

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

In the Matter of the Application of)
)
KAUAI ISLAND UTILITY COOPERATIVE) Docket No. 2022-0208
)
For Approval of Rate Changes and)
Increases, Revised Rate Schedules and)
Rules, and Other Matters.)
_____)

APPLICATION
EXHIBITS 1 THROUGH 10
ATTACHMENTS
VERIFICATION
and
CERTIFICATE OF SERVICE

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Cooperative

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APPLICATION

KAUAI ISLAND UTILITY COOPERATIVE (“KIUC” or “Applicant”), a Hawaii not-for-profit electric cooperative, by and through its attorneys, Schneider Tanaka Radovich Andrew & Tanaka, LLLC, and pursuant to Hawaii Revised Statutes (“HRS”) § 269-16, as amended, and Hawaii Administrative Rules (“HAR”) Title 16, Chapter 601,¹ hereby submits this application (“Application”) requesting that the Hawaii Public Utilities Commission (“Commission”), to the extent required, applicable, and not otherwise waived or exempted.²

¹ Pursuant to HAR § 16-601-85, KIUC filed its Notice of Intent to file a general rate increase application on October 17, 2022, at which time this proceeding was assigned Docket No. 2022-0208.

² Pursuant to Act 57, Session Laws of Hawaii 2013 (now codified as HRS § 269-31(b) and (c)), the Commission is given the authority to “waive or exempt an electric cooperative from any or all requirements of [HRS Chapter 269] or any applicable franchise, charter, decision, order, rule, or other law, upon a determination or demonstration that the requirement or requirements should not be applied to an electric cooperative or are otherwise unjust, unreasonable, or not in the public interest.” Act 57 (now codified as HRS § 269-31(b) and (c)) also provides that the Commission and the Division of Consumer Advocacy of the Department of Commerce and Consumer Affairs (“Consumer Advocate”) “shall at all times consider the ownership structure and interests of an electric cooperative in determining the scope and need for any regulatory oversight or requirements over such electric cooperative.” See Section III.A.2 (Act 57, Session Laws of Hawai’i 2013) below for a further discussion.

1. Determine, pursuant to HAR § 16-601-87, that this Application be considered a completed application under HRS § 269-16, as amended;

2. Conduct a public hearing on the island of Kauai to consider this Application, in accordance with HRS § 269-12, HRS § 269-16, and HAR § 16-601-30;

3. Approve, pursuant to HRS § 269-16, as amended, the rates and charges proposed by KIUC as set forth in Exhibit 5 to this Application, together with tariff changes to reflect these rates and charges and the proposed Energy Rate Adjustment Clause (“ERAC”) modifications discussed herein, and authorize KIUC to place into effect the proposed rates, charges and tariff changes;³

4. Approve and/or authorize KIUC to implement the depreciation rates and changes discussed in Nancy Heller Hughes’ testimony (Exhibit 10-T-1100) and to use the same in determining and establishing KIUC’s revenue requirement, revenue increase and resulting rates and charges in this proceeding;⁴

5. Approve, pursuant to HRS § 269-16, as amended, the proposed modifications to KIUC’s existing ERAC mechanism;⁵

6. Approve the recovery over a 10-year amortization period of the balance of the Lost Gross Margins regulatory asset established by Decision and Order No. 37252 issued on July 31, 2020 in Docket No. 2020-0088 (“Decision and Order No. 37252”);⁶

³ See infra, Sections III.B (Rate Relief Requested) and III.C (Justification and Need for Rate Relief Requested).

⁴ See infra, Section V.A (Depreciation Rates).

⁵ See infra, Section V.B (Energy Rate Adjustment Clause (ERAC) Mechanism).

⁶ See infra, Section V.C (Lost Gross Margins Regulatory Asset).

7. Approve the recovery over a 10-year amortization period of the balance of the regulatory asset resulting from the pension tracking mechanism established by Decision and Order issued on September 9, 2010 in Docket No. 2009-0050 (“September 9, 2010 Decision and Order”);⁷ and

8. Grant such other and further relief, including any interim rate increase, and make such other findings and determinations as may be applicable, required, just and/or reasonable under the circumstances and/or in order for KIUC to implement its proposed revenue and rate increases and tariff changes.⁸

In support of this Application, Applicant provides the following information:

I.

COMMUNICATIONS REGARDING THIS APPLICATION

Pleadings, correspondence, and notices regarding this Application should be directed to the following:

DAVID J. BISSELL
President and Chief Executive Officer
Kauai Island Utility Cooperative
4463 Pahe’e Street, Suite 1
Lihue, Hawaii 96766-2000

and

⁷ See infra, Section V.D (Pension Regulatory Asset).

⁸ The information/data contained herein and the exhibits, written testimonies and attachments attached hereto and hereby incorporated herein are provided in support of this Application and are submitted in compliance with HRS § 269-16, as amended, and HAR §§ 16-601-74, 16-601-75, 16-601-86, 16-601-87, and 16-601-91(a). KIUC contends that the filing requirements or standards have either been sufficiently met or are not applicable in light of KIUC’s not-for-profit cooperative structure. For example, HAR § 16-601-87(7), which requires a statement regarding the methods used to determine KIUC’s federal income tax payments, is not applicable because KIUC does not pay federal income taxes on its electric revenues. To the extent, however, that the Commission determines that a particular standard or requirement has not been sufficiently met due to its inapplicability to KIUC or otherwise, KIUC requests a waiver of such standard or requirement, pursuant to HAR § 16-601-92 and/or Act 57, Session Laws of Hawaii 2013 (now codified as HRS § 269-31(b) and (c)) as discussed in supra, n. 2.

ERIN TSUDA
Finance Manager
Kauai Island Utility Cooperative
4463 Pahe'e Street, Suite 1
Lihue, Hawaii 96766-2000

Copies of all pleadings, correspondence, and notices regarding this Application should also be sent to KIUC's regulatory counsel as follows:

KENT D. MORIHARA, ESQ.
LIANNA L. FIGUEROA, ESQ.
JAMIE C. YOSHIKANE, ESQ.
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Schneider Tanaka Radovich Andrew & Tanaka, LLLC
1100 Alakea Street, Suite 2100
Honolulu, Hawaii 96813

Attorneys for Applicant

II.

DESCRIPTION OF APPLICANT

Applicant is a Hawaii not-for-profit electric cooperative, whose principal place of business is 4463 Pahe'e Street, Suite 1, Lihue, Kauai, Hawaii 96766-2000. Applicant is an operating public utility engaged in the production, transmission, distribution, purchase, and sale of electric energy on the island of Kauai, State of Hawaii. Applicant has been an operating public utility since November 1, 2002, when it purchased substantially all of the assets and assumed the operations of the Kauai Electric division of Citizens Communications Company ("Citizens"), and in connection therewith, was assigned the legislatively-granted franchise⁹ previously held by Citizens to manufacture, sell, furnish, and supply electric light, current, and power on the island of Kauai. Said

⁹ KIUC's legislatively-granted franchise reads as is provided in Act 165 (Session Laws of Hawaii 1967).

transaction was approved by the Commission in Decision and Order No. 19658 issued on September 17, 2002, as amended by Decision and Order No. 19755 issued on October 30, 2002, both in Docket No. 02-0060.

Applicant is duly incorporated, validly existing, and in good standing under the laws of the State of Hawaii.

A general description of Applicant's property and equipment utilized to provide electric services is found in Exhibit 1, attached hereto.

III.

BACKGROUND AND DESCRIPTION OF RATE RELIEF REQUESTED

A. Background

1. KIUC's First Rate Case - Docket No. 2009-0050

KIUC's first and only rate case proceeding before the Commission occurred over twelve (12) years ago when KIUC filed a rate increase application on June 30, 2009 in Docket No. 2009-0050. It is KIUC's understanding that Docket No. 2009-0050 was the first and only rate proceeding before the Commission that has involved a cooperative-owned utility and not an investor-owned utility ("IOU").¹⁰ For a more detailed discussion summarizing the material differences between KIUC as a cooperative and an IOU, including how those differences were considered in setting KIUC's rates, see Attachment DJB-104 included as part of the testimony of David J. Bissell (Exhibit 10-T-100).

¹⁰ For example, the three other electric public utilities operating in the State of Hawaii, Hawaiian Electric Company, Inc., Hawaii Electric Light Company, Inc., and Maui Electric Company, Limited are all IOUs owned by their parent, Hawaiian Electric Industries, Inc., which is a publicly traded corporation on the New York Stock Exchange.

As discussed in said Attachment DJB-104, the “traditional” rate of return methodology utilized for IOUs was not used in determining KIUC’s rate increase in Docket No. 2009-0050. Instead, KIUC’s revenue requirement and rates were determined and established by the Commission based on the principal measure of financial performance used by KIUC’s lenders at that time.¹¹ More specifically, in the September 9, 2010 Decision and Order, the Commission determined KIUC’s revenue increase and resulting rates as follows:

KIUC’s rates are set at a level that is designed to allow the electric cooperative to: (A) sufficiently recover its reasonable expenses; (B) earn a sufficient margin to ensure compliance with its debt loan targets, covenants, and other lending requirements; (C) meet future and upcoming funding needs; and (D) build sufficient equity to ensure its on-going financial health and ability to obtain and qualify for future financing.^{12 13}

In addition, the Commission also amended a patronage capital refund condition¹⁴ initially imposed in Docket No. 02-0060, which provides a mechanism that in effect

¹¹ As discussed in Attachment DJB-104 and the testimony of William A. Collet (Exhibit 10-T-300), the principal measure of financial performance used by KIUC’s lenders at the time of Docket No. 2009-0050 was Times Interest Earned Ratio, or “TIER.” As further discussed in Mr. Collet’s testimony (Exhibit 10-T-300), Debt Service Coverage, or “DSC”, is the current benchmark ratio used by KIUC’s lenders instead of TIER.

¹² September 9, 2010 Decision and Order, at 57-58.

¹³ As discussed in Attachment DJB-104 to Mr. Bissell’s testimony (Exhibit 10-T-100), it was also acknowledged in Docket No. 2009-0050 that unlike an IOU, KIUC as a cooperative does not have the ability to raise equity capital and must remain financially viable only through (1) the revenues it receives from the rates it charges and the resulting equity it is able to build up over time, and (2) debt financing from its lenders.

¹⁴ Patronage capital, also known as capital credits, represents margins credited to members of the cooperative, which are allocated according to the amount paid for energy used. Margins represent the amount of money left over after all expenses have been paid, which, although analogous to profits belonging to shareholders in an IOU, are owned by the members of the cooperative. The retained patronage capital that flows from these margins is the sole source of equity capital to support the financial health and stability of the cooperative. Patronage capital of the members’ accounts is later retired through patronage capital refunds over time as the financial circumstances of the cooperative permits in an amount to be determined by KIUC’s Board Directors, as well as through the Commission’s patronage capital refund condition. KIUC has provided over \$37 million in patronage capital refunds directly to its

prevents KIUC from “over-earning” on the rates it charges to its customers/members. In amending the patronage capital refund condition, the Commission stated the following in its September 9, 2010 Decision and Order:

In effect, the Parties agree to modify the annual patronage capital refund condition by changing the triggering mechanism to whenever KIUC’s patronage capital amount exceeds a reported RUS TIER level of 2.0 for the prior reporting period. In support thereto, the Parties state that this modified patronage capital refund condition . . . “will ensure KIUC the opportunity to maintain its financial stability and access to capital on reasonable terms, while ensuring that KIUC’s ratepayers participate in any future margin earnings levels that may exceed expectations.”

As noted by KIUC in its rebuttal testimony, the proposed modified condition provides an adequate balance between what portion of margins should be: used to increase equity growth and to qualify for future financing; used to lessen financing needs; and returned to KIUC’s members through patronage capital refunds. Once these goals are met through the attainment of a RUS TIER of 2.0, KIUC has no interest in retaining any excess revenues beyond this level, and thus, agrees to seek lender approval to return all margins in excess of a 2.0 RUS TIER back to its members.¹⁵

2. Act 57, Session Laws of Hawai‘i 2013

Subsequent to Docket No. 2009-0050 and the September 9, 2010 Decision and Order, the Hawaii State Legislature provided further direction to the Commission and the Consumer Advocate regarding the level of scrutiny that an electric cooperative should be subject to, through the passage of Act 57 during the 2013 legislative session

members since its acquisition of the Kauai Electric assets in November 2002. See Mr. Bissell’s testimony (Exhibit 10-T-100), including Attachment DJB-104, for a further discussion.

¹⁵ September 9, 2010 Decision and Order, at 51-53 (footnote omitted). See also Attachment DJB-104 to Mr. Bissell’s testimony (Exhibit 10-T-100) for a further discussion. As discussed in Mr. Bissell’s testimony (Exhibit 10-T-100), KIUC is not proposing any changes or adjustments to the patronage capital refund condition in this proceeding.

(“Act 57”). Act 57 amended HRS § 269-31 by adding new subparagraphs (b) and (c), as follows:

(b) Notwithstanding any provision of this chapter [(i.e., HRS Chapter 269)] or any franchise, charter, law, decision, order, or rule to the contrary, the public utilities commission, sua sponte or upon the application of an electric cooperative, may waive or exempt an electric cooperative from any or all requirements of this chapter or any applicable franchise, charter, decision, order, rule, or other law upon a determination or demonstration that such requirement or requirements should not be applied to an electric cooperative or are otherwise unjust, unreasonable, or not in the public interest. Notwithstanding the above, the public utilities commission and the consumer advocate shall at all times consider the ownership structure and interests of an electric cooperative in determining the scope and need for any regulatory oversight or requirements over such electric cooperative. To the extent any other provision of this chapter or any franchise, charter, law, decision, order, or rule is contrary to or otherwise conflicts with this section in any manner, the provisions of this section shall govern and apply.

(c) For purposes of this chapter [(i.e., HRS Chapter 269)], an “electric cooperative” is a cooperative association or entity that is:

- (1) Owned by its members;
- (2) Formed pursuant to [HRS] chapter 421C;
- (3) Operated on a not-for-profit basis;
- (4) Authorized pursuant to a legislatively granted franchise or other legislative authority to manufacture, sell, furnish, and supply electric light, electric current, or electric power to its members or a designated service area; and
- (5) Governed by a board of directors who are members of the electric cooperative and who are democratically elected by members of the electric cooperative pursuant to applicable bylaws.

In enacting Act 57, the Hawaii State Legislature stated the following, in relevant part:

Electric cooperatives are fundamentally distinct from traditional electric utilities in terms of both governance and organizational purpose. The typical investor-owned utility is primarily driven by

the incentive to increase shareholder profitability, with virtually no influence on policy or operations coming from the electricity customer. An electric cooperative, on the other hand, is a customer-owned organization operating on a not-for-profit basis under the governance of a board of directors democratically elected by the very same customers who receive the cooperative's services and who act in their role as owners and members of the cooperative. Whereas a natural tension exists between an investor-owned utility's profit motive and the interest of its customers, the nature of electric cooperatives provides multiple safeguards that ensure that the everyday user receiving electricity services has a say in determining whether that cooperative functions in the interests of both the organization and the individual consumers.¹⁶

For a further discussion, see Attachment DJB-104 to Mr. Bissell's testimony (Exhibit 10-T-100).

B. Rate Relief Requested

Pursuant to HRS § 269-16, as amended, KIUC seeks the approval of the Commission for proposed changes and increases to its rates, charges and related tariffed rate schedules as set forth in Exhibit 5, attached hereto. Specifically, KIUC seeks a net increase in its electric revenues, based on a 2023 test year, of \$16.7 million. See Exhibit 6 (line 1, column D). This amounts to a proposed revenue requirement of \$193.7 million (Exhibit 6, line 1, column E), which represents an approximate 9.42% increase over the pro forma total electric revenue amount of \$177.0 million at present rates for the 2023 test year. See Exhibit 6 (line 1, columns F and C, respectively).¹⁷ If approved, the proposed revenue increase would provide KIUC

¹⁶ Act 57, § 1.

¹⁷ As reflected in Exhibit 6, the revenue requirement of \$193.7 million (line 1, column E) is higher than the Total Revenues amount of \$192.9 million (line 3, column E). This is due to a negative Other Revenue amount of \$826 thousand resulting from a negative charge attributable to Lost Gross Margin (LGM) amortization as further discussed in Ms. Dellamano's testimony (Exhibit 10-T-200).

with a DSC (Debt Service Coverage) Ratio under its loan Indenture¹⁸ for the 2023 test year of 1.75, as shown in Exhibit 6 (line 46, column E).¹⁹

As part of the revenue increase requested above, KIUC proposes to allocate the proposed revenue increase amongst its customer classes through rate increases as proposed in Exhibit 5 attached hereto and as further discussed in the testimony of Daniel Koehler (Exhibit 10-T-500).²⁰ This includes combining Large Power rate Schedules “L” and “P” into a single customer class referred to as Schedule “LP” as also discussed by Mr. Koehler.²¹

C. Justification and Need for Rate Relief Requested

An increase in KIUC’s revenues and rates is needed to address KIUC’s deteriorating financial results due to relatively flat sales growth and increasing costs and investments since KIUC’s last general rate increase went into effect in 2010 in Docket No. 2009-0050. Specifically, this increase is needed to provide KIUC with sufficient revenues to fund and pay fixed and variable expenses when and as due, and provide sufficient margins that enable KIUC to meet lender debt coverage ratio requirements

¹⁸ For a discussion of the DSC Ratio under KIUC’s loan Indenture arrangement (also referred to as the “Indenture DSC Ratio” or the “DSC Ratio under the Indenture”), see Mr. Collet’s testimony (Exhibit 10-T-300).

¹⁹ For comparison purposes with other IOU utility rate proceedings as discussed in Mr. Bissell’s testimony (Exhibit 10-T-100), this is equivalent to an approximate 5.54% return on rate base, as shown in Exhibit 6 (line 41, column E).

²⁰ Pursuant to HAR § 16-601-87(10), KIUC confirms that the revenue and rate increase sought herein reflects and passes through to its customers only increased costs to KIUC for the services or commodities furnished by it.

²¹ The proposed changes to KIUC’s existing tariff (i.e., KIUC Tariff No. 1) to effectuate the rate changes and increases in Exhibit 5 are set forth in Attachment DK-505 to Mr. Koehler’s testimony (Exhibit 10-T-500). This attachment also sets forth proposed tariff revisions to effectuate the ERAC modifications discussed in Section V.B (Energy Rate Adjustment Clause (ERAC) Mechanism) of this Application and in Mr. Rockwell’s testimony (Exhibit 10-T-900).

and expectations, and ensure that KIUC is able to continue to access long-term debt to fund planned and unplanned capital needs and for KIUC to continue to safely and reliably deliver its essential electric service to its customers/members and to meet various State requirements and initiatives.

Despite KIUC's various efforts over the years that have allowed it to go over twelve (12) years without filing for a general rate increase, these deteriorating financial results require a general rate increase at this time. KIUC's efforts that have allowed an over 12-year period between rate increases include various cost control measures, debt restructuring and refinancing to reduce debt service payments, increased productivity through technological investments, as well as steps to preserve KIUC's financial health during the pandemic through federal funds obtained under the Small Business Administration Paycheck Protection Program established under the CARES Act, and through the deferred accounting treatment authorized by the Commission in Docket No. 2020-0088, all as further discussed in Mr. Bissell's testimony (Exhibit 10-T-100).

And, KIUC was able to accomplish all of the above while (1) providing over \$37 million in patronage capital retirements²² directly to its members since its inception, including about \$1.5 million in May 2020 and about \$1.3 million in May 2021 during the midst of the government-imposed shut-downs and restrictions; (2) significantly increasing its renewable energy generation levels from a Renewable Portfolio Standards ("RPS")-reported 12.39% in 2010 to 69.5% as of the end of 2021 (thus helping to reduce the State's dependence on fossil fuel and greenhouse gas emissions); and (3) taking the island of Kauai from having the highest electricity rates in

²² See supra, n. 14.

the State when KIUC first acquired Kauai's electric system in November 2002 to currently having the lowest electricity rates so far this year through November 2022.

At its present rates, KIUC projects a net negative margin reported to its lenders of (\$7.1 million) for the 2023 test year, as reflected in Exhibit 6 (line 39, column A). This would result in an Indenture DSC Ratio of 0.98 as shown in Exhibit 6 (line 46, column A), which is less than the 1.25 minimum DSC Ratio required under the Indenture. The importance of KIUC meeting and exceeding its required DSC Ratio are discussed in the testimonies of Ms. Dellamano (Exhibit 10-T-200) and Mr. Collet (Exhibit 10-T-300), which includes that if KIUC is not able to meet this minimum DSC Ratio, KIUC would be precluded from borrowing any new debt under the Indenture until that deficiency has been removed for a full fiscal year.

Thus, the instant rate case is needed to increase KIUC's revenues and margin to a reasonable level that would, as noted above, allow KIUC to fund and pay expenses when and as due, provide sufficient margins to meet lender debt coverage ratio requirements and expectations, and ensure KIUC's ability to continue to access long-term debt to fund planned and unplanned capital needs, continue to safely and reliably deliver its essential electric service to its customers/members, and continue its efforts to meet various State requirements and initiatives, including the RPS and the strategic plans and goals of KIUC's member-elected Board of Directors. For a further discussion supporting the DSC Ratio and margin level that are projected to result from KIUC's proposed revenue increase, see Mr. Collet's testimony (Exhibit 10-T-300).

IV.

FINANCIAL INFORMATION

In accordance with HAR § 16-601-86 and/or HAR § 16-601-87,²³ KIUC hereby files and incorporates by reference the following exhibits:

Exhibit 1 General description of KIUC's property, plant and equipment

Exhibit 2 Financial statements

Schedules

(1) Stock Authorized and Outstanding²⁴

(2) Year-End Common Stock Outstanding and Dividends²⁵

(3) Security Agreements, Mortgages and Deeds of Trust

(4) Audited Financial Statements as of December 31, 2021

(5) Unaudited Financial Statements (10-months ended October 31, 2022)

(6) Notes, Bonds, and Other Indebtedness

Exhibit 3 KIUC's Plant and Accumulated Depreciation

Exhibit 4 Present Rate Schedules

Exhibit 5 Comparison of Present and Proposed Rates

Exhibit 6 Revenue Requirement Schedule (Regulatory Basis) for Test Year Ended December 31, 2023 at Present and Proposed Revenues

²³ KIUC has annual gross operating revenues in excess of \$2,000,000. As such, the requirements set forth in HAR § 16-601-87 are applicable to this Application.

²⁴ Under HAR § 16-601-75(a)(1), (2) and (7), KIUC is to provide information regarding dividends and the amount and kinds of stock authorized and outstanding, together with the terms of any preference or preferred stock, whether cumulative or participating or on dividends or assets, or otherwise. Because KIUC is a member-owned cooperative, it does not have any stock authorized and/or outstanding and does not and has not issued dividends.

²⁵ Id.

Exhibit 7 Revenue Requirement Schedule (GAAP Basis) for Test Year Ended December 31, 2023 at Present and Proposed Revenues

Exhibit 8 Results of Operation for Test Year Ended December 31, 2023

Exhibit 9 Average Rate Base for Test Year Ended December 31, 2023

Exhibit 10 Written Direct Testimonies

- (1) David J. Bissell (Exhibit 10-T-100)
- (2) Stacie A. Dellamano (Exhibit 10-T-200)
- (3) William A. Collet (Exhibit 10-T-300)
- (4) Stan Faryniarz (Exhibit 10-T-400)
- (5) Daniel Koehler (Exhibit 10-T-500)
- (6) Kevin R. Pierce (Exhibit 10-T-600)
- (7) Christopher Yuh (Exhibit 10-T-700)
- (8) Corinne Cuaresma (Exhibit 10-T-800)
- (9) Brad Rockwell (Exhibit 10-T-900)
- (10) Thomas A. Lovas (Exhibit 10-T-1000)
- (11) Nancy Heller Hughes (Exhibit 10-T-1100)

- Attachments**
- DJB-101 to 106 (6 attachments)
 - SF-401 and 402 (2 attachments)
 - DK-501 to 505 (5 attachments)
 - KRP-601 to 603 (3 attachments)
 - CY-701 (1 attachment)
 - BR-901 to 905 (5 attachments)
 - TAL-1001 to 1004 (4 attachments)
 - NHH-1101 to 1106 (6 attachments)

V.

OTHER REQUESTS

A. Depreciation Rates

KIUC requests Commission approval and/or authorization to implement the depreciation rates and changes set forth in the depreciation study performed by NewGen Strategies and Solutions, LLC as further discussed in the testimony of Ms. Hughes (Exhibit 10-T-1100), as well as to use those rates in determining and establishing KIUC's revenue requirement, revenue increase and resulting rates and charges in this proceeding. A copy of the depreciation study is provided as part of Ms. Hughes' testimony as Attachment NHH-1102.

B. Energy Rate Adjustment Clause (ERAC) Mechanism

KIUC also requests certain modifications to its existing ERAC mechanism as discussed by Mr. Rockwell in his testimony (Exhibit 10-T-900). Specifically, KIUC requests the following modifications to its ERAC mechanism: (1) update and reflect the use of the 2023 test year for this rate proceeding, including the 2023 test year cost of fuel for KIUC generation and the 2023 test year cost of purchased energy; (2) adjust the generation conversion factor from 0.009850 million Btu per kilowatt hour to 0.009950 million Btu per kilowatt hour to account for KIUC's current energy mix, which is now primarily renewable (or non-fuel) sources; (3) in light of the above generation conversion factor adjustment, revise the range from "0.00980 million Btu per kilowatt hour to 0.00990 million Btu per kilowatt hour" to "0.00990 million Btu per kilowatt hour to 0.01000 million Btu per kilowatt hour"; and (4) adjust the system loss factor from 4.49% to 5.09% to better reflect the much higher level of distributed generation resources on

KIUC's system today than at the time of KIUC's last rate case proceeding in Docket No. 2009-0050.

C. Lost Gross Margins Regulatory Asset

In Decision and Order No. 37252, the Commission approved KIUC's use of deferred accounting to establish a regulatory asset to record and accrue lost gross margins ("LGM") and increased bad debt expense associated with the COVID-19 pandemic, incurred from April 1, 2020 until ordered otherwise by the Commission.²⁶ Pursuant to Order No. 38605 issued on September 13, 2022 in Docket No. 2020-0088 ("Order No. 38605"), the accrual of LGM was discontinued as of the end of the second quarter of 2022 (i.e., as of June 30, 2022).²⁷ The above approval from the Commission allowed KIUC to better withstand the impacts of the pandemic and maintain the financial health of KIUC during the unprecedented pandemic where, if not for the Commission's approval, KIUC would have had to seek a rate increase from its members/customers in 2020 during the height of the economic uncertainty fostered by the pandemic.

As emphasized by the Commission in Decision and Order No. 37252, in approving the above deferred accounting treatment, that approval does not entail any presumption of future rate recovery, and any request by KIUC to recover these deferred costs shall be filed as a docketed application outside of Docket No. 2020-0088.²⁸ The Commission also stated that if KIUC files an application to recover the regulatory asset in the future, the Commission will review the reasonableness of the request, expected

²⁶ See Decision and Order No. 37252, at 1 and 22-23.

²⁷ See Order No. 38605, at 11.

²⁸ See Decision and Order No. 37252, at 21 and 23.

ratepayer impacts, and other factors, in weighing that decision.²⁹ The Commission also stated that the Consumer Advocate may also participate in any such proceeding, and may challenge the reasonableness of any accrued LGM and any deferred costs, and make recommendations regarding the time over which any potential recovery might be received.^{30 31}

The balance of the LGM regulatory asset accrued during its authorization period covering April 1, 2020 through June 30, 2022 is \$12.8 million, as shown in Exhibit 8-1 (page 1, line 15, column A). For the reasons discussed in the testimony of Ms. Dellamano (Exhibit 10-T-200), KIUC requests Commission approval to recover the balance of this regulatory asset over a 10-year amortization period.

D. Pension Regulatory Asset

In KIUC's only previous rate proceeding in Docket No. 2009-0050, the Commission approved KIUC's agreement to establish a pension tracking mechanism to record changes in costs beginning from January 2010 to create a regulatory asset to determine the future ratemaking treatment of any accumulated balances.³² The test

²⁹ See id., at 21.

³⁰ Ibid.

³¹ As discussed and detailed on pages 21 to 22 of Decision and Order No. 37252, in "anticipation of a future application for recovery," the Commission imposed various detailed reporting requirements upon KIUC for the purpose of requiring "KIUC to provide all information on deferred costs that may be necessary for a thorough review." KIUC has complied with these reporting requirements through various filings made with the Commission. See the quarterly reports filed by KIUC on October 30, 2020, February 1, 2021, May 3, 2021, August 2, 2021, November 1, 2021, February 1, 2022, May 24, 2022 and August 1, 2022, all in Docket No. 2020-0088, as well as the quarterly report filed on October 27, 2022 in Docket No. 2020-0209 as required by Order No. 38605.

³² See September 9, 2010 Decision and Order, at 53 and 60. By letter filed on November 18, 2010 in Docket No. 2009-0050, KIUC informed the Commission that approval from its lender Rural Utilities Service was not required to establish the pension tracking mechanism, and that consistent with Ordering Paragraph 6 of the September 9, 2010 Decision and Order, KIUC established the mechanism.

year balance of this regulatory asset is \$9.5 million, as shown in Workpaper 8-3 to the Application (page 1, lines 29 and 30, column D). For the reasons discussed in Ms. Dellamano's testimony (Exhibit 10-T-200), KIUC requests Commission approval to recover the balance of this regulatory asset over a 10-year amortization period.

VI.

CONCLUSION

WHEREFORE, Applicant respectfully requests as follows, to the extent required, applicable, and not otherwise waived or exempted by the Commission:³³

1. That, pursuant to HAR § 16-601-87, this Application be considered a completed application under HRS § 269-16, as amended;

2. That a public hearing be conducted on the island of Kauai to consider this Application, in accordance with HRS § 269-12, HRS § 269-16, and HAR § 16-601-30;

3. That the Commission approve, pursuant to HRS § 269-16, as amended, the rates and charges proposed by KIUC as set forth in Exhibit 5 to this Application, together with tariff changes to reflect these rates and charges and the proposed ERAC modifications, and authorize KIUC to place into effect the proposed rates, charges and tariff changes;

4. That the Commission approve and/or authorize KIUC to implement the depreciation rates and changes discussed in Ms. Hughes' testimony (Exhibit 10-T-1100) and to use the same in determining and establishing KIUC's revenue requirement, revenue increase and resulting rates and charges in this proceeding;

³³ See supra, n. 2.

5. That the Commission approve, pursuant to HRS § 269-16, as amended, the proposed modifications to KIUC's existing ERAC mechanism;

6. That the Commission approve the recovery over a 10-year amortization period of the balance of the LGM regulatory asset established by Decision and Order No. 37252;

7. That the Commission approve the recovery over a 10-year amortization period of the balance of the regulatory asset resulting from the pension tracking mechanism established by the September 9, 2010 Decision and Order; and

8. That the Commission grant such other and further relief, including any interim rate increase, and make such other findings and determinations as may be applicable, required, just and/or reasonable under the circumstances and/or in order for KIUC to implement its proposed revenue and rate increases.

DATED: Honolulu, Hawai'i, December 28, 2022.

/s/ Kent D. Morihara

KENT D. MORIHARA
LIANNA L. FIGUEROA
JAMIE C. YOSHIKANE
RIO H. KWON

Schneider Tanaka Radovich Andrew &
Tanaka, LLLC
Attorneys for Kauai Island Utility
Cooperative

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

EXHIBIT 1

**GENERAL DESCRIPTION OF KIUC'S
PROPERTY, PLANT AND EQUIPMENT**

(6 PAGES)

Kauai Island Utility Cooperative

General Description of Property, Plant and Equipment

Property

Kauai Island Utility Cooperative (“KIUC”), located on the Island of Kauai, presently owns and operates utility property (e.g., plant and equipment) to provide electric utility services to residential and commercial customers on the Island of Kauai.

Plant

KIUC’s utility plant-in-service consists of generation plant (steam, hydraulic, and other plant), transmission and distribution plant, and general plant as further described below.

Generation Plant

KIUC directly-owned generating units are located at three sites on the island: Port Allen Power Station, Kapaia Power Station, and Waiahi Power Station.

The largest of the three power stations is the Port Allen Power Station, with a total generating capacity of 89,750 kW. There are nine diesel generating units at Port Allen ranging in size from 1,750 kW to 7,600 kW. There is also a steam generating unit (9,000 kW) and two gas turbines (17,500 kW and 22,600 kW). A heat recovery steam generator unit uses waste heat from either of the two gas turbines to generate steam for the steam unit. Fuel for the power station is delivered to Port Allen harbor

and stored in tanks owned by Island Energy Services (“IES”) located across the street from the power station. The storage tanks then transfer fuel as needed to day tanks at the Port Allen Power Station, which then supply fuel to the various generating units.

The generating unit at Kapaia Power Station is a 26,600 kW steam-injected gas turbine unit. The Kapaia unit is KIUC’s cleanest and most efficient generating unit and is therefore dispatched more than the units at Port Allen. The generating unit runs primarily on naphtha, which is delivered by truck from the IES facility at Port Allen to Kapaia. There are six (6) fuel tanks at the Kapaia Power Station (which are owned by KIUC): one 225,000-gallon and two 125,000-gallon naphtha fuel tanks with internal floating roofs and three 125,000-gallon tanks for diesel or biodiesel fuel (used at lower loads).

The Waiahi Power Station consists of two hydro units that were originally built to service the Lihue Sugar Plantation. The Lower Hydro unit (800 kW) was constructed in 1914 and the Upper Hydro unit (700 kW) was constructed in 1931. Since acquiring these hydro units, KIUC has made improvements to the hydro units and the ditch system that delivers water to the hydro units to increase the generation output.

The table below provides additional information regarding the generating units.

**Kauai Island Utility Cooperative
Generating Units**

Installation		Type	Manufacturer	Gross Peak	Net Peak
Year	Unit(s)			(nameplate) kW	(actual) kW
Kapaia Power Station					
2002	CT1	IC-Gas Turbine	GE	27,500	26,600
Subtotal:				27,500	26,600
Port Allen Power Station					
1964	D1	IC-Diesel	EMD	2,000	1,750
1964	D2	IC-Diesel	EMD	2,000	1,750
1968	D3	IC-Diesel	EMD	2,750	2,500
1968	D4	IC-Diesel	EMD	2,750	1,750
1968	D5	IC-Diesel	EMD	2,750	2,500
1968	S1	Steam	GE	10,000	9,000
1973	GT1	IC-Gas Turbine	Hitachi/GE	17,500	17,500
1977	GT2	IC-Gas Turbine	John Brown/GE	22,600	22,600
1989	D6	IC-Diesel	Stork-Wartsila	7,850	7,600
1989	D7	IC-Diesel	Stork-Wartsila	7,850	7,600
1991	D8	IC-Diesel	Stork-Wartsila	7,850	7,600
1991	D9	IC-Diesel	Stork-Wartsila	7,850	7,600
Subtotal:				93,750	89,750
Waiahi Power Station					
1914	Lower	Hydro	Francis/Allis-Chalmers	800	720
1931	Upper	Hydro	Pelton/GE	700	630
Subtotal:				1,500	1,350
Grand Total:				122,750	117,700

In addition, through subsidiary arrangements that were the subject of Commission Docket Nos. 2011-0323, 2012-0383 and 2013-0202, KIUC also obtains generation from a 12,000 kW solar facility located in Anahola from its subsidiary KIUC

Renewable Solutions One, LLC, and from a 12,000 kW solar facility located in Koloa from its subsidiary KIUC Renewable Solutions Two LLC.

Transmission and Distribution Plant

KIUC has five (5) switchyards and nine (9) substations interconnected over a 57.1kV transmission network. Since acquiring the electric utility from Kauai Electric in November 2002, KIUC has added four additional substations - Anahola (2015), Green (2015), Aepo (2018), and PMRF (2020). These modern substations currently feed existing loads with built in capacity for future growth, provide redundancy in the event of a loss of an adjacent substation, and interconnect KIUC renewable generation sources. Lawai substation, the last transmission “tapped line” station on KIUC’s grid, was decommissioned in August 2022. Lawai loads were spread among the Green and Aepo substations.

KIUC has approximately 171 miles of 57.1kV transmission lines. Approximately twenty percent (20%) of the transmission system is on steel structures; the remaining eighty percent (80%) is on wood pole structures. The transmission system is primarily a looped system with at least two transmission lines feeding most substations and switchyards. The two exceptions, which are radially fed, are Mana and Princeville substations. Mana substation loads are progressively being shifted to PMRF substation and total cutover is anticipated in 2023, which would lead to Mana substation being decommissioned in 2024.

Nearly all of the existing transmission system was constructed during the early 1990s. Approximately thirty-five percent (35%) of the transmission and distribution system was destroyed during Hurricane Iniki. Some portions of the transmission system had been upgraded prior to Hurricane Iniki, but the remainder of the system, including the double circuit steel lines crossing the center of the island from Port Allen to Wainiha, was constructed or rebuilt during the 1993-1995 time period following the hurricane. The steel poles are designed to handle winds up to 125 mph.

From the distribution perspective of substations and switchyards, KIUC has 46 circuits that feed approximately 830 miles of 12.47kV rated lines. The breakdown of overhead vs. underground facilities is seventy percent (70%) and thirty percent (30%), respectively. KIUC has 24 station class power transformers with a total capacity of 226.5 MVA. All but three station transformers have 10 MVA base ratings; Kaumakani (7.5 MVA), Mana (7.5 MVA), and Wainiha (1.5 MVA).

General Plant

KIUC has two main distribution service centers, which are located at Eleele (near Port Allen) and Kapaa. Distribution line crews are based out of both service centers. Bucket/Line trucks, yard inventories, and minor materials are stored at both service centers. Kapaa service center activities will be moving to the newly built Anahola Service Center in 2023. KIUC leases the headquarters building in Lihue under a

non-cancelable operating lease which expires in 2030 and contains options to extend the term up to an additional fifteen (15) years.

KIUC currently has a redundant fiber network in place that covers headquarters, power plants, dispatch, service centers, substations, and switchyards. Information Technology (IT) and Operational Technology (OT) both share this communications network with independent equipment. KIUC's new supervisory control and data acquisition (SCADA) system was commissioned in 2021.

Other general plant facilities include office furniture and equipment; transportation equipment; stores equipment; tools, shop, and garage equipment; laboratory equipment; power-operated equipment, communications equipment; and other miscellaneous equipment.

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

**EXHIBIT 2
SCHEDULE 1**

STOCK AUTHORIZED AND OUTSTANDING

(1 PAGE)

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SPONSOR	DELLAMANO
12/28/22	

KAUAI ISLAND UTILITY COOPERATIVE
STOCK AUTHORIZED AND OUTSTANDING
TEST YEAR ENDED DECEMBER 31, 2023

Not applicable. Because Kauai Island Utility Cooperative (KIUC) is a not-for-profit member-owned electric cooperative, KIUC does not have any stock authorized and/or outstanding.

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

EXHIBIT 2
SCHEDULE 2

YEAR-END COMMON STOCK
OUTSTANDING AND DIVIDENDS

(1 PAGE)

KAUAI ISLAND UTILITY COOPERATIVE
YEAR-END COMMON STOCK OUTSTANDING AND DIVIDENDS
TEST YEAR ENDED DECEMBER 31, 2023

Not applicable. As noted in Exhibit 2, Schedule 1, Kauai Island Utility Cooperative (KIUC) is a not-for-profit member-owned electric cooperative. As such, KIUC does not have any common stock authorized or outstanding and does not issue dividends.

However, as a cooperative, KIUC has issued patronage capital refunds/retirements to its members in the total amounts set forth below since its last rate case:

a

Retirement Date	For Fiscal Year Ending	Retirement Amount
June 2010	2009	1,516,774
June 2011	2010	1,028,713
July 2012	2011	1,103,756
June 2013	2012	2,836,677
June 2014	2013	1,610,666
June 2015	2014	2,089,040
2016	2015	389,608 b
2017	2016	163,253 b
July 2018	2017	3,559,168
July 2019	2018	2,859,949
May 2020	2019	1,511,575
May 2021	2020	1,296,457
May 2022	2021	2,004,425

a Please note retirement amounts include early estate retirements.

b Includes only capital credit payouts for estate where ownership members are deceased.

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

EXHIBIT 2
SCHEDULE 3

SECURITY AGREEMENTS, MORTGAGES
AND DEEDS OF TRUST

(1 PAGE)

DOCKET NO. 2022-0208
EXHIBIT 2
SCHEDULE 3
PAGE 1
SPONSOR DELLAMANO
12/28/22

KAUAI ISLAND UTILITY COOPERATIVE
SECURITY AGREEMENTS, MORTGAGES AND DEEDS OF TRUST
TEST YEAR ENDED DECEMBER 31, 2023

The Debt of Kauai Island Utility Cooperative (KIUC) as described in Exhibit 2, Schedule 6 is secured by an Indenture of Mortgage, Security Agreement and Financing Statement, dated April 30, 2019, between Kauai Island Utility Cooperative (KIUC), as Grantor, and U.S. Bank Trust Company, National Association, as Trustee.

Date of Indenture Execution:	April 30, 2019	
Date of Supplemental Indenture Execution:	January 30, 2020	
Debtor:	KIUC	
Secured Parties:	RUS, CFC and CoBank	a
Mortgagor:	KIUC	
Mortgagee:	RUS, CFC and CoBank	a
Trustee:	U.S. Bank Trust Company, National Association	
Amount of indebtedness authorized to be secured:	\$ 525,000,000	b
Face Amounts of Indebtedness actually secured:		
RUS Notes as detailed in Exhibit 2, Schedule 6:	\$ 157,103,552	
CFC Notes as detailed in Exhibit 2, Schedule 6:	137,873,717	
CoBank Notes as detailed in Exhibit 2, Schedule 6:	18,119,000	
	<u>\$ 313,096,269</u>	
Balance of Indebtedness as of 12/31/2021:		
RUS Notes as detailed in Exhibit 2, Schedule 6:	\$ 113,032,649	
CFC Notes as detailed in Exhibit 2, Schedule 6:	109,998,015	
CoBank Notes as detailed in Exhibit 2, Schedule 6:	17,799,526	
	<u>\$ 240,830,190</u>	

- a The Trustee holds the lien and security interest created by the indenture on behalf of secured holders that are listed here as RUS, CFC, and CoBank.
- b This amount of indebtedness may be increased by a supplemental indenture, without the consent of the Holders, pursuant to Section 12.1L of the Indenture.

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

EXHIBIT 2
SCHEDULE 4

AUDITED FINANCIAL STATEMENTS AS OF
DECEMBER 31, 2021

(43 PAGES)



REPORT OF INDEPENDENT AUDITORS AND
CONSOLIDATED FINANCIAL STATEMENTS
WITH SUPPLEMENTARY INFORMATION

KAUA'I ISLAND UTILITY COOPERATIVE AND SUBSIDIARIES

December 31, 2021 and 2020



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Report of Independent Auditors

The Board of Directors
Kaua'i Island Utility Cooperative and Subsidiaries
Lihue, Kaua'i, Hawaii

Report on the Audit of the Financial Statements

Opinion

We have audited the consolidated financial statements of Kaua'i Island Utility Cooperative and Subsidiaries (the "Cooperative"), which comprise the consolidated balance sheets as of December 31, 2021 and 2020, and the related consolidated statements of operations, equities, and cash flows for the years then ended, and the related notes to the financial statements.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of Kaua'i Island Utility Cooperative and Subsidiaries as of December 31, 2021 and 2020, and the changes in their operations and their cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards (Government Auditing Standards)*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Cooperative and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about Kaua'i Island Utility Cooperative's and Subsidiaries ability to continue as a going concern for one year after the date that the financial statements are issued.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the consolidated financial statements.

In performing an audit in accordance with GAAS and *Government Auditing Standards*, we

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Cooperative's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the consolidated financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Cooperative's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings and certain internal control-related matters that we identified during the audit.

Other Matters

Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the consolidated financial statements as a whole. The consolidating balance sheets and consolidating statements of operations, (collectively, "supplementary information") are presented for purposes of additional analysis and are not a required part of the consolidated financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the consolidated financial statements. The information has been subjected to the auditing procedures applied in the audit of the consolidated financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the consolidated financial statements or to the consolidated financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the consolidating balance sheets and consolidating statements of operations are fairly stated, in all material respects, in relation to the consolidated financial statements as a whole.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated March 30, 2022 on our consideration of Kaua'i Island Utility Cooperative and Subsidiaries internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of Kaua'i Island Utility Cooperative and Subsidiaries internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering Kaua'i Island Utility Cooperative and Subsidiaries internal control over financial reporting and compliance.

Miss Adams UP

Portland, Oregon
March 30, 2022

Kaua'i Island Utility Cooperative
Consolidated Balance Sheets

	December 31,	
	2021	2020
ASSETS		
ASSETS		
Utility plant		
Electric plant in service	\$ 601,314,359	\$ 569,601,287
Electric plant acquisition cost	54,852,453	54,852,453
Accumulated depreciation and amortization	<u>(348,254,760)</u>	<u>(335,297,183)</u>
Net electric plant in service	<u>307,912,052</u>	<u>289,156,557</u>
Construction work in progress	<u>11,836,079</u>	<u>30,089,269</u>
Net utility plant	<u>319,748,131</u>	<u>319,245,826</u>
Other property and investments		
Investments in associated organizations	1,939,951	1,811,645
Rural economic development loans	<u>607,500</u>	<u>337,500</u>
Total other investments	<u>2,547,451</u>	<u>2,149,145</u>
CURRENT ASSETS		
Cash and cash equivalents	23,160,983	17,968,559
Restricted cash and cash equivalents	1,647,885	1,614,136
Other investments	5,000,000	-
Accounts and notes receivable, less allowance (\$569,999 and \$879,696 as of December 31, 2021 and 2020, respectively)	12,039,505	10,881,315
Accrued unbilled revenue	8,871,471	7,349,891
Energy rate adjustment clause	-	8,833
Inventories	19,059,947	16,334,353
Other current assets	<u>2,964,115</u>	<u>2,012,977</u>
Total current assets	<u>72,743,906</u>	<u>56,170,064</u>
Post-retirement benefit asset	<u>214,503</u>	<u>13,384</u>
Deferred debits	<u>34,289,805</u>	<u>27,774,550</u>
	<u>\$ 429,543,796</u>	<u>\$ 405,352,969</u>

Kaua'i Island Utility Cooperative
Consolidated Balance Sheets

EQUITIES AND LIABILITIES

	December 31,	
	2021	2020
EQUITIES		
Controlling equity interest	\$ 133,744,130	\$ 126,516,351
Non-controlling equity interest	17,775,258	17,827,510
Total equities	151,519,388	144,343,861
Long-term debt, less current maturities	226,146,530	214,961,063
Asset retirement obligations	2,846,406	2,740,170
CURRENT LIABILITIES		
Current maturities of long-term debt	14,422,637	14,064,298
Accounts payable	9,668,620	7,538,593
Energy rate adjustment clause	626,354	-
Consumer deposits	1,367,898	1,283,952
Accrued employee compensation	2,714,642	2,680,504
Accrued taxes	7,426,175	6,221,731
Other current and accrued liabilities	1,516,527	645,895
Total current liabilities	37,742,853	32,434,973
Deferred credits	11,288,619	10,872,902
	\$ 429,543,796	\$ 405,352,969

Kaua'i Island Utility Cooperative
Consolidated Statements of Operations

	Years Ended December 31,	
	2021	2020
OPERATING REVENUES		
Residential	\$ 67,665,717	\$ 59,717,210
Irrigation	177,137	183,919
Commercial and industrial	85,127,144	75,391,161
Public street and highway lighting	683,855	665,798
Other operating revenues	5,133,601	9,188,729
Total operating revenues	<u>158,787,454</u>	<u>145,146,817</u>
OPERATING EXPENSES		
Cost of power	82,538,182	71,564,840
Transmission – operation	483,850	346,338
Transmission – maintenance	980,318	727,483
Distribution – operation	1,727,764	1,651,701
Distribution – maintenance	4,803,586	4,344,278
Customer accounts	2,203,646	2,225,091
Customer service and information	272,391	268,046
Administrative and general	20,137,954	20,440,998
Depreciation and amortization	18,808,331	18,087,417
Taxes	13,373,251	12,251,285
Accretion expense	106,236	101,260
Total operating expenses	<u>145,435,509</u>	<u>132,008,737</u>
OPERATING MARGIN BEFORE INTEREST	13,351,945	13,138,080
INTEREST ON LONG-TERM DEBT	<u>7,210,177</u>	<u>6,964,658</u>
OPERATING MARGINS	<u>6,141,768</u>	<u>6,173,422</u>
NONOPERATING MARGINS		
Interest income	492,373	798,746
Capital credits	240,619	255,259
Other nonoperating income (expense), net	1,409,090	128,043
Total nonoperating margins	<u>2,142,082</u>	<u>1,182,048</u>
NET MARGINS	8,283,850	7,355,470
NET LOSS ATTRIBUTABLE TO NON-CONTROLLING INTEREST	<u>13,002</u>	<u>59,272</u>
NET MARGINS – COOPERATIVE	8,296,852	7,414,742
COMPREHENSIVE INCOME		
Postretirement benefit obligation gain	<u>163,209</u>	<u>246,805</u>
COMPREHENSIVE INCOME – COOPERATIVE	<u>\$ 8,460,061</u>	<u>\$ 7,661,547</u>

**Kaua'i Island Utility Cooperative
Consolidated Statements of Equities**

	Years Ended December 31,	
	2021	2020
CONTROLLING EQUITY INTEREST		
Memberships		
Balance at January 1	\$ 565	\$ 550
Additions	18	15
Balance at December 31	583	565
Patronage capital		
Balance at January 1	126,559,857	120,656,689
Transfer of net margins	8,296,852	7,414,742
Retirement of capital credits, net	(1,296,457)	(1,511,574)
Balance at December 31	133,560,252	126,559,857
Other equity		
Balance at January 1	984,074	887,665
Additions	64,157	96,409
Balance at December 31	1,048,231	984,074
Accumulated other comprehensive loss		
Balance at January 1	(1,028,145)	(1,274,950)
Amortization of gains	45,142	67,209
Actuarial gain	118,067	179,596
Balance at December 31	(864,936)	(1,028,145)
Total controlling equity interest	133,744,130	126,516,351
NON-CONTROLLING EQUITY INTEREST		
Capital account – A&B KRS II		
Balance at January 1	17,827,510	18,229,782
Distributions	(39,250)	(343,000)
Non-controlling interest in current earnings	(13,002)	(59,272)
Total non-controlling equity interest	17,775,258	17,827,510
Total equities	\$ 151,519,388	\$ 144,343,861

Kaua'i Island Utility Cooperative
Consolidated Statements of Cash Flows

	Years Ended December 31,	
	2021	2020
OPERATING ACTIVITIES		
Net margins	\$ 8,296,852	\$ 7,414,742
Adjustments to reconcile net margins to net cash from operating activities		
Depreciation and amortization	19,347,205	18,603,593
Accretion of asset retirement obligation	106,236	101,260
Interest earned on cushion of credit	(444,499)	(750,147)
Capital credit allocations	(240,619)	(255,259)
Net margins attributable to non-controlling interest	(13,002)	(59,272)
Forgiveness of PPP loan	(2,881,250)	-
Changes in assets and liabilities		
Accounts receivable and unbilled revenue	(2,679,770)	687,629
Energy rate adjustment clause	635,187	(248,323)
Inventories and other current assets	(3,676,732)	(1,138,726)
Deferred debits	(6,515,255)	(10,006,025)
Postretirement benefit obligation/asset	(37,910)	(108,352)
Payables and accrued expenses	869,525	(5,968,873)
Deferred credits	415,717	(443,669)
Net cash from operating activities	<u>13,181,685</u>	<u>7,828,578</u>
INVESTING ACTIVITIES		
Additions to utility plant, net	(16,395,848)	(24,788,756)
Rural economic development loans, net	(270,000)	196,124
Other investments	(4,887,687)	128,710
Net cash used for investing activities	<u>(21,553,535)</u>	<u>(24,463,922)</u>
FINANCING ACTIVITIES		
Borrowings from long-term debt	26,008,000	33,373,250
Principal payments on long-term debt	(11,138,445)	(11,783,628)
Distributions to non-controlling equity interest	(39,250)	(343,000)
Memberships	18	15
Other equities	64,157	96,409
Retirement of patronage capital	(1,296,457)	(1,511,574)
Net cash from financing activities	<u>13,598,023</u>	<u>19,831,472</u>
NET CHANGE IN CASH AND CASH EQUIVALENTS	5,226,173	3,196,128
CASH AND CASH EQUIVALENTS, beginning of year	<u>19,582,695</u>	<u>16,386,567</u>
CASH AND CASH EQUIVALENTS, end of year	<u>\$ 24,808,868</u>	<u>\$ 19,582,695</u>

Kaua'i Island Utility Cooperative
Consolidated Statements of Cash Flows

	Years Ended December 31,	
	2021	2020
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION		
Cash paid during the year for:		
Interest	\$ 6,353,630	\$ 6,944,069
Income taxes	\$ 10,833	\$ 13,129
NONCASH INVESTING ACTIVITIES		
Liabilities incurred for additions to utility plant	\$ 3,453,662	\$ 2,652,359
NONCASH NONOPERATING ACTIVITIES		
Forgiveness of PPP Loan	\$ 2,881,250	\$ -

Kaua'i Island Utility Cooperative

Notes to Consolidated Financial Statements

Note 1 – Organization

General – Kaua'i Island Utility Cooperative (the Cooperative), a not-for-profit cooperative association pursuant to the provisions of Chapter 421C of the Hawaii Revised Statutes, was formed to purchase and operate the electric utility on the island of Kaua'i, Hawaii. The Cooperative is the exclusive retail electric service provider for the island of Kaua'i and provides electric generation, transmission and distribution services to approximately 39,000 customers. The Cooperative's headquarters facility is located in Lihue, Hawaii.

On November 1, 2002, the Cooperative acquired substantially all of the assets of Kaua'i Electric (KE), a division of Citizens Communications Company (Citizens). The aggregate purchase price was approximately \$218 million, which included transaction costs incurred in the acquisition, and was financed by lines-of-credit from the National Rural Utilities Cooperative Finance Corporation (CFC) and loans from the U.S. government.

On October 10, 2011, the Cooperative created a wholly owned subsidiary, KIUC Renewable Solutions One LLC (KRS One). KRS One is a Delaware limited liability company that has elected to be treated as a corporation for federal tax purposes. KRS One was created to construct, own, and operate a photovoltaic (PV) facility for the purpose of selling the renewable energy produced by the PV facility to the Cooperative for use in the Cooperative's operations. The facility went into commercial operation on October 30, 2015.

On October 11, 2012, the Cooperative created a wholly owned subsidiary, KIUC Renewable Solutions Two LLC (KRS Two). KRS Two is a Delaware limited liability company that has elected to be treated as a disregarded entity for federal tax purposes. KRS Two was created to construct, own, and operate a PV facility for the purpose of selling the renewable energy produced by the PV facility to the Cooperative for use in the Cooperative's operations. The facility went into commercial operation on September 5, 2014.

On August 1, 2013, the Cooperative created a wholly owned subsidiary, KIUC Renewable Solutions Two Holdings LLC (KRS Two Holdings). KRS Two Holdings is a Delaware limited liability company that initially elected to be treated as a disregarded entity for federal tax purposes. Effective January 1, 2014, KRS Two Holdings has elected to be treated as a corporation for federal tax purposes. KRS Two Holdings was created as a holding company to own KRS Two. On August 28, 2013, the Cooperative transferred 100% of its membership interests in KRS Two to KRS Two Holdings.

On July 3, 2014, KRS Two Holdings and A&B KRS II LLC (Investor) entered into an Amended and Restated Limited Liability Company Agreement (the LLC Agreement) of KRS Two. On that date, KRS Two Holdings made a capital contribution to KRS Two in exchange for all of the Class A membership interests in KRS Two and the Investor made a capital contribution to KRS Two in exchange for all of the Class B Membership Interests in KRS Two. KRS Two Holdings is the Managing Member of KRS Two. Allocations of profits, losses, contributions, and distributions are made in accordance with the LLC Agreement. In accordance with the LLC Agreement, the "Flip Date" means the date on which Investor achieves an Internal Rate of Return (IRR) equal to the Target IRR, as defined in the LLC Agreement. The Flip Date had occurred during 2020.

Kaua'i Island Utility Cooperative **Notes to Consolidated Financial Statements**

Note 2 – Summary of Significant Accounting Policies

The accompanying consolidated financial statements reflect the financial position and results of operations for the Cooperative and its wholly owned subsidiaries KRS One and KRS Two Holdings. See Note 2, principles of consolidation, for further discussion on consolidation.

Principles of consolidation – The consolidated financial statements include the accounts of the Cooperative and its wholly owned subsidiaries, KRS One and KRS Two Holdings. KRS Two Holdings' consolidated financial statements include the accounts of KRS Two Holdings' partially owned subsidiary KRS Two. The consolidation of the Cooperative, KRS One, and KRS Two Holdings eliminated all intercompany transactions and balances. The consolidation of KRS Two Holdings and KRS Two eliminated all intercompany transactions and balances. See supplementary information for details on the elimination of intercompany transactions and balances.

Basis of accounting and presentation – The consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States of America as applied to regulated enterprises, which conform to policies prescribed or permitted by the Hawaii Public Utilities Commission (HPUC) and the United States Department of Agriculture, Rural Utilities Service (RUS).

The accounting records of the Cooperative are maintained in accordance with the Uniform System of Accounts as prescribed by the Federal Energy Regulatory Commission (FERC) for Class A and B electric utilities.

Regulatory accounting – Due to regulation of its rates by the Hawaii Public Utility Commission (HPUC), the Cooperative follows regulatory accounting requirements. Regulatory accounting requirements recognize that the ratemaking process can result in differences in the application of generally accepted accounting principles between regulated and non-regulated businesses. Such differences generally involve the accounting period in which various transactions enter into the determination of net margins. Accordingly, certain costs and income may be capitalized as a regulatory asset or liability that would otherwise be charged to expense or revenues. Regulatory assets and liabilities are recorded when it is probable that future rates will permit recovery and are approved by the HPUC (see Notes 6 and 10). Such balances are amortized over the period specified by the HPUC.

Memberships – In accordance with the Cooperative's bylaws, all electricity users can elect whether or not to become a member. Each member is entitled to one vote regardless of billing amounts.

Asset retirement obligations – The accounting for asset retirement obligations requires the recognition and measurement of liabilities for legal obligations associated with the retirement of tangible long-lived assets. Under these rules, an obligation occurs when a legally binding retirement obligation exists under enacted laws, statutes, written contracts or oral contracts. Asset retirement obligations (AROs) are recognized at fair value as incurred and capitalized as a component of the cost of the related tangible long-lived assets with a corresponding amount recorded as a liability.

Kaua'i Island Utility Cooperative

Notes to Consolidated Financial Statements

Note 2 – Summary of Significant Accounting Policies (continued)

Patronage capital – Net margins are assigned to individual Cooperative members' capital credit accounts based upon their pro rata use of total Cooperative electricity provided for the year (see Note 7). Capital credits are returned to members in accordance with the Cooperative's policies. Under the provisions of the mortgage agreements, the return to patrons of capital contributed by them is limited generally to 25% of margins received by the Cooperative in the prior calendar year. The equities and margins of the Cooperative represent 33.85% and 34.13% of the total assets at December 31, 2021 and 2020, respectively. The equity percentage is based on unconsolidated assets and equity of the Cooperative. Under the provisions of the 2010 HPUC approved rate case, subject to the loan agreements, the Cooperative is required to return patronage capital for amounts exceeding a 2.00 TIER in a given year.

Electric plant, acquisition cost, depreciation, amortization and maintenance – Electric plant is stated at the original cost of construction, which includes the cost of contracted services, direct labor and materials, and overhead items (see Note 3). Contributions from others toward the construction of electric plant are credited to the applicable plant accounts.

In accordance with RUS accounting regulations, electric plant acquisition costs represent the difference between the purchase price for the acquisition of KE's assets and the carrying value of those assets. This amount is being amortized over the remaining useful life of the assets acquired which was originally estimated to be 25 years.

Provision has been made for depreciation of electric plant at a straight-line composite rate by asset category averaging approximately 2.9% per annum. A depreciation study was conducted in August 2013 and was approved by the HPUC in December 2018. The effective date of the new depreciation rates was January 1, 2019. Depreciation for the years ended December 31, 2021 and 2020 was \$19,347,205 and \$18,603,593, respectively, of which \$18,808,331 and \$18,087,417 was charged to depreciation and amortization expense and \$538,874 and \$516,176 was allocated to other accounts, respectively.

When property which represents a retirement unit is replaced or removed, the average cost of such property as determined from the continuing property records is credited to electric plant and such cost, together with cost of removal less salvage, is charged to the accumulated provision for depreciation. Maintenance and repairs, including the renewal of minor items of plant not comprising a retirement unit, are charged to the appropriate maintenance accounts, except that repairs of transportation and service equipment are charged to clearing accounts and redistributed to operating expense and capital accounts. Management assesses impairment and the existence of asset retirement obligations annually and as circumstances warrant.

Investments in associated organizations – Investments in associated organizations are carried at cost (see Note 4), plus capital credits allocated and not retired.

Kaua'i Island Utility Cooperative
Notes to Consolidated Financial Statements

Note 2 – Summary of Significant Accounting Policies (continued)

Rural economic development loans – The Cooperative has received Rural Economic Development Grants (RED Grant) from the USDA Rural Development (USDA RD) Office in order to provide loans to promote sustainable rural economic development and job creation projects. The Cooperative is required to match 20% of the RED Grant award. The RED Grant is awarded to the Cooperative, who in turn loans the funds to the eligible project applicant at 0% interest for a term of up to ten years. When the loan recipient repays the loan, the loan funds are retained and placed into the Revolving Loan Fund (RLF) and then reused to fund new loans to additional projects (RLF Loans). The RLF Loans are made in accordance with the USDA RD approved Revolving Loan Fund Plan Loan Policies and Procedures Manual. Both the RED Grant loans and the RLF loans are stated at cost (see Note 4).

Cash equivalents – The Cooperative considers all highly liquid investments purchased with an original maturity of three months or less to be cash equivalents. Cash and cash equivalents, beginning of year, reported on the Statement of Cash Flows includes both cash and cash equivalents and restricted cash.

Restricted cash – Restricted cash is restricted for rural economic development loans and developer security deposits.

Other investments – Other investments consist of medium term notes held with CFC.

Accounts and notes receivable – Accounts and notes receivable are recorded when invoices are issued and are written off when they are determined to be uncollectible. The allowance for doubtful accounts is estimated considering the Cooperative's historical losses, review of specific problem accounts, existing economic conditions and the financial stability of its customers. Generally, the Cooperative considers accounts receivable past due after 46 days.

Inventories – Materials and supplies inventories consist primarily of items for construction and maintenance of electric plant and are valued at average unit cost. Fuel inventories consist of naphtha and diesel fuel for the generation units and are valued at lower of cost or net realizable value (see Note 5).

Preliminary survey and investigation charges – Preliminary Survey and Investigation (PSI) Charges, included under Deferred Debits, include costs for preliminary surveys, plans, and investigations made for the purpose of determining the feasibility of proposed construction projects. The portion pertaining to plant which is actually constructed is charged to Construction Work in Progress. Any portion pertaining to projects that are abandoned is charged to the appropriate operating expense account (see Note 6).

Accrued vacation – The Cooperative accrues accumulated unpaid vacation as the obligation is incurred. Compensated absences are included in “accrued employee compensation.”

Customer advances for construction – Customer advances for construction represent advances for construction jobs that the customer requested, such as line extensions. The customer advance is held in a deferred credit account until the requirements have been met, at which time the advance, or applicable proportion of the advance, is refunded. If the requirements are not met within a five-year time period, the advance is forfeited by the customer and credited to electric plant.

Kaua'i Island Utility Cooperative

Notes to Consolidated Financial Statements

Note 2 – Summary of Significant Accounting Policies (continued)

Overhaul accounting – In accordance with an HPUC Decision & Order, the Cooperative accrues for overhaul costs on the generation equipment by charging a proportion of the estimated cost of the overhaul, over the period covered by the overhaul cycle, to maintenance expense. The overhaul cycle for the individual generation units vary based on the type of unit and hours of use. For most generation units, the typical overhaul cycle is every two to five years. When the overhaul occurs, the actual costs are charged against the overhaul deferred credit (regulatory liability – scheduled plant maintenance), with any leftover being charged to maintenance expense (see Note 10).

Post-retirement benefits – The Cooperative sponsors a Retiree Welfare Benefit Plan (the Plan). The Cooperative accounts for the Plan by reporting the current economic status (the overfunded or underfunded status) of the Plan in the balance sheets and measuring the Plan assets and Plan obligations as of the balance sheets date (see Note 14).

Taxes – The Cooperative is exempt from federal income taxes under the provisions of Section 501(c)(12) of the Internal Revenue Code, except to the extent of unrelated business income, if any. The Cooperative adopted Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 740-10, relating to accounting for uncertain tax positions. As of December 31, 2021 and 2020, the Cooperative does not have any uncertain tax positions. The Cooperative files an exempt organization and unrelated business income tax return in the U.S. federal jurisdiction and the corporate subsidiaries file a corporate return with the U.S. federal and state of Hawaii jurisdictions.

The Cooperative is not exempt under Hawaii Revised Statutes from state income taxes; however, margins that are allocated within a specific time period are considered a deduction for state income tax purposes. For the State of Hawaii, the Cooperative is also assessed a 5.885% of gross revenues Public Service Company Tax in lieu of general excise taxes and county real property taxes. Also, the Cooperative is assessed a 0.5% of gross revenues Public Utility Commission Fee. For the County of Kaua'i, Hawaii, the Cooperative is assessed a 2.5% franchise fee on gross revenues.

KRS One is a Delaware limited liability company that has elected to be treated as a corporation for federal tax purposes. KRS One has federal tax net operating losses of approximately \$40.3 million as of December 31, 2021. A valuation allowance has been recorded to offset the deferred tax asset related to the tax net operating losses due to the uncertainty of the ability for the Company to generate future taxable profits to utilize the tax benefit.

KRS Two Holdings is a Delaware limited liability company that has elected to be treated as a corporation for federal tax purposes. KRS Two Holdings has federal tax net operating losses of approximately \$7.4 million as of December 31, 2021. A valuation allowance has been recorded to offset the deferred tax asset related to the tax net operating losses due to the uncertainty of the ability for the Company to generate future taxable profits to utilize the tax benefit.

Kaua'i Island Utility Cooperative
Notes to Consolidated Financial Statements

Note 2 – Summary of Significant Accounting Policies (continued)

Electric revenues and unbilled revenue – The Cooperative recognizes revenues based on rates (tariffs) authorized by the HPUC including unbilled revenue, revenue from electric power delivered but not yet billed to the customers. The Cooperative's obligation to sell electricity to its customers generally represent a single performance obligation representing a series of distinct goods that are substantially the same and have the same pattern of transfer to the customers that are satisfied over time as the customers simultaneously receives and consumes the benefits provided.

The Cooperative applies the invoice method to measure its progress towards satisfactorily completing its performance obligations to transfer each distinct delivery of electricity in the series to the customers. Revenue is recorded through the balance sheet date.

The Cooperative's tariffs for electric service include energy rate adjustment clauses under which billings to customers are adjusted to reflect changes in the cost of fuel. In order to match power costs and related revenues, under-collected or over-collected power costs to be billed or credited to consumers in subsequent periods is recognized as a current asset or current liability and as an increase or decrease of classified operating revenues on the statement of operations.

Sales for resale – KRS One and Two's primary revenue source is generated through the sale of electricity to a sole customer, the Cooperative, a related party, in accordance with the Purchase Power Agreements (PPA). KRS One and Two recognizes revenues based on the PPA rate authorized by the HPUC. KRS One and Two's obligation to sell electricity to its customer generally represents a single performance obligation representing a series of distinct goods that are substantially the same and have the same pattern of transfer to the customer that is satisfied over time as the customer simultaneously receives and consumes the benefits provided. KRS One and Two apply the invoice method to measure its progress towards satisfactorily completing its performance obligations to transfer each distinct delivery of electricity in the series to the customer. Revenue is recorded through the balance sheet date.

Cushion of credit – RUS established a Cushion of Credit Payment Program, whereby borrowers may make advance payments on their RUS and Federal Financing Bank (FFB) notes. These advance payments earned interest at the rate of 5.0% per annum until September 30, 2020. Beginning October 1, 2020, the interest rate was reduced to 4.0% per annum. Beginning October 1, 2021, the interest rate was reduced to the one-year Treasury interest rate in effect on October 1, 2021 and shall be reset at the one-year Treasury interest rate on October 1st each year thereafter. On October 1, 2021 the one-year Treasury interest rate was 0.09%. The advance payments, plus any accrued interest, can only be used for the payment of principal and interest on the notes. The Cooperative's participation in the Cushion of Credit Payment Program totaled approximately \$15 million and \$14.6 million at December 31, 2021 and 2020, respectively, and is recorded as a reduction of RUS long-term debt on the consolidated balance sheets.

Kaua'i Island Utility Cooperative

Notes to Consolidated Financial Statements

Note 2 – Summary of Significant Accounting Policies (continued)

Environmental matters – The Cooperative is subject to federal, state and local environmental laws. These laws regulate the discharge of materials into the environment and may require the Cooperative to mitigate the effects of a release of a hazardous substance. Environmental matters are recorded when it is probable that a liability has been incurred and the amount of the liability can be reasonably estimated. In general, costs related to environmental matters are charged to expense. Environmental costs are capitalized if the costs increase the value of the property and/or prevent or mitigate contamination from future operations. Although the level of future expenditures for environmental matters is difficult to determine, it is management's opinion that such costs when determined will not have a material adverse effect on the Cooperative's financial condition. Accordingly, no provision has been included in the accompanying consolidated financial statements.

Concentration of credit risk – Financial instruments that are exposed to concentrations of credit risk consist primarily of cash, including other investments, and receivables.

The Cooperative maintains its cash in deposit accounts in various financial institutions and its other investments in highly rated securities. At times these balances exceed federally insured limits.

Credit is extended to customers generally without collateral requirements; however, the Cooperative requires a deposit from some members upon connection, which is applied to unpaid bills and fees in the event of default. The deposit only accrues interest if held longer than the establishment of 12 months of good payment history and is returned along with any accrued interest periodically. In addition, formal shut-off procedures are in place.

Use of estimates – The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. These estimates include the allowance for doubtful accounts, unbilled revenue, overhaul deferrals, the post-retirement benefit obligation, asset retirement obligation and depreciation of electric plant. Actual results could differ from those estimates.

Fair value measurements – The Cooperative has determined the fair value of certain assets and liabilities in accordance with the provisions of Accounting Standards Codification (ASC) 820, *Fair Value Measurements and Disclosures*, which provides a framework for measuring fair value under generally accepted accounting principles.

ASC 820 defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. ASC 820 requires that valuation techniques maximize the use of observable inputs and minimize the use of unobservable inputs. ASC 820 also establishes a fair value hierarchy, which prioritizes the valuation inputs into three broad levels.

Kaua'i Island Utility Cooperative
Notes to Consolidated Financial Statements

Note 2 – Summary of Significant Accounting Policies (continued)

Level 1 inputs consist of quoted prices in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date. Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the related asset or liability. Level 3 inputs are unobservable inputs related to the asset or liability. The Cooperative's policy is to recognize significant transfers between levels on the date of the transfer. Other investments are considered level 2 inputs.

Note 3 – Electric Plant in Service

The major classes of electric plant in service are as follows at December 31:

	2021	2020
Production plant	\$ 227,241,649	\$ 225,071,482
Transmission plant	94,040,220	82,828,233
Distribution plant	229,424,372	212,737,254
General plant	48,370,921	46,727,121
Asset retirement costs	2,237,197	2,237,197
Total electric plant in service	\$ 601,314,359	\$ 569,601,287

Kaua'i Island Utility Cooperative
Notes to Consolidated Financial Statements

Note 4 – Other Property and Investments

Other investments consisted of the following at December 31:

	2021	2020
Investments in associated organizations		
National Rural Utilities Cooperative Finance Corporation		
Capital term certificates		
Subscription capital term certificates		
(3% interest, matures 2085)	\$ 412,000	\$ 412,000
Zero term capital certificates (0% interest, mature 2024)	164,800	164,800
Member capital securities (5% interest, first call date 2024, mature 2044)	250,000	250,000
Patronage capital	943,654	842,341
Membership	1,000	1,000
Other	168,497	141,504
	1,939,951	1,811,645
Rural economic development loans		
National Tropical Botanical Gardens 2	217,500	262,500
YWCA	30,000	75,000
Island School 2	360,000	-
	607,500	337,500
Total other investments	\$ 2,547,451	\$ 2,149,145

Note 5 – Inventories

Inventories consisted of the following at December 31:

	2021	2020
Materials and supplies	\$ 17,378,619	\$ 15,323,063
Fuel	1,681,328	1,011,290
Total inventories	\$ 19,059,947	\$ 16,334,353

Kaua'i Island Utility Cooperative Notes to Consolidated Financial Statements

Note 6 – Deferred Debits

Deferred debits consisted of the following at December 31:

	2021	2020
Regulatory asset – Iniki damage	\$ 219,132	\$ 511,392
Regulatory asset – demand-side management (DSM) and integrated resource plan (IRP)	168,507	(15,534)
Regulatory asset – suspension of disconnections	373,892	659,041
Regulatory asset – COVID-19 (LGM)	13,532,996	8,797,811
Regulatory asset – pension costs	8,371,906	6,909,350
DHHL Lease Road Fund	753,333	793,333
HCDC Joint Development fee	113,000	119,000
Preliminary survey and investigation	10,592,886	9,333,899
Other deferred debits	164,153	666,258
Total deferred debits	\$ 34,289,805	\$ 27,774,550

Regulatory asset – Iniki damage relates to costs of utility plant destroyed in 1992 that were approved by the HPUC in 1996 to be deferred over twenty-six years. The regulatory asset is being amortized to depreciation expense and the regulatory liability (Note 10) is being amortized to accumulated depreciation. Amortization was \$292,260 during 2020 and 2021 and is expected to be \$219,132 for next year.

As part of the 2009 rate case, the HPUC approved a maximum amount of annual pension plan costs to be included in rates. The rate case also required the Cooperative to establish a tracking mechanism to record changes in costs beginning in January 2010 as a regulatory asset. The treatment of the accumulated balance in the regulatory asset will be addressed in the next rate case.

During 2020, the Cooperative also received regulatory approval to defer costs associated with suspension of disconnections and loss gross margin (LGM). These costs will be included in a future application for recovery.

Preliminary survey and investigation includes approximately \$8.6 million in costs as of December 31, 2021, and \$5.4 million in costs as of December 31, 2020, related to a hydro facility that is currently in the site-control study, engineering, environmental review, and permitting phase in addition to engineering and related costs for other planned projects. In 2020, the Cooperative signed agreements with AES West Kaua'i Energy Project, LLC (Developer), for the development, construction, and operation of the Cooperative's solar pumped storage hydro project, also known as the West Kaua'i Energy Project (WKEP). One of those agreements was a Development Agreement which conveys, assigns and transfers all of the Development Assets to the Developer. In consideration, the Developer will make various payments to the Cooperative after the achievement of predefined milestones. The total of the milestone payments will reimburse the Cooperative for the hydro facility PSI cost incurred. In 2021, the Cooperative wrote off \$1.5 million in PSI cost incurred that were greater than the agreed upon milestone payments. Construction of the hydro facility is expected to begin in 2024. Deferred preliminary survey and investigation costs are capitalized to construction in progress when the construction phase begins or expensed if the project is abandoned.

Kaua'i Island Utility Cooperative
Notes to Consolidated Financial Statements

Note 7 – Patronage Capital

Patronage capital consisted of the following at December 31:

	2021	2020
Assigned to date	\$ 160,708,063	\$ 153,293,321
Assignable	8,296,852	7,414,742
Total	169,004,915	160,708,063
Retired to date	(35,444,663)	(34,148,206)
Balance	\$ 133,560,252	\$ 126,559,857

Note 8 – Long-Term Debt

The Cooperative has long-term debt due to FFB, National Rural Utilities Cooperative Finance Corporation (CFC), CoBank, ACB and National Cooperative Services Corporation (NCSC). Substantially all assets of the Cooperative are pledged as security for the long-term debt and the notes are subject to certain covenants.

Kaua'i Island Utility Cooperative
Notes to Consolidated Financial Statements

Note 8 – Long-Term Debt (continued)

Following is a summary of long-term debt at December 31:

	2021	2020
Fixed and variable notes payable due to FFB in quarterly installments of principal and interest with rates ranging from 2.574% to 4.430%, maturing December 31, 2023	\$ 5,410,217	\$ 7,122,640
Fixed and variable notes payable due to FFB in quarterly installments of principal and interest with rates ranging from 2.424% to 3.334%, maturing December 31, 2042	65,750,692	67,472,678
Fixed and variable notes payable due to FFB in quarterly installments of principal and interest with rates ranging from 1.326% to 3.437%, maturing December 31, 2051	43,189,025	35,853,681
Fixed note payable due to CFC in quarterly installments of principal and interest at a rate of 3.69%, maturing September 30, 2023	942,796	1,453,185
Fixed note payable due to CFC in monthly installments of principal and interest at a rate of 2.55%, maturing March 31, 2035	83,586,921	88,823,559
Fixed note payable due to CFC in monthly installments of principal and interest at a rate of 2.760%, maturing December 31, 2049	25,468,298	26,063,916
Fixed note payable due to CoBank in monthly installments of principal and interest rate of 2.90%, maturing February 20, 2051	17,799,526	-
PPP loan obtained from financial institution fully forgiven on August 11, 2021.	-	2,881,250
RUS/FFB advance payments (cushion of credit)	(15,041,771)	(14,597,272)
Fixed note payable due to NCSC in quarterly installments of principal and interest at a rate of 4.650%, maturing June 30, 2039	13,463,463	13,951,724
Total long-term debt	240,569,167	229,025,361
Less current maturities	(14,422,637)	(14,064,298)
Long-term debt, less current maturities	\$ 226,146,530	\$ 214,961,063

Kaua'i Island Utility Cooperative
Notes to Consolidated Financial Statements

Note 8 – Long-Term Debt (continued)

KRS Two has a loan with the NCSC, an affiliate of the CFC, to provide permanent financing for the solar project. Substantially all assets of KRS Two are pledged as security for the loan and the loan is subject to financial covenants. The Cooperative has provided NCSC with a guaranty of the indebtedness of KRS Two to NCSC.

Principal maturities of long-term debt for the next five years and thereafter are as follows:

2022	\$ 14,422,637
2023	13,356,576
2024	10,778,918
2025	11,061,139
2026	11,364,586
Thereafter	<u>194,627,082</u>
	<u>\$ 255,610,938</u>

On April 16, 2020, the Cooperative received a loan through the Paycheck Protection Program (PPP) in the amount of \$2,881,250, bearing interest at an annual rate of 1.00%. Under the terms of the Coronavirus Aid, Relief, and Economic Securities Act (CARES Act), loan recipients may apply for and be granted forgiveness for all or a portion of the loan granted under the PPP. Such forgiveness will be determined, subject to limitations, based on the use of the proceeds for payroll costs, rent, or utility costs and the maintenance of employee and compensation levels. On August 11, 2021, the Cooperative was granted full loan forgiveness in the amount of \$2,881,250, which was recorded to other non-operating income (expense).

Note 9 – Line-of-Credit

The Cooperative has a perpetual secured \$60,000,000 disaster line-of-credit, a perpetual unsecured \$5,000,000 line-of-credit for short-term financing, a 5-year unsecured \$20,000,000 line-of-credit for construction financing with CFC at variable interest rates ranging from 2.45% to 2.70% at December 31, 2021. The CFC disaster line-of-credit is secured by substantially all Cooperative assets. The CFC lines are subject to termination provisions and certain covenants. The total balance outstanding was \$0 at December 31, 2021 and 2020.

The Cooperative also has a 1-year unsecured \$15,000,000 line-of-credit for working capital with CoBank at variable interest rate of 2.41% at December 31, 2021. The total balance outstanding was \$0 at December 31, 2021 and 2020.

Kaua'i Island Utility Cooperative
Notes to Consolidated Financial Statements

Note 10 – Deferred Credits

Deferred credits consisted of the following at December 31:

	2021	2020
Rural economic development grant	\$ 1,895,319	\$ 1,595,319
Hydro development capital	-	100,000
Right of entry deposit	6,305	6,305
Customer advances for construction	5,249,453	3,914,124
Regulatory liability – Iniki	219,132	511,392
Regulatory liability – scheduled plant maintenance	3,918,410	4,745,762
Total deferred credits	\$ 11,288,619	\$ 10,872,902

Note 11 – Asset Retirement Obligation

For the year ended December 31, 2014, KRS Two completed an asset retirement obligation (ARO) calculation with the assumption that the assets will be in service through the year 2044. The useful life expectations used in the calculations of the ARO are based on the assumption that operations will continue without deviation from historical trends. As of December 31, 2014, the ARO capitalized asset and the offsetting ARO liability were established at present value. The ARO asset will be depreciated through 2044 on a straight line basis and the ARO liability will be accreted through 2044 using a discount rate and effective interest method.

In 2015 KRS Two was able to obtain a more accurate estimate of the decommissioning costs by surveying the contractors who built KRS Two's Koloa Solar Farm and KRS One's Anahola Solar Farm. Based on the estimates from the two independent nationwide contractors, KRS Two revised its estimate of the decommissioning costs, resulting in a \$698,556 decrease to the present value of the ARO capitalized asset and offsetting ARO liability.

For the year ended December 31, 2015, KRS One completed an asset retirement obligation (ARO) calculation with the assumption that the assets will be in service through the year 2040. The useful life expectations used in the calculations of the ARO are based on the assumption that operations will continue without deviation from historical trends. As of December 31, 2015, the ARO capitalized asset and the offsetting ARO liability were established at present value. The ARO asset will be depreciated through 2040 on a straight line basis and the ARO liability will be accreted through 2040 using a discount rate and effective interest method.

Kaua'i Island Utility Cooperative
Notes to Consolidated Financial Statements

Note 11 – Asset Retirement Obligation (continued)

The following table provides a reconciliation of the beginning and ending ARO liability for 2021 and 2020:

	2021	2020
Balances at January 1	\$ 2,740,170	\$ 2,638,910
Accretion of ARO liability	106,236	101,260
Balances at December 31	\$ 2,846,406	\$ 2,740,170

Note 12 – Litigation, Commitments, and Contingencies

Litigation – In the normal course of business, the Cooperative is a party to claims and matters of litigation. The ultimate outcome of these matters cannot presently be determined; however, in the opinion of management of the Cooperative, the resolution of these matters will not have a material adverse effect on the Cooperative's financial position, results of operations or liquidity.

Litigation arbitration – In 2021 KIUC was party to an arbitration with one of its suppliers. A judgement was issued in favor of the supplier. KIUC is appealing the arbitration. KIUC does not expect the arbitration award to have a material impact on the it's financials. No accrual has been made in the financials due to the uncertainty of the outcome.

Fuel contract – As a result of the purchase of KE assets, Citizens assigned to the Cooperative a fuel supply contract with an international oil refining company that is renewable for 12-month periods unless terminated by the Cooperative or the supplier; 100% of the Cooperative's fuel is obtained through this supply contract. The price is adjusted monthly to equal a published price, as defined, plus other defined costs such as terminal and freight costs. Fuel costs under this contract for the years ended December 31, 2021 and 2020, were \$29,894,685 and \$20,881,084, respectively.

Power supply – 40% of the Cooperative's power is generated using diesel and naphtha generating units. In addition, the Cooperative maintains various power supply agreements to purchase power from hydroelectric, biomass and photovoltaic projects. The terms of the agreements vary and include termination provisions.

In 2011, the Cooperative created a wholly owned subsidiary, KIUC Renewable Solutions One LLC (KRS One). KRS One developed a 14.5 MWdc solar photovoltaic facility with an integrated Battery Energy Storage System and associated interconnection facilities on a 55-acre parcel of land leased from the State of Hawaii, Department of Hawaiian Home Lands located in Anahola, Kauai, Hawaii. The output of the project provides 12 MWac of peak power for the electric system on Kauai, an amount that represents about 5% of total energy consumption and would power approximately 4,000 homes. The solar project was built for KRS One under an Engineering Procurement and Construction contract with REC Solar, Inc. and was placed in service in October 2015. This project is estimated to have a 25-year life.

Kaua'i Island Utility Cooperative

Notes to Consolidated Financial Statements

Note 12 – Litigation, Commitments, and Contingencies (continued)

In 2011, the Cooperative signed an agreement with Green Energy Team, LLC, to purchase power from its proposed 6.7 MW biomass-to-energy facility located near Koloa. The biomass-to-energy plant contributes firm capacity to the Cooperative's system and provides more than 11% of Kauai's energy needs. The biomass plant supplies enough electricity to power 8,500 homes, annually replacing about 3.7 million gallons of imported fossil fuel. This project is the first closed-loop biomass-to-energy plant in the United States and is considered to be carbon neutral. The project maximizes the use of natural fertilization processes, including intercropping with alternate rows of nitrogen-fixing trees and the use of fertilizers created as a byproduct of the plant combustion cycle. The biomass fuel is supplied primarily by more than 2,500 acres of short-rotation crops grown on Kaua'i. The facility was placed in service in January 2016. The contract includes a fixed-price per MWh power purchase agreement with a term of 20 years in addition to a monthly capacity charge. The annual capacity charge is \$5.7 million per year over the life of the initial term of the agreement. This capacity charge is subject to adjustment based on the terms of the agreement. Total power payments to Green Energy Team LLC were \$12,603,789 and \$12,260,658 during the years ended December 31, 2021 and 2020, respectively.

In 2012, the Cooperative created a wholly owned subsidiary, KIUC Renewable Solutions Two LLC (KRS Two). KRS Two developed a 14.3 MWdc solar photovoltaic facility and associated interconnection facilities on a 67-acre parcel of land leased from Grove Farm Co., Inc. near Koloa, Kaua'i, Hawaii. The output of the project provides 12 MWac of peak power for the electric system on Kaua'i, an amount that represents about 5% of total energy consumption and would power approximately 4,000 homes. The solar project was built for KRS Two under an Engineering Procurement and Construction contract with SolarCity and was placed in service in September 2014. The project is expected to have a 25-year life.

In 2015, the Cooperative signed an agreement with SolarCity Corporation, to purchase power from its proposed 13 MW dispatchable solar storage facility located adjacent to the Cooperative's Kapaia power station. The utility-scale solar array and battery storage system allows the Cooperative to use stored solar energy to displace fossil fuel generation in the evening hours and is believed to be the first utility-scale dispatchable solar system in the United States. The facility was placed in service in May of 2017. The contract includes a fixed-price per MWh power purchase agreement with a term of 20 years.

During 2016, the Cooperative signed an agreement with AES Lawai Solar, LLC to purchase power from its dispatchable solar storage facility. The project combined 28 MWdc of solar capacity with a 20 MWdc five-hour duration energy storage system to help the Cooperative shift solar energy into the evening peak hours. The facility was placed into service December 2018. This contract includes a fixed-price per MWh power purchase agreement with an initial term of 25 years.

In addition to power purchased from wholly owned subsidiaries and Green Energy Team, LLC, the Cooperative has agreements with other entities for the purchase of hydroelectric and solar photovoltaic power. Total payments under these fixed-price per MWh power purchase agreements were \$26,722,807 and \$24,305,775 during the years ended December 31, 2021 and 2020, respectively.

Kaua'i Island Utility Cooperative

Notes to Consolidated Financial Statements

Note 12 – Litigation, Commitments, and Contingencies (continued)

In 2014, the Cooperative signed an agreement with Gay & Robinson Inc., to continue to purchase power from its existing 1.25 MW hydroelectric generating facility and to purchase power from its proposed 6 MW expansion hydroelectric generating facility, which was constructed in 2018. The contract includes a fixed-price per MWh power purchase agreement with an initial term of 25 years. The facility was placed in service January 2019.

In 2017, the Cooperative signed an agreement with AES Kekaha Solar, LLC, to purchase power from its proposed 19.3 MWdc solar photovoltaic and 14 MWac five-hour duration battery energy storage system located on the Pacific Missile Range Facility on the western side of the island in the town of Kekaha. The utility-scale solar array and battery storage system will allow KIUC to use stored solar energy to displace fossil fuel generation in the evening hours. The facility was placed into service March 2021. This contract includes a fixed-priced per MWh power purchase agreement with an initial term of 25 years.

In 2020, the Cooperative signed agreements with AES West Kauai Energy Project, LLC, for the development, construction, and operation of the cooperative's solar pumped storage hydro project, also known as the West Kaua'i Energy Project (WKEP) and for the purchase of power from WKEP once it is operational. WKEP is an integrated renewable energy and irrigation project with several key components: renewable energy production via hydropower and solar photovoltaic generation, coupled with pumped hydropower and battery energy storage to shift most of the project's output into the nighttime peak. This project will offset the use of 8.5 million gallons of fossil fuels annually and supply irrigation water delivery to support diversified agriculture on state-owned lands. The project will also rehabilitate the existing Pu'u 'Ōpae, Pu'u Lua, and Mānā Reservoirs and the related ditch system infrastructure. In addition, historic diversion structures in Koke'e will be modified to restore and increase flow to the Waimea River in compliance with the instream flow standard established by the Waimea Watershed Agreement and adopted by the Commission on Water Resources in April 2017. When operational, the solar array will contribute up to 35 megawatts directly to the grid and will store up to 240 megawatt hours for dispatch during evening peak. The hydro resources are expected to produce 24 megawatts on average daily, which includes 12 hours of storage to be used overnight. This long-duration storage capacity will allow the island to run on 100% renewable energy for prolonged periods without sunlight and will provide additional grid stability by balancing intermittent solar with firm hydropower. WKEP is expected to meet roughly 25% of Kaua'i's electricity needs and will move Kaua'i beyond 80% renewable generation. Environmental studies for WKEP have been ongoing. The facility is anticipated to be constructed in 2024 and 2025. The purchase power contract includes 3 Facility components that each have different terms as follows: 1) the PV System and BESS components of the Facility contain a fixed-price per MWh and have a term of 25 years from the PV System/BESS/Pumped Storage Hydropower commercial operation date, 2) the Pumped Storage Hydropower component of the Facility contains a capacity charge that is subject to adjustment based on the terms of the agreement and has a term of 40 years from the PV System/BESS/Pumped Storage Hydropower commercial operation date, and 3) the Hydropower-only component of the Facility contains a capacity charge that is subject to adjustment based on the terms of the agreement and has a term of 50 years from the Hydropower-only commercial operation date.

Union contract – The Cooperative has an agreement with one union. As of December 31, 2021, 62% of the positions and 60% of the employees were covered by the union contract. The agreement expires in December 2023.

Kaua'i Island Utility Cooperative
Notes to Consolidated Financial Statements

Note 12 – Litigation, Commitments, and Contingencies (continued)

Operating lease – The Cooperative leases their headquarters under a non-cancelable operating lease which expires in 2030 and contains options to extend the term up to an additional 15 years. The lease also includes an option to purchase the landlord's interest, as defined, in the year 2025.

KRS One leases the land upon which their solar facility is located under a non-cancelable operating lease which expires in 2040.

KRS Two leases the land upon which their solar facility is located under a non-cancelable operating lease which expires in 2039 and contains an option to extend the term an additional 5 years.

As of December 31, 2021, the future minimum rental commitments under these leases are as follows:

2022	\$	1,342,997
2023		1,345,191
2024		1,347,450
2025		1,408,669
2026		1,260,355
Thereafter		15,963,289
	\$	22,667,951

In addition to the amounts above, the Cooperative is responsible for common area maintenance costs, real property taxes and other reimbursable operating expenses. Rent expense for the years ended December 31, 2021 and 2020, was \$1,627,046 and \$1,591,877, respectively.

Note 13 – Pension Benefits

Effective November 1, 2002, the Cooperative adopted a retirement program available for all employees meeting length of service requirements. The program is a multi-employer plan administered by the National Rural Electric Cooperative Association (NRECA) and includes a non-contributory defined benefit pension and a contributory defined contribution 401(k) plan. Approximately 1,000 rural electric systems participate in each of these plans. Withdrawal from the plan may result in the Cooperative having a significant obligation to the program. The Cooperative does not currently intend to withdraw from the plan and, accordingly, no provision has been included in the accompanying consolidated financial statements.

RS Plan disclosure information for the Retirement Security Plan – The National Rural Electric Cooperative Association (NRECA) Retirement Security Plan (RS Plan) is a defined benefit pension plan qualified under Section 401 and tax-exempt under Section 501(a) of the Internal Revenue Code. It is a multiemployer plan under the accounting standards. The plan sponsor's Employer Identification Number is 53-0116145 and the Plan Number is 333.

Kaua'i Island Utility Cooperative

Notes to Consolidated Financial Statements

Note 13 – Pension Benefits (continued)

A unique characteristic of a multiemployer plan compared to a single employer plan is that all plan assets are available to pay benefits of any plan participant. Separate asset accounts are not maintained for participating employers. This means that assets contributed by one employer may be used to provide benefits to employees of other participating employers.

Plan information – The Cooperative's contributions to the RS Plan in 2021 and in 2020 represented less than 5 percent of the total contributions made to the plan by all participating employers. The Cooperative made contributions to the plan of \$4,103,156 in 2021 and \$3,611,094 in 2020. There have been no significant changes that affect the comparability of 2021 and 2020 contributions.

In the RS Plan, a "zone status" determination is not required, and therefore not determined, under the Pension Protection Act (PPA) of 2006. In addition, the accumulated benefit obligations and plan assets are not determined or allocated separately by individual employer. In total, the Retirement Security Plan was over 80 percent funded at January 1, 2021 and 2020, based on the PPA funding target and PPA actuarial value of assets on those dates.

Because the provisions of the PPA do not apply to the RS Plan, funding improvement plans and surcharges are not applicable. Future contribution requirements are determined each year as part of the actuarial valuation of the plan and may change as a result of plan experience.

Disclosure information for the NRECA 401(k) plan – The NRECA 401(k) permits elective contributions up to 100% of the participant's salary to a maximum of \$19,500. These limits do not include certain catch-up provisions and provides the Cooperative will match 50% of the first 8% of employee base pay contributions. The Cooperative employer portion of the 401(k) plan contributions for 2021 and 2020 totaled \$589,996 and \$583,889, respectively.

Note 14 – Post-Retirement Benefits

The Cooperative's Retiree Welfare Benefit Plan (the Plan) and its associated trust, the KIUC Retiree Welfare Benefit Trust (the Trust), were adopted effective January 1, 2003. The Plan provides certain non-contributory medical (which includes a dollar cap, for which retirees pay back the Cooperative for amounts exceeding the cap), dental, vision and life insurance benefits for retired employees, their beneficiaries, and covered dependents. Benefits are paid on behalf of retirees and are a function of medical insurance costs and number of retirees. Benefits paid for the years ended December 31, 2021 and 2020, were \$257,179 and \$290,038, respectively. The measurement date for the current valuation is December 31, 2021.

Kaua'i Island Utility Cooperative
Notes to Consolidated Financial Statements

Note 14 – Post-Retirement Benefits (continued)

Weighted-average assumptions used to determine the net periodic benefit cost for the year ended December 31, 2021:

- Discount rate: 2.80% and 2.50% as of December 31, 2021 and 2020, respectively
- Expected long-term return on plan assets: 2.87% (based on the ten-year performance of the funds, weighted by market value as of December 31, 2021)
- Health care cost trend rate assumed for next year: 6.40% for pre-age 65 and 4.50% medical and 5.00% drug for post-age 65
- Rate to which the cost trend rate is assumed to decline (the ultimate trend rate): 5.00% for pre-age 65 and 4.50% medical and 5.00% drug for post-age 65

	2021	2020
Net post-retirement benefit cost		
Interest cost	\$ 94,317	\$ 122,862
Expected return on plan assets	(137,466)	(158,257)
Recognized net actuarial expense	45,142	67,209
Net post-retirement benefit cost	\$ 1,993	\$ 31,814
Accumulated post-retirement benefit obligation (APBO)		
APBO balance at the beginning of year	\$ (4,020,336)	\$ (4,254,343)
Interest costs	(94,317)	(122,862)
Actuarial (loss) gain	88,193	66,831
Benefits paid	257,179	290,038
APBO balance at the end of year	\$ (3,769,281)	\$ (4,020,336)
Reconciliation of funded status		
APBO	\$ (3,769,281)	\$ (4,020,336)
Assets funded	3,983,784	4,033,720
Accrued post-retirement funded status	\$ 214,503	\$ 13,384
Accumulated comprehensive other loss		
Unrecognized prior loss	\$ 1,028,145	\$ 1,274,950
Amortization of gains and losses	(45,142)	(67,209)
Actuarial gain	(118,067)	(179,596)
Accumulated other comprehensive loss	\$ 864,936	\$ 1,028,145

Kaua'i Island Utility Cooperative
Notes to Consolidated Financial Statements

Note 14 – Post-Retirement Benefits (continued)

The following benefit payments, which reflect expected future service as appropriate, are expected to be paid:

2022	\$	293,502
2023		276,113
2024		270,854
2025		264,278
2026		260,397
2027-2031		<u>1,210,056</u>
	\$	<u><u>2,575,200</u></u>

The Plan assets are held in the Trust and are invested in the Central Pacific Bank's Trust Division at December 31, 2021.

The Plan assets are managed by a trustee and are authorized to be held in various equity and fixed income investments and cash equivalents. The trustee is not allowed to invest in real estate or any other investment other than those noted in the investment policy. The investing strategy is long-term with a focus on moderate volatility and moderate growth investments. All investments at December 31, 2021 and 2020, were Level 1 investments as outlined in the fair value hierarchy as they have quoted prices in active markets for identical assets. The following table shows the investment allocation for Plan assets:

	<u>2021</u>	<u>2020</u>
Cash and other accrued income	\$ 1,789	\$ 1,927
Mutual funds	217,518	583,590
Bonds	<u>3,764,477</u>	<u>3,448,203</u>
	<u><u>\$ 3,983,784</u></u>	<u><u>\$ 4,033,720</u></u>

Kaua'i Island Utility Cooperative
Notes to Consolidated Financial Statements

Note 15 – Subsequent Events

On February 10, 2022, KIUC received a loan advance on the \$49,519,000 Construction Work Plan loan in the amount of \$4,900,000. The interest rate for this advance is 3.33% fixed through the maturity date of February 10, 2052.

Since January of 2020, the coronavirus (COVID-19) outbreak, characterized as a pandemic by the World Health Organizations on March 11, 2020, has caused significant disruptions in the international and U.S. economies and markets. The Company's top priority is the health and safety of their employees, and they are following published guidelines by the Center for Disease Control (CDC) and other governmental health organization in implementing procedures to protect their employees. The pandemic is an ever evolving and challenging situation and its impact on the Company in the future is uncertain.

The Cooperative has evaluated subsequent events through March 30, 2022, the date the consolidated financial statements were available to be issued.

Supplementary Information

Kaua'i Island Utility Cooperative
Consolidating Balance Sheets – December 31, 2021

	KIUC	KRS One	KRS Two Holdings	Eliminations	Consolidated
ASSETS					
ASSETS					
Utility plant					
In service	\$ 522,496,852	\$ 39,696,039	\$ 39,121,468	\$ -	\$ 601,314,359
Plant acquisition cost	54,852,453	-	-	-	54,852,453
Less accumulated depreciation	(325,718,579)	(11,449,478)	(11,086,703)	-	(348,254,760)
Total utility plant	251,630,726	28,246,561	28,034,765	-	307,912,052
Construction work in progress	11,830,945	2,567	2,567	-	11,836,079
Net utility plant	263,461,671	28,249,128	28,037,332	-	319,748,131
Other property and investments					
Investments in subsidiary companies	25,966,145	-	-	(25,966,145)	-
Investments in associated organizations	1,922,442	9,791	7,718	-	1,939,951
Rural economic development loans	607,500	-	-	-	607,500
Total other property and investments	28,496,087	9,791	7,718	(25,966,145)	2,547,451
CURRENT ASSETS					
Cash and cash equivalents	20,886,024	77,577	2,197,382	-	23,160,983
Restricted cash and cash equivalents	1,647,885	-	-	-	1,647,885
Other investments	5,000,000	-	-	-	5,000,000
Accounts receivable	11,612,390	192,060	235,055	-	12,039,505
Accrued unbilled revenue	8,871,471	-	-	-	8,871,471
Inventories	19,059,947	-	-	-	19,059,947
Other current assets	2,670,907	166,141	127,067	-	2,964,115
Total current assets	69,748,624	435,778	2,559,504	-	72,743,906
Post-retirement benefit asset	214,503	-	-	-	214,503
Deferred debits	33,423,472	866,333	-	-	34,289,805
	\$ 395,344,357	\$ 29,561,030	\$ 30,604,554	\$ (25,966,145)	\$ 429,543,796

Kaua'i Island Utility Cooperative
Consolidating Balance Sheets – December 31, 2021

	KIUC	KRS One	KRS Two Holdings	Eliminations	Consolidated
EQUITIES AND LIABILITIES					
EQUITIES					
Controlling equity interest	\$ 133,744,130	\$ (7,746,914)	\$ (1,689,905)	\$ 9,436,819	\$ 133,744,130
Non-controlling equity interest	-	-	17,775,258	-	17,775,258
Total equities	133,744,130	(7,746,914)	16,085,353	9,436,819	151,519,388
Long-term debt, less current maturities	213,194,431	35,079,815	13,202,376	(35,330,092)	226,146,530
Asset retirement obligations	-	2,116,361	730,045	-	2,846,406
CURRENT LIABILITIES					
Current maturities of long-term debt	13,911,273	-	511,364	-	14,422,637
Accounts payable	9,554,308	38,896	75,416	-	9,668,620
Energy rate adjustment clause	626,354	-	-	-	626,354
Consumer deposits	1,367,898	-	-	-	1,367,898
Accrued employee compensation	2,714,642	-	-	-	2,714,642
Accrued taxes	7,426,175	-	-	-	7,426,175
Other current and accrued liabilities	1,516,527	72,872	-	(72,872)	1,516,527
Total current liabilities	37,117,177	111,768	586,780	(72,872)	37,742,853
Deferred credits	11,288,619	-	-	-	11,288,619
	\$ 395,344,357	\$ 29,561,030	\$ 30,604,554	\$ (25,966,145)	\$ 429,543,796

**Kaua'i Island Utility Cooperative
Consolidating Balance Sheets – December 31, 2020**

	KIUC	KRS One	KRS Two Holdings	Eliminations	Consolidated
ASSETS					
ASSETS					
Utility plant					
In service	\$ 490,820,362	\$ 39,696,039	\$ 39,084,886	\$ -	\$ 569,601,287
Plant acquisition cost	54,852,453	-	-	-	54,852,453
Less accumulated depreciation	(316,110,457)	(9,650,155)	(9,536,571)	-	(335,297,183)
Total utility plant	229,562,358	30,045,884	29,548,315	-	289,156,557
Construction work in progress	30,084,135	2,567	2,567	-	30,089,269
Net utility plant	259,646,493	30,048,451	29,550,882	-	319,245,826
Other property and investments					
Investments in subsidiary companies	28,165,118	-	-	(28,165,118)	-
Investments in associated organizations	1,798,546	7,419	5,680	-	1,811,645
Rural economic development loans	337,500	-	-	-	337,500
Total other property and investments	30,301,164	7,419	5,680	(28,165,118)	2,149,145
CURRENT ASSETS					
Cash and cash equivalents	16,165,289	264,494	1,538,776	-	17,968,559
Restricted cash and cash equivalents	1,614,136	-	-	-	1,614,136
Accounts receivable	10,441,679	213,837	225,799	-	10,881,315
Accrued unbilled revenue	7,349,891	-	-	-	7,349,891
Energy rate adjustment clause	8,833	-	-	-	8,833
Inventories	16,334,353	-	-	-	16,334,353
Other current assets	2,001,731	11,246	-	-	2,012,977
Total current assets	53,915,912	489,577	1,764,575	-	56,170,064
Post-retirement benefit asset	13,384	-	-	-	13,384
Deferred debits	26,862,217	912,333	-	-	27,774,550
	\$ 370,739,170	\$ 31,457,780	\$ 31,321,137	\$ (28,165,118)	\$ 405,352,969

Kaua'i Island Utility Cooperative
Consolidating Balance Sheets – December 31, 2020

	KIUC	KRS One	KRS Two Holdings	Eliminations	Consolidated
EQUITIES AND LIABILITIES					
EQUITIES					
Controlling equity interest	\$ 126,516,351	\$ (6,677,947)	\$ (1,439,212)	\$ 8,117,159	\$ 126,516,351
Non-controlling equity interest	-	-	17,827,510	-	17,827,510
Total equities	126,516,351	(6,677,947)	16,388,298	8,117,159	144,343,861
Long-term debt, less current maturities	201,497,600	35,952,798	13,719,959	(36,209,294)	214,961,063
Asset retirement obligations	-	2,060,804	679,366	-	2,740,170
CURRENT LIABILITIES					
Current maturities of long-term debt	13,576,037	-	488,261	-	14,064,298
Accounts payable	7,444,198	49,142	45,253	-	7,538,593
Consumer deposits	1,283,952	-	-	-	1,283,952
Accrued employee compensation	2,680,504	-	-	-	2,680,504
Accrued taxes	6,221,731	-	-	-	6,221,731
Other current and accrued liabilities	645,895	72,983	-	(72,983)	645,895
Total current liabilities	31,852,317	122,125	533,514	(72,983)	32,434,973
Deferred credits	10,872,902	-	-	-	10,872,902
	\$ 370,739,170	\$ 31,457,780	\$ 31,321,137	\$ (28,165,118)	\$ 405,352,969

Kaua'i Island Utility Cooperative
Consolidating Statements of Operations – December 31, 2021

	KIUC	KRS One	KRS Two Holdings	Eliminations	KIUC Consolidated
OPERATING REVENUES					
Residential	\$ 67,665,717	\$ -	\$ -	\$ -	\$ 67,665,717
Irrigation	177,137	-	-	-	177,137
Commercial and industrial	85,127,144	-	-	-	85,127,144
Public street and highway lighting	683,855	-	-	-	683,855
Sale for resale	-	2,786,737	2,508,544	(5,295,281)	-
Other operating revenues	5,133,601	-	-	-	5,133,601
	<u>158,787,454</u>	<u>2,786,737</u>	<u>2,508,544</u>	<u>(5,295,281)</u>	<u>158,787,454</u>
OPERATING EXPENSES					
Cost of power	86,635,441	710,128	487,894	(5,295,281)	82,538,182
Transmission – operation	433,450	50,400	-	-	483,850
Transmission – maintenance	980,121	197	-	-	980,318
Distribution – operation	1,403,439	324,325	-	-	1,727,764
Distribution – maintenance	4,771,262	32,324	-	-	4,803,586
Customer accounts	2,203,646	-	-	-	2,203,646
Customer service and information	272,391	-	-	-	272,391
Administrative and general	20,090,582	14,304	33,068	-	20,137,954
Depreciation and amortization	15,458,876	1,799,324	1,550,131	-	18,808,331
Taxes	13,346,775	13,933	12,543	-	13,373,251
Accretion expense	-	55,557	50,679	-	106,236
Other interest expense	-	858,002	-	(858,002)	-
	<u>145,595,983</u>	<u>3,858,494</u>	<u>2,134,315</u>	<u>(6,153,283)</u>	<u>145,435,509</u>
OPERATING MARGIN (LOSS) BEFORE INTEREST	13,191,471	(1,071,757)	374,229	858,002	13,351,945
INTEREST ON LONG-TERM DEBT	6,569,854	-	640,323	-	7,210,177
OPERATING MARGINS (LOSSES)	<u>6,621,617</u>	<u>(1,071,757)</u>	<u>(266,094)</u>	<u>858,002</u>	<u>6,141,768</u>
NONOPERATING MARGINS					
Interest income	1,350,375	-	-	(858,002)	492,373
Capital credits	235,429	2,791	2,399	-	240,619
Loss from subsidiaries	(1,319,659)	-	-	1,319,659	-
Other nonoperating income (expense)	1,409,090	-	-	-	1,409,090
	<u>1,675,235</u>	<u>2,791</u>	<u>2,399</u>	<u>461,657</u>	<u>2,142,082</u>
NET MARGINS (LOSSES)	8,296,852	(1,068,966)	(263,695)	1,319,659	8,283,850
NET MARGINS ATTRIBUTABLE TO NON-CONTROLLING INTEREST	-	-	13,002	-	13,002
NET MARGINS (LOSSES) – COOPERATIVE	<u>8,296,852</u>	<u>(1,068,966)</u>	<u>(250,693)</u>	<u>1,319,659</u>	<u>8,296,852</u>
COMPREHENSIVE INCOME					
Postretirement benefit obligation gain	163,209	-	-	-	163,209
COMPREHENSIVE INCOME (LOSS)	<u>\$ 8,460,061</u>	<u>\$ (1,068,966)</u>	<u>\$ (250,693)</u>	<u>\$ 1,319,659</u>	<u>\$ 8,460,061</u>

Kaua'i Island Utility Cooperative Consolidating Statements of Operations – December 31, 2020

	KIUC	KRS One	KRS Two Holdings	Eliminations	KIUC Consolidated
OPERATING REVENUES					
Residential	\$ 59,717,210	\$ -	\$ -	\$ -	\$ 59,717,210
Irrigation	183,919	-	-	-	183,919
Commercial and industrial	75,391,161	-	-	-	75,391,161
Public street and highway lighting	665,798	-	-	-	665,798
Sale for resale	-	2,659,744	2,573,024	(5,232,768)	-
Other operating revenues	9,188,729	-	-	-	9,188,729
Total operating revenues	145,146,817	2,659,744	2,573,024	(5,232,768)	145,146,817
OPERATING EXPENSES					
Cost of power	75,685,307	735,857	376,444	(5,232,768)	71,564,840
Transmission – operation	320,654	25,684	-	-	346,338
Transmission – maintenance	727,087	396	-	-	727,483
Distribution – operation	1,466,525	185,176	-	-	1,651,701
Distribution – maintenance	4,327,442	16,836	-	-	4,344,278
Customer accounts	2,225,091	-	-	-	2,225,091
Customer service and information	268,046	-	-	-	268,046
Administrative and general	20,383,730	24,156	33,112	-	20,440,998
Depreciation and amortization	14,739,457	1,799,333	1,548,627	-	18,087,417
Taxes	12,225,121	13,299	12,865	-	12,251,285
Accretion expense	-	54,099	47,161	-	101,260
Other interest expense	-	893,817	-	(893,817)	-
Total operating expenses	132,368,460	3,748,653	2,018,209	(6,126,585)	132,008,737
OPERATING MARGIN (LOSS) BEFORE INTEREST	12,778,357	(1,088,909)	554,815	893,817	13,138,080
INTEREST ON LONG-TERM DEBT	6,302,276	-	662,382	-	6,964,658
OPERATING MARGINS (LOSSES)	6,476,081	(1,088,909)	(107,567)	893,817	6,173,422
NONOPERATING MARGINS (LOSSES)					
Interest income	1,692,563	-	-	(893,817)	798,746
Capital credits	250,861	2,832	1,566	-	255,259
Loss from subsidiaries	(1,132,806)	-	-	1,132,806	-
Other nonoperating income (expense)	128,043	-	-	-	128,043
Total nonoperating margins	938,661	2,832	1,566	238,989	1,182,048
NET MARGINS (LOSSES)	7,414,742	(1,086,077)	(106,001)	1,132,806	7,355,470
NET MARGINS ATTRIBUTABLE TO NON-CONTROLLING INTEREST	-	-	59,272	-	59,272
NET MARGINS (LOSSES) – COOPERATIVE	7,414,742	(1,086,077)	(46,729)	1,132,806	7,414,742
COMPREHENSIVE INCOME					
Postretirement benefit obligation gain	246,805	-	-	-	246,805
COMPREHENSIVE INCOME (LOSS)	\$ 7,661,547	\$ (1,086,077)	\$ (46,729)	\$ 1,132,806	\$ 7,661,547



Report of Independent Auditors on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with Government Auditing Standards

The Board of Directors
Kaua'i Island Utility Cooperative

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of Kaua'i Island Utility Cooperative and Subsidiaries (the "Cooperative") as of and for the year ended December 31, 2021, and the related notes to the financial statements, which collectively comprise Kaua'i Island Utility Cooperative and Subsidiaries financial statements, and have issued our report thereon dated March 30, 2022.

Report on Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered Kaua'i Island Utility Cooperative and Subsidiaries internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of Kaua'i Island Utility Cooperative and Subsidiaries internal control. Accordingly, we do not express an opinion on the effectiveness of Kaua'i Island Utility Cooperative and Subsidiaries internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. *A material weakness* is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis. *A significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that were not identified.

Report on Compliance and Other Matters

As part of obtaining reasonable assurance about whether Kaua'i Island Utility Cooperative and Subsidiaries financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.



Portland, Oregon
March 30, 2022



KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

EXHIBIT 2
SCHEDULE 5

UNAUDITED FINANCIAL STATEMENTS
(10-MONTHS ENDING
OCTOBER 31, 2022)

(2 PAGES)

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SPONSOR DELLAMANO
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KAUAI ISLAND UTILITY COOPERATIVE
STATEMENT OF OPERATIONS
UNAUDITED FINANCIAL STATEMENTS (10-MONTHS ENDED OCTOBER 31, 2022)
(IN THOUSANDS)

LINE NO.	DESCRIPTION	REFERENCE	10/31/22 BALANCE (B)
1	Operating Revenue and Patronage Capital		\$ 146,286
2	Power Production Expense		47,796
3	Cost of Purchased Power		39,807
4	Transmission Expense		989
5	Regional Market Expense		-
6	Distribution Expense - Operation		1,450
7	Distribution Expense - Maintenance		3,691
8	Customer Accounts Expense		1,917
9	Customer Service and Informational Expense		237
10	Sales Expense		-
11	Administrative and General Expense		17,523
12	Total Operation & Maintenance Expense	SUM OF L2 THRU L11	113,410
13	Depreciation & Amortization Expense		13,081
14	Tax Expense - Property & Gross Receipts		3,654
15	Tax Expense - Other		8,638
16	Interest on Long-Term Debt		5,592
17	Interest Charged to Construction - Credit		-
18	Interest Expense - Other		-
19	Other Deductions		61
20	Total Cost of Electric Service	SUM OF L12 THRU L19	144,436
21	Patronage Capital & Operating Margins	L1 - L20	1,851
22	Non Operating Margins - Interest		1,046
23	Allowance for Funds Used During Construction		-
24	Income (Loss) from Equity Investments		(438)
25	Non Operating Margins - Other		133
26	Generation and Transmission Capital Credits		-
27	Other Capital Credits and Patronage Dividends		183
28	Extraordinary Items		-
29	Patronage Capital or Margins	SUM OF L21 THRU L28	\$ 2,775 a

Notes

a Differences from Exhibit 8 due to rounding.

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KAUAI ISLAND UTILITY COOPERATIVE
BALANCE SHEET
UNAUDITED FINANCIAL STATEMENTS (10-MONTHS ENDED OCTOBER 31, 2022)
(IN THOUSANDS)

LINE NO.	DESCRIPTION	REFERENCE	10/31/22 BALANCE (B)
ASSETS AND OTHER DEBITS			
1	Total Utility Plant in Service		\$ 580,812
2	Construction Work in Progress		14,984
3	Total Utility Plant	L1 + L2	595,796
4	Accum. Provision for Depreciation and Amort.		334,678
5	Net Utility Plant	L3 - L4	261,118
6	Non-Utility Property (Net)		-
7	Invest. in Subsidiary Companies		24,871
8	Invest. in Assoc. Org. - Patronage Capital		1,159
9	Invest. in Assoc. Org. - Other - General Funds		831
10	Invest. in Assoc. Org. - Other - Nongeneral Funds		-
11	Invest. in Economic Development Projects		510
12	Other Investments		-
13	Special Funds		-
14	Total Other Property & Investments	SUM OF L6 THRU L13	27,371
15	Cash - General Funds		2,289
16	Cash - Construction Funds - Trustee		-
17	Special Deposits		(4)
18	Temporary Investments		41,847
19	Notes Receivable (Net)		-
20	Accounts Receivable - Sales of Energy (Net)		11,575
21	Accounts Receivable - Other (Net)		413
22	Renewable Energy Credits		-
23	Material and Supplies - Electric & Other		21,296
24	Prepayments		1,212
25	Other Current and Accrued Assets		8,857
26	Total Current and Accrued Assets	SUM OF L15 THRU L25	87,485
27	Regulatory Assets		32,083
28	Other Deferred Debits		(49)
		SUM OF L5, L14, L26 THRU L28	\$ 408,008
29	Total Assets and Other Debits		\$ 408,008
LIABILITIES AND OTHER CREDITS			
30	Memberships		\$ 1
31	Patronage Capital		131,556
32	Operating Margins - Prior Years		-
33	Operating Margins - Current Year		2,775
34	Non-Operating Margins		-
35	Other Margins and Equities		270
36	Total Margins & Equities (30 thru 35)	SUM OF L30 THRU L35	134,602
37	Long-Term Debt - RUS (Net)		-
38	Long-Term Debt - FFB - RUS Guaranteed		117,886
39	Long-Term Debt - Other - RUS Guaranteed		-
40	Long-Term Debt - Other (Net)		120,080
41	Long-Term Debt - RUS Econ. Devel. (Net)		-
42	Payments - Unapplied		(6,211)
43	Total Long-Term Debt (37 thru 41 - 42)	SUM OF L37 THRU L42	231,755
44	Obligations Under Capital Leases - Noncurrent		-
45	Accumulated Operating Provisions		(211)
46	Total Other Noncurrent Liabilities (44 + 45)	L44 + L45	(211)
47	Notes Payable		-
48	Accounts Payable		5,199
49	Consumers Deposits		1,289
50	Current Maturities Long-Term Debt		13,911
51	Current Maturities Long-Term Debt - Econ. Devel.		-
52	Current Maturities Capital Leases		-
53	Other Current and Accrued Liabilities		11,205
54	Total Current & Accrued Liabilities (47 thru 53)	SUM OF L47 THRU L53	31,604
55	Regulatory Liabilities		-
56	Other Deferred Credits		10,261
		SUM OF L36, L43, L46, L54 THRU L56	\$ 408,011
57	Total Liab. & Other Credits (36+43+46+54 thru 56)		\$ 408,011

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

EXHIBIT 2
SCHEDULE 6

NOTES, BONDS, AND OTHER
INDEBTEDNESS

(1 PAGE)

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EXHIBIT 2
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SPONSOR DELLAMANO
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KAUAI ISLAND UTILITY COOPERATIVE
NOTES, BONDS, AND OTHER INDEBTEDNESS
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	LENDER	DATE OF NOTE	DATE OF ISSUE	DATE OF MATURITY	INTEREST RATE	LOAN #	ORIGINAL AMOUNT	BALANCE AT 12/31/2021	2021
									INTEREST EXPENSE
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
1	CFC	12/17/03	12/18/03	09/30/23	3.690%	HI001-9005	\$ 8,240	\$ 943	\$ 47
2	CFC	04/30/19	04/30/19	03/31/35	2.550%	HI001-9014-001	103,134	83,587	2,204
3	CFC	02/06/20	02/25/20	12/31/49	2.760%	HI001-9019B	26,500	25,468	713
4							<u>137,874</u>	<u>109,998</u>	<u>2,964</u>
5	FFB	06/01/04	10/19/04	12/31/23	2.837%	B8 - 1-1	8,240	1,144	42
6	FFB	06/01/04	10/19/04	12/31/23	2.574%	B8 - 1-2	8,240	1,145	39
7	FFB	06/01/04	10/19/04	12/31/23	4.430%	B8 - 1-3	16,480	2,542	147
8							<u>32,960</u>	<u>4,831</u>	<u>228</u>
9	FFB	07/01/11	06/07/12	12/31/42	2.424%	C8#1 - 2-1	8,716	6,777	169
10	FFB	07/01/11	10/23/12	12/31/42	2.604%	C8#1 - 2-2	1,606	1,256	34
11	FFB	07/01/01	06/24/13	12/31/42	3.259%	C8#1 - 2-3	9,100	7,277	244
12	FFB	07/01/11	11/25/13	12/31/42	2.662%	C8#1 - 2-4	2,689	2,083	57
13	FFB	07/01/11	03/18/14	12/31/42	3.334%	C8#1 - 2-6	5,198	4,235	145
14	FFB	07/01/11	08/07/14	12/31/42	3.023%	C8#1 - 2-7	5,731	4,674	145
15	FFB	07/01/11	05/08/15	12/31/42	2.665%	C8#1 - 2-8	4,213	3,465	95
16	FFB	07/01/11	09/18/15	12/31/42	2.715%	C8#1 - 2-9	748	620	17
17	FFB	01/15/15	10/29/15	12/31/42	2.558%	C8#2 - 3-1	6,000	4,985	131
18	FFB	01/15/15	01/12/16	12/31/42	2.636%	C8#2 - 3-2	35,587	29,816	810
19							<u>79,588</u>	<u>65,188</u>	<u>1,847</u>
20	FFB	12/01/17	04/24/18	12/31/51	3.199%	D8 - 4-1	22,192	21,259	694
21	FFB	12/01/17	10/22/18	12/31/51	3.437%	D8 - 4-2	5,707	5,477	192
22	FFB	12/01/17	06/06/19	12/31/51	2.578%	D8 - 4-3	4,776	4,552	120
23	FFB	12/01/17	06/22/20	12/31/51	1.326%	D8 - 4-4	3,992	3,836	52
24	FFB	12/01/17	10/08/21	12/31/51	2.087%	D8 - 4-5	7,889	7,889	39
25							<u>44,556</u>	<u>43,013</u>	<u>1,097</u>
26	COBANK	02/06/20	02/22/21	02/20/51	2.900%	00102606 T01	18,119	17,800	453
27							<u>18,119</u>	<u>17,800</u>	<u>453</u>
28	Total Long Term Debt						\$ 313,097	\$ 240,830	\$ 6,589

CFC: National Rural Utilities Cooperative Finance Corporation

FFB: Federal Financing Bank (RUS)

Line 2: Original RUS notes refinanced in July 2016. In May 2020, amended to extend the maturity date from 3/31/2028 to 3/31/2035.

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

EXHIBIT 3

**KIUC'S PLANT-IN-SERVICE AND
ACCUMULATED DEPRECIATION**

(2 PAGES)

KAUAI ISLAND UTILITY COOPERATIVE
SUMMARY OF 2023 TEST YEAR PLANT IN SERVICE AND ACCUMULATED DEPRECIATION
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	PLANT BY ACCOUNT	ACCOUNT NUMBER	PLANT IN SERVICE (A)	ACCUMULATED DEPRECIATION (B)	NET PIS BALANCE (C) (A) - (B)
STEAM PRODUCTION					
1	Land & Land Rights	3100	\$ 291	\$ -	\$ 291
2	Structures & Improvements	3110	6,269	5,412	857
3	Boiler Plant Equipment	3120	17,761	11,357	6,404
4	Engines & Engine-Driven Generators	3130	6	6	-
5	Turbo generator Units	3140	3,631	2,078	1,553
6	Accessory Electric Equipment	3150	997	626	371
7	Miscellaneous Power Plant Equipment	3160	659	559	100
8	TOTAL STEAM PRODUCTION		29,614	20,038	9,576
HYDRAULIC PRODUCTION					
9	Structures & Improvements	3310	1,212	250	962
10	Reservoirs, Dams & Waterways	3320	3,017	736	2,281
11	Water Wheels, Turbines & Generators	3330	2,032	577	1,455
12	Accessory Electric Equipment	3340	715	187	528
13	TOTAL HYDRAULIC PRODUCTION		6,976	1,750	5,226
OTHER PRODUCTION					
14	Land & Land Rights	3400	8,604	-	8,604
15	Structures & Improvements	3410	20,952	12,778	8,174
16	Fuel Holders, Producers & Access	3420	5,745	3,188	2,557
17	Prime Movers	3430	72,324	44,210	28,114
18	Generators	3440	12,231	6,776	5,455
19	Accessory Electric Equipment	3450	10,729	7,350	3,379
20	Miscellaneous Other Equipment	3460	2,458	412	2,046
21	TOTAL OTHER PRODUCTION		133,043	74,714	58,329
TRANSMISSION					
22	Land & Land Rights	3500	577	-	577
23	Structures & Improvements	3520	280	185	95
24	Station Equipment	3530	34,442	13,978	20,464
25	Towers & Fixtures	3540	58	37	21
26	Poles & Fixtures	3550	30,922	25,987	4,935
27	Overhead Connectors & Devices	3560	39,634	14,452	25,182
28	Underground Conduits	3570	9	4	5
29	Underground Connectors & Devices	3580	491	179	312
30	TOTAL TRANSMISSION		106,413	54,822	51,591
DISTRIBUTION					
31	Land & Land Rights	3600	499	-	499
32	Structures & Improvements	3610	20,407	1,827	18,580
33	Station Equipment	3620	34,699	9,129	25,570
34	Storage Battery	3630	6,725	3,971	2,754
35	Poles, Towers & Fixtures	3640	38,529	25,547	12,982
36	Overhead Connectors & Devices	3650	47,550	26,009	21,541
37	Underground Conduits	3660	9,435	4,975	4,460
38	Underground Connectors & Devices	3670	29,688	16,315	13,373
39	Line Transformers	3680	30,450	14,378	16,072
40	Services	3690	7,345	5,913	1,432
41	Meters	3700	9,596	6,631	2,965
42	Installations on Customer's Premises	3710	25	23	2
43	Leased Property	3720	-	-	-
44	Street Lighting & Signal Systems	3730	5,309	1,287	4,022
45	TOTAL DISTRIBUTION		240,257	116,005	124,252
GENERAL PLANT					
46	Land & Land Rights	3890	217	-	217
47	Structures & Improvements	3900	25,935	7,204	18,731
48	Office Furniture & Equipment	3910	2,100	1,410	690
49	Computer Equipment	3911	13,832	4,957	8,875
50	Vehicles Under \$100,000	3920	7,939	7,040	899
51	Store Equipment	3930	568	164	404
52	Tools, Show & Garage Equipment	3940	1,990	1,614	376
53	Laboratory Equipment	3950	779	763	16
54	Power Operated Equipment	3960	483	211	272
55	Communication equipment	3970	4,148	2,114	2,034
56	Miscellaneous Equipment	3980	1,386	430	956
57	TOTAL GENERAL PLANT		59,377	25,907	33,470
58	TOTAL		\$ 575,680	\$ 293,236	\$ 282,444

KAUAI ISLAND UTILITY COOPERATIVE
PLANT IN SERVICE
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	PLANT BY ACCOUNT	ACCOUNT NUMBER	ACTUAL RECORDED				PROJECTED	TEST YEAR
			2018 (A)	2019 (B)	2020 (C)	2021 (D)	2022 (E)	2023 (F)
STEAM PRODUCTION								
1	Land & Land Rights	3100	\$ 291	\$ 291	\$ 291	\$ 291	\$ 291	
2	Structures & Improvements	3110	5,629	5,742	6,238	6,162	6,269	
3	Boiler Plant Equipment	3120	16,199	16,280	16,280	16,286	17,761	
4	Engines & Engine-Driven Generators	3130	6	6	6	6	6	
5	Turbo generator Units	3140	2,803	3,107	3,143	3,143	3,631	
6	Accessory Electric Equipment	3150	777	780	780	780	997	
7	Miscellaneous Power Plant Equipment	3160	669	669	672	672	659	
8	TOTAL STEAM PRODUCTION		26,374	26,875	27,410	27,340	29,614	
HYDRAULIC PRODUCTION								
9	Structures & Improvements	3310	1,039	1,039	1,039	1,041	1,132	
10	Reservoirs, Dams & Waterways	3320	2,031	2,146	2,146	3,007	3,017	
11	Water Wheels, Turbines & Generators	3330	2,017	2,023	2,023	2,051	2,032	
12	Accessory Electric Equipment	3340	719	700	715	715	715	
13	TOTAL HYDRAULIC PRODUCTION		5,806	5,908	5,923	6,814	6,976	
OTHER PRODUCTION								
14	Land & Land Rights	3400	8,604	8,604	8,604	8,604	8,604	
15	Structures & Improvements	3410	18,747	18,757	18,961	19,455	20,952	
16	Fuel Holders, Producers & Access	3420	5,011	5,013	5,167	5,176	5,745	
17	Prime Movers	3430	67,799	68,698	69,108	69,399	72,324	
18	Generators	3440	11,331	11,384	11,384	11,445	11,782	
19	Accessory Electric Equipment	3450	9,970	10,093	10,384	10,762	10,729	
20	Miscellaneous Other Equipment	3460	2,345	2,455	2,468	2,557	2,458	
21	TOTAL OTHER PRODUCTION		123,807	125,004	126,076	127,398	133,043	
TRANSMISSION								
22	Land & Land Rights	3500	577	577	577	577	577	
23	Structures & Improvements	3520	273	273	283	283	280	
24	Station Equipment	3530	26,974	28,739	29,015	33,320	34,442	
25	Towers & Fixtures	3540	58	58	58	58	58	
26	Poles & Fixtures	3550	30,525	30,504	30,480	31,209	30,922	
27	Overhead Connectors & Devices	3560	20,868	20,900	20,888	27,066	39,634	
28	Underground Conduits	3570	9	9	9	9	9	
29	Underground Connectors & Devices	3580	492	492	492	492	491	
30	TOTAL TRANSMISSION		79,776	81,552	81,802	93,014	106,413	
DISTRIBUTION								
31	Land & Land Rights	3600	502	505	499	499	499	
32	Structures & Improvements	3610	4,569	8,921	8,921	10,955	20,468	
33	Station Equipment	3620	20,519	24,356	24,447	34,231	34,699	
34	Storage Battery	3630	7,628	6,111	6,111	5,805	6,725	
35	Poles, Towers & Fixtures	3640	36,241	36,851	36,970	38,130	38,529	
36	Overhead Connectors & Devices	3650	39,946	40,733	40,690	42,669	46,928	
37	Underground Conduits	3660	9,052	9,417	9,428	9,531	9,495	
38	Underground Connectors & Devices	3670	26,971	27,535	27,470	28,252	29,105	
39	Line Transformers	3680	26,707	27,018	27,511	27,779	29,535	
40	Services	3690	6,955	7,080	7,163	7,269	7,345	
41	Meters	3700	8,086	8,277	8,316	8,755	9,327	
42	Installations on Customer's Premises	3710	29	29	29	29	25	
43	Leased Property	3720	-	-	-	-	-	
44	Street Lighting & Signal Systems	3730	5,546	5,600	5,593	5,623	5,309	
45	TOTAL DISTRIBUTION		192,751	202,433	203,148	219,833	240,257	
GENERAL PLANT								
46	Land & Land Rights	3890	217	217	217	217	217	
47	Structures & Improvements	3900	11,883	12,045	12,150	12,176	25,935	
48	Office Furniture & Equipment	3910	2,139	2,159	2,212	2,209	2,100	
49	Computer Equipment	3911	11,113	13,930	15,829	17,163	16,045	
50	Vehicles Under \$100,000	3920	6,336	6,704	6,778	6,872	7,649	
51	Store Equipment	3930	172	174	177	182	357	
52	Tools, Show & Garage Equipment	3940	2,093	2,156	2,255	2,267	2,116	
53	Laboratory Equipment	3950	838	845	845	852	795	
54	Power Operated Equipment	3960	257	257	406	539	503	
55	Communication equipment	3970	4,068	4,098	4,151	4,167	4,148	
56	Miscellaneous Equipment	3980	1,354	1,320	1,443	1,455	1,439	
57	TOTAL GENERAL PLANT		40,470	43,905	46,463	48,099	59,377	
58	TOTAL PLANT IN SERVICE		\$ 468,984	\$ 485,677	\$ 490,822	\$ 522,498	\$ 575,680	

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

EXHIBIT 4

PRESENT RATE SCHEDULES

(26 PAGES)

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
First Revised Sheet 63
Cancels Original Sheet 63

SCHEDULE "D"
Residential Service

Availability:

Applicable to lighting, heating, cooking, air conditioning and single-phase residential service in single-family dwellings metered and billed separately by the Company. This schedule does not apply where residence and business are combined. Service supplied under this rate is subject to the Rules of the Company.

Storage water heaters may be connected to this service, provided that each element is controlled by a thermostat and the maximum wattage of the heating elements that may be energized at any one time shall not exceed 5,000 watts.

Rate:

Customer Charge: (Per Customer per month) \$10.58

Energy Charge:

Non-Fuel Energy Charge (Non-Fuel and Non-Purchased Power Energy Cost only) (To be added to Customer Charge) All kWh \$0.15600 per kWh

Fuel and Purchased Power Energy Charge (may include ERAC on customer bills) (To be added to Customer Charge) All kWh \$0.19143 per kWh

Energy Rate Adjustment Clause (ERAC) (To be added to Customer Charge) All kWh See below

Minimum Charge: The minimum monthly charge shall be - (Per Customer per month) \$13.50

Resource Cost Adjustment Surcharge:

The Resource Cost Adjustment Surcharge shall be added to the Customer and Energy Charges, and energy cost adjustment.

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Original Sheet 64

SCHEDULE "D" (Continued)
Residential Service

Apartment House Collection Arrangement:

Any apartment owner having title to three or more apartments at one location, each apartment being separately metered and billed by the Company on Residential Rate Schedule, may elect to accept a commission of ten per cent (10%) of the amount of the bills rendered for such apartments not to exceed \$5.00 per month for each apartment upon entering into a collection arrangement with the Company under the following terms and conditions.

1. All accounts shall be kept in the name of the apartment house owner who shall assume the responsibility for the payment of all bills before they become past due.
2. All accounts shall remain active at all times and, though vacant, shall be subject to the minimum charge applicable.
3. Failure to comply with 1 or 2 above shall terminate the Apartment House Agreement.
4. The Company will render individual bills for each apartment on a regular billing period basis and will also furnish a statement showing gross and net billings.
5. Provision of this section applies to all existing Apartment House Agreements. No new Agreements will be accepted as of January 1, 1994.

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second Revised Sheet 65
Cancels First Revised Sheet 65

SCHEDULE "D" (Continued)
Residential Service

Energy Rate Adjustment Clause (ERAC):

This ERAC shall include the following:

FUEL AND PURCHASED ENERGY - The above rates are based on a cost of fuel for Company generation of 1735.83 cents per million Btu for fuel delivered in its service tanks and a cost for purchased energy (Purchased Energy) of 17.381 cents per kilowatthour. The term "Purchased Energy" shall mean all capacity and purchased energy charges and payments (including revenue taxes) that the Commission has authorized to include in this ERAC. Company-generated energy from non-fuel sources shall be considered as zero fuel cost in the determination of the composite fuel cost. When the Company-generated net energy cost is more or less than 1735.83 cents per million Btu, and/or the Purchased Energy cost is more or less than 17.381 cents per kilowatthour, a corresponding adjustment (Energy Rate Adjustment Factor) to the energy charge shall be made. This adjustment shall be comprised of a Company Generation Component and a Purchased Energy Component.

The Company Generation Component shall be the difference in current generation cost and base generation cost, adjusted for additional revenue taxes. The current generation cost shall be determined by the current fuel cost in cents per million Btu, multiplied by a generation conversion factor of 0.009850 million Btu per kilowatthour, weighted by the proportion of current Company generation to total system net energy in kilowatthours. The base generation cost is the base fuel cost of 1735.83 cents per million Btu multiplied by a generation conversion factor of 0.009850 million Btu per kilowatthour, weighted by the proportion of the 2010 test year generation to total system energy in kilowatthours.

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second Revised Sheet 66
Cancels First Revised Sheet 66

SCHEDULE "D" (Continued)
Residential Service

The Purchased Energy Component shall be the difference between (1) the current Purchased Energy cost weighted by the proportion of current Purchased Energy to total system net energy, and (2) the base Purchased Energy cost of 17.381 cents per kilowatthour weighted by the proportion of the 2010 test year Purchased Energy to total system net energy, adjusted to the sales delivery level and for additional revenue taxes. The Energy Rate Adjustment Factor shall be the sum of the Generation Component and the Purchased Energy Component.

The revenue tax requirement shall be calculated using current rates of the Franchise Tax, Public Service Company Tax, and Public Utilities Commission fee.

The Energy Rate Adjustment shall be effective on the date of cost change. When a cost change occurs during a customer's billing period, the Energy Rate Adjustment will be prorated for the number of days each cost was in effect.

This ERAC is consistent with the terms of the Company's operations and Purchased Energy contracts and may be revised to reflect any revisions or changes in operations and the Purchased Energy contracts, subject to approval by the Commission.

Reconciliation Adjustment:

In order to reconcile any differences that may occur between recorded and forecasted Energy Rate Adjustment Clause revenues, the year-to-date recorded revenue from the Energy Rate Adjustment Clause will be compared with the year-to-date revenue expected from the Energy Rate Adjustment Clause on a quarterly basis. If there is a variance between the recorded Energy Rate Adjustment Clause revenue and the expected Energy Rate Adjustment Clause revenue, an adjustment, lagged by two months, shall be made to the Energy Rate Adjustment Clause to reconcile the revenue variance over the sales estimated for the subsequent quarter.

In addition, for any given month, if the Company operates either below or above the range of 0.00980 million Btu per kilowatthour to 0.00990 million Btu per kilowatthour, the Company can elect to modify its Generation Component such that the Generation Component will recover only the difference between the Company's actual generation cost and base generation cost for that month by providing notice to the Commission together with a written report, which election will be effective upon the filing of the notice. This difference shall be reflected as an adjustment to the actual revenues collected for the period in question and applied as part of the reconciliation adjustment. The report will explain the reasons why the Company operated outside of the range, the expected duration that it will operate outside of the range, and, if the Company is operating above the range, what steps it will be taking to attempt to rectify the situation. Upon review of the written report, the Commission and the Division of Consumer Advocacy will have the opportunity to make further inquiries on the matter, and the Commission, at its discretion, may institute an investigatory proceeding on the matter should it believe such proceeding is warranted.

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
First Revised Sheet 69
Cancels Original Sheet 69

SCHEDULE "G"
General Light and Power Service

Availability:

Applicable for general light and/or power supplied through a single meter. Available to all consumers whose maximum demand is not greater than 30 kW for any fifteen consecutive minutes during a month, or whose energy consumption is less than 10,000 kWh in any month and who do not qualify under Schedule "D" - except Public Street and Highway Lighting Service - for all purposes including lighting, cooking, heating, refrigeration and general power. Service supplied under this rate is subject to the Rules of the Company.

Rate:

Customer Charge:	(Per customer, per month)	\$23.82
Energy Charge:		
Non-Fuel Energy Charge (Non-Fuel and Non- Purchased Power Energy Cost only)	(To be added to Customer Charge) All kWh	\$0.16626 per kWh
Fuel and Purchased Power Energy Charge (may include ERAC on customer bills)	(To be added to Customer Charge) All kWh	\$0.19143 per kWh
Energy Rate Adjustment Clause (ERAC)	(To be added to Customer Charge) All kWh	See below
Minimum Charge:	The minimum monthly charge shall be - (Per customer, per month)	\$26.45

Resource Cost Adjustment Surcharge:

The Resource Cost Adjustment Surcharge shall be added to the Customer and Energy Charges, and energy cost adjustment.

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second Revised Sheet 70
Cancels First Revised Sheet 70

SCHEDULE "G" (Continued)
General Light and Power Service

Master Metering:

This schedule is not applicable to multi-family residential dwelling units or to two or more commercial or industrial customers through one meter on a single premise, except where:

1. the individual tenant does not control a substantial portion of the energy consumed, or
2. master metered service will tend to encourage conservation or the efficient use of energy.

The determination of master metering for apartments, condominiums and multi-unit buildings shall be made by the Company.

Energy Rate Adjustment Clause (ERAC):

This ERAC shall include the following:

FUEL AND PURCHASED ENERGY - The above rates are based on a cost of fuel for Company generation of 1735.83 cents per million Btu for fuel delivered in its service tanks and a cost for purchased energy (Purchased Energy) of 17.381 cents per kilowatthour. The term "Purchased Energy" shall mean all capacity and purchased energy charges and payments (including revenue taxes) that the Commission has authorized to include in this ERAC. Company-generated energy from non-fuel sources shall be considered as zero fuel cost in the determination of the composite fuel cost. When the Company-generated net energy cost is more or less than 1735.83 cents per million Btu, and/or the Purchased Energy cost is more or less than 17.381 cents per kilowatthour, a corresponding adjustment (Energy Rate Adjustment Factor) to the energy charges shall be made. This adjustment shall be comprised of a Company Generation Component and a Purchased Energy Component.

The Company Generation Component shall be the difference in current generation cost and base generation cost, adjusted for additional revenue taxes. The current generation cost shall be determined by the current fuel cost in cents per million Btu, multiplied by a generation conversion factor of 0.009850 million Btu per kilowatthour, weighted by the proportion of current Company generation to total system net energy in kilowatthours.

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second Revised Sheet 71
Cancels First Revised Sheet 71

SCHEDULE "G" (Continued)
General Light and Power Service

The base generation cost is the base fuel cost of 1735.83 cents per million Btu multiplied by a generation conversion factor of 0.009850 million Btu per kilowatthour, weighted by the proportion of the 2010 test year generation to total system energy in kilowatthours.

The Purchased Energy Component shall be the difference between (1) the current Purchased Energy cost weighted by the proportion of current Purchased Energy to total system net energy, and (2) the base Purchased Energy cost of 17.381 cents per kilowatthour weighted by the proportion of the 2010 test year Purchased Energy to total system net energy, adjusted to the sales delivery level and for additional revenue taxes. The Energy Rate Adjustment Factor shall be the sum of the Generation Component and the Purchased Energy Component.

The revenue tax requirement shall be calculated using current rates of the Franchise Tax, Public Service Company Tax, and Public Utilities Commission fee.

The Energy Rate Adjustment shall be effective on the date of cost change. When a cost change occurs during a customer's billing period, the Energy Rate Adjustment will be prorated for the number of days each cost was in effect.

This ERAC is consistent with the terms of the Company's operations and Purchased Energy contracts and may be revised to reflect any revisions or changes in operations and the Purchased Energy contracts, subject to approval by the Commission.

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
First Revised Sheet 72
Cancels Original Sheet 72

SCHEDULE "G" (Continued)
General Light and Power Service

Reconciliation Adjustment:

In order to reconcile any differences that may occur between recorded and forecasted Energy Rate Adjustment Clause revenues, the year-to-date recorded revenue from the Energy Rate Adjustment Clause will be compared with the year-to-date revenue expected from the Energy Rate Adjustment Clause on a quarterly basis. If there is a variance between the recorded Energy Rate Adjustment Clause revenue and the expected Energy Rate Adjustment Clause revenue, an adjustment, lagged by two months, shall be made to the Energy Rate Adjustment Clause to reconcile the revenue variance over the sales estimated for the subsequent quarter.

In addition, for any given month, if the Company operates either below or above the range of 0.00980 million Btu per kilowatthour to 0.00990 million Btu per kilowatthour, the Company can elect to modify its Generation Component such that the Generation Component will recover only the difference between the Company's actual generation cost and base generation cost for that month by providing notice to the Commission together with a written report, which election will be effective upon the filing of the notice. This difference shall be reflected as an adjustment to the actual revenues collected for the period in question and applied as part of the reconciliation adjustment. The report will explain the reasons why the Company operated outside of the range, the expected duration that it will operate outside of the range, and, if the Company is operating above the range, what steps it will be taking to attempt to rectify the situation. Upon review of the written report, the Commission and the Division of Consumer Advocacy will have the opportunity to make further inquiries on the matter, and the Commission, at its discretion, may institute an investigatory proceeding on the matter should it believe such proceeding is warranted.

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
First Revised Sheet 75
Cancels Original Sheet 75

SCHEDULE "J"
General Light and Power Service

Availability:

Applicable for general light and/or power supplied through a single meter. Available when the customer's energy consumption exceeds 10,000 kWh in any month or the customer's load exceeds 30 kilowatts during any consecutive 15-minute period in any month, and to all consumers whose maximum demand is not greater than 100 kW for any fifteen consecutive minutes during a month, and who do not qualify under Schedule "D" - except Public Street and Highway Lighting Service - for all purposes including lighting, cooking, heating, refrigeration and general power. Service supplied under this rate is subject to the Rules of the Company.

Rate:

Customer Charge:	(Per customer, per month)	\$39.69
Demand Charge:	(To be added to Customer Charge)	\$6.62 per month per kW of monthly demand

Energy Charge:

Non-Fuel Energy Charge (Non-Fuel and Non-Purchased Power Energy Cost only)	(To be added to Customer Charge and Demand Charge) All kWh	\$0.13247 per kWh
Fuel and Purchased Power Energy Charge (may include ERAC on customer bills)	(To be added to Customer Charge) All kWh	\$0.19143 per kWh
Energy Rate Adjustment Clause (ERAC)	(To be added to Customer Charge) All kWh	See below

Determination of Billing Demand:

The monthly billing demand shall be the greater of (a) the highest Kilowatt demand during the month or (b) 75% of the highest Kilowatt demand during the preceding eleven months, as registered during an interval of fifteen consecutive minutes by an indicating demand meter.

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
First Revised Sheet 76
Cancels Original Sheet 76

SCHEDULE "J" (Continued)
General Light and Power Service

Minimum Charge:

The minimum monthly charge shall be:

Demand Service:

The sum of the Customer Charge and the
Demand Charge but not less than \$198.42 per month.

Resource Cost Adjustment Surcharge:

The Resource Cost Adjustment Surcharge shall be added to the Customer and Energy Charges,
and energy cost adjustment.

Master Metering:

This schedule is not applicable to multi-family residential dwelling units or to two or more
commercial or industrial customers through one meter on a single premise, except where:

1. the individual tenant does not control a substantial portion of the energy
consumed, or
2. master metered service will tend to encourage conservation or the efficient use of
energy.

The determination of master metering for apartments, condominiums and multi-unit buildings shall
be made by the Company.

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second Revised Sheet 77
Cancels First Revised Sheet 77

SCHEDULE "J" (Continued)
General Light and Power Service

Energy Rate Adjustment Clause (ERAC):

This ERAC shall include the following:

FUEL AND PURCHASED ENERGY - The above rates are based on a cost of fuel for Company generation of 1735.83 cents per million Btu for fuel delivered in its service tanks and a cost for purchased energy (Purchased Energy) of 17.381 cents per kilowatthour. The term "Purchased Energy" shall mean all capacity and purchased energy charges and payments (including revenue taxes) that the Commission has authorized to include in this ERAC. Company-generated energy from non-fuel sources shall be considered as zero fuel cost in the determination of the composite fuel cost. When the Company-generated net energy cost is more or less than 1735.83 cents per million Btu, and/or the Purchased Energy cost is more or less than 17.381 cents per kilowatthour, a corresponding adjustment (Energy Rate Adjustment Factor) to the energy charges shall be made. This adjustment shall be comprised of a Company Generation Component and a Purchased Energy Component.

The Company Generation Component shall be the difference in current generation cost and base generation cost, adjusted for additional revenue taxes. The current generation cost shall be determined by the current fuel cost in cents per million Btu, multiplied by a generation conversion factor of 0.009850 million Btu per kilowatthour, weighted by the proportion of current Company generation to total system net energy in kilowatthours. The base generation cost is the base fuel cost of 1735.83 cents per million Btu multiplied by a generation conversion factor of 0.009850 million Btu per kilowatthour, weighted by the proportion of the 2010 test year generation to total system energy in kilowatthours.

The Purchased Energy Component shall be the difference between (1) the current Purchased Energy cost weighted by the proportion of current Purchased Energy to total system net energy, and (2) the base Purchased Energy cost of 17.381 cents per kilowatthour weighted by the proportion of the 2010 test year Purchased Energy to total system net energy, adjusted to the sales delivery level and for additional revenue taxes. The Energy Rate Adjustment Factor shall be the sum of the Generation Component and the Purchased Energy Component.

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second Revised Sheet 78
Cancels First Revised Sheet 78

SCHEDULE "J" (Continued)
General Light and Power Service

The revenue tax requirement shall be calculated using current rates of the Franchise Tax, Public Service Company Tax, and Public Utilities Commission fee.

The Energy Rate Adjustment shall be effective on the date of cost change. When a cost change occurs during a customer's billing period, the Energy Rate Adjustment will be prorated for the number of days each cost was in effect.

This ERAC is consistent with the terms of the Company's operations and Purchased Energy contracts and may be revised to reflect any revisions or changes in operations and the Purchased Energy contracts, subject to approval by the Commission.

Reconciliation Adjustment:

In order to reconcile any differences that may occur between recorded and forecasted Energy Rate Adjustment Clause revenues, the year-to-date recorded revenue from the Energy Rate Adjustment Clause will be compared with the year-to-date revenue expected from the Energy Rate Adjustment Clause on a quarterly basis. If there is a variance between the recorded Energy Rate Adjustment Clause revenue and the expected Energy Rate Adjustment Clause revenue, an adjustment, lagged by two months, shall be made to the Energy Rate Adjustment Clause to reconcile the revenue variance over the sales estimated for the subsequent quarter.

In addition, for any given month, if the Company operates either below or above the range of 0.00980 million Btu per kilowatthour to 0.00990 million Btu per kilowatthour, the Company can elect to modify its Generation Component such that the Generation Component will recover only the difference between the Company's actual generation cost and base generation cost for that month by providing notice to the Commission together with a written report, which election will be effective upon the filing of the notice. This difference shall be reflected as an adjustment to the actual revenues collected for the period in question and applied as part of the reconciliation adjustment. The report will explain the reasons why the Company operated outside of the range, the expected duration that it will operate outside of the range, and, if the Company is operating above the range, what steps it will be taking to attempt to rectify the situation. Upon review of the written report, the Commission and the Division of Consumer Advocacy will have the opportunity to make further inquiries on the matter, and the Commission, at its discretion, may institute an investigatory proceeding on the matter should it believe such proceeding is warranted.

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KAUAI ISLAND UTILITY COOPERATIVE
 Lihue, Kauai, Hawaii

KIUC Tariff No. 1
 First Revised Sheet 80
 Cancels Original Sheet 80

SCHEDULE "L"
 Large Power Primary Service

Availability:

Applicable for primary large light and/or power service supplied and metered at primary voltage and a single delivery point.

Available to all power users with metered loads in excess of 100 Kilowatts during any consecutive fifteen minute period in any month except Public Street and Highway Lighting Service. Such customers must sign a contract for service for a minimum period of twelve (12) months except for temporary services. Service supplied under this rate shall be subject to the Rules of the Company.

Rate:

Customer Charge:	per Customer per month	\$355.08
Demand Charge:	(To be added to Customer Charge)	\$13.94 per kW of monthly demand
Energy Charge:	(To be added to Customer Charge and Demand Charge)	
Non-Fuel Energy Charge (Non-Fuel and Non-Purchased Power Energy Cost only)		
First	400 kWh per kW demand	\$0.11273 per kWh
All Over	400 kWh per kW demand	\$0.08998 per kWh
Fuel and Purchased Power Energy Charge (may include ERAC on customer bills)	All kWh	\$0.19143 per kWh
Energy Rate Adjustment Clause (ERAC)	All kWh	See below

Determination of Billing Demand:

The monthly billing demand shall be the greater of (a) the highest Kilowatt demand during the month or (b) 75% of the highest Kilowatt demand during the preceding eleven months, as registered during an interval of fifteen consecutive minutes by an indicating demand meter.

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
First Revised Sheet 81
Cancels Original Sheet 81

SCHEDULE "L" (Continued)
Large Power Primary Service

Minimum Charge:

The minimum monthly charge shall be the sum of the Customer Charge and the Demand Charge.

Primary Delivery:

The above rate is based on power and energy metered on the primary side of Customer-owned transformers.

Power Factor:

The above rate is based on an average power factor of 85%. If the power factor is found to average below 85%, 1/2 of 1% shall be added to the kWh for each 1% of average power factor below 85%. If the power factor is found to average above 85%, 1/2 of 1% shall be deducted from the kWh for each 1% of average power factor above 85%. The maximum increase or decrease shall in no case exceed 5%.

Determination of Power Factor:

The average monthly power factor for this rate schedule shall be determined by a computation from the reading of a reactive KVARH meter and a kWh meter, according to the following formula:

$$\text{Power factor (\%)} = \frac{\text{kWh}}{\sqrt{\text{kWh}^2 + \text{KVARH}^2}} \times 100$$

The KVARH meter shall be ratcheted to prevent reverse rotation on leading power factor.

Resource Cost Adjustment Surcharge:

The Resource Cost Adjustment Surcharge shall be added to the Customer and Energy Charges, and energy cost adjustment.

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By: Randall J. Hee, President
and Chief Executive Officer

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(September 9, 2010)

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second Revised Sheet 82
Cancels First Revised Sheet 82

SCHEDULE "L" (Continued)
Large Power Primary Service

Lighting:

Service supplied under this rate may be used for lighting purposes, provided that the energy is taken at the same voltage as any power load covered by the contract.

Master Metering:

Master Metering is not applicable to multi-family residential dwelling units or to two or more commercial or industrial customers through one meter on a single premise, except where:

1. the individual tenant does not control a substantial portion of the energy consumed, or
2. master metered service will tend to encourage conservation or the efficient use of energy.

The determination of master metering for apartments, condominiums and multi-unit buildings shall be made by the Company.

Energy Rate Adjustment Clause (ERAC):

This ERAC shall include the following:

FUEL AND PURCHASED ENERGY - The above rates are based on a cost of fuel for Company generation of 1735.83 cents per million Btu for fuel delivered in its service tanks and a cost for purchased energy (Purchased Energy) of 17.381 cents per kilowatthour. The term "Purchased Energy" shall mean all capacity and purchased energy charges and payments (including revenue taxes) that the Commission has authorized to include in this ERAC. Company-generated energy from non-fuel sources shall be considered as zero fuel cost in the determination of the composite fuel cost. When the Company-generated net energy cost is more or less than 1735.83 cents per million Btu, and/or the Purchased Energy cost is more or less than 17.381 cents per kilowatthour, a corresponding adjustment (Energy Rate Adjustment Factor) to the energy charges shall be made. This adjustment shall be comprised of a Company Generation Component and a Purchased Energy Component.

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second Revised Sheet 83
Cancels First Revised Sheet 83

SCHEDULE "L" (Continued)
Large Power Primary Service

The Company Generation Component shall be the difference in current generation cost and base generation cost, adjusted for additional revenue taxes. The current generation cost shall be determined by the current fuel cost in cents per million Btu, multiplied by a generation conversion factor of 0.009850 million Btu per kilowatthour, weighted by the proportion of current Company generation to total system net energy in kilowatthours. The base generation cost is the base fuel cost of 1735.83 cents per million Btu multiplied by a generation conversion factor of 0.009850 million Btu per kilowatthour, weighted by the proportion of the 2010 test year generation to total system energy in kilowatthours.

The Purchased Energy Component shall be the difference between (1) the current Purchased Energy cost weighted by the proportion of current Purchased Energy to total system net energy, and (2) the base Purchased Energy cost of 17.381 cents per kilowatthour weighted by the proportion of the 2010 test year Purchased Energy to total system net energy, adjusted to the sales delivery level and for additional revenue taxes. The Energy Rate Adjustment Factor shall be the sum of the Generation Component and the Purchased Energy Component.

The revenue tax requirement shall be calculated using current rates of the Franchise Tax, Public Service Company Tax, and Public Utility Commission fee.

The Energy Rate Adjustment shall be effective on the date of cost change. When a cost change occurs during a customer's billing period, the Energy Rate Adjustment will be prorated for the number of days each cost was in effect.

This ERAC is consistent with the terms of the Company's operations and Purchased Energy contracts and may be revised to reflect any revisions or changes in operations and the Purchased Energy contracts, subject to approval by the Commission.

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
First Revised Sheet 84
Cancels Original Sheet 84

SCHEDULE "L" (Continued)
Large Power Primary Service

Reconciliation Adjustment:

In order to reconcile any differences that may occur between recorded and forecasted Energy Rate Adjustment Clause revenues, the year-to-date recorded revenue from the Energy Rate Adjustment Clause will be compared with the year-to-date revenue expected from the Energy Rate Adjustment Clause on a quarterly basis. If there is a variance between the recorded Energy Rate Adjustment Clause revenue and the expected Energy Rate Adjustment Clause revenue, an adjustment, lagged by two months, shall be made to the Energy Rate Adjustment Clause to reconcile the revenue variance over the sales estimated for the subsequent quarter.

In addition, for any given month, if the Company operates either below or above the range of 0.00980 million Btu per kilowatthour to 0.00990 million Btu per kilowatthour, the Company can elect to modify its Generation Component such that the Generation Component will recover only the difference between the Company's actual generation cost and base generation cost for that month by providing notice to the Commission together with a written report, which election will be effective upon the filing of the notice. This difference shall be reflected as an adjustment to the actual revenues collected for the period in question and applied as part of the reconciliation adjustment. The report will explain the reasons why the Company operated outside of the range, the expected duration that it will operate outside of the range, and, if the Company is operating above the range, what steps it will be taking to attempt to rectify the situation. Upon review of the written report, the Commission and the Division of Consumer Advocacy will have the opportunity to make further inquiries on the matter, and the Commission, at its discretion, may institute an investigatory proceeding on the matter should it believe such proceeding is warranted.

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KAUAI ISLAND UTILITY COOPERATIVE
 Lihue, Kauai, Hawaii

KIUC Tariff No. 1
 First Revised Sheet 90
 Cancels Original Sheet 90

SCHEDULE "P"
 Large Power Secondary Service

Availability:

Applicable for secondary large light and/or power service supplied and metered at secondary voltage and a single delivery point.

Available to all power users with metered loads in excess of 100 Kilowatts during any consecutive fifteen minute period in any month except Public Street and Highway Lighting Service. Such customers must sign a contract for service for a minimum period of twelve (12) months except for temporary services. Service supplied under this rate shall be subject to the Rules of the Company.

Rate:

Customer Charge	per Customer per month	\$369.38
Demand Charge:	(To be added to Customer Charge)	\$11.14 per kW of monthly demand
Energy Charge:	(To be added to Customer Charge and Demand Charge)	
Non-Fuel Energy Charge (Non-Fuel and Non-Purchased Power Energy Cost only)		
First	400 kWh per kW demand	\$0.12236 per kWh
All Over	400 kWh per kW demand	\$0.09834 per kWh
Fuel and Purchased Power Energy Charge (may include ERAC on customer bills)	All kWh	\$0.19143 per kWh
Energy Rate Adjustment Clause (ERAC)	All kWh	See below

Determination of Billing Demand:

The monthly billing demand shall be the greater of (a) the highest Kilowatt demand during the month or (b) 75% of the highest Kilowatt demand during the preceding eleven months, as registered during an interval of fifteen consecutive minutes by an indicating demand meter.

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
First Revised Sheet 91
Cancels Original Sheet 91

SCHEDULE "P" (Continued)
Large Power Secondary Service

Minimum Charge:

The minimum monthly charge shall be the sum of the Customer Charge and the Demand Charge.

Power Factor:

The above rate is based on an average power factor of 85%. If the power factor is found to average below 85%, 1/2 of 1% shall be added to the kWh for each 1% of average power factor below 85%. If the power factor is found to average above 85%, 1/2 of 1% shall be deducted from the kWh for each 1% of average power factor above 85%. The maximum increase or decrease shall in no case exceed 5%.

Determination of Power Factor:

The average monthly power factor for this rate schedule shall be determined by a computation from the reading of a reactive KVARH meter and a kWh meter, according to the following formula:

$$\text{Power factor (\%)} = \frac{\text{kWh}}{\sqrt{\text{kWh}^2 + \text{KVARH}^2}} \times 100$$

The KVARH meter shall be ratcheted to prevent reverse rotation on leading power factor.

Resource Cost Adjustment Surcharge:

The Resource Cost Adjustment Surcharge shall be added to the Customer and Energy Charges, and energy cost adjustment.

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second Revised Sheet 92
Cancels First Revised Sheet 92

SCHEDULE "P" (Continued)
Large Power Secondary Service

Lighting:

Service supplied under this rate may be used for lighting purposes, provided that the energy is taken at the same voltage as any power load covered by the contract.

Master Metering:

Master Metering is not applicable to multi-family residential dwelling units or to two or more commercial or industrial customers through one meter on a single premise, except where:

1. the individual tenant does not control a substantial portion of the energy consumed, or
2. master metered service will tend to encourage conservation or the efficient use of energy.

The determination of master metering for apartments, condominiums and multi-unit buildings shall be made by the Company.

Energy Rate Adjustment Clause (ERAC):

This ERAC shall include the following:

FUEL AND PURCHASED ENERGY - The above rates are based on a cost of fuel for Company generation of 1735.83 cents per million Btu for fuel delivered in its service tanks and a cost for purchased energy (Purchased Energy) of 17.381 cents per kilowatthour. The term "Purchased Energy" shall mean all capacity and purchased energy charges and payments (including revenue taxes) that the Commission has authorized to include in this ERAC. Company-generated energy from non-fuel sources shall be considered as zero fuel cost in the determination of the composite fuel cost. When the Company-generated net energy cost is more or less than 1735.83 cents per million Btu, and/or the Purchased Energy cost is more or less than 17.381 cents per kilowatthour, a corresponding adjustment (Energy Rate Adjustment Factor) to the energy charges shall be made. This adjustment shall be comprised of a Company Generation Component and a Purchased Energy Component.

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second Revised Sheet 93
Cancels First Revised Sheet 93

SCHEDULE "P" (Continued)
Large Power Secondary Service

The Company Generation Component shall be the difference in current generation cost and base generation cost, adjusted for additional revenue taxes. The current generation cost shall be determined by the current fuel cost in cents per million Btu, multiplied by a generation conversion factor of 0.009850 million Btu per kilowatthour, weighted by the proportion of current Company generation to total system net energy in kilowatthours. The base generation cost is the base fuel cost of 1735.83 cents per million Btu multiplied by a generation conversion factor of 0.009850 million Btu per kilowatthour, weighted by the proportion of the 2010 test year generation to total system energy in kilowatthours.

The Purchased Energy Component shall be the difference between (1) the current Purchased Energy cost weighted by the proportion of current Purchased Energy to total system net energy, and (2) the base Purchased Energy cost of 17.381 cents per kilowatthour weighted by the proportion of the 2010 test year Purchased Energy to total system net energy, adjusted to the sales delivery level and for additional revenue taxes. The Energy Rate Adjustment Factor shall be the sum of the Generation Component and the Purchased Energy Component.

The revenue tax requirement shall be calculated using current rates of the Franchise Tax, Public Service Company Tax, and Public Utilities Commission fee.

The Energy Rate Adjustment shall be effective on the date of cost change. When a cost change occurs during a customer's billing period, the Energy Rate Adjustment will be prorated for the number of days each cost was in effect.

This ERAC is consistent with the terms of the Company's operations and Purchased Energy contracts and may be revised to reflect any revisions or changes in operations and the Purchased Energy contracts, subject to approval by the Commission.

Issued: July 17, 2015
By: David Bissell
President & Chief Executive Officer

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
First Revised Sheet 94
Cancels Original Sheet 94

SCHEDULE "P" (Continued)
Large Power Secondary Service

Reconciliation Adjustment:

In order to reconcile any differences that may occur between recorded and forecasted Energy Rate Adjustment Clause revenues, the year-to-date recorded revenue from the Energy Rate Adjustment Clause will be compared with the year-to-date revenue expected from the Energy Rate Adjustment Clause on a quarterly basis. If there is a variance between the recorded Energy Rate Adjustment Clause revenue and the expected Energy Rate Adjustment Clause revenue, an adjustment, lagged by two months, shall be made to the Energy Rate Adjustment Clause to reconcile the revenue variance over the sales estimated for the subsequent quarter.

In addition, for any given month, if the Company operates either below or above the range of 0.00980 million Btu per kilowatthour to 0.00990 million Btu per kilowatthour, the Company can elect to modify its Generation Component such that the Generation Component will recover only the difference between the Company's actual generation cost and base generation cost for that month by providing notice to the Commission together with a written report, which election will be effective upon the filing of the notice. This difference shall be reflected as an adjustment to the actual revenues collected for the period in question and applied as part of the reconciliation adjustment. The report will explain the reasons why the Company operated outside of the range, the expected duration that it will operate outside of the range, and, if the Company is operating above the range, what steps it will be taking to attempt to rectify the situation. Upon review of the written report, the Commission and the Division of Consumer Advocacy will have the opportunity to make further inquiries on the matter, and the Commission, at its discretion, may institute an investigatory proceeding on the matter should it believe such proceeding is warranted.

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KAUAI ISLAND UTILITY COOPERATIVE
 Lihue, Kauai, Hawaii

KIUC Tariff No. 1
 Second Revised Sheet 103
 Cancels First Revised Sheet 103

SCHEDULE "SL"
 Street Lighting

Availability:

Applicable to public street and highway lighting service. Available in general, where the Company owns, maintains and operates the street lighting facilities and has already installed primary distribution circuits. Service supplied under this rate is subject to the Rules of the Company.

Rate:

1. Fixture Charge:

- a. Monthly charge for standard incandescent fixtures with not in excess of 4000 lumen lamps - \$3.63 per fixture, per month.
- b. Monthly charge for standard mercury vapor fixture with not in excess of 21,000 lumen lamps - \$6.25 per fixture, per month.
- c. Monthly charge for standard high pressure sodium vapor fixtures:
 - 1 - 100 watt \$6.25 per fixture, per month
 - 2 - 150 watt \$6.25 per fixture, per month
 - 3 - 200 watt \$6.47 per fixture, per month
 - 4 - 250 watt \$6.47 per fixture, per month
 - 5 - 400 watt \$6.75 per fixture, per month
- d. Monthly charge for standard light emitting diode ("LED") fixtures:
 - 1- 45 watt \$8.18 per fixture, per month
 - 2 - 98 watt \$8.48 per fixture, per month
 - 3 - 130 watt \$8.57 per fixture, per month

2. Energy Charge:

Non-Fuel Energy Charge (Non-Fuel and Non- Purchased Power Energy Cost only)	(To be added to Customer Charge) All kWh	\$0.22387 per kWh
Fuel and Purchased Power Energy Charge (may include ERAC on customer bills)	(To be added to Customer Charge) All kWh	\$0.19143 per kWh
Energy Rate Adjustment Clause (ERAC)	(To be added to Customer Charge) All kWh	See below

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second Revised Sheet 104
Cancels First Revised Sheet 104

SCHEDULE "SL" (Continued)
Street Lighting

Minimum Charge:

The minimum monthly charge will be the above Fixture Charge per fixture connected to the circuit.

Unmetered Service:

When Mercury Vapor service is unmetered and lamps are individually controlled for normal dusk-to-dawn operation, the monthly Kilowatthours per lamp billed at the above rates will be uniform at 76, 104, and 164 Kilowatthours for the 175, 250, and 400-watt mercury vapor lamps, respectively.

When High Pressure Sodium Vapor service is unmetered and lamps are individually controlled for normal dusk-to-dawn operation, the monthly Kilowatthours per lamp billed at the above rates will be uniform at 53, 74, 94, 114, and 176 Kilowatthours for the 100, 150, 200, 250, and 400-watt high pressure sodium vapor lamps, respectively.

When LED service is unmetered and lamps are individually controlled for normal dusk-to-dawn operation, the monthly Kilowatthours per lamp billed at the above rates will be uniform at 16.2, 35.28, and 46.8 Kilowatthours for the 45, 98, and 130 watt LED lights, respectively, multiplied by the applicable percentage dimming factor, if any. Customer has the option to select a percentage dimming factor, which is available in 5% increments (e.g., 95%, 90%, 85%, etc.).

Night-time hours of lamp and ballast operation reflect an average 360 hours per month.

Resource Cost Adjustment Surcharge:

The Resource Cost Adjustment Surcharge shall be added to the Customer and Energy Charges, and energy cost adjustment.

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second Revised Sheet 105
Cancels First Revised Sheet 105

SCHEDULE "SL" (Continued)
Street Lighting

Term of Contract:

If the Company is asked to remove or relocate facilities within 60 months after installation, the customer shall make a contribution in the amount of the estimated net removal or relocation cost.

Energy Rate Adjustment Clause (ERAC):

This ERAC shall include the following:

FUEL AND PURCHASED ENERGY - The above rates are based on a cost of fuel for Company generation of 1735.83 cents per million Btu for fuel delivered in its service tanks and a cost for purchased energy (Purchased Energy) of 17.381 cents per kilowatthour. The term "Purchased Energy" shall mean all capacity and purchased energy charges and payments (including revenue taxes) that the Commission has authorized to include in this ERAC. Company-generated energy from non-fuel sources shall be considered as zero fuel cost in the determination of the composite fuel cost. When the Company-generated net energy cost is more or less than 1735.83 cents per million Btu, and/or the Purchased Energy cost is more or less than 17.381 cents per kilowatthour, a corresponding adjustment (Energy Rate Adjustment Factor) to the energy charges shall be made. This adjustment shall be comprised of a Company Generation Component and a Purchased Energy Component.

The Company Generation Component shall be the difference in current generation cost and base generation cost, adjusted for additional revenue taxes. The current generation cost shall be determined by the current fuel cost in cents per million Btu, multiplied by a generation conversion factor of 0.009850 million Btu per kilowatthour, weighted by the proportion of current Company generation to total system net energy in kilowatthours. The base generation cost is the base fuel cost of 1735.83 cents per million Btu multiplied by a generation conversion factor of 0.009850 million Btu per kilowatthour, weighted by the proportion of the 2010 test year generation to total system energy in kilowatthours.

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second Revised Sheet 106
Cancels First Revised Sheet 106

SCHEDULE "SL" (Continued)
Street Lighting

The Purchased Energy Component shall be the difference between (1) the current Purchased Energy cost weighted by the proportion of current Purchased Energy to total system net energy, and (2) the base Purchased Energy cost of 17.381 cents per kilowatthour weighted by the proportion of the 2010 test year Purchased Energy to total system net energy, adjusted to the sales delivery level and for additional revenue taxes. The Energy Rate Adjustment Factor shall be the sum of the Generation Component and the Purchased Energy Component.

The revenue tax requirement shall be calculated using current rates of the Franchise Tax, Public Service Company Tax, and Public Utilities Commission fee.

The Energy Rate Adjustment shall be effective on the date of cost change. When a cost change occurs during a customer's billing period, the Energy Rate Adjustment will be prorated for the number of days each cost was in effect.

This ERAC is consistent with the terms of the Company's operations and Purchased Energy contracts and may be revised to reflect any revisions or changes in operations and the Purchased Energy contracts, subject to approval by the Commission.

Reconciliation Adjustment:

In order to reconcile any differences that may occur between recorded and forecasted Energy Rate Adjustment Clause revenues, the year-to-date recorded revenue from the Energy Rate Adjustment Clause will be compared with the year-to-date revenue expected from the Energy Rate Adjustment Clause on a quarterly basis. If there is a variance between the recorded Energy Rate Adjustment Clause revenue and the expected Energy Rate Adjustment Clause revenue, an adjustment, lagged by two months, shall be made to the Energy Rate Adjustment Clause to reconcile the revenue variance over the sales estimated for the subsequent quarter.

In addition, for any given month, if the Company operates either below or above the range of 0.00980 million Btu per kilowatthour to 0.00990 million Btu per kilowatthour, the Company can elect to modify its Generation Component such that the Generation Component will recover only the difference between the Company's actual generation cost and base generation cost for that month by providing notice to the Commission together with a written report, which election will be effective upon the filing of the notice. This difference shall be reflected as an adjustment to the actual revenues collected for the period in question and applied as part of the reconciliation adjustment. The report will explain the reasons why the Company operated outside of the range, the expected duration that it will operate outside of the range, and, if the Company is operating above the range, what steps it will be taking to attempt to rectify the situation. Upon review of the written report, the Commission and the Division of Consumer Advocacy will have the opportunity to make further inquiries on the matter, and the Commission, at its discretion, may institute an investigatory proceeding on the matter should it believe such proceeding is warranted.

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KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

EXHIBIT 5

COMPARISON OF PRESENT AND
PROPOSED RATES

(1 PAGE)

KAUAI ISLAND UTILITY COOPERATIVE
COMPARISON OF PRESENT AND PROPOSED RATES
TEST YEAR ENDED DECEMBER 31, 2023

LINE NO.	CUSTOMER CLASS	DESCRIPTION	PRESENT RATES (A)	PROPOSED RATES (B)	\$ INCREASE (C) (B) - (A)	% INCREASE (D) (C) / (A)
SCHEDULE "D" - Residential Service						
1	Customer Charge	per customer per month	\$ 10.58	\$ 13.50	\$ 2.92	27.60%
	Energy Charge		<u>per kWh</u>	<u>per kWh</u>		
2	Non-Fuel Energy Charge (Non-Fuel and Non-Purchased Power Energy Cost only)	per kWh (all kWh)	\$ 0.15600	\$ 0.21019	\$ 0.05419	34.74%
3	Fuel and Purchased Power Energy Charge	per kWh (all kWh)	\$ 0.19143	\$ 0.20188	\$ 0.01045	5.46%
4	Minimum Charge	per customer per month	\$ 13.50	\$ 13.50	\$ -	0.00%
SCHEDULE "G" - General Light and Power Service						
5	Customer Charge	per customer per month	\$ 23.82	\$ 25.00	\$ 1.18	4.95%
	Energy Charge		<u>per kWh</u>	<u>per kWh</u>		
6	Non-Fuel Energy Charge (Non-Fuel and Non-Purchased Power Energy Cost only)	per kWh (all kWh)	\$ 0.16626	\$ 0.22599	\$ 0.05973	35.93%
7	Fuel and Purchased Power Energy Charge	per kWh (all kWh)	\$ 0.19143	\$ 0.20188	\$ 0.01045	5.46%
8	Minimum Charge	per customer per month	\$ 26.45	\$ 25.00	\$ (1.45)	-5.48%
SCHEDULE "J" - General Light and Power Service						
9	Customer Charge	per customer per month	\$ 39.69	\$ 40.00	\$ 0.31	0.78%
10	Demand Charge	per kW of monthly demand	\$ 6.62	\$ 8.28	\$ 1.66	25.08%
	Energy Charge		<u>per kWh</u>	<u>per kWh</u>		
11	Non-Fuel Energy Charge (Non-Fuel and Non-Purchased Power Energy Cost only)	per kWh (all kWh)	\$ 0.13247	\$ 0.18456	\$ 0.05209	39.32%
12	Fuel and Purchased Power Energy Charge	per kWh (all kWh)	\$ 0.19143	\$ 0.20188	\$ 0.01045	5.46%
SCHEDULE "L" - Large Power Primary Service (see Note a)						
13	Customer Charge	per customer per month	\$ 355.08	\$ 355.00	\$ (0.08)	-0.02%
14	Demand Charge	per kW of monthly demand	\$ 13.94	\$ 14.90	\$ 0.96	6.89%
	Energy Charge		<u>per kWh</u>	<u>per kWh</u>		
15	Non-Fuel Energy Charge (Non-Fuel and Non-Purchased Power Energy Cost only)	400 kWh per kW demand	\$ 0.11273	\$ 0.16549	\$ 0.05276	46.80%
16	First	400 kWh per kW demand	\$ 0.08998	\$ 0.16549	\$ 0.07551	83.92%
17	All Over	400 kWh per kW demand	\$ 0.19143	\$ 0.20188	\$ 0.01045	5.46%
17	Fuel and Purchased Power Energy Charge	per kWh (all kWh)	\$ 0.19143	\$ 0.20188	\$ 0.01045	5.46%
SCHEDULE "P" - Large Power Secondary Service (see Note a)						
18	Customer Charge	per customer per month	\$ 369.38	\$ 355.00	\$ (14.38)	-3.89%
19	Demand Charge	per kW of monthly demand	\$ 11.14	\$ 14.90	\$ 3.76	33.75%
	Energy Charge		<u>per kWh</u>	<u>per kWh</u>		
20	Non-Fuel Energy Charge (Non-Fuel and Non-Purchased Power Energy Cost only)	400 kWh per kW demand	\$ 0.12236	\$ 0.16549	\$ 0.04313	35.25%
21	First	400 kWh per kW demand	\$ 0.09834	\$ 0.16549	\$ 0.06715	68.28%
22	All Over	400 kWh per kW demand	\$ 0.19143	\$ 0.20188	\$ 0.01045	5.46%
22	Fuel and Purchased Power Energy Charge	per kWh (all kWh)	\$ 0.19143	\$ 0.20188	\$ 0.01045	5.46%
SCHEDULE "SL" - Street Lighting						
Fixture Charge						
23	Standard incandescent fixtures <= 4,000 lumens	per fixture per month	\$ 3.63	\$ 4.54	\$ 0.91	25.07%
24	Standard mercury vapor fixtures <= 21,000 lumens	per fixture per month	\$ 6.25	\$ 7.81	\$ 1.56	24.96%
	Standard high pressure sodium vapor fixtures					
25	<= 100 watt	per fixture per month	\$ 6.25	\$ 7.81	\$ 1.56	24.96%
26	101-150 watt	per fixture per month	\$ 6.25	\$ 7.81	\$ 1.56	24.96%
27	151-200 watt	per fixture per month	\$ 6.47	\$ 8.09	\$ 1.62	25.04%
28	201-250 watt	per fixture per month	\$ 6.47	\$ 8.09	\$ 1.62	25.04%
29	251-400 watt	per fixture per month	\$ 6.75	\$ 8.44	\$ 1.69	25.04%
	Standard light emitting diode (LED) fixtures					
30	<= 45 watt	per fixture per month	\$ 8.18	\$ 10.23	\$ 2.05	25.06%
31	46-98 watt	per fixture per month	\$ 8.48	\$ 10.60	\$ 2.12	25.00%
32	99-130 watt	per fixture per month	\$ 8.57	\$ 10.71	\$ 2.14	24.97%
	Energy Charge		<u>per kWh</u>	<u>per kWh</u>		
33	Non-Fuel Energy Charge (Non-Fuel and Non-Purchased Power Energy Cost only)	per kWh (all kWh)	\$ 0.22387	\$ 0.31166	\$ 0.08779	39.21%
34	Fuel and Purchased Power Energy Charge	per kWh (all kWh)	\$ 0.19143	\$ 0.20188	\$ 0.01045	5.46%

Notes

a KIUC proposes to combine Schedules "L" and "P" into new Schedule "LP". Refer to testimony of Dan Koehler for additional information (Exhibit 10-T-500).

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

EXHIBIT 6

REVENUE REQUIREMENT SCHEDULE
(REGULATORY BASIS)

For Test Year Ended December 31, 2023
at Present and Proposed Revenues

(1 PAGE)

KAUAI ISLAND UTILITY COOPERATIVE
REVENUE REQUIREMENT
(REGULATORY BASIS)
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS, EXCEPT PERCENTAGES AND RATIOS)

LINE NO.	DESCRIPTION	FACTOR OR REFERENCE	PRESENT RATES 2023 (A)	REGULATORY ADJUSTMENTS (B)	ADJUSTED PRESENT RATES 2023 (C) (A) + (B)	INCREASE (D)	PROPOSED RATES 2023 (E) (C) + (D)	% INCREASE (F) (D) + (C)
1	Electric Revenue	8-1	\$ 177,034	\$ -	\$ 177,034	\$ 16,682	\$ 193,716	9.42%
2	Other Revenue	8-1	(826)	-	(826)	-	(826)	0.00%
3	TOTAL REVENUES	L1 + L2	176,208	-	176,208	16,682	192,890	9.47%
4	Fuel	8-2	43,518	-	43,518	-	43,518	
5	Purchased Power	8-2	47,595	-	47,595	-	47,595	
6	TOTAL COMMODITIES	L4 + L5	91,113	-	91,113	-	91,113	
7	GROSS MARGIN	L3 - L6	85,095	-	85,095	16,682	101,777	
8	Power Supply	8-4	15,319	-	15,319	-	15,319	
9	Transmission & Distribution	8-5	9,359	-	9,359	-	9,359	
10	Member Services	8-6	3,535	-	3,535	17	3,552	
11	Communications	8-7	896	-	896	-	896	
12	Energy Services	8-8	1,031	-	1,031	-	1,031	
13	Human Resources	8-9	1,321	-	1,321	-	1,321	
14	Executive	8-10	1,185	-	1,185	-	1,185	
15	Board of Directors	8-11	694	-	694	-	694	
16	Safety and Facilities	8-12	3,524	-	3,524	-	3,524	
17	SOS Shearwater Program	8-13	384	-	384	-	384	
18	Regulatory Affairs	8-14	1,717	-	1,717	-	1,717	
19	Engineering	8-15	1,628	-	1,628	-	1,628	
20	Habitat Conservation Program	8-16	4,528	-	4,528	-	4,528	
21	Financial & Corporate Services	8-17	2,421	-	2,421	-	2,421	
22	Information Technology	8-18	3,044	-	3,044	-	3,044	
23	TOTAL O&M LESS COMMODITIES	SUM OF L8 THRU L22	50,586	-	50,586	17	50,603	
24	TOTAL O&M INCL COMMODITIES	L6 + L23	141,699	-	141,699	17	141,716	
25	Depreciation & Amortization	8-19	18,531	(2,194) a	16,337	-	16,337	
26	Taxes Other Than Income	8-20	15,694	-	15,694	1,482	17,176	
27	TOTAL EXPENSES	SUM OF L24 THRU L26	175,924	(2,194)	173,730	1,499	175,229	
28	OPERATING MARGIN	L3 - L27	284	2,194	2,478	15,183	17,661	
29	Interest & Dividend Income	8-21	955	-	955	-	955	
30	Other Income (Jobbing)	8-22	94	-	94	-	94	
31	Income (Loss) from KRS1	8-23	(1,268)	-	(1,268)	-	(1,268)	
32	Income (Loss) from KRS2H	8-24	(233)	-	(233)	-	(233)	
33	Non-Operating Income	8-25	98	-	98	-	98	
34	Capital Credits & Patronage Allocation	8-28	225	-	225	-	225	
35	Sponsorships & Contributions	8-29	(78)	78 b	-	-	-	
36	Other Deductions-Abandoned PSI	8-30	-	-	-	-	-	
37	Interest Expense-Long-Term Debt	8-31	(6,730)	-	(6,730)	-	(6,730)	
38	Interest Expense-Short-Term Debt	8-32	(462)	-	(462)	-	(462)	
39	NET MARGIN	SUM OF L28 THRU L38	\$ (7,115)	\$ 2,272	\$ (4,843)	\$ 15,183	\$ 10,340	
40	AVERAGE RATE BASE	Exhibit 9	\$ 318,844		\$ 318,844		\$ 318,844	
41	RETURN ON RATE BASE	L28 / L40	0.09%		0.78%		5.54%	
42	Regulatory TIER	(L39 - L37) / -L37	(0.06)		0.28		2.54	
43	Indenture DSC Ratio (Regulatory)							
44	Adjusted Net Margin	L39+L25-L31-L32-L37	\$ 19,647		\$ 19,725		\$ 34,908	
45	Total Debt Service	L50	\$ 19,984		\$ 19,984		\$ 19,984	
46	Indenture DSC Ratio (Regulatory)	L44 / L45	0.98		0.99		1.75	
47	Total Debt Service							
48	Interest Expense-Long-Term Debt	-L37	\$ 6,730		\$ 6,730		\$ 6,730	
49	Principal Payments		13,254		13,254		13,254	
50	Total	L48 + L49	\$ 19,984		\$ 19,984		\$ 19,984	
Revenue Requirement								
51	Target Reported DSC	L46, Column (E)				1.75		
52	Additional Net Margin Required	(L51 - L46) x L50			\$ 15,183			
53	Factor for Moving Rate Base	Workpaper 7			1.098719991			
54	Additional Revenue Required	L52 x L53			\$ 16,682			
55	Percent Increase - Electric Revenue	L54 / L1, Column (A)				9.42%		
56	Percent Increase - Total Revenue	L54 / L3, Column (A)				9.47%		

Notes

a Regulatory adjustment to remove acquisition premium amortization of \$2,194,182.

b Regulatory adjustment to remove contributions expense of \$77,575.

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

EXHIBIT 7

REVENUE REQUIREMENT SCHEDULE
(GAAP BASIS)

For Test Year Ended December 31, 2023
at Present and Proposed Revenues

(2 PAGES)

KAUAI ISLAND UTILITY COOPERATIVE
REVENUE REQUIREMENT
(GAAP BASIS - FOR ILLUSTRATIVE PURPOSES ONLY)
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS, EXCEPT PERCENTAGES AND RATIOS)

LINE NO.	DESCRIPTION	FACTOR OR REFERENCE	PRESENT RATES 2023 (A)	INCREASE (B)	PROPOSED RATES 2023 (C)	% INCREASE (D) (B) ÷ (A)
1	Electric Revenue	8-1	\$ 177,034	\$ 16,682	\$ 193,716	9.42%
2	Other Revenue	8-1	(826)	-	(826)	0.00%
3	TOTAL REVENUES	L1 + L2	176,208	16,682	192,890	9.47%
4	Fuel	8-2	43,518	-	43,518	
5	Purchased Power	8-2	47,595	-	47,595	
6	TOTAL COMMODITIES	L4 + L5	91,113	-	91,113	
7	GROSS MARGIN	L3 - L6	85,095	16,682	101,777	
8	Power Supply	8-4	15,319	-	15,319	
9	Transmission & Distribution	8-5	9,359	-	9,359	
10	Member Services	8-6	3,535	17	3,552	
11	Communications	8-7	896	-	896	
12	Energy Services	8-8	1,031	-	1,031	
13	Human Resources	8-9	1,321	-	1,321	
14	Executive	8-10	1,185	-	1,185	
15	Board of Directors	8-11	694	-	694	
16	Safety and Facilities	8-12	3,524	-	3,524	
17	SOS Shearwater Program	8-13	384	-	384	
18	Regulatory Affairs	8-14	1,717	-	1,717	
19	Engineering	8-15	1,628	-	1,628	
20	Habitat Conservation Program	8-16	4,528	-	4,528	
21	Financial & Corporate Services	8-17	2,421	-	2,421	
22	Information Technology	8-18	3,044	-	3,044	
23	TOTAL O&M LESS COMMODITIES	SUM OF L8 THRU L22	50,586	17	50,603	
24	TOTAL O&M INCL COMMODITIES	L6 + L23	141,699	17	141,716	
25	Depreciation & Amortization	8-19	18,531	-	18,531	
26	Taxes Other Than Income	8-20	15,694	1,482	17,176	
27	TOTAL EXPENSES	SUM OF L24 THRU L26	175,924	1,499	177,423	
28	OPERATING MARGIN	L3 - L27	284	15,183	15,467	
29	Interest & Dividend Income	8-21	955	-	955	
30	Other Income (Jobbing)	8-22	94	-	94	
31	Income (Loss) from KRS1	8-23	(1,268)	-	(1,268)	
32	Income (Loss) from KRS2H	8-24	(233)	-	(233)	
33	Non-Operating Income	8-25	98	-	98	
34	Capital Credits & Patronage Allocation	8-28	225	-	225	
35	Sponsorships & Contributions	8-29	(78)	-	(78)	
36	Other Deductions-Abandoned PSI	8-30	-	-	-	
37	Interest Expense-Long-Term Debt	8-31	(6,730)	-	(6,730)	
38	Interest Expense-Short-Term Debt	8-32	(462)	-	(462)	
39	NET MARGIN	SUM OF L28 THRU L38	(7,115)	15,183	8,068	
40	RUS TIER	(L39 - L37) / -L37	(0.06)		2.20	
41	Indenture DSC Ratio					
42	Adjusted Net Margin	L39+L25-L31-L32-L37	\$ 19,647		\$ 34,830	
43	Total Debt Service	L52	\$ 19,984		\$ 19,984	
44	Indenture DSC Ratio	L42 / L43	0.98		1.74	
45	Traditional Reported DSC					
46	Adjusted Net Margin	L39+L25-L37	\$ 18,146		\$ 33,329	
47	Total Debt Service	L52	\$ 19,984		\$ 19,984	
48	Traditional Reported DSC	L46 / L47	0.91		1.67	
49	Total Debt Service					
50	Interest Expense-Long-Term Debt	-L37	\$ 6,730		\$ 6,730	
51	Principal Payments		13,254		13,254	
52	Total	L50 + L51	\$ 19,984		\$ 19,984	
Revenue Requirement						
53	Target Reported DSC	L44, Column (C)		1.74		
54	Additional Net Margin Required	(L53 - L44) * L52		\$ 15,183		
55	Factor for Moving Rate Base	Workpaper 7		1.098719991		
56	Additional Revenue Required	L54 x L55		\$ 16,682		
57	Percent Increase - Electric Revenue	L56 / C (A), L1		9.42%		
58	Percent Increase - Total Revenue	L56 / C (A), L3		9.47%		

KAUAI ISLAND UTILITY COOPERATIVE
 REVENUE REQUIREMENT SUPPORT
 TEST YEAR ENDED DECEMBER 31, 2023

LINE NO.	DESCRIPTION	REFERENCE	RATES (A)	FACTOR (B)
1	Gross Revenue Factor			1.00000000
	Less:			
2	Franchise Royalty Tax		2.5000%	
3	Public Service Company Tax		5.8850%	
4	Public Utility Commission Fees		0.5000%	
5	Uncollectible Rate		0.1000%	0.08985000
6	Subject to Income Tax	L1 - L5		0.91015000
	Less:			
7	State Income Tax		0.0000% a	
8	Federal Income Tax		0.0000% b	-
9	Remaining for Net Income	L6 - L8		0.91015000
10	Expense for Each \$1 of Revenue	L5		0.08985000
11	Factor to convert Income to Revenue	L1 / L9		1.098719991

Notes

- a KIUC is subject to state income taxes under Hawaii Revised Statutes; however, margins that are allocated within a specific time period are considered a deduction for state income tax purposes. Therefore, amounts are considered de minimis and no State Income Tax is included in the Revenue Requirement.
- b KIUC is exempt from federal income taxes under the provisions of Section 501(c)(12) of the Internal Revenue Code, except to the extent of unrelated business income, if any. Therefore, no Federal Income Tax is included in the Revenue Requirement model.

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

EXHIBIT 8

RESULTS OF OPERATION

For Test Year Ended December 31, 2023

(45 PAGES)

KAUAI ISLAND UTILITY COOPERATIVE
RESULTS OF OPERATION
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	REFERENCE	ACTUAL RECORDED					PROJECTED 2022 (F)	DIFFERENCE INC / (DEC) (G) (H) - (F)	TEST YEAR ENDED 12/31/2023 (H)
			2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)			
1	Electric Sales Revenue	8-1	\$ 162,193	\$ 154,467	\$ 135,958	\$ 153,654	\$ 146,627	\$ 173,295	\$ 3,739	\$ 177,034
2	Other Operating Revenue	8-1	467	451	9,189	5,134	(341)	54	(880)	(826)
3	TOTAL REVENUES	L1 + L2	<u>162,660</u>	<u>154,918</u>	<u>145,147</u>	<u>158,788</u>	<u>146,286</u>	<u>173,349</u>	<u>2,859</u>	<u>176,208</u>
4	Fuel	8-2	47,402	33,576	20,881	29,895	37,036	42,650	868	43,518
5	Purchased Power	8-2	31,547	39,754	41,799	44,622	39,807	46,772	823	47,595
6	TOTAL COMMODITIES	L4 + L5	<u>78,949</u>	<u>73,330</u>	<u>62,680</u>	<u>74,517</u>	<u>76,843</u>	<u>89,422</u>	<u>1,691</u>	<u>91,113</u>
7	GROSS MARGIN	L3 - L6	<u>83,711</u>	<u>81,588</u>	<u>82,467</u>	<u>84,271</u>	<u>69,443</u>	<u>83,927</u>	<u>1,168</u>	<u>85,095</u>
8	Power Supply	8-4	15,641	15,452	13,840	12,688	11,389	13,774	1,545	15,319
9	Transmission & Distribution	8-5	6,477	7,034	7,651	8,452	6,691	8,173	1,186	9,359
10	Member Services	8-6	2,948	2,982	2,840	2,669	2,314	2,830	705	3,535
11	Communications	8-7	652	718	684	760	620	782	114	896
12	Energy Services	8-8	542	561	651	638	473	614	417	1,031
13	Human Resources	8-9	894	999	993	1,012	717	892	429	1,321
14	Executive	8-10	1,108	1,007	925	877	831	1,019	166	1,185
15	Board of Directors	8-11	540	566	499	554	491	573	121	694
16	Safety and Facilities	8-12	2,627	2,750	3,170	3,385	2,648	3,195	329	3,524
17	SOS Shearwater Program	8-13	273	322	304	442	365	428	(44)	384
18	Regulatory Affairs	8-14	1,177	1,050	1,343	840	728	919	798	1,717
19	Engineering	8-15	594	483	1,092	1,053	1,033	1,222	406	1,628
20	Habitat Conservation Program	8-16	3,304	3,471	3,724	3,597	3,739	3,832	696	4,528
21	Financial & Corporate Services	8-17	1,458	1,641	1,644	1,926	1,611	1,948	473	2,421
22	Information Technology	8-18	1,854	2,239	2,637	2,586	2,192	2,712	332	3,044
23	TOTAL O&M LESS COMMODITIES	SUM OF L8 THRU L22	<u>40,089</u>	<u>41,275</u>	<u>41,997</u>	<u>41,479</u>	<u>35,842</u>	<u>42,913</u>	<u>7,673</u>	<u>50,586</u>
24	TOTAL O&M INCL COMMODITIES	L6 + L23	<u>119,038</u>	<u>114,605</u>	<u>104,677</u>	<u>115,996</u>	<u>112,685</u>	<u>132,335</u>	<u>9,364</u>	<u>141,699</u>
25	Depreciation and Amortization	8-19	16,010	14,578	14,739	15,458	13,081	15,801	2,730	18,531
26	Taxes Other Than Income	8-20	14,568	13,847	12,951	14,140	13,023	15,469	225	15,694
27	TOTAL EXPENSES	SUM OF L24 THRU L26	<u>149,616</u>	<u>143,030</u>	<u>132,367</u>	<u>145,594</u>	<u>138,789</u>	<u>163,605</u>	<u>12,319</u>	<u>175,924</u>
28	OPERATING MARGIN	L3 - L27	<u>13,044</u>	<u>11,888</u>	<u>12,780</u>	<u>13,194</u>	<u>7,497</u>	<u>9,744</u>	<u>(9,460)</u>	<u>284</u>
29	Interest & Dividend Income	8-21	1,968	2,032	1,693	1,350	1,046	885	70	955
30	Other Operating Income (Net)	8-22	124	307	(2)	(19)	51	96	(2)	94
31	Income (Loss) from KRS1	8-23	(1,151)	(1,652)	(1,085)	(1,068)	(445)	(1,284)	16	(1,268)
32	Income (Loss) from KRS2H	8-24	86	(12)	(45)	(251)	6	(312)	79	(233)
33	Non-Operating Income (Net)	8-25	91	89	87	2,979	82	98	-	98
34	Liquidated Damages	8-26	-	324	18	-	-	-	-	-
35	Gain on Disposition of Property	8-27	-	-	82	-	-	-	-	-
36	Capital Credits & Patronage Allocation	8-28	343	308	251	235	183	198	27	225
37	Sponsorships & Contributions	8-29	(61)	(71)	(56)	(53)	(61)	(67)	(11)	(78)
38	Other Deductions-Abandoned PSI	8-30	-	-	-	(1,498)	-	-	-	-
39	Interest Expense-Long-Term Debt	8-31	(5,898)	(5,985)	(6,303)	(6,570)	(5,592)	(6,641)	(89)	(6,730)
40	Interest Expense-Short-Term Debt	8-32	(114)	-	-	-	-	(48)	(414)	(462)
41	NET MARGIN	SUM OF L28 THRU L40	<u>\$ 8,432</u> a	<u>\$ 7,228</u> a	<u>\$ 7,420</u> a	<u>\$ 8,299</u> a	<u>\$ 2,767</u>	<u>\$ 2,669</u>	<u>\$ (9,784)</u>	<u>\$ (7,115)</u>

Notes

a Differences from audited financial statements due to rounding.

KAUAI ISLAND UTILITY COOPERATIVE
REVENUES AT PRESENT AND PROPOSED RATES
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR			
		2018	2019	2020	2021	YTD 10/2022	2022	2023	ADJUSTMENTS	PRESENT RATES	ADJUSTMENTS	PROPOSED RATES
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1	Residential	\$ 65,170	\$ 63,201	\$ 59,717	\$ 67,666	\$ 63,126	\$ 74,733	\$ 76,174	\$ -	\$ 76,174	\$ 7,152	\$ 83,326
2	Small Commercial - Schedule G	25,056	24,116	20,152	22,610	21,895	25,703	26,034	-	26,034	2,443	28,477
3	Large Commercial - Schedule J	17,697	16,924	14,988	16,724	16,068	18,904	18,183	-	18,183	1,708	19,891
4	Large Power-Primary - Schedule L	16,783	15,335	11,636	12,898	12,856	15,271	16,758	-	16,758	1,573	18,331
5	Large Power-Secondary - Schedule P	36,406	34,114	28,615	32,895	31,429	37,298	39,017	-	39,017	3,663	42,680
6	Street Lighting	719	682	666	684	581	697	716	-	716	143	859
7	Irrigation	362	95	184	177	672	689	152	-	152	-	152
8	TOTAL ELECTRIC REVENUE	162,193	154,467	135,958	153,654	146,627	173,295	177,034	-	177,034	16,682	193,716
9	Tariff Revenues	442	420	355	359	334	393	359	-	359	-	359
10	Rental Revenues	13	14	14	14	46	49	68	-	68	-	68
11	Other Revenues - Interconnection	12	17	22	26	30	34	25	-	25	-	25
12	Other Revenues - COVID-19 LGM	-	-	8,798	4,735	(751)	(422)	-	(1,278)	(1,278)	-	(1,278)
13	TOTAL OTHER REVENUE	467	451	9,189	5,134	(341)	54	452	(1,278)	(826)	-	(826)
14	TOTAL REVENUES	\$ 162,660	\$ 154,918	\$ 145,147	\$ 158,788	\$ 146,286	\$ 173,349	\$ 177,486	\$ (1,278)	\$ 176,208	\$ 16,682	\$ 192,890

Notes

a Adjustment to include amortization of Regulatory Asset for COVID-19 Lost Gross Margin to recover over a 10-year period (2023 - 2032).

15	Total Regulatory Asset - COVID-19 LGM	\$ 12,782
16	Divided by Recovery Period - 10 Years	10
17	Annual Amortization Expense	\$ 1,278
18	Difference due to Rounding	(1)
19	Adj. Annual Amortization Expense	\$ 1,277

Total Regulatory Asset - COVID-19 LGM is calculated as the sum of Columns (C) through (E). Note that balance for Projected 2022 in Column (F) is not included as the 2022 Budget assumes accrual of COVID-19 LGM through 12/31/2022 and was not adjusted for termination of accrual as of 06/30/2022.

KAUAI ISLAND UTILITY COOPERATIVE
KWH SALES AND CUSTOMERS
TEST YEAR ENDED DECEMBER 31, 2023

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED	
		2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)
kWh Sales								
1	Residential	174,726,470	181,264,409	177,182,391	186,243,561	160,190,587	191,918,587	190,379,000
2	Commercial - Schedule G	65,473,099	67,417,715	57,698,004	60,188,554	53,992,794	64,061,794	63,283,000
3	Commercial - Schedule J	49,854,166	51,256,543	46,668,526	48,348,244	42,585,460	50,650,460	47,426,000
4	Large Power - Schedule L	51,409,785	51,265,330	39,586,355	40,153,191	36,857,460	44,236,460	47,034,000
5	Large Power - Schedule P	107,098,228	108,215,545	91,894,242	98,582,111	86,715,389	104,118,389	106,083,000
6	Street Lighting	852,640	790,188	770,590	768,345	618,388	748,388	770,000
7	Irrigation	1,699,665	500,111	1,490,585	871,638	2,038,626	2,128,626	746,000
8	Sub-Total	<u>451,114,053</u>	<u>460,709,841</u>	<u>415,290,693</u>	<u>435,155,644</u>	<u>382,998,704</u>	<u>457,862,704</u>	<u>455,721,000</u>
Average Customer Bills for Year								
9	Residential	28,961	29,195	29,510	29,803	29,972	29,920	30,106
10	Commercial - Schedule G	4,480	4,552	4,569	4,610	4,687	4,655	4,672
11	Commercial - Schedule J	294	292	295	293	292	293	293
12	Large Power - Schedule L	14	14	14	15	16	14	15
13	Large Power - Schedule P	108	105	101	103	100	107	103
14	Street Lighting	3,734	3,756	3,765	3,767	3,791	3,773	3,769
15	Irrigation	<u>3</u>	<u>3</u>	<u>3</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
16	Sub-Total	<u>37,594</u>	<u>37,917</u>	<u>38,257</u>	<u>38,593</u>	<u>38,860</u>	<u>38,764</u>	<u>38,960</u>
Annual kWh Sales Per Average Customer Bills								
17	Residential	6,033	6,209	6,004	6,249	5,345	6,363	6,324
18	Commercial - Schedule G	14,615	14,811	12,628	13,056	11,520	13,595	13,545
19	Commercial - Schedule J	169,572	175,536	158,198	165,011	145,841	161,863	161,863
20	Large Power - Schedule L	3,672,128	3,661,809	2,827,597	2,676,879	2,303,591	3,359,571	3,135,600
21	Large Power - Schedule P	991,650	1,030,624	909,844	957,108	867,154	991,430	1,029,932
22	Street Lighting	228	210	205	204	163	204	204
23	Irrigation	<u>566,555</u>	<u>166,704</u>	<u>496,862</u>	<u>435,819</u>	<u>1,019,313</u>	<u>373,000</u>	<u>373,000</u>
24	Sub-Total	<u>5,420,781</u>	<u>5,055,903</u>	<u>4,411,338</u>	<u>4,254,326</u>	<u>4,352,927</u>	<u>4,906,026</u>	<u>4,720,468</u>

Note: Average Customer Bills for Year is representative of the average number of consumers served, a requirement in our annual RUS Financial and Operating Report Electric Distribution ("RUS Form 7"). It is calculated by adding the monthly customer count for the year and dividing by 12. Refer to the direct testimony of Stacie Dellamano (Exhibit 10-T-200) for details on the forecasted information.

KAUAI ISLAND UTILITY COOPERATIVE
 KWH SALES
 TEST YEAR ENDED DECEMBER 31, 2023

LINE NO.	DESCRIPTION	ACTUAL					YTD 10/2022		2023 SALES FORECAST (MARCH 2022) ^a				2023 BUDGET (L)
		2017 (A)	2018 (B)	2019 (C)	2020 (D)	2021 (E)	2022 BUDGET (F)	FORECAST (G)	LOW (H)	BASE (I)	HIGH (J)	AVERAGE BASE / HIGH (K) ((I) + (J)) / 2	
1	Schedule D	169,346,331	174,726,470	181,264,409	177,182,391	186,243,561	187,422,000	191,918,587	182,206,000	187,313,000	193,445,000	190,379,000	190,379,000
2	Schedule G	62,824,313	65,473,099	67,417,715	57,698,004	60,188,554	62,974,000	64,061,794	60,033,000	62,070,000	64,496,000	63,283,000	63,283,000
3	Schedule J	50,282,542	49,854,166	51,256,543	46,668,526	48,348,244	48,304,000	50,650,460	45,139,000	46,229,000	48,622,000	47,426,000	47,426,000
4	Schedule L	51,926,563	51,409,785	51,265,330	39,586,355	40,153,191	45,696,000	44,236,460	44,508,000	46,452,000	47,615,000	47,034,000	47,034,000
5	Schedule P	108,943,412	107,098,228	108,215,545	91,894,242	98,582,111	104,088,000	104,118,389	105,689,000	105,934,000	106,231,000	106,083,000	106,083,000
6	SL	878,661	852,640	790,188	770,590	768,345	770,000	748,388	770,000	770,000	770,000	770,000	770,000
7	Irrigation	896,148	1,699,665	500,111	1,490,585	871,638	746,000	2,128,626	746,000	746,000	746,000	746,000	746,000
8	TOTAL	445,097,970	451,114,053	460,709,841	415,290,693	435,155,644	450,000,000	457,862,704	439,091,000	449,514,000	461,925,000	455,721,000	455,721,000

Notes

a Refer to Electric Load Forecast dated March 2022 (Attachment TAL-1003) for additional information regarding 2023 Sales Forecast.

KAUAI ISLAND UTILITY COOPERATIVE
COMMODITIES
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR	
		2018	2019	2020	2021	YTD 10/2022	2022	2023	ADJUSTMENTS	PRESENT
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
1	Fuel	\$ 47,402	\$ 33,576	\$ 20,881	\$ 29,895	\$ 37,036	\$ 42,650	\$ 43,518	\$ -	\$ 43,518
2	Purchased Power	31,547	39,754	41,799	44,622	39,807	46,772	47,595	-	47,595
3	TOTAL COMMODITIES	<u>\$ 78,949</u>	<u>\$ 73,330</u>	<u>\$ 62,680</u>	<u>\$ 74,517</u>	<u>\$ 76,843</u>	<u>\$ 89,422</u>	<u>\$ 91,113</u>	<u>\$ -</u>	<u>\$ 91,113</u>

KAUAI ISLAND UTILITY COOPERATIVE
OPERATIONS & MAINTENANCE LESS COMMODITIES
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS, EXCEPT PERCENTAGES)

LINE NO.	DESCRIPTION	REFERENCE	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR		% OF TOTAL O&M EXCL COMMODITIES (J)
			2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)	
1	Power Supply	8-4	\$ 5,192	\$ 5,279	\$ 5,246	\$ 4,962	\$ 4,171	\$ 5,159	\$ 6,101	\$ -	\$ 6,101	12%
2	Transmission & Distribution	8-5	2,395	2,765	3,066	3,134	2,656	3,301	3,694	-	3,694	7%
3	Member Services	8-6	1,512	1,464	1,273	1,163	994	1,226	1,461	-	1,461	3%
4	Communications	8-7	235	251	265	263	230	279	211	-	211	0%
5	Energy Services	8-8	210	249	328	324	227	287	377	-	377	1%
6	Human Resources	8-9	473	486	510	530	358	447	556	-	556	1%
7	Executive	8-10	633	678	553	648	512	627	710	-	710	1%
8	Board of Directors	8-11	-	-	-	-	-	-	-	-	-	0%
9	Safety and Facilities	8-12	194	188	216	192	167	202	223	-	223	0%
10	SOS Shearwater Program	8-13	-	-	-	-	-	-	-	-	-	0%
11	Regulatory Affairs	8-14	319	248	471	300	195	244	163	-	163	0%
12	Engineering	8-15	217	223	545	561	448	559	701	-	701	1%
13	Habitat Conservation Program	8-16	149	126	22	16	16	16	-	-	-	0%
14	Financial & Corporate Services	8-17	748	778	855	950	928	1,111	1,264	-	1,264	2%
15	Information Technology	8-18	435	388	450	454	405	504	580	-	580	1%
		SUM OF L1 THRU L15	12,712	13,123	13,800	13,497	11,307	13,962	16,041	-	16,041	32%
17	Power Supply	8-4	\$ 3,025	\$ 3,202	\$ 3,285	\$ 3,170	\$ 2,724	\$ 3,217	\$ 3,046	620 a	3,666	7%
18	Transmission & Distribution	8-5	1,400	1,569	1,897	2,064	1,880	2,182	1,889	384	2,273	4%
19	Member Services	8-6	967	1,030	885	849	768	946	1,097	223	1,320	3%
20	Communications	8-7	115	128	132	138	127	151	148	30	178	0%
21	Energy Services	8-8	96	129	141	148	105	141	222	45	267	1%
22	Human Resources	8-9	239	264	273	254	207	254	295	61	356	1%
23	Executive	8-10	185	206	154	143	192	216	148	30	178	0%
24	Board of Directors	8-11	-	-	-	-	-	-	-	-	-	0%
25	Safety and Facilities	8-12	146	141	173	161	145	169	148	30	178	0%
26	SOS Shearwater Program	8-13	-	-	-	-	-	-	-	-	-	0%
27	Regulatory Affairs	8-14	217	166	312	220	146	177	130	26	156	0%
28	Engineering	8-15	80	82	244	255	216	279	396	81	477	1%
29	Habitat Conservation Program	8-16	69	68	18	7	14	14	-	-	-	0%
30	Financial & Corporate Services	8-17	370	388	468	512	501	592	627	128	755	1%
31	Information Technology	8-18	262	212	270	271	274	334	369	76	445	1%
		SUM OF L17 THRU L31	7,191	7,585	8,252	8,192	7,299	8,672	8,515	1,734	10,249	20%
32	TOTAL Payroll Overhead	THRU L31	7,191	7,585	8,252	8,192	7,299	8,672	8,515	1,734	10,249	20%
33	TOTAL SALARIES & WAGES	L16 + L32	19,903	20,708	22,052	21,689	18,606	22,634	24,556	1,734	26,290	52%
34	Power Supply	8-4	7,424	6,971	5,309	4,556	4,494	5,398	5,525	27 a	5,552	11%
35	Transmission & Distribution	8-5	2,682	2,700	2,688	3,254	2,155	2,690	3,392	-	3,392	7%
36	Member Services	8-6	449	488	682	657	552	658	755	(1)	754	1%
37	Communications	8-7	302	339	287	359	263	352	507	-	507	1%
38	Energy Services	8-8	236	183	182	166	141	186	387	-	387	1%
39	Human Resources	8-9	182	249	210	228	152	191	409	-	409	1%
40	Executive	8-10	290	123	218	86	127	176	297	-	297	1%
41	Board of Directors	8-11	540	566	499	554	491	573	694	-	694	1%
42	Safety and Facilities	8-12	2,287	2,421	2,781	3,032	2,336	2,824	3,123	-	3,123	6%
43	SOS Shearwater Program	8-13	273	322	304	442	365	428	384	-	384	1%
44	Regulatory Affairs	8-14	641	636	560	320	387	498	598	800	1,398	3%
45	Engineering	8-15	297	178	303	237	369	384	450	-	450	1%
46	Habitat Conservation Program	8-16	3,086	3,277	3,684	3,574	3,709	3,802	4,528	-	4,528	9%
47	Financial & Corporate Services	8-17	340	475	321	464	182	245	402	-	402	1%
48	Information Technology	8-18	1,157	1,639	1,917	1,861	1,513	1,874	2,019	-	2,019	4%
		SUM OF L34 THRU L48	20,186	20,567	19,945	19,790	17,236	20,279	23,470	826	24,296	48%
49	TOTAL OPERATIONS & MAINTENANCE	THRU L48	20,186	20,567	19,945	19,790	17,236	20,279	23,470	826	24,296	48%
50	TOTAL O&M LESS COMMODITIES	L33 + L49	\$ 40,089	\$ 41,275	\$ 41,997	\$ 41,479	\$ 35,842	\$ 42,913	\$ 48,026	\$ 2,560	\$ 50,586	100%

Notes
a Refer to schedule referenced in Column E for detail of each adjustment from 2023 Budget to 2023 Test Year Budget at Present Rates.

KAUAI ISLAND UTILITY COOPERATIVE
OPERATIONS & MAINTENANCE
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	PROJECTED 2022 (A)	ADJUSTMENTS (B)	PROJECTED 2023 (C)
1	TOTAL O&M LESS COMMODITIES	\$ 42,913		
2	SALARIES & WAGES		1,922 a	
3	OPERATIONS & MAINTENANCE			
4	Habitat Conservation Program		726 b	
5	Transmission & Distribution		702 c	
6	Safety and Facilities		299 d	
7	Human Resources		218 e	
8	Energy Services		201 f	
9	Power Supply		127 g	
10	Training & Travel		326 h	
11	OTHER		592 i	1.4%
12	TOTAL O&M LESS COMMODITIES			\$ 48,026

Notes

- a Adjustment from Projected 2022 Salaries & Wages reflects contractual pay increases for union employees and commensurate increases for non-union employees, also includes inflationary insurance overhead increases, vacancies that were unfilled due to COVID hiring restrictions and migration of employees.
- b Adjustment from Projected 2022 O&M for Habitat Conservation Program is primarily due to KIUC adding two additional mitigation sites in 2023 in accordance with its early implementation of the Long Term Habitat Conservation Plan (LTHCP). The two additional mitigation sites result in increases in program-related conservation measures for ecological monitoring services, predator & vegetation control services, and facility maintenance in connection with our endangered species programs.
- c Non-labor Transmission and Distribution ("T&D") Budget totals \$3,284,440 as detailed out in Exhibit 8-5. This budget is primarily comprised of maintenance of overhead lines – both transmission lines and distribution lines - including repairs to the overhead lines, tree trimming, clearing, and other necessary right-of-way maintenance expenses. Expenses were reduced in 2022 due to COVID work-related restrictions, such as limited staffing to perform maintenance and vegetation control work, and 2023 represents an expected move toward normal O&M levels coupled with the potential to catch-up on deferred maintenance that was not possible in previous years, due to COVID-related health and safety restrictions. In addition, KIUC has been experiencing inflationary pressures on prices for parts, services, and consumables that require increasing future years' budget amounts.
- d Adjustment from 2022 O&M is for a quoted 10% property insurance cost increase and an additional increase for pandemic expenses recovery for travel and training and additional cost for health supplies kept on hand.
- e Adjustment from Projected 2022 O&M for Human Resources is primarily due to increase in recruitment and relocation expenses, employee consulting service for 3rd party hiring, HR software system, and training and education of employees.
- f Adjustment from Projected 2022 O&M for Energy Services is primarily due to increase in rebate programs that were budgeted to be implemented in 2020, but because of COVID were placed on hold and are now being actively advertised and marketed with the membership. This primarily consists of the EV Charging Rebates.
- g Non-labor Power Supply Budget amounts have declined in recent years due to increasing renewable purchase power agreements causing less dispatch of KIUC generating assets. Reduced dispatch saves expenses by extending the next required overhaul for each generating unit (since overhauls are typically tied to the number of fired hours) and by requiring less consumables. Beginning with 2020, COVID resulted in a significant decrease in kWh sales, requiring even less dispatch of KIUC generating assets (and therefore less O&M expenses). As COVID restrictions have eased and kWh sales have increased in 2022, and without any significant new renewable projects being added to the system, dispatch of KIUC generating units has increased, resulting in the need for increased O&M expenses. This will continue as future year kWh sales increase, until significant new renewable projects are added (which will not occur before 2025, at least). In addition, KIUC has been experiencing inflationary pressures on prices for parts, services, and consumables that require increasing future years' budget amounts.
- h Adjustment from Projected 2022 O&M reflects increases in training, travel, and related expenses due to an expected return to pre-pandemic levels in 2023.
- i Adjustment from Projected 2022 O&M related to overall cost increases primarily due to inflation and supply chain disruption issues carrying forward from 2022, impacting O&M expectations for 2023.

KAUAI ISLAND UTILITY COOPERATIVE
 REGULATORY ASSET - PENSION EXPENSE
 TEST YEAR ENDED DECEMBER 31, 2023
 (IN THOUSANDS, EXCEPT YEARS AND MONTHS)

LINE NO.	MONTH	2022		2023		NET INCREASE TO PENSION COSTS
		ANNUAL PENSION COSTS PER DOCKET NO. 2009-0050 D&O (A)	ACTUAL PENSION COST ESTIMATE (B)	AMORTIZATION OF REG ASSET - PENSION EXPENSE (C)	ANNUAL PENSION COSTS ESTIMATE (D) (B) + (C)	
1	January	\$ 220	\$ 320	\$ 79	\$ 399	\$ 179
2	February	220	320	79	399	179
3	March	220	320	79	399	179
4	April	220	320	79	399	179
5	May	220	320	79	399	179
6	June	220	320	79	399	179
7	July	220	320	79	399	179
8	August	220	320	79	399	179
9	September	220	320	79	399	179
10	October	220	320	79	399	179
11	November	220	320	79	399	179
12	December	220	320	79	399	179
13	TOTAL	\$ 2,640	\$ 3,840	\$ 948 a	\$ 4,788	\$ 2,148
14	Adjustment due to Rounding	1	-	4	4	3
15	ADJUSTED TOTAL	\$ 2,641	\$ 3,840	\$ 952	\$ 4,792	\$ 2,151

Notes

a Amortization of Regulatory Asset - Pension Expense calculated as follows:

	BEGINNING BALANCE (A)	MONTHLY ACCRUAL (B)	ACTUAL / FORECAST (C)	NET ACTIVITY / END BALANCE (D) (B) + (C)
16	Balance at 12/31/21	\$ 8,372		
17	January-22		(220)	319
18	February-22		(220)	316
19	March-22		(220)	319
20	April-22		(220)	308
21	May-22		(220)	318
22	June-22		(220)	316
23	July-22		(220)	310
24	August-22		(220)	304
25	September-22		(220)	320
26	October-22		(220)	320
27	November-22		(220)	320
28	December-22		(220)	320
29	Balance at 12/31/22			\$ 9,522
30	Total Regulatory Asset - Pension Expenses			\$ 9,522
31	Divided by Recovery Period - 10 Years			10
32	Annual Amortization Expense			\$ 952
33	Total Regulatory Asset - Pension Expenses			\$ 952
34	Monthly Recovery Period - 12 Months			12
35	Monthly Amortization Expense			\$ 79

KAUAI ISLAND UTILITY COOPERATIVE
 REGULATORY ASSET - PENSION EXPENSE
 PAYROLL & TRANSPORTATION OVERHEAD ALLOCATION
 TEST YEAR ENDED DECEMBER 31, 2023
 (IN THOUSANDS, EXCEPT FTE AND PERCENTAGES)

LINE NO.	DEPARTMENT	TOTAL FTE COUNT (A)	TOTAL BY DEPARTMENT ^a		LABOR ALLOCATION RATES						PAYROLL OVERHEAD						TRANSPORTATION OVERHEAD								
			PAYROLL OVERHEAD (B)	TRANSPORTATION OVERHEAD (C)	O&M (D)	CAPITAL			CLEARING (G)	BILLABLES (H)	TOTAL (I)	O&M (J)	CAPITAL			CLEARING (M)	BILLABLES (N)	TOTAL (O)	O&M (P)	CAPITAL			CLEARING (S)	BILLABLES (T)	TOTAL (U)
						DIRECT (E)	A&G (F)	TOTAL (I) THRU (H)					DIRECT (K)	A&G (L)	TOTAL (O) THRU (N)					DIRECT (Q)	A&G (R)	TOTAL (U) THRU (T)			
			(A) x [1]	(B) x (D)	(B) x (E)	(B) x (F)	(B) x (G)	(B) x (H)	(C) x (D)	(C) x (E)	(C) x (F)	(C) x (G)	(C) x (H)	(C) x (D)	(C) x (E)	(C) x (F)	(C) x (G)	(C) x (H)	(C) x (D)	(C) x (E)	(C) x (F)	(C) x (G)	(C) x (H)		
1	Power Supply	42.25	\$ 635	-	97.6%	0.8%	0.8%	0.9%	100.0%	\$ 620	\$ 5	\$ 5	\$ -	\$ 6	\$ 636	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
2	Transmission & Distribution	38.25	575	-	66.8%	22.2%	9.4%	1.6%	100.0%	384	128	54	-	9	575	-	-	-	-	-	-	-	-	-	
3	Member Services	15.00	225	-	99.0%	0.0%	1.0%	0.0%	100.0%	223	-	2	-	-	225	-	-	-	-	-	-	-	-	-	
4	Communications	2.00	30	-	100.0%	0.0%	0.0%	0.0%	100.0%	30	-	-	-	-	30	-	-	-	-	-	-	-	-	-	
5	Energy Services	3.00	45	-	100.0%	0.0%	0.0%	0.0%	100.0%	45	-	-	-	-	45	-	-	-	-	-	-	-	-	-	
6	Human Resources	4.00	61	-	100.0%	0.0%	0.0%	0.0%	100.0%	61	-	-	-	-	61	-	-	-	-	-	-	-	-	-	
7	Executive	2.00	30	-	100.0%	0.0%	0.0%	0.0%	100.0%	30	-	-	-	-	30	-	-	-	-	-	-	-	-	-	
8	Safety & Facilities	2.00	30	-	100.0%	0.0%	0.0%	0.0%	100.0%	30	-	-	-	-	30	-	-	-	-	-	-	-	-	-	
9	Regulatory Affairs	2.00	30	-	87.8%	0.0%	12.2%	0.0%	100.0%	26	-	4	-	-	30	-	-	-	-	-	-	-	-	-	
10	Engineering	12.50	188	-	42.9%	0.0%	57.1%	0.0%	100.0%	81	-	107	-	-	188	-	-	-	-	-	-	-	-	-	
11	Financial & Corporate Services	11.00	166	-	77.1%	0.0%	22.1%	0.8%	100.0%	128	-	36	-	1	165	-	-	-	-	-	-	-	-	-	
12	Information Technology	5.00	76	-	100.0%	0.0%	0.0%	0.0%	100.0%	76	-	-	-	-	76	-	-	-	-	-	-	-	-	-	
13	Stores Clearing	4.00	60	-	-	-	-	100.0%	100.0%	-	-	-	60	-	60	-	-	-	-	-	-	-	-	-	
14	Transportation Clearing	-	-	-	-	-	-	100.0%	100.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
15	TOTAL	143.00	\$ 2,151	-						\$ 1,734	\$ 133	\$ 208	\$ 60	\$ 16	\$ 2,151	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
16	Payroll Overhead per Employee		\$ 15	[1]																					

Notes
 a Allocation of Payroll Overhead and Transportation is based on FTE Count by Department calculated as Total Net Increase to Pension Costs (Workpaper 8-3, Page 1, Line 15, Column (E)) divided by Total FTE Count (Workpaper 8-3, Page 2, Line 15, Column (A)).

KAUAI ISLAND UTILITY COOPERATIVE
POWER SUPPLY
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR	
		2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)
1	Salaries & Wages - Direct Labor	\$ 5,192	\$ 5,279	\$ 5,246	\$ 4,962	\$ 4,171	\$ 5,159	\$ 6,101	\$ -	\$ 6,101
2	Payroll Overhead	3,025	3,202	3,285	3,170	2,724	3,217	3,046	620 a	3,666
3	TOTAL SALARIES & WAGES	8,217	8,481	8,531	8,132	6,895	8,376	9,147	620	9,767
4	Steam Expenses	45	30	16	25	17	21	20	-	20
5	Misc Steam Power Exp	-	-	-	-	-	1	-	-	-
6	Maint of Structures	171	210	174	162	133	162	187	-	187
7	Maint of Boiler Plant	240	102	56	33	43	51	104	1 b	105
8	Maint of Electric Plant	93	83	5	6	-	2	34	-	34
9	Water for Power	485	415	206	106	46	85	144	-	144
10	Maint of Structures-Hydro	-	-	-	-	-	1	7	-	7
11	Mt of Reservoirs,Dams,Waterways	259	237	206	181	175	211	216	-	216
12	Maint of Electric Plant-Hydro	25	(3)	5	1	1	2	6	-	6
13	Generation Expenses	438	311	204	205	238	255	266	-	266
14	Misc Other Pwr Gen Exp	899	846	743	835	731	828	791	1 c	792
15	Buildings & Structures-Other	85	85	96	93	68	83	99	-	99
16	Maint of Gen and Elect Plt	4,684	4,655	3,598	2,909	3,042	3,696	3,651	25 d	3,676
17	TOTAL - POWER GENERATION	7,424	6,971	5,309	4,556	4,494	5,398	5,525	27	5,552
18	TOTAL POWER SUPPLY	\$ 15,641	\$ 15,452	\$ 13,840	\$ 12,688	\$ 11,389	\$ 13,774	\$ 14,672	\$ 647	\$ 15,319

Notes

- a Adjustment to Payroll Overhead due to increased Payroll OH allocation via additional Pension Regulatory Asset and Expense. Refer to Workpaper 8-3, Page 2, for detailed calculation of adjustment and allocation by Department.
- b Adjustment to Maint of Electric Plant due to allocation from increased Stores Expense via increased Payroll OH via additional Pension Regulatory Asset and Expense. Refer to Workpaper 8-3, Page 2 for detailed calculation of adjustment and allocation by Department.
- c Adjustment to Misc Other Pwr Gen Exp due to allocation from increased Stores Expense via increased Payroll OH via additional Pension Regulatory Asset and Expense. Refer to Workpaper 8-3, Page 2 for detailed calculation of adjustment and allocation by Department.
- d Adjustment to Maint of Gen and Elect Plt due to allocation from increased Stores Expense via increased Payroll OH via additional Pension Regulatory Asset and Expense. Refer to Workpaper 8-3, Page 2 for detailed calculation of adjustment and allocation by Department.

KAUAI ISLAND UTILITY COOPERATIVE
TRANSMISSION & DISTRIBUTION
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR	
		2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)
1	Salaries & Wages - Direct Labor	\$ 2,395	\$ 2,765	\$ 3,066	\$ 3,134	\$ 2,656	\$ 3,301	\$ 3,694	\$ -	\$ 3,694
2	Payroll Overhead	1,400	1,569	1,897	2,064	1,880	2,182	1,889	384 a	2,273
3	TOTAL SALARIES & WAGES	3,795	4,334	4,963	5,198	4,536	5,483	5,583	384	5,967
4	System Control & Load Dispatch	221	208	136	188	51	73	86	-	86
5	Station Expenses	80	75	70	72	38	50	78	-	78
6	Overhead Line Expenses	9	11	2	6	8	18	11	-	11
7	Misc Transmission Exp	75	104	53	66	123	139	81	-	81
8	Transmission Exp Rents	65	65	19	65	58	66	65	-	65
9	Maint of Station Equip	3	26	7	218	2	12	123	-	123
10	Maint of Overhead Lines	422	410	538	557	347	448	610	-	610
11	Station Expenses	237	83	66	100	53	68	110	-	110
12	Overhead Line Expenses	10	9	2	1	1	2	2	-	2
13	Underground Line Expenses	3	1	1	1	5	6	4	-	4
14	Meter Expenses - Standard	-	-	32	(3)	19	23	17	-	17
15	Misc Distribution Exp	216	246	232	194	170	208	314	-	314
16	Distribution Exp - Rents	14	14	15	8	17	17	14	-	14
17	Maint of Station Equip	41	94	120	172	76	100	147	-	147
18	Maint of Overhead Lines	1,129	1,208	1,246	1,348	1,071	1,311	1,531	-	1,531
19	Maint of Underground Lines	49	43	54	113	36	45	60	-	60
20	Maint of Line Transformers	-	-	-	-	-	-	1	-	1
21	Maint of St Lighting	-	1	12	41	1	3	14	-	14
22	Maint of Meters - Standard	-	-	5	12	10	12	14	-	14
23	TOTAL T&D EXPENSE	2,574	2,598	2,610	3,159	2,086	2,601	3,282	-	3,282
24	Office Supplies & Expense	14	14	10	8	8	10	16	-	16
25	Outside/Professional Services	-	-	7	1	-	2	7	-	7
26	Maintenance of General Plant	94	88	61	86	61	77	87	-	87
27	TOTAL ADMINISTRATIVE EXPENSE	108	102	78	95	69	89	110	-	110
28	TOTAL TRANSMISSION & DISTRIBUTION	\$ 6,477	\$ 7,034	\$ 7,651	\$ 8,452	\$ 6,691	\$ 8,173	\$ 8,975	\$ 384	\$ 9,359

Notes

a Adjustment to Payroll Overhead due to increased Payroll OH allocation via additional Pension Regulatory Asset and Expense. Refer to Workpaper 8-3, Page 2 for detailed calculation of adjustment and allocation by Department.

KAUAI ISLAND UTILITY COOPERATIVE
MEMBER SERVICES
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR			
		2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)	ADJUSTMENTS (J)	PROPOSED RATES (K)
1	Salaries & Wages - Direct Labor	\$ 1,512	\$ 1,464	\$ 1,273	\$ 1,163	\$ 994	\$ 1,226	\$ 1,461	\$ -	\$ 1,461	\$ -	\$ 1,461
2	Payroll Overhead	987	1,030	885	849	768	946	1,097	223 a	1,320	-	1,320
3	TOTAL SALARIES & WAGES	2,499	2,494	2,158	2,012	1,762	2,172	2,558	223	2,781	-	2,781
4	Meter Expenses-Standard	(8)	17	51	18	12	16	30	-	30	-	30
5	Maint of Meters-Standard	6	7	1	-	-	-	-	-	-	-	-
6	Cust Records & Collection Exp	268	255	291	291	219	267	304	-	304	-	304
7	TOTAL STANDARD METER EXPENSE	266	279	343	309	231	283	334	-	334	-	334
8	Meter Exp-Non-Std-Whse Rent	22	21	32	28	23	28	30	-	30	-	30
9	Meter Reading Exp-Non-Standard	3	4	4	4	5	5	5	-	5	-	5
10	Cust Rec & Collect-Non-Standard	1	3	3	3	-	-	2	-	2	-	2
11	Outside/Professional Services	-	-	-	-	-	-	-	-	-	-	-
12	TOTAL NON-STANDARD METER EXPENSE	26	28	39	35	28	33	37	-	37	-	37
13	Uncollectible Accounts	(10)	30	146	158	144	171	177	(1) b	176	17 c	193
14	Key Accounts	20	17	11	12	11	16	23	-	23	-	23
15	Office Supplies & Expense	62	55	57	50	47	55	82	-	82	-	82
16	Outside/Professional Services	57	53	58	70	66	75	75	-	75	-	75
17	Other General Expense	27	22	27	22	24	24	26	-	26	-	26
18	Maintenance of General Plant	1	4	1	1	1	1	1	-	1	-	1
19	TOTAL ADMINISTRATIVE EXPENSE	147	134	143	143	138	155	184	-	184	-	184
20	TOTAL MEMBER SERVICES	\$ 2,948	\$ 2,982	\$ 2,840	\$ 2,669	\$ 2,314	\$ 2,830	\$ 3,313	\$ 222	\$ 3,535	\$ 17	\$ 3,552

Notes

- a Adjustment to Payroll Overhead due to increased Payroll OH allocation via additional Pension Regulatory Asset and Expense. Refer to Workpaper 8-3, Page 2 for detailed calculation of adjustment and allocation by Department.
- b Adjustment to Uncollectible Accounts due to change in Total Revenues due to LGM recovery.
- c Adjustment to Uncollectible Accounts due to increase in Total Revenues due to increase in Proposed Rates.

KAUAI ISLAND UTILITY COOPERATIVE
COMMUNICATIONS
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR	
		2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)
1	Salaries & Wages - Direct Labor	\$ 235	\$ 251	\$ 265	\$ 263	\$ 230	\$ 279	\$ 211	\$ -	\$ 211
2	Payroll Overhead	115	128	132	138	127	151	148	30 a	178
3	TOTAL SALARIES & WAGES	350	379	397	401	357	430	359	30	389
4	Member Information & Education	72	71	83	91	68	83	95	-	95
5	Member Survey	17	19	-	20	22	22	21	-	21
6	TOTAL COMMUNICATIONS EXPENSE	89	90	83	111	90	105	116	-	116
7	Community Outreach	104	126	85	90	46	99	145	-	145
8	TOTAL COMMUNITY & EDUCATION EXPENSE	104	126	85	90	46	99	145	-	145
9	Office Supplies & Expense	13	23	5	6	6	10	21	-	21
10	Community Outreach-Communications	87	91	113	119	56	56	123	-	123
11	Community Outreach-Projects	9	9	1	33	65	82	102	-	102
12	TOTAL ADMINISTRATIVE EXPENSE	109	123	119	158	127	148	246	-	246
13	TOTAL COMMUNICATIONS	\$ 652	\$ 718	\$ 684	\$ 760	\$ 620	\$ 782	\$ 866	\$ 30	\$ 896

Notes

a Adjustment to Payroll Overhead due to increased Payroll OH allocation via additional Pension Regulatory Asset and Expense. Refer to Workpaper 8-3, Page 2 for detailed calculation of adjustment and allocation by Department.

KAUAI ISLAND UTILITY COOPERATIVE
ENERGY SERVICES
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR	
		2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)
1	Salaries & Wages - Direct Labor	\$ 210	\$ 249	\$ 328	\$ 324	\$ 227	\$ 287	\$ 377	\$ -	\$ 377
2	Payroll Overhead	96	129	141	148	105	141	222	45 ^a	267
3	TOTAL SALARIES & WAGES	306	378	469	472	332	428	599	45	644
4	TOTAL OUTSIDE SERVICES	-	-	6	16	5	5	60	-	60
5	Heat Pump Water Heater	2	1	3	10	4	5	10	-	10
6	Water Heater Timer Rebate	-	-	-	-	-	1	4	-	4
7	SWH Rebate	54	49	23	39	44	51	51	-	51
8	SWH Loan	8	4	-	-	-	1	5	-	5
9	Appliance Rebate	117	94	109	68	38	62	110	-	110
10	Air Conditioning/Maint. Rebate	-	-	-	6	-	2	22	-	22
11	VFD Pool Pump Rebate	-	-	-	-	-	-	-	-	-
12	Qual Member Appl Repl Program	5	5	7	-	26	26	8	-	8
13	Lighting Program	28	19	19	17	19	19	27	-	27
14	HBI Program	17	11	15	10	5	6	16	-	16
15	Time of Use Pilot/EV Rebate	5	-	-	-	-	8	74	-	74
16	TOTAL ENERGY PROGRAMS	236	183	176	150	136	181	327	-	327
17	TOTAL ENERGY SERVICES	\$ 542	\$ 561	\$ 651	\$ 638	\$ 473	\$ 614	\$ 986	\$ 45	\$ 1,031

Notes

a Adjustment to Payroll Overhead due to increased Payroll OH allocation via additional Pension Regulatory Asset and Expense. Refer to Workpaper 8-3, Page 2 for detailed calculation of adjustment and allocation by Department.

KAUAI ISLAND UTILITY COOPERATIVE
HUMAN RESOURCES
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR	
		2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)
1	Salaries & Wages - Direct Labor	\$ 473	\$ 486	\$ 510	\$ 530	\$ 358	\$ 447	\$ 556	\$ -	\$ 556
2	Payroll Overhead	239	264	273	254	207	254	295	61 ^a	356
3	TOTAL SALARIES & WAGES	712	750	783	784	565	701	851	61	912
4	Office Supplies & Expense	99	140	79	100	111	126	169	-	169
5	Outside/Professional Services	22	41	97	100	13	32	131	-	131
6	Maintenance of General Plant	25	27	-	16	16	16	20	-	20
7	TOTAL HUMAN RESOURCES	146	208	176	216	140	174	320	-	320
8	Office Supplies & Expense	36	41	34	12	12	17	89	-	89
9	TOTAL TRAINING & DEVELOPMENT	36	41	34	12	12	17	89	-	89
10	TOTAL HUMAN RESOURCES	\$ 894	\$ 999	\$ 993	\$ 1,012	\$ 717	\$ 892	\$ 1,260	\$ 61	\$ 1,321

Notes

^a Adjustment to Payroll Overhead due to increased Payroll OH allocation via additional Pension Regulatory Asset and Expense. Refer to Workpaper 8-3, Page 2 for detailed calculation of adjustment and allocation by Department.

KAUAI ISLAND UTILITY COOPERATIVE
EXECUTIVE
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR	
		2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)
1	Salaries & Wages - Direct Labor	\$ 633	\$ 678	\$ 553	\$ 648	\$ 512	\$ 627	\$ 710	\$ -	\$ 710
2	Payroll Overhead	185	206	154	143	192	216	148	30 ^a	178
3	TOTAL SALARIES & WAGES	818	884	707	791	704	843	858	30	888
4	Office Supplies & Expense	75	46	17	17	22	31	109	-	109
5	Outside/Professional Services	74	-	85	1	97	106	51	-	51
6	Other General Expense	141	77	116	68	8	39	137	-	137
7	TOTAL PRESIDENT	290	123	218	86	127	176	297	-	297
8	TOTAL EXECUTIVE	\$ 1,108	\$ 1,007	\$ 925	\$ 877	\$ 831	\$ 1,019	\$ 1,155	\$ 30	\$ 1,185

Notes

a Adjustment to Payroll Overhead due to increased Payroll OH allocation via additional Pension Regulatory Asset and Expense. Refer to Workpaper 8-3, Page 2 for detailed calculation of adjustment and allocation by Department.

KAUAI ISLAND UTILITY COOPERATIVE
BOARD OF DIRECTORS
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR	
		2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)
1	Outside/Professional Services	\$ 167	\$ 197	\$ 237	\$ 226	\$ 167	\$ 215	\$ 252	\$ -	\$ 252
2	Other General Expense	269	268	163	220	225	259	339	-	339
3	TOTAL BOARD ADMIN & GEN EXPENSE	436	465	400	446	392	474	591	-	591
4	TOTAL BOARD ELECTIONS	81	78	87	98	90	90	88	-	88
5	TOTAL ANNUAL MEETING	23	23	12	10	9	9	15	-	15
6	TOTAL BOARD OF DIRECTORS	<u>\$ 540</u>	<u>\$ 566</u>	<u>\$ 499</u>	<u>\$ 554</u>	<u>\$ 491</u>	<u>\$ 573</u>	<u>\$ 694</u>	<u>\$ -</u>	<u>\$ 694</u>

KAUAI ISLAND UTILITY COOPERATIVE
SAFETY & FACILITIES
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR	
		2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)
1	Salaries & Wages - Direct Labor	\$ 194	\$ 188	\$ 216	\$ 192	\$ 167	\$ 202	\$ 223	\$ -	\$ 223
2	Payroll Overhead	146	141	173	161	145	169	148	30 ^a	178
3	TOTAL SALARIES & WAGES	340	329	389	353	312	371	371	30	401
4	Office Supplies & Expense	9	13	6	7	12	15	21	-	21
5	Other General Expense	114	106	206	130	80	117	223	-	223
6	TOTAL SAFETY	123	119	212	137	92	132	244	-	244
7	Office Supplies & Expense	24	19	13	14	10	13	25	-	25
8	Property Insurance	599	705	957	1,224	912	1,087	1,218	-	1,218
9	Rent Expense-Hana Kukui	1,286	1,303	1,294	1,327	1,106	1,327	1,327	-	1,327
10	Rent-Anahola Service Center	9	9	95	95	79	95	95	-	95
11	Maintenance of General Plant	246	266	210	235	137	170	214	-	214
12	TOTAL FACILITIES	2,164	2,302	2,569	2,895	2,244	2,692	2,879	-	2,879
13	TOTAL SAFETY & FACILITIES	\$ 2,627	\$ 2,750	\$ 3,170	\$ 3,385	\$ 2,648	\$ 3,195	\$ 3,494	\$ 30	\$ 3,524

Notes

a Adjustment to Payroll Overhead due to increased Payroll OH allocation via additional Pension Regulatory Asset and Expense. Refer to Workpaper 8-3, Page 2 for detailed calculation of adjustment and allocation by Department.

KAUAI ISLAND UTILITY COOPERATIVE
 SOS SHEARWATER PROGRAM
 TEST YEAR ENDED DECEMBER 31, 2023
 (IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR	
		2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)
1	Office Supplies & Expense	\$ 3	\$ 58	\$ -	\$ -	\$ -	\$ -	\$ 2	\$ -	\$ 2
2	Outside/Professional Services	256	249	286	427	359	420	367	-	367
3	USFW SOS Shearwater Program	14	15	18	15	6	8	15	-	15
4	TOTAL SOS SHEARWATER PROGRAM	<u>\$ 273</u>	<u>\$ 322</u>	<u>\$ 304</u>	<u>\$ 442</u>	<u>\$ 365</u>	<u>\$ 428</u>	<u>\$ 384</u>	<u>\$ -</u>	<u>\$ 384</u>

KAUAI ISLAND UTILITY COOPERATIVE
REGULATORY AFFAIRS
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR	
		2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)
1	Salaries & Wages - Direct Labor	\$ 319	\$ 248	\$ 471	\$ 300	\$ 195	\$ 244	\$ 163	\$ -	\$ 163
2	Payroll Overhead	217	166	312	220	146	177	130	26 ^a	156
3	TOTAL SALARIES & WAGES	536	414	783	520	341	421	293	26	319
4	Outside/Professional Services	498	502	417	186	267	334	400	800 ^b	1,200
5	Other Regulatory Expenses	11	6	4	3	-	3	18	-	18
6	TOTAL REGULATORY EXPENSE	509	508	421	189	267	337	418	800	1,218
7	Outside/Professional Services	96	92	126	126	94	126	128	-	128
8	Other Legislative Expenses	14	15	3	-	6	7	14	-	14
9	TOTAL LEGISLATIVE EXPENSE	110	107	129	126	100	133	142	-	142
10	Office Supplies & Expense	9	8	1	-	2	2	12	-	12
11	Outside/Professional Services	13	13	9	5	18	26	26	-	26
12	TOTAL REAL PROPERTY	22	21	10	5	20	28	38	-	38
13	TOTAL REGULATORY AFFAIRS	\$ 1,177	\$ 1,050	\$ 1,343	\$ 840	\$ 728	\$ 919	\$ 891	\$ 826	\$ 1,717

Notes

a Adjustment to Payroll Overhead due to increased Payroll OH allocation via additional Pension Regulatory Asset and Expense. Refer to Workpaper 8-3, Page 2 for detailed calculation of adjustment and allocation by Department.

b Adjustment to Outside/Professional Services to include amortization of Regulatory Asset for Rate Case expenses over 3-year period (2023-2025). Refer to Workpaper 8-14 for detailed calculation.

14	Total Regulatory Asset - Rate Case Expenses	\$ 2,400
15	Divided by Recovery Period - 3 Years	3
16	Annual Amortization Expense	\$ 800

KAUAI ISLAND UTILITY COOPERATIVE
 REGULATORY AFFAIRS
 TEST YEAR ENDED DECEMBER 31, 2023
 (IN THOUSANDS, EXCEPT YEARS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR	
		2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)
1	Outside/Professional Services							\$ 400	\$ 800	\$ 1,200
		BASE SCENARIO				LOW SCENARIO				
2		Preparation and Filing	Discovery and Settlement	Hearings and Briefings	Total	Preparation and Filing	Discovery and Settlement	Hearings and Briefings	Total	
3	PREPARATION AND FILING									
4	Collet & Associates, LLC	\$ 145	\$ 231	\$ -	\$ 376	\$ 40	\$ 120	\$ -	\$ 160	
5	Daymark Energy Advisors	617	236	-	853	353	131	-	484	
6	Energy & Resource Economics	30	15	-	45	30	15	-	45	
7	NewGen Strategies & Solutions, LLC	30	15	-	45	30	15	-	45	
8	Legal	314	748	-	1,062	180	410	-	590	
9	Travel	-	-	20	20	-	-	20	20	
10	Subtotal	Sum of L4 thru L9	\$ 1,136	\$ 1,245	\$ 20	\$ 2,401	\$ 633	\$ 691	\$ 20	\$ 1,344
11	Subtotal (Rounded)				\$ 2,400					\$ 1,340
12	Amortization Period				3					3
13	Test Year Expense	L11 / L12			\$ 800					\$ 447

KAUAI ISLAND UTILITY COOPERATIVE
ENGINEERING
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR	
		2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)
1	Salaries & Wages - Direct Labor	\$ 217	\$ 223	\$ 545	\$ 561	\$ 448	\$ 559	\$ 701	\$ -	\$ 701
2	Payroll Overhead	80	82	244	255	216	279	396	81 ^a	477
3	TOTAL SALARIES & WAGES	297	305	789	816	664	838	1,097	81	1,178
4	Office Supplies & Expense	45	54	17	17	10	16	32	-	32
5	Outside/Professional Services	184	69	267	199	353	362	390	-	390
6	Other General Expense	-	-	-	2	3	3	-	-	-
7	Maintenance of General Plant	55	55	19	19	3	3	22	-	22
8	TOTAL ENGINEERING	284	178	303	237	369	384	444	-	444
9	Misc Distribution Expense	7	-	-	-	-	-	6	-	6
10	Office Supplies & Expense	5	-	-	-	-	-	-	-	-
11	Maintenance of General Plant	1	-	-	-	-	-	-	-	-
12	TOTAL DISTRIBUTION PLANNERS	13	-	-	-	-	-	6	-	6
13	TOTAL ENGINEERING	\$ 594	\$ 483	\$ 1,092	\$ 1,053	\$ 1,033	\$ 1,222	\$ 1,547	\$ 81	\$ 1,628

Notes

a Adjustment to Payroll Overhead due to increased Payroll OH allocation via additional Pension Regulatory Asset and Expense. Refer to Workpaper 8-3, Page 2 for detailed calculation of adjustment and allocation by Department.

KAUAI ISLAND UTILITY COOPERATIVE
HABITAT CONSERVATION PROGRAM
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR	
		2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)
1	Salaries & Wages - Direct Labor	\$ 149	\$ 126	\$ 22	\$ 16	\$ 16	\$ 16	\$ -	\$ -	\$ -
2	Payroll Overhead	69	68	18	7	14	14	-	-	-
3	TOTAL SALARIES & WAGES	218	194	40	23	30	30	-	-	-
4	Office Supplies & Expense	154	171	(16)	-	-	3	19	-	19
5	Outside/Professional Services	2,932	3,106	3,700	3,574	3,709	3,799	4,509	-	4,509
6	TOTAL ADMINISTRATIVE EXPENSE	3,086	3,277	3,684	3,574	3,709	3,802	4,528	-	4,528
7	TOTAL HABITAT CONSERVATION PROGRAM	<u>\$ 3,304</u>	<u>\$ 3,471</u>	<u>\$ 3,724</u>	<u>\$ 3,597</u>	<u>\$ 3,739</u>	<u>\$ 3,832</u>	<u>\$ 4,528</u>	<u>\$ -</u>	<u>\$ 4,528</u>

KAUAI ISLAND UTILITY COOPERATIVE
FINANCIAL & CORPORATE SERVICES
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR			
		2018	2019	2020	2021	YTD 10/2022	2022	2023	ADJUSTMENTS	PRESENT RATES	ADJUSTMENTS	PROPOSED RATES
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1	Salaries & Wages - Direct Labor	\$ 748	\$ 778	\$ 855	\$ 950	\$ 928	\$ 1,111	\$ 1,264	\$ -	\$ 1,264	\$ -	\$ 1,264
2	Payroll Overhead	370	388	468	512	501	592	627	128 a	755	-	755
3	TOTAL - SALARIES & WAGES	1,118	1,166	1,323	1,462	1,429	1,703	1,891	128	2,019	-	2,019
4	TOTAL UNCOLLECTIBLE ACCOUNTS	-	-	-	-	-	-	-	-	-	-	-
5	Office Supplies & Expense	55	63	58	69	79	94	115	-	115	-	115
6	Outside/Professional Services	282	405	230	368	79	121	246	-	246	-	246
7	HPUC Fee	812	774	725	793	731	866	887	(6) b	881	83	964
8	Maintenance of General Plant	-	2	29	24	20	24	24	-	24	-	24
9	TOTAL ACCOUNTING & FINANCE	1,149	1,244	1,042	1,254	909	1,105	1,272	(6)	1,266	83	1,349
10	Less: HPUC Fee - Reclassified to Exhibit 8-20	(812)	(774)	(725)	(793)	(731)	(866)	(887)	6	(881)	(83)	(964)
11	ADJ TOTAL ACCOUNTING & FINANCE	337	470	317	461	178	239	385	-	385	-	385
12	Office Supplies & Expense	3	5	4	3	4	6	17	-	17	-	17
13	TOTAL PURCHASING	3	5	4	3	4	6	17	-	17	-	17
14	TOTAL FINANCIAL & CORPORATE SERVICES	\$ 1,458	\$ 1,641	\$ 1,644	\$ 1,926	\$ 1,611	\$ 1,948	\$ 2,293	\$ 128	\$ 2,421	\$ -	\$ 2,421

Notes

- a Adjustment to Payroll Overhead due to increased Payroll OH allocation via additional Pension Regulatory Asset and Expense. Refer to Workpaper 8-3, Page 2 for detailed calculation of adjustment and allocation by Department.
- b Adjustment to HPUC Fee due to change in Total Revenues due to LGM recovery.
- c For the purposes of supporting the revenue requirement, the PUC Fee shown on Exhibit 8-17 has been reclassified to Exhibit 8-20, which computes the Taxes Other Than Income Taxes.

KAUAI ISLAND UTILITY COOPERATIVE
INFORMATION TECHNOLOGY
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR	
		2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)
1	Salaries & Wages - Direct Labor	\$ 435	\$ 388	\$ 450	\$ 454	\$ 405	\$ 504	\$ 580	\$ -	\$ 580
2	Payroll Overhead	262	212	270	271	274	334	369	76 a	445
3	TOTAL SALARIES & WAGES	697	600	720	725	679	838	949	76	1,025
4	Office Supplies & Expense	84	68	49	17	18	29	64	-	64
5	Telecommunications	352	341	356	302	278	335	326	-	326
6	Outside Services	78	136	199	335	470	503	500	-	500
7	Maintenance of General Plant	b 643	1,094	1,313	1,207	747	1,007	1,129	-	1,129
8	TOTAL ADMINISTRATIVE EXPENSE	1,157	1,639	1,917	1,861	1,513	1,874	2,019	-	2,019
9	TOTAL INFORMATION TECHNOLOGY	\$ 1,854	\$ 2,239	\$ 2,637	\$ 2,586	\$ 2,192	\$ 2,712	\$ 2,968	\$ 76	\$ 3,044

Notes

a Adjustment to Payroll Overhead due to increased Payroll OH allocation via additional Pension Regulatory Asset and Expense. Refer to Workpaper 8-3, Page 2 for detailed calculation of adjustment and allocation by Department.

KAUAI ISLAND UTILITY COOPERATIVE
DEPRECIATION & AMORTIZATION
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED				YTD 10/2022 (E)	PROJECTED		2023 TEST YEAR	
		2018 (A)	2019 (B)	2020 (C)	2021 (D)		2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)
1	Depreciation Expense	\$ 13,524	\$ 12,092	\$ 12,253	\$ 12,972	\$ 11,034	\$ 13,388	\$ 14,333	\$ 2,004	a \$ 16,337
2	Purchase Acquisition Premium Amortization	2,194	2,194	2,194	2,194	1,828	2,194	2,194	-	2,194
3	Iniki Regulatory Asset Write-off	292	292	292	292	219	219	-	-	-
4	TOTAL DEPRECIATION & AMORTIZATION	\$ 16,010	\$ 14,578	\$ 14,739	\$ 15,458	\$ 13,081	\$ 15,801	\$ 16,527	\$ 2,004	\$ 18,531

Notes

a See Workpaper 8-19 Page 4 for computation of 2023 test year adjustment for depreciation expense. Adjustment to use depreciation rates per 2017 Depreciation Study in 2023 Test Year. Note that 2023 Budget uses depreciation rates per PUC-approved 2012 Depreciation Study. Refer to testimony of Nancy Heller Hughes (Exhibit 10-T-1100) for additional information.

KAUAI ISLAND UTILITY COOPERATIVE
 COMPUTATION OF 12/31/22 DEPRECIABLE PLANT BALANCE
 TEST YEAR ENDED DECEMBER 31, 2023
 (IN THOUSANDS, EXCEPT PERCENTAGES)

Line No.	Description	Account	Audited PIS 12/31/2021 (A)	2022 Additions		Fully Depr Plant (D)	Ret Rates 2012 Study (E)	Retirements 2022 (F)	Depreciable Plant 12/31/2022 (G)	Projected PIS 12/31/2022 (H)
				2021 CWIP (B)	2022 CAPEX (C)					
									= (A) + (B) + = - (A) x (E) (C) + (D) + (F)	= (D) + (G)
1	Land & Land Rights	3100	\$ 291	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 291	\$ 291
2	Structures and Improvements	3110	6,162	-	13	(3,021)	0.19%	(12)	3,142	6,163
3	Boiler Plant Equipment	3120	16,286	40	568	(2,705)	0.72%	(117)	14,072	16,777
4	Engines and Engine-Driven Generators	3130	6	-	-	(6)	0.00%	-	-	6
5	Turbogenerator Units	3140	3,143	-	-	(800)	0.22%	(7)	2,336	3,136
6	Accessory Electric Equipment	3150	780	68	50	(271)	0.06%	(0)	627	898
7	Miscellaneous Power Plant Equipment	3160	672	-	-	(117)	1.27%	(9)	546	663
8	SUBTOTAL - Steam Production		27,340	108	631	(6,920)	0.53%	(145)	21,014	27,934
9										
10	Structures and Improvements	3310	1,041	13	78	-	0.00%	-	1,132	1,132
11	Reservoirs, Dams & Waterways	3320	3,007	1	21	-	1.52%	(46)	2,983	2,983
12	Water Wheels, Turbines & Generators	3330	2,051	-	5	-	0.12%	(2)	2,054	2,054
13	Accessory Electric Equipment-Water	3340	715	-	-	-	0.00%	-	715	715
14	SUBTOTAL - Hydraulic Production		6,814	14	104	-	0.71%	(48)	6,884	6,884
15										
16	Land & Land Rights	3400	8,604	-	-	-	0.00%	-	8,604	8,604
17	Structures and Improvements	3410	19,455	267	320	(1,134)	0.12%	(23)	18,885	20,019
18	Fuel Holders, Producers, and Access	3420	5,176	61	17	-	0.08%	(4)	5,250	5,250
19	Prime Movers	3430	69,399	301	456	(21,436)	0.99%	(687)	48,033	69,469
20	Generators	3440	11,445	24	323	(2,054)	0.08%	(9)	9,729	11,783
21	Accessory Electric Equipment	3450	10,762	-	-	(1,093)	0.16%	(17)	9,652	10,745
22	Miscellaneous Power Plant Equipment	3460	2,557	-	-	(7)	0.26%	(7)	2,543	2,550
23	SUBTOTAL - Other Production Plant		127,398	653	1,116	(25,724)	0.59%	(748)	102,695	128,419
24										
25	Land & Land Rights, Roads & Trails	3500	577	-	-	-	0.00%	-	577	577
26	Structures and Improvements	3520	283	-	-	-	0.91%	(3)	280	280
27	Station Equipment	3530	33,320	252	1,107	(2,690)	1.36%	(453)	31,536	34,226
28	Towers & Fixtures	3540	58	-	-	-	0.44%	(0)	58	58
29	Poles & Fixtures	3550	31,209	-	-	(489)	0.27%	(84)	30,636	31,125
30	Overhead Conductors & Devices	3560	27,066	620	8,932	(757)	0.65%	(176)	35,685	36,442
31	Underground Conduit	3570	9	-	-	-	0.06%	(0)	9	9
32	Underground Conductor & Devices	3580	492	-	-	-	0.04%	(0)	492	492
33	SUBTOTAL - Transmission Plant		93,014	872	10,039	(3,936)	0.77%	(716)	99,273	103,209
34										
35	Land and Land Rights	3600	499	-	-	-	0.00%	-	499	499
36	Structures and Improvements	3610	10,955	8,065	1,452	-	0.04%	(4)	20,468	20,468
37	Station Equipment	3620	34,231	155	180	(331)	1.28%	(438)	33,797	34,128
38	Storage Battery Equipment	3630	6,111	-	-	-	5.00%	(306)	5,805	5,805
39	Poles, Towers, and Fixtures	3640	38,130	69	1,010	(775)	0.78%	(297)	38,137	38,912
40	Overhead, Conductors and Devices	3650	42,669	493	4,243	(606)	1.12%	(478)	46,321	46,927
41	Underground Conduit	3660	9,531	-	-	(48)	0.38%	(36)	9,447	9,495
42	Underground Conductor & Devices	3670	28,252	67	1,046	(1,635)	0.92%	(260)	27,470	29,105
43	Line Transformers	3680	27,779	45	2,219	(832)	1.83%	(508)	28,703	29,535
44	Services	3690	7,269	(16)	90	-	0.28%	(20)	7,323	7,323
45	Meters	3700	8,755	3	570	(101)	0.02%	(2)	9,225	9,326
46	Installations on Customer's Premises	3710	29	-	-	-	1.22%	(0)	29	29
47	Leased Property, Consumers' Premises	3720	-	-	-	-	1.22%	-	-	-
48	Street Lighting	3730	5,623	(11)	42	(8)	2.00%	(112)	5,534	5,542
49	SUBTOTAL - Distribution Plant		219,833	8,870	10,852	(4,336)	1.12%	(2,463)	232,756	237,092
50										
51	Land and Land Rights	3890	217	-	-	-	0.00%	-	217	217
52	Structures and Improvements	3900	12,176	183	684	(3,276)	0.68%	(83)	9,684	12,960
53	Office Furniture & Equipment	3910	2,209	2	21	(551)	5.00%	(110)	1,571	2,122
54	Computer Equipment	3911	17,163	86	1,436	(1,744)	15.38%	(2,640)	14,301	16,045
55	Transportation Equipment	3920	6,872	207	571	(1,753)	0.00%	-	5,897	7,650
56	Store Equipment	3930	182	16	168	(78)	4.76%	(9)	279	357
57	Tools, Shop and Garage Equipment	3940	2,267	-	-	(232)	6.67%	(151)	1,884	2,116
58	Laboratory Equipment	3950	852	-	-	(546)	6.67%	(57)	249	795
59	Power - Operated Equipment	3960	539	-	-	(195)	6.67%	(36)	308	503
60	Communication Equipment	3970	4,167	95	139	(137)	6.25%	(260)	4,004	4,141
61	Miscellaneous Equipment	3980	1,455	-	82	(2)	6.67%	(97)	1,438	1,440
62	SUBTOTAL - General Plant		48,099	589	3,101	(8,514)	7.16%	(3,443)	39,832	48,346
63										
64	TOTAL		\$ 522,498	\$ 11,106	\$ 25,843	\$ (49,430)		\$ (7,563)	\$ 502,454	\$ 551,884

Notes: (D) Fully depreciated plant as of 5/31/22.
 (E) Retirement rates developed during 2012 depreciation study cycle.
 (H) Projected PIS at 12/31/2022 includes fully depreciated plant in column (D).

KAUAI ISLAND UTILITY COOPERATIVE
 COMPUTATION OF 2023 PROJECTED DEPRECIABLE PLANT BALANCE (USING 2012 RETIREMENT RATES)
 TEST YEAR ENDED DECEMBER 31, 2023
 (IN THOUSANDS, EXCEPT PERCENTAGES)

Line No.	Description	Account	Depreciable Plant		2023 Additions		Ret Rates 2012 Study (D)	Retirements 2023 (E)	Depreciable Plant 12/31/2023 (F)	Depreciable Plant 2023 Average (G)
			12/31/2022 (A)	2022 CWIP (B)	2023 CAPEX (C)	2023 CAPEX (C)				
			WP 8-19 P1 Col (G)					= (A) + (B) + (C) + (E)		= ((A) + (F)) / 2
1	Land & Land Rights	3100	\$ 291	\$ -	\$ -	0.00%	\$ -	\$ 291	\$ 291	
2	Structures and Improvements	3110	3,142	-	113	0.19%	(6)	3,249	3,196	
3	Boiler Plant Equipment	3120	14,071	-	1,092	0.72%	(101)	15,062	14,566	
4	Engines and Engine-Driven Generators	3130	-	-	-	0.00%	-	-	-	
5	Turbogenerator Units	3140	2,335	500	-	0.22%	(5)	2,830	2,582	
6	Accessory Electric Equipment	3150	627	70	30	0.06%	(0)	727	677	
7	Miscellaneous Power Plant Equipment	3160	547	-	-	1.27%	(7)	540	544	
8	SUBTOTAL - Steam Production		21,013	570	1,235	0.57%	(120)	22,698	21,856	
9										
10	Structures and Improvements	3310	1,132	-	80	0.00%	-	1,212	1,172	
11	Reservoirs, Dams & Waterways	3320	2,983	-	34	1.52%	(45)	2,972	2,977	
12	Water Wheels, Turbines & Generators	3330	2,054	-	15	0.12%	(2)	2,067	2,060	
13	Accessory Electric Equipment-Water	3340	715	-	-	0.00%	-	715	715	
14	SUBTOTAL - Hydraulic Production		6,884	-	129	0.69%	(48)	6,965	6,925	
15										
16	Land & Land Rights	3400	8,604	-	-	0.00%	-	8,604	8,604	
17	Structures and Improvements	3410	18,885	-	1,025	0.12%	(23)	19,887	19,386	
18	Fuel Holders, Producers, and Access	3420	5,250	-	500	0.08%	(4)	5,746	5,498	
19	Prime Movers	3430	48,033	300	3,074	0.99%	(476)	50,931	49,482	
20	Generators	3440	9,728	-	475	0.08%	(8)	10,195	9,962	
21	Accessory Electric Equipment	3450	9,652	-	-	0.16%	(15)	9,637	9,644	
22	Miscellaneous Power Plant Equipment	3460	2,543	-	-	0.26%	(7)	2,536	2,540	
23	SUBTOTAL - Other Production Plant		102,695	300	5,074	0.52%	(532)	107,537	105,116	
24										
25	Land & Land Rights, Roads & Trails	3500	577	-	-	0.00%	-	577	577	
26	Structures and Improvements	3520	280	-	-	0.91%	(3)	277	279	
27	Station Equipment	3530	31,536	-	510	1.36%	(429)	31,617	31,577	
28	Towers & Fixtures	3540	58	-	-	0.44%	(0)	58	58	
29	Poles & Fixtures	3550	30,635	-	-	0.27%	(83)	30,552	30,594	
30	Overhead Conductors & Devices	3560	35,685	-	3,581	0.65%	(232)	39,034	37,360	
31	Underground Conduit	3570	9	-	-	0.06%	(0)	9	9	
32	Underground Conductor & Devices	3580	492	-	-	0.04%	(0)	492	492	
33	SUBTOTAL - Transmission Plant		99,272	-	4,091	0.75%	(747)	102,616	100,944	
34										
35	Land and Land Rights	3600	499	-	-	0.00%	-	499	499	
36	Structures and Improvements	3610	20,468	-	-	0.04%	(8)	20,460	20,464	
37	Station Equipment	3620	33,797	-	1,170	1.28%	(433)	34,534	34,166	
38	Storage Battery Equipment	3630	5,805	-	1,500	5.00%	(290)	7,015	6,410	
39	Poles, Towers, and Fixtures	3640	38,137	-	86	0.78%	(297)	37,926	38,031	
40	Overhead, Conductors and Devices	3650	46,322	-	1,220	1.12%	(519)	47,023	46,673	
41	Underground Conduit	3660	9,447	-	-	0.38%	(36)	9,411	9,429	
42	Underground Conductor & Devices	3670	27,470	-	770	0.92%	(253)	27,987	27,729	
43	Line Transformers	3680	28,703	-	1,538	1.83%	(525)	29,716	29,209	
44	Services	3690	7,323	-	75	0.28%	(21)	7,377	7,350	
45	Meters	3700	9,226	-	325	0.02%	(2)	9,549	9,388	
46	Installations on Customer's Premises	3710	29	-	-	1.22%	(0)	29	29	
47	Leased Property, Consumers' Premises	3720	-	-	-	1.22%	-	-	-	
48	Street Lighting	3730	5,534	-	44	2.00%	(111)	5,467	5,501	
49	SUBTOTAL - Distribution Plant		232,760	-	6,728	1.07%	(2,495)	236,993	234,877	
50										
51	Land and Land Rights	3890	217	-	-	0.00%	-	217	217	
52	Structures and Improvements	3900	9,684	5,523	7,518	0.68%	(66)	22,659	16,172	
53	Office Furniture & Equipment	3910	1,572	-	57	5.00%	(79)	1,550	1,561	
54	Computer Equipment	3911	14,301	-	965	15.38%	(2,199)	13,067	13,684	
55	Transportation Equipment	3920	5,896	-	290	0.00%	-	6,186	6,041	
56	Store Equipment	3930	279	-	223	4.76%	(13)	489	384	
57	Tools, Shop and Garage Equipment	3940	1,884	-	-	6.67%	(126)	1,758	1,821	
58	Laboratory Equipment	3950	249	-	-	6.67%	(17)	232	241	
59	Power - Operated Equipment	3960	308	-	-	6.67%	(21)	287	298	
60	Communication Equipment	3970	4,003	-	275	6.25%	(250)	4,028	4,015	
61	Miscellaneous Equipment	3980	1,437	-	43	6.67%	(96)	1,384	1,411	
62	SUBTOTAL - General Plant		39,830	5,523	9,371	7.20%	(2,866)	51,858	45,844	
63										
64	TOTAL		\$ 502,454	\$ 6,393	\$ 26,628	1.35%	\$ (6,807)	\$ 528,668	\$ 515,561	

Notes:
 (D) Retirement rates developed during 2012 depreciation study cycle.

KAUAI ISLAND UTILITY COOPERATIVE
 COMPUTATION OF 2023 TEST YEAR DEPRECIABLE PLANT BALANCE (USING 2017 RETIREMENT RATES)
 TEST YEAR ENDED DECEMBER 31, 2023
 (IN THOUSANDS, EXCEPT PERCENTAGES)

Line No.	Description	Account	Depreciable Plant		2023 Additions		Ret Rate 2017 Study (D)	Retirements 2023 (E)	Depreciable Plant 12/31/2023 (F)	Depreciable Plant 2023 Average (G)
			12/31/2022 (A)	2022 CWIP (B)	2023 CAPEX (C)	2023 CAPEX (C)				
			WP 8-19 P1 Col (G)						= (A) + (B) + (C) + (E) = ((A) + (F)) / 2	
1	Land & Land Rights	3100	\$ 291	\$ -	\$ -	0.00%	\$ -	\$ 291	\$ 291	
2	Structures and Improvements	3110	3,142	-	113	0.22%	(7)	3,248	3,195	
3	Boiler Plant Equipment	3120	14,071	-	1,092	0.76%	(107)	15,056	14,564	
4	Engines and Engine-Driven Generators	3130	-	-	-	0.00%	-	-	-	
5	Turbogenerator Units	3140	2,335	500	-	0.19%	(4)	2,831	2,583	
6	Accessory Electric Equipment	3150	627	70	30	0.16%	(1)	726	676	
7	Miscellaneous Power Plant Equipment	3160	547	-	-	0.94%	(5)	542	544	
8	SUBTOTAL - Steam Production		21,013	570	1,235	0.59%	(124)	22,694	21,853	
9										
10	Structures and Improvements	3310	1,132	-	80	0.00%	-	1,212	1,172	
11	Reservoirs, Dams & Waterways	3320	2,983	-	34	0.00%	-	3,017	3,000	
12	Water Wheels, Turbines & Generators	3330	2,054	-	15	1.83%	(38)	2,031	2,043	
13	Accessory Electric Equipment-Water	3340	715	-	-	0.00%	-	715	715	
14	SUBTOTAL - Hydraulic Production		6,884	-	129	0.55%	(38)	6,975	6,930	
15										
16	Land & Land Rights	3400	8,604	-	-	0.00%	-	8,604	8,604	
17	Structures and Improvements	3410	18,885	-	1,025	0.49%	(93)	19,817	19,351	
18	Fuel Holders, Producers, and Access	3420	5,250	-	500	0.09%	(5)	5,745	5,498	
19	Prime Movers	3430	48,033	300	3,074	1.08%	(519)	50,888	49,461	
20	Generators	3440	9,728	-	475	0.27%	(26)	10,177	9,952	
21	Accessory Electric Equipment	3450	9,652	-	-	0.16%	(15)	9,637	9,644	
22	Miscellaneous Power Plant Equipment	3460	2,543	-	-	3.62%	(92)	2,451	2,497	
23	SUBTOTAL - Other Production Plant		102,695	300	5,074	0.73%	(750)	107,319	105,007	
24										
25	Land & Land Rights, Roads & Trails	3500	577	-	-	0.00%	-	577	577	
26	Structures and Improvements	3520	280	-	-	0.14%	(0)	280	280	
27	Station Equipment	3530	31,536	-	510	0.93%	(293)	31,753	31,644	
28	Towers & Fixtures	3540	58	-	-	0.58%	(0)	58	58	
29	Poles & Fixtures	3550	30,635	-	-	0.66%	(202)	30,433	30,534	
30	Overhead Conductors & Devices	3560	35,685	-	3,581	1.09%	(389)	38,877	37,281	
31	Underground Conduit	3570	9	-	-	0.12%	(0)	9	9	
32	Underground Conductor & Devices	3580	492	-	-	0.13%	(1)	491	492	
33	SUBTOTAL - Transmission Plant		99,272	-	4,091	0.89%	(886)	102,477	100,875	
34										
35	Land and Land Rights	3600	499	-	-	0.00%	-	499	499	
36	Structures and Improvements	3610	20,468	-	-	0.30%	(61)	20,407	20,437	
37	Station Equipment	3620	33,797	-	1,170	1.77%	(598)	34,369	34,083	
38	Storage Battery Equipment	3630	5,805	-	1,500	10.00%	(581)	6,725	6,265	
39	Poles, Towers, and Fixtures	3640	38,137	-	86	1.23%	(469)	37,754	37,945	
40	Overhead, Conductors and Devices	3650	46,322	-	1,220	1.29%	(598)	46,944	46,633	
41	Underground Conduit	3660	9,447	-	-	0.63%	(60)	9,387	9,417	
42	Underground Conductor & Devices	3670	27,470	-	770	0.68%	(187)	28,053	27,762	
43	Line Transformers	3680	28,703	-	1,538	2.17%	(623)	29,618	29,161	
44	Services	3690	7,323	-	75	0.72%	(53)	7,345	7,334	
45	Meters	3700	9,226	-	325	0.60%	(55)	9,496	9,361	
46	Installations on Customer's Premises	3710	29	-	-	11.80%	(3)	26	27	
47	Leased Property, Consumers' Premises	3720	-	-	-	11.80%	-	-	-	
48	Street Lighting	3730	5,534	-	44	5.00%	(277)	5,301	5,418	
49	SUBTOTAL - Distribution Plant		232,760	-	6,728	1.53%	(3,564)	235,924	234,342	
50										
51	Land and Land Rights	3890	217	-	-	0.00%	-	217	217	
52	Structures and Improvements	3900	9,684	5,523	7,518	0.68%	(66)	22,659	16,172	
53	Office Furniture & Equipment	3910	1,572	-	57	5.00%	(79)	1,550	1,561	
54	Computer Equipment	3911	14,301	-	965	22.22%	(3,178)	12,088	13,195	
55	Transportation Equipment	3920	5,896	-	290	0.00%	-	6,186	6,041	
56	Store Equipment	3930	279	-	223	4.00%	(11)	491	385	
57	Tools, Shop and Garage Equipment	3940	1,884	-	-	6.67%	(126)	1,758	1,821	
58	Laboratory Equipment	3950	249	-	-	6.67%	(17)	232	241	
59	Power - Operated Equipment	3960	308	-	-	6.67%	(21)	287	298	
60	Communication Equipment	3970	4,003	-	275	6.67%	(267)	4,011	4,007	
61	Miscellaneous Equipment	3980	1,437	-	43	6.67%	(96)	1,384	1,411	
62	SUBTOTAL - General Plant		39,830	5,523	9,371	6.69%	(3,859)	50,865	45,348	
63										
64	TOTAL		\$ 502,454	\$ 6,393	\$ 26,628	1.84%	\$ (9,221)	\$ 526,254	\$ 514,354	

Notes:
 (D) Retirement rates developed during 2017 depreciation study cycle.

KAUAI ISLAND UTILITY COOPERATIVE
 COMPUTATION OF 2023 TEST YEAR DEPRECIATION EXPENSE ADJUSTMENT
 TEST YEAR ENDED DECEMBER 31, 2023
 (IN THOUSANDS, EXCEPT PERCENTAGES)

Line No.	Description	Account	2023 Projected (2012 Retirement Rates)			2023 TY (2017 Retirement Rates)		Depreciation Rates		Depreciation Expense		2023 TY Adjustment
			Depreciable Plant			Depreciable Plant		2012 Study (F)	2017 Study (G)	2023 Projected (H)	2023 Test Year (I)	
			12/31/2022 (A)	12/31/2023 (B)	2023 Average (C)	12/31/2023 (D)	2023 Average (E)					
			WP 8-19 P1 Col (G)	WP 8-19 P2 Col (F)	= ((A)+(B)) / 2	WP 8-19 P3 Col (F)	= ((A)+(D)) / 2					
1	Land & Land Rights	3100	\$ 291	\$ 291	\$ 291	\$ 291	\$ 291	0.00%	0.00%	\$ -	\$ -	\$ -
2	Structures and Improvements	3110	3,142	3,248	3,195	3,248	3,195	2.59%	1.15%	83	37	(48)
3	Boiler Plant Equipment	3120	14,071	15,061	14,566	15,056	14,564	2.60%	3.11%	379	453	74
4	Engines and Engine-Driven Generators	3130	-	-	-	-	-	0.00%	0.00%	-	-	-
5	Turbogenerator Units	3140	2,335	2,830	2,583	2,831	2,583	3.49%	3.07%	90	79	(11)
6	Accessory Electric Equipment	3150	627	727	677	726	677	2.52%	2.84%	17	19	2
7	Miscellaneous Power Plant Equipment	3160	547	540	544	542	545	6.78%	4.34%	37	24	(13)
8	SUBTOTAL - Steam Production		21,013	22,697	21,855	22,694	22,275	2.77%	2.75%	606	612	6
9												
10	Structures and Improvements	3310	1,132	1,212	1,172	1,212	1,172	3.76%	2.85%	44	33	(11)
11	Reservoirs, Dams & Waterways	3320	2,983	2,972	2,978	3,017	3,000	3.48%	2.57%	104	77	(27)
12	Water Wheels, Turbines & Generators	3330	2,054	2,067	2,061	2,032	2,043	4.24%	4.03%	87	82	(5)
13	Accessory Electric Equipment-Water	3340	715	715	715	715	715	3.49%	2.64%	25	19	(6)
14	SUBTOTAL - Hydraulic Production		6,884	6,966	6,925	6,976	6,951	3.75%	3.05%	260	212	(48)
15												
16	Land & Land Rights	3400	8,604	8,604	8,604	8,604	8,604	0.00%	0.00%	-	-	-
17	Structures and Improvements	3410	18,885	19,888	19,387	19,818	19,352	3.34%	3.39%	648	656	9
18	Fuel Holders, Producers, and Access	3420	5,250	5,745	5,498	5,745	5,498	3.42%	3.13%	188	172	(16)
19	Prime Movers	3430	48,033	50,932	49,483	50,888	49,461	3.15%	3.71%	1,559	1,835	276
20	Generators	3440	9,728	10,195	9,962	10,177	9,953	2.98%	2.82%	297	281	(16)
21	Accessory Electric Equipment	3450	9,652	9,637	9,645	9,637	9,645	1.58%	1.66%	152	160	8
22	Miscellaneous Power Plant Equipment	3460	2,543	2,336	2,540	2,451	2,497	2.44%	1.99%	62	200	138
23	SUBTOTAL - Other Production Plant		102,695	107,537	105,116	107,320	106,218	2.78%	3.11%	2,905	3,303	398
24												
25	Land & Land Rights, Roads & Trails	3500	577	577	577	577	577	0.00%	0.00%	-	-	-
26	Structures and Improvements	3520	280	278	279	280	280	1.33%	1.19%	4	3	(0)
27	Station Equipment	3530	31,536	31,617	31,577	31,753	31,645	2.50%	2.24%	789	709	(81)
28	Towers & Fixtures	3540	58	58	58	58	58	1.86%	1.79%	1	1	(0)
29	Poles & Fixtures	3550	30,635	30,553	30,594	30,433	30,534	1.22%	1.11%	373	339	(34)
30	Overhead Conductors & Devices	3560	35,685	39,034	37,360	38,877	37,281	2.01%	1.95%	751	727	(24)
31	Underground Conduit	3570	9	9	9	9	9	1.48%	1.34%	0	0	(0)
32	Underground Conductor & Devices	3580	492	492	492	491	492	2.18%	2.13%	11	10	(0)
33	SUBTOTAL - Transmission Plant		99,272	102,618	100,945	102,478	101,712	1.91%	1.76%	1,929	1,790	(140)
34												
35	Land and Land Rights	3600	499	499	499	499	499	0.00%	0.00%	-	-	-
36	Structures and Improvements	3610	20,468	20,460	20,464	20,407	20,438	2.09%	1.84%	428	376	(52)
37	Station Equipment	3620	33,797	34,534	34,166	34,368	34,083	3.13%	3.75%	1,069	1,278	209
38	Storage Battery Equipment	3630	5,805	7,015	6,410	6,725	6,265	4.98%	10.00%	319	627	307
39	Poles, Towers, and Fixtures	3640	38,137	37,925	38,031	37,754	37,946	1.59%	2.39%	605	907	302
40	Overhead, Conductors and Devices	3650	46,322	47,023	46,673	46,944	46,633	3.18%	2.14%	1,484	998	(486)
41	Underground Conduit	3660	9,447	9,411	9,429	9,387	9,417	1.34%	1.65%	126	155	29
42	Underground Conductor & Devices	3670	27,470	27,987	27,729	28,053	27,762	1.98%	2.22%	549	616	67
43	Line Transformers	3680	28,703	29,715	29,209	29,618	29,161	4.50%	3.64%	1,314	1,061	(253)
44	Services	3690	7,323	7,377	7,350	7,345	7,334	1.35%	1.44%	99	106	6
45	Meters	3700	9,226	9,549	9,388	9,496	9,361	13.59%	8.80%	1,276	824	(452)
46	Installations on Customer's Premises	3710	29	28	29	25	27	10.00%	10.00%	3	3	(0)
47	Leased Property, Consumers' Premises	3720	-	-	-	-	-	12.26%	5.51%	-	-	-
48	Street Lighting	3730	5,534	5,467	5,501	5,301	5,418	2.45%	5.72%	135	310	175
49	SUBTOTAL - Distribution Plant		232,760	236,990	234,875	235,922	235,399	3.15%	3.08%	7,408	7,261	(147)
50												
51	Land and Land Rights	3890	217	217	217	217	217	0.00%	0.00%	-	-	-
52	Structures and Improvements	3900	9,684	22,659	16,172	22,659	16,172	1.91%	1.54%	309	249	(60)
53	Office Furniture & Equipment	3910	1,572	1,550	1,561	1,550	1,561	3.94%	3.61%	62	56	(6)
54	Computer Equipment	3911	14,301	13,067	13,684	12,088	13,195	2.98%	17.70%	405	2,343	1,938
55	Transportation Equipment	3920	5,896	6,186	6,041	6,186	6,041	10.00%	10.00%	604	604	-
56	Store Equipment	3930	279	488	384	490	385	3.81%	1.53%	15	6	(9)
57	Tools, Shop and Garage Equipment	3940	1,884	1,759	1,822	1,759	1,822	6.40%	3.60%	117	66	(51)
58	Laboratory Equipment	3950	249	232	241	232	241	4.75%	2.06%	11	5	(6)
59	Power - Operated Equipment	3960	308	287	298	287	298	2.02%	1.26%	6	4	(2)
60	Communication Equipment	3970	4,003	4,028	4,016	4,011	4,007	5.23%	7.91%	210	317	107
61	Miscellaneous Equipment	3980	1,437	1,384	1,411	1,384	1,411	6.45%	8.05%	91	114	23
62	SUBTOTAL - General Plant		39,830	51,857	45,844	50,863	48,353	3.99%	7.78%	1,829	3,763	1,934
63												
64	TOTAL		\$ 602,454	\$ 628,665	\$ 615,560	\$ 626,253	\$ 620,906	2.90%	3.25%	\$ 14,937	\$ 16,941	\$ 2,004
65												
66	Less: Transportation Equipment									(604)	(604)	-
67	TOTAL - TY Depreciation Adjustment Purposes									\$ 14,333	\$ 16,337	\$ 2,004

KAUAI ISLAND UTILITY COOPERATIVE
TAXES OTHER THAN INCOME
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR			
		2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)	ADJUSTMENTS (J)	PROPOSED RATES (K)
1	PSC Tax	\$ 9,694	\$ 9,204	\$ 8,595	\$ 9,381	\$ 8,638	\$ 10,502	\$ 10,445	\$ (75) a	\$ 10,370	\$ 982 c	\$ 11,352
2	Franchise Tax	4,062	3,869	3,631	3,966	3,654	4,066	4,437	(32) b	4,405	417 c	4,822
3	Income Tax on Non-Op Income	-	-	-	-	-	35	38	-	38	-	38
4	TOTAL TAXES OTHER THAN INCOME	13,756	13,073	12,226	13,347	12,292	14,603	14,920	(107)	14,813	1,399	16,212
4	PUC Fee	812	774	725	793	731	866	887	(6)	881	83 c	964 d
5	ADJ TOTAL TAXES OTHER THAN INCOME	\$ 14,568	\$ 13,847	\$ 12,951	\$ 14,140	\$ 13,023	\$ 15,469	\$ 15,807	\$ (113)	\$ 15,694	\$ 1,482	\$ 17,176

Notes

- a Adjustment to PSC Tax due to change in Total Revenues due to LGM recovery.
- b Adjustment to Franchise Tax due to change in Total Revenues due to LGM recovery.
- c Adjustment to PSC Tax, Franchise Tax, and PUC Fee due to increase in Total Revenues due to increase in Proposed
- d For the purposes of supporting the revenue requirement, the PUC Fee shown on Exhibit 8-17 has been reclassified to Exhibit 8-20, which computes the Taxes Other Than Income Taxes.

KAUAI ISLAND UTILITY COOPERATIVE
 TAXES OTHER THAN INCOME
 TEST YEAR ENDED DECEMBER 31, 2023
 (IN THOUSANDS, EXCEPT PERCENTAGES)

LINE NO.	DESCRIPTION	REFERENCE	REVENUES AT	REVENUES AT	TAX	TAXES AT	TAXES AT
			PRESENT	PROPOSED	RATES	PRESENT	PROPOSED
			(A)	(B)	(C)	(D)	(E)
					Workpaper 7		
1	PSC Tax	Exhibit 8-1, Line 14	\$ 176,208	\$ 192,890	5.885%	\$ 10,370	\$ 11,352
2	Franchise Tax	Exhibit 8-1, Line 14	176,208	192,890	2.500%	4,405	4,822
3	PUC Fee	Exhibit 8-1, Line 14	176,208	192,890	0.500%	881	964
4	Income Tax on Non-Op Income	Exhibit 8-20, Line 5				38	38
5	TOTAL TAXES OTHER THAN INCOME					<u>\$ 15,694</u>	<u>\$ 17,176</u>

KAUAI ISLAND UTILITY COOPERATIVE
INTEREST & DIVIDEND INCOME
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR	
		2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)
1	Interest & Dividend Income	\$ 16	\$ 1	\$ 1	\$ -	\$ 1	\$ -	\$ -	\$ -	\$ -
2	DSM/IRP Interest Earned	41	(5)	(20)	(7)	5	-	-	-	-
3	Int Inc - Cushion of Credit	736	774	750	444	8	7	3	-	3
4	Int Inc - Daily Fund	8	82	43	6	136	6	75	-	75
5	Int Inc - Medium Term Note	75	37	-	15	1	-	-	-	-
6	Int Inc - Member Capital Securities	13	13	13	13	10	13	13	-	13
7	Int Inc - CFC SCTC	-	15	12	12	10	12	12	-	12
8	Int Inc - Select Notes	98	144	-	9	163	12	-	-	-
9	TOTAL TAXABLE INTEREST INCOME	987	1,061	799	492	334	50	103	-	103
10	Interest Income - KRS1	981	971	894	858	712	835	852	-	852
11	TOTAL INTEREST INCOME	\$ 1,968	\$ 2,032	\$ 1,693	\$ 1,350	\$ 1,046	\$ 885	\$ 955	\$ -	\$ 955

KAUAI ISLAND UTILITY COOPERATIVE
OTHER OPERATING INCOME (NET)
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR	
		2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)
1	TOTAL JOBBING INCOME	\$ 252	\$ 906	\$ 181	\$ 174	\$ 227	\$ 315	\$ 330	\$ -	\$ 330
2	TOTAL JOBBING EXPENSE	128	599	183	193	176	219	236	-	236
3	TOTAL OTHER OPERATING INCOME (NET)	\$ 124	\$ 307	\$ (2)	\$ (19)	\$ 51	\$ 96	\$ 94	\$ -	\$ 94

KAUAI ISLAND UTILITY COOPERATIVE
INCOME FROM KRS1
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED				YTD 10/2022 (E)	PROJECTED		2023 TEST YEAR	
		2018 (A)	2019 (B)	2020 (C)	2021 (D)		2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)
1	Electric Revenue	\$ 2,466	\$ 2,333	\$ 2,660	\$ 2,787	\$ 2,543	\$ 2,522	\$ 2,467	\$ -	\$ 2,467
2	TOTAL REVENUE	2,466	2,333	2,660	2,787	2,543	2,522	2,467	-	2,467
3	TOTAL COMMODITIES	-	-	-	-	-	-	-	-	-
4	GROSS MARGIN	2,466	2,333	2,660	2,787	2,543	2,522	2,467	-	2,467
3	Production	636	804	736	710	505	769	677	-	677
4	Transmission & Distribution	141	305	228	407	197	310	313	-	313
5	Administration	15	57	24	14	17	23	23	-	23
6	TOTAL O&M LESS COMMODITIES	792	1,166	988	1,131	719	1,102	1,013	-	1,013
7	TOTAL O&M INCL COMMODITIES	792	1,166	988	1,131	719	1,102	1,013	-	1,013
8	Depreciation & Amortization	1,785	1,786	1,799	1,799	1,499	1,799	1,799	-	1,799
9	Accretion	51	53	54	56	48	57	59	-	59
10	Taxes Other Than Income	12	12	13	14	13	13	12	-	12
11	TOTAL EXPENSES	2,640	3,017	2,854	3,000	2,279	2,971	2,883	-	2,883
12	OPERATING INCOME	(174)	(684)	(194)	(213)	264	(449)	(416)	-	(416)
13	Interest & Dividend Income	4	3	3	3	3	-	-	-	-
14	Interest Expense-LTD	(981)	(971)	(894)	(858)	(712)	(775)	(744)	-	(744)
15	Interest Expense-STD	-	-	-	-	-	(60)	(108)	-	(108)
16	Interest Charged to Construction	-	-	-	-	-	-	-	-	-
17	TOTAL INCOME FROM KRS1	\$ (1,151)	\$ (1,652)	\$ (1,085)	\$ (1,068)	\$ (445)	\$ (1,284)	\$ (1,268)	\$ -	\$ (1,268)

KAUAI ISLAND UTILITY COOPERATIVE
INCOME FROM KRS2H
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS, EXCEPT PERCENTAGES)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					YTD 10/2022 (E)	PROJECTED		2023 TEST YEAR	
		2018 (A)	2019 (B)	01/2020 - 04/2020 (C)	05/2020 - 12/2020 (C)	2021 (D)		2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)
1	Electric Revenue	\$ 2,257	\$ 2,188	\$ 815	\$ 1,758	\$ 2,509	\$ 2,217	\$ 2,448	\$ 2,448	\$ -	\$ 2,448
2	TOTAL REVENUE	\$ 2,257	\$ 2,188	\$ 815	\$ 1,758	\$ 2,509	\$ 2,217	\$ 2,448	\$ 2,448	\$ -	\$ 2,448
3	TOTAL COMMODITIES	-	-	-	-	-	-	-	-	-	-
4	GROSS MARGIN	\$ 2,257	\$ 2,188	\$ 815	\$ 1,758	\$ 2,509	\$ 2,217	\$ 2,448	\$ 2,448	\$ -	\$ 2,448
3	Production	343	578	107	269	488	310	504	435	-	435
4	Administration	28	28	7	23	29	33	40	41	-	41
5	TOTAL O&M LESS COMMODITIES	371	606	114	292	517	343	544	476	-	476
6	TOTAL O&M INCL COMMODITIES	371	606	114	292	517	343	544	476	-	476
7	Depreciation & Amortization	1,549	1,549	516	1,032	1,550	1,294	1,549	1,553	-	1,553
8	Accretion	41	44	16	31	51	45	54	59	-	59
9	Taxes Other Than Income	11	11	4	9	13	11	12	12	-	12
10	TOTAL EXPENSES	1,972	2,210	650	1,364	2,131	1,693	2,159	2,100	-	2,100
11	OPERATING INCOME	285	(22)	165	394	378	524	289	348	-	348
12	Interest & Dividend Income	3	3	-	2	2	3	-	-	-	-
13	Interest Expense-LTD	(704)	(683)	(223)	(439)	(640)	(516)	(617)	(593)	-	(593)
14	Interest Expense-STD	-	-	-	-	-	-	-	-	-	-
15	Interest Charged to Construction	-	-	-	-	-	-	-	-	-	-
16	Extraordinary Items	95	-	-	-	-	-	-	-	-	-
17	NET INCOME FROM KRS2	(321)	(702)	(58)	(43)	(260)	11	(328)	(245)	-	(245)
18	Net Income Distribution	1%	1%	1%	95%	95%	95%	95%	95%	95%	95%
19	NET INCOME FROM KRS2 TO KRS2H	(4)	(7)	(1)	(41)	(247)	10	(312)	(233)	-	(233)
20	Administrative and General Expense KRS2H	(5)	(5)	(1)	(3)	(4)	(4)	-	-	-	-
21	TOTAL INCOME FROM KRS2H	\$ 86	\$ (12)	\$ (2)	\$ (44)	\$ (251)	\$ 6	\$ (312)	\$ (233)	\$ -	\$ (233)

Notes

a Recovery on bankruptcy claim allocated 100% to KRS2H.

KAUAI ISLAND UTILITY COOPERATIVE
NON-OPERATING INCOME (NET)
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR	
		2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)
1	Rent Revenue - Eleele Admin Ofc	\$ 87	\$ 87	\$ 88	\$ 99	\$ 82	\$ 99	\$ 99	\$ -	\$ 99
2	TOTAL NON-OPERATING INCOME	87	87	88	99	82	99	99	-	99
3	Maintenance Building - Eleele Admin Ofc	1	1	1	1	-	1	1	-	1
4	Utilities - Eleele Admin Ofc	(2)	(3)	-	-	-	-	-	-	-
5	TOTAL EXPENSE ELEEELE ADMIN OFC	(1)	(2)	1	1	-	1	1	-	1
6	RLF Annual Administrative Fee	3	-	-	-	-	-	-	-	-
7	SBA PPP Loan Forgiveness	-	-	-	(2,881)	-	-	-	-	-
8	TOTAL NON-OPERATING INCOME (NET)	\$ 91	\$ 89	\$ 87	\$ 2,979	\$ 82	\$ 98	\$ 98	\$ -	\$ 98

KAUAI ISLAND UTILITY COOPERATIVE
 GAIN ON DISPOSITION OF PROPERTY
 TEST YEAR ENDED DECEMBER 31, 2023
 (IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR	
		2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)
1	Gain on Disposition of Property	\$ -	\$ -	\$ 82	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2	GAIN ON DISPOSITION OF PROPERTY	\$ -	\$ -	\$ 82	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

KAUAI ISLAND UTILITY COOPERATIVE
 CAPITAL CREDITS & PATRONAGE ALLOCATION
 TEST YEAR ENDED DECEMBER 31, 2023
 (IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR	
		2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)
1	Capital Credits & Patronage Allocation	\$ 343	\$ 308	\$ 251	\$ 235	\$ 183	\$ 198	\$ 225	\$ -	\$ 225
2	TOTAL CAPITAL CREDITS & PATRONAGE ALLOCATION	\$ 343	\$ 308	\$ 251	\$ 235	\$ 183	\$ 198	\$ 225	\$ -	\$ 225

KAUAI ISLAND UTILITY COOPERATIVE
SPONSORSHIPS & CONTRIBUTIONS
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR	
		2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)
1	Sharing of Aloha	\$ (24)	\$ (24)	\$ (24)	\$ (24)	\$ (16)	\$ -	\$ (24)	\$ -	\$ (24)
2	Community Events	(37)	(47)	(32)	(29)	(45)	(67)	(54)	-	(54)
3	TOTAL SPONSORSHIPS & CONTRIBUTIONS	<u>\$ (61)</u>	<u>\$ (71)</u>	<u>\$ (56)</u>	<u>\$ (53)</u>	<u>\$ (61)</u>	<u>\$ (67)</u>	<u>\$ (78)</u>	<u>\$ -</u>	<u>\$ (78)</u>

KAUAI ISLAND UTILITY COOPERATIVE
 OTHER DEDUCTIONS - ABANDONED PSI
 TEST YEAR ENDED DECEMBER 31, 2023
 (IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR	
		2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)
1	Abandoned PSI	\$ -	\$ -	\$ -	\$ (1,498)	\$ -	\$ -	\$ -	\$ -	\$ -
2	OTHER DEDUCTIONS - ABANDONED PSI	\$ -	\$ -	\$ -	\$ (1,498)	\$ -	\$ -	\$ -	\$ -	\$ -

KAUAI ISLAND UTILITY COOPERATIVE
INTEREST EXPENSE-LONG-TERM DEBT
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR	
		2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)
1	SBA PPP Balance	\$ -	\$ -	\$ 21	\$ (21)	\$ -	\$ -	\$ -	\$ -	\$ -
2	CFC	2,946	2,674	3,034	2,964	2,339	2,940	2,618	-	2,618
3	FFB (First Federal Bank)	2,952	3,311	3,248	3,174	2,702	3,183	3,445	-	3,445
4	CoBank	-	-	-	453	551	518	667	-	667
5	TOTAL INTEREST EXPENSE-LONG-TERM DEBT	\$ (5,898)	\$ (5,985)	\$ (6,303)	\$ (6,570)	\$ (5,592)	\$ (6,641)	\$ (6,730)	\$ -	\$ (6,730)

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KAUAI ISLAND UTILITY COOPERATIVE
NOTES, BONDS, AND OTHER INDEBTEDNESS
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS, EXCEPT PERCENTAGES)

LINE NO.	LENDER (A)	DATE OF NOTE (B)	DATE OF ISSUE (C)	DATE OF MATURITY (D)	INTEREST RATE (E)	LOAN # (F)	ORIGINAL AMOUNT (G)	BALANCE AT 12/31/2022 (H)	BALANCE AT 12/31/2023 (I)	TY 2023 INTEREST EXPENSE (J)
1	CFC	12/17/03	12/18/03	09/30/23	3.690%	HI001-9005	\$ 8,240	\$ 412	\$ -	\$ 8
2	CFC	04/30/19	04/30/19	03/31/35	2.550%	HI001-9014-001	103,134	78,215	72,705	1,930
3	CFC	02/06/20	02/25/20	12/31/49	2.760%	HI001-9019B	26,500	24,856	24,227	680
4							<u>137,874</u>	<u>103,483</u>	<u>96,932</u>	<u>2,618</u>
5	FFB	06/01/04	10/19/04	12/31/23	2.837%	B8 - 1-1	8,240	580	-	10
6	FFB	06/01/04	10/19/04	12/31/23	2.574%	B8 - 1-2	8,240	580	-	9
7	FFB	06/01/04	10/19/04	12/31/23	4.430%	B8 - 1-3	16,480	1,298	-	36
8							<u>32,960</u>	<u>2,458</u>	<u>-</u>	<u>55</u>
9	FFB	07/01/11	06/07/12	12/31/42	2.424%	C8#1 - 2-1	8,716	6,523	6,263	155
10	FFB	07/01/11	10/23/12	12/31/42	2.604%	C8#1 - 2-2	1,606	1,210	1,163	31
11	FFB	07/01/01	06/24/13	12/31/42	3.259%	C8#1 - 2-3	9,100	7,028	6,770	225
12	FFB	07/01/11	11/25/13	12/31/42	2.662%	C8#1 - 2-4	2,689	2,007	1,928	52
13	FFB	07/01/11	03/18/14	12/31/42	3.334%	C8#1 - 2-6	5,198	4,091	3,942	134
14	FFB	07/01/11	08/07/14	12/31/42	3.023%	C8#1 - 2-7	5,731	4,510	4,340	134
15	FFB	07/01/11	05/08/15	12/31/42	2.665%	C8#1 - 2-8	4,213	3,339	3,208	87
16	FFB	07/01/11	09/18/15	12/31/42	2.715%	C8#1 - 2-9	748	598	575	16
17	FFB	01/15/15	10/29/15	12/31/42	2.558%	C8#2 - 3-1	6,000	4,801	4,611	121
18	FFB	01/15/15	01/12/16	12/31/42	2.636%	C8#2 - 3-2	35,587	28,723	27,601	744
19							<u>79,588</u>	<u>62,830</u>	<u>60,401</u>	<u>1,699</u>
20	FFB	12/01/17	04/24/18	12/31/51	3.199%	D8 - 4-1	22,192	20,820	20,366	659
21	FFB	12/01/17	10/22/18	12/31/51	3.437%	D8 - 4-2	5,707	5,368	5,256	183
22	FFB	12/01/17	06/06/19	12/31/51	2.578%	D8 - 4-3	4,776	4,448	4,341	113
23	FFB	12/01/17	06/22/20	12/31/51	1.326%	D8 - 4-4	3,992	3,729	3,620	49
24	FFB	12/01/17	10/08/21	12/31/51	2.087%	D8 - 4-5	7,889	7,694	7,494	159
25	FFB	12/01/17	05/19/22	12/31/51	3.236%	D8 - 4-6	3,450	3,415	3,341	109
26	FFB	12/01/17	08/29/22	12/31/51	3.422%	D8 - 4-7	12,706	12,645	12,379	428
27							<u>60,712</u>	<u>58,119</u>	<u>56,797</u>	<u>1,700</u>
28	COBANK	02/06/20	02/22/21	02/20/51	2.900%	00102606 T01	18,119	17,408	17,004	506
29	COBANK	02/06/20	02/10/22	02/10/52	3.330%	00102606 T01-DS	4,900	4,812	4,713	161
30							<u>23,019</u>	<u>22,220</u>	<u>21,717</u>	<u>667</u>
31	TOTAL						\$ 334,153	\$ 249,110	\$ 235,847	\$ 6,739
32	Adjustment due to Rounding						-	-	-	(9)
33	ADJUSTED TOTAL						\$ 334,153	\$ 249,110	\$ 235,847	\$ 6,730

CFC: National Rural Utilities Cooperative Finance Corporation

FFB: Federal Financing Bank (RUS)

Line 2: Original RUS notes refinanced in July 2016. In May 2020, amended to extend the maturity date from 3/31/2028 to 3/31/2035.

KAUAI ISLAND UTILITY COOPERATIVE
 INTEREST EXPENSE-SHORT-TERM DEBT
 TEST YEAR ENDED DECEMBER 31, 2023
 (IN THOUSANDS)

LINE NO.	DESCRIPTION	ACTUAL RECORDED					PROJECTED		2023 TEST YEAR	
		2018 (A)	2019 (B)	2020 (C)	2021 (D)	YTD 10/2022 (E)	2022 (F)	2023 (G)	ADJUSTMENTS (H)	PRESENT RATES (I)
1	CFC-LOC \$5M	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2	CFC-LOC \$20M	30	-	-	-	-	-	231	-	231
3	CoBank-LOC \$15M	84	-	-	-	-	48	231	-	231
4	TOTAL INTEREST EXPENSE-SHORT-TERM DEBT	\$ (114)	\$ -	\$ -	\$ -	\$ -	\$ (48)	\$ (462)	\$ -	\$ (462)

KAUAI ISLAND UTILITY COOPERATIVE

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EXHIBIT 9

AVERAGE RATE BASE

For Test Year Ended December 31, 2023

(3 PAGES)

KAUAI ISLAND UTILITY COOPERATIVE
AVERAGE RATE BASE
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS)

LINE NO.	DESCRIPTION	FACTOR OR REFERENCE	BALANCE AT		TEST YEAR AT PROPOSED RATES OR AVERAGE RATE BASE (C)
			BEGINNING OF YEAR (A)	END OF YEAR (B)	
1	Plant in Service	Exhibit 3-1, L58, Columns (E) & (F)	\$ 551,884	\$ 575,680	\$ 563,782
2	Construction Work in Progress, including CIAC		6,393	10,740	8,567
3	Accumulated Depreciation		<u>(285,515)</u>	<u>(293,235)</u>	<u>(289,375)</u>
4	Net Plant in Service	Sum of L1 thru L3	\$ 272,762	\$ 293,185	\$ 282,974
5	Fuel Inventory and Supplies	Exhibit 9-1, L16, Column 2			1,649
6	Materials & Supplies Inventory	Exhibit 9-1, L16, Column 3			17,667
7	Working Capital	Exhibit 9-2, L15			<u>16,555</u>
8	Net Rate Base	Sum of L4 thru L7			<u>\$ 318,844</u>

KAUAI ISLAND UTILITY COOPERATIVE
OTHER RATE BASE ELEMENTS
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS, EXCEPT MONTHS)

LINE NO.	DESCRIPTION	FUEL INVENTORY & SUPPLIES	MATERIALS & SUPPLIES
		2022	2022
		(A)	(B)
1	October, Prior Year	\$ 1,645	\$ 16,671
2	November, Prior Year	1,823	17,290
3	December, Prior Year	1,681	17,384
4	January	1,333	17,246
5	February	1,357	17,218
6	March	1,612	16,813
7	April	1,557	16,933
8	May	1,519	17,115
9	June	1,909	17,229
10	July	1,865	18,174
11	August	1,877	18,682
12	September	1,752	19,483
13	October	<u>1,510</u>	<u>19,428</u>
14	Total	\$ 21,440	\$ 229,666
15	Number of Months	<u>13</u>	<u>13</u>
16	Average for Year	<u>\$ 1,649</u>	<u>\$ 17,667</u>

KAUAI ISLAND UTILITY COOPERATIVE
WORKING CAPITAL
TEST YEAR ENDED DECEMBER 31, 2023
(IN THOUSANDS, EXCEPT ESTIMATED LAG)

Line #	Description	Format or Reference (A)	Amount (B)	Sub-Total (C)	Total (D)
<u>Operating & Maintenance Expenses</u>					
1	Pro Forma O&M Expense	Exhibit 8, L23	\$ 50,586		
2	Test Year Uncollectible Expense	Exhibit 8-6, L13, Column G	(177)		
3	Pro Forma Uncollectible on Revenue Increase	Exhibit 8-6, L13, Column H	1		
4	Net O&M Expense	Sum L1-L3	\$ 50,410		
5	Estimated Lag For O&M @ 1/12 Formula		0.08333		
6	Working Capital For O&M Expenses	L4 x L5		\$ 4,201	
<u>Commodities Purchased for Resale</u>					
7	Pro Forma Expense	Exhibit 8, L6 Col E	\$ 91,113		
8	Estimated Lag for Commodities @ 1/12 Formula		0.08333		
9	Working Capital for Commodities	L7 x L8		7,592	
10	Operational Working Capital Requirement	L6 + L9		\$ 11,793	
<u>Contingency Cash Requirement</u>					
11	Net O&M Expense	L4	\$ 50,410		
12	Interest Expense	Exhibit 8, L39, Column E	6,730		
13	Sub-Total Annual Amount	Sum L11-L12	\$ 57,140		
14	Monthly Amount	L13 / 12		4,762	
15	TOTAL WORKING CAPITAL REQUIREMENT	L10 + L14			\$ 16,555

KAUAI ISLAND UTILITY COOPERATIVE

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EXHIBIT 10

TESTIMONY OF DAVID J. BISSELL
(EXHIBIT 10-T-100)

(49 PAGES)

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**KAUAI ISLAND UTILITY COOPERATIVE
DOCKET NO. 2022-0208
EXHIBIT 10-T-100

DIRECT TESTIMONY
OF
DAVID J. BISSELL**

9 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

10 A. My name is David Bissell. My business address is 4463 Pahee Street,
11 Suite 1, Lihue, Hawaii 96766-2000.

12 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

13 A. I am employed by Kauai Island Utility Cooperative (“KIUC”) as President
14 and Chief Executive Officer (“CEO”).

15 **Q. PLEASE SUMMARIZE YOUR EDUCATION.**

16 A. I have a Master of Business Administration degree from the Kelley School
17 of Business at Indiana University, in Bloomington, Indiana. Prior to this, I
18 earned a Bachelor of Science degree from the State University of New York
19 College at Brockport, in Brockport, N.Y. I am a Certified Public Accountant
20 and a Certified Management Accountant.

21 **Q. PLEASE DESCRIBE YOUR WORK EXPERIENCE.**

22 A. I have been employed at KIUC since 2006 and have been CEO since 2011.
23 Prior to being appointed CEO, I was KIUC’s Chief Financial Officer (“CFO”)
24 and Financial Vice President. Before my employment with KIUC, I held
25 various tax and financial management positions with Duke Energy

1 (previously Cinergy) for about eight years, and Hoosier Energy Rural
2 Electric Cooperative (a generation and transmission cooperative) for about
3 six years.

4 **Q. WHAT ARE YOUR DUTIES AND RESPONSIBILITIES AS THE**
5 **PRESIDENT AND CEO OF KIUC?**

6 A. I am responsible for the overall administration of the business and
7 operations of KIUC in accordance with the policies and budgets approved
8 by KIUC's Board of Directors. I am also responsible for achieving strategic
9 objectives under KIUC's Strategic Plan developed by the Board of Directors.

10 **Q. HAVE YOU PRESENTED TESTIMONY BEFORE UTILITY**
11 **REGULATORY COMMISSIONS?**

12 A. Yes. In my previous role as the CFO and Financial Vice President of KIUC,
13 I presented Direct Testimony and Rebuttal Testimony during KIUC's first
14 and only rate case before this Commission in Docket No. 2009-0050.

15 **I. PRIMARY PURPOSE OF TESTIMONY**

16 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

17 A. As the CEO, my testimony will provide a broad overview of KIUC's
18 Application submitted in this proceeding ("Application") from a policy
19 perspective and identify the witnesses that will support various elements of
20 the proposed revenue requirement and increase in operating revenues in
21 their respective testimonies.

1 **Q. WHAT AREAS OF POLICY WILL BE DISCUSSED IN YOUR**
2 **TESTIMONY?**

3 A. As the policy witness, my testimony will address:

4 1. Why KIUC is requesting an increase in its current rates based on a
5 2023 test year ("Test Year") revenue requirement and the amount of
6 increase being sought in the Application. This will include a
7 discussion of:

8 a. The financial outlook for KIUC.

9 b. A discussion of the COVID-19 pandemic and the impact of the
10 pandemic on the local economy and KIUC's kilowatt-hour
11 ("kWh") sales and operating expenses.

12 c. Other impacts and challenges facing KIUC, including staffing,
13 inflation, limited resource and vendor availability, and
14 endangered species obligations and costs.

15 d. The financial uncertainty resulting from these impacts and
16 challenges.

17 2. A background of KIUC's cooperative ownership structure, which will
18 also include a discussion of:

19 a. The differences between a cooperative and an
20 investor-owned utility ("IOU").

21 b. KIUC's patronage capital allocation and retirement process as
22 a cooperative.

23 c. The Commission's patronage capital refund condition and its
24 impact in ratemaking.

25 d. KIUC's governance and the role of its member-elected Board
26 of Directors.

27 3. KIUC's strategic plan and goals. This will include a discussion of:

28 a. KIUC's generation sources, including the renewable
29 generation sources that have been added in furtherance of
30 these plans and goals.

- 1 b. The reliability levels that KIUC has been able to achieve.
- 2 c. The many measures that KIUC has undertaken to control
3 costs and increase productivity that have allowed KIUC to go
4 over twelve (12) years without seeking a general rate
5 increase.
- 6 d. A comparison of KIUC's rates to the rates charged by the
7 electric utilities on other Hawaiian Islands.
- 8 4. The communication efforts KIUC has undertaken to inform its
9 members/customers regarding the proposed rate increase.

10 **Q. ARE YOU SPONSORING ANY OF THE APPLICATION EXHIBITS?**

11 A. Yes. In addition to the subject testimony, I will be sponsoring Exhibit 1 to
12 the Application. I am also submitting the following attachments in support
13 of my testimony, which are incorporated herein. These attachments are as
14 follows:

- 15 1. Attachment DJB-101: KIUC Board Policy No. 1
- 16 2. Attachment DJB-102: 2019 KIUC Strategic Plan
- 17 3. Attachment DJB-103: Draft of updated KIUC Strategic Plan
- 18 4. Attachment DJB-104: Discussion of differences between KIUC and
19 an IOU, KIUC's last rate case in Docket No. 2009-0050, and Act 57,
20 2013 Hawaii legislative session
- 21 5. Attachment DJB-105: Comparison in Operations and Maintenance
22 ("O&M") costs between 2010 and 2023 Test Year pro forma
23 (excluding fuel and purchased power, habitat conservation plan, rate
24 case, and pension regulatory asset amortization expenses)
- 25 6. Attachment DJB-106: Change in sales since 2010: 2010 and 2023
26 Test Year pro forma

1 **Q. PLEASE DESCRIBE EXHIBIT 1 TO THE APPLICATION.**

2 A. Exhibit 1 to the Application provides a general description of KIUC's
3 property, plant and equipment. The information in Exhibit 1 is being
4 provided in accordance with Hawaii Administrative Rule § 16-601-87(1).

5 **Q. PLEASE IDENTIFY THE OTHER WITNESSES WHO WILL BE**
6 **PRESENTING TESTIMONY ON BEHALF OF KIUC IN SUPPORT OF THE**
7 **APPLICATION, AND BRIEFLY DESCRIBE THE AREAS THEY WILL**
8 **COVER IN THIS PROCEEDING.**

9 A. In addition to my own direct testimony, KIUC will be presenting ten (10)
10 other witnesses and their respective direct testimonies in support of KIUC's
11 Application. A list of each witness and a summary of the areas to be
12 covered by that witness follow:

13 Stacie Dellamano (Exhibit 10-T-200). Stacie Dellamano, KIUC's
14 CFO, will provide testimony in support of KIUC's need for increased
15 revenues, which will supplement the discussions in my testimony and in
16 William A. Collet's testimony (Exhibit 10-T-300). Ms. Dellamano will also
17 discuss the main contributing factors for the needed revenue increase, and
18 the development of the Test Year revenue requirement. As part of that
19 discussion, she will also discuss the specific requests set forth in the
20 Application regarding the use of the depreciation rates discussed in the
21 testimony of Nancy Heller Hughes (Exhibit 10-T-1100), as well as KIUC's
22 requests to recover over a 10-year amortization period the Lost Gross

1 Margins (“LGM”) regulatory asset established in Docket No. 2020-0088 and
2 the pension regulatory asset established in Docket No. 2009-0050.

3 William A. Collet (Exhibit 10-T-300). William A. Collet, President of
4 Collet & Associates, LLC, will provide testimony in support of the use of the
5 Debt Service Coverage Ratio (“DSC Ratio”) to determine KIUC’s revenue
6 requirement in this proceeding. In doing so, Mr. Collet will provide a
7 discussion of the rationale for KIUC’s movement to its current Indenture
8 arrangement and how the DSC Ratio is now the principal measure of loan
9 covenant compliance. Mr. Collet’s testimony will also discuss why it would
10 be beneficial for KIUC to establish a credit rating with one or more of the
11 three major credit rating agencies, and he will also discuss the uniqueness
12 of KIUC as a distribution electric cooperative due to its relatively large
13 investment in generation and transmission assets, and he will undertake an
14 analysis of electric cooperative peers to establish customary financial
15 metrics that support the fair and reasonable revenue requirement being
16 requested by KIUC in this proceeding.

17 Stan Faryniarz (Exhibit 10-T-400). Stan Faryniarz, Principal
18 Consultant for Daymark Energy Advisors (“Daymark”), will provide
19 testimony on KIUC’s revenue requirements model (Exhibit 6 to the
20 Application) as the sponsor of that model, and on the working cash
21 computation reflected in the Test Year average rate base (Exhibit 9 to the
22 Application).

1 Daniel Koehler (Exhibit 10-T-500). Daniel Koehler, Vice President
2 and Principal Consultant for Daymark, will provide testimony on the
3 proposed customer class revenue targets, rate class structure change to
4 combine Large Power Schedules “L” and “P,” and the proposed rate design
5 by customer class.

6 Kevin Pierce (Exhibit 10-T-600). Kevin Pierce, Senior Consultant
7 with Daymark, will provide testimony on the Load Research Study and
8 Allocated Cost of Service Study prepared by Daymark and how they were
9 used in developing KIUC’s rate design proposals discussed by Mr. Koehler
10 in his testimony (Exhibit 10-T-500).

11 Christopher Yuh (Exhibit 10-T-700). Christopher Yuh, KIUC’s
12 Manager of Finance, Risk and Analytics, will provide testimony on KIUC’s
13 operating budget and describe the process undertaken to develop the
14 budget and how that information was used to determine the Test Year
15 revenue requirement being proposed in the Application. His testimony on
16 the operating budget will also describe the purpose and goal of the budget
17 process, the budget sources for the Test Year revenue requirement and the
18 supporting exhibits, and the pro-forma adjustments from the operating
19 budget that were applied to derive the Test Year revenue requirement.
20 Mr. Yuh will also discuss KIUC’s endangered species-related Test Year
21 O&M and capital costs for its Habitat Conservation Plan (“HCP”) and Save
22 our Shearwaters activities.

1 Corinne Cuaresma (Exhibit 10-T-800). Corinne Cuaresma, KIUC's
2 Controller, will provide testimony on the preparation of the historical
3 accounting and financial data used as a basis in various exhibits to the
4 Application and describe the source of information for the Test Year
5 estimates for depreciation expense and accumulated depreciation.

6 Brad Rockwell (Exhibit 10-T-900). Brad Rockwell, KIUC's Chief of
7 Operations, will provide testimony on KIUC's capital expenditures and
8 projects during 2022 and for the Test Year that will contribute to KIUC's
9 plant, as well as plant that is being removed or retired from service. His
10 testimony on KIUC's capital expenditures will provide the underlying
11 support for the plant additions as shown in Exhibit 3 to the Application.
12 Mr. Rockwell will also discuss non-labor expenses for KIUC's Power Supply
13 and Transmission and Distribution departments, commodities costs, KIUC's
14 Energy Rate Adjustment Clause (ERAC) mechanism and changes to the
15 mechanism being proposed in the Application.

16 Thomas A. Lovas (Exhibit 10-T-1000). Thomas A. Lovas, an
17 economist and electric system consultant and the owner of Energy &
18 Resource Economics, will provide testimony discussing KIUC's approach to
19 load forecasting and the development of the load forecast that underlies the
20 Test Year sales estimate prepared by KIUC.

21 Nancy Heller Hughes (Exhibit 10-T-1100). Nancy Heller Hughes, a
22 Principal at NewGen Strategies and Solutions, LLC ("NewGen"), will

1 provide testimony summarizing and supporting the results of the
2 depreciation study performed by NewGen to determine the recommended
3 annual depreciation accrual rates based on KIUC's plant in service as of
4 December 31, 2017.

5 **Q. PLEASE PROVIDE A LIST OF THE OTHER EXHIBITS TO THE**
6 **APPLICATION AND THEIR RESPECTIVE WITNESS SPONSORS.**

7	A.	<u>Exhibit</u>	<u>Subject Matter</u>	<u>Sponsor</u>
8		Exhibit 1	General Description of KIUC's	David J. Bissell
9			Property, Plant and Equipment	
10		Exhibit 2	Financial Statements	
11		<u>Schedules</u>		
12		(1)	Stock Authorized and Outstanding	Stacie A. Dellamano
13		(2)	Year-End Common Stock Outstanding	Stacie A. Dellamano
14			and Dividends	
15		(3)	Security Agreements,	Stacie A. Dellamano
16			Mortgages and Deeds of Trust	
17		(4)	Audited Financial Statements as of	Stacie A. Dellamano
18			December 31, 2021	
19		(5)	Unaudited Financial Statements	Stacie A. Dellamano
20			(10-months ended October 31, 2022)	
21		(6)	Notes, Bonds, and Other Indebtedness	Stacie A. Dellamano
22		Exhibit 3	KIUC's Plant and Accumulated	Stacie A. Dellamano
23			Depreciation	
24		Exhibit 4	Present Rate Schedules	Stacie A. Dellamano
25		Exhibit 5	Comparison of Present and	Daniel Koehler
26			Proposed Rates	

1	Exhibit 6	Revenue Requirement	Stan Faryniarz
2		Schedule (Regulatory Basis) for	
3		Test Year Ended December 31,	
4		2023 at Present and Proposed	
5		Revenues	
6	Exhibit 7	Revenue Requirement	Stan Faryniarz
7		Schedule (GAAP Basis) for	
8		Test Year Ended December 31,	
9		2023 at Present and Proposed	
10		Revenues	
11			
12	Exhibit 8	Results of Operation for	Stacie A. Dellamano ¹
13		Test Year Ended December 31,	
14		2023	
15	Exhibit 9	Average Rate Base for Test	Stan Faryniarz
16		Year Ended December 31, 2023	

- 17 **II. NEED FOR REVENUE AND RATE INCREASE**
- 18 **Q. WHAT IS THE AMOUNT OF THE REVENUE INCREASE BEING**
- 19 **SOUGHT IN THE INSTANT APPLICATION.**
- 20 **A.** KIUC seeks a net revenue increase in electric revenues, based on a
- 21 calendar 2023 Test Year, of \$16.7 million. See Exhibit 6 to the Application
- 22 (line 1, column D). This represents a 9.42% increase over the pro forma
- 23 electric revenue amount of \$177.0 million at present rates for the Test Year.
- 24 See Exhibit 6 to the Application (line 1, column F and line 1, column C,
- 25 respectively).

¹ See the testimony of Ms. Dellamano (Exhibit 10-T-200) for the various witnesses sponsoring the supporting exhibits to Exhibit 8 (Exhibits 8-1 to 8-32).

1 **Q. PLEASE EXPLAIN KIUC'S NEED FOR INCREASED REVENUES.**

2 A. An increase in KIUC's revenues and rates is needed to address KIUC's
3 deteriorating financial results due to relatively flat sales growth and
4 increasing costs and investments since KIUC's last general rate increase
5 went into effect in 2010 in Docket No. 2009-0050. Specifically, this increase
6 is needed to provide KIUC with sufficient revenues to fund and pay fixed
7 and variable expenses when and as due and provide sufficient margins that
8 enable KIUC to meet lender debt coverage ratio requirements and
9 expectations, and ensure that KIUC is able to access long-term debt to fund
10 planned and unplanned capital needs and for KIUC to continue to safely
11 and reliably deliver its essential electric service to its customers/members
12 and to meet various State requirements and initiatives, including the
13 Renewable Portfolio Standards ("RPS"). Ms. Dellamano's testimony
14 (Exhibit 10-T-200) discusses the negative impacts upon KIUC if it is not able
15 to meet its required DSC Ratio under the Indenture, including KIUC being
16 precluded from borrowing any new debt under the Indenture until the DSC
17 Ratio deficiency has been removed for a full fiscal year.

18 **Q. FOR COMPARISON PURPOSES, DID KIUC COMPUTE A RETURN ON**
19 **RATE BASE BASED ON THE REQUESTED TEST YEAR REVENUE**
20 **REQUIREMENT?**

21 A. Yes. Although it is not the basis for KIUC's requested revenue increase, for
22 potential comparison purposes with other utility rate proceedings before this

1 Commission utilizing the rate of return methodology for setting rates as
2 traditionally applied for IOUs, the proposed revenue increase would provide
3 KIUC with an approximate 5.54% rate of return on rate base, as shown on
4 Exhibit 6 to the Application (line 41, column E).

5 **Q. PLEASE EXPLAIN WHY KIUC'S TEST YEAR REVENUE**
6 **REQUIREMENT IS NOT BASED ON A RETURN ON RATE BASE**
7 **COMPUTATION.**

8 A. As discussed in Attachment DJB-104 to this testimony, the rate of return
9 methodology used for IOUs was not utilized by this Commission in
10 establishing KIUC's revenue requirement and rates in its first and only rate
11 case in Docket No. 2009-0050. Instead, the revenue requirement and rates
12 were established using the principal measure of financial performance used
13 by the cooperative's lenders at that time (i.e., Times Interest Earned Ratio
14 or "TIER").

15 **Q. PLEASE EXPLAIN HOW KIUC'S REVENUE REQUIREMENT WAS**
16 **DETERMINED FOR THE SUBJECT APPLICATION.**

17 A. Similar to KIUC's last rate case, KIUC's revenue requirement is based on
18 the principal measure of financial performance used by KIUC's lenders,
19 which is now the DSC Ratio instead of TIER as noted above and further
20 discussed in Mr. Collet's testimony (Exhibit 10-T-300).

1 **A. THE FINANCIAL OUTLOOK FOR KIUC**

2 **Q. WHAT MARGIN AND DSC RATIO DOES KIUC PROJECT BASED ON**
3 **THE TEST YEAR REVENUE AT PRESENT RATES?**

4 A. At its present rates, KIUC projects a net margin for the Test Year of negative
5 \$7.1 million, as shown in Exhibit 6 to the Application (line 39, column A).
6 This results in a DSC Ratio under KIUC's Indenture of 0.98, as shown in
7 Exhibit 6 (line 46, column A).² After making regulatory adjustments to
8 remove certain O&M costs that are not being included for recovery in this
9 rate proceeding (shown in column B of Exhibit 6),³ KIUC projects a net
10 margin loss for the Test Year of \$4.8 million at its present rates and an
11 Indenture DSC Ratio of 0.99, as shown in Exhibit 6 (line 39, column C and
12 line 46, column C, respectively). These DSC ratios are below the
13 1.25 minimum DSC Ratio required under KIUC's loan Indenture
14 arrangement.⁴

² KIUC's DSC Ratio as calculated under the Indenture is discussed and also referred to as the "Indenture DSC Ratio" in Mr. Collet's testimony (Exhibit 10-T-300).

³ These regulatory adjustments are discussed in the testimony of Mr. Yuh (Exhibit 10-T-700).

⁴ KIUC's Indenture arrangement was consummated in April 2019, and was approved by this Commission in Decision and Order No. 35101 issued on December 18, 2017 in Docket No. 2017-0346. The Indenture arrangement is further discussed in Mr. Collet's testimony (Exhibit 10-T-300).

1 **Q. WHAT MARGIN AND DSC RATIO IS EXPECTED TO BE REALIZED AT**
2 **THE PROPOSED REVENUE REQUIREMENT FOR THE TEST YEAR?**

3 A. KIUC's proposed revenue requirement is expected to result in a net Test
4 Year margin of \$10.34 million, as shown on Exhibit 6 to the Application
5 (line 39, column E). This is expected to result in an Indenture DSC Ratio of
6 1.75 as shown on Exhibit 6 (line 46, column E). In his testimony
7 (Exhibit 10-T-300), Mr. Collet discusses the expectations of KIUC's lenders
8 and the broader capital market regarding DSC Ratio levels and the
9 associated net margin requirements necessary to achieve an adequate
10 DSC Ratio. Mr. Collet also explains why the DSC Ratio is the appropriate
11 financial ratio to use to determine KIUC's revenue requirement in this
12 proceeding, and provides his expert opinion that KIUC's proposed revenue
13 increase that is designed to achieve the above margin and an Indenture
14 DSC Ratio of 1.75 is just and reasonable.

15 **B. IMPACTS OF THE PANDEMIC ON THE LOCAL ECONOMY AND**
16 **KIUC'S KWH SALES AND OPERATING EXPENSES**

17 **1. KWH SALES IMPACT**

18 **Q. HOW HAS THE COVID-19 PANDEMIC AFFECTED THE ECONOMY ON**
19 **THE ISLAND OF KAUAI AND KIUC'S KWH SALES?**

20 A. The COVID-19 pandemic resulted in a mandated shut-down of many
21 business establishments, which resulted in a significant decrease in kWh
22 sales from KIUC's commercial customers during this period. This is

1 reflected in the kWh sales information provided on Exhibit 8-1 to the
2 Application (page 2, line 8), which shows that KIUC's total annual kWh sales
3 for 2020 and 2021 were significantly below historical levels, particularly for
4 customer classes G, J, L and P. The result was a lowering of KIUC's kWh
5 sales, which was only partially offset by growth in kWh sales to the
6 residential class in 2021. While the island of Kauai's economy has been
7 recovering as the government-imposed shut-downs and restrictions
8 ceased, annual kWh sales for these classes are not likely to recover to
9 pre-pandemic levels for the foreseeable future, especially with current
10 inflationary concerns and possible recession risks.

11 **2. OPERATING EXPENSES**

12 **Q. IN ADDITION TO THE REDUCTION IN KWH SALES, HAS THE COVID-**
13 **19 PANDEMIC AFFECTED KIUC'S OPERATIONS AND OPERATING**
14 **COSTS?**

15 **A.** Yes, as will be discussed below, the COVID-19 pandemic together with
16 higher inflation has impacted KIUC's staffing and operating costs, and have
17 presented challenges with certain KIUC vendors being able to perform
18 contracted work.

1 **C. OTHER IMPACTS AND CHALLENGES FACING KIUC,**
2 **INCLUDING STAFFING, INFLATION, RESOURCE AND VENDOR**
3 **AVAILABILITY, AND ENDANGERED SPECIES OBLIGATIONS**

4 **1. STAFFING LEVELS**

5 **Q. HAS KIUC EXPERIENCED HIGHER THAN NORMAL EMPLOYEE**
6 **TURNOVER OR LOSS OF KEY EMPLOYEES IN THE LAST YEAR?**

7 A. Yes. The cooperative has had a significantly higher level of turnover than
8 normal and has lost key employees, particularly in the financial area.
9 Through October of 2022, 18 employees have left KIUC in 2022 including
10 12 retirees with 331 years of combined KIUC service. This includes KIUC's
11 former Financial Vice President/CFO and the Regulatory Affairs Manager,
12 who both resigned citing the cost of living in Kauai as a major reason for
13 leaving KIUC and moving out of the state of Hawaii. KIUC experienced
14 difficulty in recruiting and hiring a new CFO. Multiple, qualified applicants
15 either dropped out of the recruiting process after researching living costs on
16 Kauai, or demanded unacceptably high salary levels.

17 **Q. HAS THERE BEEN A SIMILAR EXPERIENCE ON THE OPERATIONAL**
18 **SIDE?**

19 A. Yes. Of the 18 employees that have left KIUC as noted above, 9 of them
20 were bargaining unit employees (6 retired) in operational areas, including a
21 lineperson who moved to the west coast to work at another utility. KIUC is
22 aware that certain west coast utilities have been actively recruiting Hawaii

1 based linepersons offering large signing bonuses, living cost assistance,
2 and high overtime earning opportunities.

3 **Q. ARE THERE OTHER FACTORS OUTSIDE OF COST OF LIVING THAT**
4 **ARE IMPACTING EMPLOYEE TURNOVER?**

5 A. Yes. As noted above, KIUC has lost 12 employees through October 2022
6 due to retirement and expects increased levels of retirements to continue.
7 KIUC has multiple employees who are currently retirement eligible.
8 Additionally, long-term employees covered under National Rural Electric
9 Cooperative Association pension programs are potentially negatively
10 financially impacted by not retiring in 2022 while low interest rates are still
11 being applied in discounting the value of future pension benefits to derive
12 lump-sum payment amounts.

13 **2. INFLATION AND LIMITED RESOURCE AND VENDOR AVAILABILITY**

14 **Q. HOW HAS INFLATION IMPACTED KIUC'S OPERATING EXPENSES**
15 **AND THE TEST YEAR PROJECTIONS?**

16 A. Ms. Dellamano's testimony (Exhibit 10-T-200) also discusses how inflation
17 has impacted KIUC's operating expenses and the Test Year expense
18 amounts, where, as discussed by Mr. Yuh (Exhibit 10-T-700), KIUC
19 anticipates inflationary growth of 3-5% in the normalization of the Test Year
20 budget numbers. A significant concern is KIUC's ability to have a
21 reasonable opportunity and/or assurance that it can obtain sufficient
22 revenues from this rate case proceeding so that it can continue operations

1 in a safe and reliable manner, fund and pay expenses when and as due,
2 and meet its lender requirements and expectations to among other things
3 continue to be able to obtain long-term financing, without experiencing a
4 significant and material negative impact if inflation continues at the recent
5 historically high levels. This is a significant risk for the cooperative,
6 especially given the extensive resources and the time that would be
7 required to prepare, submit, process and then obtain another rate increase.
8 If high inflation continues to impact critical operational areas such as wages,
9 employee retention, and the hiring of outside contractors for plant
10 maintenance and there is no mechanism outside of another general rate
11 application to adjust revenues, KIUC could be faced with the loss of key
12 employees, or the need to cut prudent maintenance items in order to remain
13 financially sound and in compliance with its lender requirements, which is
14 imperative to continue to have the ability to access debt financing.

15 **Q. ARE THERE OTHER AREAS THAT ARE BEING IMPACTED BY**
16 **RECENT ECONOMIC FACTORS?**

17 A. Yes. Many areas are being impacted by higher costs and employee
18 availability issues. One key area is vegetation management, particularly
19 tree trimming. KIUC has contracted with Asplundh for tree trimming for
20 many years. Recently, due to the pandemic and other labor issues, they
21 have been unable to maintain adequate work crews necessary to meet
22 KIUC's vegetation management goals, as further discussed in

1 Mr. Rockwell's testimony (Exhibit 10-T-900). As a result, KIUC's actual
2 expenditures in this critical area have recently been materially below
3 budgeted levels. However, going forward, these vegetation management
4 efforts must be increased for the foreseeable future to meet vegetation
5 management goals, which are designed to ensure the safety and reliability
6 of KIUC's system and operations.

7 **Q. ARE THERE OTHER EXPENSE AREAS WHERE ACTUAL RESULTS**
8 **HAVE BEEN BELOW BUDGET DUE TO THE EXTRAORDINARY**
9 **IMPACTS OF THE GLOBAL PANDEMIC?**

10 A. Yes. Business travel, training, and employee development, energy
11 efficiency related rebates, and power plant maintenance costs are areas
12 that have seen significant expense reductions.

13 **Q. DO KIUC'S TEST YEAR EXPENSE PROJECTIONS REFLECT THE**
14 **LOWER LEVEL OF COSTS INCURRED DURING THE PANDEMIC IN**
15 **AREAS SUCH AS TRAVEL AND TRAINING, POWER PLANT**
16 **MAINTENANCE AND TREE TRIMMING?**

17 A. No. These lower cost levels were due to abnormal conditions arising from
18 the pandemic as discussed above. Travel including for training essentially
19 stopped due to government-imposed shut-downs and restrictions. With
20 respect to tree trimming, these efforts were impacted due to the inability of
21 the contractor to maintain adequate work crews as discussed above, where
22 KIUC must increase its vegetation management efforts for the foreseeable

1 future in order to meet its vegetation management goals. And, for other
2 plant maintenance activities, as discussed in the testimony of Mr. Rockwell
3 (Exhibit 10-T-900), the reduced kWh sales from the government-imposed
4 shut-downs and restrictions in 2020 and 2021 resulted in the need to
5 dispatch KIUC generation less frequently, thereby reducing the need for
6 routine maintenance and lengthening the interval between scheduled
7 overhauls (and thus reducing the annual maintenance costs of KIUC
8 generation). However, as discussed by Mr. Rockwell, the dispatch of KIUC
9 generating units has increased due to increased kWh sales as government-
10 imposed restrictions have eased, which in turn increases routine
11 maintenance and reduces the interval between scheduled overhauls of
12 KIUC generation, thus resulting in higher generation maintenance
13 expenses. In light of the above, the Test Year reflects a level of activity in
14 these and other expense areas that are more representative of
15 pre-pandemic levels and what KIUC expects to be normalized levels of
16 operations. KIUC does not believe it would be prudent to lower cost
17 projections below what is expected under “normal” operations and what
18 KIUC expects to incur during the Test Year.

1 **3. KIUC’S ENDANGERED SPECIES OBLIGATIONS AND COSTS**

2 **Q. WHAT ARE KIUC’S ENDANGERED SPECIES COMPLIANCE**
3 **OBLIGATIONS?**

4 A. KIUC’s utility operations inherently result in the incidental take of certain
5 endangered or threatened species, including Newell’s Shearwaters and
6 Hawaiian Petrels. Certain protected water birds and green sea turtles can
7 also be harmed by KIUC operations. Under federal and state laws, KIUC
8 must obtain an incidental take permit from U.S. Fish and Wildlife Service
9 (“USFWS”) and an incidental take license from the Hawaii Department of
10 Land and Natural Resources (“DLNR”) in order to legally operate and avoid
11 fines and criminal penalties. In order to obtain these authorizations, KIUC
12 must have in place an approved HCP, and KIUC has been working with
13 various agencies to develop the HCP for many years. The HCP, once
14 approved, is expected to cover a 30- to 50-year timeframe to mitigate the
15 impacts of KIUC’s operations through various conservation measures.
16 Over the years, KIUC has undertaken various line reconfigurations and
17 agreed to various measures in furtherance of its efforts to develop the HCP
18 and obtain its incidental take authorizations, some of which have been the
19 subject of prior Commission dockets (see for example Docket
20 Nos. 2011-0045, 2020-0040 and 2022-0045).

1 **Q. WHAT IS THE STATUS OF THE HCP?**

2 A. KIUC expects a public draft of the HCP to be published in early 2023, with
3 completion of the HCP in the late 2023 to 2024 timeframe. The HCP
4 requires completion of an Environmental Impact Statement which is
5 ongoing.

6 **Q. WHAT COSTS RELATED TO ENDANGERED SPECIES COMPLIANCE
7 ARE INCLUDED IN THE TEST YEAR?**

8 A. As discussed further in Mr. Yuh's testimony (Exhibit 10-T-700), Test Year
9 costs related to endangered species compliance efforts include \$4.9 million
10 in O&M expenses and \$14.1 million in capital costs.

11 **D. THE FINANCIAL UNCERTAINTY RESULTING FROM THE
12 ABOVE IMPACTS AND CHALLENGES**

13 **Q. HOW DO THE IMPACTS AND CHALLENGES DISCUSSED ABOVE
14 IMPACT THIS RATE PROCEEDING?**

15 A. The various economic impacts and uncertainty resulting from the above
16 circumstances, especially the world changing pandemic and inflationary
17 pressures, create a significant level of financial uncertainty in determining
18 pro forma Test Year projections of what sales levels and operating
19 expenses KIUC can expect for the Test Year. It still remains unclear the
20 scope of economic recovery that will occur on Kauai. The duration and
21 severity of the economic impacts of the pandemic and the current
22 inflationary environment on the island of Kauai and on KIUC remain

1 unknown, including how these impacts will permanently or for the
2 foreseeable future change customer usage patterns.

3 KIUC is faced with a potential risk to its financial fitness and ability to
4 provide its essential electric service if the rates resulting from this
5 proceeding end up being insufficient for KIUC to fund and pay its expenses
6 when and as due, to meet its lender debt coverage ratio requirements and
7 expectations, and to provide KIUC with the ability to access long-term debt
8 to fund planned and unplanned capital needs. As discussed above and in
9 Ms. Dellamano's testimony (Exhibit 10-T-200), if KIUC is not able to meet
10 the minimum Indenture DSC Ratio of 1.25, KIUC would be precluded from
11 borrowing any new debt under the Indenture until that deficiency has been
12 removed for a full fiscal year. As discussed in Attachment DJB-104 to this
13 testimony, KIUC as a cooperative does not have the ability to raise equity
14 capital and must remain financially viable only through (1) the revenues it
15 receives from the rates it charges and the resulting equity it is able to build
16 up over time, and (2) debt financing from its lenders, where the revenue
17 requirement that is ultimately authorized in this proceeding will directly
18 influence KIUC's ability to obtain such debt financing and/or to obtain such
19 financing on reasonable and favorable terms.

20 Especially in light of the above uncertainty in the current economic
21 environment, and also due to the risk of regulatory lag (i.e., the extensive
22 resources and time required to prepare, submit, process and then obtain

1 another rate increase), it is imperative that KIUC's revenue requirement and
2 rates are determined based on the expenses KIUC expects to incur during
3 the Test Year under "normal" operations, and not on expense levels during
4 the unprecedented situation over the previous couple of years starting with
5 a worldwide pandemic and government-imposed shut-downs and travel
6 restrictions, where KIUC was unable to maintain its normal level of activity
7 due to such restrictions (such as travel and training activities) and/or due to
8 resource and vendor limitations (such as vegetation management/tree
9 trimming).

10 **Q. GIVEN THE UNCERTAINTY DISCUSSED ABOVE, ISN'T THERE A RISK**
11 **OF THE COOPERATIVE OVER-EARNING ON THE RATES IT CHARGES**
12 **IF, FOR EXAMPLE, KIUC'S ACTUAL SALES LEVELS END UP BEING**
13 **MATERIALLY HIGHER THAN WHAT MAY BE REASONABLY**
14 **PROJECTED AT THIS TIME?**

15 A. KIUC believes that this is always a risk in a rate setting environment. This
16 is especially the case in this situation when rates are based on a prospective
17 future test year with circumstances fundamentally different than what has
18 recently been experienced for the reasons discussed above. However, the
19 concerns with this are at least somewhat alleviated in this situation for
20 two reasons. The first reason is due to KIUC's cooperative ownership
21 structure, where, as discussed in Attachment DJB-104 to this testimony,
22 any margins that result from the revenues received by KIUC (i.e., profits for

1 an IOU) belong to KIUC's ratepaying members (and not a separate group
2 of shareholders) as patronage capital and remain with the cooperative until
3 ultimately returned back to KIUC's ratepaying members through patronage
4 capital refunds and retirements. The second reason is due to this
5 Commission's patronage capital refund condition further discussed below,
6 which in effect establishes a means to prevent KIUC from "over-earning" on
7 the rates it charges by requiring KIUC to return to its members any margins
8 in excess of what is needed for KIUC to report a 2.0 TIER to lenders for the
9 prior calendar year.

10 **Q. YOU MENTION REGULATORY LAG (I.E., THE EXTENSIVE**
11 **RESOURCES AND TIME REQUIRED TO PREPARE, SUBMIT,**
12 **PROCESS AND THEN OBTAIN ANOTHER RATE INCREASE) IN THE**
13 **EVENT KIUC'S REVENUES ARE INSUFFICIENT. HAS KIUC**
14 **CONSIDERED OTHER REGULATORY OR RATEMAKING**
15 **APPROACHES TO MINIMIZE THE FINANCIAL RISK ASSOCIATED**
16 **WITH UNCERTAIN EXPENSE ITEMS AND THE REGULATORY LAG**
17 **ASSOCIATED WITH INCREASING RATES?**

18 A. KIUC is aware of certain revenue and expense decoupling methodologies
19 that potentially could result in a reduced financial risk to the cooperative
20 through the ability to adjust sales and expense projections outside of a
21 formal rate proceeding to compensate for inflation and projection risk.

1 **Q. DOES THE APPLICATION INCLUDE ANY DECOUPLING TYPE**
2 **EXPENSE OR REVENUE ADJUSTMENT APPROACHES TO BALANCE**
3 **KIUC'S NEED FOR FINANCIAL STABILITY WITH**
4 **MEMBER/CUSTOMER RATE LEVELS?**

5 A. No. KIUC has not incorporated decoupling methodologies into the revenue
6 requirement amount requested in the subject Application. KIUC has not
7 been granted any decoupling treatment to date, and it would be premature
8 and presumptuous to include such methodologies in the Application
9 submittal. Having said the above, however, KIUC notes that if it was able
10 to obtain some type of a decoupling mechanism that would allow it to adjust
11 the rates and revenues it receives without facing the regulatory lag and
12 expense of having to go through a full rate proceeding like it did in Docket
13 No. 2009-0050, KIUC would likely be able to remain financially viable with
14 a decreased revenue requirement.

15 **III. KIUC'S COOPERATIVE OWNERSHIP STRUCTURE**

16 **Q. PLEASE DESCRIBE KIUC.**

17 A. KIUC is a public utility operating under a legislatively-granted franchise to
18 manufacture, sell, furnish and supply electric light, current and power on the
19 island of Kauai.

20 **Q. PLEASE DESCRIBE KIUC'S OWNERSHIP STRUCTURE.**

21 A. KIUC is a federal tax-exempt, not-for-profit electric cooperative organized
22 under Hawaii Revised Statutes ("HRS") Section 421C. KIUC was formed

1 by a group of Kauai business and community leaders and professionals for
2 the purpose of acquiring the Kauai Electric division assets of Citizens
3 Communication Company (previously referred to as Kauai Electric). The
4 acquisition was completed on November 1, 2002, and it was approved by
5 this Commission in Decision and Order No. 19658, issued on
6 September 17, 2002, as amended by Decision and Order No. 19755, issued
7 on October 30, 2002, both in Docket No. 02-0060.

8 **A. DIFFERENCES BETWEEN A COOPERATIVE AND AN IOU**

9 **Q. HOW DOES THE COOPERATIVE OWNERSHIP STRUCTURE OF KIUC**
10 **DIFFER FROM AN INVESTOR-OWNED UTILITY (IOU)?**

11 A. Cooperative electric utilities have several fundamental differences from an
12 IOU. These differences are detailed and further discussed in Attachment
13 DJB-104 to this testimony. In summary, key differences include:

- 14 1. Electric cooperatives are owned by their members who must be
15 customers receiving service from the cooperative, rather than by
16 shareholders who are not required to be customers and are in many
17 cases entirely separate and apart, in many cases geographically,
18 from the customer base.
- 19 2. All electric customers are eligible to become member/owners of the
20 cooperative. For KIUC, all of KIUC's electric customers are
21 automatically members of the cooperative unless a customer elects
22 not to be a member. Currently, over 99.6% of KIUC's electric
23 customers are members of KIUC. As such, KIUC's owners and
24 customers are essentially one and the same.
- 25 3. Members of a cooperative elect a Board of Directors from amongst
26 the cooperative membership to govern the cooperative.

1 4. Earnings from a cooperative are allocated to its members based on
2 patronage with the cooperative, rather than distributed to
3 shareholders/investors as is the case for an IOU.

4 5. Most electric cooperatives are not-for-profit and are exempt from
5 federal, and in most cases, state⁵ income taxes.

6 See Attachment DJB-104 for a further discussion of the differences
7 between KIUC as a cooperative and an IOU and how these differences
8 were recognized in KIUC's first and only rate case in Docket No. 2009-0050.

9 **Q. WHAT DIFFERENTIATES KIUC FROM THE IOUS IN THE STATE FROM**
10 **AN OVERSIGHT/REGULATION STANDPOINT?**

11 A. KIUC, as a member owned electric cooperative, is unique in Hawaii. It is
12 KIUC's understanding that it is the only not-for-profit cooperative that this
13 Commission oversees, and all or essentially all of the other utilities that this
14 Commission currently oversees under its statutory authority granted under
15 HRS Chapter 269 are IOUs. For a further discussion, see
16 Attachment DJB-104 to this testimony.

17 **Q. BASED ON THE DIFFERENCES NOTED ABOVE, IS THE COMMISSION**
18 **STATUTORILY ALLOWED OR EVEN REQUIRED TO CONSIDER**

⁵ KIUC notes that it does pay a *de minimis* amount of state income taxes on non-patronage derived income.

1 **THESE DIFFERENCES WHEN EXERTING ITS REGULATORY**
2 **OVERSIGHT OF KIUC?**

3 A. Yes. As also discussed in Attachment DJB-104 to this testimony,
4 subsequent to the completion of KIUC's last rate case in Docket
5 No. 2009-0050, the Hawaii State Legislature passed Act 57 during the 2013
6 legislative session that: (1) requires this Commission and the Consumer
7 Advocate to "at all times consider the ownership structure and interests of
8 an electric cooperative in determining the scope and need for any regulatory
9 oversight or requirements over such electric cooperative," and (2) grants
10 this Commission the authority to waive or exempt an electric cooperative
11 from "any or all requirements of this chapter [i.e., HRS Chapter 269] or any
12 applicable franchise, charter, decision, order, rule, or other law upon a
13 determination or demonstration that such requirement or requirements
14 should not be applied to an electric cooperative or are otherwise unjust,
15 unreasonable, or not in the public interest."

16 **B. KIUC'S PATRONAGE AND CAPITAL ALLOCATION AND**
17 **RETIREMENT PROCESS**

18 **Q. WHAT IS PATRONAGE CAPITAL?**

19 A. Patronage capital, also known as capital credits, represents margins
20 credited to members of KIUC and allocated according to the amount paid
21 for energy used. Margins, for a cooperative, represent revenue remaining
22 after considering all expenses and is analogous to profits for an IOU. At the

1 end of each year, the margin is allocated to each member of the cooperative
2 based on the member's energy use for the year. The allocated margin is
3 credited to each member's patronage capital account and the balance in
4 each member's account accumulates until retirement of capital occurs.

5 Patronage capital for a cooperative represents the only method of
6 raising and maintaining equity. Unlike an IOU, a cooperative cannot issue
7 stock to obtain equity at levels acceptable to capital market participants and
8 lenders. For a state regulated cooperative such as KIUC, it is essential that
9 revenue levels granted by the state regulator are adequate to generate
10 sufficient margins to meet capital market and lender requirements and
11 expectations while also recognizing the needs to retire allocated patronage
12 capital to members as appropriate, which is ultimately legally required for
13 the cooperative to maintain its tax-exempt status. Mr. Collet, as discussed
14 in his testimony (Exhibit 10-T-300), considers the requirements and
15 expectations of lenders in his assessment of an appropriate DSC Ratio and
16 margin that KIUC should be entitled or allowed to achieve and earn.

17 **Q. PLEASE EXPLAIN THE DIFFERENCE BETWEEN ALLOCATION AND**
18 **RETIREMENT OF PATRONAGE CAPITAL.**

19 A. The allocation of patronage capital involves crediting KIUC's margins to
20 each member's patronage capital account based on the amount paid for
21 energy used. The balance in each member's account remains with the
22 cooperative as its source of equity capital until it is retired. The retirement

1 of patronage capital involves the actual payment, typically via check or bill
2 credit, to members in an amount determined by KIUC's Board of Directors
3 and/or required by this Commission's patronage capital refund condition
4 mentioned above and further discussed below.

5 **C. THE COMMISSION'S PATRONAGE CAPITAL REFUND**
6 **CONDITION AND ITS IMPACT IN RATEMAKING**

7 **Q. DOES THE COMMISSION HAVE ANY ROLE IN DETERMINING THE**
8 **AMOUNT OF PATRONAGE CREDITS TO RETIRE?**

9 A. Yes. As noted above and further discussed in Attachment DJB-104, in
10 KIUC's last rate case, the Commission ordered KIUC to refund to members
11 (subject to lender approval) via patronage capital refunds/retirements any
12 net margin over and above what is needed to achieve a RUS-reported TIER
13 of 2.0. Prior to that, the Commission had required KIUC to return 25% of
14 net margins to its members on a yearly basis, subject to lender approval.

15 **Q. HOW DOES KIUC VIEW THE PATRONAGE CAPITAL REFUND**
16 **CONDITION IMPOSED BY THE COMMISSION FROM A RATEMAKING**
17 **STANDPOINT?**

18 A. From a ratemaking standpoint, KIUC views the patronage capital refund
19 condition as effectively establishing a means to prevent KIUC from
20 "over-earning" on the rates it charges to its customers/members, as
21 discussed in Attachment DJB-104. Thus, in the event actual financial
22 results exceed Test Year projections, the revenue that KIUC can receive is

1 effectively capped, providing KIUC with an adequate, but not excessive,
2 margin for the cooperative.

3 **Q. IS KIUC PROPOSING ANY CHANGE TO THE COMMISSION'S**
4 **CURRENT PATRONAGE CAPITAL REFUND CONDITION AS PART OF**
5 **THIS PROCEEDING?**

6 A. No, KIUC is not proposing any changes or adjustments for purposes of this
7 rate proceeding. KIUC believes that, at this time and for purposes of this
8 rate proceeding, the Commission's existing patronage capital refund
9 condition imposed in Docket No. 2009-0050 provides a suitable balance
10 between: (1) KIUC's need to receive sufficient revenues to cover expenses
11 and to ensure that KIUC can meet lender requirements and maintain access
12 to long-term debt to fund planned and unplanned capital needs and for
13 KIUC to continue to safely and reliably deliver its essential electric service
14 to its customers/members and meet various State requirements and
15 initiatives; (2) the current uncertainty discussed above in being able to
16 accurately forecast sales levels and various increased costs especially in
17 light of the still ongoing impacts of the COVID-19 pandemic, current
18 inflationary concerns and possible recession risks; and (3) keeping
19 ratepayer's electricity costs as low as reasonably possible.

20 **Q. MR. COLLET'S TESTIMONY (EXHIBIT 10-T-300) DISCUSSES HOW**
21 **TIER IS NO LONGER APPLICABLE FOR KIUC AND ALSO PROVIDES**
22 **AN EXAMPLE OF HOW THE USE OF A CONSTANT TIER LEVEL**

1 **DURING THE LATER STAGES OF A LOAN MAY NOT PROVIDE A**
2 **REVENUE REQUIREMENT SUFFICIENT FOR A UTILITY TO PAY ITS**
3 **DEBT SERVICE DUE TO REDUCED INTEREST EXPENSE OVER TIME.**
4 **IN LIGHT OF THIS, WHY IS KIUC NOT SEEKING TO REMOVE THE USE**
5 **OF TIER IN THE CURRENT PATRONAGE CAPITAL REFUND**
6 **CONDITION?**

7 A. For the reasons discussed in Mr. Collet's testimony (Exhibit 10-T-300),
8 TIER should not be considered for the purpose of determining KIUC's
9 revenue requirement and rates in this proceeding. However, for purposes
10 of the Commission's existing patronage capital refund condition, earning a
11 RUS TIER of 2.0 is expected to result in adequate margins for meeting
12 lender Equity Ratio requirements and expectations, and as such, for
13 purposes of this rate case proceeding, KIUC does not feel the need to
14 modify the existing patronage capital refund condition and its 2.0 TIER level
15 at this time. However, at some point in the future, the 2.0 TIER threshold
16 will likely need to be revised as the interest component of KIUC's debt
17 service declines for the reasons discussed by Mr. Collet.

18 **Q. HOW MUCH PATRONAGE CAPITAL HAS KIUC RETIRED SINCE**
19 **FORMATION IN 2002?**

20 A. KIUC has retired \$37.2 million in patronage capital to its
21 customers/members since the acquisition of Kauai's electric utility in
22 November 2002. This includes over \$20 million since the time of the last

1 rate case proceeding in 2010, as shown in Exhibit 2, Schedule 2 to the
2 Application.

3 **D. KIUC'S GOVERNANCE AND THE ROLES OF ITS BOARD OF**
4 **DIRECTORS**

5 **Q. WHO HAS OVERALL GOVERNANCE RESPONSIBILITY FOR THE**
6 **DIRECTION OF ACTIONS TO BE PURSUED BY KIUC?**

7 A. KIUC has a member elected Board of Directors who have the overall
8 governance responsibility over KIUC.

9 **Q. HOW IS KIUC'S BOARD OF DIRECTORS STRUCTURED?**

10 A. KIUC's Board of Directors is comprised of nine members. Members serve
11 staggered three-year terms with three members elected by the membership
12 base each year.

13 **Q. WHAT ARE THE RESPONSIBILITIES OF KIUC'S BOARD OF**
14 **DIRECTORS?**

15 A. The authority and responsibility of KIUC's Board of Directors are set forth in
16 KIUC Board Policy No. 1 (submitted as part of this testimony as Attachment
17 DJB-101). In general, the Board serves in a governance role, providing
18 strategic direction for the cooperative. The Board is responsible for hiring,
19 evaluating, and determining the compensation of the cooperative's CEO,
20 approving major plans and expenditures, and overseeing the performance
21 of KIUC management.

1 **Q. HOW OFTEN DOES KIUC'S BOARD OF DIRECTORS MEET AND ARE**
2 **THE MEETINGS OPEN TO THE PUBLIC?**

3 A. KIUC's Board meets at least once a month and the meetings are open to
4 the public. The public has the opportunity to provide testimony to the Board
5 at these meetings.

6 **IV. KIUC'S STRATEGIC PLAN AND GOALS**

7 **Q. IS THE BOARD RESPONSIBLE FOR KIUC'S STRATEGIC PLANNING?**

8 A. Yes. KIUC's Board is responsible for the completion of KIUC's Strategic
9 Plan. The Board works with staff in the strategic planning process.

10 **Q. WHAT ARE THE GENERAL GOALS AND OBJECTIVES OF THE**
11 **STRATEGIC PLAN APPROVED BY THE BOARD OF DIRECTORS?**

12 A. The Board of Directors implicitly and expressly acknowledge the cost of
13 energy as a strategic plan focus area. KIUC's directors also recognize the
14 importance of reliability, resiliency and reliability in their planning efforts,
15 along with aggressive carbon reduction goals. KIUC has been, and expects
16 to continue to be, a leader in renewable energy generation and technology
17 deployment over the coming years. This includes KIUC's ability to
18 previously leverage its not-for-profit cooperative structure and resulting
19 ability to obtain favorable financing through unique affiliated and tax equity
20 arrangements that increased renewable generation while also providing
21 electric bill savings to KIUC's customers/members (see the KRS One and
22 KRS Two arrangements that were the subject of Commission Docket

1 Nos. 2011-0323, 2012-0383 and 2013-0202). KIUC's directors are focused
2 on the overall well-being of the cooperative and its member owners and
3 they do not take authorizing a rate increase lightly. However, they
4 recognize that maintaining a solid financial footing is critical to being able to
5 continue providing safe and reliable electric service for the island, to
6 continue to access the capital markets and on favorable terms, and to
7 continue to achieve KIUC's strategic goals.

8 **Q. WHEN WAS THE LAST STRATEGIC PLAN COMPLETED?**

9 A. The last Strategic Plan was completed in 2019, a copy of which is provided
10 as Attachment DJB-102 to this testimony. KIUC is currently updating its
11 Strategic Plan. A draft of the updated plan has been completed (submitted
12 as Attachment DJB-103 to this testimony) and has been presented to the
13 public for comments. It is currently expected that the plan will be finalized
14 by the end of 2023.

15 **Q. CAN YOU SUMMARIZE KEY ELEMENTS OF THE 2019 STRATEGIC**
16 **PLAN AND DISCUSS HOW SUCCESSFUL THE COOPERATIVE HAS**
17 **BEEN IN ACHIEVING THE GOALS SET FORTH IN THE PLAN?**

18 A. Key elements of the 2019 Strategic Plan included:

- 19 (1) Generate at least 70% of electricity by using cost effective
20 renewable resources by 2030.
- 21 (2) Hold controllable cost increases at or below the actual level of
22 inflation.
- 23 (3) Maintain system reliability at 99.96% or better.

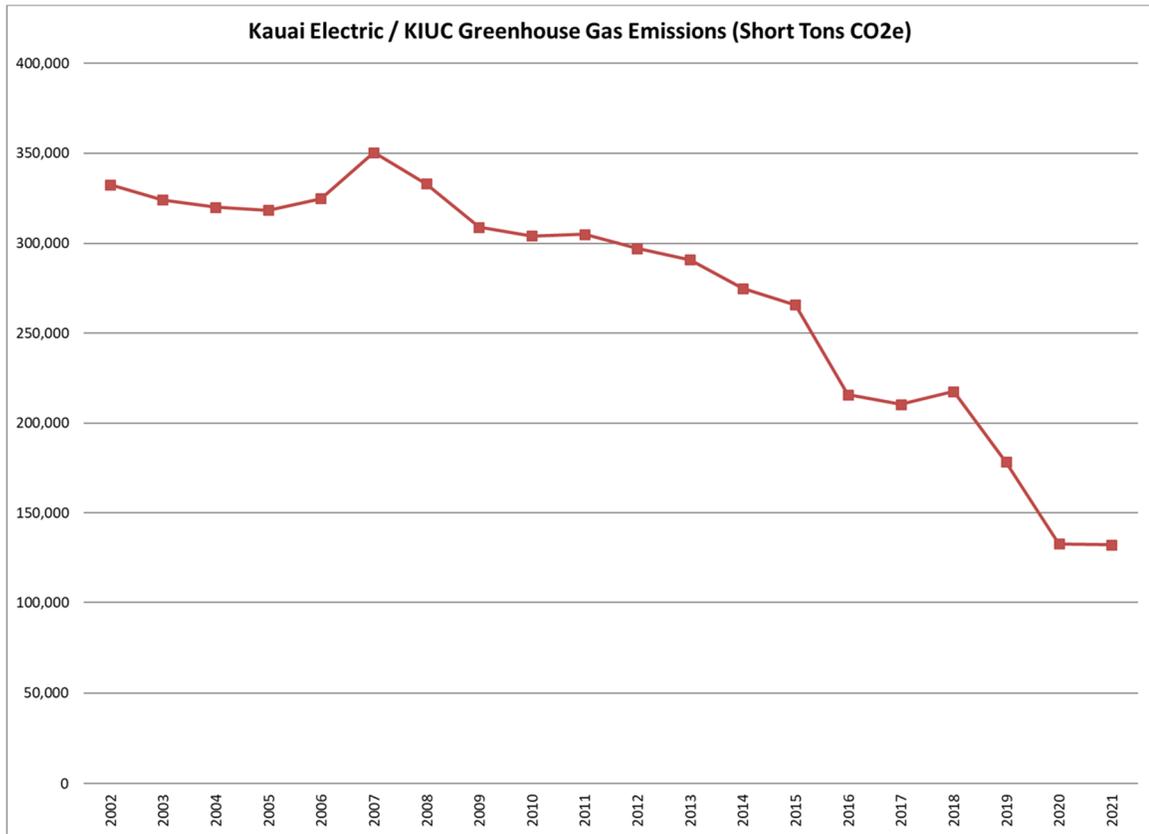
- 1 (4) Maintain a prudent financial structure and access to capital.
- 2 (5) Establish a rate structure that is fair between classes of members,
- 3 encourages usage during lowest cost periods, and increases
- 4 financial stability through greater recovery of cost through fixed
- 5 charges rather than reliance on volume of electricity consumed.
- 6 (6) Consider and potentially seek increased exemption from
- 7 regulation by the Commission through changes in state law or
- 8 Commission order.
- 9 (7) Obtain long-term incidental federal and state permits that set
- 10 requirements for conservation of endangered bird species.
- 11 (8) Continue to address the strategic implications of climate change,
- 12 including reducing the utility’s contribution to greenhouse gas
- 13 emissions, adapting to the direct and indirect impacts locally and
- 14 developing mitigation measures to protect the cooperative’s
- 15 assets.

16 Overall, KIUC has been successful in its efforts toward achieving its
 17 strategic goals including:

- 18 • In 2021, KIUC renewable generation reached 69.5%, essentially
- 19 meeting the 70% target nine years early.
- 20 • As compared to 2010 (i.e., since the year of the last rate case
- 21 proceeding in Docket No. 2009-0050), the pro forma Test Year
- 22 2023 O&M costs (excluding fuel and purchased power, habitat
- 23 conservation plan, rate case and pension regulatory asset
- 24 amortization expenses) are projected to be 37% higher. See
- 25 Attachment DJB-105 to this testimony (line 8, column I). This
- 26 results in an average increase of about 2.8% per year. Inflation,
- 27 as measured by the Honolulu Consumer Price Index for All Urban
- 28 Consumers (“CPI-U”), increased about 37%⁶ from 2010 through
- 29 September 2022.

⁶ (September, 2022 Honolulu CPI-U of 321.799
https://www.bls.gov/regions/west/hi_honolulu_msa.htm) minus 2010 Honolulu CPI-U of 234.869
https://www.bls.gov/regions/west/data/consumerpriceindex_honolulu_table.pdf) divided by 2010
 Honolulu CPI-U of 234.869 equals 0.370, or 37%.

- 1 • KIUC's Average Service Availability has averaged 99.97% since
2 2019, exceeding the strategic target.
- 3 • KIUC's endangered species compliance activities are ongoing.
4 KIUC continues to actively work with USFWS and DLNR on
5 completing the HCP and obtaining an incidental take permit from
6 USFWS and an incidental take license from DLNR for covered
7 species under the HCP.
- 8 • KIUC has continued to build equity levels toward lender
9 standards and expectations discussed in Mr. Collet's testimony
10 (Exhibit 10-T-300). For the reasons discussed by Mr. Collet, the
11 outcome of this rate application is an important aspect for KIUC
12 to maintain adequate financial strength to enable access to
13 capital at reasonable rates.
- 14 • KIUC has been able to avoid filing for a general rate increase for
15 over twelve (12) years, and strategies related to ratemaking and
16 a lessened scope of regulation are still evolving.
- 17 • Climate change continues to be a significant concern for KIUC.
18 In furtherance of the Strategic Plan goal to continue to reduce the
19 utility's contribution to greenhouse gas emissions, KIUC's
20 movement to renewable generation has resulted in a material
21 reduction in greenhouse gas emissions, as shown in the chart
22 below.



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KIUC has also taken steps to decrease operational exposure to potential sea level rise and tsunami inundation by constructing the Anahola Service Center for KIUC's Eastside line crews.

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Q. WHAT GOALS AND OBJECTIVES ARE INCLUDED IN KIUC'S DRAFT STRATEGIC PLAN?

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A. The draft Strategic Plan (Attachment DJB-103) focuses on three key areas:

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(1) Cost of Electricity - Have the lowest electricity rates in Hawaii while maintaining reliability and financial stability. Save members money by relying more on the elected Board of Directors and less on state regulators for oversight and decision making. Expand the use of technology and offer free energy efficiency consultations.

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(2) Carbon Footprint - Contribute to a sustainable Kauai by reaching 100% renewable generation by 2033.

1 (3) Resiliency and Reliability - Become more resilient, improve reliability,
2 and be better able to handle operational challenges and threats from
3 cybersecurity, local climate change impacts, and natural disasters
4 such as hurricanes and floods. Lead the state of Hawaii in reliability.

5 **Q. HOW DOES THIS RATE APPLICATION IMPACT KIUC'S STRATEGIC**
6 **DIRECTION DISCUSSED ABOVE?**

7 A. The proposed rate increase provides KIUC with an opportunity to receive
8 sufficient revenues that would allow KIUC to remain financially stable and
9 in compliance with its debt covenants and to maintain the ability to access
10 long-term debt to fund capital needs, and thus is a critical component to
11 providing KIUC with the financial resources needed to carry out the
12 Strategic Plan's goals and objectives. Without the ability to obtain sufficient
13 revenues from its rates (especially given that as a cooperative there is no
14 other ability to raise equity capital as noted above), KIUC's ability to carry
15 out these goals and objectives would be negatively impacted and
16 threatened, as KIUC could be faced with the need to lessen or redirect its
17 focus from these goals and objectives in order to remain financially sound
18 and in compliance with its lender requirements (and especially its ability to
19 meet the minimum 1.25 Indenture DSC Ratio, where if it is not met, KIUC
20 would be precluded from borrowing any new debt under the Indenture until
21 that deficiency has been removed for a full fiscal year).

1 oil prices. Most of these contracts also do not have any price escalation
2 clauses, and none have variable pricing based on the time of day.

3 **Q. DOES KIUC HAVE LARGE AMOUNTS OF CURTAILED RENEWABLE**
4 **ENERGY?**

5 A. No. KIUC has relatively low levels of curtailed energy. Over the last five
6 calendar years (2017-2021), KIUC has averaged 1,001 MWh per year of
7 curtailed energy at the two KIUC affiliate-owned KRS One and KRS Two
8 solar farms (see Docket Nos. 2011-0323, 2012-0383 and 2013-0202 noted
9 above), which are the only utility-scale renewable producers that KIUC
10 curtails. The 1,001 MWh annual average equates to less than 2% of all
11 utility-scale stand-alone (i.e., no BESS) solar production. For 2022, KIUC
12 curtailed just 352 MWh through October from these same two solar farms.
13 KIUC also occasionally curtails customers with PV systems under
14 Schedule “Q” of KIUC Tariff No. 1 who have oversized systems and who
15 are thereby required to install separate curtailable meters. These
16 customers acknowledge that they are subject to curtailment when they
17 complete their interconnection applications for their systems with KIUC. For
18 calendar year 2021, these systems were subject to curtailment for a total of
19 227 hours, or about 5% of total daylight hours.

1 **Q. WOULD TIME OF USE RATES HELP UTILIZE THE CURTAILED**
2 **ENERGY?**

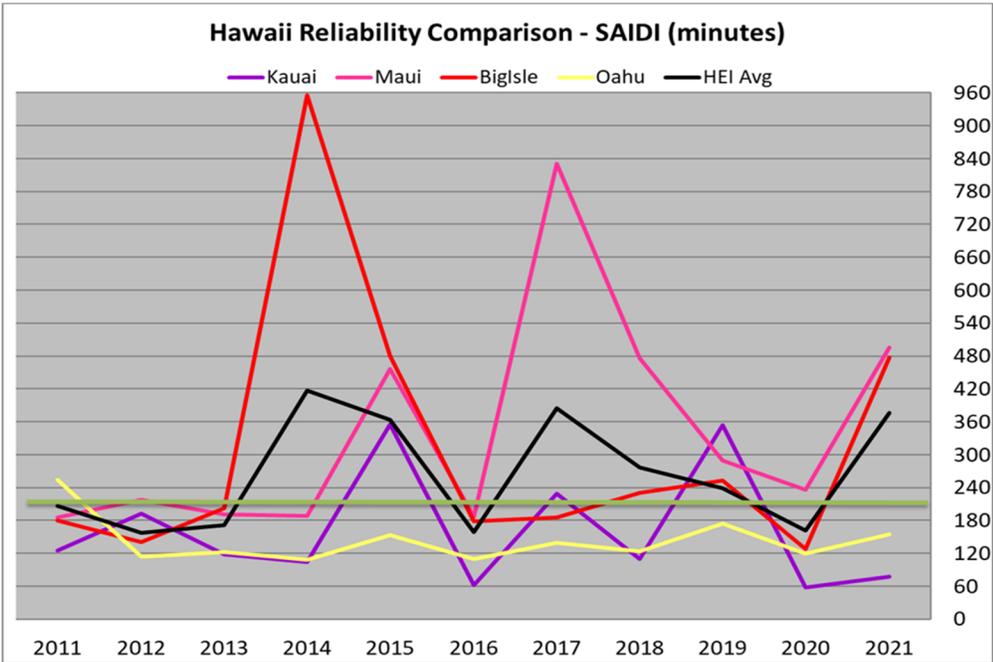
3 A. Potentially, having lower cost energy during the daytime hours could result
4 in a marginal increase in load during curtailment periods. However, with
5 such low overall system curtailment and lack of variability in generating
6 costs by time of day as discussed above, KIUC does not believe it would be
7 prudent to implement a time of use rate structure that would potentially
8 impact all customers/members to address a likely small decrease in
9 curtailed renewable energy. Furthermore, there are other resources such
10 as batteries that can allow customers/members to store and utilize their
11 curtailed energy to offset their full retail rates if they so desire without
12 impacting all customers/members.

13 **B. KIUC'S RELIABILITY LEVELS**

14 **Q. PLEASE DISCUSS KIUC'S SYSTEM RELIABILITY LEVELS.**

15 A. The table below shows that KIUC has led Hawaii with the lowest system
16 average interruption duration index ("SAIDI")⁷ results in 2020 and 2021
17 (which were the last two full years of available data). SAIDI is a common
18 measure of utility reliability and measures the total duration of Commission
19 reportable interruptions for the average customer over a year.

⁷ KIUC data obtained from internal records. Additional data from <https://www.hawaiianelectric.com/about-us/performance-scorecards-and-metrics/service-reliability>. All data is non-normalized.



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C. MEASURES TAKEN THAT HAVE ALLOWED KIUC TO GO OVER 12 YEARS SINCE THE LAST RATE INCREASE

Q. HOW HAS KIUC BEEN ABLE TO AVOID FILING FOR A RATE INCREASE SINCE ITS LAST INCREASE TOOK EFFECT IN 2010, PARTICULARLY GIVEN THE COOPERATIVE’S ESSENTIALLY FLAT SALES GROWTH DURING THIS TIMEFRAME?

A. There have been four key developments that have allowed the cooperative to go over twelve years between general rate increases:

- Cost Control: As discussed above, KIUC has set and achieved a strategic goal of holding controllable cost increases at or below the level of inflation. This has been enabled by technological advancements and efficiencies. Technology investments in areas such as Automated Metering Infrastructure, upgraded Supervisory Control and Data Acquisition (SCADA), NISC’s enterprise systems, along with a keen focus on cost control have enabled the cooperative to reduce its staffing levels from 163 full time equivalents in 2010 to 143 at the end of 2021 (see table below).

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KIUC Year End Staffing Levels 2010 to 2021

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
163	164	161	163	160	153	153	150	151	147	147	143

- 2. Debt Restructuring/Interest Rate Reduction: Through a combination of debt restructuring and refinancing, KIUC has reduced its interest expense on long-term debt from \$9.1 million in 2010 to \$6.6 million at the end of 2021, even while adding additional debt financing during that time period. The restructuring and refinancing efforts included KIUC refinancing the then remaining \$133 million balance of an existing loan (which was the subject of Docket No. 2016-0091 and consummated effective May 26, 2020) and KIUC restructuring a \$20 million loan to extend the term of that loan (which was the subject of Docket No. 2021-0061 and consummated effective October 7, 2021). The above efforts reduced debt service payments on these loans by approximately \$5.5 million per year and allowed KIUC to meet its DSC Ratio requirements without increasing rates.

- 3. Lost Gross Margins (LGM): This Commission in Docket No. 2020-0088 authorized KIUC to utilize deferred accounting treatment to establish a regulatory asset to compensate for decreased sales associated with the COVID-19 pandemic and its harmful impacts on Kauai’s economy and KIUC electric sales. Pursuant to this authorization, KIUC recorded \$12.8 million of deferred revenue under this asset for the period between April 1, 2020 and the end of the deferral period on June 30, 2022. Through this regulatory treatment, KIUC’s financial statement reflected sales at 2019 levels and avoided the need for KIUC to file for a rate increase at that time.

- 4. Paycheck Protection Program: KIUC applied for \$2.8 million in federal assistance, under the Small Business Association Paycheck Protection Program established under the CARES Act. The loan KIUC received was ultimately forgiven under the program and KIUC recognized the \$2.8 million as income in 2021, which assisted KIUC in buffering revenue shortfalls from decreased sales.

1 **Q. WHAT HAS CHANGED TO REQUIRE A REVENUE INCREASE NOW?**

2 A. As described above, KIUC has been successful in controlling costs and the
3 measures discussed above allowed KIUC to not seek a rate increase
4 sooner. However, despite these efforts and measures, KIUC projects that
5 its Test Year O&M costs (excluding fuel and purchase power) are
6 \$15.6 million higher than in 2010, as reflected in Attachment DJB-105 to
7 this testimony (line 4, column H). This represents an approximate 45%
8 increase (line 4, column I). During this period of time, sales have only
9 increased by a total of about 21,188 MWh or 4.9%, as reflected in
10 Attachment DJB-106 to this testimony (line 1, columns G and H,
11 respectively). Ultimately, the increase in O&M costs since 2010 are not
12 sufficiently offset by sales increases and interest expense reductions,
13 resulting in a need for a revenue increase in order for KIUC to maintain
14 financial fitness.

15 **D. KIUC'S RATES COMPARED TO OTHER HAWAIIAN ISLANDS**

16 **Q. HOW DO KIUC'S RATES COMPARE TO THE ELECTRIC RATES FOR**
17 **THE OTHER HAWAIIAN ISLANDS?**

18 A. KIUC's effective residential electric rates, for a ratepayer using 500 kWh per
19 month, have averaged \$0.3918 per kWh (inclusive of all monthly charges)
20 this year through November 2022. KIUC's residential electric rates are the
21 lowest in Hawaii over this timeframe. In comparison, at the time KIUC took

1 over Kauai's electric utility operations in November 2002, KIUC had the
2 highest electric rates in the state of Hawaii.

3 **V. KIUC'S OUTREACH AND COMMUNICATIONS WITH ITS**
4 **MEMBERS/CUSTOMERS REGARDING THE PROPOSED RATE**
5 **INCREASE**

6 **Q. HOW HAS/WILL KIUC COMMUNICATE THIS RATE INCREASE WITH**
7 **ITS MEMBERS/CUSTOMERS?**

8 A. KIUC's Board of Directors approved a resolution authorizing the filing of the
9 subject rate case Application at their December 15, 2022 meeting. KIUC
10 has provided regular updates on the progress of the Application at regularly
11 scheduled public Board meetings. The need for a rate increase was
12 discussed at an August 25, 2022 Lihue Business Association meeting,
13 which was covered in an August 28, 2022 front-page article in The Garden
14 Island News. KIUC will also establish a dedicated page on its website to
15 provide the public with information related to the rate case, and plans to
16 issue a press release regarding the filing of the subject Application. KIUC
17 has met with members of Kauai's County Council, and served the filed
18 Notice of Intent with the Mayor's office. KIUC will continue to communicate
19 with its membership on an ongoing basis throughout the pendency of the
20 rate case process.

21 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

22 A. Yes.

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

ATTACHMENT DJB-101

(3 PAGES)

KIUC BOARD POLICY NO. 1
AUTHORITY AND RESPONSIBILITY OF THE BOARD OF DIRECTORS

PURPOSE OF POLICY:

This policy describes the authority and responsibility of the KIUC Board as well as the authority and responsibility of individual Directors and officers of the Board.

POLICY CONTENT:

I. General Responsibilities of the Board of Directors

The business and affairs of KIUC shall be governed by its Board of Directors which shall exercise all powers of the Cooperative except those which are by law, by the Articles of Incorporation, or by the Bylaws conferred upon or reserved to the members. Generally, the Board is concerned with the broad courses of action to be followed by the Cooperative, rather than the means used to carry out the courses of action, which means are normally delegated to the CEO.

The general responsibility of each Director is to exercise their business judgment to act in what they reasonably believe to be the best interests of KIUC and its members.

II. Key Responsibilities of the Board of Directors

The key responsibilities of the Board include:

A. Selecting certain key employees and contractors

1. Selecting, evaluating, and compensating the CEO.
2. Selecting the General Counsel.
3. Selecting the external auditing firm for KIUC.

B. Approving major plans and expenditures

1. Approving annual operating budgets.
2. Approving capital expenditure budgets.
3. Approving changes in rates charged to members.
4. Approving retirements of patronage capital.
5. Approving KIUC's Strategic Plan.
6. Approving Board policies.

C. Overseeing management's performance

1. Monitoring and reviewing KIUC's performance in meeting strategic, financial, and operational goals and targets.
2. Providing insight, advice, and support to the CEO on key decisions.

III. Meeting Attendance, Preparation and Participation

Directors are expected to prepare for, attend, and contribute meaningfully to all meetings of the Board and Board committees of which they are a member.

IV. Board Officers

Each year at the Annual Board Meeting, the Board shall elect the following officers. The duties of these officers shall include, but are not limited to, the duties described below.

- A. Board Chair.** The Board Chair shall preside at all Board and member meetings and may sign on KIUC's behalf any document properly authorized by the Board or members. The Board Chair shall approve the expenses of the Treasurer.
- B. Vice Chair.** The Vice Chair shall perform the duties of the Board Chair in his/her absence.
- C. Secretary.** The regular duties of the Secretary are to oversee the minutes of Board meetings and the minutes of member meetings and to authenticate KIUC's records as needed.

In the absence of both the Board Chair and the Vice Chair, the Secretary shall serve as the chair of the Board.

- D. Treasurer.** The Treasurer shall approve the expenses of all other Directors, the CEO, and the General Counsel. In the absence of the Board Chair, the Vice Chair, and the Secretary, the Treasurer shall serve as the chair of the Board.
- E. Assistant Secretary.** The Assistant Secretary shall perform the regular duties of the Secretary in his/her absence. In the absence of the Board Chair, the Vice Chair, the Secretary, and the Treasurer, the Assistant Secretary shall perform the duties of the Board Chair. The Board may choose to elect a First Assistant Secretary and a Second Assistant Secretary, in which case the First Assistant Secretary shall serve in the absence of the Secretary and the Second Assistant Secretary shall serve in the absence of both the Secretary and the First Assistant Secretary.
- F. Assistant Treasurer.** The Assistant Treasurer shall perform the duties of the Treasurer in his/her absence. The Board may choose to elect a First Assistant Treasurer and a Second Assistant Treasurer, in which case the First Assistant Treasurer shall serve in the absence of the Treasurer and the Second Assistant Treasurer shall serve in the absence of both the Treasurer and the First Assistant Treasurer.

Revised: 03/25/2021
Reviewed: 05/29/2018
Reviewed: 08/30/2016
Reviewed: 10/28/2014

Adopted on this 25th day of March, 2021.



Calvin Murashige
Secretary

Revised: 11/29/2011

Revised: 07/27/2010

Revised: 07/25/2006

Revised: 10/24/2002

Original Adoption: 04/12/2000

KAUAI ISLAND UTILITY COOPERATIVE

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(10 PAGES)



STRATEGIC PLAN UPDATE

2016-2030

August 30, 2016 (Draft)

January 20, 2017 (Revised)

January 31, 2017 (Adopted)

June 17, 2019 (Reviewed)

THE STRATEGIC CONTEXT

Much has changed for the island of Kauaʻi since 2002, when Kauaʻi Island Utility Cooperative (KIUC) purchased Kauaʻi Electric (KE) from Citizens Utilities. Moving from an investor-owned model to a member-owned cooperative governed by an elected Board of Directors has delivered significant benefits to the Kauaʻi community as a whole.

Prior to the sale, KE had relied for decades on imported diesel fuel for its generators. This reliance increased as sugar plantations on the island shut down and KE no longer had access to renewable power supplied by the plantations via the burning of bagasse.

After the sale to KIUC, and as the cooperative established itself, oil prices rose significantly. The KIUC board realized that member bills could increase to unacceptable levels because of continued dependency on fossil fuel. At the same time, the growing concern about carbon emissions and the resulting impact on climate change caused KIUC to begin a serious examination of feasible renewable energy technologies.

KIUC embarked on perhaps the most ambitious shift to renewable energy sources anywhere in the American electric utility industry. As this strategic plan update is written in 2016, renewables have increased from six percent of sales in 2007 to 37 percent in 2016. KIUC is rapidly closing in on reaching the 70 percent renewable level by 2030—a full decade ahead of the Hawaiʻi statewide goal.

Some of that momentum is attributable to our member-owners. At the end of 2012, more than 1,200 Kauaʻi households had rooftop solar generating systems (often called “PV,” for “photovoltaic”). By 2016, there were more than 3,500 such systems, with a capacity of 21 megawatts.

In addition to the rooftop systems, KIUC has either built or collaborated with third parties on three industrial scale solar projects, including Anahola (12 megawatts), Koloa (12 megawatts), and Port Allen (6 megawatts). Three smaller privately owned solar arrays in Waimea, ʻŌmaʻo and Kapaʻa contribute 1.6 megawatts total. Currently under construction is a 13-megawatt solar array with battery storage capability adjacent to the Kapaia Power Station. This project – a partnership with Solar City and Tesla - is the first of its size in the nation.

KIUC’s renewable portfolio also includes hydroelectric systems at Wainiha, Waiahi, Kalāheo, Olokele and Waimea/Kekaha, generating a combined total of 10 megawatts to the grid. A 6-megawatt system is under construction on Gay and Robinson land, and under consideration is an additional project that would combine solar and hydro in a pumped storage system, which could produce 25 megawatts at full capacity.

In 2016, Green Energy began operating its 7-megawatt biomass plant just outside Lihue. The plant provides 12 percent of Kauaʻi’s power, and is one of the first plants of its kind in this country:

burning wood chips from invasive species and from locally grown trees. KIUC purchases electricity from the plant under the terms of a 20-year contract.

In 2016, on some individual days, KIUC derives 97 percent of its energy from renewable sources, including 77 percent from solar. On the average clear day, with solar at or close to full potential, all but one of KIUC's diesel generators can shut down. By replacing oil with renewables, the amount of carbon dioxide (CO₂) released by KIUC's power plants in 2016 is expected to fall to 225,000 tons. This is well below the 247,000 tons released in 1990, which is the baseline year for targeted greenhouse gas emission reductions according to the Kyoto Protocol.

These accomplishments are even more impressive when you consider that Hawai'i is unique within our country's energy landscape. We have no cheap natural gas, nuclear, large hydro, and little coal-fired generation (O'ahu only). Additionally, Kaua'i is unique *within* Hawai'i: no geothermal, limitations on wind due to the Endangered Species Act, and no economy of scale for many other potentially cheap renewables like biomass. So, with today's commercially available technology, KIUC is left largely with solar and small hydro to achieve its renewable goals.

Even with these challenges, fourteen years after our formation as a co-op, KIUC is regarded as one of the nation's most progressive, forward-thinking electric utilities.

2019 Progress Report. Some of the overall context in which we operate has shifted since this report was published in early 2017. For example, while electric vehicles represent a small fraction of the total number of vehicles registered on Kauai, the number of vehicles sold per year is inching upward. The pace of EV adoption and its impact on KIUC is something we will continue to monitor, as it presents opportunities such as load growth and a further reduction of greenhouse gas emissions on Kauai.

KIUC's solar generation capacity has markedly increased, with the completion of both the Tesla and AES Lāwa'i solar plus storage facilities, adding a combined total of 33 megawatts of PV and 152 megawatt hours of storage capacity. In addition, distributed solar resources have increased from 22 megawatts in 2017 to 31.3 megawatts today.

Hydropower capacity has also increased, with an additional 6 megawatts now produced by Gay & Robinson following the completion of facility improvements. KIUC is also proceeding with development of the West Kauai Energy Project: a proposed 25-megawatt pumped storage hydro facility, which will be the first in the world to incorporate solar PV as a component of the system.

With average renewable generation topping 50 percent during the first six months of 2019, coming from a mix of biomass, hydro, direct-to-grid solar and solar battery storage, we are operating one of the most progressive and complex grids on the planet. Since 2017, KIUC has experienced several brief periods of running on 100 percent renewable power. While this is a remarkable accomplishment, and one that can be easily achieved based on total renewable generating capacity, we are proceeding cautiously so as not to risk reliability during this time of grid transition.

As this astonishingly rapid strategic transformation has occurred, KIUC has proven that a progressive and aggressive approach to meeting member needs by keeping pace with new technologies can work to our members' advantage. For example, KIUC:

- Made history in 2016 by breaking ground on the electric industry's first utility-scale solar plant, with the capability to store power with batteries during the day for release to the grid during the evening peak-usage hours.
- Worked to welcome and integrate member-generated rooftop solar power into our grid, despite the technical challenges of balancing island-wide loads. Out of necessity, this has required us to discourage installation of oversize rooftop systems that produce more power than the individual member can use.
- Reduced average bills by 26 percent over the last three years, mostly as a result of low oil prices and a comprehensive focus on cost control. More importantly, our aggressive renewable progress has positioned us to protect ourselves more effectively against high oil prices that would negatively impact our members.
- Maintained high reliability with more than 99.96 percent average service availability during the last three years.
- Continued to explore new and creative uses of hydroelectric generation; expanding what we have and contemplating a new breakthrough in pumped storage technology. The new technology could enable us to use solar-generated power to pump water uphill from a holding pond to a reservoir behind a new hydro station during the day and release the water to run downhill through hydro generators at night.
- Began to explore ways to shift some legacy oil-fired generation to propane or renewable-based fuels, in order to take advantage of potential cost savings in the always volatile oil market.
- Returned \$25 million in patronage capital (i.e. excess earnings) to member-owners. This is significant in that this money stays on Kaua'i in the pockets of our members, versus being returned to off-island investors, as was the case under previous ownership.
- Rebuilt our customer service infrastructure so paying bills and interacting with us is easier.
- Continued to enhance approaches to avoid death or injury to endangered birds that collide with power lines. At the same time, we are seeking a new long-range permit intended to mitigate the impacts of our facilities.
- Began to consider moving out from under the authority of the PUC to a deregulated or minimally regulated status, which would allow us greater flexibility in responding to member concerns and unexpected changes in fuel prices and market conditions.

- Assisted efforts on other islands to create member-owned electric cooperatives. Starting with Hawai'i Island, KIUC has offered its experience and expertise to other communities.

2019 Progress Report. *Several of these items call for updates:*

- ❖ *The addition of utility-scale battery storage at the Tesla and AES facilities have had a marked impact on reliability. In 2018, KIUC led the state in reliability at 1.83 average outage hours per customer, or a 99.979 percent reliability factor. This was 11 percent better than Oahu, 52 percent better than Hawai'i Island, and 76 percent better than Maui.*
- ❖ *The West Kaua'i Energy Project (i.e., pumped storage hydro) has moved significantly forward in development, with consultants currently working on engineering design and various studies required for project approval from the Hawaii Public Utilities Commission.*
- ❖ *By the end of 2019, KIUC will have retired a total of \$32 million in patronage capital to members since its inception in 2002.*
- ❖ *Since 2017, KIUC has invested millions of dollars into information technology and cybersecurity infrastructure, significantly bolstering network security, enhancing grid operations and outage response, and improving customer service levels via on-line applications such as Smart Hub and an outage management system.*
- ❖ *KIUC's prudent fiscal management and status as a not-for-profit cooperative continues to deliver financial benefits to its members. Since becoming a cooperative in 2002, KIUC's rates have significantly stabilized compared to the investor-owned utilities on the other Hawaiian islands. For example, in 2004, KIUC's rates were 89 percent higher than those on O'ahu. In 2018, that gap had shrunk to 21 percent. This is particularly significant when you consider that Oahu has access to extremely affordable fuel (e.g., coal) and massive economies of scale not present on Kaua'i.*
- ❖ *Member engagement has increased markedly since early 2017. The number of members using our Smart Hub service more than doubled from 3,211 to 7,352 during that period. We have also increased our use of social media for member education and a resource for outage information. The number of followers on KIUC's Facebook page has increased by 67 percent since 2017, achieving a reach of nearly 500,000 views in 2018 alone. In addition, an outage map installed on KIUC's website in late 2018 has now become a primary source of information for members when the power goes out.*

What does the future hold? Our initiatives moving forward include:

- We will expand our search for alternatives to oil for legacy generating systems that must remain available to ensure adequate stability and capacity in order to meet the needs of all members.
- After concluding that liquefied natural gas is not a fuel alternative that will be embraced in Hawai'i in the near term, we have shifted to considering expanded use of propane or renewable based fuels. Prices of these products could be locked in with more future certainty than oil.

- We will continue to focus on cost control while balancing customer service and reliability. Since 2007, our staffing level has declined from 174 to 149 employees. This is evidence of how KIUC has kept pace with technology without sacrificing customer service. It also underscores the competence and flexibility of our work force.
- Because we strive to balance service levels and member costs, we are considering filing for a rate revision with the PUC. A revised rate plan would allow us to more fairly balance costs among different member types, and incentivize use during non-peak hours.
- An adequate supply of energy would have no usefulness without the ability to reliably deliver that energy through KIUC's transmission and distribution infrastructure. This network must be maintained and upgraded to ensure that KIUC's high standards for safety and reliability continue to be met.

2019 Progress Report. *Several of these items call for updates:*

- ❖ *KIUC is no longer looking to propane or renewable-based fuels as a substitute for legacy oil-fired generation.*
- ❖ *We continue to look for cost savings wherever possible, being mindful to insure that customer service levels and reliability remain high. Our staffing level now stands at 139 full-time employees, while reliability statistics for KIUC were highest in the state for 2018. Our annual survey of member satisfaction consistently reveals that our customers give KIUC its highest rankings for having courteous, professional and knowledgeable employees.*
- ❖ *KIUC currently has no plans to file for a rate revision with the Hawai'i Public Utilities Commission. A Time of Use pilot project, completed over a twelve-month period with roughly 350 member-volunteers, revealed that even a significant rate discount during daytime hours had negligible impact on energy usage during various periods of the day.*
- ❖ *Grid resiliency has become an emerging focus over the past two years, particularly in light of severe weather events that have impacted Kaua'i and communities around the globe. Fortunately, Kauai's grid was significantly hardened during the rebuild following Hurricane 'Iniki in 1992. We have also added new generating facilities throughout the island (e.g., Kapaia Power Station, Green Energy Team biomass plant, Anahola and Kōloa solar facilities, Tesla and AES Lāwa'i solar plus storage facilities), which will allow us to restore power more quickly in Lihue and remote parts of the island.*
- ❖ *In addition to the initiatives originally listed in 2017, KIUC has, since its formation, placed considerable energies toward community support. The KIUC Charitable Foundation issues grants annually to assist low-income individuals pay their utility bills and to support non-profits with charitable activities. KIUC also maintains a "Sharing of Aloha" grant program, which assists various local non-profit organizations that contribute to Kaua'i's quality of living. Each year, employee groups select a community "cause" to support: in 2017 employees participated in a work day for Habitat for Humanity, and in 2018 various park improvement projects were completed throughout the island. KIUC contributes tens of thousands of dollars annually to support various non-profit groups for their fundraising events, and employees are encouraged to participate as volunteers on non-profit community boards and commissions.*

STRATEGIC GOALS AND ACTIONS

- A. Generate at least 70 percent of electricity by using cost effective renewable resources by 2030. This achievement level will place KIUC ten years ahead of state mandates as we progress toward 100% renewable electric production by 2045.
- B. Manage technology and price risk by adding new renewable generation sources at no more than 20 percent of Kaua'i's electric usage in any single year.
- C. Hold controllable cost increases at or below the actual level of inflation, and maintain system reliability at 99.96% or better availability.
- D. Establish a rate structure that is fair between classes of members, encourages usage during lowest cost periods, and increases financial stability through greater recovery of cost through fixed charges rather than reliance on volume of electricity consumed.
- E. Maintain a safe, diverse, well trained, competitively compensated and motivated work force, aligned with organizational strategies and able to respond quickly to business opportunities and threats.
- F. Maintain a prudent financial structure and access to capital.
- G. Consider and potentially seek increased exemption from regulation by the PUC through changes in state law or PUC order. Current state law, enacted in 2013, states "the public utilities commission and the consumer advocate shall at all times consider the ownership structure and interests of an electric cooperative in determining the scope and need for any regulatory oversight or requirements over such electric cooperative."
- H. Continue to address the strategic implications of climate change, including reducing the utility's contribution to greenhouse gas emissions, adapting to the direct and indirect impacts locally and developing mitigation measures to protect the cooperative's assets.
- I. Obtain long-term incidental federal and state permits that set requirements for conservation of endangered bird species. The permitting process places limits on the number of birds that can be injured or killed in collisions with power lines or other electricity-related incidents. These incidents are called "takes." We will seek government grants, where available, to help mitigate some of the expenses associated with the application process.
- J. Obtain fixed pricing, three years in advance, for at least 25 percent of our fossil fuel requirements. Recent renewable projects have also used fixed pricing to help stabilize electric rates.
- K. Continue investing in technology to cost-effectively maintain or improve our member service offerings and utility operations, including our smart-grid, in order to continue our transformation towards a 100% renewable future and lower operating costs.

2019 Report. *While the Strategic Plan will likely not be officially updated until 2020 or later, at this juncture, there is an opportunity to clarify and expand the strategic focus of the current Board of Directors:*

- ❖ *The 2017 strategic goal for renewable generation was 70 percent by 2030. It is clear that, if all projects currently being pursued are completed as anticipated, we will far exceed this goal more than five years early.*
- ❖ *A reliability factor of 99.96 is highly desirable, and translates to roughly 3.5 average outage hours per customer. However, we believe that with the additional battery infrastructure installed since 2017, reliability of 99.97 percent (i.e., 2.6 average outage hours per customer) is a reasonable expectation for KIUC.*
- ❖ *As previously discussed, a Time of Use pilot project, completed over a twelve-month period with roughly 350 member-volunteers, revealed that even a significant rate discount during daytime hours had negligible impact on energy usage during various periods of the day. We will continue to examine our rate structure as it relates to our overall financial picture and other non-financial strategic goals, and will propose adjustments as necessary.*
- ❖ *KIUC has taken a large step over the last twelve months in improving its financial stability by completing an indenture agreement, which replaces its former restrictive loan agreement with a single lender. The indenture is a multi-lender loan agreement that is more favorable to KIUC because it allows the cooperative to borrow from any financial institution. This ensures KIUC has better access to capital in the future.*
- ❖ *KIUC continues to be fully regulated by the PUC, but in recent years has successfully received exemptions from new state legislation that applies to investor-owned utilities. We continue to study the merits of full or partial deregulation.*
- ❖ *Climate change is a growing concern and one KIUC is addressing on several fronts. Since 2010, KIUC has reduced its use of fossil fuels by 15 million gallons per year. Efforts to harden the grid and prepare for restoration following a major natural disaster are ongoing. We are also addressing the impact of sea-level rise by moving its east side service center from Kapa'a to higher ground in Anahola.*
- ❖ *As previously discussed, we have invested millions into our technology infrastructure in recent years and will continue to do so in order to reduce cost, provide additional services and value to members, and address cybersecurity needs. For example, more and more members are using Smart Hub to pay bills, manage and track usage and report outages. Our outage map and Facebook page provide immediate information and status updates on current outages. The integration of an outage management system with our smart meter infrastructure enables KIUC's operations, power plant and field crews to better pinpoint the location and cause of outages, leading to faster restoration. We will continue to monitor new developments in technology (e.g., electric vehicles, battery storage) to identify opportunities and challenges moving forward.*

The Strategic Plan sets the overall direction of KIUC and intends to benefit members, directors and employees.

This Strategic Plan updates and expands the Strategic Plan 2008-2023. The goal remains the same: to faithfully serve KIUC's members with reliable, reasonably priced electricity and to improve the quality of their lives.

VISION, MISSION AND CULTURE

Vision Improve the quality of life for KIUC's members and on Kaua'i

Mission Be an energy solutions leader by:

- Safely providing reliable power that is fairly and competitively priced
- Encourage conservation and efficient use of energy resources
- Increasing sustainable power supply and environmental stewardship

Culture The culture is shaped by several elements, all critical to KIUC's success. KIUC embraces the seven cooperative principles and a Hawaiian-based values system, derived from an employee-adopted set of shared values called Ho'oka'ana Waiwai.

7 cooperative principles

- Voluntary and Open membership
- Democratic Member Control
- Members' Economic Participation
- Autonomy and Independence
- Education, Training and Information
- Cooperation Among Cooperatives
- Concern for Community

Values

- **Respect (Kupono):** treating everyone with fairness, integrity and honesty
- **Teamwork (Laulima):** looking out for each other and working together as one team toward common goals
- **Excellence (Ho'okela):** striving to provide the best professional service to our members by producing high quality work and excelling in everything one does
- **Responsibility (Kuleana):** practicing stewardship and the privilege of doing the right thing for our members in a responsive manner

KIUC BOARD OF DIRECTORS

Jan TenBruggencate (Chairman)
Calvin Murashige (Vice Chairman)
Teofilio Phil Tacbian (Secretary)
Peter Yukimura (Treasurer)
Dee Crowell
David Iha
Patrick Gegen
Allan Smith

The KIUC Board of Directors would like to acknowledge former Director Dennis Esaki, who made valuable contributions as Chair of the Strategic Planning Committee throughout most of the update process.

The 2019 Review was conducted by the KIUC Board of Directors:

Allan Smith (Chair)

Jan TenBruggencate (Vice Chair)

Calvin Murashige (Secretary)

Peter Yukimura (Treasurer)

Dee Crowell

David Iha

Janet Kass

James Mayfield

Teofilio Phil Tacbian

KAUAI ISLAND UTILITY COOPERATIVE

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(10 PAGES)



STRATEGIC PLAN UPDATE
2023-2033

DRAFT

THE STRATEGIC CONTEXT

Introduction

The years 2021 and 2022 will be remembered as a “watershed” period for Kaua‘i Island Utility Cooperative. As it enters its 20th year of existence, KIUC presently leads the state in three key metrics: renewables, reliability and lowest rates. Consider:

- ☀ In 2021, for the third straight year, KIUC had the highest percentage of renewable generation in the state in its annual Renewable Portfolio Standards (RPS) filing for the Hawai‘i Public Utilities Commission (PUC). At nearly 70% renewable generation, KIUC achieved more than double the state-required RPS for 2021 (30%), and nearly met its own Board of Directors’ strategic goal of 70% renewable by 2030 a full nine years early.
- ☀ KIUC achieved this high penetration of renewables – more than two-thirds of which was solar - without negatively impacting reliability. In fact, for the second straight year, KIUC had the best reliability statistics in the State of Hawai‘i, reporting 99.9852% system availability to the PUC, far exceeding the Board of Directors’ current strategic target of 99.96%.
- ☀ For the first time since its formation in 2002, KIUC reported the lowest residential rates in the state in May 2022, and remains the lowest through September 2022. By employing sound fiscal management and replacing price volatile fossil fuel with fixed-price renewables, KIUC closed a 70% gap in pricing with O‘ahu. This achievement is particularly noteworthy since O‘ahu is much larger than Kaua‘i and their utility benefits from economies of scale not available to KIUC.

KIUC’s Board of Directors has always set aggressive goals for the cooperative. The most recent Strategic Plan, adopted in 2016, included the following goals:

- Generate at least 70% of electricity by using cost effective renewable resources by 2030
- Manage technology and price risk by adding new renewable generation sources at no more than 10% of Kaua‘i’s electric usage in any single year
- Hold controllable cost increases at or below the actual level of inflation, and maintain system reliability at 99.96% or better availability
- Continue to address the strategic implications of climate change, including reducing the utility's contribution to greenhouse gas emissions (GHG), adapting to the direct and indirect impacts locally and developing mitigation measures to protect the cooperative's assets
- Continue investing in technology to cost-effectively maintain or improve our member service offerings and utility operations, including our smart-grid, in order to continue our transformation towards a 100% renewable future and lower operating costs

Some goals in the 2016 Strategic Plan – such as those listed above – have been met, some are still in progress, and others have either been revised or reconsidered given evolving circumstances. However, enough has been accomplished – and enough has changed in our operating environment – for the Board of Directors to embark on the adoption of a new, bold and well-targeted Strategic Plan for KIUC.

Today's External Environment

Economic Trends

As of 2021, Kaua'i's resident population was recorded at 73,298. Compared to a population of 67,091 in 2010, this indicates a relatively small growth rate of roughly 1% per year. During that same period visitor arrivals experienced significant growth, with the average daily visitor census growing from 19,716 in 2010 to 27,695 in 2019: resulting in a de facto daily population of more than 100,000 and a growth rate of almost 2% per year.

Visitor arrivals during the COVID-19 impacted period of 2020-2021 took a steep decline; however, numbers quickly rebounded to near "normal" levels when Kaua'i re-entered the so-called "Safe Travels" program in April 2021. With the ensuing steady increase in travel to Kaua'i and no current travel restrictions or other limiting mandates, Hawai'i appears to be continuing its recovery from the long-lasting effects of the pandemic. The number of travelers to Kaua'i has been consistently equal to or exceeding 2019 pre-pandemic levels and hotel performance data reflects an increase in occupancy and room rates, respectively.

While current economic indicators continue to point to an overall favorable trend as compared to 2020 and 2021, it remains unclear when a full economic recovery will take place on Kaua'i. The severity and duration of the economic impacts of the COVID-19 pandemic on the island of Kaua'i and on KIUC remain unknown, as both will continue to be impacted by many variables, including but not limited to, the rate at which employment will return to more normalized levels, the ability of tourism to continue rebounding and maintaining or exceeding pre-pandemic levels, the number of bankruptcies and closures of various small and large businesses, the continued distribution and availability of the COVID-19 vaccines and boosters to the public, vaccination rates and their impact on the number of active COVID-19 infections, the continuation and severity of COVID-19 variants, and, ultimately, how all of these impacts resulting from a world-changing pandemic will permanently change customer usage patterns even after all variables are known and the health risks from the COVID-19 pandemic are deemed under control.

Federal Legislation:

In November 2021, President Biden signed a \$1 trillion bipartisan infrastructure package into law. There is approximately \$110 billion in the Bipartisan Infrastructure Law (BIL) that the National Rural Electric Cooperative Association and its members identified as relevant funding opportunities for co-ops and the communities they serve. Funding opportunity topics include grid modernization and resiliency, clean energy, electric vehicle charging infrastructure, cybersecurity and broadband ¹. KIUC will monitor and,

¹ From NRECA, Infrastructure Bill Funding Opportunities. A Guidebook for Preparing Electric Cooperatives, July 2022.

where appropriate, participate in applications for funding opportunities available under BIL. The law also provides increased incentives for electric vehicles and charging infrastructure.

In August 2022, the Inflation Reduction Act was signed into law by President Biden. This law represents the largest commitment in U.S. history towards fighting climate change and includes almost \$400 billion in tax incentives towards renewable energy and other efforts towards reducing carbon emissions. Of particular interest to KIUC are provisions to extend the Investment Tax Credit (ITC) for solar projects by ten years, allowing standalone battery storage to be eligible for ITC, and provisions that make electric cooperatives eligible for direct payment of ITC.

Global Impacts:

Political unrest leading to the war in Ukraine created uncertainty in global oil markets, effectuating a spike in oil prices not seen in more than a decade. These events happen far from our shores but have proven catastrophic to KIUC members in the past, with wildly escalating electric bills wreaking havoc on household and commercial budgets. Between the summer of 2021 and the summer of 2022, the rest of the State experienced electric rate increases as high as 50% due to the global oil crisis, while KIUC's rates increased only a fraction of that amount: roughly 10%. The key to KIUC's success in this regard was the accelerated adoption of new renewable generation sources since 2010, placing the majority of the utility's generation on the shoulders of facilities with fixed-priced power purchase agreements. It's estimated that since 2010, KIUC's members have saved \$35 million as a direct result of increased renewable generation.

Supply chain disruptions due to the pandemic coupled with geopolitical unrest have impacted the financial health of businesses across all sectors of the economy. These challenges are exacerbated for Hawai'i due to our geographic isolation and the relatively small size of our economy compared to other countries/regions that are competing for the same, limited resources.

Climate change continues to be one of the foremost challenges facing our planet, with no solution in sight. A 2017 report published by the Environmental Protection Agency on Climate impacts on islands within the United States noted: "Many islands are especially vulnerable to the risks of climate change because of their small size, low elevation, remote geographical location, and concentration of infrastructure along coastlines." Temperatures in Hawai'i are expected to rise by 1.5°F to 3.5°F by mid-century, and precipitation is expected to decrease in the Pacific Islands, according to the report. Climate change will impact the availability of water resources and threaten coastal infrastructure: all things KIUC must monitor closely.

Preparing for and preventing cyber-attacks has become a core function of utilities around the globe. According to an April 2022 report by WSJ Pro, energy is one of the top three sectors targeted for attack in the United States. KIUC has invested heavily in its technology infrastructure in recent years, and significant investments are expected to continue.

Alignment with Other Plans:

The State of Hawai‘i’s Office of Planning and Sustainable Development’s Statewide Sustainability Program recently updated the Hawai‘i 2050 Sustainability Plan to serve as the state’s sustainability and climate strategic action plan; align the State’s goals, policies, and actions with the United Nations Sustainable Development Goals; and recommend sustainability and climate change actions for 2020–2030. Among the goals identified in the Plan are:

- Ensure access to affordable reliable, sustainable, and modern energy for all. The Plan notes that the energy sector is largest source of emissions in Hawai‘i, accounting for 87% of total GHG emissions, with transportation accounting for the largest share of energy sector emissions.
- Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation. The Plan asserts Hawai‘i has an opportunity to incorporate green infrastructure as an adaptation strategy by adopting design concepts such as installation of more vegetation and permeable surfaces, which can decrease urban temperatures, reduce carbon emissions, improve air quality, increase urban tree canopy, and capture water to replenish the water table.
- Take urgent action to combat climate change and its impacts. Hawai‘i anticipates an estimated 3.2 feet of sea level rise by 2100. Climate change impacts, such as sea level rise and more frequent and intense extreme weather events (hurricanes, flood, droughts), pose an increasing threat to infrastructure and communities.
- End hunger, achieve food security and improved nutrition and promote sustainable agriculture. While promoting food security is not a core mission of electric utilities, there are ways to support agricultural goals through strategic development of renewable projects. For example, the West Kaua‘i Energy Project will allow for expansion of agriculture in addition to significantly increasing renewable energy production.

Closer to home, the County of Kaua‘i Planning Department is developing a Climate Adaptation Plan (CAP) (www.Kauaiadaptation.com).

The CAP will build upon the County of Kaua‘i 2020 Multi-Hazard Mitigation and Resilience Plan, which assessed natural hazards that may affect the island. The Climate Adaptation Plan will further analyze this information, focusing on factors such as:

- ✓ Sea Level Rise, Coastal Flood and Erosion
- ✓ Tropical Cyclone and Other High Winds
- ✓ Extreme Rainfall and Inland Flooding
- ✓ Extreme Heat and Drought
- ✓ Wildfire

Current Challenges and Opportunities for KIUC

In addition to considering the external factors that impact our cooperative, it's important to carefully examine what's happening within our cooperative before setting strategic goals. Over the past 20 years, KIUC has made great progress realizing the benefits of the cooperative ownership and governance structure. Moving from zero percent equity in 2002 to nearly 35% equity in 2021, retiring more than \$40 million in patronage capital to members, increasing renewables from 10% to nearly 70% in a decade, and achieving the lowest rates in the state while maintaining the best system reliability are but a few of our most significant accomplishments.

And yet many challenges remain. Consider the following:

- **Financial stability** is critical to maintaining a rate structure that is as affordable as possible for members. Financial stability can be impacted by many things, and recent years have presented numerous challenges to stability, such as:
 - Supply chain disruptions, especially those created by circumstances beyond our control, impacted the financial health of KIUC as well as businesses across all sectors of the economy.
 - Costs associated with compliance with the Endangered Species Act have escalated significantly over the past ten years, and will continue to be a significant part of KIUC's annual budget for the foreseeable future. KIUC does not currently have a mechanism for absorbing this additional expense through its rate structure, which has caused erosion of net margins over the past decade.
 - Inflation has driven up the cost of doing business significantly over the past 13 years, however, growth in electric sales has not kept pace and KIUC's base rates have not increased since 2010. KIUC's request for a base rate increase, the first in 12 years, is scheduled to be filed with the Hawai'i Public Utilities Commission (HPUC) in late 2022.
 - Distributed generation and storage can be beneficial to KIUC's members from both a reliability and a cost of energy standpoint. However, these technologies also provide a challenge to KIUC as they can result in lower energy sales which could result in higher energy costs for members unable to self-generate.
 - KIUC has traditionally experienced employee retention rates well above the national average, reducing the cost of turnover and stabilizing operations. Similar to other employers, COVID-19 and the associated economic downturn changed the landscape for KIUC on employee retention, particularly with "early" retirements being taken by long-term employees. Competing for employees is time consuming and costly, creating new financial strain for KIUC.
- **Reaching 100% renewable generation** is a priority for KIUC and we are on track to reach that mark well ahead of the State of Hawai'i mandated deadline of 2045. KIUC has been careful to pace the adoption of new renewable sources to benefit from evolving technology, while capturing available tax credits by creating partnerships with industry leaders, in order to contain

the cost of investment. While a feasible path for KIUC to 100% renewable is becoming clearer, challenges remain:

- KIUC is actively developing the West Kaua‘i Energy Project (WKEP) which would provide longer duration storage for solar and hydro-based generation, addressing the gap in renewables currently experienced during non-solar hours. It is anticipated that WKEP could move KIUC towards 90% renewable sourced generation.
 - KIUC’s peak load in 2022 hovers around 75 megawatts, and the all-time peak demand occurred in 2019 at 80 MW. In order to serve the peak, in addition to renewable resources such as batteries, KIUC maintains 105 megawatts of conventional generators that currently operate on petroleum (naphtha and ultra-low sulfur diesel), but could also run on a renewable fuel like biodiesel.
 - Ultimately, even with WKEP, as we approach 100% renewable generation for the island, it is likely that conventional generators will continue to be part of our energy mix, although perhaps fueled by biofuels rather than petroleum. Liquid-fueled generators are not weather dependent and can store weeks of fuel in a very small footprint. KIUC’s conventional generators’ average age is 46 years and some units are losing manufacturer support for parts and services. KIUC will evaluate replacement of some of these older generators with new units that could provide high-efficiency, reliability, and the continued ability to serve the peak demand without relying too heavily on weather-dependent sources like solar and hydro.
 - Emerging technologies, such as hydrogen for electric generation will also be closely monitored and considered as a potential fuel source.
 - An increasing number of companies are considering goals toward carbon neutrality: i.e., neutralizing their carbon footprint via a combination of reducing emissions and taking other measures such as investing in offsets for emissions. KIUC focus remains on renewable energy generation as the most impactful way to reduce our carbon footprint. However, KIUC should monitor trends and actions being taken by utilities in relation to carbon neutrality, with the possibility to establish future strategic goals in this area.
- **Reliability** of our electrical service remains of key importance, and new technology such as electric vehicles and battery storage will present many challenges and opportunities for our grid. The ability to reliably provide electricity to Kaua‘i depends upon having sufficient generation, transmission, and distribution resources available at all times. With respect to generation, KIUC must ensure that it not only has adequate generating resources, but that it also maintains sufficient storage to power those resources continuously when the unexpected happens. With respect to transmission, KIUC should ideally have at least two transmission lines serving all portions on the island, and must maintain those lines to avoid unnecessary outages. Kaua‘i’s North Shore reliability remains a challenge for the cooperative with limited transmission service, remote and environmentally sensitive access. KIUC anticipates significant infrastructure investments to improve North Shore reliability in the coming years. With respect to distribution,

KIUC will continue to review all outages that occur with the goal of reducing and eliminating unnecessary outages.

- **Mitigating climate change impacts** to KIUC's infrastructure will be critical to ensure the reliable delivery of electricity to members in future decades. KIUC has identified vulnerabilities and is already being proactive by relocating the Kapa'a Service Center to a new site in Anahola. The Kapa'a switchyard remains at this location, and options for relocation are being developed. We continue to monitor evolving predictions relating to sea level rise to identify any additional infrastructure that may become vulnerable in the future.
- **State and federal regulation** impacts our operations in many ways. KIUC continues to be regulated by the PUC and our financial stability and our progress towards 100% renewable energy generation is ultimately tied to receiving positive outcomes from our various regulatory proceedings. Our relationship with the PUC has historically been constructive. However, cost and time commitments associated with PUC regulation continues to be of concern. KIUC is also subject to federal oversight from the Rural Utilities Service (RUS) which is one of our major sources of capital for funding our operations. KIUC's relationship with RUS has also been constructive. In 2019, KIUC entered into an Indenture of Mortgage with RUS which shifts certain RUS compliance requirements to a trustee and substantially reduced the regulatory burden associated with RUS borrowing.
- **Cybersecurity**, as mentioned previously, remains one of the biggest threats to utilities across the globe. KIUC continues to invest in its technology infrastructure to address cybersecurity.

With challenges in mind, it's important that we focus equal attention on the numerous opportunities KIUC could embrace:

- **Exploring possible new revenue streams** beyond our current business model, such as finding a niche in the growing alternative fuel vehicle economy, securing more state and federal grants, and offering new services utilizing existing infrastructure (e.g., middle-mile broadband).
- **Putting the needs of members first** is a basic tenet of the cooperative structure. Our affiliation with the National Rural Electrical Cooperative Association (NRECA) and other cooperative-focused organizations and vendors affords KIUC access to sophisticated software and member-facing applications at prices well below what would be available to us as a small, stand-alone utility. Energy efficiency and rebate programs for both residents and businesses will not only continue, but evolve and expand with the needs of our members. KIUC will also continue to collaborate with government and non-profit entities to ensure financial assistance is available to members in need.
- **Stabilizing rates** by replacing fossil fuel with renewable sources either owned by KIUC or purchased via long-term, fixed-rate agreements will continue to be a key component of our strategy.

- **Reducing GHG emissions** on an accelerated pace has been a basic tenet of KIUC's previous Strategic Planning efforts. KIUC is already decades ahead of established state mandates for renewable production and has exceeded aggressive goals set by its Board of Directors in 2008 and 2016. Achieving 100% renewable as soon as possible, in a way that doesn't compromise reliability and financial stability, is a goal worthy of pursuit.

Based on the foregoing, the KIUC Board of Directors have identified three primary strategic goals for the cooperative:

Goal 1 – Cost of Electricity

KIUC will deliver reliable electricity at the lowest possible cost.

- *Objective 1.1: Have the lowest electricity rates in Kaua'i while maintaining reliability and financial stability*
- *Objective 1.2: Save members money by:*
 - *Relying more on our elected board of directors and less on state regulators for oversight and decision making*
 - *Expanding the use of technology*
 - *Offering free energy efficiency consultation*
- *Objective 1.3: Lower costs by diversifying and expanding the cooperative's financial resources*
 - *Seek and secure federal and state grants benefiting KIUC and our members*
 - *Seek new business opportunities that align with our assets, operations, goals and - member needs*

Goal 2 – Carbon Footprint

KIUC will contribute to a sustainable Kaua'i by reaching 100% renewable generation by 2033.

- *Objective 2.1: By December 2023, develop a plan with timeline to reach and maintain 100% renewable generation by 2033: 12 years ahead of the State of Hawai'i mandate*
 - *Pursue renewable projects that reduce greenhouse gas emissions AND help stabilize electricity rates*
 - *Plan for replacement of current renewable energy sources*
 - *Execute contracts for renewable fuels that are economically and environmentally justifiable*
 - *Own and operate conventional generating units that are reliable, efficient, and able to utilize renewable fuel sources*

- *Objective 2.2: Be a trusted source for members as they transition to renewables for self-generation, transportation and other daily needs*

Goal 3 – Resiliency and Reliability

KIUC will become more resilient, improve reliability, and be better able to handle operational challenges and threats from cybersecurity, local climate change impacts, and natural disasters such as hurricanes and floods.

- *Objective 3.1: Lead the State of Hawai‘i in reliability*
 - *Develop a second transmission line to mitigate North Shore outages associated with the existing single transmission line*
- *Objective 3.2: Develop a plan to move or upgrade electrical equipment threatened by climate change*
 - *Move Kapa‘a substation to higher ground or otherwise mitigate potential inundation risk*
- *Objective 3.3: Improve systems and practices to prevent or mitigate the impacts of cyber-attacks to help ensure continuation of electrical service and business functionality*
 - *Develop and adopt a companywide cyber framework to protect the grid from cyber-attacks, ensure protection of company and member data and provide redundancy for access to data in the event of a cyber attack*
- *Objective 3.4: Evaluate micro-grid options and opportunities for high-risk areas on Kaua‘i. Implement micro-grids where both economically and technically practical*

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

ATTACHMENT DJB-104

(8 PAGES)

Differences Between KIUC and an Investor-Owned Utility

Kauai Island Utility Cooperative (“KIUC”) is a not-for-profit electric cooperative utility organized under Hawaii Revised Statutes (“HRS”) Chapter 421C. It is KIUC’s understanding that it is the only not-for-profit cooperative that the Hawaii Public Utilities Commission (“Commission”) oversees, and all or essentially all of the other utilities that the Commission currently oversees under its authority established by HRS Chapter 269 are investor-owned utilities (“IOU” or “IOUs”).

Since KIUC’s acquisition of Kauai’s electric utility on November 1, 2002, KIUC has submitted extensive information in numerous proceedings explaining KIUC’s differing ownership structure and interests.¹ In addition, as further discussed below, both the Hawaii State Legislature and the Commission have recognized the differences between KIUC as a cooperative and IOUs, including how a cooperative should be regulated or overseen in both a ratemaking and non-ratemaking context.

The following provides a discussion of these differences between KIUC and an IOU, as well as certain legislative and Commission actions and determinations over the years acknowledging these differences, including when KIUC’s first and only application for an increase in its base rates was filed over twelve (12) years ago in Docket No. 2009-0050 and the Legislature’s subsequent enactment of Act 57 during the 2013 legislative session.

1. Summary of material differences between KIUC as a cooperative and an investor-owned utility (IOU).

Investor-Owned Utility (IOU)

- Owned and controlled by shareholders. For an IOU, there is no requirement that its shareholders are actual customers receiving service from the utility, and, in most cases, these shareholders are entirely separate and apart, including in many cases geographically, from the utility’s rate paying customers.
- Inherently profit driven/motivated in order to retain and continue to attract shareholder investment.
- Governed by Board(s) of Directors that are not selected by the utility’s customer base.

¹ See, e.g., Stipulation of Settlement in Support of Final Rates, filed on April 28, 2010, in Docket No. 2009-0050 (“Docket No. 2009-0050 Stipulation”), at pp. 14-17; see also Docket Nos. 2011-0128, 2014-0117, 2016-0091, 2016-0394, 2017-0346 and 2017-0371.

KIUC/Electric Cooperative

- Owned by its customers. As a cooperative, all of KIUC's electric customers are automatically members (i.e., owners) of KIUC unless a customer elects not to be a member. Currently, over 99.6% of KIUC's electric customers are members of KIUC. As a result, KIUC's "owners" and rate paying customers are essentially one and the same.
- Not-for-profit. Instead of profits going to a group of shareholders as with an IOU, any "profits" of KIUC, known as margins, remain with the cooperative to be used productively as the capital of the cooperative and are ultimately returned back to KIUC's members through patronage capital refunds and retirements.
- Governed by a Board of Directors comprised of members of the cooperative and who are elected by the cooperative's membership base.

The above differences fundamentally alter the interests and objectives of KIUC as an electric cooperative as compared to an IOU. An IOU, due to its for-profit ownership structure, is inherently concerned with obtaining both cost recovery from ratepayers as well as a suitable profit, or return on investment, for its shareholders. As a result, an inherent and unavoidable tension exists between the for-profit incentives of an IOU's shareholders and the customers' interests in obtaining quality electric service that is safe, reliable, and at as low rates as possible.

This inherent tension does not exist for an electric cooperative² such as KIUC because KIUC's members (i.e., owners) and rate paying customers are essentially one and the same. As noted above, unlike an IOU where profits belong to the shareholders, KIUC's profits (i.e., margins for a cooperative) remain with KIUC and are ultimately returned back to KIUC's members through patronage capital refunds and retirements. In addition, from a rate making standpoint, the Commission and the Consumer Advocate have in effect established a means to prevent KIUC from "over-earning" on the rates it charges, through the imposition of a patronage capital refund condition that was first imposed in Docket No. 02-0060 and later amended during KIUC's last rate case in Docket No. 2009-0050 as further discussed below.

² Electric cooperatives have been in existence since the early 1930s and have been a significant factor in the rural electrification of the nation through their ability to obtain federal assistance starting with the passage of the Rural Electrification Act of 1936. See <https://www.electric.coop/our-organization/history>. As discussed therein, the National Rural Electric Cooperative Association (also known as NRECA) was formed in 1942 by electric cooperatives to provide a unified voice for cooperatives and to represent their interests in Washington, DC. Today, NRECA represents more than 900 consumer-owned, not-for-profit electric cooperatives, public power districts, and public utility districts in the United States.

As discussed in William A. Collet's testimony (Exhibit 10-T-300), the vast majority of electric cooperatives throughout the nation are not regulated by state utility commissions, and they are instead self-regulated by their member elected boards of directors.

The above factors, coupled with KIUC's not-for-profit status and governance by a member elected Board of Directors, allow KIUC to inherently operate for the benefit of its members with the specific objective to keep rates as low as reasonably possible (i.e., KIUC operates on a cost minimizing philosophy while an IOU operates on a profit maximum philosophy).

2. KIUC's Last Rate Case (Docket No. 2009-0050).

KIUC's first and only rate case proceeding before the Commission occurred over twelve (12) years ago when KIUC filed a rate increase application on June 30, 2009 in Docket No. 2009-0050. It is KIUC's understanding that Docket No. 2009-0050 was the first rate proceeding before the Commission that involved a cooperative-owned utility and not an IOU.³

During that proceeding, an extensive amount of information was submitted by KIUC explaining the differences between a cooperative and an IOU and KIUC's position on how rates should be determined and established for KIUC as a cooperative. As part of those efforts, the appropriate scope and extent/need for regulatory oversight of KIUC's costs and/or rate levels were discussed between KIUC and the Consumer Advocate, where the Consumer Advocate acknowledged that KIUC's ownership structure "may argue for less stringent regulatory oversight of costs and/or rate levels", and that in "some jurisdictions, cooperatives are not subject to state rate regulation, leaving rate levels to the discretion of the cooperative's Board of Directors and management."⁴ However, the Consumer Advocate decided to impose the same level of rate case regulatory scrutiny upon KIUC that it applies to IOUs at that time, stating the following:

Q. DOES THE CONSUMER ADVOCATE AGREE THAT COOPERATIVE UTILITIES SHOULD RECEIVE LESS STRINGENT REGULATORY SCRUTINY OF EXPENSES OR INVESTMENT LEVELS THAT DRIVE THEIR REVENUE REQUIREMENT?

A. No. **Unless and until a different form of regulation or deregulation is found appropriate by either the legislature or the Commission**, the Consumer Advocate will afford rate filings made by KIUC the same level of scrutiny as Applications for rate changes that are submitted by Hawaii's investor-owned utilities.⁵

³ See id.

⁴ See Division of Consumer Advocacy's Direct Testimonies, Exhibits, and Workpapers filed on January 11, 2010 in Docket No. 2009-0050, CA-T-1 (Direct Testimony and Exhibits of Michael L. Brosch), at p. 15.

⁵ Id. at pp. 17-18. See also Docket No. 2009-0050 Stipulation, at p. 22 (bold and underlined emphasis added).

In doing so, however, the Consumer Advocate did not utilize the “traditional” rate of return methodology of setting rates to determine the revenue requirement/revenue increase that should be approved by the Commission, and the Consumer Advocate agreed that KIUC’s revenue requirement and rates should be determined based on the lender ratio utilized by KIUC’s lenders at that time (which was then based on a Times Interest Earned Ratio, or “TIER”).

More specifically, KIUC and the parties to that docket, including the Consumer Advocate, stipulated that as a cooperative, KIUC’s rates should not be established using the “traditional” rate of return methodology that is utilized for IOUs.⁶ Under the IOU method of setting rates, the Commission and the Consumer Advocate must attempt to achieve and ensure a proper balance between the competing interests of an IOU’s shareholders and customers. To accomplish this in the IOU setting, rates are generally based on plant in service, accumulated depreciation and various rate base elements utilizing a rate of return methodology to, among other things, set forth the rate of return, revenues and rates that would provide the IOU’s for-profit shareholders the opportunity to obtain a fair return of, and on, their investment.

Instead, KIUC and the parties stipulated that KIUC’s rates should be based on TIER,⁷ which was the financial performance and loan covenant ratio used by KIUC’s lenders at that time. The parties acknowledged that, unlike an IOU, KIUC as a cooperative does not have the ability to raise equity capital and must remain financially viable only through (1) the revenues it receives from the rates it charges and the resulting equity it is able to build up over time, and (2) debt financing from its lenders – at that time, the United States Department of Agriculture, Rural Utilities Service (“RUS”), an agency of the federal government with lending authority established by the United States Congress, and the National Rural Utilities Cooperative Finance Corporation (“CFC”), a cooperatively owned private banking company.⁸ It was also recognized at that time that “TIER is well-established in the cooperative industry as an important financial ratio for reviewing the financial health of a cooperative, and TIER is considered the generally accepted method for determining revenue requirements for cooperatives.”⁹

In its Decision and Order issued on September 9, 2010 in Docket No. 2009-0050 (“September 9, 2010 Decision and Order”), the Commission approved the use of the

⁶ See Docket No. 2009-0050 Stipulation, at p. 25.

⁷ Ibid.

⁸ Id. at 24.

⁹ Id. at 26.

lending ratio TIER to establish KIUC's revenue increase and resulting rates.¹⁰ In doing so, the Commission stated the following:

KIUC's rates [as stipulated to and approved in the September 9, 2010 Decision and Order] are set at a level that is designed to allow the electric cooperative to: (A) sufficiently recover its reasonable expenses; (B) earn a sufficient margin to ensure compliance with its debt loan targets, covenants, and other lending requirements; (C) meet future and upcoming funding needs; and (D) build sufficient equity to ensure its on-going financial health and ability to obtain and qualify for future financing.¹¹

In addition, as discussed above, KIUC is subject to a patronage capital refund condition that in effect establishes a means to prevent KIUC from "over-earning" on the rates it charges. This patronage capital refund condition was first imposed by the Commission in Docket No. 02-0060 and then later amended during the Docket No. 2009-0050 rate case. In discussing the amended patronage capital refund condition, the Commission's September 9, 2010 Decision and Order states the following, in relevant part:

In effect, the Parties agree to modify the annual patronage capital refund condition by changing the triggering mechanism to whenever KIUC's patronage capital amount exceeds a reported RUS TIER level of 2.0 for the prior reporting period. In support thereto, the Parties state that this modified patronage capital refund condition, when combined with the other agreements set forth in the Stipulation, "will ensure KIUC the opportunity to maintain its financial stability and access to capital on reasonable terms, while ensuring that KIUC's ratepayers participate in any future margin earnings levels that may exceed expectations."

As noted by KIUC in its rebuttal testimony, the proposed modified condition provides an adequate balance between what portion of margins should be: used to increase equity growth and to qualify for future financing; used to lessen financing needs; and returned to KIUC's members through patronage capital refunds. Once these goals are met through the attainment of a RUS TIER of 2.0, KIUC has no interest in retaining any excess revenues beyond this level, and thus, agrees to seek lender approval to return all margins in excess of a 2.0 RUS TIER back to its members.

¹⁰ See September 9, 2010 Decision and Order, at pp. 38-40.

¹¹ *Id.* at 57-58.

Based on the Parties' overall rationale, the commission approves as reasonable the stipulated modifications to Ordering Paragraph No. 8.b of the commission's Decision and Order No. 19658, issued in Docket No. 02-0060. Hence, the patronage capital refund condition is amended to read as follows:

On or before April 30 of each year commencing in 2011, KIUC shall prepare and submit to RUS and CFC a calculation of its achieved operating margin dollars for the prior reporting period. Based upon this calculation, KIUC shall propose and strongly recommend RUS and CFC approval, to the extent required, for payment of patronage capital cash refunds to its members in a minimum total amount equal to the amount by which KIUC has exceeded a reported RUS TIER of 2.0 for that prior reporting period. Upon RUS and CFC approval of the proposed patronage capital cash refunds, payments are to be made to KIUC members as soon as practical thereafter, but not later than thirty (30) days from receipt of RUS and CFC approval of that year. These payments shall be made by check, billing credit or other methodology to be decided upon by the Board. Complete copies of all calculations and correspondence associated with administration of this provision shall be timely submitted for review by the commission and the Consumer Advocate.¹²

In its September 9, 2010 Decision and Order, the Commission also noted the extent of the rate case expenses and efforts required by KIUC in Docket No. 2009-0050. In doing so, the Commission stated its expectation that the expenses to be incurred by KIUC in its next rate case proceeding should be much lower because the next rate case would not be KIUC's first as an electric cooperative, and as such KIUC should not feel compelled to explain and have to reiterate certain positions throughout its filings, including its cooperative ratemaking methodology and the differences between an electric cooperative and an IOU.¹³

3. Act 57, Session Laws of Hawai'i 2013 ("Act 57").

As discussed above, even though the Consumer Advocate acknowledged in Docket No. 2009-0050 that KIUC's ownership structure may argue for less stringent regulatory oversight of costs and/or rate levels, the Consumer Advocate took the position that "[u]nless and until a different form of regulation or deregulation is found appropriate

¹² See *id.* at 51-53 (footnotes omitted).

¹³ See *id.* at 33.

by either the legislature or the Commission, the Consumer Advocate will afford rate filings made by KIUC the same level of scrutiny as Applications for rate changes that are submitted by Hawaii's investor-owned utilities."

Since the filing of the above position by the Consumer Advocate in 2010, the Hawaii State Legislature has acted on this matter through Act 57 during the 2013 legislative session.¹⁴ In enacting Act 57, the Legislature stated the following, in relevant part:

Electric cooperatives are fundamentally distinct from traditional electric utilities in terms of both governance and organizational purpose. The typical investor-owned utility is primarily driven by the incentive to increase shareholder profitability, with virtually no influence on policy or

¹⁴ Act 57 amended HRS § 269-31 by adding new subparagraphs (b) and (c), which read as follows:

(b) Notwithstanding any provision of this chapter or any franchise, charter, law, decision, order, or rule to the contrary, the public utilities commission, sua sponte or upon the application of an electric cooperative, may waive or exempt an electric cooperative from any or all requirements of this chapter or any applicable franchise, charter, decision, order, rule, or other law upon a determination or demonstration that such requirement or requirements should not be applied to an electric cooperative or are otherwise unjust, unreasonable, or not in the public interest. Notwithstanding the above, the public utilities commission and the consumer advocate shall at all times consider the ownership structure and interests of an electric cooperative in determining the scope and need for any regulatory oversight or requirements over such electric cooperative. To the extent any other provision of this chapter [(i.e., HRS Chapter 269)] or any franchise, charter, law, decision, order, or rule is contrary to or otherwise conflicts with this section in any manner, the provisions of this section shall govern and apply.

(c) For purposes of this chapter [(i.e., HRS Chapter 269)], an "electric cooperative" is a cooperative association or entity that is:

- (1) Owned by its members;
- (2) Formed pursuant to [HRS] chapter 421C;
- (3) Operated on a not-for-profit basis;
- (4) Authorized pursuant to a legislatively granted franchise or other legislative authority to manufacture, sell, furnish, and supply electric light, electric current, or electric power to its members or a designated service area; and
- (5) Governed by a board of directors who are members of the electric cooperative and who are democratically elected by members of the electric cooperative pursuant to applicable bylaws.

operations coming from the electricity customer. An electric cooperative, on the other hand, is a customer-owned organization operating on a not-for-profit basis under the governance of a board of directors democratically elected by the very same customers who receive the cooperative's services and who act in their role as owners and members of the cooperative. Whereas a natural tension exists between an investor-owned utility's profit motive and the interest of its customers, the nature of electric cooperatives provides multiple safeguards that ensure that the everyday user receiving electricity services has a say in determining whether that cooperative functions in the interests of both the organization and the individual consumers.¹⁵

Through Act 57 and its resulting amendments to HRS § 269-31, the Legislature requires that the Commission and the Consumer Advocate "shall at all times consider the ownership structure and interests of an electric cooperative in determining the scope and need for any regulatory oversight or requirements over such electric cooperative."¹⁶ The Legislature also found that the Commission should be given "the flexibility and discretion to determine the applicability of existing regulatory requirements to electric cooperatives in furtherance of the public interest."¹⁷ To provide the Commission with this flexibility, the Legislature, through Act 57, gave the Commission the power and authority to waive or exempt an electric cooperative from any or all laws or requirements upon a determination or demonstration that such law(s) or requirement(s) "should not be applied to an electric cooperative or are otherwise unjust, unreasonable, or not in the public interest."¹⁸

¹⁵ Act 57, § 1.

¹⁶ Id. at § 2; see also id. at § 1.

¹⁷ Id. at § 1.

¹⁸ Id. at § 2; see also id. at § 1.

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

ATTACHMENT DJB-105

(1 PAGE)

KAUAI ISLAND UTILITY COOPERATIVE
ATTACHMENT DJB-105
COMPARISON IN OPERATIONS AND MAINTENANCE COSTS
(EXCLUDING FUEL AND PURCHASED POWER, HABITAT CONSERVATION PLAN, RATE CASE, AND PENSION REGULATORY ASSET AMORTIZATION EXPENSES
2010 AND 2023 TEST YEAR
(IN THOUSANDS, EXCEPT PERCENTAGES)

LINE NO.	DESCRIPTION	REFERENCE	2010	NOTE	2023 TEST YEAR	NOTE	CHANGE	PERCENTAGE CHANGE
			AMOUNT		AMOUNT AT PROPOSED RATES			
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H) (F) - (D)	(I) (H) / (D)
1	Operation and Maintenance Expense		\$ 108,336	(1)	\$ 141,716	(4)	\$ 33,380	
2	Fuel		68,900	(2)	43,518	(5)	(25,382)	
3	Purchase Power		4,447	(2)	47,595	(6)	43,148	
4	Operation and Maintenance Expense (Excluding Fuel and Purchase Power)	L1 - (L2 + L3)	34,989		50,603		15,614	45%
5	Endangered Species Costs		1,890	(2)	4,912	(7)	3,022	
6	Rate Case Regulatory Asset Amortization		1,148	(2)	800	(8)	(348)	
7	Pension Cost Regulatory Asset Amortization		2,641	(3)	4,792	(9)	2,151	
8	Total Adj. Operation and Maintenance Expense (Excluding Habitat Conservation Plan, Rate Case, and Pension Regulatory Asset Amortization)	L4 - (L5 + L6 + L7)	\$ 29,310		\$ 40,099		\$ 10,789	37%

Notes

- (1) 2010 PUC Annual Report, Schedule B (excluding HPUC Fee of \$775)
- (2) KIUC internal accounting records
- (3) Workpaper 8-3, pg. 1, Line 15, Column A
- (4) Exhibit 7, Line 24, Column C
- (5) Exhibit 7, Line 4, Column C
- (6) Exhibit 7, Line 5, Column C
- (7) Exhibit 7, Line 17 plus Line 20, Column C
- (8) Workpaper 8-14, Line 1, Column H
- (9) Workpaper 8-3, pg. 1, Line 15, Column D

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

ATTACHMENT DJB-106

(1 PAGE)

KAUAI ISLAND UTILITY COOPERATIVE
ATTACHMENT DJB-106
CHANGE IN SALES SINCE 2010
2010 AND 2023 TEST YEAR

LINE NO. (A)	DESCRIPTION (B)	2010 AMOUNT (C)	NOTE (D)	2023 TEST YEAR AMOUNT (E)	NOTE (F)	(F-D) CHANGE (G) (E) - (C)	(H/D) PERCENTAGE CHANGE (H) (G) / (C)
1	Sales (MWh)	434,533,319	(1)	455,721,000	(2)	21,187,681	4.9%

Notes

(1) 2010 PUC Annual Report, Schedule C

(2) Exhibit 8-1, pg. 2, Line 8

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

EXHIBIT 10

TESTIMONY OF STACIE A. DELLAMANO
(EXHIBIT 10-T-200)

(49 PAGES)

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KAUAI ISLAND UTILITY COOPERATIVE
DOCKET NO. 2022-0208
EXHIBIT 10-T-200

DIRECT TESTIMONY
OF
STACIE A. DELLAMANO

9 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

10 A. My name is Stacie A. Dellamano. My business address is 4463 Pahee
11 Street, Suite 1, Lihue, Hawaii 96766-2000.

12 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

13 A. I am employed by Kauai Island Utility Cooperative ("KIUC") as Chief
14 Financial Officer ("CFO") and Financial Vice President.

15 **Q. PLEASE SUMMARIZE YOUR EDUCATION.**

16 A. I have a Bachelor of Science degree in Business Administration, with a
17 concentration in Finance, from Colorado State University in Fort Collins,
18 Colorado. I have a Master of Business Administration degree from Regis
19 University, with a concentration in Accounting. I am a Certified Public
20 Accountant.

21 **Q. PLEASE DESCRIBE YOUR WORK EXPERIENCE.**

22 A. I have been employed as CFO and Financial Vice President of KIUC since
23 August 2022. Before my employment with KIUC, I held various tax and
24 financial management positions with Mountain Parks Electric, Inc., a
25 Colorado electric distribution cooperative, for about seven years. Prior to

1 that period, I practiced accounting with Day and Associates, a tax and
2 financial accounting firm, for about eight years.

3 **Q. WHAT ARE YOUR DUTIES AND RESPONSIBILITIES AS THE CFO AND**
4 **FINANCIAL VICE PRESIDENT OF KIUC?**

5 A. I am responsible for the finance and accounting functions of KIUC. My
6 areas of responsibility include budgeting, long range financial planning,
7 cash management, accounting, warehouse operations, and financial
8 reporting and analysis.

9 **I. PRIMARY PURPOSE OF TESTIMONY**

10 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

11 A. I am providing testimony on the following topics in support of KIUC's
12 Application submitted in this proceeding ("Application"):

13 (1) KIUC's need for increased revenues, which supplements the
14 discussions by David J. Bissell and William A. Collet in their
15 testimonies (Exhibit 10-T-100 and Exhibit 10-T-300,
16 respectively).

17 (2) The main contributing factors for the needed revenue
18 increase.

19 (3) Development of the calendar 2023 test year ("Test Year")
20 revenue requirement.

21 In connection with the above, I will also discuss the specific requests set
22 forth in the Application regarding the use of the depreciation rates discussed
23 in the testimony of Nancy Heller Hughes (Exhibit 10-T-1100), as well as
24 KIUC's requests to recover over a 10-year amortization period the Lost
25 Gross Margin ("LGM") regulatory asset established in Docket

1 No. 2020-0088 and the pension regulatory asset established in Docket
2 No. 2009-0050.

3 **Q. ARE YOU SPONSORING ANY OF THE APPLICATION EXHIBITS?**

4 A. Yes. In addition to the subject testimony, and in connection with the
5 purpose of my testimony described above, I am sponsoring Exhibits 2, 3, 4
6 and 8, as well as certain exhibits that support Exhibit 8, as will be described
7 later in my testimony.

8 **Q. PLEASE DESCRIBE EXHIBIT 2 TO THE APPLICATION.**

9 A. Exhibit 2 contains various financial information that is being provided by
10 KIUC pursuant to Hawaii Administrative Rules § 16-601-75, and consists of
11 the following schedules:

12 (1) Schedule 1: Stock Authorized and Outstanding: As noted in this
13 schedule, because KIUC is a not-for-profit member-owned electric
14 cooperative, KIUC does not have any stock authorized and/or
15 outstanding.

16 (2) Schedule 2: Year-End Common Stock Outstanding and Dividends:
17 For the same reason noted in Schedule 1, KIUC does not have any
18 year-end common stock outstanding and has not and does not issue
19 any dividends. However, as a cooperative, KIUC does issue
20 patronage capital refunds/retirements to its members. As noted in
21 Schedule 2, KIUC has paid over \$20 million in patronage capital
22 refunds to its members since 2010.

23 (3) Schedule 3: Security Agreements, Mortgages, and Deeds of Trust:
24 This schedule provides a description of security agreements,
25 mortgages or deeds of trust involving KIUC's property.

26 (4) Schedule 4: Audited Financial Statements as of December 31, 2021:
27 This schedule provides KIUC's audited financial statements for the
28 fiscal year ended December 31, 2021.

1 (5) Schedule 5: Unaudited Financial Statements (10-months ending
2 October 31, 2022). This provides KIUC's unaudited financial
3 information for the first ten months of 2022 ending October 31, 2022,
4 which is the most recently available information as of the filing of the
5 subject Application.

6 (6) Schedule 6: Notes, Bonds, and Other Indebtedness. This schedule
7 provides a description of notes, bonds or other indebtedness of
8 KIUC. As noted therein, KIUC currently has loans with National
9 Rural Utilities Cooperative Finance Corporation ("CFC"), U.S.
10 Department of Agriculture, Rural Utilities Service ("RUS") and
11 CoBank ASB ("CoBank").¹

12 **Q. PLEASE DESCRIBE EXHIBIT 3 TO THE APPLICATION.**

13 A. Exhibit 3 contains a summary of KIUC's 2023 Test Year plant-in-service and
14 accumulated depreciation reserve. Brad Rockwell's testimony
15 (Exhibit 10-T-900) provides various underlying support for the plant
16 additions shown in this Exhibit.

17 **Q. PLEASE DESCRIBE EXHIBIT 4 TO THE APPLICATION.**

18 A. Exhibit 4 contains the applicable tariff sheet schedules in KIUC's Tariff No. 1
19 that set forth KIUC's present rates as approved and filed with this
20 Commission, for which KIUC is seeking to revise, modify and/or increase
21 as part of the subject Application (i.e., tariff Schedules "D", "G", "J", "L", "P"
22 and "SL").

¹ For a description of CFC, RUS and CoBank, see KIUC's Application filed on October 17, 2017 in Docket No. 2017-0371, at footnotes 10 to 12 (see <https://dms.puc.hawaii.gov/dms/DocumentViewer?pid=A1001001A17J25A90216E02333>). A further discussion of these lenders and lender requirements and expectations is provided in Mr. Collet's testimony (Exhibit 10-T-300).

1 **Q. PLEASE DESCRIBE EXHIBIT 8 TO THE APPLICATION.**

2 A. Exhibit 8 presents KIUC's Results of Operation for 2018 through 2021,
3 year-to-date through October 2022, and projected for 2022 and the pro
4 forma Test Year. The supporting information for Exhibit 8 is reflected in
5 Exhibits 8-1 through 8-32 to the Application.

6 **Q. PLEASE DESCRIBE THE SUPPORTING EXHIBITS TO EXHIBIT 8 TO**
7 **THE APPLICATION, AND IDENTIFY THE VARIOUS SPONSORS.**

8 A. Exhibit 8-1 to the Application (page 1, lines 1 through 8) present the electric
9 revenues by customer class and in total, and lines 9 through 13 present the
10 other operating revenues. The Total Revenues for each year, including the
11 Test Year, is shown on line 14. Page 2 of Exhibit 8-1 to the Application
12 presents customer data for each customer class. The annual kilowatt-hour
13 ("kWh") sales are shown on lines 1 through 8, columns A through G, the
14 average customer bills for each year are shown on lines 9 through 16,
15 columns A through G, and the average kWh sales per average customer
16 bill are shown on lines 17 through 24, columns A through G.

17 Exhibit 8-2 to the Application reflects the commodities costs, which
18 is comprised of fuel to operate KIUC's generating units and purchased
19 power.

20 Exhibit 8-3 to the Application, page 1 summarizes the departmental
21 labor and non-labor expenses that comprise the Operations and

1 Maintenance (“O&M”) expense. Page 2 identifies the costs that result in the
2 increase for the projected 2023 expenses over projected 2022 expenses.

3 Exhibits 8-4 through 8-18 to the Application reflect the labor and
4 non-labor costs for each department. The non-labor costs pertain to the
5 specific activities performed by each department. However, KIUC notes
6 that although listed on Exhibits 8-13 and 8-16, respectively, KIUC does not
7 have a Save Our Shearwater (“SOS”) or Habitat Conservation department.
8 As discussed by Mr. Bissell and Christopher Yuh in their testimonies
9 (Exhibit 10-T-100 and Exhibit 10-T-700, respectively), these habitat
10 conservation and SOS activities are in furtherance of KIUC’s efforts to
11 obtain incidental take authorizations to legally operate and avoid fines and
12 criminal penalties under endangered/threatened species protection laws.
13 For clarity in understanding the various costs of these activities and efforts,
14 rather than separate the program costs across multiple departments, KIUC
15 presented the program costs in these separate exhibits due to the
16 significant expenditures that are incurred to conduct this program.

17 Exhibits 8-19 and 8-20 to the Application reflect the depreciation and
18 amortization expense and Taxes Other Than Income Tax (“TOTIT”),
19 respectively. Exhibits 8-21 through 8-32 to the Application reflect KIUC’s
20 non-operating revenue and expense consisting of: interest and dividend
21 income, other operating income (net), income/losses from the KRS1 and
22 KRS2 subsidiary solar farm operations (which were the subject of previous

1 Commission Docket Nos. 2011-0323, 2012-0383 and 2013-0202),
2 non-operating income (net), liquidated damages, gains/losses from the
3 disposition of property, capital credits and patronage allocation,
4 sponsorships and contributions, other deductions, and interest expense on
5 long and short term debt.

6 I sponsor Exhibits 8-3 (and page 1 of its Workpaper), 8-6 to 8-12,
7 8-14 (and its Workpaper), 8-15, 8-17, 8-18 and 8-20 (and its Workpaper).
8 Daniel Koehler (Exhibit 10-T-500) sponsors page 1 of Exhibit 8-1, while
9 Mr. Yuh (Exhibit 10-T-700) sponsors page 2 of Exhibit 8-1, Workpaper 8-1, as
10 well as Exhibits 8-13, 8-16 and 8-21 through 8-32 to the Application. Mr. Yuh
11 and I co-sponsor page 2 of Workpaper 8-3. In addition, I also co-sponsor
12 Exhibits 8-4 and 8-5 with Mr. Rockwell (Exhibit 10-T-900), where I sponsor
13 the total salaries and wages and labor related costs and Mr. Rockwell
14 sponsors the non-labor related costs. Mr. Rockwell also sponsors
15 Exhibit 8-2, and Corinne Cuaresma (Exhibit 10-T-800) sponsors Exhibit 8-19
16 (and its Workpaper).

17 **II. KIUC'S NEED FOR INCREASED REVENUES**

18 **Q. WHY IS KIUC REQUESTING AN INCREASE IN REVENUES?**

19 A. An increase in KIUC's revenues and rates is needed to provide KIUC with
20 sufficient revenues to pay expenses and provide a reasonable opportunity
21 to realize the net margins that are necessary to, among other things, meet

1 KIUC's debt service covenants.² At present rates, KIUC is projecting a net
2 margin loss of \$7.1 million and a Debt Service Coverage ("DSC") Ratio
3 under its Indenture of 0.98, as shown in Exhibit 6 to the Application (line 39,
4 column A and line 46, column A, respectively).³ After removing the O&M
5 costs that are not being included for recovery in this rate proceeding as
6 regulatory adjustments (shown in column B of Exhibit 6), as discussed in
7 the testimony of Mr. Yuh (Exhibit 10-T-700), KIUC is projecting a net margin
8 loss of \$4.8 million and an Indenture DSC Ratio of 0.99, as shown in said
9 Exhibit 6 (line 39, column C and line 46, column C, respectively). These
10 DSC ratios are well below the minimum DSC Ratio of 1.25 required under
11 KIUC's existing Indenture arrangement that was the subject of Docket
12 No. 2017-0346.⁴

² See the testimony of Mr. Bissell (Exhibit 10-T-100) and Mr. Collet (Exhibit 10-T-300) for a further discussion. As discussed in Mr. Bissell's testimony, this increase is needed to provide KIUC with sufficient revenues to fund and pay fixed and variable expenses when and as due and provide sufficient margins that enable KIUC to meet lender debt coverage ratio requirements and expectations, and ensure that KIUC is able to access long-term debt to fund planned and unplanned capital needs and for KIUC to continue to safely and reliably deliver its essential electric service to its customers/members and to meet various State requirements and initiatives, including the Renewable Portfolio Standards. Mr. Collet's testimony supports the margin amount and DSC Ratio that should be used to establish KIUC's revenue increase and resulting revenue requirement and rates in this proceeding. Mr. Collet also discusses KIUC's Indenture arrangement and the manner in which the DSC Ratio is calculated under KIUC's Indenture (referred to by Mr. Collet as the "Indenture DSC Ratio") and the traditional method of calculating the DSC Ratio used by CFC and rating agencies (referred to by Mr. Collet as the "Traditional DSC Ratio").

³ Id.

⁴ Id.

1 **Q. PLEASE DESCRIBE THE IMPACTS ON KIUC IF IT IS NOT ABLE TO**
2 **MEET ITS MINIMUM DSC RATIO OF 1.25 AS REQUIRED BY ITS**
3 **INDENTURE.**

4 A. If KIUC is unable to meet the minimum Indenture DSC Ratio of 1.25 or
5 greater, its annual financial calculation reports submitted to KIUC's lenders
6 under their respective loan agreements would reflect the deficiency, and
7 KIUC would be precluded for a certain period (described below) from
8 issuing new secured debt under its Indenture. Specifically, the Indenture
9 requires, with each new secured debt issuance, the delivery of an officers'
10 certificate certifying that KIUC has met the minimum DSC Ratio (as defined
11 in the Indenture) for the prior fiscal year. If KIUC is unable to deliver such
12 officers' certificate because the Indenture DSC Ratio is below the minimum
13 1.25 required for the prior fiscal year, KIUC cannot issue additional secured
14 debt under the Indenture. The Indenture does allow for an alternative
15 calculation in such officers' certificate of the DSC Ratio for any consecutive
16 12 months within the prior 18-months, but the practical effect of not meeting
17 the minimum Indenture DSC Ratio of 1.25 or greater in any fiscal year is
18 that KIUC is precluded from borrowing any new debt under the Indenture
19 until that deficiency has been removed for a full fiscal year.

20 Separately, under KIUC's respective loan agreements with its
21 lenders, CoBank and CFC, an affirmative covenant requires that KIUC
22 achieve a minimum "Average DSC Ratio" of at least 1.25 or greater. An

1 Average DSC Ratio is defined as the average of KIUC's two highest annual
2 DSC Ratios during the most recent three fiscal years. A failure to achieve
3 the Average DSC Ratio constitutes an Event of Default under these KIUC
4 lender loan agreements.

5 **III. MAIN CONTRIBUTING FACTORS FOR THE REVENUE INCREASE**

6 **Q. WHAT ARE THE MAJOR CONTRIBUTING FACTORS FOR THE NEED**
7 **FOR INCREASED REVENUES?**

8 A. The increase in revenues for the Test Year is needed primarily due to the
9 following:

- 10 1. Relatively flat sales growth resulting in insufficient electric sales
11 revenues to meet increasing expenses
- 12 2. Increased commodity and O&M expenses than previous years
13 (i.e., 2020 and 2021) due to:
 - 14 a. Inflation which affects many of KIUC's operating costs
 - 15 b. Increased labor and labor related costs
- 16 3. Non-Labor Costs
 - 17 a. Expected increase in overhauls and increased costs of
18 performing overhauls
 - 19 b. Increase in transmission and distribution ("T&D") line
20 maintenance efforts and related costs
 - 21 c. Other O&M (including rents and property insurance)
 - 22 d. Increased bird mitigation efforts and related costs to obtain
23 required federal and state incidental take authorizations (Habitat
24 Conservation Program)
- 25 4. Depreciation expense

1 5. Regulatory Asset Amortizations: Inclusion of the amortization of the
2 regulatory assets for:

3 a. Pension expense resulting from the tracking mechanism
4 authorized by this Commission in Docket No. 2009-0050;

5 b. LGM accrual authorized by this Commission in Docket
6 No. 2020-0088; and

7 c. Rate case expense for the instant Application.

8 The following sections of my testimony will discuss each of the above
9 items or provide a reference to the applicable witness(es) that address that
10 item.

11 **IV. DEVELOPMENT OF THE TEST YEAR REVENUE REQUIREMENT**

12 **Q. PLEASE EXPLAIN HOW THE APPLICATION'S TEST YEAR REVENUE**
13 **REQUIREMENT WAS DETERMINED.**

14 A. KIUC first determined the Test Year revenues at present rates using the
15 projected sales forecast that was based on information provided by
16 Thomas A. Lovas in his testimony (Exhibit 10-T-1000). Mr. Yuh explains
17 how KIUC developed the projected Test Year kWh sales in his testimony
18 (Exhibit 10-T-700). Exhibit 8-1 to the Application (page 2, lines 1-8, columns
19 A to G) provides the kWh sales for 2018 to October 2022 year-to-date and
20 projected 2022 and the Test Year. Exhibit 8-1 (page 2, lines 9-16, columns
21 A to G) also separately shows the number of Average Customer Bills by
22 year, which corresponds to the customer count supporting the Test Year
23 kWh sales forecast. Finally, Exhibit 8-1 (page 2, lines 17-24, columns A
24 to G) provides the Annual kWh Sales per Average Customer Bills.

1 Using the Test Year kWh sales forecast, KIUC then projected the
2 commodities costs using its production simulation model. Next, KIUC
3 determined the O&M expenses by starting with the operating budget
4 approved by KIUC's Board or Directors,⁵ and then adjusted for costs that
5 are not included in the O&M budget (e.g., recovery of LGM, pension tracker
6 amortization and expenses from this rate case) or are not being included
7 for recovery in this rate proceeding (e.g., amortization of acquisition
8 premium from the 2002 acquisition of Kauai Electric in Docket No. 02-0060,
9 and sponsorship and contributions expenses). KIUC then included the
10 depreciation and amortization that resulted from the depreciation rates
11 proposed and discussed by Ms. Hughes in her testimony
12 (Exhibit 10-T-1100) and the projected plant in service at December 31, 2022
13 and December 31, 2023 to determine the Test Year depreciation expense.
14 Ms. Cuaresma discusses the calculation of the Test Year depreciation
15 expense in her testimony (Exhibit 10-T-800). Next, KIUC computed the
16 TOTIT based on the Test Year revenues at present rates. The result is the
17 operating margin at present rates. Other income and expenses such as
18 interest expense were then added to derive the Test Year net margin at
19 present rates.

⁵ See the testimony of Mr. Yuh (Exhibit 10-T-700) for a discussion of the process KIUC follows to develop the operating budget that is approved by KIUC's member-elected Board of Directors.

1 The revenue requirement was then determined by computing the
2 additional revenue and related bad debt expense, which is calculated as a
3 percentage of electric revenue and TOTIT that are necessary for KIUC to
4 realize the net margin and Indenture DSC Ratio of 1.75 that was determined
5 by Mr. Collet to be just and reasonable as discussed in his testimony
6 (Exhibit 10-T-300). This results in KIUC's proposal for an increase of 9.42%
7 in electric revenues, which results in \$16.7 million of additional revenues to
8 derive the Test Year electric revenue, as shown in Exhibit 6 to the
9 Application (line 1, column F and line 1, column D, respectively). The Test
10 Year electric revenues at proposed rates reflect the same kWh sales
11 forecast used to derive the electric revenues at present rates for each
12 customer classification times the proposed rates that are discussed by
13 Mr. Koehler in his testimony in Exhibit 10-T-500. The resulting proposed
14 rates as shown in Exhibit 5 to the Application are intended to result in the
15 electric revenue necessary to result in the revenue requirement for the Test
16 Year shown in Exhibit 6 to the Application (line 1, column E).

17 **Q. WHAT IS THE PURPOSE OF EXHIBIT 6 AND EXHIBIT 7 TO THE**
18 **APPLICATION?**

19 A. Exhibit 6 to the Application reflects the revenue requirement calculation on
20 a regulatory basis where KIUC is not requesting (1) the amortization of the
21 acquisition premium from the 2002 acquisition of Kauai Electric in Docket
22 No. 02-0060, and (2) certain expenses for sponsorship and contributions in

1 the cost of service that establishes the revenue requirement, as discussed
2 by Mr. Yuh in his testimony (Exhibit 10-T-700). These regulatory
3 adjustments are reflected in column B of said Exhibit 6. Exhibit 7 to the
4 Application provides the revenue requirement calculation under Generally
5 Accepted Accounting Principles (GAAP) where the amortization of the
6 acquisition premium and sponsorships and contributions are reflected as
7 expenses as they would be on KIUC's audited financial statements,
8 including financial reports to its lenders, as also discussed by Mr. Collet in
9 his testimony (Exhibit 10-T-300).

10 **A. REVENUES**

11 **1. COMPUTATION OF REVENUES AT PRESENT AND**
12 **PROPOSED RATES**

13 **Q. WHAT ARE THE PROJECTED TEST YEAR REVENUES AT PRESENT**
14 **RATES AND PROPOSED RATES?**

15 A. As shown on Exhibit 6 to the Application, KIUC's projected Test Year
16 revenues at present and proposed rates amount to \$176.2 million (line 3,
17 column C) and \$192.9 million (line 3, column E), respectively. The
18 \$176.2 million amount is comprised of \$177.0 million of electric revenue
19 (line 1, column C) and negative \$0.8 million of Other Revenue (line 2,
20 column C). The \$192.9 million amount is comprised of \$193.7 million of
21 electric revenue (line 1, column E) and negative \$0.8 million of Other
22 Revenue (line 2, column E).

1 **Q. PLEASE EXPLAIN WHAT THE NEGATIVE \$0.8 MILLION IN OTHER**
2 **REVENUES REPRESENTS.**

3 A. As detailed in Exhibit 8-1 to the Application (page 1, lines 9-13), Other
4 Revenues are comprised of the sum of tariff, rental, and interconnection
5 revenues totaling about \$0.5 million (line 13, column G) for the 2023 budget.
6 From this amount, a negative charge attributable to LGM amortization in the
7 amount of about \$1.3 million (page 1, lines 12-13, column H) is subtracted
8 from the positive \$0.5 million amount to produce an Other Revenues total
9 of about negative \$0.8 million for the Test Year as shown in line 13,
10 column I. The amortization of the LGM Regulatory Asset that was approved
11 by this Commission in Docket No. 2020-0088 as further discussed below
12 requires a debit entry to revenues to reconcile the reversal of revenue
13 already credited when the LGM Regulatory Asset was established and
14 accrued in 2020 and 2021. The amortization entry is why the Other
15 Revenues total is negative because the amortization of the LGM Regulatory
16 Asset debit exceeds the other sources of other revenues credits.

17 **Q. PLEASE EXPLAIN WHY THE ELECTRIC REVENUES AT PROPOSED**
18 **RATES AMOUNTING TO \$193.7 MILLION (EXHIBIT 6 TO THE**
19 **APPLICATION, LINE 1, COLUMN E) EXCEEDS THE TOTAL REVENUES**

1 **AT PROPOSED RATES AMOUNTING TO \$192.9 MILLION (EXHIBIT 6**
2 **TO THE APPLICATION, LINE 3, COLUMN E).**

3 A. As noted above, the Other Revenues includes the amortization of the LGM
4 Regulatory Asset which KIUC seeks to recover in the revenue requirement
5 for this proceeding. In order to provide for such recovery, the electric
6 revenues must exceed the total revenues because of the negative charge
7 amount of \$1.3 million discussed above. The underlying support for KIUC's
8 amortization recovery request is discussed later in my testimony.

9 **2. RELATIVELY FLAT SALES GROWTH INSUFFICIENT TO**
10 **OFFSET INCREASING EXPENSES**

11 **Q. ARE YOU SPECIFICALLY ADDRESSING THIS ISSUE IN YOUR**
12 **TESTIMONY?**

13 A. No. Mr. Bissell discusses this issue in his testimony (Exhibit 10-T-100),
14 where he demonstrates that the increases in O&M costs since the last rate
15 increase in 2010 in Docket No. 2009-0050 are not sufficiently offset by
16 relatively flat sales increases and KIUC's cost control measures including
17 interest expense reductions.

18 **B. INCREASED COMMODITY AND O&M EXPENSES**

19 **1. INFLATION**

20 **Q. IN RELATION TO INFLATION, HOW HAVE O&M COSTS GROWN?**

21 A. As discussed in Mr. Bissell's testimony (Exhibit 10-T-100), KIUC has been
22 able to achieve the goal in KIUC's strategic plan to hold controllable costs

1 at or below the level of inflation. However, KIUC's O&M costs have
2 experienced, and are expected to experience even greater increases with
3 inflation reaching historically high levels, along with new or substantially
4 increased O&M expenditures being required in certain areas. In addition,
5 supply chain issues (low available supply and high mainland demand) as
6 well as shipping constraints have caused delays in receiving material parts
7 necessary for overhaul and maintenance as well as material increases in
8 prices. These inflationary pressures on prices for parts, services, and
9 consumables required increases in budget amounts.

10 2. COMMODITIES COSTS

11 **Q. WHAT ARE THE PROJECTED COMMODITIES COSTS FOR THE TEST**
12 **YEAR?**

13 A. As shown on Exhibit 6 to the Application (lines 4-6, columns A, C and E)
14 and Exhibit 8-2 (lines 1-3, columns G and I), the Test Year costs of
15 commodities amount to \$91.1 million, which is comprised of \$43.5 million in
16 fuel costs and \$47.6 million in purchased power costs.

17 **Q. WHAT DO KIUC'S COMMODITIES COSTS REPRESENT?**

18 A. The Test Year commodities expense represents the costs of operating
19 KIUC's generation and the costs of purchasing energy and capacity from
20 independent power producers.

1 **Q. HOW ARE KIUC'S COMMODITIES COSTS DETERMINED?**

2 A. Mr. Rockwell discusses this in his testimony submitted as Exhibit 10-T-900,
3 including how the above Test Year amounts were determined.

4 **C. O&M EXPENSES**
5 **(EXCLUDING COSTS RELATED TO FUEL AND PURCHASED POWER)**

6 **Q. HOW DO THE TEST YEAR O&M EXPENSES (EXCLUDING COSTS**
7 **RELATED TO FUEL AND PURCHASED POWER) COMPARE TO 2022**
8 **PROJECTED COSTS?**

9 A. As noted on Exhibit 8 to the Application, KIUC's Test Year O&M costs
10 exclusive of fuel and purchased power expenses are \$50.6 million (line 23,
11 column H). These costs are projected to be \$42.9 million in 2022 (line 23,
12 column F) based on actual year to date amounts through October 2022 with
13 the remaining two months of the year assumed to be at budgeted levels.
14 This represents an 18%⁶ increase for the Test Year over estimated 2022
15 levels.

16 **Q. PLEASE IDENTIFY THE REASONS FOR THE ABOVE \$7.7 MILLION**
17 **INCREASE OVER PROJECTED 2022 COSTS.**

18 A. As noted on Exhibit 8-3 to the Application (page 1, line 50, column H), about
19 \$2.6 million of the \$7.7 million increase is due to the expense portion of the
20 increase in the annual pension expense as provided by the National Rural
21 Electric Cooperative Association ("NRECA") actuary and the amortization

⁶ \$50.6 million - \$42.9 million = \$7.7 million. \$7.7 million ÷ \$42.9 million = 18%.

1 of the pension regulatory asset (i.e., about \$1.8 million) and amortization of
2 the rate case expenses (i.e., \$0.8 million), as reflected in lines 17-31⁷ and
3 lines 34-48, column H, respectively, and further discussed below in my
4 testimony. The remaining \$5.1 million increase is primarily due to the
5 contributing factors discussed in Section III (Main Contributing Factors for
6 the Revenue Increase) above. The costs associated with these factors
7 amount to \$4.5 million of the \$5.1 million increase. These factors and their
8 associated costs are identified on Exhibit 8-3 to the Application (page 2,
9 lines 2-10), which also provides footnotes to further explain the bridge
10 between projected 2022 costs and the Test Year costs, before the
11 \$2.6 million adjustments discussed above. In general, the 2023 operating
12 budget costs reflect a return to a more normal pre-COVID-19 operating
13 environment than during the government-mandated shut-downs and
14 restrictions that attempted to stop or limit the spread of the pandemic, which
15 restricted the kind of work, availability of labor, and induced other supply
16 chain constraints that produced lower than historical levels of costs in actual
17 reported results for 2020 and 2021 and into the projected 2022 results. This
18 pandemic-induced trend is not reflective of what KIUC needs to budget for
19 to meet its expected operational needs and requirements under a situation
20 very different today than what was experienced in previous years from the

⁷ See also Workpaper 8-3 of the Application (page 2, line 15, column J).

1 pandemic-related shut-downs and restrictions. KIUC now expects that it
2 will again be able to gain access to full operations levels from outside
3 vendors and service providers to assist in matters such as tree trimming,
4 but now in an operating environment facing inflationary cost pressures
5 much higher than that experienced in 2020 and 2021, and also an
6 increasing level of time and costs needed as part of its continuing Habitat
7 Conservation Plan efforts to obtain its incidental take authorizations.

8 **1. INCREASED LABOR AND LABOR RELATED COSTS**
9 **[SALARIED AND WAGES AND EMPLOYEE BENEFITS]**

10 **Q. WHAT IS KIUC'S FORECASTED LABOR AND LABOR RELATED**
11 **EXPENSE FOR THE TEST YEAR?**

12 A. As shown on Exhibit 8-3 to the Application (page 1, line 33, column I), the
13 total Test Year labor and labor related expense amounts to \$26.3 million.

14 **Q. PLEASE EXPLAIN HOW THE TEST YEAR PROJECTION OF**
15 **\$26.3 MILLION WAS DETERMINED.**

16 A. First, KIUC determined the total salary and wage cost for each department,
17 program or functional area of operation. Since a portion of salary and
18 wages and labor related costs are capitalized to plant, KIUC determined the
19 portion of the salary and wage and labor related costs that would be
20 capitalized to plant.⁸ The remaining amount after capitalization resulted in

⁸ See the testimony of Mr. Yuh (Exhibit 10-T-700) for a discussion of the 2023 capitalization rates.

1 the departmental operating budget or functional area labor and labor related
2 expense for the Test Year.

3 As noted on Exhibit 8-3 to the Application (page 1, line 33,
4 column G), the Test Year projection started with the 2023 departmental
5 operating budget expense amount of \$24.6 million. The testimony of
6 Mr. Yuh (Exhibit 10-T-700) discusses the process by which the operating
7 budget is developed. The departmental or functional area operating budget
8 was then increased by \$1.7 million (Exhibit 8-3, page 1, line 33, column H)
9 to reflect the expense portion of the increase in the annual pension expense
10 as well as the pension regulatory asset amortization discussed later in my
11 testimony. This adjustment was allocated to each department's payroll
12 overhead using the department's labor overhead rates. The results of the
13 allocation are shown in Exhibit 8-3 (page 1, lines 17-32, column H). These
14 adjustments are also reflected as adjustments on Exhibits 8-4 through 8-12,
15 Exhibits 8-14 through 8-15 and Exhibits 8-17 through 8-18 to the
16 Application. As previously noted, KIUC does not have an SOS or Habitat
17 Conservation department, but has presented the program costs in
18 two exhibits (i.e., Exhibits 8-13 and 8-16 to the Application) due to the
19 significant expenditures that are incurred as part of KIUC's efforts to obtain
20 its incidental take authorizations.

1 **Q. IS LABOR AND LABOR RELATED COSTS A SIGNIFICANT**
2 **OPERATING EXPENSE FOR KIUC?**

3 A. Yes. Exhibit 8-3 to the Application (page 1, lines 1-50) presents KIUC's
4 labor and labor related costs and non-labor costs by department for 2018
5 through the Test Year. More specifically, this exhibit presents the actual
6 costs from 2018 through October 2022, and then projected for all of 2022
7 and the Test Year. Labor and labor related costs represent approximately
8 52%⁹ of KIUC's annual total O&M expenses.

9 **Q. HOW HAVE INCREASED PAYROLL COSTS IMPACTED THE AMOUNT**
10 **OF THE REQUESTED REVENUE INCREASE?**

11 A. Overall payroll costs, on average, have increased by an average of 3.2%
12 per year since the last rate increase in 2010 in Docket No. 2009-0050. The
13 increase represents salary and hourly wage and benefits costs for both
14 bargaining unit employees ("BU") who are employed under a collective
15 bargaining agreement ("CBA") and non-bargaining unit employees ("NBU").
16 As discussed in Mr. Bissell's testimony (Exhibit 10-T-100), technological
17 investments in areas such as Automated Metering Infrastructure and an
18 upgraded Supervisory Control and Data Acquisition (SCADA) system,

⁹ Exhibit 8-3 to the Application separates the total non-fuel O&M expense into labor related and non-labor categories by department or functional area. Total labor related costs represent \$26.3 million of the total \$50.6 million of non-fuel O&M cost (page 1, column I, lines 33 and 50, respectively). As shown on Exhibit 8-3 to the Application (page 1, line 33, column J), Total labor related costs represent 52% of the \$50.6 million in total non-fuel O&M costs.

1 along with a keen focus on cost control have enabled the cooperative to
2 reduce its staffing levels from 163 full time equivalents in 2010 to 143 at the
3 end of 2021. However, this decline in staffing levels has been offset by an
4 overall increase in the average salary and wages for cost of living,
5 merit-based increases and CBA contractual wage rate increases. In
6 addition, the expenses attributed to recruiting and hiring efforts and to
7 attract and retain qualified employees, with specialized skill sets from plant
8 operator to lineman to engineers, have also increased.

9 **Q. HOW DID KIUC DETERMINE THE TOTAL DEPARTMENTAL SALARY**
10 **AND WAGE COST FOR THE TEST YEAR?**

11 A. First, KIUC assumed that there will be one hundred and forty-three (143)
12 full-time (permanent) employees and eight (8) summer interns/part-time
13 employees, consistent with that shown in the Board-approved budget. This
14 number of full-time employees (i.e., 143) is the same number of employees
15 in the 2021 head count reflected in Mr. Bissell's testimony
16 (Exhibit 10-T-100). Of the 143 full-time (permanent) employees, 87 are BU
17 employees who are employed under a CBA, and the other 56 are NBU
18 employees.

19 Next, KIUC applied the following assumptions when determining the
20 salary and wage cost for the above number of employees.

- 21 1. KIUC forecasts that NBU employees would receive a 4.1%
22 combined cost of living and merit pay increase on
23 March 1, 2023.

- 1 2. For the BU employees, KIUC used 2,080 hours for computing
2 the employee's base pay. KIUC then applied the contracted
3 wage rates to the number of hours in which the 2023
4 contracted wage rate is applicable.
- 5 3. Next, KIUC determined the overtime hours by using 2021
6 actual overtime hours¹⁰ as a percentage of regular labor
7 hours, by division, and applied the derived percentage to Test
8 Year regular labor costs by division to determine the overtime
9 compensation. Adding the results of the above computations
10 produced the total departmental salary and wages cost for the
11 Test Year.

12 **Q. WHAT COSTS ARE INCLUDED AS THE TEST YEAR LABOR RELATED**
13 **COST?**

- 14 A. The labor related costs shown as payroll overhead in the budget consist of
15 the costs and expenses for employee health, wellness and retirement
16 programs including: pension expense (actual pension expense and
17 regulatory asset recovery of pension expense included), 401(k) match
18 expense, payroll tax expenses, medical, dental, and vision health plans, life
19 insurance benefits, and benefit administrative fees. The regulatory asset
20 recovery of pension expense is discussed later in my testimony.

¹⁰ 2021 overtime hours were used as it represents the last full calendar year of activity. 2021 is considered representative for overtime even with government restrictions in place for non-essential workers. KIUC's operational employees were not working remotely during the pandemic as they are essential workers necessary for KIUC to safely and reliably provide electricity during the pandemic.

1 **Q. WHAT IS THE ESTIMATED LABOR RELATED COST FOR THE TEST**
2 **YEAR?**

3 A. Total employee overhead expense for the Test Year is \$10.2 million, as
4 shown in Exhibit 8-3 to the Application (page 1, line 32, column I).

5 **Q. PLEASE EXPLAIN HOW THE TEST YEAR PENSION EXPENSE WAS**
6 **DETERMINED.**

7 A. The Test Year pension expense amounts to \$4.8 million, as shown in
8 Workpaper 8-3 to the Application (page 1, line 15, column D), which
9 includes the Test Year pension expense provided by the NRECA actuary of
10 \$3.8 million (Workpaper 8-3, page 1, line 15, column B), as well as the
11 amortization of the pension regulatory asset amounting to \$952 thousand
12 (Workpaper 8-3, page 1, line 15, column C) as further discussed in my
13 testimony below.

14 **Q. PLEASE EXPLAIN HOW THE MEDICAL, DENTAL, VISION,**
15 **CHIROPRACTIC AND LIFE INSURANCE COSTS FOR THE TEST YEAR**
16 **WERE DETERMINED.**

17 A. Medical, dental, vision, chiropractic and life insurance costs reflect the KIUC
18 employee's applicable election for coverage and eligibility percentages
19 multiplied by the rates that will be in effect for the Test Year. These rates
20 reflect the insurance premium increases received from various insurance
21 providers.

1 **2. INCREASE IN NON-LABOR O&M COSTS**

2 **Q. WHICH OF KIUC’S DEPARTMENTS OR COST CENTERS INCUR**
3 **COSTS THAT COMPRISE A SIGNIFICANT PORTION OF KIUC’S TOTAL**
4 **ANNUAL NON-LABOR COSTS?**

5 A. As shown on Exhibit 8-3 to the Application (page 1, lines 34-48, columns I
6 and J), KIUC’s non-labor costs are primarily incurred by the following
7 departments, programs or functional cost centers: (a) Power Supply;
8 (b) T&D, (c) Safety and Facilities, (d) Habitat Conservation Program¹¹, and
9 (e) Information Technology. The types of non-labor costs incurred by each
10 of the above are shown on the referenced exhibit to the Application
11 (i.e., Exhibit 8-4, Exhibit 8-5, Exhibit 8-12, Exhibit 8-16, and Exhibit 8-18).

12 **Q. WHAT SPECIFIC COSTS COMPRISE A SIGNIFICANT PORTION OF**
13 **EACH OF THE ABOVE DEPARTMENT’S AND COST CENTER’S**
14 **NON-LABOR COSTS?**

15 A. The following costs represent a significant portion of each of the non-labor
16 costs:

¹¹ As noted above, KIUC does not have a Habitat Conservation department. For clarity in understanding the various costs needed to obtain incidental take authorizations to legally operate and avoid fines and criminal penalties as discussed by Mr. Bissell in Exhibit 10-T-100, KIUC has separated the costs of this program incurred across multiple departments due to the significant expenditures that are incurred to conduct this program.

O&M Expense	Detail of Major Non-Labor Expense Items in the O&M Expense	Source	Total of Non-Labor Expense per O&M Expense Line Item	Major Non-Labor Expense Amounts	Percent of Major Non-Labor Expenses
Power Supply	Maintenance of General and Electric Plant	Exh 8-4, lines 16 and 17, column G	\$5.5 M	\$3.7 M	66.1%
Transmission & Distribution	Maintenance of Overhead lines	Exh 8-5, lines 18, 23 and 27, column G	\$3.4 M	\$1.5 M	45.1%
Safety & Facility	Rent, Property Insurance and Property Maintenance	Exh 8-12, lines 8-10 and 12, column G	\$2.9 M	\$2.6 M	91.7%
Habitat Conservation Program	Outside/Professional Services for Long Term Habitat Conservation Plan Draft	Exh 8-16, lines 5 and 6, column G	\$4.528 M	\$4.509 M	99.6%
Information Technology	Maintenance of General Plant and Outside Services	Exh 8-18, lines 7 and 8, column G	\$2.0 M	\$1.1 M	55.9%

1

2

These items are discussed in the following section of this testimony,

3

which also explains how each item in the table was derived and why the

4

computation produces a reasonable result for ratemaking purposes.

5

a. **INCREASE IN OVERHAULS AND OVERHAUL COSTS**

6

(Power Supply Department – Maintenance of general and electric plant)

7

Q. WHAT IS THE TEST YEAR NON-LABOR EXPENSE FOR THE POWER

8

SUPPLY DEPARTMENT?

9

A. As shown on Exhibit 8-4 to the Application (line 17, columns G and I), the

10

Test Year non-labor expense is \$5.5 million. This amount reflects the

11

2023 operating budget amount of \$5.5 million plus adjustments amounting

1 to \$0.027 million to reflect increased stores expense as discussed in note d
2 on this exhibit. Mr. Rockwell further discusses this Test Year non-labor
3 expense in his testimony (Exhibit 10-T-900).

4 **b. INCREASE IN T&D LINE MAINTENANCE AND RELATED COSTS**
5 **(Transmission and Distribution – Maintenance of Overhead Lines)**

6 **Q. WHAT IS THE TEST YEAR NON-LABOR EXPENSE FOR THE**
7 **TRANSMISSION AND DISTRIBUTION (T&D) DEPARTMENT?**

8 A. As shown on Exhibit 8-5 to the Application, the Test Year non-labor expense
9 is \$3.4 million (sum of lines 23 and 27, column G and I), which is the
10 2023 operating budget amount.¹² Mr. Rockwell also further discusses this
11 Test Year non-labor expense in his testimony (Exhibit 10-T-900).

12 **c. OTHER O&M (INCLUDES RENTS AND PROPERTY INSURANCE)**
13 **(Safety and Facilities – Office Rent, Property Insurance and**
14 **Maintenance)**

15 **Q. WHAT IS THE TEST YEAR NON-LABOR EXPENSE FOR THE SAFETY**
16 **AND FACILITIES DEPARTMENT?**

17 A. As shown on Exhibit 8-12 to the Application, the Test Year non-labor
18 expense is \$3.1 million (sum of lines 6 and 12, column G), which is the
19 2023 operating budget amount.¹³

¹² See the testimony of Mr. Yuh (Exhibit 10-T-700) for a discussion of the budget process.

¹³ Id.

1 **Q. WHAT ACTIVITY RESULTS IN A SIGNIFICANT PERCENTAGE OF THE**
2 **TOTAL NON-LABOR EXPENSE NOTED ABOVE?**

3 A. This budget is primarily comprised of rent and property insurance
4 amounting to \$2.6 million (lines 8-10, columns G and I) of the above
5 \$3.1 million amount.

6 **Q. HOW WAS THE TEST YEAR BUDGET FOR OFFICE RENT, PROPERTY**
7 **INSURANCE AND PROPERTY MAINTENANCE EXPENSE**
8 **DETERMINED?**

9 A. Office rent is for KIUC's main office building in Lihue and the Service Center
10 in Anahola, which are covered by executed lease agreements. The amount
11 of the lease agreements is the determinant of the Test Year costs of
12 \$1.4 million, as shown on Exhibit 8-12 to the Application (lines 9 and 10,
13 columns F and G). As shown therein, lease rent for these two facilities are
14 expected to remain the same in 2022 and the Test Year.

15 With regards to the increase in property insurance shown on
16 Exhibit 8-12 to the Application (line 8, columns F and G), KIUC sent out a
17 request for proposal in 2022 for insurance coverage for all insurance needs
18 for KIUC. KIUC received four (4) proposals and chose an insurance
19 provider with the most competitive cost proposal along with the provider
20 being the highest rated and financially backed insurance carrier among the
21 providers submitting proposals. The competitive bid process produced an
22 annual savings to KIUC on normal and recurring insurance costs of about

1 8%, but this renewal resulted in a total increase to insurance costs to reflect
2 insurance for the recently completed Anahola Service Center (10% property
3 insurance increase). In addition, premiums for cyber security insurance
4 were increased in the Test Year as compared to 2022 costs.

5 Exhibit 8-12 to the Application (line 11, columns F and G), reflects
6 the costs of building maintenance. This expense is determined based on
7 ongoing tenant space maintenance and improvements in the two buildings
8 leased by KIUC.

9 d. **INCREASED BIRD MITIGATION EFFORTS (HABITAT**
10 **CONSERVATION PROGRAM)**

11 **Q. WHAT IS THE TEST YEAR NON-LABOR EXPENSE FOR THE HABITAT**
12 **CONSERVATION PROGRAM?**

13 A. As shown on Exhibit 8-16 to the Application (line 6, columns G and I), the
14 Test Year non-labor expense is \$4.5 million, which is the 2023 operating
15 budget amount.¹⁴

16 **Q. HOW WAS THE TEST YEAR BUDGET FOR LONG TERM HABITAT**
17 **CONSERVATION PLAN DRAFT, BIRD MONITORING, PREDATOR AND**
18 **VEGETATION CONTROL AND FACILITY CONTROL RELATED TO**

¹⁴ See the testimony of Mr. Yuh (Exhibit 10-T-700) for a discussion of the budget process.

1 **PREVENTION OF POWER LINE BIRD COLLISION EXPENSE**
2 **DETERMINED?**

3 A. Exhibit 8-16 to the Application displays the historical, projected and Test
4 Year costs for the Habitat Conservation Program. Mr. Bissell's testimony
5 (Exhibit 10-T-100) explains the need for these habitat conservation efforts,
6 and Mr. Yuh's testimony (Exhibit 10-T-700) explains how the projected O&M
7 expenses were determined.

8 e. **INFORMATION TECHNOLOGY**

9 **Q. WHAT IS THE TEST YEAR NON-LABOR EXPENSE FOR INFORMATION**
10 **TECHNOLOGY?**

11 A. As shown on Exhibit 8-18 to the Application (line 8, columns G and I), the
12 Test Year non-labor expense is \$2.0 million, which is the 2023 operating
13 budget amount.

14 **Q. HOW WAS THE TEST YEAR BUDGET FOR INFORMATION**
15 **TECHNOLOGY DETERMINED SPECIFICALLY ADDRESSING THE**
16 **TWO LARGEST NON-LABOR BUDGET ITEMS OF MAINTENANCE OF**
17 **GENERAL PLANT AND OUTSIDE SERVICES?**

18 A. As noted in Exhibit 8-18 to the Application, the Information Technology Test
19 Year budget includes the following non-labor major costs for maintenance
20 of general plant, which primarily represents hardware maintenance/support
21 for computer equipment recorded under Account 3911 and software
22 maintenance support. The costs for such maintenance are further detailed

1 to be explained as: software hardware maintenance and support (Microsoft
2 Licensing which includes the monthly cost per account for Microsoft 365
3 and NISC Accounting/billing software), offsite backups, network licensing,
4 and data center hardware systems support. Also, network engineering and
5 cyber security are included in the outside services line item.

6 **D. REGULATORY ASSET AMORTIZATIONS**
7 **(PENSION, LGM AND RATE CASE EXPENSE)**

8 **Q. WHAT AMOUNTS ARE BUDGETED FOR AMORTIZATION OF**
9 **PREVIOUSLY DEFERRED REGULATORY ASSETS AND COSTS**
10 **RELATED TO THE CURRENT RATE CASE?**

11 A. The Test Year revenue requirement (i.e., Electric Revenue, Exhibit 6 to the
12 Application, line 1, column E) includes recovery of the amortization of
13 two regulatory assets amounting to \$22.3 million combined, spread out over
14 a 10-year period. The \$22.3 million amount reflects (1) \$9.5 million of
15 deferred pension expense as detailed in Workpaper 8-3, page 1 to the
16 Application (line 29, column D), and as authorized by this Commission in
17 Docket No. 2009-0050; and (2) \$12.8 million of LGM accrual as shown in
18 Exhibit 8-1 to the Application (line 15, column A) as authorized by this
19 Commission in Docket No. 2020-0088. In addition, KIUC is proposing to
20 amortize \$2.4 million in costs to process the instant Application over a
21 3-year period as shown on Workpaper 8-14 to the Application. Each are
22 separately discussed in my testimony below.

1 **1. REGULATORY PENSION ASSET**

2 **Q. WHAT IS THE REGULATORY PENSION ASSET?**

3 A. The Regulatory Pension Asset represents the balance that has
4 accumulated over time representing the difference between the actual
5 incurred pension cost and the \$2.1 million included in determining the
6 revenue requirement approved by this Commission in Docket
7 No. 2009-0050. The difference between what KIUC actually paid for its
8 pension cost and the amount allowed in the prior rate case was charged to
9 a tracking account as a regulatory asset, and KIUC has been funding the
10 difference between its actual pension cost and what it collects in rates since
11 2010.

12 **Q. WHY DID KIUC RECORD THE ABOVE DIFFERENCE AS A**
13 **REGULATORY ASSET?**

14 A. Pursuant to a stipulation in KIUC's last rate proceeding in Docket
15 No. 2009-0050, KIUC agreed to seek Commission approval of a
16 mechanism that would track this difference. The tracking mechanism was
17 explained in the response to PUC-IR-211 sponsored by KIUC and the
18 Consumer Advocate, filed with the Commission on May 25, 2010 in Docket
19 No. 2009-0050. In relevant part, this response states the following:

20 In the development of the stipulated revenue requirement, the
21 parties have included the most recent 2010 estimate of
22 pension costs as provided by KIUC's NRECA actuary. The
23 2010 actuarially-determined overall pension cost estimate is
24 \$2,640,600. The amount of 2010 actuarially-determined total

1 pension cost chargeable to expense, that underlies test year
2 revenue requirement in this docket, is \$2,076,639 (total KIUC
3 pension cost of \$2,640,600 times the test year O&M payroll
4 percentage of 78.6427% equals \$2,076,639). To the extent
5 that actual pension costs incurred and chargeable to expense
6 in 2010 and in subsequent years is greater than \$2,076,639,
7 the difference in costs normally required to be expensed will
8 instead be deferred within a Regulatory Asset account.
9 Alternatively, if actual pension costs incurred and chargeable
10 to expense in 2010 and subsequent years is less than
11 \$2,076,639, the difference in costs will be deferred within a
12 Regulatory Liability account. Within KIUC's next general rate
13 case, any cumulative "net" deferred pension expense balance
14 (positive or negative/Regulatory Asset or Regulatory Liability)
15 will be evaluated along with current information regarding then
16 current test year pension expenses, and such balances may
17 be amortized as an expense charge or credit over a period
18 deemed reasonable, subject to Commission review and
19 approval.

20 In its Decision and Order issued on September 9, 2010 in Docket
21 No. 2009-0050, this Commission approved KIUC's stipulated agreement to
22 establish this pension tracking mechanism, and ordered KIUC to promptly
23 seek RUS approval to establish this regulatory asset for accounting
24 purposes.

25 **Q. DID KIUC OBTAIN ANY REQUIRED RUS APPROVALS TO CREATE**
26 **THE REGULATORY PENSION ASSET?**

27 A. No, contrary to KIUC's initial understanding at the time of Docket
28 No. 2009-0050, KIUC determined that RUS approval was not required for
29 KIUC to establish this asset. KIUC informed the Commission of this by letter
30 filed on November 18, 2010 in Docket No. 2009-0050.

1 **Q. WHAT IS THE BALANCE OF THIS REGULATORY PENSION ASSET?**

2 A. The balance is \$9.5 million, as shown in Workpaper 8-3 to the Application
3 (page 1, lines 29 and 30, column D).

4 **Q. IS KIUC PROPOSING TO RECOVER THE \$9.5 MILLION IN THE**
5 **INSTANT PROCEEDING?**

6 A. Yes, however KIUC proposes to amortize the \$9.5 million amount over a
7 10-year period and only include the amortized annual amount of
8 \$0.95 million as shown in Workpaper 8-3 to the Application (page 1, line 15,
9 column C and line 33, column D) as part of the Test Year pension expense
10 that is reflected in the revenue requirement determination.

11 **Q. PLEASE EXPLAIN WHY KIUC BELIEVES IT IS REASONABLE TO SEEK**
12 **RECOVERY OF THE REGULATORY PENSION ASSET FROM KIUC'S**
13 **CUSTOMERS/MEMBERS.**

14 A. The annual pension expense as determined by the NRECA actuary is a
15 legitimate and necessary operating expense. KIUC contends that providing
16 a defined benefit pension for KIUC's employees helps KIUC to recruit and
17 retain qualified employees, whose skills are necessary to ensure that KIUC
18 is able to provide reliable service. Thus, KIUC's customers/members
19 benefit from KIUC's ability to recruit and retain qualified employees, and
20 KIUC is not presently aware of any argument as to why it should not be able
21 to recover from its customer/members the full amount of providing this
22 important defined benefit pension plant at its full cost rather than limiting the

1 pension expense to the \$2.1 million amount included in the 2010 test year
2 revenue requirement in the last rate case (Docket No. 2009-0050).

3 **Q. AS A GENERAL MATTER, DIFFERENCES BETWEEN THE ACTUAL**
4 **AND FORECASTED REVENUE REQUIREMENT COMPONENTS ARE**
5 **NOT SUBSEQUENTLY RECOVERED FROM A UTILITY'S CUSTOMERS.**
6 **WHY IS KIUC SEEKING SUCH RECOVERY OF THE PENSION**
7 **EXPENSE IN THE INSTANT PROCEEDING?**

8 A. By establishing the tracking mechanism, the Commission inherently
9 allowed KIUC to seek recovery of the difference between the actual and
10 estimated pension expense. The intent to allow for cost recovery of an
11 amortized amount of the regulatory asset as part of KIUC's next rate case
12 (i.e., this rate proceeding) is reflected in the response to PUC-IR-211
13 sponsored by KIUC and the Consumer Advocate quoted above, which
14 states the following, in relevant part:

15 Within KIUC's next general rate case, any cumulative "net"
16 deferred pension expense balance (positive or
17 negative/Regulatory Asset or Regulatory Liability) will be
18 evaluated along with current information regarding then
19 current test year pension expenses, and such balances may
20 be amortized as an expense charge or credit over a period
21 deemed reasonable, subject to Commission review and
22 approval.

1 **Q. OVER WHAT PERIOD OF TIME IS KIUC REQUESTING TO AMORTIZE**
2 **THIS BALANCE FOR PURPOSES OF THIS RATE PROCEEDING?**

3 A. As set forth in the Application and noted above, KIUC is requesting to
4 amortize the balance over a 10-year period.

5 **Q. PLEASE EXPLAIN WHY THE PROPOSED 10-YEAR AMORTIZATION**
6 **PERIOD IS REASONABLE.**

7 A. KIUC believes the 10-year recovery period is reasonable because it has
8 already funded the \$9.5 million deferred regulatory asset balance without
9 reimbursement in its rates and without interest or any carrying cost
10 associated with the asset balance. The balance accumulated by KIUC
11 making pension contributions over the last 12 years at a rate in excess of
12 what it could recover in its cost of service, and with a 10-year amortization
13 period, will in effect take KIUC 22 years to get back to a breakeven of its
14 actual cost, without interest. That 22-year period would relate to the typical
15 lifetime of employment for a covered employee and would appear to match
16 the cost incursion period with the recovery period in a less favorable manner
17 than another utility might be willing to accept.

18 **2. REGULATORY LGM ASSET**

19 **Q. WHAT IS THE REGULATORY LGM ASSET?**

20 A. This regulatory asset represents the financial impact of the lost revenues
21 resulting from the reduced electricity kWh sales that resulted from the
22 pandemic and government imposed shut-downs and restrictions.

1 **Q. WAS THIS REGULATORY ASSET APPROVED BY THIS COMMISSION?**

2 A. Yes. This Commission approved the creation of this regulatory asset in
3 2020. Specifically, in Decision and Order No. 37252 issued on
4 July 31, 2020 in Docket No. 2020-0088 (“Decision and Order No. 37252”),
5 the Commission approved KIUC’s use of deferred accounting to establish a
6 regulatory asset to record and accrue LGM and increased bad debt
7 expense associated with the COVID-19 pandemic, incurred from
8 April 1, 2020. In doing so, the Commission stated the following in relevant
9 part:

10 After review of the record, the Commission determines that
11 the unprecedented health and economic challenges caused
12 by the COVID-19 pandemic warrant the extraordinary relief
13 requested by KIUC. As such, the Commission approves
14 KIUC's request to use deferred accounting treatment to
15 establish a regulatory asset to record and accrue lost gross
16 margins associated with the COVID-19 pandemic, including
17 increased bad debt expense (to the extent not already
18 authorized pursuant to Order Nos. 37125, 37153, and 37189),
19 beginning from April 1, 2020 and continuing until ordered
20 otherwise by the Commission, subject to the conditions
21 herein.

22 The Commission emphasizes that this approval is limited to
23 the specific facts and circumstances presented in this docket,
24 and reiterates that this approval does not entail any
25 presumption of future recovery. In the event that KIUC files
26 an application to recover approved regulatory assets in the
27 future, the Commission will review the reasonableness of the
28 request, expected ratepayer impacts, and other factors, in
29 weighing that decision. The Consumer Advocate may also
30 participate in any such proceeding, and may challenge the
31 reasonableness of any accrued LGM and any deferred costs,
32 and make recommendations regarding the time over which
33 any potential recovery might be received.

1 In anticipation of future application for recovery, the
2 Commission will require KIUC to provide all information on
3 deferred costs that may be necessary for a thorough review.
4 For this reason, the Commission conditions approval of
5 KIUC's request on detailed reporting requirements. This will
6 enable the Commission to protect the interests of customers,
7 while also providing KIUC with much-needed short-term
8 relief.¹⁵

9 Pursuant to Order No. 38605 issued on September 13, 2022 in
10 Docket No. 2020-0088 ("Order No. 38605"), the accrual of LGM was
11 discontinued as of the end of the second quarter of 2022 (i.e., as of
12 June 30, 2022).

13 **Q. HAS KIUC BEEN PROVIDING THE INFORMATION REQUIRED BY THIS**
14 **COMMISSION AS REFLECTED ABOVE TO ALLOW FOR A THOROUGH**
15 **RATE RECOVERY REVIEW?**

16 A. Yes. KIUC has complied with these reporting requirements through various
17 filings made with this Commission. See the quarterly reports filed by KIUC
18 on October 30, 2020, February 1, 2021, May 3, 2021, August 2, 2021,
19 November 1, 2021, February 1, 2022, May 24, 2022 and August 1, 2022,
20 all in Docket No. 2020-0088, as well as the quarterly report filed on
21 October 27, 2022 in Docket No. 2020-0209 as required by Order No. 38605.

¹⁵ Decision and Order No. 37252, at 20-21.

1 **Q. WHAT IS THE BALANCE OF THIS REGULATORY LGM ASSET?**

2 A. The balance of this regulatory asset accrued during its authorization period
3 (i.e., from April 1, 2020 to June 30, 2022) is \$12.8 million, as shown in
4 Exhibit 8-1 to the Application (page 1, line 15, column A).

5 **Q. IS KIUC PROPOSING TO RECOVER THIS AMOUNT IN THE INSTANT**
6 **PROCEEDING?**

7 A. Yes. As set forth in the Application, KIUC is requesting approval to recover
8 and amortize this balance over a 10-year period. In other words, KIUC
9 proposes to amortize the \$12.8 million amount over a 10-year period and
10 thus include \$1.28 million as the Test Year amount in the revenue
11 requirement determination, as shown on Exhibit 8-1 to the Application
12 (page 1, line 19, column A). Because approval to recover the accrued LGM
13 will require additional revenues and also result in an increase in the electric
14 service rates, KIUC believes it is more efficient and cost effective to include
15 such request in the instant Application, rather than file a separate
16 application to recover the accrued LGM. By combining this request in the
17 instant Application, this Commission (and the Consumer Advocate) will also
18 be able to assess the impact of the requested LGM amortized cost recovery
19 together with the proposed increases in present rates that are necessary to
20 provide KIUC with a reasonable opportunity to realize the net margin and
21 DSC Ratio level discussed in Mr. Collet's testimony (Exhibit 10-T-300).

1 **Q. PLEASE EXPLAIN WHY KIUC BELIEVES IT IS REASONABLE TO SEEK**
2 **RECOVERY OF THIS REGULATORY LGM ASSET FROM KIUC’S**
3 **CUSTOMERS/MEMBERS, AND OVER A 10-YEAR AMORTIZATION**
4 **PERIOD.**

5 A. This Commission’s authorization to accrue LGM benefited KIUC’s
6 customers/members by allowing KIUC to defer the filing of a rate increase
7 application to recover the revenues that were lost in 2020 as a result of the
8 government-imposed COVID-19 shut-downs and restrictions. As discussed
9 in KIUC’s application submitted in Docket No. 2020-0088, these resulting
10 loss of revenues from reduced kWh sales would not have allowed KIUC to
11 meet its minimum 1.25 Indenture DSC Ratio in either 2020 or 2021. As
12 discussed above, if KIUC is unable to meet the minimum Indenture DSC
13 Ratio of 1.25, KIUC is precluded from the ability to fund new debt under the
14 Indenture for at least a full fiscal year. Had KIUC been unable to meet the
15 1.25 minimum Indenture DSC Ratio for both 2020 and 2021, it would have
16 defaulted on its existing debt obligations.

17 In approving KIUC’s request, this Commission on page 19 of
18 Decision and Order No. 37252 stated that “KIUC has demonstrated the
19 significant financial impact that has resulted from the COVID-19 pandemic.
20 Deferred accounting treatment for costs related to COVID-19 impacts would
21 help KIUC to achieve a DSC ratio that exceeds the minimum DSC, which is

1 important in maintaining compliance with loan agreements and protecting
2 favorable access to capital.”

3 In sum, the recovery of the accrued LGM is reasonable because
4 such accrual provided a benefit to KIUC’s customers/members by:
5 (1) deferring the filing of a rate increase application during a time when the
6 Kauai economy was suffering and many of KIUC’s members/customers
7 were facing financial hardships due to the government imposed COVID-19
8 shut-downs and pandemic restrictions; and (2) enabling KIUC to meet its
9 debt service requirements without needing to file a rate application, which
10 ensured KIUC’s ability to obtain debt financing if needed. Without this
11 Commission’s approval of this deferred accounting treatment, KIUC and its
12 membership would have been detrimentally impacted for the reasons
13 discussed above. It is also relevant to note that this Commission’s approval
14 of the LGM accrual allowed KIUC to still provide its membership with
15 patronage capital retirements during this period, including \$1.1 million paid
16 out in May 2021 and \$1.7 million paid out in May 2022.

17 KIUC also contends that spreading out this recovery over a 10-year
18 amortization period is appropriate and that by spreading it out over this long
19 of a period, it will help to minimize the impact to the customers/members.
20 Initially, the analysis was performed to support a 2- to 3-year recovery, but
21 the burden on rates was too high and unreasonable and the 10-year
22 amortization was in line with the philosophy of gradualism in any rate

1 increase as referenced in the testimony of Mr. Koehler (Exhibit 10-T-500).
2 If the sales decline could have been recovered in a volumetric decoupling
3 mechanism, the recovery period might have been as short as 12-18 months
4 through the imposition of higher rates through the decoupling mechanism.

5 As noted above, KIUC is requesting recovery of the \$12.8 million
6 amount ratably over a 10-year period. This \$1.28 million amortization is
7 reflected on Exhibit 8-1 to the Application (page 1, line 19, column A).

8 **3. REGULATORY ASSET - RATE CASE EXPENSE**

9 **Q. PLEASE EXPLAIN THE RATE CASE EXPENSE AMOUNT SET FORTH** 10 **ABOVE.**

11 A. The \$2.4 million estimate is shown on Workpaper 8-14 to the Application
12 (line 11, column E). This expense reflects KIUC's estimated costs for the
13 preparation, filing and processing of the subject rate case Application. The
14 expenses have been separated into three activity groupings to facilitate
15 review and verification during the processing of the Application. The first
16 phase, Preparation and Filing, contains KIUC's total estimated costs to
17 prepare and file the Application together with its various exhibits,
18 testimonies and testimony attachments. This estimate is shown on
19 Workpaper 8-14 to the Application (line 10, column B). Discovery and
20 Settlement, the second phase, shown on Workpaper 8-14 (lines 4-10,
21 column C) reflect the projected costs to be incurred subsequent to the filing,
22 which would include activities such as the public hearing, providing notice

1 of the public hearing, addressing any intervention requests, the discovery
2 process, possible settlement discussions, and the preparation and filing of
3 any settlement/stipulation documents and/or rebuttal testimonies for any
4 items that have not been fully settled upon or stipulated to. The third phase,
5 Hearings and Briefings, shown on Workpaper 8-14 to the Application
6 (lines 4-10, column D) would cover any hearing or briefings that may be
7 required together with post-hearing efforts and filings if the rate case cannot
8 be settled and hearings on some or all issues are required. At this time,
9 KIUC has only projected \$20,000 for this third phase under the hope and
10 assumption that a settlement can be reached and that no formal hearing will
11 take place. However, if such a hearing or briefings do occur, KIUC will
12 update its cost estimate at that time (especially since that estimate will be
13 largely dependent on what issues or matters remain unresolved and will be
14 the subject of any hearing, including how many issues/matters remain
15 unresolved, their complexity, the extent to which expert witnesses will be
16 called to testify, and the resulting scope and extent of any post-hearing
17 briefs or filings, etc.).

18 **Q. WHY HAVE YOU PROVIDED A BASE SCENARIO AND A LOW**
19 **SCENARIO FOR YOUR ESTIMATES?**

20 A. The base scenario in Workpaper 8-14 of the Application sets forth KIUC's
21 estimated costs at this time. However, the actual level of involvement of
22 consultants and legal support as well as the number of activities in these

1 phases could vary significantly depending on the scope of any intervention
2 or participation, the issues that arise in this proceeding (including in number
3 and complexity), and the scope of review required in rate design. For
4 example, in the last rate case proceeding, KIUC ended up expending a
5 significantly greater amount of time and expense than it initially
6 contemplated in explaining its cooperative ownership structure and the
7 differences between it and an investor-owned utility and how these
8 differences should be considered in ratemaking. Given this, KIUC thought
9 that in addition to providing its current estimate (i.e., the base scenario), it
10 would be appropriate to also provide a low range of estimated costs for
11 these phases. KIUC will update these estimates as these phases proceed
12 to reflect actual costs through a period and more current estimates of the
13 costs to complete each phase.

14 **Q. PLEASE EXPLAIN WHY KIUC HAS USED A 3-YEAR PERIOD FOR THE**
15 **AMORTIZATION OF THOSE EXPENDITURES.**

16 A. KIUC anticipates the need to make more frequent rate changes to match
17 the changing costs of providing service to its customers, who are essentially
18 the members (owners) of the cooperative as discussed in Mr. Bissell's
19 testimony (Exhibit 10-T-100).

1 **Q. WHAT IS THE AMOUNT INCLUDED IN THE TEST YEAR EXPENSE FOR**
2 **THE AMORTIZATION OF THE RATE CASE EXPENSE?**

3 A. The amount is \$0.8 million as shown on Workpaper 8-14 to the Application
4 (line 13, column E).

5 **E. DEPRECIATION**

6 **Q. HOW MUCH DEPRECIATION EXPENSE IS BUDGETED FOR THE TEST**
7 **YEAR?**

8 A. As shown on Exhibit 8-19 to the Application (line 4, column G), KIUC's
9 operating budget depreciation and amortization expense is \$16.5 million.
10 This amount reflects the operating budget depreciation expense amounting
11 to (1) \$14.3 million as shown in Exhibit 8-19 (line 1, column G); and (2) the
12 amortization of the acquisition premium resulting from the 2002 acquisition
13 of Kauai Electric in Docket No. 02-0060 amounting to \$2.2 million as shown
14 in Exhibit 8-19 to the Application (line 2, column G). As shown on Exhibit 6
15 to the Application (line 25, column C), the Test Year depreciation and
16 amortization expense amounts to \$16.3 million. In deriving the
17 \$16.3 million, KIUC increased the 2023 operating budget expense of
18 \$14.3 million by \$2.0 million as shown on Exhibit 8-19, line 1, column H.
19 Ms. Cuaresma (Exhibit 10-T-800) discusses the derivation of the Test Year
20 depreciation expense in her testimony. In addition, as shown on Exhibit 6
21 to the Application (line 25, columns B and C), KIUC removed the
22 amortization of the purchase acquisition premium as a regulatory

1 adjustment. Mr. Yuh (Exhibit 10-T-700) discusses the adjustment to
2 remove the purchase acquisition premium amortization in his testimony.

3 **Q. PLEASE DESCRIBE KIUC'S REQUEST IN THE APPLICATION**
4 **REGARDING ITS DEPRECIATION RATES.**

5 A. It is KIUC's understanding that Commission approval is required for KIUC
6 to change its depreciation rates. Based on that understanding, and as
7 reflected in the Application, KIUC requests Commission approval and/or
8 authorization to implement the depreciation rates and changes set forth in
9 the 2017 Depreciation Study, as well as to use those rates in determining
10 and establishing KIUC's revenue requirement, revenue increase and
11 resulting rates and charges in this proceeding, which results in a total Test
12 Year depreciation expense amount of \$16.3 million as shown in Exhibit 6 to
13 the Application (line 25, column E).

14 **F. TAXES OTHER THAN INCOME TAXES**

15 **Q. WHAT IS THE TEST YEAR BUDGET AMOUNT FOR TAXES OTHER**
16 **THAN INCOME TAXES?**

17 A. For the State of Hawaii, KIUC is assessed a 5.885% Public Service
18 Company Tax on gross revenues in lieu of general excise taxes and county
19 real property taxes. As discussed above, KIUC is also assessed 0.5% of
20 gross revenues for the HPUC fee. For the County of Kauai, KIUC is
21 assessed a 2.5% franchise fee on gross revenues. Workpaper 8-20 to the
22 Application (lines 1-3, columns D and E) reflects the computation of each of

1 the above taxes at present and proposed rates. In addition, KIUC pays a
2 *de minimis* amount of state income tax on non-patronage derived income.
3 The tax is shown on line 3 of Exhibit 8-20 to the Application. Because the
4 state income tax amount is *de minimis*, KIUC has not included State Income
5 Taxes in the revenue requirement calculation.

6 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

7 A. Yes.

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

EXHIBIT 10

TESTIMONY OF WILLIAM A. COLLET
(EXHIBIT 10-T-300)

(42 PAGES)

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KAUAI ISLAND UTILITY COOPERATIVE
DOCKET NO. 2022-0208
EXHIBIT 10-T-300

DIRECT TESTIMONY
OF
WILLIAM A. COLLET

9 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

10 A. My name is William A. Collet. I am President of Collet & Associates, LLC,
11 and my business address is 4151 N. Mulberry Street, Suite 245, Kansas
12 City, Missouri 64116.

13 **BACKGROUND AND EXPERIENCE**

14 **Q. DESCRIBE YOUR EDUCATIONAL BACKGROUND AND**
15 **PROFESSIONAL EXPERIENCE.**

16 A. Prior to founding Collet & Associates in 2009, I was co-founding principal of
17 Christenberry Collet & Company, Inc. ("CCCO"), a Kansas City based
18 investment banking firm, where I managed the firm's energy and
19 infrastructure practice since 1994. I began my investment banking career
20 and have been working in the electric cooperative industry since 1989 when
21 I was with the investment banking firm of H. B. Oppenheimer & Company.

22 I have a Bachelor of Science in Business Administration degree with
23 honors from Southern Methodist University, with a concentration in Finance,
24 and a Master in Business Administration degree with distinction from
25 Harvard Business School. Prior to my investment banking career, I had

1 marketing and financial management positions in several start-up
2 companies and spent two years in the venture capital industry. My
3 investment banking experience includes a wide variety of corporate finance
4 engagements in multiple industries including mergers and acquisitions, debt
5 and equity fundraisings, initial public offerings, fairness opinions, and the
6 corresponding financial, accounting, legal, tax and operations analysis
7 required in these engagements. For the past fifteen years, approximately
8 95% of my time has been spent in the regulated utility industry, with a
9 special emphasis on assisting cooperative electric utilities in renewable
10 project financing and acquisition of service territories from investor-owned
11 utilities.

12 I have been a visiting professor at several Missouri business schools
13 with curriculum materials in the areas of capital markets and financial
14 analysis. I have presented several seminars and forums on corporate
15 finance topics, including mergers and acquisitions, sponsored by the
16 National Rural Electric Cooperative Association and the cooperative utility
17 industry's leading lender, the National Rural Utilities Cooperative Finance
18 Corporation ("CFC"), at annual and seminar meetings of these
19 organizations. I have presented similar material to statewide meetings of
20 cooperatives in several states.

1 **Q. HAVE YOU HELD SECURITIES LICENSES DURING YOUR**
2 **INVESTMENT BANKING EMPLOYMENT?**

3 A. Yes. I have held Series 7, Series 24, and Series 63 securities licenses
4 overseen by the Financial Industry Regulatory Authority, which is the
5 successor organization to the National Association of Securities Dealers.

6 **Q. PLEASE SUMMARIZE THE TYPE OF WORK THAT YOUR FIRM DOES**
7 **AND YOUR PROFESSIONAL QUALIFICATIONS.**

8 A. Collet & Associates, as was its predecessor CCCO, is an investment
9 banking firm focusing on corporate finance activities including debt
10 fundraising, project finance structuring, financial advisory and transaction
11 advisory services. Our principal specialty is in the area of advising electric
12 cooperatives on project finance, debt fundraising, mergers and acquisitions,
13 and financial planning. We are often advisors in the development of Equity
14 Management Plans and on occasion provide testimony and support in rate
15 cases for electric cooperatives which draw on our financial advisory
16 analyses and recommendations.

17 Collet & Associates was founded to continue this specialized practice
18 of its predecessor and to provide fundraising for renewable generation
19 projects and efficiency and conservation programs. I have been actively
20 involved with numerous cooperative clients in exploring structuring and
21 financing alternatives for utility scale renewable generation projects.

1 Over approximately three decades, Collet & Associates and its
2 predecessor were actively involved in acquisition transactions whereby
3 electric cooperatives were successful in acquiring portions of
4 investor-owned utility service territories and the outright purchase of
5 municipal electric systems. One such example is the acquisition by Kauai
6 Island Utility Cooperative (“KIUC”) of the island of Kauai’s electric utility on
7 November 1, 2002, which was approved by this Commission in Docket
8 No. 02-0060, and further discussed below in my testimony.

9 **Q. PLEASE DESCRIBE YOUR EXPERIENCE PROVIDING TESTIMONY**
10 **AND/OR INFORMATION BEFORE REGULATORY COMMISSIONS.**

11 A. In addition to this Commission, I have provided testimony and/or financial
12 information, exhibits or answers to information and discovery requests
13 before the Regulatory Corporation of Alaska, the Kansas Corporation
14 Commission, the Vermont Public Utility Commission, the Texas Public
15 Utility Commission, the Illinois Commerce Commission, the Corporation
16 Commission of the State of Oklahoma, the Minnesota Public Utilities
17 Commission, the Michigan Public Service Commission, the Public Service
18 Commission of Maryland, and the Public Utilities Commission of Colorado.

19 I have specifically provided testimony regarding the revenue
20 requirement and appropriate financial ratios of an electric cooperative
21 before the Vermont Public Utility Commission on behalf of Vermont Electric
22 Cooperative in 2009, this Commission on behalf of KIUC in 2010 in Docket

1 No. 2009-0050, and the Public Service Commission of Maryland in the 2015
2 rate case for Southern Maryland Electric Cooperative (“SMECO”). I am
3 currently engaged to provide testimony for SMECO in a rate case filed on
4 December 1, 2022.

5 Also, as a part of our practice of financial advisory consulting,
6 Collet & Associates advises clients on the impact of regulatory decisions in
7 determining the financial health of electric utilities and the related impact on
8 financial planning considerations. This includes advice concerning the
9 financial implications for regulated utilities of commission decisions on
10 revenue requirement and cost recovery as they relate to the credit rating
11 agencies’ assessment of the regulatory climate and credit metrics of electric
12 utilities.

13 Finally, I testified before the Public Service Commission of Maryland
14 in support of the issuance of the certificate of need and convenience for
15 SMECO’s Solar facility in 2011.

16 **Q. IN YOUR 30 YEARS OF INVESTMENT BANKING AND FINANCIAL**
17 **ADVISORY WORK, PLEASE DESCRIBE YOUR EXPERIENCE RAISING**
18 **DEBT CAPITAL FOR ELECTRIC COOPERATIVES.**

19 A. In our many merger and acquisition transactions, debt financings and
20 refinancings, and renewable project development engagements, I have had
21 extensive experience dealing with all of the principal lenders and financing
22 sources for electric cooperatives. These lenders include CFC, CoBank ASB

1 (“CoBank”), the U.S. Department of Agriculture, Rural Utilities Service
2 (“RUS”), and various bond underwriters and bond investors that buy
3 cooperative bonds in the private placement markets. Over that
4 approximately 30-year period, I have been involved in securing over
5 \$6.7 billion in debt commitments for electric cooperatives. As a part of these
6 transactions, I have developed extensive knowledge of how the various
7 lenders view an electric cooperative’s debt obligations and the factors they
8 deem important to credit underwriting decisions. This experience also
9 translates to the major credit ratings agencies and the criteria they use to
10 rate electric cooperative debt obligations.

11 **I. PRIOR AFFILIATION WITH KIUC**

12 **Q. HAVE YOU PREVIOUSLY BEEN AN ADVISOR TO KIUC IN A**
13 **FINANCIAL CAPACITY? PLEASE EXPLAIN.**

14 **A.** Yes. As noted above, I was the investment banker who represented KIUC
15 in its acquisition of Kauai Electric that closed on November 1, 2002 and that
16 was the subject of this Commission’s Docket No. 02-0060. My principal
17 responsibilities at that time were to negotiate the purchase agreement with
18 Citizens Communications Company (then owner of Kauai Electric) that was
19 submitted in Docket No. 02-0060, to work with CFC and RUS to raise the
20 financing needed to fund the \$215 million purchase price of Kauai Electric,
21 as well as to support the purchase of Kauai Electric before this Commission

1 that was ultimately approved in Decision and Order No. 19658, issued on
2 September 17, 2002, as amended by Decision and Order No. 19755, issued
3 on October 30, 2002, both in Docket No. 02-0060. The next year, I
4 represented KIUC in the negotiation and financing of the purchase of the
5 26.4 MW power station now known as the Kapaia Power Station, from
6 Dominion Resources, Inc., for \$40.2 million in a transaction that was
7 approved by this Commission in Docket No. 03-0223 and closed in
8 December 2003. Subsequently, I also assisted KIUC in the development
9 of its first Equity Management Plan, which was submitted to this
10 Commission as an informational filing by letter filed on December 15, 2004,
11 as required by Decision and Order No. 20691 issued on
12 November 26, 2003, as clarified by Order No. 20708 issued on
13 December 5, 2003, both in Docket No. 03-0223. My additional experience
14 as a financial advisor to KIUC is further discussed below.

15 **Q. WERE YOU PREVIOUSLY AN ADVISOR TO KIUC IN ITS ONLY**
16 **PREVIOUS RATE CASE IN DOCKET NO. 2009-0050?**

17 A. Yes, I was engaged by KIUC and provided Rebuttal Testimony and
18 responses to Information Requests in KIUC's only previous rate case in
19 Docket No. 2009-0050.

1 **Q. HAVE YOU BEEN AN ADVISOR TO KIUC ON OTHER DOCKETS SINCE**
2 **2010?**

3 A. Yes, I have been involved in and served as a financial advisor to KIUC on
4 numerous other dockets before this Commission over the last twelve years
5 involving the approval of Power Purchase Agreements (e.g., Docket
6 Nos. 2011-0180, 2015-0331, 2017-0018 and 2017-0443), various
7 financings (e.g., Docket Nos. 2011-0128 and 2014-0117), the refinancing
8 of KIUC's long-term debt (Docket No. 2016-0091), implementing an
9 Indenture of Mortgage, Security Agreement and Financing Statement
10 ("Indenture") (Docket No. 2017-0346), and the financing arrangements for
11 the KIUC Renewable Solutions One, LLC ("KRS One") and KIUC
12 Renewable Solutions Two LLC ("KRS Two") solar facilities that were
13 approved in Docket Nos. 2011-0323 and 2012-0383, respectively, including
14 the approval of the subsequent Tax Equity Flip structure financing
15 arrangement for KRS Two in Docket No. 2013-0202.

16 Most recently, I sponsored responses to Information Requests in
17 connection with KIUC's application for the West Kauai Energy Project in
18 Docket No. 2020-0218, which was approved in Decision and Order
19 No. 38095 issued on December 1, 2021, and I performed a similar advisory
20 function in Docket No. 2020-0088 for KIUC's Application for Approval of
21 Deferred Accounting Treatment to Establish Regulatory Asset Associated

1 with the COVID-19 Pandemic, which was approved in Decision and Order
2 No. 37252 issued on July 31, 2020.

3 **II. PURPOSE OF TESTIMONY**

4 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

5 A. My testimony focuses primarily on a discussion of the appropriate financial
6 ratio, which is the Debt Service Coverage (“DSC”) Ratio, that should be
7 used to determine KIUC’s revenue requirement in this proceeding. As
8 further discussed below, the use of the DSC Ratio is appropriate in light of
9 the KIUC Indenture arrangement that was approved by this Commission in
10 Docket No. 2017-0346 and consummated in April 2019, where the DSC
11 Ratio is now the principal measure of loan covenant compliance.
12 Consequently, KIUC needs to align its regulatory approach to ratemaking
13 with its financial covenants under its existing Indenture arrangement.

14 I will also provide a brief discussion of the outcome of KIUC’s only
15 prior rate case in its twenty years of existence in Docket No. 2009-0050,
16 and the rationale for moving to the Indenture arrangement noted above.
17 This testimony will also discuss why it would be beneficial for KIUC to
18 establish a credit rating with one or more of the three major credit rating
19 agencies,¹ where the Indenture and use of the DSC Ratio are the foundation

¹ The three major credit rating agencies are Standard & Poor’s Ratings Services (“S&P”), Moody’s Investors Services (“Moody’s”), and Fitch Ratings (“Fitch”), which are all for-profit credit rating agencies with revenues provided by annual fees from rated companies and investors that buy rated securities.

1 of the credit analysis process. Among other things, KIUC's ability to raise
2 bond investor long-term debt and its credit worthiness as a counterparty for
3 additional renewable energy project development efforts would be positively
4 impacted by a credit rating from one of the major agencies. My testimony
5 further examines the uniqueness of KIUC as a distribution electric
6 cooperative due to its relatively large investment in generation and
7 transmission assets, which necessitates a comparison to a more tailored
8 group of electric cooperative peers to establish customary financial metrics
9 to be used in determining a fair and reasonable revenue requirement in this
10 rate case proceeding. In summary, my testimony addresses the following
11 topics:

- 12 • Provide a brief discussion of KIUC's only previous rate case
13 in Docket No. 2009-0050;
- 14 • Provide a brief discussion of the rationale for KIUC moving to
15 the Indenture arrangement that was the subject of Docket
16 No. 2017-0346;
- 17 • Discuss why the use of the Times Interest Earned Ratio
18 ("TIER"), which was used in KIUC's only other rate case over
19 12 years ago in Docket No. 2009-0050, is no longer applicable
20 and should have no precedent value in establishing KIUC's
21 revenue requirement in this rate case due to the mathematical
22 variance of TIER over the life of a financing arrangement;
- 23 • Discuss how KIUC is unique compared to the vast majority of
24 electric distribution cooperatives;
- 25 • Provide illustrative calculations of the DSC Ratio and Equity
26 Ratio for KIUC for the fiscal year ended December 31, 2021
27 under the Indenture formulas and compare that calculation to
28 the traditional definition of DSC Ratio used by CFC in its

- 1 comparative data analysis and rating agencies in their rating
2 process;
- 3 • Provide comparisons of recent KIUC financial results to
4 electric cooperative peers to establish the range of just and
5 reasonable DSC Ratios based on industry precedents;
 - 6 • Explain rating agency expectations for electric distribution
7 cooperatives and comparison of KIUC to other rated
8 distribution cooperatives based on financial metrics; and
 - 9 • Provide my expert opinion regarding the appropriate DSC
10 Ratio to be used to establish KIUC's revenue requirement.

11 **III. KIUC'S ONLY PREVIOUS RATE CASE**

12 **Q. AS IT RELATES TO THE PURPOSE OF YOUR TESTIMONY, PLEASE**
13 **DISCUSS SOME OF THE IMPORTANT ISSUES AND CONCLUSIONS**
14 **THAT WERE DETERMINED IN KIUC'S RATE CASE IN DOCKET**
15 **NO. 2009-0050?**

16 A. A summary of KIUC's only previous rate case, which occurred over
17 twelve years ago in Docket No. 2009-0050, is included as part of
18 Attachment DJB-104 to David J. Bissell's testimony (Exhibit 10-T-100), and
19 I wish to incorporate that discussion into my testimony. I think the most
20 important result from that rate case proceeding was that KIUC's revenue
21 requirement was appropriately not established based on the traditional
22 investor-owned utility ("IOU") rate of return methodology, but instead it was
23 established based on the principal measure of financial performance used
24 by KIUC's lenders at that time (i.e., TIER as further discussed below). The
25 TIER-based lender requirement is in contrast to the traditional IOU

1 ratemaking methodology where in the traditional IOU setting, a return on
2 equity and weighted average cost of capital is applied to a rate base
3 calculation to determine the rate of return on that rate base that would in
4 effect belong to the IOU's shareholders. The revenue requirement
5 necessary to deliver that earnings level is then calculated as the basis for
6 establishing the electric service rates in the IOU ratemaking methodology.

7 As discussed in Attachment DJB-104 mentioned above, TIER was
8 the financial performance and loan covenant ratio used by KIUC's lenders
9 at the time of that rate case. More specifically, TIER was at that time the
10 principal measure of KIUC's financial performance to determine compliance
11 with its lending covenants. KIUC had purchased the Kauai Electric assets
12 in November 2002 through a 100% debt financed purchase, which included
13 RUS and CFC as financing parties. Consequently, the first rate case for
14 KIUC was acutely focused on lender expectation as defined by the principal
15 financial metric (i.e., TIER) used at that time by those lenders to assess
16 KIUC's creditworthiness.

1 **IV. TRANSITION TO INDENTURE ARRANGEMENT**

2 **Q. CAN YOU DESCRIBE THE TRANSITION KIUC IMPLEMENTED IN 2019**
3 **THROUGH THE INDENTURE ARRANGEMENT THAT WAS THE**
4 **SUBJECT OF DOCKET NO. 2017-0346?**

5 A. As noted above, KIUC entered into and consummated an Indenture
6 arrangement in April 2019, which arrangement was approved by this
7 Commission in Decision and Order No. 35101 issued on
8 December 18, 2017 in Docket No. 2017-0346. In my opinion, this
9 arrangement in effect implemented a transition in financing approach from
10 (1) a purely asset-based financing model characteristic of RUS debt with
11 highly proscriptive covenants that were found in the Restated Purchase
12 Money Mortgage and Security Agreement (“Joint Mortgage”) and
13 associated loan agreement that included CFC and RUS as joint lenders, to
14 (2) the Indenture arrangement that provides for greater access to capital
15 sources with fewer administrative lender approvals and requirements
16 imposed. This in my view was an important step for KIUC to transition from
17 the asset-based financing characteristic of RUS single asset loans that
18 normally apply to small distribution cooperatives that are the principal
19 beneficiaries of the RUS lending program, to instead giving KIUC the ability
20 to finance the enterprise as a whole with capital structures, loan terms,
21 covenants, and the ability to place new debt that are more reflective of

1 KIUC's situation with significant investments in generation and transmission
2 assets similar to the larger electric cooperative organizations.

3 As a part of the Indenture arrangement, KIUC was able to finalize the
4 form of the Indenture and establish U.S. Bank National Association as the
5 Trustee to administer existing and future debt issuances. An Indenture is
6 the norm for Generation and Transmission ("G&T") organizations.

7 The Indenture allows for the issuance of new debt so long as the
8 following two principal financial metrics are met: (1) DSC Ratio; and
9 (2) Equity to Capitalization ("Equity") Ratio. The Indenture was also utilized
10 to bring CoBank into a lending relationship with KIUC without the need to
11 redo the Joint Mortgage structure to add a new lender. This Indenture
12 allows for greater competition among lenders where, in comparison, the
13 Joint Mortgage required the additional agreement of the existing lenders in
14 order to bring in a new lender.

15 In addition, by moving to an Indenture, KIUC opened the opportunity
16 to access the capital markets of insurance companies and pension funds
17 that are active investors in the fixed rate term notes issued in private
18 placements by electric utilities, both cooperative G&Ts and investor-owned.
19 The broadened access to capital markets and diversification of capital
20 sources was a key element in the KIUC decision to pursue the Indenture
21 arrangement.

1 The Indenture is also consistent with KIUC's current desire to obtain
2 a credit rating from one of the three major credit rating agencies as further
3 discussed below. A rating would place KIUC in the small peer group
4 (approximately 9 others) of electric distribution cooperatives with such a
5 credit rating.

6 **V. WHY TIER IS NO LONGER APPLICABLE TO ESTABLISH**
7 **KIUC'S REVENUE REQUIREMENT**

8 **Q. IN YOUR OPINION, SHOULD TIER OR ITS USE IN DOCKET**
9 **NO. 2009-0050 HAVE ANY BEARING IN THE DETERMINATION OF**
10 **KIUC'S REVENUE REQUIREMENT IN THIS RATE CASE**
11 **PROCEEDING? PLEASE EXPLAIN WHY OR WHY NOT.**

12 A. No. It is my strong opinion that TIER has no precedent value in this
13 proceeding and should not be considered for the purpose of determining
14 KIUC's revenue requirement in this proceeding. My opinion is based on
15 two separate factors, either of which supports my professional opinion.

16 **Q. PLEASE EXPLAIN THE TWO FACTORS THAT SUPPORT YOUR**
17 **OPINION THAT TIER SHOULD NOT BE USED AS A PRECEDENT IN**
18 **THIS PROCEEDING TO DETERMINE KIUC'S REVENUE**
19 **REQUIREMENT?**

20 A. The first reason is that none of KIUC's financing arrangements today even
21 mention TIER as a financial metric, basis of a financial covenant, or
22 benchmark to measure KIUC's financial performance. As discussed above

1 and in Attachment DJB-104, KIUC's revenue requirement in Docket
2 No. 2009-0050 was based on the financial performance and loan covenant
3 ratio utilized by KIUC's lenders, which at that time was TIER. While I fully
4 agree that KIUC's revenue requirement should be based on the financial
5 and loan covenant performance ratio(s) imposed by KIUC's lenders, the
6 applicable ratio is no longer TIER – i.e., as noted above, TIER is no longer
7 an operative concept or has any relevance under the current KIUC financing
8 arrangements. As I further discussed below in my testimony regarding
9 rating agency considerations, it would be, in my professional opinion, a
10 credit negative for KIUC to have a regulatory framework for ratemaking that
11 is not in alignment with its current financial covenants.

12 The second reason is that the determination of a just and reasonable
13 TIER for ratemaking purposes has no relevance over time as loans mature.
14 In the early years of a mortgage-style loan with level annual payments
15 throughout its term, most of the debt service (comprised of both interest and
16 principal repayment) is interest. In the later years of that same loan, the
17 majority of the payment represents principal repayment, not interest. As a
18 result, a revenue requirement determined during the beginning of a loan
19 based on TIER will not be relevant in the later years of that loan.

20 To illustrate this, the example below in Table 1 shows the impact
21 over time for a 25-year loan, where a revenue requirement based on a TIER
22 of 2.00 in the first year of a loan's interest expense would produce a

1 5.76 TIER at the same revenue requirement in year 20, and a 31.05 TIER
2 in the final year of the loan. The table also provides an example of how the
3 use of a constant TIER to determine the revenue requirement if held at that
4 TIER level (which only includes interest expense during the applicable
5 period of time) would not even provide a revenue requirement sufficient for
6 the utility to pay its debt service (which includes interest and principal
7 repayment) by year 11.

1

Table 1

TIER Analysis						
Rate	4.48%	Avg. of 10/24/22 FFB rates for 20 yr and 30 yr terms				
TIER	2.00	TIER = (Margins + LTD Interest) / LTD Interest				
	\$ 8,960,000	Revenue Requirement to achieve 2.0 TIER on Year 1 Interest				
Year	Principal	Interest	Total Payment	TIER Revenue Requirement at 2.0 Interest Expense	Revenue Requirement less Debt Service	TIER Calculated on Year 1 Revenue Requirement
0	\$ 100,000,000	\$ -	\$ 100,000,000	\$ -	\$ -	
1	(2,250,027)	(4,480,000)	(6,730,027)	8,960,000	2,229,973	2.00
2	(2,350,828)	(4,379,199)	(6,730,027)	8,758,398	2,028,371	2.05
3	(2,456,145)	(4,273,882)	(6,730,027)	8,547,763	1,817,737	2.10
4	(2,566,180)	(4,163,846)	(6,730,027)	8,327,693	1,597,666	2.15
5	(2,681,145)	(4,048,882)	(6,730,027)	8,097,763	1,367,736	2.21
6	(2,801,261)	(3,928,766)	(6,730,027)	7,857,532	1,127,506	2.28
7	(2,926,757)	(3,803,270)	(6,730,027)	7,606,539	876,513	2.36
8	(3,057,876)	(3,672,151)	(6,730,027)	7,344,302	614,275	2.44
9	(3,194,869)	(3,535,158)	(6,730,027)	7,070,316	340,290	2.53
10	(3,337,999)	(3,392,028)	(6,730,027)	6,784,056	54,029	2.64
11	(3,487,541)	(3,242,486)	(6,730,027)	6,484,971	(245,055)	2.76
12	(3,643,783)	(3,086,244)	(6,730,027)	6,172,488	(557,539)	2.90
13	(3,807,024)	(2,923,002)	(6,730,027)	5,846,005	(884,022)	3.07
14	(3,977,579)	(2,752,448)	(6,730,027)	5,504,895	(1,225,131)	3.26
15	(4,155,775)	(2,574,252)	(6,730,027)	5,148,504	(1,581,523)	3.48
16	(4,341,953)	(2,388,073)	(6,730,027)	4,776,147	(1,953,880)	3.75
17	(4,536,473)	(2,193,554)	(6,730,027)	4,387,108	(2,342,919)	4.08
18	(4,739,707)	(1,990,320)	(6,730,027)	3,980,640	(2,749,387)	4.50
19	(4,952,046)	(1,777,981)	(6,730,027)	3,555,962	(3,174,065)	5.04
20	(5,173,897)	(1,556,129)	(6,730,027)	3,112,259	(3,617,768)	5.76
21	(5,405,688)	(1,324,339)	(6,730,027)	2,648,678	(4,081,349)	6.77
22	(5,647,863)	(1,082,164)	(6,730,027)	2,164,328	(4,565,699)	8.28
23	(5,900,887)	(829,140)	(6,730,027)	1,658,280	(5,071,747)	10.81
24	(6,165,247)	(564,780)	(6,730,027)	1,129,560	(5,600,467)	15.86
25	(6,441,450)	(288,577)	(6,730,027)	577,154	(6,152,873)	31.05
Total	\$ (100,000,000)	\$ (68,250,671)	\$ (168,250,671)	\$ 136,501,342	\$ (31,749,329)	

2

- 1 • KIUC is not a part of a G&T cooperative system. KIUC manages its
2 own portfolio of owned generation resources (including through a
3 subsidiary structure) and purchased power resources while also
4 owning a significant amount of transmission facilities operated at
5 57,100 volts. KIUC is subject to the counterparty credit and
6 collateral requirements of these bilateral power supply contracts.
7 For all but approximately 50 electric distribution cooperatives, these
8 power supply and transmission investments are managed through
9 joint ownership of G&T cooperatives and paid for through a single
10 monthly power supply bill. In contrast, KIUC must own its G&T
11 assets and finance them on its balance sheet. This, coupled with
12 higher operation costs due to KIUC's geographic isolation and
13 island location, results in a higher utility plant investment and costs
14 per consumer than is the norm for the vast majority of electric
15 distribution cooperatives. In other words, KIUC has a much larger
16 comparative asset base with a correspondingly much smaller
17 customer base over which to spread out these investments and
18 costs as compared to most electric distribution cooperatives.
- 19 • With over \$656 million in gross utility plant, KIUC's financing
20 requirements are larger and require more diversity in financing
21 sources than the vast majority of electric distribution cooperatives.
22 However, due to this larger size and scope, KIUC is large enough

1 in comparison to the majority of electric distribution cooperatives to
2 have the ability to attract long-term debt from capital market
3 investors such as pension funds and insurance companies that buy
4 electric utility notes and bonds with maturities up to 30 years.

- 5 • With the size of KIUC's capitalization requirements, it is at or near
6 the top of the single credit borrower list for the two primary non-RUS
7 banking sources of electric cooperative debt capital (i.e., CFC and
8 CoBank).

9 As a result of the above and the resulting need for continued access
10 to debt capital and on reasonable terms and costs, including the potential
11 future use of direct private placements to insurance and pension funds that
12 buy electric cooperative long-term bonds, KIUC must be more focused on
13 maintaining a profile conducive to a high credit rating from one of the major
14 credit rating agencies as further discussed below. These considerations
15 are not a factor for the vast majority of electric distribution cooperatives. It
16 should also be noted that KIUC's ability to raise bond investor long-term
17 debt and its credit worthiness as a counterparty for additional renewable
18 energy project development efforts would be positively impacted by a credit
19 rating from one of the major agencies.

1 **VII. DSC RATIO AND EQUITY RATIO**

2 **Q. YOU PREVIOUSLY MENTIONED THAT THE INDENTURE ALLOWS**
3 **FOR THE ISSUANCE OF NEW DEBT SO LONG AS THE**
4 **TWO PRINCIPAL FINANCIAL METRICS ARE MET (I.E., DSC RATIO**
5 **AND EQUITY RATIO). HAVE YOU CALCULATED THE EQUITY RATIO**
6 **AND DSC RATIO FOR KIUC CONSISTENT WITH THE TERMS OF THE**
7 **INDENTURE?**

8 **A. Yes. KIUC's Equity Ratio for the fiscal year ended December 31, 2021, is**
9 **provided below:**

10 **Table 2**

Equity Ratio	
	Actual 2021
a) Aggregate Margins & Equities	\$ 133,744,130
b) Add back Negative Aggregate Margins & Equities from Subsidiaries	9,436,818
c) Add back Other Comprehensive Loss	864,936
d) Aggregate Margins & Equities (Numerator)	\$ 144,045,884
e) Total Long Term Debt	240,569,167
f) Total Long Term Debt & Equities (Denominator)	\$ 384,615,051
g) Equity Ratio	37.45%

11

12 The DSC Ratio is generally regarded as a better measure of financial
13 performance than the older RUS construct of TIER discussed earlier in my
14 testimony. This is because the DSC Ratio explicitly addresses the
15 combined fixed charges of debt service, which is comprised of both interest
16 expense and scheduled principal repayment. Margins are combined with
17 interest expense and the non-cash charge for depreciation, after elimination

1 of earnings from subsidiaries and non-cash margins from other income, to
 2 provide a numerator reflective of KIUC’s operating cash flow. This cash
 3 flow numerator is then divided by principal and interest, excluding subsidiary
 4 debt, to determine the DSC Ratio. KIUC’s DSC Ratio for the fiscal year
 5 ended December 31, 2021 is provided below:

6 **Table 3**

Debt Service Coverage Ratio (DSC)		Actual 2021
a)	Net Margins	\$ 8,296,853
b)	Add back Loss from Subsidiaries	1,319,660
c)	Add back Long Term Interest	7,210,177
d)	Depreciation & Amortization	18,808,331
e)	Adjusted Margins (Numerator)	\$ 35,635,021
f)	Long Term Interest	7,210,177
g)	Long Term Principal	14,422,637
h)	Total Debt Service (Denominator)	21,632,814
i)	Debt Service Coverage Ratio	1.65

7

8 **Q. DOES THE ABOVE CALCULATION OF THE DSC RATIO AND EQUITY**
 9 **RATIO CORRESPOND TO THE CALCULATION THAT CFC USES, THE**
 10 **INDENTURE USES OR A RATING AGENCY WOULD LIKELY USE TO**
 11 **CALCULATE THE SAME RATIOS? IF IT DOES NOT, PLEASE**
 12 **EXPLAIN.**

13 **A.** The DSC Ratio and Equity Ratio provided above use the calculation that
 14 the Indenture uses. In comparison, the CFC calculation of the DSC Ratio
 15 and Equity Ratio would normally not eliminate the impact of subsidiary
 16 earnings and subsidiary debt (i.e., the impact of KRS One and KRS Two in

1 KIUC's situation, which affiliated arrangements were the subject of Docket
2 Nos. 2011-0323, 2012-0383 and 2013-0202 mentioned above). For
3 purpose of my testimony, I refer to the DSC calculation which does not
4 remove subsidiary operations as the "Traditional DSC Ratio." This
5 Traditional DSC Ratio uses the net margins after the subsidiary results are
6 included, consistent with how KIUC reports financial results for its audited
7 financial statements, as the basis for the DSC Ratio calculation. In
8 comparison, the Indenture calculations eliminate any subsidiary earnings or
9 losses and any debt service associated with the subsidiary debt in the
10 calculation of the DSC Ratio for Indenture compliance purposes. For
11 purposes of my testimony, I refer to the above DSC calculation as the
12 "Indenture DSC Ratio."

13 Because KIUC has subsidiary losses from its KRS renewable
14 subsidiaries, the Traditional DSC Ratio would show a lower DSC Ratio than
15 the Indenture DSC Ratio. In the traditional CFC calculation methodology,
16 the Equity Ratio would also be calculated including the equity and debt
17 associated with the subsidiaries.

18 For rating agency purposes, it is likely that the DSC Ratio and Equity
19 Ratio would be calculated the same way as the Traditional DSC Ratio and
20 not the Indenture DSC Ratio, and thus would include subsidiary impacts in
21 the corresponding ratios. The Indenture is a stand-alone calculation unique
22 to the KIUC Indenture definitions (thus not including subsidiaries), whereas

1 the traditional calculation by CFC and by the rating agencies would use the
2 more traditional calculations which include the impact of subsidiary
3 operations on the audited financial statement results.

4 **Q. WHY DOES THE KIUC INDENTURE ARRANGEMENT AND DSC RATIO**
5 **CALCULATION UNDER THE INDENTURE ELIMINATE SUBSIDIARY**
6 **OPERATIONS?**

7 A. At the time, KIUC's Indenture arrangement was developed in recognition of
8 the possible need to expand the use of the subsidiary structure to pursue
9 renewable project development opportunities and continue the possible use
10 of tax-equity flip or other structures to monetize potential tax benefits as was
11 the case for KRS One and KRS Two above. The financing for those
12 subsidiaries would be separate and stand-alone, including the potential use
13 of third-party tax equity investments, and KIUC believed that separating the
14 stand-alone subsidiary operations was necessary to isolate the financial
15 results of its core distribution cooperative operations from its renewable
16 project financing arrangements for the calculation of the principal financial
17 metric pursuant to the Indenture arrangement.

1 **VIII. PEER GROUP ANALYSIS TO BENCHMARK THE**
2 **APPROPRIATE FINANCIAL METRICS TO ESTABLISH KIUC'S**
3 **REVENUE REQUIREMENT**

4 **Q. BASED ON KIUC'S UNIQUENESS, IS THERE A SUBSET OF THE**
5 **ELECTRIC DISTRIBUTION COOPERATIVE NETWORK THAT**
6 **PROVIDES A USEFUL PEER GROUP FOR COMPARATIVE**
7 **PURPOSES?**

8 **A.** Yes. CFC obtains financial reporting information from its various
9 borrowers – however, that information is provided on a confidential basis to
10 CFC by the borrowers and as such, this information is not available to KIUC
11 or the public. However, KIUC asked CFC to help KIUC define a peer group
12 that is reflective of KIUC's unique factors discussed above. This resulted in
13 CFC providing KIUC with a peer group of approximately 40 electric
14 distribution cooperatives (including KIUC but with no other name or
15 identifying information about the peers), which was compiled based on
16 meeting two criteria; namely, total utility plant in excess of \$250 million and
17 no affiliation with a cooperative G&T association. These peers either
18 generate their own power (KIUC and Alaska cooperatives), have significant
19 investment in high voltage transmission (contributing to the total utility plant
20 criteria), or purchase power from investor-owned and/or governmental
21 power providers (Bonneville Power, TVA, and Lower Colorado River
22 Authority). These electric distribution cooperatives represent only about 2%
23 of the industry. For the purposes of benchmarking KIUC against these

1 industry peers, I refer to these 40 peers (including KIUC) as the “Hybrid
2 Peer Group”.

3 CFC also provided an even more closely comparable peer group
4 comprised of the 10 largest distribution cooperatives who also generate
5 their own power supply as an integrated generation, transmission, and
6 distribution (“GT&D”) cooperative system. Although the names of the other
7 9 GT&D peers were not made available by CFC, it is likely that the peer
8 group, which I refer to as the “Directly Comparable Peer Group”, is largely
9 made up of Alaska electric cooperatives who generate a significant portion
10 of their own power requirements due to their geographic remoteness and
11 the lack of a statewide power market.

12 In addition, I compared KIUC to the 9 electric distribution
13 cooperatives that are rated by at least one of the major ratings agencies,
14 which I refer to as the “Rated Distribution Peer Group”. The Rated
15 Distribution Peer Group is separate from the CFC provided data referred to
16 above. These cooperatives have accessed the capital markets and
17 maintain an active credit rating due to their size or complexity of operations,
18 counterparty power supplier requirements, or desire for diversity of capital
19 sources. The criteria on which these electric distribution cooperatives are
20 rated, including financial metrics and qualitative factors such as the
21 perceived support of state utility commissions for those that are rate
22 regulated, are far more comparable to KIUC than the different criteria and

1 financial metrics that are used to set the ratings for the
 2 31 G&T organizations that are rated by at least one rating agency.
 3 G&T organizations are wholesale power providers to their distribution
 4 cooperative members, and as such their principal rating criteria revolves
 5 around the terms of the wholesale power contract provisions, which are not
 6 applicable to a distribution cooperative with retail consumers like KIUC.

7 The names of the 9 electric distribution cooperatives in the Rated
 8 Distribution Peer Group are known, as the credit rating report is published
 9 by the rating agency. Table 4 below summarizes the state in which each
 10 cooperative is located, the rating by agency (most are rated by only one or
 11 two agencies), whether it has G&T assets, Equity to Capitalization Ratio,
 12 the historical or reported DSC Ratio, and whether it is rate regulated by a
 13 State utilities commission. As the table demonstrates, there is a correlation
 14 between a higher rating level and the regulatory status and equity levels,
 15 where higher equity levels, higher DSC Ratios, and the lack of state rate
 16 regulation appear to be positive rating criteria.

Table 4

Cooperative	Credit Rating		Equity/ Capital	DSC Ratio	Rate Regulated	
	State	S&P/Moody's/Fitch				G&T
Brunswick EMC	NC	A//A+	Yes	43.4%	1.81	No
Chugach Electric	AK	A//A-	No	14.7%	1.50	Partial
CoServ Electric	TX	//A	Yes	52.2%	2.50	No
Delaware Electric Cooperative, Inc.	DE	A+//	Yes	57.2%	NA	No
Guadalupe Valley Electric	TX	A-//A+	No	47.3%	1.48	No
New Hampshire Electric	NH	A//	No	56.5%	1.94	Yes
Overton Power District #5	NV	/Baa1 (BBB+)/A	No	72.0%	3.08	No
Sulphur Springs Valley Electric	AZ	A-//A	Yes	55.4%	2.87	Yes
Vermont Electric	VT	A+//BBB+	No	51.2%	3.75	Yes

1 **Q. HOW DOES KIUC’S 2021 FINANCIAL PERFORMANCE COMPARE TO**
2 **OTHER ELECTRIC COOPERATIVES ON THE EQUITY RATIO AND THE**
3 **DSC RATIO FINANCIAL METRICS UNDER THE CFC TRADITIONAL**
4 **METHODOLOGY?**

5 A. KIUC is able to obtain information from CFC that provides certain
6 information that ranks KIUC against other reporting cooperatives. For the
7 fiscal 2021 year ended December 31, 2021, KIUC ranked 694th out of
8 812 reporting cooperatives on its Traditional DSC Ratio. That means that
9 KIUC was 694th lowest from the top level of the highest DSC Ratio reported.
10 The median value for the industry DSC Ratio was 2.23 compared to KIUC
11 with a value of 1.64 (using the CFC Traditional DSC Ratio calculation
12 methodology). On the Equity Ratio, Equity as a % of Total Capitalization,
13 KIUC ranked 706th out of 812 reporting cooperatives, with the lower ranking
14 reflecting less equity as a percentage of capitalization. KIUC’s
15 38.55% Equity Ratio places it well below the median value of 52.51%.

16 **Q. IS THE ENTIRE UNIVERSE OF ELECTRIC DISTRIBUTION**
17 **COOPERATIVES THE RIGHT PEER GROUP SAMPLE TO COMPARE**
18 **KIUC’S FINANCIAL PERFORMANCE TO FOR THE PURPOSE OF**
19 **BENCHMARKING A JUST AND REASONABLE DSC RATIO AND**
20 **EQUITY RATIO?**

21 A. No. The lower Equity Ratio for KIUC is heavily influenced by the unique
22 factors discussed above, where KIUC began with 0% equity when it

1 acquired Kauai Electric in November 2002, KIUC has a much higher
2 investment in utility plant than the vast majority of other distribution
3 cooperatives due to its separate and geographically isolated nature
4 including the need for G&T asset ownership and that it cannot belong to a
5 G&T organization. For the reasons discussed above, I do not believe that
6 the entire universe of distribution cooperatives is the relevant peer group for
7 comparison purposes.

8 As discussed above, KIUC has obtained the Hybrid Peer Group from
9 CFC, which limits the peer group for comparison by qualifying criteria to a
10 universe of approximately 40 electric cooperatives (no names provided by
11 CFC) that share the characteristics of (i) not being associated with a G&T
12 cooperative for power supply and transmission services, (ii) having
13 investments in G&T assets, and (iii) having total utility plant over
14 \$250 million. A comparison of KIUC 2021 financial results to this Hybrid
15 Peer Group still demonstrates that KIUC has a relatively low DSC Ratio and
16 Equity Ratio. The median DSC Ratio value for the Hybrid Peer Group was
17 2.55 in comparison to the KIUC 1.64 amount, and the median Equity Ratio
18 value was 56.35% compared to the KIUC value of 38.55%. As a result,
19 even based on this defined peer group with unique characteristics similar to
20 KIUC (with higher assets owned per distribution meter), KIUC has a lower
21 DSC Ratio and a lower Equity Ratio than its peers in the Hybrid Peer Group.

1 In my opinion, the benchmarking of KIUC 2021 financial results to
2 the Directly Comparable Peer Group is likely the most illuminating because
3 this is a peer group most closely comparable to KIUC as a GT&D electric
4 cooperative. While the number of peers of other cooperatives in this group
5 (i.e., 9) may not be as statistically significant as a larger peer group, like the
6 Hybrid Peer Group, what is lacked in numbers is made up for in
7 comparability. With a total peer group of 10 cooperatives (including KIUC),
8 the Directly Comparable Peer Group demonstrates a financial metric
9 benchmarking comparison which has meaningfully informed my
10 professional opinion on what metric should be used to determine KIUC's
11 just and reasonable revenue requirement. For the Directly Comparable
12 Peer Group, the median DSC Ratio value was 1.70 in comparison to the
13 KIUC 1.64 amount, and the median Equity Ratio value was 38.83%
14 compared to the KIUC value of 38.55%.

15 **Q. BASED ON YOUR PROFESSIONAL OPINION, WHAT IS THE**
16 **APPROPRIATE FINANCIAL METRIC THAT SHOULD BE USED TO**
17 **DETERMINE KIUC'S REVENUE REQUIREMENT IN THIS**
18 **PROCEEDING?**

19 A. From my perspective, and in my professional opinion, the DSC Ratio is the
20 only relevant metric to use for determining KIUC's revenue requirement in
21 this proceeding. It is the principal metric of financial performance under
22 KIUC's current financing arrangements as discussed above; it allows for

1 benchmarking against other electric cooperatives to establish an industry
2 standard expectation of lenders to electric cooperatives; and it is the basis
3 of credit rating criteria for rating agencies that desire to produce
4 comparative data across the electric utility industry on behalf of lenders and
5 bond investors.

6 In my opinion, maintaining a solid DSC Ratio will mean that over time
7 the Equity Ratio will take care of itself. Said another way, at a sufficiently
8 creditworthy and financially sustainable DSC Ratio, the Equity Ratio that
9 results from that financial performance will ensure KIUC's access to
10 long-term debt financing at the lowest possible rates, even in challenging
11 credit market circumstances, due to a highly creditworthiness indicative of
12 industry peer Equity Ratio levels.

13 **IX. CREDIT RATINGS AND EXPECTATIONS FOR ELECTRIC**
14 **COOPERATIVES**

15 **Q. WHY ARE CREDIT RATINGS DETERMINED IN PART BY**
16 **CALCULATION OF FINANCIAL RATIOS?**

17 **A.** Credit ratings and the financial analysis performed by lenders and bond
18 market investors fundamentally involve an assessment of the likelihood that
19 the electric utility's debt obligations will be paid on time and in their full
20 amounts. The calculation of financial ratios which reflect the amount of
21 coverage over and above the debt service obligations that are collected in
22 revenues and the equity level that provides a collateral cushion to the debt

1 holders' claim on the assets are important considerations to prospectively
2 assess the credit quality of a borrower. These credit metrics are expressed
3 in industry standard calculations that look at ratios to allow for comparison
4 across a similar peer group of electric utilities. That comparative analysis
5 is important because electric utilities are essentially competing in the capital
6 markets for access to capital and at reasonable rates, and the higher rated
7 utilities are generally more attractive to bank lenders and bond investors
8 and are, therefore, able to borrow at lower costs.

9 The competition for debt capital is especially important to electric
10 cooperatives like KIUC because they can't sell equity capital to
11 investors/shareholders (preferred and common stock) and must instead
12 solely rely on debt capital, the revenue received from the rates it charges
13 and retained margins for their capital needs to support investment in their
14 utility systems.

15 **Q. DO YOU FIND ONE OF THE CREDIT RATING METHODOLOGIES**
16 **PARTICULARLY ILLUMINATING IN HOW A RATING AGENCY MIGHT**
17 **VIEW KIUC FOR ITS ELECTRIC COOPERATIVE RATINGS CRITERIA?**

18 **A.** Yes, I tend to favor the Moody's rating methodology for Regulated Electric
19 and Gas Utilities because it is a matrix driven approach with quantitative
20 factors weighted to establish the overall credit scoring result. The Moody's
21 Methodology breaks four key factors into subcategories.

1 The four key factors important in the Moody's assessment grid are:

- 2 1. Regulatory Framework
- 3 2. Ability to Recover Costs and Earn Returns
- 4 3. Diversification
- 5 4. Financial Strength

6 The Regulatory Framework and the Ability to Recover Costs and
7 Earn Returns make up 50% of the combined credit rating assessment.
8 There is specific language that associates a more or less supportive
9 regulatory climate to a particular credit rating. In general, regulatory
10 frameworks that place a high degree of concern on the recoverability of cost
11 in a timely manner and are supportive of utilities and eliminate doubt as to
12 the importance of credit rating criteria are indicative of higher credit ratings.
13 In comparison, instances of incursions into the utility structure by
14 self-generation, net metering, and distributed generation that are growing
15 significantly or having a meaningful impact on rates for customers that
16 remain with the utility have a negative impact on the credit scoring.

17 Many states that have implemented aggressive renewable energy
18 and distributed energy resource public policy objectives are generally
19 thought of by the ratings community to have a legislative and regulatory
20 structure that is conducive to promoting potentially disruptive incursions into
21 the traditional integrated utility model. Only strong support for the credit
22 metrics and focus on minimizing regulatory lag can serve to mitigate these

1 potentially negative credit rating attributes. The outcome of this rate case
2 proceeding will be a tangible signal as to the credit supportiveness of
3 KIUC's regulatory framework especially with the inability to raise equity
4 capital as noted above, and a positive outcome in the proceeding could go
5 a long way to demonstrating a generally credit supportive posture of KIUC's
6 regulators towards the financial goals and objectives adopted by the
7 customer-members elected Board.

8 The Fitch Rating Criteria also specifically addresses elements of
9 regulatory oversight, or more importantly for the public power sector lack of
10 public utility commissions regulatory oversight of retail rates, as a key rating
11 criteria. The general rating criteria for Fitch include: (i) Revenue
12 Defensibility, (ii) Operating Risk, (iii) Financial Profile, and (iv) Asymmetric
13 Additive Risk Factors.

14 **Q. IN DAVID BISSELL'S TESTIMONY (EXHIBIT 10-T-100), HE NOTES**
15 **THAT THERE ARE OTHER REGULATORY OR RATEMAKING**
16 **APPROACHES FOR REVENUE AND EXPENSE DECOUPLING**
17 **METHODOLOGIES TO REDUCE FINANCIAL RISK. CAN YOU**
18 **DISCUSS THE CREDIT RATING AGENCY AND CAPITAL MARKETS**
19 **VIEW OF THESE KINDS OF METHODOLOGIES?**

20 **A.** In many jurisdictions, a regulatory framework has been developed to
21 decouple the electric utility's revenues from the volumetric sale of electricity
22 and to recover some expenses through a revenue adjustment mechanism

1 between full rate cases, which I refer to as a "Decoupling/RAM" framework.
2 These mechanisms are often implemented to lessen the potential public
3 policy impact and resulting credit negatives of distributed energy resources
4 (like rooftop solar installations) and other energy policies that are
5 considered disruptive to the traditional integrated utility model. Credit rating
6 agencies and capital markets generally view these types of
7 Decoupling/RAM frameworks as credit positives as they have the potential
8 to lower financial risk to the utility and decrease regulatory lag for the timely
9 recovery of costs. It is my understanding that the Hawaiian Electric
10 Companies have such a Decoupling/RAM framework but that KIUC does
11 not such a framework.

12 **Q. IN YOUR OPINION, WILL THE OUTCOME OF THIS RATE CASE**
13 **PROCEEDING HAVE AN IMPACT ON KIUC'S CREDIT RATING**
14 **OBJECTIVE?**

15 A. Yes. The ultimate credit rating that KIUC obtains from one or more of the
16 major credit rating agencies will be heavily influenced by the outcome of this
17 rate case proceeding. As noted above and in Attachment DJB-104 to
18 David Bissell's testimony, unlike an IOU, KIUC as a cooperative does not
19 have the ability to raise equity capital and must remain financially viable only
20 through (1) the revenues it receives from the rates it charges and the
21 resulting equity it is able to build up over time, and (2) debt financing from
22 its lenders. The revenue requirement that KIUC is authorized in this

1 proceeding, including the DSC Ratio that it will be based upon and the
2 resulting rates that KIUC can charge its customers/members, will directly
3 influence KIUC's financial viability and the criteria considered by the
4 applicable rating agencies.

5 This opinion is based on the analysis of the credit rating
6 methodologies of Fitch, S&P and Moody's which are published and updated
7 from time to time. Moody's Rating Methodology for US Electric
8 Generation & Transmission Cooperatives was last updated on
9 November 22, 2021, and although it does not directly address distribution
10 cooperatives like KIUC, the updated methodology does discuss the
11 important elements of financial metrics and considerations that go into the
12 Moody's rating process. Fitch published its most recent U.S. Public Power
13 Rating Criteria on April 9, 2021, which directly addresses public power
14 sector criteria, which include both electric cooperatives and municipal
15 electric utilities. Fitch views electric cooperatives as part of the public power
16 sector.

1 X. USE OF 1.75 INDENTURE DSC RATIO FOR KIUC
2 REVENUE REQUIREMENT

3 **Q. IN YOUR PROFESSIONAL OPINION, IS THE REVENUE REQUIREMENT**
4 **REQUESTED BY KIUC IN THIS PROCEEDING JUST AND**
5 **REASONABLE FROM AN INDUSTRY BENCHMARKING**
6 **PERSPECTIVE?**

7 A. Yes, the revenue requirement that is presented on Exhibit 6 to the
8 Application demonstrates an Indenture DSC Ratio of 1.75 (which exclude
9 subsidiary impacts as further discussed above) and, on Exhibit 7 to the
10 Application, a Traditional DSC Ratio used by CFC of 1.67 (which does not
11 exclude subsidiary impacts as further discussed above). This revenue
12 requirement produces a regulatory net margin of \$10.3 million (as shown in
13 Exhibit 6 to the Application), and a GAAP net margin, where amortization of
14 the acquisition premium is expensed against margins, of \$8.1 million (as
15 shown in Exhibit 7 to the Application). It is my professional opinion that
16 KIUC's revenue requirement request produces a DSC Ratio and resulting
17 net margins that are (i) just and reasonable, supported by industry
18 precedents based on comparison to closely comparable electric
19 cooperative peer groups, (ii) illustrative of a credit positive supportive
20 regulatory environment which is important to lenders, bond investors, and
21 credit rating agencies, and (iii) consistent with historical financial results
22 where the outcome of this rate case at this revenue requirement and DSC

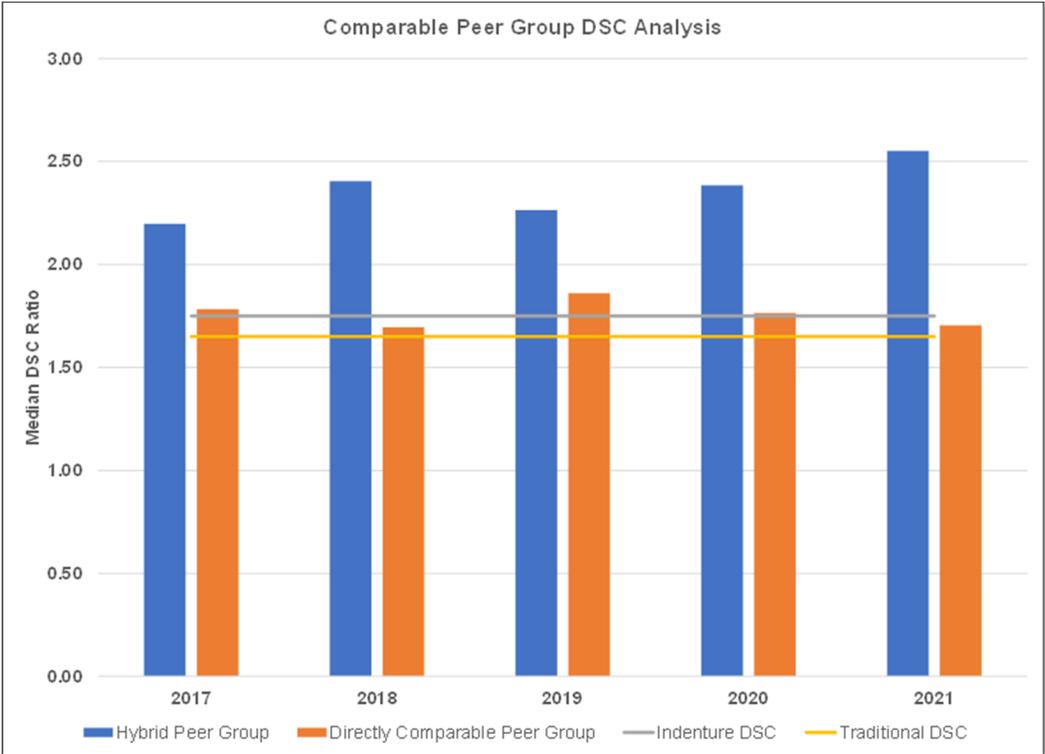
1 Ratio would be viewed positively by KIUC's lenders because it would
2 produce a test year expectation of financial results similar to KIUC's strong
3 past financial performance.

4 If anything, the DSC Ratio and resulting net margin that KIUC is
5 requesting are slightly below what I believe could be justified based on
6 industry peer performance, given that KIUC's DSC Ratio and Equity Ratio
7 would remain lower than its comparable peers discussed above, thereby
8 reinforcing my professional opinion regarding the just and reasonable
9 nature of the revenue requirement request.

10 Table 5 below presents the Indenture and Traditional DSC Ratios
11 charted against the DSC Ratios reported for the Hybrid Peer Group and the
12 Directly Comparable Peer Group over the last five years. As the table
13 demonstrates, the DSC Ratio that results from the revenue requirement that
14 KIUC is requesting in this proceeding is at or below the median value of its
15 most closely comparable industry peers. At anything at or around the
16 median value of its peers, the KIUC DSC Ratio resulting from its revenue
17 requirement request must be interpreted as just and reasonable in my
18 opinion.

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Table 5



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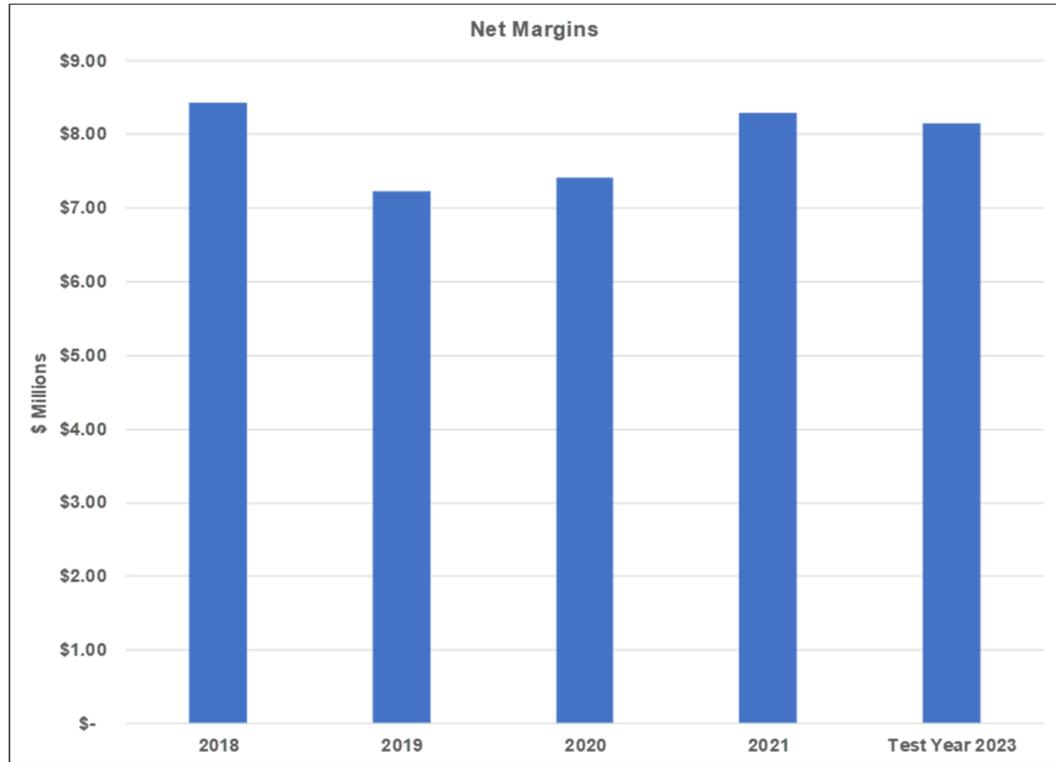
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Further, Table 6 below presents the last four years of KIUC’s audited financial net margins in comparison to the net margin projected to result from the 2023 test year at the proposed revenue requirement. As Table 6 demonstrates, the requested revenue requirement produces a comparable reported net margin level consistent with the maintenance of solid financial performance and lender expectations. In my professional opinion, this further provides evidence of a just and reasonable level of the requested revenue requirement and a credit supportive regulatory framework if such a revenue requirement was authorized.

1

Table 6



2

3 **Q. DOES THIS COMPLETE YOUR TESTIMONY?**

4 **A. Yes.**

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

EXHIBIT 10

TESTIMONY OF STAN FARYNIARZ
(EXHIBIT 10-T-400)

(13 PAGES)

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**KAUAI ISLAND UTILITY COOPERATIVE
DOCKET NO. 2022-0208
EXHIBIT 10-T-400

DIRECT TESTIMONY
OF
STAN FARYNIARZ**

9

I. INTRODUCTION

10 **Q. WHAT IS YOUR NAME AND BUSINESS ADDRESS?**

11 A. My name is Stan Faryniarz. My business address is 370 Main Street,
12 Suite 325, Worcester, MA 01608.

13 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

14 A. I am employed by Daymark Energy Advisors (“Daymark”) as a Principal
15 Consultant.

16 **Q. PLEASE SUMMARIZE YOUR EDUCATION.**

17 A. I have a Bachelor’s degree with honors in Economics, and a Master’s
18 degree in Public Administration (finance and managerial economics
19 concentration) from the University of Vermont. I have completed additional
20 post-graduate coursework in Regulatory Economics (NARUC Rate School),
21 and I hold the Certified Energy Procurement (CEP) Professional credential
22 from the Association of Energy Engineers.

23 **Q. PLEASE DESCRIBE YOUR WORK EXPERIENCE.**

24 A. I am an energy economist and power supply planning and management
25 specialist with 34 years of experience in areas including electric utility cost

1 of service and rates, power supply procurement and management,
2 wholesale and retail power transactions, power project financial analysis
3 and due diligence, asset and utility valuations, and integrated resource
4 planning and analysis.

5 I have advised executives and managers concerning the electric
6 power supplies of public and investor-owned electric utilities, and have
7 advised large industrial customers, regulators, consumer advocates, and
8 power plant developers and owners regarding specific power projects and
9 transactions, portfolio risk management strategies, and power markets.

10 I have prepared numerous valuation analyses of power projects and
11 assets, combined portfolios of assets, and electric utilities. This work has
12 involved power production assets in the northeastern U.S., North Carolina,
13 Ohio, Arkansas, Wisconsin and Canada. I have evaluated the economics,
14 contract structure, ratepayer security, development prospects or
15 going-forward value of dozens of renewable, non-renewable merchant, and
16 Qualifying Facility (QF) power projects in the northeastern U.S., Arizona and
17 Canada. I have conducted this work for regulators and for providers of
18 private capital and quasi-public capital.

19 I have prepared, or have overseen the preparation of all or portions
20 of integrated resource plans for several Vermont utilities and for other public
21 utilities, and I am a load forecasting specialist.

1 My experience includes the preparation of well over a dozen electric
2 and water utility allocated cost of service and rate design studies, rate
3 unbundling studies, and rate path projection studies, for or involving utilities
4 in Vermont, Maine, New Hampshire, North Carolina and Pennsylvania.

5 My ratemaking experience spans from work done directly on behalf
6 of multiple utilities, including rate regulated electric utility cooperatives such
7 as Kauai Island Utility Cooperative (“KIUC”), to service as an expert to
8 regulatory commission staff. Notably, I have developed numerous rate
9 cases, allocated cost of service studies, rate designs, and other related
10 work for public power utilities, as well as served several public service
11 commissions as their expert in review of rate cases and rate designs
12 sponsored by the investor-owned utilities they regulate.

13 My experience and qualifications are described in more detail in my
14 resume and selected testimony appendix, which are attached as
15 Attachment SF-401 and Attachment SF-402, respectively. I have testified
16 as a ratemaking expert before regulatory authorities in Maine, New
17 Hampshire, Rhode Island, Vermont, Pennsylvania, Maryland, Georgia,
18 Utah and Nova Scotia, CA.

19 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?**

20 **A.** I am testifying on behalf of KIUC.

1 **Q. WHAT IS DAYMARK’S HISTORY OF SERVICE TO KIUC?**

2 A. Daymark has been retained by KIUC as its rates consultant, developing
3 revenue requirements, load research, allocated cost of service studies, rate
4 design options and other support since 2015 when we completed our first
5 assignment for KIUC, involving changes to KIUC’s street light tariff
6 (Schedule “SL”), which was approved by this Commission in Decision and
7 Order No. 33257 issued on October 8, 2015 in Transmittal No. 2015-03.
8 This work has also included assisting with filings and providing assistance
9 for KIUC in its West Kauai Energy Project (WKEP) application proceeding.

10 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

11 A. I will introduce and sponsor the KIUC revenue requirement models
12 (Exhibit 6 – Regulatory and Exhibit 7 – GAAP to the Application) in addition
13 to Exhibit 9 – Average Rate Base. I am also submitting the following
14 attachments referred to above in support of my testimony, which are
15 incorporated herein:

- 16 1. Attachment SF-401 – My Resume
- 17 2. Attachment SF-402 – My Selected Testimony Appendix

18 **Q. WHAT ROLE DID YOU PLAY ON BEHALF OF KIUC IN THIS RATE CASE**
19 **APPLICATION?**

20 A. I oversaw the Daymark team and the work the team sponsors in testimony.
21 That includes: i) the development of the KIUC revenue requirement model,
22 ii) the historical load research study (“LRS”) and allocated cost of service

1 study (“ACOSS”) discussed in the testimony of Kevin Pierce
2 (Exhibit 10-T-600), and iii) the rate design modeling and tariff changes
3 discussed in the testimony of Daniel Koehler (Exhibit 10-T-500). A copy of
4 the LRS is provided as Attachment KRP-602 to Mr. Pierce’s testimony, a
5 copy of the ACOSS is provided as Attachment KRP-603 to Mr. Pierce’s
6 testimony, and the proposed tariff changes are provided as
7 Attachment DK-505 to Mr. Koehler’s testimony.

8 **Q. PLEASE BRIEFLY EXPLAIN THE TWO OTHER PIECES OF**
9 **SUPPORTING TESTIMONY PREPARED BY THE DAYMARK TEAM.**

10 A. In addition to the revenue requirement modeling, Daymark prepared the
11 LRS¹ and then the ACOSS both noted above, which was used to (among
12 other purposes) identify the revenue that should be received from each
13 customer class to meet the approximately \$193.7 million KIUC Test Year
14 electric revenue set forth in Exhibit 6 to the Application (line 1, column E).
15 These studies are explained more fully in the testimony of Mr. Pierce
16 (Exhibit 10-T-600). As Mr. Pierce discusses in his testimony, class electric
17 revenue requirement responsibility and current contributions towards
18 meeting KIUC’s overall electric revenue requirement are not in sync. That
19 is a common result following preparation of an ACOSS, especially if, as in
20 this case, rates adjustments have not been made for many years.

¹ The historical LRS is a separate and distinct analysis from Thomas A. Lovas’ load and sales forecast for the Test Year, which Mr. Lovas discusses in his testimony (Exhibit 10-T-1000).

1 Because of those disparities, how much movement towards
2 ACOSS-indicated revenue requirements compared to current rates and
3 revenue contributions by each major customer class, must be addressed.
4 Daymark's approach to doing so is explained in the testimony of both
5 Messrs. Pierce and Koehler (Exhibits 10-T-600 and 10-T-500, respectively).

6 Following careful review of bill impacts and ensuring that classic
7 ratemaking principles were adhered to, including rate gradualism,
8 avoidance of rate and bill shock, simplicity, promotion of strong price signals
9 and economic efficiency, specific target revenue requirements by rate class
10 and specific changes to rate components were established in lieu of a
11 completely uniform adjustment to current rates.

12 The testimony of Mr. Koehler (Exhibit 10-T-500) explains the
13 modeling approach and presents the resulting rate changes that came out
14 of those efforts. Finally, KIUC tariff changes, which were also overseen by
15 KIUC executives, were prepared to complete the subject Application and
16 are provided as Attachment DK-505 to Mr. Koehler's testimony as noted
17 above.

1 revenue requirement components. The specific witnesses that are
2 sponsoring various parts of Exhibits 8 to 8-32 to the Application are set forth
3 in the testimony of Stacie Dellamano (Exhibit 10-T-200). I am only
4 sponsoring the computation of the working capital reflected in the average
5 rate base for the Test Year (see Exhibit 9 to the Application).

6 **Q. PLEASE EXPLAIN THE PURPOSE OF THE REVENUE REQUIREMENT**
7 **COMPUTATION SHOWN ON EXHIBIT 6 TO THE APPLICATION.**

8 A. The revenue requirement computation reflects the net margin for the Test
9 Year at KIUC's current authorized rates, plus the revenues that are
10 necessary to provide KIUC with a reasonable opportunity to earn the net
11 margin that results in the Debt Service Coverage ("DSC") Ratio
12 recommended by Mr. Collet in Exhibit 10-T-300. As discussed by
13 Ms. Dellamano in Exhibit 10-T-200, Exhibit 6 to the Application reflects the
14 revenue requirement calculation on a regulatory basis where KIUC is not
15 requesting (1) the amortization of the acquisition premium from the 2002
16 acquisition of Kauai Electric in Docket No. 02-0060, and (2) certain
17 expenses for sponsorship and contributions in the cost of service that
18 establishes the revenue requirement. As shown on Exhibit 6 to the
19 Application, the net margin at KIUC's current rates following these
20 regulatory adjustments is projected to result in approximately a negative

1 (\$4.8 million).³ In order to realize the approximate \$10.3 million⁴ net margin
2 which would meet the DSC Ratio recommended by Mr. Collet, KIUC must
3 receive additional revenue amounting to about \$16.7 million, otherwise
4 known as the “revenue deficiency.”⁵ The approximately \$16.7 million
5 additional revenue includes the associated revenue taxes and franchise fee
6 assessment on such revenues necessary to arrive at the approximate
7 \$10.3 million net margin sufficient to realize a 1.75 DSC Ratio discussed by
8 Mr. Collet.

9 **Q. WHAT IS THE PURPOSE OF EXHIBIT 7 TO THE APPLICATION?**

10 A. As explained in the testimony of Ms. Dellamano (Exhibit 10-T-200),
11 Exhibit 7 to the Application provides the revenue requirement calculation
12 under Generally Accepted Accounting Principles (GAAP) where the
13 amortization of acquisition premium and sponsorships and contributions are
14 reflected as expenses as they would be on KIUC's audited financial
15 statements, including financial reports to its lenders. Exhibit 7 to the
16 Application illustrates that the revenue requirement based on previously
17 disallowed expenses still allows KIUC a reasonable opportunity to realize

³ See Exhibit 6 to the Application (line 39, column C).

⁴ See Exhibit 6 to the Application (line 39, column E).

⁵ See Exhibit 6 to the Application (line 1, column D).

1 net margins that support the DSC Ratio recommendation of Mr. Collet
2 (Exhibit 10-T-300).

3 **Q. PLEASE EXPLAIN THE PURPOSE OF PREPARING EXHIBITS 9**
4 **THROUGH 9-2 TO THE APPLICATION.**

5 A. Exhibits 9 through 9-2 to the Application were prepared for two purposes.
6 First, as explained in the testimony of Mr. Pierce (Exhibit 10-T-600), the
7 Test Year rate base (Exhibit 9 to the Application) and related depreciation
8 expense is used in the ACROSS to functionalize, classify, and allocate costs
9 that can be disaggregated by function (i.e., Generation, Transmission,
10 Distribution, and Customer Service), and classify the costs as either
11 energy-related, demand-related or customer-related for KIUC's customer
12 classes.

13 Second, as explained in Mr. Bissell's testimony (Exhibit 10-T-100),
14 we addressed the return on rate base calculation for potential comparison
15 purposes with other utility rate proceedings before this Commission.
16 Investor-owned utilities ("IOUs") (such as the Hawaiian Electric Companies)
17 utilize the rate of return methodology for setting rates. KIUC wanted to
18 illustrate the return on rate base resulting from the net margin at the
19 proposed revenue requirement shown on Exhibit 6 to the Application.

1 **Q. PLEASE EXPLAIN WHY YOU CALCULATED WORKING CAPITAL AS**
2 **SHOWN ON EXHIBIT 9-2 TO THE APPLICATION.**

3 A. In order to compute the Test Year rate base, I was required to compute the
4 Test Year working capital since rate base includes working capital. All year
5 end balances for the rate base components can be derived from KIUC's
6 financial records, with the exception of working capital, which is computed
7 as set forth below.

8 **Q. PLEASE DESCRIBE THE WORKING CAPITAL CALCULATION.**

9 A. I used the combination of a formula method and included a contingency
10 cash requirement, which is an approach commonly used by cooperative
11 utilities. First, as presented on lines 5 and 8 of Exhibit 9-2 to the Application,
12 I have used a factor of one-twelfth (0.08333) for operating expenses other
13 than commodities. This factor reflects the payment for expenses to provide
14 service to customers approximately 30 days prior to bill payment for the
15 service provided. Next, line 10 of Exhibit 9-2 provides the operational
16 working capital requirement for the commodities. This reflects a payment
17 for commodity expenses of 30 days prior to the payment of customer bills.
18 Finally, because cooperative utilities typically have lower equity ratios when
19 compared to IOUs, a contingency factor is used to reflect the need for
20 additional working capital. I have presented this as a working capital
21 amount equal to one month's cash expenditures for operating and
22 maintenance expense and interest expense as presented on line 14 of

1 Exhibit 9-2 to the Application. The total of these calculations results in a
2 working capital addition to rate base of about \$16.6 million as presented on
3 Exhibit 9-2 to the Application (line 15, column D).

4 **Q. WHY DID YOU USE THE ABOVE FORMULA TO COMPUTE THE TEST**
5 **YEAR WORKING CAPITAL AND DOES THIS FORMULA**
6 **METHODOLOGY PRODUCE A REASONABLE ALLOWANCE FOR**
7 **WORKING CAPITAL FOR KIUC IN THE TEST YEAR?**

8 A. As previously explained, the return on rate base computation is presented
9 for comparison purposes. As the testimony of other KIUC witnesses makes
10 clear, KIUC's required margins are not tied in any formal way to rate base.
11 Consequently, KIUC determined it was not necessary to expend resources
12 to perform a lead/lag study, in large part in order to minimize the costs of
13 processing the instant Application. In my opinion, the working capital
14 allowance resulting from the formula computation I performed produces a
15 reasonable result for the intended purpose.

16 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

17 A. At this time, yes.

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

ATTACHMENT SF-401

(3 PAGES)



AREAS OF EXPERTISE

Utility Rate-making
Regulatory Advisory Services
Grid Modernization
Procurement and Portfolio Management (PPM)
Expert Witness

BACKGROUND

Daymark Energy Advisors
1999-Present

Decisions Economics LLC
1994-1999

Weil & Howe, Inc.
1990-1999

Vermont Department of Public Service
1986-1990

EDUCATION

Certified Energy Procurement (CEP) Professional
Association of Energy Engineers

Master of Public Administration
University of Vermont

NARUC Graduate Studies Program in Regulatory Economics
Michigan State University

B.A., Economics
University of Vermont

Stan Faryniarz, CEP

Principal Consultant

Stan advises clients on matters regarding regulated cost recovery, rates, power procurement, portfolio management and power supply planning. He is the primary advisor to clients with power supply portfolios totaling approximately 300 MW and \$200 million in annual spend. Stan has testified before state and provincial regulatory agencies on issues including cost of service and rate design, general rate case applications, rate path projection studies, integrated resource planning, power project regulatory approvals, and federal and state policies ranging from PURPA to net metering and grid modernization.

SELECTED EXPERIENCE

- For Amtrak, reviewed and sponsored expert testimony on Universal Service Program cost allocation and related policy implications before the Pennsylvania PUC in the hearings concerning PECO Energy Company's request for a 2021 base rate increase.
- For the County Council, Delaware County, Pennsylvania, issued a report to the Delaware County Court of Common Pleas, and sponsored expert testimony on behalf of Delaware County before the Pennsylvania PUC on the long-term rate impacts and other reasons, objecting to the application filed by Aqua Pennsylvania Wastewater seeking approval to acquire the wastewater system assets of the Delaware County Regional Water Quality Control Authority ("DELCORA"). Presently sponsoring additional testimony before the PUC on remand.
- For Amtrak, reviewed and sponsored expert testimony before the Maryland Public Service Commission regarding the Baltimore Gas & Electric 2020 multi-year plan (MYP) rate filing, made recommendations for rates parity and rate reform to Schedule T (transmission level service customers distribution rate) and other retail rates.
- For the Georgia Public Service Commission Staff, sponsored significant testimony regarding the Georgia Power Company (GPC) allocated cost of service study and proposed rate design featuring "modernized" rates. The testimony addressed and critiqued proposals by GPC for increased customer charges, three-part rates for residential customers, tiered block rates, various commercial rate redesigns, low-moderate income (LMI) rate programs, and other GPC proposals, all in support of Staff recommendations and policies in the 2019 rate case.
- Prepared and sponsored testimony in dozens of cost of service, cost allocation, rate design, and special contracts proceedings, as well as three demand elasticity studies, for numerous electric and water companies in Maine, Maryland, Pennsylvania, Rhode Island, Utah, New Hampshire and Vermont.

- Led a team on behalf of Norwich (CT) Public Utilities that conducted an independent analysis of the rates proposed by the Sewer Authority of the City of Norwich in response to a civil suit by two of its customers (Docket KNL-CV-12-6013751-S, Superior Court Judicial District of New London), and prepared a report and draft expert testimony for presentation on behalf of the defendant, Norwich Public Utilities.
- For Bar Harbor Water Company in Maine, prepared an allocated cost of service study and rate design for water service that phases from declining block to uniform volumetric rates and reduced allowances for year-round and seasonal customer classes.
- For a large industrial customer intervener in an Aqua Maine Water Company rate case (Maine PUC Docket 2010-72), reviewed company workpapers and testimony, and supported successful negotiations that led to modifications in the Aqua Maine design to more fairly reflect the capacity costs of serving that largest customer on the system.
- For the Pennsylvania Office of Consumer Advocate (York Water Company v Pennsylvania PUC, Dockets R-00016236 & R-00016236C0001-C0006), filed testimony supporting changes to the York Water Company excess capacity allocations to reflect a more equitable revenue requirement responsibility for and better price signals to the residential class.
- Supported the Manitoba Public Utilities Board (PUB) in its comprehensive review of a recent Manitoba Hydro electric cost of service study (COSS) and underlying methodology.
- For Amtrak, developed special contracts and tariffs in eight different utility service territories from Washington D.C. to Boston since Amtrak electrified its north end high speed rail system beginning in 1999. Each custom agreement reflected the unique characteristics of Amtrak's moving interstate train loads, including numerous special contracts in the Baltimore Gas & Electric and Pennsylvania Power & Light territories related to hydro generation specifically dedicated to serving Amtrak.
- Advised Amtrak on several load retention special contracts and assisted in negotiating with Connecticut Light & Power and Philadelphia Electric Company to preserve conjunctive demand billing for Amtrak traction power deliveries, which led to a stipulated settlement and tariff.
- For the Stowe Electric Department in Vermont, led a team that prepared a load research study based on smart meter data, developed custom cost allocators using this load research, prepared a comprehensive allocated cost of service study (ACOSS) reflecting customer class consolidation, and designed a voluntary seasonal time-of-use (TOU) rate and a critical peak pricing (CPP) rate; offered supporting testimony before the Vermont Public Utility Commission (Docket 8463) and gained approval from the VT Department of Public Service (DPS) and PUC without changes. Led a team that sponsored Stowe's most recent rate case.
- For Littleton and Woodsville Water & Light Departments in New Hampshire, assisted with proforma rate decreases occasioned by more economic power supply arrangements we arranged, and reviewed and made

recommendations on in-house allocated cost of service studies to guide appropriate rate design.

- Assisted Woodsville Water & Light Department in unbundling its rates for a special tariff for its largest single customer, Grafton County, New Hampshire.
- For public power systems in Vermont and Hawaii, developed special LED Streetlight and Electric Vehicle Charging tariffs.
- For the Vermont Public Power Supply Authority, led a team that trained the Authority's in-house rate analysts using proprietary Daymark Energy Advisors cost allocation, billing curve, and rate design models.
- Directed the preparation of an embedded cost allocation and marginal cost-based rate design filing, which involved several utility member systems, many of which have unique attributes – one has a special contract design for a ski area that encourages minimization of demand during system coincident peak conditions, another has a design that recognizes the requirement to integrate output from a hydro station that is approximately equivalent to the load for the entire system.
- For the Town of New Shoreham, Rhode Island, in a Block Island Power Company rate case (RI PUC Docket 3655), prepared testimony that showed how rates and demand response could be integrated, together with appropriate system planning, to forestall the need for significant investment in additional diesel generation on Block Island.

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

ATTACHMENT SF-402

(4 PAGES)

TESTIMONY

Expert Testimony

FORUM	ON BEHALF OF	MATTER
Pennsylvania Public Utility Commission	National Railroad Passenger Corporation (Amtrak)	Docket No. R-2021-3024601 Pennsylvania Public Utility Commission vs PECO Energy Company – Electric Division
Pennsylvania Public Utility Commission	Delaware County, PA	Docket No. A-2019-3015173 Application of Aqua Pennsylvania Wastewater, Inc. pursuant to Sections 507, 1102 and 1329 of the Public Utility Code For, inter alia, approval of the acquisition of the wastewater system assets of the Delaware County Regional Water Quality Control Authority
Court of Common Pleas of Delaware County, Pennsylvania	County Council of Delaware County, PA	County of Delaware, Pennsylvania v. Delaware County Regional Water Control Authority (DELCORA), et al.
Maryland Public Service Commission	National Railroad Passenger Corporation (Amtrak)	Case No. 9645 Application of Baltimore Gas and Electric Company for an Electric and Gas Multi-Year Plan
Georgia Public Service Commission	Georgia PSC Public Interest Advocacy Staff	Docket No. 42516 In the Matter of Georgia Power Company's 2019 Rate Case
Vermont Public Utility Commission	Town of Stowe Electric Department	Petition of Town of Stowe Electric Department pursuant to 30 V.S.A §§ 225 and 227(a) for a 7.9% rate increase to take effect on a service-rendered basis August 15, 2018 Case No. 18-2372-TF. June 2018.
Public Service Commission of Utah	Utah Division of Public Utilities	Investigation of the costs and benefits of PacifiCorp's net metering program, which addressed allocated cost of service, rate design, and net energy metering rate design Docket No. 14-035-114. July 2017
New Hampshire Public Utilities Commission	New Hampshire Public Utilities Commission Staff	Development of new alternative net metering tariffs and/or other regulatory mechanisms and tariffs for customer-generators (net energy metering, rate design) Docket No. DE 16-576. December 2016, January 2017, and March 2017.
Public Service Commission of Utah	Utah Division of Public Utilities	Application of Rocky Mountain Power for authority to increase its retail electric utility service rates in Utah and for approval of its proposed electric service schedules and electric service regulations Docket No. 13-035-184. May, June, and July 2014.
Pennsylvania Public Utility Commission	National Railroad Passenger Corporation (Amtrak)	Pennsylvania Public Utility Commission vs. PPL Electric Utilities Corporation Docket No. R-2015-2469275
Pennsylvania Public Utility Commission	National Railroad Passenger Corporation (Amtrak)	Petition of PPL Electric Utilities Corporation for waiver of the distribution system improvement charge cap of 5% of billed revenues

FORUM	ON BEHALF OF	MATTER
		Docket No. P-2015-2474714
Rhode Island Public Utilities Commission	Town of New Shoreham	Block Island Power Company request for a rate change application Docket No. 3655
Rhode Island Public Utilities Commission	National Railroad Passenger Corporation (Amtrak)	Narragansett Electric Company's proposal to introduce two new companion generic tariffs to its existing tariffs relating to High Voltage Delivery Service. Docket No. 2867
Vermont Public Service Board (now Vermont Public Utility Commission)	Town of Stowe Electric Department	Petition for approval of the company's 2015 rate design and tariff amendments (rate design) Docket No. 8463
Vermont Public Service Board	Washington Electric Cooperative	Petition for approval of rate design changes and a change in rate schedules pursuant to 30 V.S.A. § 225 (rate design) Docket No. 7575
Vermont Public Service Board	Washington Electric Cooperative	Petition for: (1) a Certificate of Public Good pursuant to 30 V.S.A. § 248(j) authorizing the Second Coventry Project Expansion; and (2) approval of Washington Electric Cooperatives' promissory note to the Rural Utilities Service pursuant to 30 V.S.A. § 108 to finance the Second Coventry Project Expansion. (Certificate of Public Good) Docket No. 7455
Vermont Public Service Board	Washington Electric Cooperative	Petition for: (1) a Certificate of Public Good pursuant to 30 V.S.A. § 248(j) authorizing the First Coventry Project Expansion; and (2) approval of Washington Electric Cooperatives' promissory note to the National Rural Utilities Cooperative Finance Corporation (CFC) pursuant to 30 V.S.A. § 108 to finance the Coventry Project Expansion (IRP, Certificate of Public Good) Dockets No. 6896 & 7432
Vermont Public Service Board	Washington Electric Cooperative Coventry Clean Energy Corporation	Joint petition for: (1) a certificate of public good authorizing Coventry Clean Energy Corporation to operate as a corporation that generates and transmits electricity; (2) authorization for Washington Electric Cooperative to have a 100% ownership interest in Coventry Clean Energy Corporation; (3) approval for Coventry Clean Energy Corporation to sell all its generation to Washington Electric Cooperative; (4) approval of Washington Electric Cooperative's promissory note to the Rural Utilities Service; and (5) approval of Coventry Clean Energy Corporation's promissory note to Washington Electric Cooperative (Certificate of Public Good) Docket No. 6925
Vermont Public Service Board	Washington Electric Cooperative, Inc. Vermont Electric Power Company, Inc.	Joint petition for a Certificate of Public Good pursuant to 30 V.S.A. § 248 authorizing: (1) Washington Electric Cooperative to construct an electric generation station in Coventry, Vermont; (2) Washington Electric

FORUM	ON BEHALF OF	MATTER
	Citizens Electric Company Vermont Electric Cooperative, Inc.	Cooperative and Vermont Electric Power Company to make improvements to the Irasburg substation; (3) Washington Electric Cooperative, Vermont Electric Cooperative, and Citizens Communications Corporation to construct 46 kV transmission lines in Coventry and Irasburg, Vermont, including provisions for distribution system construction by Citizens Communications Corporation and Vermont Electric Cooperative (Certificate of Public Good) Docket No. 6924
Vermont Public Service Board	Vermont Electric Cooperative, Inc. and Citizens Electric Company	Joint petition for transfer of assets and transfer and assignment of Hydro-Québec contracts (merger, load forecast, power supply contract disallowance) Docket Nos. 6850 & 6853
Vermont Public Service Board	Washington Electric Cooperative	Investigation into the tariff filing of Washington Electric Cooperative re: proposed rate design changes Docket No. 6328
Vermont Public Service Board	Washington Electric Cooperative	Investigation into the tariff filing of Washington Electric Cooperative for a 3.8% rate increase Docket No. 6315
Maryland Public Service Commission	National Railroad Passenger Corporation (Amtrak)	Phase II in the matter of the current and future financial condition of Baltimore Gas and Electric Company (merger) Case No. 9173. August 2009.
Pennsylvania Public Utility Commission	National Railroad Passenger Corporation (Amtrak)	Petition of the PPL Electric Utilities Corporation for approval of a default service program and procurement plan for the period January 1, 2011 through May 31, 2014 Docket No. P-2008-2060309
Pennsylvania Public Utility Commission	National Railroad Passenger Corporation (Amtrak)	Application of Safe Harbor Water Power Corporation pursuant to Section 1102(a)(2) of the Pennsylvania Public Utility Code authorizing Safe Harbor Water Power Corporation to abandon public service authorized by a Certificate of Public Convenience Docket A-2008-2078319
Pennsylvania Public Utility Commission	Pennsylvania Office of Consumer Advocate	York Water Company vs. Pennsylvania PUC (rate case, rate design) Dockets R-00016236 & R-00016236C0001-C0006
Maine Public Utilities Commission	Camden & Rockland Water Company et al	Petition for a proposed increase in rates and rate design Docket No. 93-145
Nova Scotia Utility and Review Board	Small power project developer	Investigation into non-utility generation resources and U.S. PURPA Qualifying Facility policies
Vermont Public Service Board	Vermont Department of Public Service	Investigation into the tariff filing for VPX Inc. (rate case) Docket No. 5411
Vermont Public Service Board	Vermont Department of Public Service	Review of Bonneville Pacific Corporation's proposed cogeneration facility Docket Nos. 5395 & 5401

FORUM	ON BEHALF OF	MATTER
Vermont Public Service Board	Vermont Department of Public Service	Investigation into fee schedules for VPX Inc. (rate case) Docket No. 5298
Vermont Public Service Board	Vermont Department of Public Service	Investigation into least cost investments, energy efficiency, conservation and management of the demand for energy (IRP) Docket No. 5270
Vermont Public Service Board	Vermont Department of Public Service	Petition of Great Falls Hydroelectric for 30-year levelized rates pursuant to Rule 4.100 (PURPA QF) Docket No. 5233
Vermont Public Service Board	Vermont Department of Public Service	Petition of Vermont Department of Public Service requesting deletion of the decremental pricing provision contained in the contract between VPX Inc. and Missisquoi Associates approved in Docket 5106 (PURPA QF) Docket No. 5193
Vermont Public Service Board	Vermont Department of Public Service	Petition of First Energy Associates vs. VPX Inc. re: Decker Energy Letter of Intent with VPX (PURPA QF) Docket No. 5181
Vermont Public Service Board	Vermont Department of Public Service	Petition of East Georgia Cogeneration re: approval of levelized rates pursuant to Rule 4.100 and issuance of a Certificate of Public Good pursuant to 30 V.S.A. §§ 248 (PURPA QF) Docket No. 5179
Vermont Public Service Board	Vermont Department of Public Service	Rule 4.100, Small Power Production Rates filed by the Vermont Department of Public Service (PURPA QF; avoided costs) Docket No. 5177
Vermont Public Service Board	Vermont Department of Public Service	Petition of Comtu Falls Hydro for Long-term Levelized Rates pursuant to Rule 4.100 (PURPA QF) Docket No. 5168
Vermont Public Service Board	Vermont Department of Public Service	Agreement for sale of electricity between VPX Inc. and Vermont Marble Power Company pursuant to Rule 4.100 (PURPA QF) Docket No. 5109
Vermont Public Service Board	Vermont Department of Public Service	Petition of Bio-Energy Corporation for 30-year power sales contract pursuant to Rule 4.100 (PURPA QF) Docket No. 4964
Vermont Public Service Board	Vermont Department of Public Service	Petition of Emerson Falls Hydroelectric for 30-year power sales contract pursuant to Rule 4.100 (PURPA QF) Docket No. 4949
Bennington Vermont Family Court	Judith Livingston	Livingston vs. Livingston, Valuation of Environmental Power Corporation for Plaintiff (Valuation) Docket No. F182-6-93BnDmd
Joint Hearing of the Vermont House Commerce and Senate Finance Committees	Vermont Department of Public Service	1987, Valuation of the Vermont Electric Power Company (VELCO) (Valuation)

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

EXHIBIT 10

TESTIMONY OF DANIEL KOEHLER
(EXHIBIT 10-T-500)

(17 PAGES)

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**KAUAI ISLAND UTILITY COOPERATIVE
DOCKET NO. 2022-0208
EXHIBIT 10-T-500**

**DIRECT TESTIMONY
OF
DANIEL KOEHLER**

10 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

11 A. My name is Daniel Koehler. My business address is 370 Main Street,
12 Suite 325, Worcester, MA 01608.

13 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

14 A. I am employed by Daymark Energy Advisors (“Daymark”) as a Vice
15 President and Principal Consultant.

16 **Q. PLEASE SUMMARIZE YOUR EDUCATION.**

17 A. I received a Bachelor of Arts degree in Applied Mathematics with a focus in
18 Economics from Yale University and a Master of Public Policy and
19 Management Degree from the University of Southern Maine.

20 **Q. PLEASE DESCRIBE YOUR WORK EXPERIENCE.**

21 A. I have worked at Daymark for 13 years in positions of increasing
22 responsibility. Prior to Daymark I worked for 7 years in non-profit
23 management. My resume and record of testimony is provided as
24 Attachment DK-501.

1 **Q. WHAT ARE YOUR DUTIES AND RESPONSIBILITIES AS A VICE**
2 **PRESIDENT AND PRINCIPAL CONSULTANT AT DAYMARK?**

3 A. In my role as Vice President of Consulting Operations, I am responsible for
4 ensuring that Daymark efficiently delivers excellent advisory services to its
5 clients. I serve on the Management team tasked with setting strategic
6 direction and overseeing day-to-day operations. As a Principal Consultant,
7 I advise developers, investors, and regulators on utility rate design,
8 wholesale market dynamics and the deployment of clean energy
9 infrastructure across North America and Hawaii. In addition to my expert
10 witness appearances listed in Attachment DK-501, I have assisted with
11 analysis and expert testimony development in utility planning cases in front
12 of public utility commissions in Michigan, North Dakota, Arkansas,
13 Wisconsin, Vermont, Utah, and Manitoba. I have also assisted with rate
14 development or review in Hawaii, Wisconsin, Utah, Massachusetts, and
15 Vermont. I have been engaged in advising Kauai Island Utility Cooperative
16 (“KIUC”) on rate issues and production cost modeling since 2015.

17 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

18 A. My testimony will discuss the proposed customer class revenue targets,
19 proposed rate class structure change to combine Large Power Schedules
20 “L” and “P”, and proposed rate design by customer class.

21 **Q. ON WHOSE BEHALF ARE YOU PRESENTING THIS TESTIMONY?**

22 A. I am presenting this testimony on behalf of the KIUC.

1 **Q. OTHER THAN THIS TESTIMONY, ARE YOU SPONSORING ANY**
2 **EXHIBITS TO SUPPORT THE APPLICATION IN THIS PROCEEDING?**

3 A. Yes. In connection with the purpose of my testimony discussed above, I
4 am sponsoring Exhibit 5 (Comparison of Present and Proposed Rates) and
5 page 1 of Exhibit 8-1 (Revenues at Present and Proposed Rates). I am
6 also submitting the following attachments in support of my testimony, which
7 are incorporated herein:

- 8 1. Attachment DK-501 – My Resume and Record of Presentations and
9 Testimony
10 2. Attachment DK-502 – Class Revenue Summary
11 3. Attachment DK-503 – Proof of Revenue for Proposed Rates
12 4. Attachment DK-504 – KIUC Rates Comparison and Customer Bill
13 Impact Analysis
14 5. Attachment DK-505 – Revised Tariff Sheets, in both a clean version
15 and a “redlined” version showing changes to existing Tariff Sheets

16 **Q. WERE THESE ATTACHMENTS PREPARED BY YOU OR UNDER YOUR**
17 **DIRECT SUPERVISION?**

18 A. Yes.

19 **Q. PLEASE SUMMARIZE YOUR TESTIMONY IN THIS PROCEEDING.**

20 A. I am proposing rates that are designed to collect sufficient revenue while
21 avoiding excessive rate shock, simplify bill structure and predictability, and
22 make reasonable progress toward aligning revenue collection with cost
23 causation as assessed in Daymark’s allocated cost-of-service study

1 (“ACOSS”). A copy of the ACOSS is provided as Attachment KRP-603 to
2 Kevin Pierce’s testimony (Exhibit 10-T-600).

3 I. **PROPOSED CLASS REVENUE TARGETS**

4 **Q. IS KIUC PROPOSING ANY RATE CLASS STRUCTURE CHANGES IN**
5 **THIS PROCEEDING?**

6 A. Yes. KIUC’s current tariff (i.e., KIUC Tariff No. 1) includes (1) Schedule “L”
7 (Large Power Primary Service), which is applicable for primary large light
8 and/or power supplied and metered at primary voltage and a single delivery
9 point; and (2) Schedule “P” (Large Power Secondary Service), which is
10 applicable for secondary large light and/or power service supplied and
11 metered at secondary voltage and a single delivery point.

12 KIUC is proposing to simplify its rate structure by consolidating these
13 Large Power “L” and “P” Schedules. As it currently stands and as the Load
14 Research Study (“LRS”) discussed and provided as Attachment KRP-602
15 to Mr. Pierce’s testimony (Exhibit 10-T-600) indicates, the differentiation
16 between Schedules “L” and “P” is insufficient to require separate classes –
17 the load profiles of the classes are similar, as are the cost-of-service
18 profiles. Less than 15 customers are currently served under Schedule “L”,
19 and thus, a combined Large Power class will make the billing process more
20 streamlined and efficient for KIUC. It should also benefit Large Power
21 customers both new and old in understanding and estimating their costs of

1 electricity from KIUC's system. This combined schedule is referred to as
2 Schedule "LP".

3 **Q. HOW DOES KIUC'S PROPOSED ELECTRIC REVENUE BASED ON A**
4 **2023 TEST YEAR COMPARE WITH ITS EXPECTED ELECTRIC**
5 **REVENUE AT PRESENT RATES?**

6 A. As reflected in Exhibit 6 to the Application (line 1, column E), KIUC's total
7 electric revenue proposed for the 2023 test year ("Test Year") is
8 approximately \$193.7 million. The Test Year pro forma electric revenue at
9 present rates is approximately \$177.0 million, as reflected in Exhibit 6
10 (line 1, column C). This results in an overall \$16.7 million Test Year revenue
11 deficiency as shown in Exhibit 6 (line 1, column D).

12 **Q. WHAT CLASS REVENUE TARGET ARE YOU PROPOSING IN THE**
13 **SUBJECT APPLICATION?**

14 A. I propose revenue increases and a class revenue target for each class as
15 shown in Attachment DK-502, rows 4 and 5, respectively, ranging from no
16 increase for Irrigation to a 20.0% increase for Street Lighting. All other
17 classes are proposed to receive an approximately 9.4% revenue increase.¹
18 While the ACOSS results indicate a different proposal to achieve
19 cost-based rates, ratemaking principles and contractual realities provide

¹ The revenue increase for Schedules "D", "G", "J", "L" and "P" is slightly less than the overall increase, but the difference is not apparent due to rounding.

1 mitigating reasons why complete alignment with ACROSS-indicated targets
2 is neither appropriate nor feasible.

3 **Q. PLEASE EXPLAIN WHY.**

4 A. As discussed in the testimony of Mr. Pierce (Exhibit 10-T-600), an ACROSS
5 was used to apportion class revenue requirements responsibly, and drive
6 my Rate Design proposals at the individual class rate components level, by
7 considering (but not strictly adhering to) the functionalized and classified
8 cost results. Attachment DK-502 to my testimony shows class allocated
9 electric revenue requirement based on Daymark's ACROSS (row 1), and the
10 percentage increase required to align each class with ACROSS-indicated
11 electric revenue requirement (row 3). As shown in that attachment, all
12 customer classes require an increase to meet ACROSS ranging from a 1.8%
13 increase for Schedule "J" to a nearly 15-fold (1,380%) increase for the
14 Irrigation class. In my opinion, a gradual approach should be utilized to
15 achieve rate changes that move towards the ACROSS results.

16 **Q. WHY HAVE YOU PROPOSED NO REVENUE TARGET INCREASE FOR**
17 **THE IRRIGATION CUSTOMER CLASS?**

18 A. Because Irrigation customers are served under negotiated power purchase
19 agreements, no increase relative to current rates is feasible at this time.

1 **Q. WHY HAVE YOU PROPOSED A 20% REVENUE TARGET INCREASE**
2 **FOR STREET LIGHTING?**

3 A. As shown in Attachment DK-502 at rows 1 and 2, current Street Lighting
4 rates would generate less than half of the revenue requirement for that class
5 as indicated by the ACOSS. However, more than doubling rates on any
6 customer class would be directly contrary to the ratemaking principle of
7 gradualism, and could result in unreasonable bill impacts on customers. The
8 proposed revenue increase of 20% appropriately balances gradual
9 progress in movement toward ACOSS without causing unreasonable bill
10 impacts on Street Lighting customers. This increase of 20% represents
11 more than twice the overall revenue increase of 9.4% being sought in the
12 subject Application, but less than one sixth (1/6) the increase needed to fully
13 align with ACOSS.

14 **Q. WHY HAVE YOU PROPOSED AN APPROXIMATE 9.4% REVENUE**
15 **TARGET INCREASE ACROSS THE SCHEDULE “D” RESIDENTIAL**
16 **SERVICE, SCHEDULE “G” GENERAL LIGHT AND POWER SERVICE**
17 **(I.E., SMALL COMMERCIAL), SCHEDULE “J” GENERAL LIGHT AND**
18 **POWER SERVICE (I.E., LARGE COMMERCIAL), AND SCHEDULES “L”**
19 **LARGE POWER PRIMARY SERVICE AND “P” LARGE POWER**
20 **SECONDARY SERVICE CLASSES?**

21 A. Residential customers would require a 13.4% increase to align the revenue
22 contribution from this customer class with allocated revenue requirements

1 from the ACOSS, as shown in Attachment DK-502 (row 3). Such an
2 increase in revenues would require an increase to the present rates that
3 would be unduly burdensome on this class, particularly low- and
4 moderate-income families who are among the least well positioned to
5 absorb sudden, large increases in cost. As a result, I propose sharing the
6 revenue increase among residential, commercial and large power classes
7 to mitigate rate shock for the residential class while still making incremental
8 progress toward the ACOSS results. To compensate for the shortfall,
9 additional revenue must be collected from the remaining classes. The
10 commercial and large power classes have similar ACOSS-indicated
11 increases, ranging from 1.8% to 4.9%, as shown in Attachment DK-502
12 (row 3). I propose to have these classes share in recovering the average
13 system-wide 9.4% increase in electric revenues, bringing each class only
14 modestly above ACOSS-indicated revenue targets on a total dollar
15 recovered basis.

16 **II. PROPOSED RATE DESIGN**

17 **Q. PLEASE DISCUSS THE OVERALL STRATEGY AND DESIGN**
18 **PARAMETERS USED TO DEVELOP THE PROPOSED RATES AND**
19 **THEIR COMPONENT VALUES.**

20 **A.** KIUC's current rate structure is heavily dependent on energy charges,
21 where 93% of projected Test Year 2023 revenues would, absent any other
22 changes, be collected through rates based on per kilowatt-hour ("kWh") of

1 usage. However, the marginal ACROSS indicates that little more than half
2 (approximately 53%) of total costs of service are driven by energy needs,
3 with the balance classified to demand (43%) and total number of customers
4 (4%). This imbalance leaves KIUC vulnerable to revenue under-collection
5 when usage is lower than expected, particularly when the lower usage is
6 not tied to lower overall peak demands on the system. Daymark's overall
7 strategy in designing rates was to incrementally address this imbalance,
8 without causing undue customer confusion or rate shock through sudden,
9 large changes in any particular rate component.

10 **Q. PLEASE DESCRIBE THE MODELING PROCESS TO ARRIVE AT RATE**
11 **COMPONENTS THAT ACHIEVE THE DESIRED REVENUE TARGETS.**

12 A. Daymark developed a simple iterative model for each rate class built on
13 projected billing determinants data provided by KIUC from its 2023 sales
14 forecast. See Exhibit 8-1 to the Application (page 2, line 8, column G) for
15 the 2023 Test Year sales forecast. Daymark solved for a combination of
16 rate components to yield the target revenue for each class based on
17 projected Test Year billing determinants. Daymark further tested proposed
18 rates in a Proof of Revenue calculation, provided as Attachment DK-503 to
19 my testimony, to ensure that the rate components yield the appropriate total
20 Test Year class revenues based on billing determinants from the sales
21 forecast.

1 **Q. WHAT ARE THE STANDARD RATE COMPONENTS USED FOR KIUC’S**
2 **MAJOR CUSTOMER CLASSES, AND HOW DO THEY RELATE TO**
3 **ACOSS-INDICATED COSTS?**

4 A. There are several standard rate components used for KIUC’s major
5 customer classes. All residential, commercial and large power customer
6 classes have a Customer Charge, which is a rate that is assessed per
7 customer on each monthly bill. The Customer Charge is generally optimal
8 for recovering costs that have been classified in the ACOSS as Customer
9 Service-related costs and allocated to each respective class. All residential,
10 commercial and large power customer classes similarly have an Energy
11 Charge, which is a rate that is assessed per billed kWh of energy. The
12 Energy Charge is generally optimal for recovering costs that have been
13 classified in ACOSS as Energy-related costs (such as fuel and purchased
14 power-related expenses) and allocated to each respective class.
15 Schedules “J”, “L” and “P” also include a Demand Charge, which is a rate
16 that is assessed per kilowatt (“kW”) of billed demand. Billed demand is the
17 higher of the highest 15-minute demand during a month, and 75% of the
18 highest 15-minute demand over the prior eleven months. A Demand
19 Charge is generally optimal for recovering costs that have been classified
20 in the ACOSS as Demand-related costs (such as transmission and
21 generator capital costs) and allocated to each respective class. Finally, a
22 Minimum Charge sets a floor on monthly bill amounts.

1 **Q. PLEASE DESCRIBE THE THREE COMPONENTS OF THE TOTAL**
2 **ENERGY CHARGE.**

3 A. KIUC Tariff No. 1 divides the Energy Charge into three components: (1) the
4 Non-Fuel Energy Charge, (2) the Fuel and Purchased Power Energy
5 Charge, and (3) the Energy Rate Adjustment Clause (“ERAC”). The ERAC,
6 which varies monthly according to a tariff-defined calculation, is discussed
7 in the testimony of Brad Rockwell (Exhibit 10-T-900). Mr. Rockwell also
8 discusses the changes to the ERAC mechanism being proposed by KIUC
9 in the subject Application. The Fuel and Purchased Power Energy Charge
10 is set to recover the applicable test year commodity costs. The Non-Fuel
11 Energy Charge is set as the difference between the Energy Charge (set
12 according to considerations discussed below) and the Fuel and Purchased
13 Power Energy Charge.

14 **Q. WHAT RATE CHANGES ARE YOU PROPOSING FOR SCHEDULE “D”**
15 **(RESIDENTIAL SERVICE)?**

16 A. Exhibit 5 to the Application provides a schedule comparing KIUC’s present
17 tariffed rates and the rates being proposed in the subject proceeding. As
18 noted therein and in Attachment DK-504 to my testimony, I propose a
19 Customer Charge increase from \$10.58 to \$13.50 per customer/per month,
20 and a Total Energy Charge increase to \$0.41207 per kWh. This represents
21 a \$2.92 increase in the Customer Charge over present rates, though it is
22 still 35% less than the ACOSS-indicated Customer Charge rate of

1 \$20.64 per customer-month. This moves the Customer Charge in line with
2 the current minimum bill for Schedule “D”, which is also \$13.50, simplifying
3 the bill structure. The proposed Total Energy Charge is 84% over the
4 ACOSS indicated rate of \$0.22446/kWh, which is necessary to compensate
5 for the lack of a demand charge for this schedule and the below
6 ACOSS-indicated customer charge. Increasing the Customer Charge by a
7 greater percentage than the Energy Charge for this class slightly eases the
8 over-reliance on Energy Charges discussed above (94% vs. 95% in present
9 rates).

10 **Q. WHAT RATE CHANGES ARE YOU PROPOSING FOR SCHEDULE “G”**
11 **GENERAL LIGHT AND POWER SERVICE (I.E., SMALL**
12 **COMMERCIAL)?**

13 A. I propose a Customer Charge increase from \$23.82 to \$25.00 per customer/
14 per month and a Total Energy Charge increase to \$0.42787 per kWh as
15 shown in Exhibit 5 to the Application and Attachment DK-504 to my
16 testimony. This represents a modest 5% increase in the current Customer
17 Charge rate, while fitting most of the revenue increase in the
18 customer-controllable Energy Charge. The proposed Total Energy Charge
19 is almost double (91% above) the ACOSS indicated rate of \$0.22446/kWh,
20 compensating for the lack of a Demand Charge for this schedule. Despite
21 a Customer Charge proposed at slightly above ACOSS indications, this

1 schedule is the only one for which the percentage share of revenue
2 collected from the Energy Charge increases slightly under proposed rates.

3 **Q. WHAT RATE CHANGES DO YOU PROPOSE FOR SCHEDULE "J"**
4 **GENERAL LIGHT AND POWER SERVICE (I.E., LARGE COMMERCIAL**
5 **DEMAND-METERED)?**

6 A. I propose a Customer Charge increase from \$39.69 to \$40.00 per
7 customer/per month, which is an increase of just \$0.31 per customer/per
8 month or 0.8% over present rates as shown in Exhibit 5 to the Application
9 and Attachment DK-504 to this testimony. The proposed Demand Charge
10 increases from \$6.62 per kW to \$8.28 per kW, which represents a relatively
11 modest \$1.66 or 25% increase over present rates. The proposed Total
12 Energy Charge for Schedule "J" is \$0.38644 per kWh. Though the largest
13 percentage increase is made to the Demand Charge, the proposed charge
14 is still 82% below the ACROSS-indicated rate of \$45.25 per kW. As a result,
15 even with the 25% increase in Demand Charge, the Customer Charge and
16 Energy Charge both exceed ACROSS-indicated levels by 41% and 72%,
17 respectively. The rates proposed for Schedule "J" move the class
18 incrementally towards a more ACROSS-indicated structure while adhering to
19 the principle of gradualism by not excessively increasing any single
20 component. The expected over-reliance on per kWh charges improves
21 marginally from 93% in present rates to 92%.

1 **Q. WHAT RATE CHANGES ARE YOU PROPOSING FOR SCHEDULE “L”**
2 **LARGE POWER PRIMARY SERVICE AND FOR SCHEDULE “P” LARGE**
3 **POWER SECONDARY SERVICE?**

4 A. For the reasons discussed above, KIUC is proposing to simplify its rate
5 structure by consolidating these Large Power schedules into a combined
6 schedule referred to as Schedule “LP”. For the newly combined schedule,
7 KIUC proposes a Customer Charge of \$355 per customer/per month
8 charge, which is a slight reduction from Schedule “L”’s current \$355.08 per
9 customer/per month charge and Schedule “P”’s current \$369.38 per
10 customer/per month charge, as shown in Exhibit 5 to the Application. As
11 also reflected in said Exhibit 5 and Attachment DK-504 to this testimony,
12 the proposed Demand Charge is \$14.90 per kW, which is a
13 \$0.96 per kW (7%) increase over current Schedule “L” and
14 \$3.76 per kW (33.75%) increase over current Schedule “P” rates. The
15 increase in Demand Charge was limited to a 25% increase over the
16 \$11.92 per kW weighted average of existing Schedule “L” and “P” rates
17 projected in the 2023 Test Year, again in the interest of ensuring gradualism
18 and avoiding rate and bill shock for lower load factor customers. Though
19 the largest percentage increase of all rate components is made to the
20 Demand Charge, the proposed charge is still 75% below the
21 ACOSS-indicated rate of \$60.59 per kW. The proposed Total Energy
22 Charge is \$0.36737 for all billed kWh, which is an increase of

1 \$0.03415 per kWh (10.2%) over Schedule “L” present rates and an
2 increase of \$0.02446 (7.1%) over Schedule “P” present rates. The
3 proposed Total Energy Charge is \$0.13717 per kWh (60%) above the
4 ACOSS-indicated rate of \$0.23020 per kWh.

5 It is also noted that in current rates, there is a discounted Energy
6 Charge for all kWh energy consumed over 400 kWh per kW demand, which
7 I believe was probably intended to mitigate the result that high load factor
8 customers contribute disproportionately more to cover cost of service than
9 low load factor customers. Raising the proposed Demand Charge by a
10 greater percentage than the Energy Charge serves a similar purpose. The
11 proposed combined rate structure eliminates the declining block structure
12 in Schedules “L” and “P”, leading to simplified billing and a superior price
13 signal for energy usage and conservation. The expected over-reliance on
14 per kWh charges improves marginally from 91% in present rates to 90%.

15 **Q. WAS A PROOF OF REVENUE PERFORMED FOR THE PROPOSED**
16 **RATES?**

17 A. Yes. Attachment DK-503 shows how the proposed rates, when applied to
18 forecast Test Year billing determinants, yield target revenues by class and
19 the total system electric revenue requirement of \$193.7 million. *De minimis*
20 variances can be explained by rounding of rate components to appropriate
21 significant figures.

1 **Q. WAS A CUSTOMER BILL IMPACT ANALYSIS PERFORMED FOR THE**
2 **MAJOR RATE CLASSES?**

3 A. Yes. Daymark performed bill impact analyses for each of the major rate
4 classes for Schedule “D”, “G”, “J”, and the new proposed combined
5 Schedule “LP” (i.e., that combines current Schedule “L” and Schedule “P”
6 classes). Schedule “D” (Residential Service) and Schedule “G” (General
7 Light and Power Service) (i.e., Small Commercial) bill impacts were
8 estimated using 50-100 kWh/month increments to demonstrate changes
9 from the previous rates for representative customer usage levels. Schedule
10 “J” (General Light and Power Service) (i.e., Large Commercial) and
11 combined Schedule “LP” (Large Power) classes were estimated using
12 representative kWh/month increments as well, tailored to respective
13 customer size. In addition, billed demand for each kWh/month level was
14 calculated based on three representative load factor levels. Load factor is
15 the ratio of average load to maximum (billed) demand. The results are
16 provided in Attachment DK-504 to my testimony.

17 **Q. WHAT FINDINGS AND CONCLUSIONS DID YOU DRAW FROM THE**
18 **KIUC RATES COMPARISON (CUSTOMER BILL IMPACT ANALYSIS)**
19 **REFLECTED IN ATTACHMENT DK-504?**

20 A. Daymark found that the bill impacts on customers were within reasonable
21 ranges and achieved the desired results of the proposed rate design. No
22 customers were impacted unfairly or disproportionately relative to those of

1 the same class and under the guidance of the ACOSS. While certain lower
2 load factor customers in the Commercial or Large Power classes may see
3 relatively large bill increases due to the modest increase in Demand
4 Charges, this addresses what has represented an unfair subsidization of
5 these low load-factor customers.

6 **Q. HAVE YOU PREPARED UPDATED TARIFF SHEETS REFLECTING**
7 **THESE PROPOSED CHANGES IN RATES?**

8 A. Yes. Clean and “redlined” versions of updated tariff sheets reflecting the
9 proposed changes set forth in Exhibit 5 to the Application, as well as the
10 proposed ERAC changes discussed in Mr. Rockwell’s testimony
11 (Exhibit 10-T-900), are provided as Attachment DK-505 to my testimony.

12 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

13 A. Yes.

KAUAI ISLAND UTILITY COOPERATIVE

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ATTACHMENT DK-501

(6 PAGES)



Dan Koehler

Vice President and Principal Consultant

Dan advises developers, investors, and regulators on utility rate design, wholesale market dynamics and the deployment of clean energy infrastructure across North America and Hawaii. His principal practice areas are power system planning and wholesale market modeling including energy and capacity markets, renewable energy attributes, energy storage optimization, and carbon emissions reductions. He has appeared as an expert before state regulatory agencies on matters including ratemaking, renewable energy contracts, and resource planning.

SELECTED PROFESSIONAL EXPERIENCE

Utility Rate Design

- Assisted the Utah Division of Public Utilities in a review of Rocky Mountain Power's net power cost reconciliation (Energy Balancing Account) for each year since 2011, with particular focus on the prudence of natural gas and electric hedging transactions. Filed expert report and testimony in annual dockets auditing EBA costs in each calendar year since 2014 (Docket Nos. 15-035-03, 16-035-01, 17-035-01, 18-035-01, 19-035-01, 20-035-01, 21-035-01, and 22-035-01).
- Filed testimony to FERC on behalf of the New York State Utility Intervention Unit, presenting analysis of and proposed adjustments to NEET New York's requested base ROE.
- Provided expert pre-filed and oral testimony to the Michigan Public Service Commission in Consumers Energy Company's last three general electric rate cases (Case Nos. U-17735, U-17990 and U-18322) focusing on coal-fired generation investment decisions and proposed investment recovery mechanisms.
- Managed the project team assisting Kaua'i Island Utility Cooperative (KIUC) with re-design of rates, with a focus on addressing issues related to widespread installation of distributed energy resources.
- Conducted market research and designed Time of Use, Critical Peak Pricing, and Real Time Pricing rates for multiple small New England municipal utilities.
- Assisted the Utah Division of Public Utilities with the analysis of capital expenditures in a major utility's general rate case, including a novel sampling approach to generalize findings, and assisted with preparation of expert testimony.
- Designed Allocated Cost of Service-based Critical Peak Pricing Rates for Stowe Electric Department and drafted supporting testimony to the Vermont Public Service Board.
- Worked with a team to develop testimony in several electric rate cases on behalf of the Wisconsin Citizens Utility Board.

Regulatory Economics

- Prepared a report on avoided costs of a proposed renewable energy and storage Qualifying Facility near Fairbanks, Alaska, and submitted expert testimony on behalf of Golden Valley Electric Association (GVEA) supporting a QF Tariff rate in Docket No. U-22-029.
- Analyzed a request to the North Dakota Public Service Commission for an Advanced Determination of Prudence for installation of \$500 million Air Quality Control System at Big Stone coal-fired power facility. Assisted Richard Hahn with developing expert testimony on behalf of NDPSC Staff in Docket No. PU-11-165.
- Analyzed a petition to the Arkansas Public Service Commission for approval of installing \$500 million in environmental controls at Flint Creek coal-fired power plant in northwest Arkansas. Assisted Richard Hahn with developing expert testimony on behalf of APSC Staff in Docket No. 12-008-U.
- Evaluated the Integrated Resource Plan of a North Dakota utility and helped prepare expert testimony before the Public Service Commission on the utility's application to build a new generation unit.
- Evaluated application filings and drafted testimony for presentation to the Wisconsin Public Service Commission on a proposed 345kV transmission project and a quarter billion-dollar distribution system upgrade.
- Assisted with developing and drafting Integrated Resource Plans for two Vermont utilities, including producing a multivariate regression analysis to forecast load.
- Analyzed the application of a Utah utility for approval of a new 625 MW combined cycle generation resource and assisted with expert testimony of Richard Hahn on behalf of the Division of Public Utilities in Utah PSC Docket No. 10-035-126.
- Analyzed the merger application of Duke and Progress and assisted in drafting testimony on behalf of environmental organizations engaged in commission proceedings in both North Carolina and South Carolina.
- Analyzed PJM's proposed capacity market overhaul and assisted a large coalition of stakeholders with intervention at the FERC regarding the transition process.

Power System Planning

- Managed and coordinated the firm's wholesale market analytics practice area, including maintaining and extending the firm's capabilities and technology to analyze and forecast market trends in energy, capacity, natural gas, and other markets.
- Supervising operator of Daymark's PLEXOS market model, an hourly chronologic electric energy market simulation model licensed through Energy Exemplar that provides both nodal and zonal representations of the Eastern Interconnection control areas. Managed the team that maintains, updates, and operates the PLEXOS model to support analysis for numerous client projects.
- Managed the development, maintenance, and operation of Daymark's proprietary wholesale market models including CapMarker (capacity markets in three ISOs), TideMarker₂ (energy storage), and clean energy policy compliance models for various regions.
- Leads the Daymark teams providing primary production cost modeling services and advisory support to Kaua'i Island Utility Cooperative (using PCI GenTrader) and Green Mountain Power (using PLEXOS).

- Developed a study of the wholesale market benefits and other benefits of Vineyard Wind's offshore wind project submitted in 2017 as part of the winning bid in the Massachusetts 83C Clean Energy RFP. Provided similar services for the Commonwealth Wind and Mayflower Wind offshore wind project submitted in 2021 as part of both winning bids in the Massachusetts 83C-III solicitation.
- Advised an offshore wind developer on bid development into NYSERDA's 2020 and 2022 clean energy solicitations based on comprehensive zonal and nodal production cost modeling in long-term scenario analysis considering key policies, infrastructure changes, and market design evolution associated with New York's aggressive decarbonization targets.
- Provided price modeling insight and CO₂ reduction benefit analysis in support of Swift Current's bids into two recent Maine renewable resource procurements. Daymark's benefits analysis was part of Swift Current's Three Rivers Solar project's winning bid in the Fall 2020 RFP and the 120 MW Greene Apple solar project's winning bid Maine's Spring 2021 RFP.
- Authored studies on behalf of multiple prospective investors in generation assets in PJM, MISO, New England, New York, and Ontario providing analysis and assessment of energy policy and regulation, resource adequacy constructs, and wholesale electricity and natural gas markets.
- Developed process improvement strategies in wholesale electricity market modeling for a large Canadian independent power producer. In particular, assisted the client in improving the representation of NYISO in AURORAxmp, with a focus on improved output benchmarking tools, supply stack representation, and fuel forecasts. Also assisted the client with programming AURORAxmp to conduct Monte Carlo risk analysis with multiple correlated continuous and discrete risk variables.
- Developed and successfully benchmarked models of various systems using PLEXOS and AURORAxmp software including PJM, MISO, NYISO, Southern Company and neighboring Balancing Authority Areas, Duke Energy, and ISO New England.

Generation Asset Valuation

- Provided market analytic and strategic decision-making support to Osaka Gas USA in its acquisition of significant ownership shares in two natural gas combined cycle assets in New England, one in PJM, and prospective acquisitions in other northeastern markets.
- Supported Connecticut Municipal Electric Energy Cooperative asset management with a valuation study of the 84 MW Pierce Station Gas Turbine.
- Assisted with the preparation of an appraisal critique and alternative asset valuations for a 540 MW natural gas-fired generation unit in Rhode Island and several hydroelectric assets in northern New England. Supported expert witness Dan Peaco in multiple tax appeal litigation proceedings in Vermont, New Hampshire, and Rhode Island courts.
- Provided analysis, expert witness preparation, and litigation support in two arbitration cases concerning fair market value of hydroelectric generation assets in Maine and Vermont. Assisted expert witness Dan Peaco with testimony in arbitration proceedings regarding the valuation of 4 MW Brassua Dam in Maine (AAA Case No. 11 153 Y 02133 11) and the valuation of 7 MW Winooski One in Vermont (AAA Case No. 11 198 Y 002014 12).
- Co-authored a report with the New Hampshire Public Utilities Commission Staff on the market value of Public Service Company of New Hampshire's generation fleet.

Renewable Energy

- Provided analysis of climate change impacts and potential renewable energy export markets for independent consultant work on the Manitoba Hydro application to construct over 2,000 MW of new hydro facilities.
- Modeled, analyzed, and contributed to a report on the current and potential impact of a Renewable Energy and Energy Efficiency Portfolio Standard in North Carolina.
- Provided research and market analytics support for expert witness testimony on the potential for Hydro Quebec to export wind power to New England markets.
- Co-authored a U.S. offshore wind market outlook report and presentation for a confidential client.

Competitive Procurement

- Assisted PSEG Long Island with the design, administration, and evaluation of the 2015 Renewable RFP on behalf of Long Island Power Authority.
- Leads team providing electric energy advisory and procurement services to the Massachusetts Port Authority.
- Advised PSEG Long Island on the development of three feed-in tariffs and a major RFP to encourage the development of clean energy resources on the Long Island Power Authority system.
- Research and analytical support for Central Procurement Options study for Massachusetts DOER and Attorney General's Office.

EMPLOYMENT HISTORY

Daymark Energy Advisors, Inc.	Worcester, MA
<i>Principal Consultant and Vice President, Consulting Operations</i>	2022 – Present
<i>Managing Consultant and Director of Project Management</i>	2019 – 2022
<i>Senior Consultant and Manager of Wholesale Market Analytics</i>	2017 – 2019
<i>Consultant</i>	2013 – 2017
<i>Analyst</i>	2010 – 2013
Kennebec Valley Organization	Waterville, ME
<i>Director</i>	2003 – 2009
United States Peace Corps	Paraguay
<i>Volunteer</i>	2000 – 2002

EDUCATION

University of Southern Maine	Portland, ME
<i>Master of Public Policy and Management</i>	2011
Yale University	New Haven, CT
<i>B.A., with Major in Applied Mathematics</i>	2000

PRESENTATIONS & TESTIMONY

Invited Speaker & Conference Presentations

- *Assessing the Battery Market: Opportunities and Challenges in 2021*, presented at the Solar Media, Solar & Storage Finance USA virtual summit, November 2020.
- *Incorporating Discrete Scenario Inputs in AURORA Monte Carlo Analysis*, presented at the EPIS Electric Market Forecasting Conference, Tucson, AZ, October 2013.
- *Regulation, Markets and Headwinds for Coal Generation*, presented at the La Capra Associates Client Symposium, Burlington, VT, November 2012.

Expert Testimony

FORUM	ON BEHALF OF	TOPIC
Regulatory Commission of Alaska	Golden Valley Electric Association	Supporting avoided cost-based Tariff filing for a proposed Qualifying Facility. Docket No. U-22-029. Ongoing.
Utah Public Service Commission	Division of Public Utilities	Joint testimony sponsoring an audit report of Rocky Mountain Power's Energy Balance Account filing. Docket No. 22-035-01. November 2022.
Utah Public Service Commission	Division of Public Utilities	Joint testimony sponsoring an audit report of Rocky Mountain Power's Energy Balancing Account filing. Docket No. 21-035-01. November 2021.
Utah Public Service Commission	Division of Public Utilities	Joint testimony sponsoring an audit report of Rocky Mountain Power's Energy Balancing Account filing. Docket No. 20-035-01. November 2020.
Utah Public Service Commission	Division of Public Utilities	Joint testimony sponsoring an audit report of Rocky Mountain Power's Energy Balancing Account filing. Docket No. 19-035-01. November 2019.
Utah Public Service Commission	Division of Public Utilities	Joint testimony sponsoring an audit report of Rocky Mountain Power's Energy Balancing Account filing. Docket No. 18-035-01. November 2018.
Rhode Island Public Utilities Commission	Vineyard Wind	Retained to file testimony on cost/benefit evaluation provisions in draft RFP for renewable energy long-term contracts. Docket No. 4822. August 2018
Utah Public Service Commission	Division of Public Utilities	Joint testimony sponsoring an audit report of Rocky Mountain Power's Energy Balancing Account filing. Docket No. 17-035-01. November 2017.
Michigan Public Service Commission	Michigan Environmental Council, Natural Resources Defense Council, Sierra Club	Review of Consumers' proposed investment in life extension of coal-fired generation units, focusing on the modeling and economic analysis of various retirement dates. Docket No. U-18322. August 2017.
Michigan Public Service Commission	Michigan Environmental Council and Sierra Club	Impact of wind RFP non-selection decision on 2017 Power Supply Cost Recovery Plan filing. Docket No. U-18142. June 2017.
Federal Energy Regulatory Commission	New York State Utility Intervention Unit	Analysis of and proposed adjustments to NEET New York's requested base ROE. Docket No. ER16-2719-000. December 2016.

FORUM	ON BEHALF OF	TOPIC
Utah Public Service Commission	Division of Public Utilities	Joint testimony sponsoring an audit report of Rocky Mountain Power's Energy Balancing Account filing. Docket No. 16-035-01. July 2016.
Michigan Public Service Commission	Michigan Environmental Council, Natural Resources Defense Council and Sierra Club	Expert testimony in Consumers Energy general rate case focusing on proposed investment recovery mechanism and generation asset disposition. Docket No. U-17990. July 2016.
New Hampshire Public Utilities Commission	PUC Staff	Valuation of PSNH generation assets.
Utah Public Service Commission	Division of Public Utilities	Joint testimony sponsoring an audit report of Rocky Mountain Power's Energy Balancing Account. Docket No. 15-035-03. July 2015.
Michigan Public Service Commission	Michigan Environmental Council and Natural Resources Defense Council	Expert testimony in Consumers Energy general rate case focusing on proposed investment recovery mechanism and generation asset disposition. Docket No. U-17735. June 2015.

KAUAI ISLAND UTILITY COOPERATIVE

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ATTACHMENT DK-502

(1 PAGE)

Existing Class Structure

<u>Row</u>		Residential (D)	Gen. Light & Power (Small Comm.) (G)	Gen. Light & Power (Large Comm.) (J)	Large Power Primary (L)	Large Power Secondary (P)	Street Lighting (SL)	Irrigation	Total
1	COS-indicated Revenue Requirement (\$Millions)	\$ 86.37	\$ 26.74	\$ 18.52	\$ 17.58	\$ 40.60	\$ 1.66	\$ 2.24	\$ 193.72
2	Est. Revenue from Current Rates (\$Millions)	\$ 76.17	\$ 26.03	\$ 18.18	\$ 16.76	\$ 39.02	\$ 0.72	\$ 0.15	\$ 177.03
3	Est. Increase Required to meet COS	13.4%	2.7%	1.8%	4.9%	4.1%	131.2%	1380%	9.4%
4	Proposed Revenue Increase	9.4%	9.4%	9.4%	9.4%	9.4%	20.0%	0.0%	9.4%
5	Proposed Class Revenue Target	83.33	28.48	19.89	18.33	42.68	0.86	0.15	193.72

Proposed Class Structure

<u>Row</u>		Residential (D)	Gen. Light & Power (Small Comm.) (G)	Gen. Light & Power (Large Comm.) (J)	Large Power Combined (LP)	Street Lighting (SL)	Irrigation	Total
1	COS-indicated Revenue Requirement (\$Millions)	\$ 86.37	\$ 26.74	\$ 18.52	\$ 58.18	\$ 1.66	\$ 2.24	\$ 193.72
2	Est. Revenue from Current Rates (\$Millions)	\$ 76.17	\$ 26.03	\$ 18.18	\$ 55.77	\$ 0.72	\$ 0.15	\$ 177.03
3	Est. Increase Required to meet COS	13.4%	2.7%	1.8%	4.3%	131.2%	1380%	9.4%
4	Proposed Revenue Increase	9.4%	9.4%	9.4%	9.4%	20.0%	0.0%	9.4%
5	Proposed Class Revenue Target	\$ 83.33	\$ 28.48	\$ 19.89	\$ 61.01	\$ 0.86	\$ 0.15	\$ 193.72

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

ATTACHMENT DK-503

(4 PAGES)

Kauai Island Utility Cooperative
2023 TY Proof of Revenue by Rate Schedule

SCHEDULE "G"

Class Allocated
Revenue Target

Item	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
No. of customers	cust	4,661	4,663	4,665	4,667	4,669	4,671	4,673	4,675	4,677	4,679	4,681	4,683	56,064
Customer charge	\$/cust	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00	\$25.00
Cust. chg revenue	\$	\$116,525	\$116,575	\$116,625	\$116,675	\$116,725	\$116,775	\$116,825	\$116,875	\$116,925	\$116,975	\$117,025	\$117,075	\$1,401,600
Kwh sales	kWh	5,030,000	4,701,000	5,360,000	4,555,000	5,264,000	5,436,000	5,837,000	5,763,000	5,385,000	6,619,000	4,234,000	5,099,000	63,283,000
Energy charge	\$/kWh	0.42787	0.427870	0.427870	0.427870	0.427870	0.427870	0.427870	0.427870	0.427870	0.427870	0.427870	0.427870	\$0.4279
Energy revenue	\$	\$2,152,186	\$2,011,417	\$2,293,383	\$1,948,948	\$2,252,308	\$2,325,901	\$2,497,477	\$2,465,815	\$2,304,080	\$2,832,072	\$1,811,602	\$2,181,709	\$27,076,898
Total Revenue	\$	\$2,268,711	\$2,127,992	\$2,410,008	\$2,065,623	\$2,369,033	\$2,442,676	\$2,614,302	\$2,582,690	\$2,421,005	\$2,949,047	\$1,928,627	\$2,298,784	\$28,478,498
Non-Fuel Energy Rate		0.22599	0.22599	0.22599	0.22599	0.22599	0.22599	0.22599	0.22599	0.22599	0.22599	0.22599	0.22599	
Fuel & PP Energy Rate		0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	
Base Energy Rate	\$/kWh	0.42787	0.42787	0.42787	0.42787	0.42787	0.42787	0.42787	0.42787	0.42787	0.42787	0.42787	0.42787	
ERAC	\$/kWh	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Total Energy Rate	\$/kWh	0.427870	0.427870	0.427870	0.427870	0.427870	0.427870	0.427870	0.427870	0.427870	0.427870	0.427870	0.427870	
ERAC Revenues		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

\$28,478,387

SCHEDULE "J"

Class Allocated
Revenue Target

Item	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
No. of customers	cust	293	293	293	293	293	293	293	293	293	293	293	293	3,516
Customer charge	\$/cust	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00
Cust. chg revenue	\$	\$11,720	\$11,720	\$11,720	\$11,720	\$11,720	\$11,720	\$11,720	\$11,720	\$11,720	\$11,720	\$11,720	\$11,720	\$140,640
Kwh sales	kWh	3,750,000	3,477,000	3,951,000	3,545,000	3,969,000	4,069,000	4,361,000	4,456,000	4,010,000	4,084,000	3,894,000	3,860,000	47,426,000
Energy charge	\$/kWh	0.38644	0.38644	0.38644	0.38644	0.38644	0.38644	0.38644	0.38644	0.38644	0.38644	0.38644	0.38644	0.38644
Energy revenue	\$	\$1,449,150	\$1,343,652	\$1,526,824	\$1,369,930	\$1,533,780	\$1,572,424	\$1,685,265	\$1,721,977	\$1,549,624	\$1,578,221	\$1,504,797	\$1,491,658	\$18,327,302
KW Demand	kW	14,330	14,682	14,811	13,770	13,807	14,405	14,183	14,804	14,354	14,197	14,018	14,455	171,816
Demand Charge	\$/kW	\$8.28	\$8.28	\$8.28	\$8.28	\$8.28	\$8.28	\$8.28	\$8.28	\$8.28	\$8.28	\$8.28	\$8.28	\$8.28
Demand Revenue	\$	\$118,652	\$121,567	\$122,635	\$114,016	\$114,322	\$119,273	\$117,435	\$122,577	\$118,851	\$117,551	\$116,069	\$119,687	\$1,422,635
Total Revenue	\$	\$1,579,522	\$1,476,939	\$1,661,179	\$1,495,666	\$1,659,822	\$1,703,417	\$1,814,420	\$1,856,274	\$1,680,195	\$1,707,492	\$1,632,586	\$1,623,065	\$19,890,577
Non-Fuel Energy Rate		0.18456	0.18456	0.18456	0.18456	0.18456	0.18456	0.18456	0.18456	0.18456	0.18456	0.18456	0.18456	
Fuel & PP Energy Rate		0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	
Base Energy Rate	\$/kWh	0.38644	0.38644	0.38644	0.38644	0.38644	0.38644	0.38644	0.38644	0.38644	0.38644	0.38644	0.38644	
ERAC	\$/kWh	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Total Energy Rate	\$/kWh	0.38644	0.38644	0.38644	0.38644	0.38644	0.38644	0.38644	0.38644	0.38644	0.38644	0.38644	0.38644	
ERAC Revenues	\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

\$19,890,536

Kauai Island Utility Cooperative
2023 TY Proof of Revenue by Rate Schedule

SCHEDULE "LP"

Class Allocated
Revenue Target

Item	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
No. of customers	cust	118	118	118	118	118	118	118	118	118	118	118	118	1,416
Customer charge	\$/cust	\$355.00	\$355.00	\$355.00	\$355.00	\$355.00	\$355.00	\$355.00	\$355.00	\$355.00	\$355.00	\$355.00	\$355.00	\$355.00
Cust. chg revenue	\$	\$41,890	\$41,890	\$41,890	\$41,890	\$41,890	\$41,890	\$41,890	\$41,890	\$41,890	\$41,890	\$41,890	\$41,890	\$502,680
Non-Fuel Energy Rate		0.16549	0.16549	0.16549	0.16549	0.16549	0.16549	0.16549	0.16549	0.16549	0.16549	0.16549	0.16549	
Fuel & PP Energy Rate		0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	
Base Energy Rate	kWh	0.36737	0.36737	0.36737	0.36737	0.36737	0.36737	0.36737	0.36737	0.36737	0.36737	0.36737	0.36737	
Billed kwh sales	\$/kWh	11,935,653	11,193,064	12,267,405	10,388,272	12,046,413	12,528,909	13,523,751	13,548,003	12,760,912	13,420,067	12,741,236	12,373,092	148,726,777
Billed kwh revenue	\$	\$4,384,801	\$4,111,996	\$4,506,677	\$3,816,339	\$4,425,491	\$4,602,745	\$4,968,220	\$4,977,130	\$4,687,976	\$4,930,130	\$4,680,748	\$4,545,503	\$54,637,756
Kwh Sales	kWh	12,288,000	11,523,000	12,630,000	10,695,000	12,402,000	12,899,000	13,923,000	13,948,000	13,138,000	13,816,000	13,117,000	12,738,000	153,117,000
ERAC	\$/kWh	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
ERAC Revenues	\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total kwh revenue	\$	\$4,384,801	\$4,111,996	\$4,506,677	\$3,816,339	\$4,425,491	\$4,602,745	\$4,968,220	\$4,977,130	\$4,687,976	\$4,930,130	\$4,680,748	\$4,545,503	\$54,637,756
														\$0.357
KW Demand	kW	32,859	34,102	30,997	29,975	30,707	33,786	33,410	34,790	33,806	33,272	32,434	33,851	393,989
Demand Charge	\$/kW	\$14.90	\$14.90	\$14.90	\$14.90	\$14.90	\$14.90	\$14.90	\$14.90	\$14.90	\$14.90	\$14.90	\$14.90	\$ 14.90
Demand Revenue	\$	\$489,599	\$508,120	\$461,855	\$446,628	\$457,534	\$503,411	\$497,809	\$518,371	\$503,709	\$495,753	\$483,267	\$504,380	\$5,870,436
Total Revenue	\$	\$4,916,290	\$4,662,006	\$5,010,422	\$4,304,857	\$4,924,915	\$5,148,047	\$5,507,919	\$5,537,391	\$5,233,576	\$5,467,773	\$5,205,904	\$5,091,773	\$61,010,872

\$61,010,598

Kauai Island Utility Cooperative
2023 TY Proof of Revenue by Rate Schedule

SCHEDULE "SL"

Item	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Class Allocated Revenue Target
No. of fixtures	fixtures	3,769	3,769	3,769	3,769	3,769	3,769	3,769	3,769	3,769	3,769	3,769	3,769	45,228	
Ave. revenue per fixture	\$/Fixture	10.26	10.26	10.26	10.26	10.26	10.26	10.26	10.26	10.26	10.26	10.26	10.26	\$10.26	
Base fixture revenue	\$	\$38,670	\$38,670	\$38,670	\$38,670	\$38,670	\$38,670	\$38,670	\$38,670	\$38,670	\$38,670	\$38,670	\$38,670	\$464,040	
Kwh sales	kWh	64,000	64,000	64,000	64,000	64,000	64,000	64,000	64,000	64,000	64,000	64,000	66,000	770,000	
Energy charge	\$/kWh	0.5135	0.5135	0.5135	0.5135	0.5135	0.5135	0.5135	0.5135	0.5135	0.5135	0.5135	0.5135	\$0.514	
Energy revenue	\$	\$32,867	\$32,867	\$32,867	\$32,867	\$32,867	\$32,867	\$32,867	\$32,867	\$32,867	\$32,867	\$32,867	\$33,894	\$395,431	
Total Revenue	\$	\$71,537	\$72,564	\$859,471	\$859,466										
Non-Fuel Energy Rate		0.31166	0.31166	0.31166	0.31166	0.31166	0.31166	0.31166	0.31166	0.31166	0.31166	0.31166	0.31166		
Fuel & PP Energy Rate		0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	0.20188	0.20188		
Base Energy Rate	\$/kWh	0.51354	0.51354	0.51354	0.51354	0.51354	0.51354	0.51354	0.51354	0.51354	0.51354	0.51354	0.51354		
ERAC	\$/kWh	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000		
Total Energy Rate	\$/kWh	0.513540	0.513540	0.513540	0.513540	0.513540	0.513540	0.513540	0.513540	0.513540	0.513540	0.513540	0.513540		
ERAC Revenues	\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	

IRRIGATION

Item	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Class Allocated Revenue Target
No. of customers	cust	2	2	2	2	2	2	2	2	2	2	2	2	24	
Customer charge	\$/cust	0	0	0	0	0	0	0	0	0	0	0	0		
Cust. chg revenue	\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Kwh sales	kWh	40,000	143,000	179,000	2,000	4,000	92,000	68,000	94,000	23,000	16,000	62,000	23,000	746,000	
Energy charge	\$/kWh	0.2032	0.2032	0.2032	0.2032	0.2032	0.2032	0.2032	0.2032	0.2032	0.2032	0.2032	0.2032	\$0.203	
Energy revenue	\$	\$8,129	\$29,061	\$36,377	\$406	\$813	\$18,697	\$13,819	\$19,103	\$4,674	\$3,252	\$12,600	\$4,674	\$151,605	
Total Revenue	\$	\$8,129	\$29,061	\$36,377	\$406	\$813	\$18,697	\$13,819	\$19,103	\$4,674	\$3,252	\$12,600	\$4,674	\$151,605	\$151,605
Total Revenue	\$	\$15,708,433	\$14,344,768	\$15,966,347	\$14,050,008	\$15,864,694	\$16,619,535	\$17,660,750	\$17,641,641	\$16,502,037	\$17,306,398	\$15,780,300	\$16,272,681	\$193,717,591	\$193,716,390

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

ATTACHMENT DK-504

(6 PAGES)

KIUC Rates Comparison - Test Year 2023

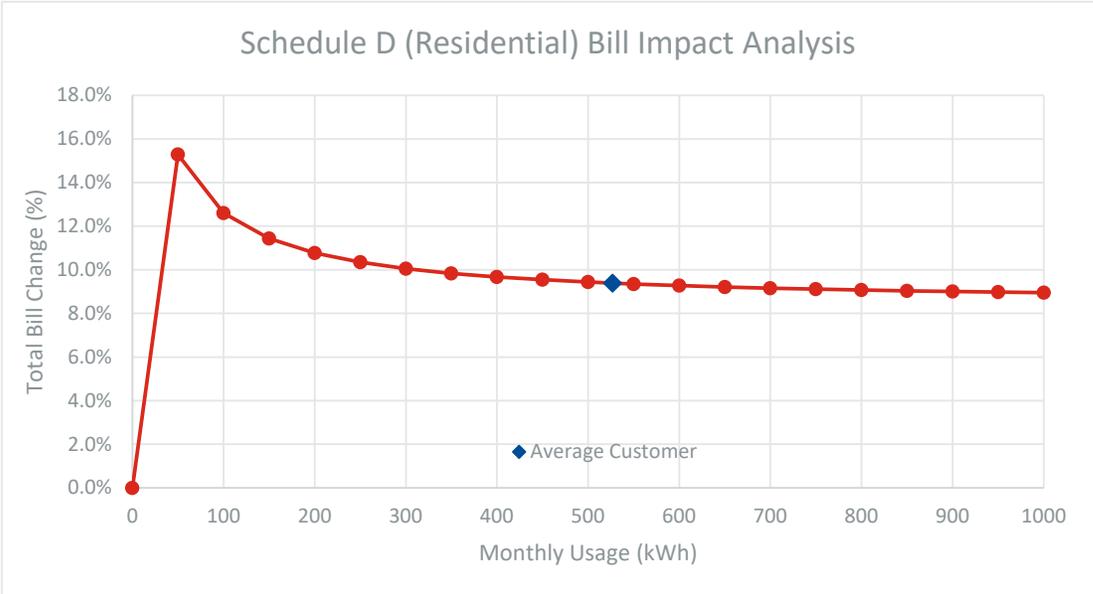
	(a) Present Rates	(b) Proposed Rates	(c) (b) - (a) Unit Change	(d) (c) / (a) % Change
Schedule "D" (Residential Service)				
Customer Charge (\$/Month)	\$ 10.58	\$ 13.50	\$ 2.92	28%
Total Energy Charge (\$/kWh)	\$ 0.38004	\$ 0.41207	\$ 0.03203	8%
<i>Non Fuel Energy Charge (\$/kWh)</i>	\$ 0.15600	\$ 0.21019	\$ 0.05419	35%
<i>Fuel & PP Energy Charge (\$/kWh)</i>	\$ 0.19143	\$ 0.20188	\$ 0.01045	5%
<i>Energy Rate Adjustment Clause (ERAC) (\$/kWh)</i>	\$ 0.03261	\$ -	\$ (0.03261)	-100%
Minimum Bill (\$/Month)	\$ 13.50	\$ 13.50	\$ -	0%
Schedule "G" (General Light and Power Service)				
Customer Charge (\$/Month)	\$ 23.82	\$ 25.00	\$ 1.18	5%
Total Energy Charge (\$/kWh)	\$ 0.39029	\$ 0.42787	\$ 0.03758	10%
<i>Non Fuel Energy Charge (\$/kWh)</i>	\$ 0.16626	\$ 0.22599	\$ 0.05973	36%
<i>Fuel & PP Energy Charge (\$/kWh)</i>	\$ 0.19143	\$ 0.20188	\$ 0.01045	5%
<i>ERAC (\$/kWh)</i>	\$ 0.03260	\$ -	\$ (0.03260)	-100%
Minimum Bill (\$/Month)	\$ 26.45	\$ 25.00	\$ (1.45)	-5%
Schedule "J" (General Light and Power Service)				
Customer Charge (\$/Month)	\$ 39.69	\$ 40.00	\$ 0.31	1%
Total Energy Charge (\$/kWh)	\$ 0.35646	\$ 0.38644	\$ 0.02998	8%
<i>Non Fuel Energy Charge (\$/kWh)</i>	\$ 0.13247	\$ 0.18456	\$ 0.05209	39%
<i>Fuel & PP Energy Charge (\$/kWh)</i>	\$ 0.19143	\$ 0.20188	\$ 0.01045	5%
<i>ERAC (\$/kWh)</i>	\$ 0.03256	\$ -	\$ (0.03256)	-100%
Demand Charge (\$/kW)	\$ 6.62	\$ 8.28	\$ 1.66	25%
Minimum Bill (\$/Month)	\$ 198.42	[cust + dmd]		
Schedule "L" (Large Power Primary Service)*				
Customer Charge (\$/Month)	\$ 355.08	\$ 355.00	\$ (0.08)	0%
Total Energy Charge (\$/kWh)	\$ 0.33322	\$ 0.36737	\$ 0.03415	10%
<i>Non Fuel Energy Charge (\$/kWh)</i>	\$ 0.10807	\$ 0.16549	\$ 0.05742	53%
<i>Fuel & PP Energy Charge (\$/kWh)</i>	\$ 0.19143	\$ 0.20188	\$ 0.01045	5%
<i>ERAC (\$/kWh)</i>	\$ 0.03371	\$ -	\$ (0.03371)	-100%
Demand Charge (\$/kW)	\$ 13.94	\$ 14.90	\$ 0.96	7%
Minimum Bill (\$/Month)	[cust + dmd]	[cust + dmd]		
Schedule "P" (Large Power Secondary Service)*				
Customer Charge (\$/Month)	\$ 369.38	\$ 355.00	\$ (14.38)	-4%
Total Energy Charge (\$/kWh)	\$ 0.34291	\$ 0.36737	\$ 0.02446	7.1%
<i>Non Fuel Energy Charge (\$/kWh)</i>	\$ 0.11792	\$ 0.16549	\$ 0.04757	40%
<i>Fuel & PP Energy Charge (\$/kWh)</i>	\$ 0.19143	\$ 0.20188	\$ 0.01045	5%
<i>ERAC (\$/kWh)</i>	\$ 0.03356	\$ -	\$ (0.03356)	-100%
Demand Charge (\$/kW)	\$ 11.14	\$ 14.90	\$ 3.76	34%
Minimum Bill (\$/Month)	[cust + dmd]	[cust + dmd]		
Schedule "SL" (Street Lighting)				
Fixture Charge (\$/Month, by type)				
Standard incandescent <= 4,000 lumen	\$ 3.63	\$ 4.54	\$ 0.91	25%
Standard mercury vapor <= 21,000 lumen	\$ 6.25	\$ 7.81	\$ 1.56	25%
Sodium vapor, <= 100 watt	\$ 6.25	\$ 7.81	\$ 1.56	25%
Sodium vapor, 101-150 watt	\$ 6.25	\$ 7.81	\$ 1.56	25%
Sodium vapor, 151-200 watt	\$ 6.47	\$ 8.09	\$ 1.62	25%
Sodium vapor, 201-250 watt	\$ 6.47	\$ 8.09	\$ 1.62	25%
Sodium vapor, 251+ watt	\$ 6.75	\$ 8.44	\$ 1.69	25%
LED, <= 45 watt	\$ 8.18	\$ 10.23	\$ 2.05	25%
LED, 46-98 watt	\$ 8.48	\$ 10.60	\$ 2.12	25%
LED, 99+ watt	\$ 8.57	\$ 10.71	\$ 2.14	25%
Total Energy Charge (\$/kWh)	\$ 0.44785	\$ 0.51354	\$ 0.06569	15%
<i>Non Fuel Energy Charge (\$/kWh)</i>	\$ 0.22387	\$ 0.31166	\$ 0.08779	39%
<i>Fuel & PP Energy Charge (\$/kWh)</i>	\$ 0.19143	\$ 0.20188	\$ 0.01045	5%
<i>ERAC (\$/kWh)</i>	\$ 0.03255	\$ -	\$ (0.03255)	-100%
Minimum Bill (\$/Month)	[fixture charge]	[fixture charge]		0%

* Proposed rates are for the new combined class, Schedule "LP" (Large Power Service)

Schedule D (Residential) Bill Impact Analysis

	Present Rates	Proposed Rates
Customer Charge (\$/Month)	\$ 10.58	\$ 13.50
Energy Charge (\$/kWh)	\$ 0.38004	\$ 0.41207
Minimum Bill (\$/Month)	\$ 13.50	\$ 13.50

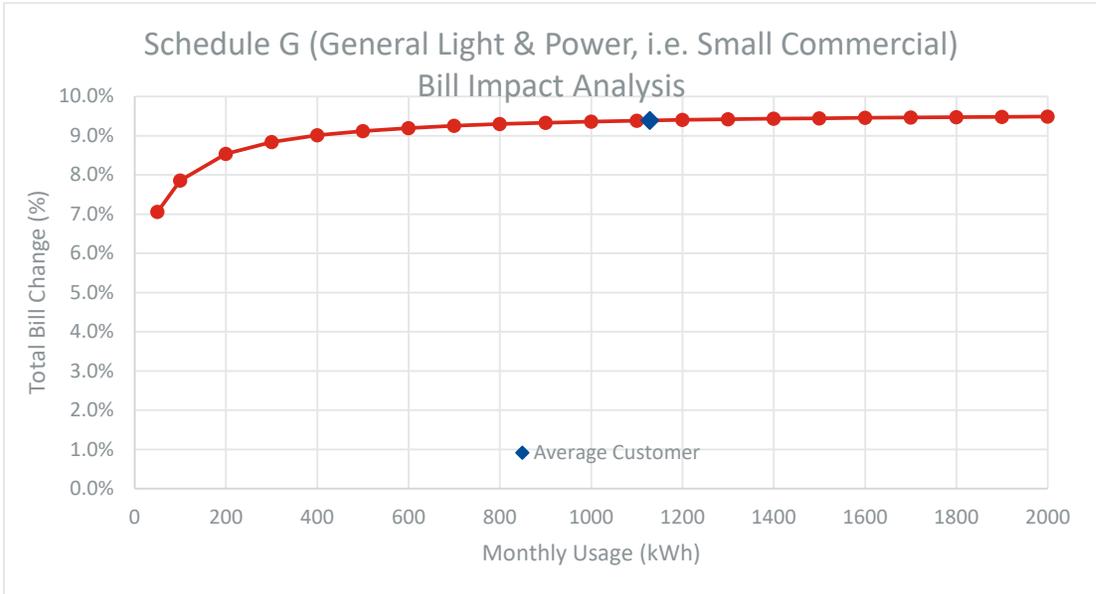
kWh Usage	Total Monthly Bill (\$)		Change		
	Present Rates	Proposed Rates	\$	%	
0	\$ 13.50	\$ 13.50	\$ -	0.0%	
50	\$ 29.58	\$ 34.10	\$ 4.52	15.3%	
100	\$ 48.58	\$ 54.71	\$ 6.12	12.6%	
150	\$ 67.59	\$ 75.31	\$ 7.72	11.4%	
200	\$ 86.59	\$ 95.91	\$ 9.33	10.8%	
250	\$ 105.59	\$ 116.52	\$ 10.93	10.3%	
300	\$ 124.59	\$ 137.12	\$ 12.53	10.1%	
350	\$ 143.60	\$ 157.72	\$ 14.13	9.8%	
400	\$ 162.60	\$ 178.33	\$ 15.73	9.7%	
450	\$ 181.60	\$ 198.93	\$ 17.33	9.5%	
500	\$ 200.60	\$ 219.54	\$ 18.93	9.4%	
550	\$ 219.60	\$ 240.14	\$ 20.53	9.4%	
600	\$ 238.61	\$ 260.74	\$ 22.14	9.3%	
650	\$ 257.61	\$ 281.35	\$ 23.74	9.2%	
700	\$ 276.61	\$ 301.95	\$ 25.34	9.2%	
750	\$ 295.61	\$ 322.55	\$ 26.94	9.1%	
800	\$ 314.61	\$ 343.16	\$ 28.54	9.1%	
850	\$ 333.62	\$ 363.76	\$ 30.14	9.0%	
900	\$ 352.62	\$ 384.36	\$ 31.74	9.0%	
950	\$ 371.62	\$ 404.97	\$ 33.35	9.0%	
1000	\$ 390.62	\$ 425.57	\$ 34.95	8.9%	
"Average" Customer	527	\$ 210.85	\$ 230.65	\$ 19.80	9.4%



Schedule G (General Light & Power, i.e. Small Commercial) Bill Impact Analysis

	Present Rates	Proposed Rates
Customer Charge (\$/Month)	\$ 23.82	\$ 25.00
Energy Charge (\$/kWh)	\$ 0.39029	\$ 0.42787
Minimum Bill (\$/Month)	\$ 26.45	\$ 25.00

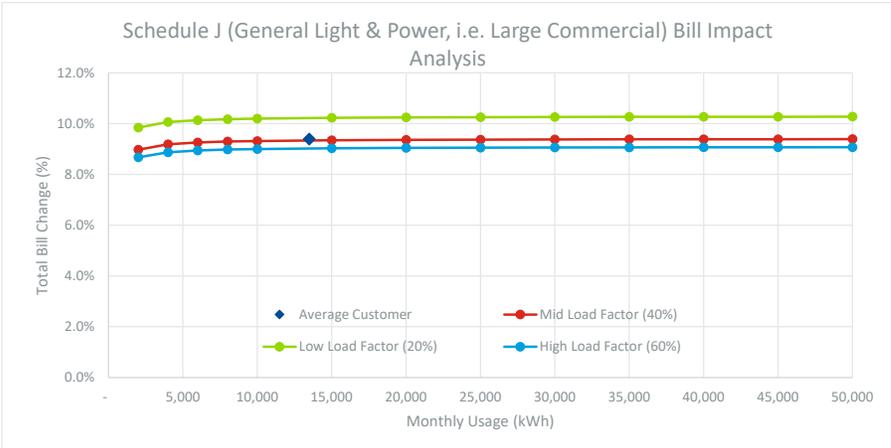
kWh Usage	Total Monthly Bill (\$)		Change		
	Present Rates	Proposed Rates	\$	%	
50	\$ 43.33	\$ 46.39	\$ 3.06	7.1%	
100	\$ 62.85	\$ 67.79	\$ 4.94	7.9%	
200	\$ 101.88	\$ 110.57	\$ 8.70	8.5%	
300	\$ 140.91	\$ 153.36	\$ 12.45	8.8%	
400	\$ 179.94	\$ 196.15	\$ 16.21	9.0%	
500	\$ 218.97	\$ 238.94	\$ 19.97	9.1%	
600	\$ 257.99	\$ 281.72	\$ 23.73	9.2%	
700	\$ 297.02	\$ 324.51	\$ 27.49	9.3%	
800	\$ 336.05	\$ 367.30	\$ 31.24	9.3%	
900	\$ 375.08	\$ 410.08	\$ 35.00	9.3%	
1000	\$ 414.11	\$ 452.87	\$ 38.76	9.4%	
1100	\$ 453.14	\$ 495.66	\$ 42.52	9.4%	
1200	\$ 492.17	\$ 538.44	\$ 46.27	9.4%	
1300	\$ 531.20	\$ 581.23	\$ 50.03	9.4%	
1400	\$ 570.23	\$ 624.02	\$ 53.79	9.4%	
1500	\$ 609.26	\$ 666.81	\$ 57.55	9.4%	
1600	\$ 648.29	\$ 709.59	\$ 61.31	9.5%	
1700	\$ 687.31	\$ 752.38	\$ 65.06	9.5%	
1800	\$ 726.34	\$ 795.17	\$ 68.82	9.5%	
1900	\$ 765.37	\$ 837.95	\$ 72.58	9.5%	
2000	\$ 804.40	\$ 880.74	\$ 76.34	9.5%	
"Average" Customer	1,129	\$ 464.37	\$ 507.96	\$ 43.60	9.4%



Schedule J (General Light & Power, i.e. Large Commercial) Bill Impact Analysis

	Present Rates	Proposed Rates
Customer Charge (\$/Month)	\$ 39.69	\$ 40.00
Energy Charge (\$/kWh)	\$ 0.35646	\$ 0.38644
Demand Charge (\$/kW)	\$ 6.62	\$ 8.28
Minimum Bill (\$/Month)	\$ 198.42	[cust + dmd]

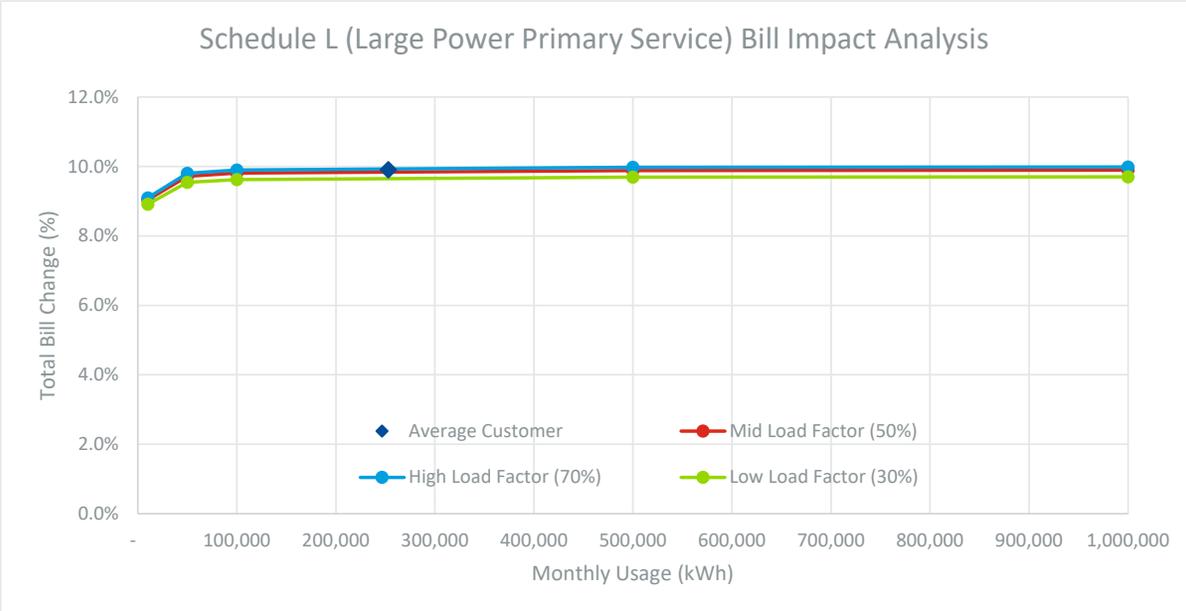
kWh Usage	kW Demand	Total Monthly Bill (\$)		Change	
		Present Rates	Proposed Rates	\$	%
Mid Load Factor (40%)					
2000	6.8	\$ 798	\$ 869	\$ 72	9.0%
4000	13.7	\$ 1,556	\$ 1,699	\$ 143	9.2%
6000	20.5	\$ 2,314	\$ 2,528	\$ 214	9.3%
8000	27.4	\$ 3,073	\$ 3,358	\$ 286	9.3%
10000	34.2	\$ 3,831	\$ 4,188	\$ 357	9.3%
15000	51.4	\$ 5,727	\$ 6,262	\$ 535	9.3%
20000	68.5	\$ 7,622	\$ 8,336	\$ 714	9.4%
25000	85.6	\$ 9,518	\$ 10,410	\$ 892	9.4%
30000	102.7	\$ 11,413	\$ 12,484	\$ 1,070	9.4%
35000	119.9	\$ 13,310	\$ 14,558	\$ 1,249	9.4%
40000	137.0	\$ 15,205	\$ 16,632	\$ 1,427	9.4%
45000	154.1	\$ 17,101	\$ 18,706	\$ 1,605	9.4%
50000	171.2	\$ 18,996	\$ 20,780	\$ 1,784	9.4%
Low Load Factor (20%)					
2000	13.7	\$ 843	\$ 926	\$ 83	9.8%
4000	27.4	\$ 1,647	\$ 1,813	\$ 166	10.1%
6000	41.1	\$ 2,451	\$ 2,699	\$ 248	10.1%
8000	54.8	\$ 3,254	\$ 3,585	\$ 331	10.2%
10000	68.5	\$ 4,058	\$ 4,472	\$ 414	10.2%
15000	102.7	\$ 6,066	\$ 6,687	\$ 621	10.2%
20000	137.0	\$ 8,076	\$ 8,903	\$ 827	10.2%
25000	171.2	\$ 10,085	\$ 11,119	\$ 1,034	10.3%
30000	205.5	\$ 12,094	\$ 13,335	\$ 1,241	10.3%
35000	239.7	\$ 14,103	\$ 15,550	\$ 1,448	10.3%
40000	274.0	\$ 16,112	\$ 17,766	\$ 1,654	10.3%
45000	308.2	\$ 18,121	\$ 19,982	\$ 1,861	10.3%
50000	342.5	\$ 20,130	\$ 22,198	\$ 2,068	10.3%
High Load Factor (60%)					
2000	4.6	\$ 783	\$ 851	\$ 68	8.7%
4000	9.1	\$ 1,526	\$ 1,661	\$ 135	8.9%
6000	13.7	\$ 2,269	\$ 2,472	\$ 203	8.9%
8000	18.3	\$ 3,013	\$ 3,283	\$ 271	9.0%
10000	22.8	\$ 3,755	\$ 4,093	\$ 338	9.0%
15000	34.2	\$ 5,613	\$ 6,120	\$ 507	9.0%
20000	45.7	\$ 7,471	\$ 8,147	\$ 676	9.0%
25000	57.1	\$ 9,329	\$ 10,174	\$ 845	9.1%
30000	68.5	\$ 11,187	\$ 12,200	\$ 1,013	9.1%
35000	79.9	\$ 13,045	\$ 14,227	\$ 1,182	9.1%
40000	91.3	\$ 14,902	\$ 16,254	\$ 1,351	9.1%
45000	102.7	\$ 16,760	\$ 18,280	\$ 1,520	9.1%
50000	114.2	\$ 18,619	\$ 20,308	\$ 1,689	9.1%
"Average" Customer (Load Factor = 38%)					
13,489	49	\$ 5,171	\$ 5,657	\$ 486	9.4%



Schedule L (Large Power Primary Service) Bill Impact Analysis

	Present Rates (L)	Proposed Rates (LP)
Customer Charge (\$/Month)	\$ 355.08	\$ 355.00
Energy Charge (\$/kWh)	\$ 0.33322	\$ 0.36737
Demand Charge (\$/kW)	\$ 13.94	\$ 14.90
Minimum Bill (\$/Month)	[cust + dmd]	[cust + dmd]

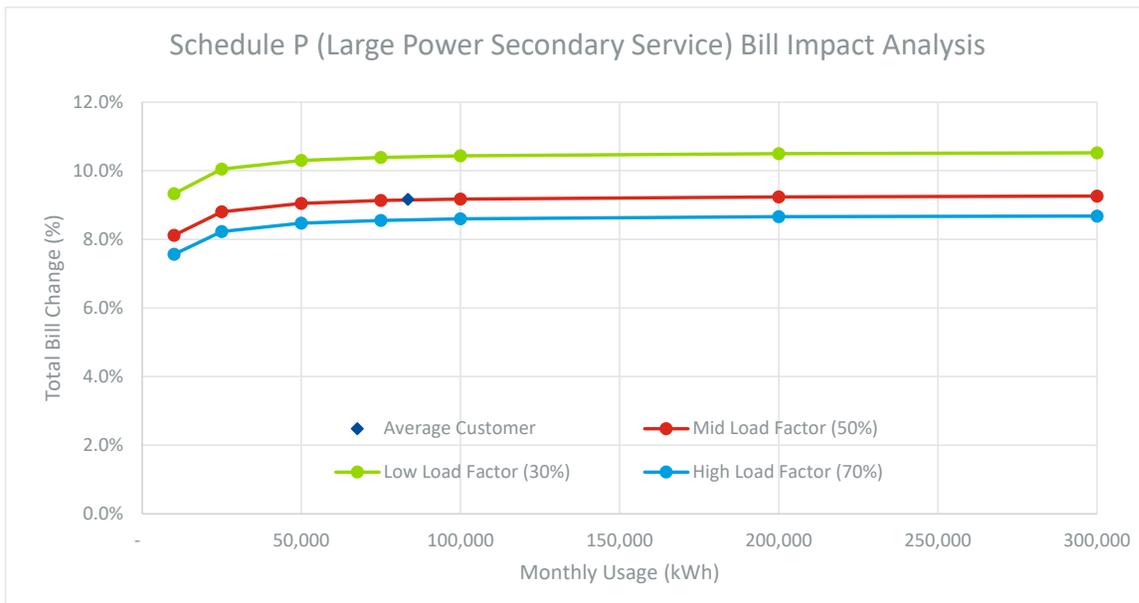
kWh Usage	kW Demand	Total Monthly Bill (\$)		Change	
		Present Rates	Proposed Rates	\$	%
Mid Load Factor (50%)					
10,000	27.4	\$ 4,069	\$ 4,437	\$ 368	9.0%
50,000	137.0	\$ 18,926	\$ 20,765	\$ 1,839	9.7%
100,000	274.0	\$ 37,496	\$ 41,175	\$ 3,678	9.8%
500,000	1,369.9	\$ 186,060	\$ 204,452	\$ 18,392	9.9%
1,000,000	2,739.7	\$ 371,763	\$ 408,547	\$ 36,784	9.9%
Low Load Factor (30%)					
10,000	45.7	\$ 4,324	\$ 4,710	\$ 385	8.9%
50,000	228.3	\$ 20,198	\$ 22,125	\$ 1,927	9.5%
100,000	456.6	\$ 40,042	\$ 43,895	\$ 3,854	9.6%
500,000	2,283.1	\$ 198,790	\$ 218,058	\$ 19,269	9.7%
1,000,000	4,566.2	\$ 397,224	\$ 435,761	\$ 38,537	9.7%
High Load Factor (70%)					
10,000	19.6	\$ 3,960	\$ 4,321	\$ 360	9.1%
50,000	97.8	\$ 18,379	\$ 20,181	\$ 1,801	9.8%
100,000	195.7	\$ 36,405	\$ 40,008	\$ 3,603	9.9%
500,000	978.5	\$ 180,604	\$ 198,620	\$ 18,016	10.0%
1,000,000	1,956.9	\$ 360,851	\$ 396,883	\$ 36,032	10.0%
"Average" Customer (Load Factor = 57%)					
252,928	607	\$ 93,097	\$ 102,318	\$ 9,221	9.9%



Schedule P (Large Power Secondary Service) Bill Impact Analysis

	Present Rates (P)	Proposed Rates (LP)
Customer Charge (\$/Month)	\$ 369.38	\$ 355.00
Energy Charge (\$/kWh)	\$ 0.34291	\$ 0.36737
Demand Charge (\$/kW)	\$ 11.14	\$ 14.90
Minimum Bill (\$/Month)	[cust + dmd]	[cust + dmd]

kWh Usage	kW Demand	Total Monthly Bill (\$)		Change	
		Present Rates	Proposed Rates	\$	%
Mid Load Factor (50%)					
10,000	27.4	\$ 4,104	\$ 4,437	\$ 333	8.1%
25,000	68.5	\$ 9,705	\$ 10,560	\$ 855	8.8%
50,000	137.0	\$ 19,041	\$ 20,765	\$ 1,724	9.1%
75,000	205.5	\$ 28,377	\$ 30,970	\$ 2,593	9.1%
100,000	274.0	\$ 37,713	\$ 41,175	\$ 3,462	9.2%
200,000	547.9	\$ 75,056	\$ 81,993	\$ 6,937	9.2%
300,000	821.9	\$ 112,399	\$ 122,812	\$ 10,413	9.3%
Low Load Factor (30%)					
10,000	45.7	\$ 4,308	\$ 4,710	\$ 402	9.3%
25,000	114.2	\$ 10,214	\$ 11,241	\$ 1,026	10.0%
50,000	228.3	\$ 20,058	\$ 22,125	\$ 2,067	10.3%
75,000	342.5	\$ 29,903	\$ 33,011	\$ 3,108	10.4%
100,000	456.6	\$ 39,747	\$ 43,895	\$ 4,148	10.4%
200,000	913.2	\$ 79,125	\$ 87,436	\$ 8,311	10.5%
300,000	1,369.9	\$ 118,504	\$ 130,978	\$ 12,473	10.5%
High Load Factor (70%)					
10,000	19.6	\$ 4,017	\$ 4,321	\$ 304	7.6%
25,000	48.9	\$ 9,487	\$ 10,268	\$ 781	8.2%
50,000	97.8	\$ 18,605	\$ 20,181	\$ 1,576	8.5%
75,000	146.8	\$ 27,723	\$ 30,095	\$ 2,372	8.6%
100,000	195.7	\$ 36,841	\$ 40,008	\$ 3,167	8.6%
200,000	391.4	\$ 73,312	\$ 79,661	\$ 6,349	8.7%
300,000	587.1	\$ 109,784	\$ 119,314	\$ 9,530	8.7%
"Average" Customer (Load Factor = 50%)					
83,495	230	\$ 31,567	\$ 34,461	\$ 2,894	9.2%



KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

ATTACHMENT DK-505
(Clean Version)

(26 PAGES)

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second Revised Sheet 63
Cancels First Revised Sheet 63

SCHEDULE "D"
Residential Service

Availability:

Applicable to lighting, heating, cooking, air conditioning and single-phase residential service in single-family dwellings metered and billed separately by the Company. This schedule does not apply where residence and business are combined. Service supplied under this rate is subject to the Rules of the Company.

Storage water heaters may be connected to this service, provided that each element is controlled by a thermostat and the maximum wattage of the heating elements that may be energized at any one time shall not exceed 5,000 watts.

Rate:

Customer Charge: (Per Customer per month) \$13.50

Energy Charge:

Non-Fuel Energy Charge (Non-Fuel and Non- Purchased Power Energy Cost only)	(To be added to Customer Charge) All kWh	\$0.21019 per kWh
Fuel and Purchased Power Energy Charge (may include ERAC on customer bills)	(To be added to Customer Charge) All kWh	\$0.20188 per kWh
Energy Rate Adjustment Clause (ERAC)	(To be added to Customer Charge) All kWh	See below
Minimum Charge:	The minimum monthly charge shall be - (Per Customer per month)	\$13.50

Resource Cost Adjustment Surcharge:

The Resource Cost Adjustment Surcharge shall be added to the Customer and Energy Charges, and energy cost adjustment.

Issued: TBD
By: David Bissell, President
and Chief Executive Officer

Effective: TBD
Decision and Order No. TBD

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Original Sheet 64

SCHEDULE "D" (Continued)
Residential Service

Apartment House Collection Arrangement:

Any apartment owner having title to three or more apartments at one location, each apartment being separately metered and billed by the Company on Residential Rate Schedule, may elect to accept a commission of ten per cent (10%) of the amount of the bills rendered for such apartments not to exceed \$5.00 per month for each apartment upon entering into a collection arrangement with the Company under the following terms and conditions.

1. All accounts shall be kept in the name of the apartment house owner who shall assume the responsibility for the payment of all bills before they become past due.
2. All accounts shall remain active at all times and, though vacant, shall be subject to the minimum charge applicable.
3. Failure to comply with 1 or 2 above shall terminate the Apartment House Agreement.
4. The Company will render individual bills for each apartment on a regular billing period basis and will also furnish a statement showing gross and net billings.
5. Provision of this section applies to all existing Apartment House Agreements. No new Agreements will be accepted as of January 1, 1994.

Issued: October 15, 2010
By: Randall J. Hee, President
and Chief Executive Officer

Effective: October 12, 2010
Decision and Order No. 19658,
Interim Decision and Order (April 29,
2010)/Order (May 26, 2010), and
Decision and Order (September 9, 2010)

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Third Revised Sheet 65
Cancels Second Revised Sheet 65

SCHEDULE "D" (Continued)
Residential Service

Energy Rate Adjustment Clause (ERAC):

This ERAC shall include the following:

FUEL AND PURCHASED ENERGY - The above rates are based on a cost of fuel for Company generation of 2301.98 cents per million Btu for fuel delivered in its service tanks and a cost for purchased energy (Purchased Energy) of 17.443 cents per kilowatthour. The term "Purchased Energy" shall mean all capacity and purchased energy charges and payments (including revenue taxes) that the Commission has authorized to include in this ERAC. Company-generated energy from non-fuel sources shall be considered as zero fuel cost in the determination of the composite fuel cost. When the Company-generated net energy cost is more or less than 2301.98 cents per million Btu, and/or the Purchased Energy cost is more or less than 17.443 cents per kilowatthour, a corresponding adjustment (Energy Rate Adjustment Factor) to the energy charge shall be made. This adjustment shall be comprised of a Company Generation Component and a Purchased Energy Component.

The Company Generation Component shall be the difference in current generation cost and base generation cost, adjusted for additional revenue taxes. The current generation cost shall be determined by the current fuel cost in cents per million Btu, multiplied by a generation conversion factor of 0.009950 million Btu per kilowatthour, weighted by the proportion of current Company generation to total system net energy in kilowatthours. The base generation cost is the base fuel cost of 2301.98 cents per million Btu multiplied by a generation conversion factor of 0.009950 million Btu per kilowatthour, weighted by the proportion of the 2023 test year generation to total system energy in kilowatthours.

Issued: TBD
By: David Bissell
President & Chief Executive Officer

Effective: TBD
Decision and Order No. TBD

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Third Revised Sheet 66
Cancels Second Revised Sheet 66

SCHEDULE "D" (Continued)
Residential Service

The Purchased Energy Component shall be the difference between (1) the current Purchased Energy cost weighted by the proportion of current Purchased Energy to total system net energy, and (2) the base Purchased Energy cost of 17.443 cents per kilowatthour weighted by the proportion of the 2023 test year Purchased Energy to total system net energy, adjusted to the sales delivery level and for additional revenue taxes. The Energy Rate Adjustment Factor shall be the sum of the Generation Component and the Purchased Energy Component.

The revenue tax requirement shall be calculated using current rates of the Franchise Tax, Public Service Company Tax, and Public Utilities Commission fee.

The Energy Rate Adjustment shall be effective on the date of cost change. When a cost change occurs during a customer's billing period, the Energy Rate Adjustment will be prorated for the number of days each cost was in effect.

This ERAC is consistent with the terms of the Company's operations and Purchased Energy contracts and may be revised to reflect any revisions or changes in operations and the Purchased Energy contracts, subject to approval by the Commission.

Reconciliation Adjustment:

In order to reconcile any differences that may occur between recorded and forecasted Energy Rate Adjustment Clause revenues, the year-to-date recorded revenue from the Energy Rate Adjustment Clause will be compared with the year-to-date revenue expected from the Energy Rate Adjustment Clause on a quarterly basis. If there is a variance between the recorded Energy Rate Adjustment Clause revenue and the expected Energy Rate Adjustment Clause revenue, an adjustment, lagged by two months, shall be made to the Energy Rate Adjustment Clause to reconcile the revenue variance over the sales estimated for the subsequent quarter.

In addition, for any given month, if the Company operates either below or above the range of 0.00990 million Btu per kilowatthour to 0.01000 million Btu per kilowatthour, the Company can elect to modify its Generation Component such that the Generation Component will recover only the difference between the Company's actual generation cost and base generation cost for that month by providing notice to the Commission together with a written report, which election will be effective upon the filing of the notice. This difference shall be reflected as an adjustment to the actual revenues collected for the period in question and applied as part of the reconciliation adjustment. The report will explain the reasons why the Company operated outside of the range, the expected duration that it will operate outside of the range, and, if the Company is operating above the range, what steps it will be taking to attempt to rectify the situation. Upon review of the written report, the Commission and the Division of Consumer Advocacy will have the opportunity to make further inquiries on the matter, and the Commission, at its discretion, may institute an investigatory proceeding on the matter should it believe such proceeding is warranted.

Issued: TBD
By: David Bissell
President & Chief Executive Officer

Effective: TBD
Decision and Order No. TBD

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second Revised Sheet 69
Cancels First Revised Sheet 69

SCHEDULE "G"
General Light and Power Service

Availability:

Applicable for general light and/or power supplied through a single meter. Available to all consumers whose maximum demand is not greater than 30 kW for any fifteen consecutive minutes during a month, or whose energy consumption is less than 10,000 kWh in any month and who do not qualify under Schedule "D" - except Public Street and Highway Lighting Service - for all purposes including lighting, cooking, heating, refrigeration and general power. Service supplied under this rate is subject to the Rules of the Company.

Rate:

Customer Charge: (Per customer, per month) \$25.00

Energy Charge:

Non-Fuel Energy Charge (Non-Fuel and Non-Purchased Power Energy Cost only) (To be added to Customer Charge) All kWh \$0.22599 per kWh

Fuel and Purchased Power Energy Charge (may include ERAC on customer bills) (To be added to Customer Charge) All kWh \$0.20188 per kWh

Energy Rate Adjustment Clause (ERAC) (To be added to Customer Charge) All kWh See below

Minimum Charge: The minimum monthly charge shall be - (Per customer, per month) \$25.00

Resource Cost Adjustment Surcharge:

The Resource Cost Adjustment Surcharge shall be added to the Customer and Energy Charges, and energy cost adjustment.

Issued: TBD
By: David Bissell, President
and Chief Executive Officer

Effective: TBD
Decision and Order No. TBD

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Third Revised Sheet 70
Cancels Second Revised Sheet 70

SCHEDULE "G" (Continued)
General Light and Power Service

Master Metering:

This schedule is not applicable to multi-family residential dwelling units or to two or more commercial or industrial customers through one meter on a single premise, except where:

1. the individual tenant does not control a substantial portion of the energy consumed, or
2. master metered service will tend to encourage conservation or the efficient use of energy.

The determination of master metering for apartments, condominiums and multi-unit buildings shall be made by the Company.

Energy Rate Adjustment Clause (ERAC):

This ERAC shall include the following:

FUEL AND PURCHASED ENERGY - The above rates are based on a cost of fuel for Company generation of 2301.98 cents per million Btu for fuel delivered in its service tanks and a cost for purchased energy (Purchased Energy) of 17.443 cents per kilowatthour. The term "Purchased Energy" shall mean all capacity and purchased energy charges and payments (including revenue taxes) that the Commission has authorized to include in this ERAC. Company-generated energy from non-fuel sources shall be considered as zero fuel cost in the determination of the composite fuel cost. When the Company-generated net energy cost is more or less than 2301.98 cents per million Btu, and/or the Purchased Energy cost is more or less than 17.443 cents per kilowatthour, a corresponding adjustment (Energy Rate Adjustment Factor) to the energy charges shall be made. This adjustment shall be comprised of a Company Generation Component and a Purchased Energy Component.

The Company Generation Component shall be the difference in current generation cost and base generation cost, adjusted for additional revenue taxes. The current generation cost shall be determined by the current fuel cost in cents per million Btu, multiplied by a generation conversion factor of 0.009950 million Btu per kilowatthour, weighted by the proportion of current Company generation to total system net energy in kilowatthours.

Issued: TBD
By: David Bissell
President & Chief Executive Officer

Effective: TBD
Decision and Order No. TBD

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Third Revised Sheet 71
Cancels Second Revised Sheet 71

SCHEDULE "G" (Continued)
General Light and Power Service

The base generation cost is the base fuel cost of 2301.98 cents per million Btu multiplied by a generation conversion factor of 0.009950 million Btu per kilowatthour, weighted by the proportion of the 2023 test year generation to total system energy in kilowatthours.

The Purchased Energy Component shall be the difference between (1) the current Purchased Energy cost weighted by the proportion of current Purchased Energy to total system net energy, and (2) the base Purchased Energy cost of 17.443 cents per kilowatthour weighted by the proportion of the 2023 test year Purchased Energy to total system net energy, adjusted to the sales delivery level and for additional revenue taxes. The Energy Rate Adjustment Factor shall be the sum of the Generation Component and the Purchased Energy Component.

The revenue tax requirement shall be calculated using current rates of the Franchise Tax, Public Service Company Tax, and Public Utilities Commission fee.

The Energy Rate Adjustment shall be effective on the date of cost change. When a cost change occurs during a customer's billing period, the Energy Rate Adjustment will be prorated for the number of days each cost was in effect.

This ERAC is consistent with the terms of the Company's operations and Purchased Energy contracts and may be revised to reflect any revisions or changes in operations and the Purchased Energy contracts, subject to approval by the Commission.

Issued: TBD
By: David Bissell
President & Chief Executive Officer

Effective: TBD
Decision and Order No. TBD

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second Revised Sheet 72
Cancels First Revised Sheet 72

SCHEDULE "G" (Continued)
General Light and Power Service

Reconciliation Adjustment:

In order to reconcile any differences that may occur between recorded and forecasted Energy Rate Adjustment Clause revenues, the year-to-date recorded revenue from the Energy Rate Adjustment Clause will be compared with the year-to-date revenue expected from the Energy Rate Adjustment Clause on a quarterly basis. If there is a variance between the recorded Energy Rate Adjustment Clause revenue and the expected Energy Rate Adjustment Clause revenue, an adjustment, lagged by two months, shall be made to the Energy Rate Adjustment Clause to reconcile the revenue variance over the sales estimated for the subsequent quarter.

In addition, for any given month, if the Company operates either below or above the range of 0.00990 million Btu per kilowatthour to 0.01000 million Btu per kilowatthour, the Company can elect to modify its Generation Component such that the Generation Component will recover only the difference between the Company's actual generation cost and base generation cost for that month by providing notice to the Commission together with a written report, which election will be effective upon the filing of the notice. This difference shall be reflected as an adjustment to the actual revenues collected for the period in question and applied as part of the reconciliation adjustment. The report will explain the reasons why the Company operated outside of the range, the expected duration that it will operate outside of the range, and, if the Company is operating above the range, what steps it will be taking to attempt to rectify the situation. Upon review of the written report, the Commission and the Division of Consumer Advocacy will have the opportunity to make further inquiries on the matter, and the Commission, at its discretion, may institute an investigatory proceeding on the matter should it believe such proceeding is warranted.

Issued: TBD
By: David Bissell, President
and Chief Executive Officer

Effective: TBD
Decision and Order No. TBD

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second Revised Sheet 75
Cancels First Revised Sheet 75

SCHEDULE "J"
General Light and Power Service

Availability:

Applicable for general light and/or power supplied through a single meter. Available when the customer's energy consumption exceeds 10,000 kWh in any month or the customer's load exceeds 30 kilowatts during any consecutive 15-minute period in any month, and to all consumers whose maximum demand is not greater than 100 kW for any fifteen consecutive minutes during a month, and who do not qualify under Schedule "D" - except Public Street and Highway Lighting Service - for all purposes including lighting, cooking, heating, refrigeration and general power. Service supplied under this rate is subject to the Rules of the Company.

Rate:

Customer Charge:	(Per customer, per month)	\$40.00
Demand Charge:	(To be added to Customer Charge)	\$8.28 per month per kW of monthly demand

Energy Charge:

Non-Fuel Energy Charge (Non-Fuel and Non-Purchased Power Energy Cost only)	(To be added to Customer Charge and Demand Charge) All kWh	\$0.18456 per kWh
Fuel and Purchased Power Energy Charge (may include ERAC on customer bills)	(To be added to Customer Charge) All kWh	\$0.20188 per kWh
Energy Rate Adjustment Clause (ERAC)	(To be added to Customer Charge) All kWh	See below

Determination of Billing Demand:

The monthly billing demand shall be the greater of (a) the highest Kilowatt demand during the month or (b) 75% of the highest Kilowatt demand during the preceding eleven months, as registered during an interval of fifteen consecutive minutes by an indicating demand meter.

Issued: TBD
By: David Bissell, President
and Chief Executive Officer

Effective: TBD
Decision and Order No. TBD

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second Revised Sheet 76
Cancels First Revised Sheet 76

SCHEDULE "J" (Continued)
General Light and Power Service

Minimum Charge:

The minimum monthly charge shall be:

Demand Service:

The sum of the Customer Charge and the Demand Charge.

Resource Cost Adjustment Surcharge:

The Resource Cost Adjustment Surcharge shall be added to the Customer and Energy Charges, and energy cost adjustment.

Master Metering:

This schedule is not applicable to multi-family residential dwelling units or to two or more commercial or industrial customers through one meter on a single premise, except where:

1. the individual tenant does not control a substantial portion of the energy consumed, or
2. master metered service will tend to encourage conservation or the efficient use of energy.

The determination of master metering for apartments, condominiums and multi-unit buildings shall be made by the Company.

Issued: TBD
By: David Bissell, President
and Chief Executive Officer

Effective: TBD
Decision and Order No. TBD

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Third Revised Sheet 77
Cancels Second Revised Sheet 77

SCHEDULE "J" (Continued)
General Light and Power Service

Energy Rate Adjustment Clause (ERAC):

This ERAC shall include the following:

FUEL AND PURCHASED ENERGY - The above rates are based on a cost of fuel for Company generation of 2301.98 cents per million Btu for fuel delivered in its service tanks and a cost for purchased energy (Purchased Energy) of 17.443 cents per kilowatthour. The term "Purchased Energy" shall mean all capacity and purchased energy charges and payments (including revenue taxes) that the Commission has authorized to include in this ERAC. Company-generated energy from non-fuel sources shall be considered as zero fuel cost in the determination of the composite fuel cost. When the Company-generated net energy cost is more or less than 2301.98 cents per million Btu, and/or the Purchased Energy cost is more or less than 17.443 cents per kilowatthour, a corresponding adjustment (Energy Rate Adjustment Factor) to the energy charges shall be made. This adjustment shall be comprised of a Company Generation Component and a Purchased Energy Component.

The Company Generation Component shall be the difference in current generation cost and base generation cost, adjusted for additional revenue taxes. The current generation cost shall be determined by the current fuel cost in cents per million Btu, multiplied by a generation conversion factor of 0.009950 million Btu per kilowatthour, weighted by the proportion of current Company generation to total system net energy in kilowatthours. The base generation cost is the base fuel cost of 2301.98 cents per million Btu multiplied by a generation conversion factor of 0.009950 million Btu per kilowatthour, weighted by the proportion of the 2023 test year generation to total system energy in kilowatthours.

The Purchased Energy Component shall be the difference between (1) the current Purchased Energy cost weighted by the proportion of current Purchased Energy to total system net energy, and (2) the base Purchased Energy cost of 17.443 cents per kilowatthour weighted by the proportion of the 2023 test year Purchased Energy to total system net energy, adjusted to the sales delivery level and for additional revenue taxes. The Energy Rate Adjustment Factor shall be the sum of the Generation Component and the Purchased Energy Component.

Issued: TBD
By: David Bissell
President & Chief Executive Officer

Effective: TBD
Decision and Order No. TBD

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Third Revised Sheet 78
Cancels Second Revised Sheet 78

SCHEDULE "J" (Continued)
General Light and Power Service

The revenue tax requirement shall be calculated using current rates of the Franchise Tax, Public Service Company Tax, and Public Utilities Commission fee.

The Energy Rate Adjustment shall be effective on the date of cost change. When a cost change occurs during a customer's billing period, the Energy Rate Adjustment will be prorated for the number of days each cost was in effect.

This ERAC is consistent with the terms of the Company's operations and Purchased Energy contracts and may be revised to reflect any revisions or changes in operations and the Purchased Energy contracts, subject to approval by the Commission.

Reconciliation Adjustment:

In order to reconcile any differences that may occur between recorded and forecasted Energy Rate Adjustment Clause revenues, the year-to-date recorded revenue from the Energy Rate Adjustment Clause will be compared with the year-to-date revenue expected from the Energy Rate Adjustment Clause on a quarterly basis. If there is a variance between the recorded Energy Rate Adjustment Clause revenue and the expected Energy Rate Adjustment Clause revenue, an adjustment, lagged by two months, shall be made to the Energy Rate Adjustment Clause to reconcile the revenue variance over the sales estimated for the subsequent quarter.

In addition, for any given month, if the Company operates either below or above the range of 0.00990 million Btu per kilowatthour to 0.01000 million Btu per kilowatthour, the Company can elect to modify its Generation Component such that the Generation Component will recover only the difference between the Company's actual generation cost and base generation cost for that month by providing notice to the Commission together with a written report, which election will be effective upon the filing of the notice. This difference shall be reflected as an adjustment to the actual revenues collected for the period in question and applied as part of the reconciliation adjustment. The report will explain the reasons why the Company operated outside of the range, the expected duration that it will operate outside of the range, and, if the Company is operating above the range, what steps it will be taking to attempt to rectify the situation. Upon review of the written report, the Commission and the Division of Consumer Advocacy will have the opportunity to make further inquiries on the matter, and the Commission, at its discretion, may institute an investigatory proceeding on the matter should it believe such proceeding is warranted.

Issued: TBD
By: David Bissell
President & Chief Executive Officer

Effective: TBD
Decision and Order No. TBD

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second Revised Sheet 80
Cancels First Revised Sheet 80

SCHEDULE "LP"
Large Power Service

Availability:

Applicable for primary or secondary large light and/or power service supplied and metered at a single delivery point.

Available to all power users with metered loads in excess of 100 Kilowatts during any consecutive fifteen minute period in any month except Public Street and Highway Lighting Service. Such customers must sign a contract for service for a minimum period of twelve (12) months except for temporary services. Service supplied under this rate shall be subject to the Rules of the Company.

Rate:

Customer Charge:	per Customer per month	\$355.00
Demand Charge:	(To be added to Customer Charge)	\$14.90 per kW of monthly demand
Energy Charge:	(To be added to Customer Charge and Demand Charge)	
Non-Fuel Energy Charge (Non-Fuel and Non-Purchased Power Energy Cost only)	All kWh	\$0.16549 per kWh
Fuel and Purchased Power Energy Charge (may include ERAC on customer bills)	All kWh	\$0.20188 per kWh
Energy Rate Adjustment Clause (ERAC)	All kWh	See below

Determination of Billing Demand:

The monthly billing demand shall be the greater of (a) the highest Kilowatt demand during the month or (b) 75% of the highest Kilowatt demand during the preceding eleven months, as registered during an interval of fifteen consecutive minutes by an indicating demand meter.

Issued: TBD
By: David Bissell, President
and Chief Executive Officer

Effective: TBD
Decision and Order No. TBD

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second Revised Sheet 81
Cancels First Revised Sheet 81

SCHEDULE "LP" (Continued)
Large Power Service

Minimum Charge:

The minimum monthly charge shall be the sum of the Customer Charge and the Demand Charge.

Power Factor:

The above rate is based on an average power factor of 85%. If the power factor is found to average below 85%, 1/2 of 1% shall be added to the kWh for each 1% of average power factor below 85%. If the power factor is found to average above 85%, 1/2 of 1% shall be deducted from the kWh for each 1% of average power factor above 85%. The maximum increase or decrease shall in no case exceed 5%.

Determination of Power Factor:

The average monthly power factor for this rate schedule shall be determined by a computation from the reading of a reactive KVARH meter and a kWh meter, according to the following formula:

$$\text{Power factor (\%)} = \text{kWh} / \sqrt{\text{kWh}^2 + \text{KVARH}^2} \times 100$$

The KVARH meter shall be ratcheted to prevent reverse rotation on leading power factor.

Resource Cost Adjustment Surcharge:

The Resource Cost Adjustment Surcharge shall be added to the Customer and Energy Charges, and energy cost adjustment.

Issued: TBD
By: David Bissell, President
and Chief Executive Officer

Effective: TBD
Decision and Order No. TBD

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Third Revised Sheet 82
Cancels Second Revised Original Sheet 82

SCHEDULE "LP" (Continued)
Large Power Service

Lighting:

Service supplied under this rate may be used for lighting purposes, provided that the energy is taken at the same voltage as any power load covered by the contract.

Master Metering:

Master Metering is not applicable to multi-family residential dwelling units or to two or more commercial or industrial customers through one meter on a single premise, except where:

1. the individual tenant does not control a substantial portion of the energy consumed, or
2. master metered service will tend to encourage conservation or the efficient use of energy.

The determination of master metering for apartments, condominiums and multi-unit buildings shall be made by the Company.

Energy Rate Adjustment Clause (ERAC):

This ERAC shall include the following:

FUEL AND PURCHASED ENERGY - The above rates are based on a cost of fuel for Company generation of 2301.98 cents per million Btu for fuel delivered in its service tanks and a cost for purchased energy (Purchased Energy) of 17.443 cents per kilowatthour. The term "Purchased Energy" shall mean all capacity and purchased energy charges and payments (including revenue taxes) that the Commission has authorized to include in this ERAC. Company-generated energy from non-fuel sources shall be considered as zero fuel cost in the determination of the composite fuel cost. When the Company-generated net energy cost is more or less than 2301.98 cents per million Btu, and/or the Purchased Energy cost is more or less than 17.443 cents per kilowatthour, a corresponding adjustment (Energy Rate Adjustment Factor) to the energy charges shall be made. This adjustment shall be comprised of a Company Generation Component and a Purchased Energy Component.

Issued: TBD
By: David Bissell
President & Chief Executive Officer

Effective: TBD
Decision and Order No. TBD

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Third Revised Sheet 83
Cancels Second Revised Sheet 83

SCHEDULE "LP" (Continued)
Large Power Service

The Company Generation Component shall be the difference in current generation cost and base generation cost, adjusted for additional revenue taxes. The current generation cost shall be determined by the current fuel cost in cents per million Btu, multiplied by a generation conversion factor of 0.009950 million Btu per kilowatthour, weighted by the proportion of current Company generation to total system net energy in kilowatthours. The base generation cost is the base fuel cost of 2301.98 cents per million Btu multiplied by a generation conversion factor of 0.009950 million Btu per kilowatthour, weighted by the proportion of the 2023 test year generation to total system energy in kilowatthours.

The Purchased Energy Component shall be the difference between (1) the current Purchased Energy cost weighted by the proportion of current Purchased Energy to total system net energy, and (2) the base Purchased Energy cost of 17.443 cents per kilowatthour weighted by the proportion of the 2023 test year Purchased Energy to total system net energy, adjusted to the sales delivery level and for additional revenue taxes. The Energy Rate Adjustment Factor shall be the sum of the Generation Component and the Purchased Energy Component.

The revenue tax requirement shall be calculated using current rates of the Franchise Tax, Public Service Company Tax, and Public Utility Commission fee.

The Energy Rate Adjustment shall be effective on the date of cost change. When a cost change occurs during a customer's billing period, the Energy Rate Adjustment will be prorated for the number of days each cost was in effect.

This ERAC is consistent with the terms of the Company's operations and Purchased Energy contracts and may be revised to reflect any revisions or changes in operations and the Purchased Energy contracts, subject to approval by the Commission.

Issued: TBD
By: David Bissell
President & Chief Executive Officer

Effective: TBD
Decision and Order No. TBD

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second Revised Sheet 84
Cancels First Revised Sheet 84

SCHEDULE "LP" (Continued)
Large Power Service

Reconciliation Adjustment:

In order to reconcile any differences that may occur between recorded and forecasted Energy Rate Adjustment Clause revenues, the year-to-date recorded revenue from the Energy Rate Adjustment Clause will be compared with the year-to-date revenue expected from the Energy Rate Adjustment Clause on a quarterly basis. If there is a variance between the recorded Energy Rate Adjustment Clause revenue and the expected Energy Rate Adjustment Clause revenue, an adjustment, lagged by two months, shall be made to the Energy Rate Adjustment Clause to reconcile the revenue variance over the sales estimated for the subsequent quarter.

In addition, for any given month, if the Company operates either below or above the range of 0.00990 million Btu per kilowatthour to 0.01000 million Btu per kilowatthour, the Company can elect to modify its Generation Component such that the Generation Component will recover only the difference between the Company's actual generation cost and base generation cost for that month by providing notice to the Commission together with a written report, which election will be effective upon the filing of the notice. This difference shall be reflected as an adjustment to the actual revenues collected for the period in question and applied as part of the reconciliation adjustment. The report will explain the reasons why the Company operated outside of the range, the expected duration that it will operate outside of the range, and, if the Company is operating above the range, what steps it will be taking to attempt to rectify the situation. Upon review of the written report, the Commission and the Division of Consumer Advocacy will have the opportunity to make further inquiries on the matter, and the Commission, at its discretion, may institute an investigatory proceeding on the matter should it believe such proceeding is warranted.

Issued: TBD
By: David Bissell, President
and Chief Executive Officer

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second Revised Sheet 90
Cancels First Revised Sheet 90

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Issued: TBD
By: David Bissel, President
and Chief Executive Officer

Effective: TBD

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second Revised Sheet 91
Cancels First Revised Sheet 91

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Issued: TBD
By: David Bissell, President
and Chief Executive Officer

Effective: TBD

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Third Revised Sheet 92
Cancels Second Revised Sheet 92

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By: David Bissell
President & Chief Executive Officer

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Third Revised Sheet 93
Cancels Second Revised Sheet 93

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Issued: TBD
By: David Bissell
President & Chief Executive Officer

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second Revised Sheet 94
Cancels First Revised Sheet 94

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By: David Bissell, President
and Chief Executive Officer

Effective: TBD

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Third Revised Sheet 103
Cancels Second Revised Sheet 103

SCHEDULE "SL"
Street Lighting

Availability:

Applicable to public street and highway lighting service. Available in general, where the Company owns, maintains and operates the street lighting facilities and has already installed primary distribution circuits. Service supplied under this rate is subject to the Rules of the Company.

Rate:

1. Fixture Charge:
 - a. Monthly charge for standard incandescent fixtures with not in excess of 4000 lumen lamps - \$4.54 per fixture, per month.
 - b. Monthly charge for standard mercury vapor fixture with not in excess of 21,000 lumen lamps - \$7.81 per fixture, per month.
 - c. Monthly charge for standard high pressure sodium vapor fixtures:

1 – <=100 watt	\$7.81 per fixture, per month
2 – 101-150 watt	\$7.81 per fixture, per month
3 – 151-200 watt	\$8.09 per fixture, per month
4 – 201-250 watt	\$8.09 per fixture, per month
5 – 251+ watt	\$8.44 per fixture, per month
 - d. Monthly charge for standard light emitting diode ("LED") fixtures:

1 – <=45 watt	\$10.23 per fixture, per month
2 – 46-98 watt	\$10.60 per fixture, per month
3 – 99+ watt	\$10.71 per fixture, per month

2. Energy Charge:

Non-Fuel Energy Charge (Non-Fuel and Non-Purchased Power Energy Cost only)	(To be added to Customer Charge) All kWh	\$0.31166 per kWh
Fuel and Purchased Power Energy Charge (may include ERAC on customer bills)	(To be added to Customer Charge) All kWh	\$0.20188 per kWh
Energy Rate Adjustment Clause (ERAC)	(To be added to Customer Charge) All kWh	See below

Issued: TBD
By: David Bissell, President
and Chief Executive Officer

Effective: TBD
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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second Revised Sheet 104
Cancels First Revised Sheet 104

SCHEDULE "SL" (Continued)
Street Lighting

Minimum Charge:

The minimum monthly charge will be the above Fixture Charge per fixture connected to the circuit.

Unmetered Service:

When Mercury Vapor service is unmetered and lamps are individually controlled for normal dusk-to-dawn operation, the monthly Kilowatthours per lamp billed at the above rates will be uniform at 76, 104, and 164 Kilowatthours for the 175, 250, and 400-watt mercury vapor lamps, respectively.

When High Pressure Sodium Vapor service is unmetered and lamps are individually controlled for normal dusk-to-dawn operation, the monthly Kilowatthours per lamp billed at the above rates will be uniform at 53, 74, 94, 114, and 176 Kilowatthours for the 100, 150, 200, 250, and 400-watt high pressure sodium vapor lamps, respectively.

When LED service is unmetered and lamps are individually controlled for normal dusk-to-dawn operation, the monthly Kilowatthours per lamp billed at the above rates will be uniform at 16.2, 35.28, and 46.8 Kilowatthours for the 45, 98, and 130 watt LED lights, respectively, multiplied by the applicable percentage dimming factor, if any. Customer has the option to select a percentage dimming factor, which is available in 5% increments (e.g., 95%, 90%, 85%, etc.).

Night-time hours of lamp and ballast operation reflect an average 360 hours per month.

Resource Cost Adjustment Surcharge:

The Resource Cost Adjustment Surcharge shall be added to the Customer and Energy Charges, and energy cost adjustment.

Issued: September 15, 2015
By: David Bissell, President
and Chief Executive Officer

Effective: October 16, 2015
Decision and Order No. 19658, Interim
Decision and Order (April 29, 2010)/Order
(May 26, 2010), and Decision and Order
(September 9, 2010)

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Third Revised Sheet 105
Cancels Second Revised Sheet 105

SCHEDULE "SL" (Continued)
Street Lighting

Term of Contract:

If the Company is asked to remove or relocate facilities within 60 months after installation, the customer shall make a contribution in the amount of the estimated net removal or relocation cost.

Energy Rate Adjustment Clause (ERAC):

This ERAC shall include the following:

FUEL AND PURCHASED ENERGY - The above rates are based on a cost of fuel for Company generation of 2301.98 cents per million Btu for fuel delivered in its service tanks and a cost for purchased energy (Purchased Energy) of 17.443 cents per kilowatthour. The term "Purchased Energy" shall mean all capacity and purchased energy charges and payments (including revenue taxes) that the Commission has authorized to include in this ERAC. Company-generated energy from non-fuel sources shall be considered as zero fuel cost in the determination of the composite fuel cost. When the Company-generated net energy cost is more or less than 2301.98 cents per million Btu, and/or the Purchased Energy cost is more or less than 17.443 cents per kilowatthour, a corresponding adjustment (Energy Rate Adjustment Factor) to the energy charges shall be made. This adjustment shall be comprised of a Company Generation Component and a Purchased Energy Component.

The Company Generation Component shall be the difference in current generation cost and base generation cost, adjusted for additional revenue taxes. The current generation cost shall be determined by the current fuel cost in cents per million Btu, multiplied by a generation conversion factor of 0.009950 million Btu per kilowatthour, weighted by the proportion of current Company generation to total system net energy in kilowatthours. The base generation cost is the base fuel cost of 2301.98 cents per million Btu multiplied by a generation conversion factor of 0.009950 million Btu per kilowatthour, weighted by the proportion of the 2023 test year generation to total system energy in kilowatthours.

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By: David Bissell
President & Chief Executive Officer

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Third Revised Sheet 106
Cancels Second Revised Sheet 106

SCHEDULE "SL" (Continued)
Street Lighting

The Purchased Energy Component shall be the difference between (1) the current Purchased Energy cost weighted by the proportion of current Purchased Energy to total system net energy, and (2) the base Purchased Energy cost of 17.443 cents per kilowatthour weighted by the proportion of the 2023 test year Purchased Energy to total system net energy, adjusted to the sales delivery level and for additional revenue taxes. The Energy Rate Adjustment Factor shall be the sum of the Generation Component and the Purchased Energy Component.

The revenue tax requirement shall be calculated using current rates of the Franchise Tax, Public Service Company Tax, and Public Utilities Commission fee.

The Energy Rate Adjustment shall be effective on the date of cost change. When a cost change occurs during a customer's billing period, the Energy Rate Adjustment will be prorated for the number of days each cost was in effect.

This ERAC is consistent with the terms of the Company's operations and Purchased Energy contracts and may be revised to reflect any revisions or changes in operations and the Purchased Energy contracts, subject to approval by the Commission.

Reconciliation Adjustment:

In order to reconcile any differences that may occur between recorded and forecasted Energy Rate Adjustment Clause revenues, the year-to-date recorded revenue from the Energy Rate Adjustment Clause will be compared with the year-to-date revenue expected from the Energy Rate Adjustment Clause on a quarterly basis. If there is a variance between the recorded Energy Rate Adjustment Clause revenue and the expected Energy Rate Adjustment Clause revenue, an adjustment, lagged by two months, shall be made to the Energy Rate Adjustment Clause to reconcile the revenue variance over the sales estimated for the subsequent quarter.

In addition, for any given month, if the Company operates either below or above the range of 0.00990 million Btu per kilowatthour to 0.01000 million Btu per kilowatthour, the Company can elect to modify its Generation Component such that the Generation Component will recover only the difference between the Company's actual generation cost and base generation cost for that month by providing notice to the Commission together with a written report, which election will be effective upon the filing of the notice. This difference shall be reflected as an adjustment to the actual revenues collected for the period in question and applied as part of the reconciliation adjustment. The report will explain the reasons why the Company operated outside of the range, the expected duration that it will operate outside of the range, and, if the Company is operating above the range, what steps it will be taking to attempt to rectify the situation. Upon review of the written report, the Commission and the Division of Consumer Advocacy will have the opportunity to make further inquiries on the matter, and the Commission, at its discretion, may institute an investigatory proceeding on the matter should it believe such proceeding is warranted.

Issued: TBD
By: David Bissell
President & Chief Executive Officer

Effective: TBD
Decision and Order No. TBD

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

ATTACHMENT DK-505
(Redlined Version)

(26 PAGES)

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

SCHEDULE "D"
Residential Service

Availability:

Applicable to lighting, heating, cooking, air conditioning and single-phase residential service in single-family dwellings metered and billed separately by the Company. This schedule does not apply where residence and business are combined. Service supplied under this rate is subject to the Rules of the Company.

Storage water heaters may be connected to this service, provided that each element is controlled by a thermostat and the maximum wattage of the heating elements that may be energized at any one time shall not exceed 5,000 watts.

Rate:

Customer Charge:	(Per Customer per month)	\$13.50 <u>\$10.58</u>
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Energy Charge:

Non-Fuel Energy Charge (Non-Fuel and Non-Purchased Power Energy Cost only)	(To be added to Customer Charge) All kWh	\$0.21019 <u>\$0.15600</u> per kWh
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Fuel and Purchased Power Energy Charge (may include ERAC on customer bills)	(To be added to Customer Charge) All kWh	\$0.20188 <u>\$0.19143</u> per kWh
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Energy Rate Adjustment Clause (ERAC)	(To be added to Customer Charge) All kWh	See below
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Minimum Charge:	The minimum monthly charge shall be - (Per Customer per month)	\$13.50
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Resource Cost Adjustment Surcharge:

The Resource Cost Adjustment Surcharge shall be added to the Customer and Energy Charges, and energy cost adjustment.

Issued: ~~October 15, 2010~~TBD
By: ~~David Bissell~~Randall J. Hee, President
and Chief Executive Officer

Effective: ~~TBD~~October 12, 2010
Decision and Order No. ~~TBD~~19658,
~~Interim Decision and Order (April 29, 2010)~~Order (May 26, 2010), and ~~Decision and Order (September 9, 2010)~~

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Original Sheet 64

SCHEDULE "D" (Continued)
Residential Service

Apartment House Collection Arrangement:

Any apartment owner having title to three or more apartments at one location, each apartment being separately metered and billed by the Company on Residential Rate Schedule, may elect to accept a commission of ten per cent (10%) of the amount of the bills rendered for such apartments not to exceed \$5.00 per month for each apartment upon entering into a collection arrangement with the Company under the following terms and conditions.

1. All accounts shall be kept in the name of the apartment house owner who shall assume the responsibility for the payment of all bills before they become past due.
2. All accounts shall remain active at all times and, though vacant, shall be subject to the minimum charge applicable.
3. Failure to comply with 1 or 2 above shall terminate the Apartment House Agreement.
4. The Company will render individual bills for each apartment on a regular billing period basis and will also furnish a statement showing gross and net billings.
5. Provision of this section applies to all existing Apartment House Agreements. No new Agreements will be accepted as of January 1, 1994.

Issued: October 15, 2010
By: Randall J. Hee, President
and Chief Executive Officer

Effective: October 12, 2010
Decision and Order No. 19658,
Interim Decision and Order (April 29,
2010)/Order (May 26, 2010), and
Decision and Order (September 9, 2010)

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
~~Third~~Second Revised Sheet 65
Cancels ~~Second~~First Revised Sheet 65

SCHEDULE "D" (Continued)
Residential Service

Energy Rate Adjustment Clause (ERAC):

This ERAC shall include the following:

FUEL AND PURCHASED ENERGY - The above rates are based on a cost of fuel for Company generation of ~~2301.984735.83~~ cents per million Btu for fuel delivered in its service tanks and a cost for purchased energy (Purchased Energy) of ~~17.44347.384~~ cents per kilowatthour. The term "Purchased Energy" shall mean all capacity and purchased energy charges and payments (including revenue taxes) that the Commission has authorized to include in this ERAC. Company-generated energy from non-fuel sources shall be considered as zero fuel cost in the determination of the composite fuel cost. When the Company-generated net energy cost is more or less than ~~2301.984735.83~~ cents per million Btu, and/or the Purchased Energy cost is more or less than ~~17.44347.384~~ cents per kilowatthour, a corresponding adjustment (Energy Rate Adjustment Factor) to the energy charge shall be made. This adjustment shall be comprised of a Company Generation Component and a Purchased Energy Component.

The Company Generation Component shall be the difference in current generation cost and base generation cost, adjusted for additional revenue taxes. The current generation cost shall be determined by the current fuel cost in cents per million Btu, multiplied by a generation conversion factor of ~~0.0099500.009850~~ million Btu per kilowatthour, weighted by the proportion of current Company generation to total system net energy in kilowatthours. The base generation cost is the base fuel cost of ~~2301.984735.83~~ cents per million Btu multiplied by a generation conversion factor of ~~0.0099500.009850~~ million Btu per kilowatthour, weighted by the proportion of the ~~2023~~~~2010~~ test year generation to total system energy in kilowatthours.

Issued: ~~July 17, 2015~~TBD
By: David Bissell
President & Chief Executive Officer

Effective: ~~TBD~~August 18, 2015
Decision and Order No. ~~19658,~~
~~Interim Decision and Order (April 29,~~
~~2010)/Order (May 26, 2010), Decision~~
~~and Order (September 9, 2010), and~~ _____
_____TBD

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
~~Third Second~~ Revised Sheet 66
Cancels ~~Second First~~ Revised Sheet 66

SCHEDULE "D" (Continued)
Residential Service

The Purchased Energy Component shall be the difference between (1) the current Purchased Energy cost weighted by the proportion of current Purchased Energy to total system net energy, and (2) the base Purchased Energy cost of ~~17.44347.384~~ cents per kilowatthour weighted by the proportion of the ~~20232040~~ test year Purchased Energy to total system net energy, adjusted to the sales delivery level and for additional revenue taxes. The Energy Rate Adjustment Factor shall be the sum of the Generation Component and the Purchased Energy Component.

The revenue tax requirement shall be calculated using current rates of the Franchise Tax, Public Service Company Tax, and Public Utilities Commission fee.

The Energy Rate Adjustment shall be effective on the date of cost change. When a cost change occurs during a customer's billing period, the Energy Rate Adjustment will be prorated for the number of days each cost was in effect.

This ERAC is consistent with the terms of the Company's operations and Purchased Energy contracts and may be revised to reflect any revisions or changes in operations and the Purchased Energy contracts, subject to approval by the Commission.

Reconciliation Adjustment:

In order to reconcile any differences that may occur between recorded and forecasted Energy Rate Adjustment Clause revenues, the year-to-date recorded revenue from the Energy Rate Adjustment Clause will be compared with the year-to-date revenue expected from the Energy Rate Adjustment Clause on a quarterly basis. If there is a variance between the recorded Energy Rate Adjustment Clause revenue and the expected Energy Rate Adjustment Clause revenue, an adjustment, lagged by two months, shall be made to the Energy Rate Adjustment Clause to reconcile the revenue variance over the sales estimated for the subsequent quarter.

In addition, for any given month, if the Company operates either below or above the range of ~~0.009900-00980~~ million Btu per kilowatthour to ~~0.010000-00990~~ million Btu per kilowatthour, the Company can elect to modify its Generation Component such that the Generation Component will recover only the difference between the Company's actual generation cost and base generation cost for that month by providing notice to the Commission together with a written report, which election will be effective upon the filing of the notice. This difference shall be reflected as an adjustment to the actual revenues collected for the period in question and applied as part of the reconciliation adjustment. The report will explain the reasons why the Company operated outside of the range, the expected duration that it will operate outside of the range, and, if the Company is operating above the range, what steps it will be taking to attempt to rectify the situation. Upon review of the written report, the Commission and the Division of Consumer Advocacy will have the opportunity to make further inquiries on the matter, and the Commission, at its discretion, may institute an investigatory proceeding on the matter should it believe such proceeding is warranted.

Issued: ~~July 17, 2015~~TBD
By: David Bissell
President & Chief Executive Officer

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~~Interim Decision and Order (April 29,~~
~~2010)/Order (May 26, 2010), and~~
~~Decision and Order (September 9,~~
~~2010), and~~ _____

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
~~Second~~^{First} Revised Sheet 69
Cancels ~~First Revised~~^{Original} Sheet 69

SCHEDULE "G"
General Light and Power Service

Availability:

Applicable for general light and/or power supplied through a single meter. Available to all consumers whose maximum demand is not greater than 30 kW for any fifteen consecutive minutes during a month, or whose energy consumption is less than 10,000 kWh in any month and who do not qualify under Schedule "D" - except Public Street and Highway Lighting Service - for all purposes including lighting, cooking, heating, refrigeration and general power. Service supplied under this rate is subject to the Rules of the Company.

Rate:

Customer Charge:	(Per customer, per month)	\$25.00 ^{23.82}
Energy Charge:		
Non-Fuel Energy Charge (Non-Fuel and Non-Purchased Power Energy Cost only)	(To be added to Customer Charge) All kWh	\$0.22599 ^{\$0.16626} per kWh
Fuel and Purchased Power Energy Charge (may include ERAC on customer bills)	(To be added to Customer Charge) All kWh	\$0.20188 ^{\$0.19143} per kWh
Energy Rate Adjustment Clause (ERAC)	(To be added to Customer Charge) All kWh	See below
Minimum Charge:	The minimum monthly charge shall be - (Per customer, per month)	\$25.00 ^{26.45}

Resource Cost Adjustment Surcharge:

The Resource Cost Adjustment Surcharge shall be added to the Customer and Energy Charges, and energy cost adjustment.

Issued: ~~October 15, 2010~~^{TBD}
By: ~~David Bissell~~^{Randall J. Hee}, President
and Chief Executive Officer

Effective: ~~TBD~~^{October 12, 2010}
Decision and Order No. ~~TBD~~¹⁹⁶⁵⁸, ~~Interim Decision and Order (April 29, 2010)~~
~~Order (May 26, 2010)~~, and ~~Decision and Order (September 9, 2010)~~

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
~~Third~~Second Revised Sheet 70
Cancels ~~Second~~First Revised Sheet 70

SCHEDULE "G" (Continued)
General Light and Power Service

Master Metering:

This schedule is not applicable to multi-family residential dwelling units or to two or more commercial or industrial customers through one meter on a single premise, except where:

1. the individual tenant does not control a substantial portion of the energy consumed, or
2. master metered service will tend to encourage conservation or the efficient use of energy.

The determination of master metering for apartments, condominiums and multi-unit buildings shall be made by the Company.

Energy Rate Adjustment Clause (ERAC):

This ERAC shall include the following:

FUEL AND PURCHASED ENERGY - The above rates are based on a cost of fuel for Company generation of ~~2301.984735.83~~ cents per million Btu for fuel delivered in its service tanks and a cost for purchased energy (Purchased Energy) of ~~17.44347.384~~ cents per kilowatthour. The term "Purchased Energy" shall mean all capacity and purchased energy charges and payments (including revenue taxes) that the Commission has authorized to include in this ERAC. Company-generated energy from non-fuel sources shall be considered as zero fuel cost in the determination of the composite fuel cost. When the Company-generated net energy cost is more or less than ~~2301.984735.83~~ cents per million Btu, and/or the Purchased Energy cost is more or less than ~~17.44347.384~~ cents per kilowatthour, a corresponding adjustment (Energy Rate Adjustment Factor) to the energy charges shall be made. This adjustment shall be comprised of a Company Generation Component and a Purchased Energy Component.

The Company Generation Component shall be the difference in current generation cost and base generation cost, adjusted for additional revenue taxes. The current generation cost shall be determined by the current fuel cost in cents per million Btu, multiplied by a generation conversion factor of ~~0.0099500.009850~~ million Btu per kilowatthour, weighted by the proportion of current Company generation to total system net energy in kilowatthours.

Issued: ~~July 17, 2015~~TBD
By: David Bissell
President & Chief Executive Officer

Effective: ~~TBD-August 18, 2015~~
Decision and Order No. ~~TBD-19658, Interim Decision and Order (April 29, 2010), Order (May 26, 2010), Decision and Order (September 9, 2010), and~~ _____

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
~~Third~~Second Revised Sheet 71
Cancels ~~Second~~First Revised Sheet 71

SCHEDULE "G" (Continued)
General Light and Power Service

The base generation cost is the base fuel cost of ~~2301.98~~~~1735.83~~ cents per million Btu multiplied by a generation conversion factor of ~~0.0099500~~~~0.009850~~ million Btu per kilowatthour, weighted by the proportion of the ~~2023~~~~2010~~ test year generation to total system energy in kilowatthours.

The Purchased Energy Component shall be the difference between (1) the current Purchased Energy cost weighted by the proportion of current Purchased Energy to total system net energy, and (2) the base Purchased Energy cost of ~~17.443~~~~17.384~~ cents per kilowatthour weighted by the proportion of the ~~2023~~~~2010~~ test year Purchased Energy to total system net energy, adjusted to the sales delivery level and for additional revenue taxes. The Energy Rate Adjustment Factor shall be the sum of the Generation Component and the Purchased Energy Component.

The revenue tax requirement shall be calculated using current rates of the Franchise Tax, Public Service Company Tax, and Public Utilities Commission fee.

The Energy Rate Adjustment shall be effective on the date of cost change. When a cost change occurs during a customer's billing period, the Energy Rate Adjustment will be prorated for the number of days each cost was in effect.

This ERAC is consistent with the terms of the Company's operations and Purchased Energy contracts and may be revised to reflect any revisions or changes in operations and the Purchased Energy contracts, subject to approval by the Commission.

Issued: ~~July 17, 2015~~~~TBD~~
By: David Bissell
President & Chief Executive Officer

Effective: ~~TBD~~~~August 18, 2015~~
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~~Decision and Order (April 29, 2010)~~/~~Order~~
~~(May 26, 2010)~~, ~~Decision and Order~~
~~(September 9, 2010)~~, and _____

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
~~Second First~~ Revised Sheet 72
Cancels ~~First Revised Original~~ Sheet 72

SCHEDULE "G" (Continued)
General Light and Power Service

Reconciliation Adjustment:

In order to reconcile any differences that may occur between recorded and forecasted Energy Rate Adjustment Clause revenues, the year-to-date recorded revenue from the Energy Rate Adjustment Clause will be compared with the year-to-date revenue expected from the Energy Rate Adjustment Clause on a quarterly basis. If there is a variance between the recorded Energy Rate Adjustment Clause revenue and the expected Energy Rate Adjustment Clause revenue, an adjustment, lagged by two months, shall be made to the Energy Rate Adjustment Clause to reconcile the revenue variance over the sales estimated for the subsequent quarter.

In addition, for any given month, if the Company operates either below or above the range of ~~0.009900-00980~~ million Btu per kilowatthour to ~~0.010000-00990~~ million Btu per kilowatthour, the Company can elect to modify its Generation Component such that the Generation Component will recover only the difference between the Company's actual generation cost and base generation cost for that month by providing notice to the Commission together with a written report, which election will be effective upon the filing of the notice. This difference shall be reflected as an adjustment to the actual revenues collected for the period in question and applied as part of the reconciliation adjustment. The report will explain the reasons why the Company operated outside of the range, the expected duration that it will operate outside of the range, and, if the Company is operating above the range, what steps it will be taking to attempt to rectify the situation. Upon review of the written report, the Commission and the Division of Consumer Advocacy will have the opportunity to make further inquiries on the matter, and the Commission, at its discretion, may institute an investigatory proceeding on the matter should it believe such proceeding is warranted.

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By: ~~David Bissell~~Randall J. Hee, President
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~~Decision and Order (April 29, 2010)/Order~~
~~(May 26, 2010), and Decision and Order~~
~~(September 9, 2010)~~

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second~~First~~ Revised Sheet 75
Cancels ~~First Revised~~Original Sheet 75

SCHEDULE "J"
General Light and Power Service

Availability:

Applicable for general light and/or power supplied through a single meter. Available when the customer's energy consumption exceeds 10,000 kWh in any month or the customer's load exceeds 30 kilowatts during any consecutive 15-minute period in any month, and to all consumers whose maximum demand is not greater than 100 kW for any fifteen consecutive minutes during a month, and who do not qualify under Schedule "D" - except Public Street and Highway Lighting Service - for all purposes including lighting, cooking, heating, refrigeration and general power. Service supplied under this rate is subject to the Rules of the Company.

Rate:

Customer Charge:	(Per customer, per month)	\$40.00 <u>\$39.69</u>
Demand Charge:	(To be added to Customer Charge)	\$8.28 <u>\$6.62</u> per month per kW of monthly demand
Energy Charge:		
Non-Fuel Energy Charge (Non-Fuel and Non-Purchased Power Energy Cost only)	(To be added to Customer Charge and Demand Charge) All kWh	\$0.18456 <u>\$0.13247</u> per kWh
Fuel and Purchased Power Energy Charge (may include ERAC on customer bills)	(To be added to Customer Charge) All kWh	\$0.20188 <u>\$0.19143</u> per kWh
Energy Rate Adjustment Clause (ERAC)	(To be added to Customer Charge) All kWh	See below

Determination of Billing Demand:

The monthly billing demand shall be the greater of (a) the highest Kilowatt demand during the month or (b) 75% of the highest Kilowatt demand during the preceding eleven months, as registered during an interval of fifteen consecutive minutes by an indicating demand meter.

Issued: ~~October 15, 2010~~TBD
By: ~~David Bissell~~Randall J. Hee, President
and Chief Executive Officer

Effective: ~~TBD~~October 12, 2010
Decision and Order No. ~~TBD19658, Interim Decision and Order (April 29, 2010), Order (May 26, 2010), and Decision and Order (September 9, 2010)~~

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
~~Second First~~ Revised Sheet 76
Cancels ~~First Revised Original~~ Sheet 76

SCHEDULE "J" (Continued)
General Light and Power Service

Minimum Charge:

The minimum monthly charge shall be:

Demand Service:

The sum of the Customer Charge and the
_____ Demand Charge ~~but not less than \$198.42 per month.~~

Resource Cost Adjustment Surcharge:

The Resource Cost Adjustment Surcharge shall be added to the Customer and Energy Charges, and energy cost adjustment.

Master Metering:

This schedule is not applicable to multi-family residential dwelling units or to two or more commercial or industrial customers through one meter on a single premise, except where:

1. the individual tenant does not control a substantial portion of the energy consumed, or
2. master metered service will tend to encourage conservation or the efficient use of energy.

The determination of master metering for apartments, condominiums and multi-unit buildings shall be made by the Company.

Issued: ~~October 15, 2010~~ TBD
2023
By: ~~David Bissell~~ Randall J. Hee, President
and Chief Executive Officer

Effective: ~~TBD~~ October 12, 2010 January 1,
Decision and Order No. ~~TBD~~ 19658, Interim
Decision and Order (April 29, 2010)/Order
(May 26, 2010), and Decision and Order
(September 9, 2010)

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
~~Third~~Second Revised Sheet 77
Cancels ~~Second~~First Revised Sheet 77

SCHEDULE "J" (Continued)
General Light and Power Service

Energy Rate Adjustment Clause (ERAC):

This ERAC shall include the following:

FUEL AND PURCHASED ENERGY - The above rates are based on a cost of fuel for Company generation of ~~2301.984735.83~~ cents per million Btu for fuel delivered in its service tanks and a cost for purchased energy (Purchased Energy) of ~~17.44347.384~~ cents per kilowatthour. The term "Purchased Energy" shall mean all capacity and purchased energy charges and payments (including revenue taxes) that the Commission has authorized to include in this ERAC. Company-generated energy from non-fuel sources shall be considered as zero fuel cost in the determination of the composite fuel cost. When the Company-generated net energy cost is more or less than ~~2301.984735.83~~ cents per million Btu, and/or the Purchased Energy cost is more or less than ~~17.44347.384~~ cents per kilowatthour, a corresponding adjustment (Energy Rate Adjustment Factor) to the energy charges shall be made. This adjustment shall be comprised of a Company Generation Component and a Purchased Energy Component.

The Company Generation Component shall be the difference in current generation cost and base generation cost, adjusted for additional revenue taxes. The current generation cost shall be determined by the current fuel cost in cents per million Btu, multiplied by a generation conversion factor of ~~0.0099500.009850~~ million Btu per kilowatthour, weighted by the proportion of current Company generation to total system net energy in kilowatthours. The base generation cost is the base fuel cost of ~~2301.984735.83~~ cents per million Btu multiplied by a generation conversion factor of ~~0.0099500.009850~~ million Btu per kilowatthour, weighted by the proportion of the ~~20232010~~ test year generation to total system energy in kilowatthours.

The Purchased Energy Component shall be the difference between (1) the current Purchased Energy cost weighted by the proportion of current Purchased Energy to total system net energy, and (2) the base Purchased Energy cost of ~~17.44347.384~~ cents per kilowatthour weighted by the proportion of the ~~20232010~~ test year Purchased Energy to total system net energy, adjusted to the sales delivery level and for additional revenue taxes. The Energy Rate Adjustment Factor shall be the sum of the Generation Component and the Purchased Energy Component.

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President & Chief Executive Officer

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
~~Third~~Second Revised Sheet 78
Cancels ~~Second~~First Revised Sheet 78

SCHEDULE "J" (Continued)
General Light and Power Service

The revenue tax requirement shall be calculated using current rates of the Franchise Tax, Public Service Company Tax, and Public Utilities Commission fee.

The Energy Rate Adjustment shall be effective on the date of cost change. When a cost change occurs during a customer's billing period, the Energy Rate Adjustment will be prorated for the number of days each cost was in effect.

This ERAC is consistent with the terms of the Company's operations and Purchased Energy contracts and may be revised to reflect any revisions or changes in operations and the Purchased Energy contracts, subject to approval by the Commission.

Reconciliation Adjustment:

In order to reconcile any differences that may occur between recorded and forecasted Energy Rate Adjustment Clause revenues, the year-to-date recorded revenue from the Energy Rate Adjustment Clause will be compared with the year-to-date revenue expected from the Energy Rate Adjustment Clause on a quarterly basis. If there is a variance between the recorded Energy Rate Adjustment Clause revenue and the expected Energy Rate Adjustment Clause revenue, an adjustment, lagged by two months, shall be made to the Energy Rate Adjustment Clause to reconcile the revenue variance over the sales estimated for the subsequent quarter.

In addition, for any given month, if the Company operates either below or above the range of ~~0.009900-00980~~ million Btu per kilowatthour to ~~0.010000-00990~~ million Btu per kilowatthour, the Company can elect to modify its Generation Component such that the Generation Component will recover only the difference between the Company's actual generation cost and base generation cost for that month by providing notice to the Commission together with a written report, which election will be effective upon the filing of the notice. This difference shall be reflected as an adjustment to the actual revenues collected for the period in question and applied as part of the reconciliation adjustment. The report will explain the reasons why the Company operated outside of the range, the expected duration that it will operate outside of the range, and, if the Company is operating above the range, what steps it will be taking to attempt to rectify the situation. Upon review of the written report, the Commission and the Division of Consumer Advocacy will have the opportunity to make further inquiries on the matter, and the Commission, at its discretion, may institute an investigatory proceeding on the matter should it believe such proceeding is warranted.

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~~(September 9, 2010), and _____~~

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
~~Second~~~~First~~ Revised Sheet 80
Cancels ~~First Revised~~~~Original~~ Sheet 80

SCHEDULE "LP"
Large Power ~~Primary~~ Service

Availability:

Applicable for primary or secondary large light and/or power service supplied and metered at primary voltage and a single delivery point.

Available to all power users with metered loads in excess of 100 Kilowatts during any consecutive fifteen minute period in any month except Public Street and Highway Lighting Service. Such customers must sign a contract for service for a minimum period of twelve (12) months except for temporary services. Service supplied under this rate shall be subject to the Rules of the Company.

Rate:

Customer Charge:	per Customer per month	\$355.00 \$355.08
Demand Charge:	(To be added to Customer Charge)	\$14.90 \$13.94 per kW of monthly demand
Energy Charge:	(To be added to Customer Charge and Demand Charge)	
Non-Fuel Energy Charge (Non-Fuel and Non-Purchased Power Energy Cost only)	<u>All kWh</u>	<u>\$0.16549 per kWh</u>
<u>First</u>	400 kWh per kW demand	\$0.11273 per kWh
All Over	400 kWh per kW demand	\$0.08998 per kWh
Fuel and Purchased Power Energy Charge (may include ERAC on customer bills)	All kWh	\$0.20188 \$0.19143 per kWh
Energy Rate Adjustment Clause (ERAC)	All kWh	See below

Determination of Billing Demand:

The monthly billing demand shall be the greater of (a) the highest Kilowatt demand during the month or (b) 75% of the highest Kilowatt demand during the preceding eleven months, as registered during an interval of fifteen consecutive minutes by an indicating demand meter.

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
~~Second~~First Revised Sheet 81
Cancels ~~First Revised~~Original Sheet 81

SCHEDULE "LP" (Continued)
Large Power ~~Primary~~ Service

Minimum Charge:

The minimum monthly charge shall be the sum of the Customer Charge and the Demand Charge.

~~Primary Delivery:~~

~~The above rate is based on power and energy metered on the primary side of Customer-owned transformers.~~

Power Factor:

The above rate is based on an average power factor of 85%. If the power factor is found to average below 85%, 1/2 of 1% shall be added to the kWh for each 1% of average power factor below 85%. If the power factor is found to average above 85%, 1/2 of 1% shall be deducted from the kWh for each 1% of average power factor above 85%. The maximum increase or decrease shall in no case exceed 5%.

Determination of Power Factor:

The average monthly power factor for this rate schedule shall be determined by a computation from the reading of a reactive KVARH meter and a kWh meter, according to the following formula:

$$\text{Power factor (\%)} = \frac{\text{kWh}}{\sqrt{\text{kWh}^2 + \text{KVARH}^2}} \times 100$$

The KVARH meter shall be ratcheted to prevent reverse rotation on leading power factor.

Resource Cost Adjustment Surcharge:

The Resource Cost Adjustment Surcharge shall be added to the Customer and Energy Charges, and energy cost adjustment.

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
~~Third~~~~Second~~ Revised Sheet 82
Cancels ~~Second~~~~First~~ Revised Original Sheet 82

SCHEDULE "LP" (Continued)
Large Power ~~Primary~~ Service

Lighting:

Service supplied under this rate may be used for lighting purposes, provided that the energy is taken at the same voltage as any power load covered by the contract.

Master Metering:

Master Metering is not applicable to multi-family residential dwelling units or to two or more commercial or industrial customers through one meter on a single premise, except where:

1. the individual tenant does not control a substantial portion of the energy consumed, or
2. master metered service will tend to encourage conservation or the efficient use of energy.

The determination of master metering for apartments, condominiums and multi-unit buildings shall be made by the Company.

Energy Rate Adjustment Clause (ERAC):

This ERAC shall include the following:

FUEL AND PURCHASED ENERGY - The above rates are based on a cost of fuel for Company generation of ~~2301.984735.83~~ cents per million Btu for fuel delivered in its service tanks and a cost for purchased energy (Purchased Energy) of ~~17.44347.384~~ cents per kilowatthour. The term "Purchased Energy" shall mean all capacity and purchased energy charges and payments (including revenue taxes) that the Commission has authorized to include in this ERAC. Company-generated energy from non-fuel sources shall be considered as zero fuel cost in the determination of the composite fuel cost. When the Company-generated net energy cost is more or less than ~~2301.984735.83~~ cents per million Btu, and/or the Purchased Energy cost is more or less than ~~17.44347.384~~ cents per kilowatthour, a corresponding adjustment (Energy Rate Adjustment Factor) to the energy charges shall be made. This adjustment shall be comprised of a Company Generation Component and a Purchased Energy Component.

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
~~Third~~Second Revised Sheet 83
Cancels ~~Second~~First Revised Sheet 83

SCHEDULE "LP" (Continued)
Large Power ~~Primary~~ Service

The Company Generation Component shall be the difference in current generation cost and base generation cost, adjusted for additional revenue taxes. The current generation cost shall be determined by the current fuel cost in cents per million Btu, multiplied by a generation conversion factor of ~~0.0099500-009850~~ million Btu per kilowatthour, weighted by the proportion of current Company generation to total system net energy in kilowatthours. The base generation cost is the base fuel cost of ~~2301.981735-83~~ cents per million Btu multiplied by a generation conversion factor of ~~0.0099500-009850~~ million Btu per kilowatthour, weighted by the proportion of the ~~2023~~2010 test year generation to total system energy in kilowatthours.

The Purchased Energy Component shall be the difference between (1) the current Purchased Energy cost weighted by the proportion of current Purchased Energy to total system net energy, and (2) the base Purchased Energy cost of ~~17.44317-381~~ cents per kilowatthour weighted by the proportion of the ~~2023~~2010 test year Purchased Energy to total system net energy, adjusted to the sales delivery level and for additional revenue taxes. The Energy Rate Adjustment Factor shall be the sum of the Generation Component and the Purchased Energy Component.

The revenue tax requirement shall be calculated using current rates of the Franchise Tax, Public Service Company Tax, and Public Utility Commission fee.

The Energy Rate Adjustment shall be effective on the date of cost change. When a cost change occurs during a customer's billing period, the Energy Rate Adjustment will be prorated for the number of days each cost was in effect.

This ERAC is consistent with the terms of the Company's operations and Purchased Energy contracts and may be revised to reflect any revisions or changes in operations and the Purchased Energy contracts, subject to approval by the Commission.

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
~~Second~~First Revised Sheet 84
Cancels ~~First Revised~~Original Sheet 84

SCHEDULE "LP" (Continued)
Large Power ~~Primary~~ Service

Reconciliation Adjustment:

In order to reconcile any differences that may occur between recorded and forecasted Energy Rate Adjustment Clause revenues, the year-to-date recorded revenue from the Energy Rate Adjustment Clause will be compared with the year-to-date revenue expected from the Energy Rate Adjustment Clause on a quarterly basis. If there is a variance between the recorded Energy Rate Adjustment Clause revenue and the expected Energy Rate Adjustment Clause revenue, an adjustment, lagged by two months, shall be made to the Energy Rate Adjustment Clause to reconcile the revenue variance over the sales estimated for the subsequent quarter.

In addition, for any given month, if the Company operates either below or above the range of ~~0.009900-0.00980~~ million Btu per kilowatthour to ~~0.010000-0.00990~~ million Btu per kilowatthour, the Company can elect to modify its Generation Component such that the Generation Component will recover only the difference between the Company's actual generation cost and base generation cost for that month by providing notice to the Commission together with a written report, which election will be effective upon the filing of the notice. This difference shall be reflected as an adjustment to the actual revenues collected for the period in question and applied as part of the reconciliation adjustment. The report will explain the reasons why the Company operated outside of the range, the expected duration that it will operate outside of the range, and, if the Company is operating above the range, what steps it will be taking to attempt to rectify the situation. Upon review of the written report, the Commission and the Division of Consumer Advocacy will have the opportunity to make further inquiries on the matter, and the Commission, at its discretion, may institute an investigatory proceeding on the matter should it believe such proceeding is warranted.

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Decision and Order (April 29, 2010), Order
(May 26, 2010), and Decision and Order
(September 9, 2010)

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

~~SCHEDULE "P" [This sheet intentionally left blank]
Large Power Secondary Service~~

~~Availability:~~

~~Applicable for secondary large light and/or power service supplied and metered at secondary voltage and a single delivery point.~~

~~Available to all power users with metered loads in excess of 100 Kilowatts during any consecutive fifteen minute period in any month except Public Street and Highway Lighting Service. Such customers must sign a contract for service for a minimum period of twelve (12) months except for temporary services. Service supplied under this rate shall be subject to the Rules of the Company.~~

~~Rate:~~

Customer Charge	per Customer per month	\$369.38
Demand Charge:	(To be added to Customer Charge)	\$11.14 per kW of monthly demand
Energy Charge:	(To be added to Customer Charge and Demand Charge)	
Non-Fuel Energy Charge (Non-Fuel and Non-Purchased Power Energy Cost only)		
—— First	400 kWh per kW demand	\$0.12236 per kWh
—— All Over	400 kWh per kW demand	\$0.09834 per kWh
Fuel and Purchased Power Energy Charge (may include ERAC on customer bills)	All kWh	\$0.19143 per kWh
Energy Rate Adjustment Clause (ERAC)	All kWh	See below

~~Determination of Billing Demand:~~

~~The monthly billing demand shall be the greater of (a) the highest Kilowatt demand during the month or (b) 75% of the highest Kilowatt demand during the preceding eleven months, as registered during an interval of fifteen consecutive minutes by an indicating demand meter.~~

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
~~Second First~~ Revised Sheet 91
Cancels ~~First Revised Original~~ Sheet 91

~~SCHEDULE "P" (Continued) [This sheet intentionally left blank]
Large Power Secondary Service~~

~~Minimum Charge:~~

~~The minimum monthly charge shall be the sum of the Customer Charge and the Demand Charge.~~

~~Power Factor:~~

~~The above rate is based on an average power factor of 85%. If the power factor is found to average below 85%, 1/2 of 1% shall be added to the kWh for each 1% of average power factor below 85%. If the power factor is found to average above 85%, 1/2 of 1% shall be deducted from the kWh for each 1% of average power factor above 85%. The maximum increase or decrease shall in no case exceed 5%.~~

~~Determination of Power Factor:~~

~~The average monthly power factor for this rate schedule shall be determined by a computation from the reading of a reactive KVARH meter and a kWh meter, according to the following formula:~~

$$\text{Power factor (\%)} = \frac{\text{kWh}}{\sqrt{\text{kWh}^2 + \text{KVARH}^2}} \times 100$$

~~The KVARH meter shall be ratcheted to prevent reverse rotation on leading power factor.~~

~~Resource Cost Adjustment Surcharge:~~

~~The Resource Cost Adjustment Surcharge shall be added to the Customer and Energy Charges, and energy cost adjustment.~~

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
~~Third~~Second Revised Sheet 92
Cancels ~~Second~~First Revised Sheet 92

~~SCHEDULE "P" (Continued) [This sheet intentionally left blank]
Large Power Secondary Service~~

~~Lighting:~~

~~Service supplied under this rate may be used for lighting purposes, provided that the energy is taken at the same voltage as any power load covered by the contract.~~

~~Master Metering:~~

~~Master Metering is not applicable to multi-family residential dwelling units or to two or more commercial or industrial customers through one meter on a single premise, except where:~~

- ~~1. the individual tenant does not control a substantial portion of the energy consumed, or~~
- ~~2. master metered service will tend to encourage conservation or the efficient use of energy.~~

~~The determination of master metering for apartments, condominiums and multi-unit buildings shall be made by the Company.~~

~~Energy Rate Adjustment Clause (ERAC):~~

~~This ERAC shall include the following:~~

~~FUEL AND PURCHASED ENERGY—The above rates are based on a cost of fuel for Company generation of 1735.83 cents per million Btu for fuel delivered in its service tanks and a cost for purchased energy (Purchased Energy) of 17.381 cents per kilowatthour. The term "Purchased Energy" shall mean all capacity and purchased energy charges and payments (including revenue taxes) that the Commission has authorized to include in this ERAC. Company-generated energy from non-fuel sources shall be considered as zero fuel cost in the determination of the composite fuel cost. When the Company generated net energy cost is more or less than 1735.83 cents per million Btu, and/or the Purchased Energy cost is more or less than 17.381 cents per kilowatthour, a corresponding adjustment (Energy Rate Adjustment Factor) to the energy charges shall be made. This adjustment shall be comprised of a Company Generation Component and a Purchased Energy Component.~~

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
~~Third~~Second Revised Sheet 93
Cancels ~~Second~~First Revised Sheet 93

SCHEDULE "P" (Continued) [This sheet intentionally left blank]
Large Power Secondary Service

~~The Company Generation Component shall be the difference in current generation cost and base generation cost, adjusted for additional revenue taxes. The current generation cost shall be determined by the current fuel cost in cents per million Btu, multiplied by a generation conversion factor of 0.009850 million Btu per kilowatthour, weighted by the proportion of current Company generation to total system net energy in kilowatthours. The base generation cost is the base fuel cost of 1735.83 cents per million Btu multiplied by a generation conversion factor of 0.009850 million Btu per kilowatthour, weighted by the proportion of the 2010 test year generation to total system energy in kilowatthours.~~

~~The Purchased Energy Component shall be the difference between (1) the current Purchased Energy cost weighted by the proportion of current Purchased Energy to total system net energy, and (2) the base Purchased Energy cost of 17.381 cents per kilowatthour weighted by the proportion of the 2010 test year Purchased Energy to total system net energy, adjusted to the sales delivery level and for additional revenue taxes. The Energy Rate Adjustment Factor shall be the sum of the Generation Component and the Purchased Energy Component.~~

~~The revenue tax requirement shall be calculated using current rates of the Franchise Tax, Public Service Company Tax, and Public Utilities Commission fee.~~

~~The Energy Rate Adjustment shall be effective on the date of cost change. When a cost change occurs during a customer's billing period, the Energy Rate Adjustment will be prorated for the number of days each cost was in effect.~~

~~This ERAC is consistent with the terms of the Company's operations and Purchased Energy contracts and may be revised to reflect any revisions or changes in operations and the Purchased Energy contracts, subject to approval by the Commission.~~

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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
~~Second~~~~First~~ Revised Sheet 94
Cancels ~~First Revised~~~~Original~~ Sheet 94

SCHEDULE "P" (Continued) [This sheet intentionally left blank]
Large Power Secondary Service

Reconciliation Adjustment:

~~In order to reconcile any differences that may occur between recorded and forecasted Energy Rate Adjustment Clause revenues, the year to date recorded revenue from the Energy Rate Adjustment Clause will be compared with the year to date revenue expected from the Energy Rate Adjustment Clause on a quarterly basis. If there is a variance between the recorded Energy Rate Adjustment Clause revenue and the expected Energy Rate Adjustment Clause revenue, an adjustment, lagged by two months, shall be made to the Energy Rate Adjustment Clause to reconcile the revenue variance over the sales estimated for the subsequent quarter.~~

~~In addition, for any given month, if the Company operates either below or above the range of 0.00980 million Btu per kilowatthour to 0.00990 million Btu per kilowatthour, the Company can elect to modify its Generation Component such that the Generation Component will recover only the difference between the Company's actual generation cost and base generation cost for that month by providing notice to the Commission together with a written report, which election will be effective upon the filing of the notice. This difference shall be reflected as an adjustment to the actual revenues collected for the period in question and applied as part of the reconciliation adjustment. The report will explain the reasons why the Company operated outside of the range, the expected duration that it will operate outside of the range, and, if the Company is operating above the range, what steps it will be taking to attempt to rectify the situation. Upon review of the written report, the Commission and the Division of Consumer Advocacy will have the opportunity to make further inquiries on the matter, and the Commission, at its discretion, may institute an investigatory proceeding on the matter should it believe such proceeding is warranted.~~

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By: ~~Randall J. Hee~~David Bissell, President
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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1

~~Third~~ ~~Second~~ Revised Sheet 103
Cancels ~~Second~~ ~~First~~ Revised Sheet 103

SCHEDULE "SL"
Street Lighting

Availability:

Applicable to public street and highway lighting service. Available in general, where the Company owns, maintains and operates the street lighting facilities and has already installed primary distribution circuits. Service supplied under this rate is subject to the Rules of the Company.

Rate:

1. Fixture Charge:

- a. Monthly charge for standard incandescent fixtures with not in excess of 4000 lumen lamps - ~~\$4.54~~~~\$3.63~~ per fixture, per month.
- b. Monthly charge for standard mercury vapor fixture with not in excess of 21,000 lumen lamps - ~~\$7.81~~~~\$6.25~~ per fixture, per month.
- c. Monthly charge for standard high pressure sodium vapor fixtures:
 - 1 - ~~<=~~100 watt ~~\$7.81~~~~\$6.25~~ per fixture, per month
 - 2 - ~~101-150~~ watt ~~\$7.81~~~~\$6.25~~ per fixture, per month
 - 3 - ~~151-200~~ watt ~~\$8.09~~~~\$6.47~~ per fixture, per month
 - 4 - ~~201-250~~ watt ~~\$8.09~~~~\$6.47~~ per fixture, per month
 - 5 - ~~251+400~~ watt ~~\$8.44~~~~\$6.75~~ per fixture, per month
- d. Monthly charge for standard light emitting diode ("LED") fixtures:
 - 1- ~~<=~~45 watt ~~\$10.23~~~~\$8.18~~ per fixture, per month
 - 2 - ~~46-98~~ watt ~~\$10.60~~~~\$8.48~~ per fixture, per month
 - 3 - ~~99+130~~ watt ~~\$10.71~~~~\$8.57~~ per fixture, per month

2. Energy Charge:

Non-Fuel Energy Charge (Non-Fuel and Non-Purchased Power Energy Cost only)	(To be added to Customer Charge) All kWh	\$0.31166 \$0.22387 per kWh
Fuel and Purchased Power Energy Charge (may include ERAC on customer bills)	(To be added to Customer Charge) All kWh	\$0.20188 \$0.19143 per kWh
Energy Rate Adjustment Clause (ERAC)	(To be added to Customer Charge) All kWh	See below

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By: David Bissell, President
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KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
Second Revised Sheet 104
Cancels First Revised Sheet 104

SCHEDULE "SL" (Continued)
Street Lighting

Minimum Charge:

The minimum monthly charge will be the above Fixture Charge per fixture connected to the circuit.

Unmetered Service:

When Mercury Vapor service is unmetered and lamps are individually controlled for normal dusk-to-dawn operation, the monthly Kilowatthours per lamp billed at the above rates will be uniform at 76, 104, and 164 Kilowatthours for the 175, 250, and 400-watt mercury vapor lamps, respectively.

When High Pressure Sodium Vapor service is unmetered and lamps are individually controlled for normal dusk-to-dawn operation, the monthly Kilowatthours per lamp billed at the above rates will be uniform at 53, 74, 94, 114, and 176 Kilowatthours for the 100, 150, 200, 250, and 400-watt high pressure sodium vapor lamps, respectively.

When LED service is unmetered and lamps are individually controlled for normal dusk-to-dawn operation, the monthly Kilowatthours per lamp billed at the above rates will be uniform at 16.2, 35.28, and 46.8 Kilowatthours for the 45, 98, and 130 watt LED lights, respectively, multiplied by the applicable percentage dimming factor, if any. Customer has the option to select a percentage dimming factor, which is available in 5% increments (e.g., 95%, 90%, 85%, etc.).

Night-time hours of lamp and ballast operation reflect an average 360 hours per month.

Resource Cost Adjustment Surcharge:

The Resource Cost Adjustment Surcharge shall be added to the Customer and Energy Charges, and energy cost adjustment.

Issued: September 15, 2015
By: David Bissell, President
and Chief Executive Officer

Effective: October 16, 2015
Decision and Order No. 19658, Interim
Decision and Order (April 29, 2010)/Order
(May 26, 2010), and Decision and Order
(September 9, 2010)

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
~~Third~~Second Revised Sheet 105
Cancels ~~Second~~First Revised Sheet 105

SCHEDULE "SL" (Continued)
Street Lighting

Term of Contract:

If the Company is asked to remove or relocate facilities within 60 months after installation, the customer shall make a contribution in the amount of the estimated net removal or relocation cost.

Energy Rate Adjustment Clause (ERAC):

This ERAC shall include the following:

FUEL AND PURCHASED ENERGY - The above rates are based on a cost of fuel for Company generation of ~~2301.984735.83~~ cents per million Btu for fuel delivered in its service tanks and a cost for purchased energy (Purchased Energy) of ~~17.44347.384~~ cents per kilowatthour. The term "Purchased Energy" shall mean all capacity and purchased energy charges and payments (including revenue taxes) that the Commission has authorized to include in this ERAC. Company-generated energy from non-fuel sources shall be considered as zero fuel cost in the determination of the composite fuel cost. When the Company-generated net energy cost is more or less than ~~2301.984735.83~~ cents per million Btu, and/or the Purchased Energy cost is more or less than ~~17.44347.384~~ cents per kilowatthour, a corresponding adjustment (Energy Rate Adjustment Factor) to the energy charges shall be made. This adjustment shall be comprised of a Company Generation Component and a Purchased Energy Component.

The Company Generation Component shall be the difference in current generation cost and base generation cost, adjusted for additional revenue taxes. The current generation cost shall be determined by the current fuel cost in cents per million Btu, multiplied by a generation conversion factor of ~~0.0099500.009850~~ million Btu per kilowatthour, weighted by the proportion of current Company generation to total system net energy in kilowatthours. The base generation cost is the base fuel cost of ~~2301.984735.83~~ cents per million Btu multiplied by a generation conversion factor of ~~0.0099500.009850~~ million Btu per kilowatthour, weighted by the proportion of the ~~2023~~2010 test year generation to total system energy in kilowatthours.

Issued: ~~July 17, 2015~~TBD
By: David Bissell
President & Chief Executive Officer

Effective: ~~August 18, 2015~~January 1, 2023
Decision and Order No. ~~TBD-19658, Interim Decision and Order (April 29, 2010)/Order (May 26, 2010), Decision and Order (September 9, 2010), and~~ _____

KAUAI ISLAND UTILITY COOPERATIVE
Lihue, Kauai, Hawaii

KIUC Tariff No. 1
~~Third~~Second Revised Sheet 106
Cancels ~~Second~~First Revised Sheet 106

SCHEDULE "SL" (Continued)
Street Lighting

The Purchased Energy Component shall be the difference between (1) the current Purchased Energy cost weighted by the proportion of current Purchased Energy to total system net energy, and (2) the base Purchased Energy cost of ~~17.44347-384~~ cents per kilowatthour weighted by the proportion of the ~~2023-2040~~ test year Purchased Energy to total system net energy, adjusted to the sales delivery level and for additional revenue taxes. The Energy Rate Adjustment Factor shall be the sum of the Generation Component and the Purchased Energy Component.

The revenue tax requirement shall be calculated using current rates of the Franchise Tax, Public Service Company Tax, and Public Utilities Commission fee.

The Energy Rate Adjustment shall be effective on the date of cost change. When a cost change occurs during a customer's billing period, the Energy Rate Adjustment will be prorated for the number of days each cost was in effect.

This ERAC is consistent with the terms of the Company's operations and Purchased Energy contracts and may be revised to reflect any revisions or changes in operations and the Purchased Energy contracts, subject to approval by the Commission.

Reconciliation Adjustment:

In order to reconcile any differences that may occur between recorded and forecasted Energy Rate Adjustment Clause revenues, the year-to-date recorded revenue from the Energy Rate Adjustment Clause will be compared with the year-to-date revenue expected from the Energy Rate Adjustment Clause on a quarterly basis. If there is a variance between the recorded Energy Rate Adjustment Clause revenue and the expected Energy Rate Adjustment Clause revenue, an adjustment, lagged by two months, shall be made to the Energy Rate Adjustment Clause to reconcile the revenue variance over the sales estimated for the subsequent quarter.

In addition, for any given month, if the Company operates either below or above the range of ~~0.009900-00980~~ million Btu per kilowatthour to ~~0.010000-00990~~ million Btu per kilowatthour, the Company can elect to modify its Generation Component such that the Generation Component will recover only the difference between the Company's actual generation cost and base generation cost for that month by providing notice to the Commission together with a written report, which election will be effective upon the filing of the notice. This difference shall be reflected as an adjustment to the actual revenues collected for the period in question and applied as part of the reconciliation adjustment. The report will explain the reasons why the Company operated outside of the range, the expected duration that it will operate outside of the range, and, if the Company is operating above the range, what steps it will be taking to attempt to rectify the situation. Upon review of the written report, the Commission and the Division of Consumer Advocacy will have the opportunity to make further inquiries on the matter, and the Commission, at its discretion, may institute an investigatory proceeding on the matter should it believe such proceeding is warranted.

Issued: ~~July 17, 2015~~TBD
By: David Bissell
President & Chief Executive Officer

Effective: ~~TBD~~August 18, 2015
Decision and Order No. ~~TBD~~19658, Interim
~~Decision and Order (April 29, 2010)/Order~~
~~(May 26, 2010), Decision and Order~~
~~(September 9, 2010), and _____~~

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

EXHIBIT 10

TESTIMONY OF KEVIN R. PIERCE
(EXHIBIT 10-T-600)

(15 PAGES)

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**KAUAI ISLAND UTILITY COOPERATIVE
DOCKET NO. 2022-0208
EXHIBIT 10-T-600
DIRECT TESTIMONY
OF
KEVIN R. PIERCE**

9 **Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS**
10 **ADDRESS.**

11 A. My name is Kevin Pierce. I am a Senior Consultant with Daymark Energy
12 Advisors (“Daymark”), which is headquartered at 370 Main Street,
13 Suite 325, Worcester, MA 01608.

14 **Q. ON WHOSE BEHALF ARE YOU PRESENTING THIS TESTIMONY?**

15 A. I am testifying on behalf of Kauai Island Utility Cooperative (“KIUC”).

16 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE HAWAII PUBLIC**
17 **UTILITIES COMMISSION (“COMMISSION”)?**

18 A. No, but I have provided testimony and/or provided analyses in other
19 regulatory proceedings before other public utilities/service commissions as
20 noted below and in my professional resume provided as
21 Attachment KRP-601.

1 **Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND**
2 **ACCREDITATIONS.**

3 A. I have a B.A. in Political Science from the University of Maine as well as an
4 M.A. in Law and Diplomacy from the Fletcher School at Tufts University.
5 I have also attended NARUC's Rate School.

6 **Q. PLEASE DESCRIBE YOUR PROFESSIONAL EXPERIENCE.**

7 A. I joined Daymark in 2019 as an Analyst. At Daymark, I work on electric,
8 natural gas and renewable energy projects, including providing regulatory
9 support and regulatory review for a number of clients. In my work, I have
10 supported a variety of analyses for various renewable energy projects,
11 including several economic benefits reports. I have also worked with
12 members of the Daymark team to evaluate long-term power supply
13 agreements, including solar power purchase agreements for three electric
14 cooperatives. Additionally, I have worked on and provided testimony for
15 St. Lawrence Gas in New York on Cost of Service in their latest rate case.
16 My professional resume is provided in Attachment KRP-601.

17 **Q. HAVE YOU PREPARED ANY ATTACHMENTS IN SUPPORT OF YOUR**
18 **TESTIMONY?**

19 A. Yes, the attachments listed below have been prepared in support of my
20 direct testimony.

21 1. Attachment KRP-601 – Professional Resume

22 2. Attachment KRP-602 – Historical Load Research Study Report

1 3. Attachment KRP-603 – Allocated Cost of Service Study

2 **Q. WERE THESE ATTACHMENTS PREPARED BY YOU OR UNDER YOUR**
3 **DIRECT SUPERVISION?**

4 A. Yes.

5 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

6 A. Herein, I describe the (1) historical load research study (“LRS”) and
7 (2) 2023 calendar test year (“TY”) allocated cost of service study (“ACOSS”)
8 that were prepared for KIUC as part of its comprehensive rate case
9 application (“Application”), as well as how they are used in developing
10 KIUC’s rate design proposals discussed in the direct testimony of
11 Mr. Koehler provided in Exhibit 10-T-500. As noted above, the LRS is
12 provided as Attachment KRP-602 and the ACOSS is provided as
13 Attachment KRP-603 to my testimony.

14 **Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

15 A. Among other findings, Daymark has found that under a strict cost-of-service
16 approach, all classes under KIUC Tariff No. 1 would see a rate increase,
17 ranging at the high end from over 1000% in the Irrigation class¹ down to just
18 around 2-3% for Commercial Classes “G” and “J.” Additionally, under a strict
19 cost-of-service based rate design, KIUC’s customers as a whole would see

¹ The KIUC Irrigation class is served under various power purchase agreements (“PPAs”) and the revenues received from that class of customers are not necessarily directly related to KIUC’s cost or rate base investments.

1 a sharp increase in the Demand Charge component of rates compared to
2 what is currently being collected. Finally, the current Residential Class “D”
3 customer service charge is not fully recovering the costs of customer
4 service.

5 I. **DEVELOPMENT OF LRS FOR KIUC**

6 **Q. PLEASE DESCRIBE THE PURPOSE OF THE LRS.**

7 A. A historical LRS seeks to understand how a given electric system and its
8 customers use electricity, when it is used, and the relative load factors² of
9 the various classes.

10 The KIUC LRS uses historical hourly data taken from advanced
11 metering infrastructure (“AMI”) to generate load profiles of the major classes
12 over various time frames and identify monthly and annual coincident peaks
13 and non-coincident peaks hours, and ratios, by customer class.

14 As will be explained further, Coincident Peak and Non-Coincident
15 Peak ratios, and delivery system loss calculations coming out of the LRS
16 are fed into the KIUC TY ACOSS in order to apportion fixed generation,
17 transmission and distribution costs to the various customer classes,
18 primarily to develop the demand related charges, as discussed below.

² Load factor expresses the ratio of average to peak consumption, indicating how efficiently customer classes use energy. A higher load factor represents greater efficiency, which translates to less system investment and cost required to serve that customer class, and vice-versa.

1 **Q. PLEASE EXPLAIN HOW DAYMARK DEVELOPED ITS LRS FOR KIUC.**

2 A. KIUC provided Daymark with hourly data for individual customers by meter
3 for its major classes under the current schedules of KIUC's
4 Commission-approved tariff ("KIUC Tariff No. 1"), including Schedule "D"
5 (Residential Service), Schedule "G" (General Light and Power Service)
6 (i.e., small Commercial), Schedule "J" (General Light and Power Service)
7 (i.e., large Commercial), Schedule "L" (Large Power Primary Service) and
8 Schedule "P" (Large Power Secondary Service), all sourced from KIUC's
9 AMI system. Daymark then aggregated customers by rate schedule and by
10 hour to form rate schedule-specific hourly demand, and consequent load
11 profiles. Various additional analyses were also conducted, which are further
12 detailed in the LRS provided in Attachment KRP-602.

13 **Q. WHAT INFORMATION WAS USED FROM THE LRS IN THE ACROSS?**

14 A. The LRS generated values that were used as inputs for some of the
15 Schedule Allocators in the ACROSS model. Three factors – (1) the annual
16 Coincident Peak ("CP") Load Factors, (2) the annual Non-Coincident Peak
17 ("NCP") Load Factors, and (3) the Loss Factors for each class were utilized
18 in formulating some aspects of the ACROSS Schedule Allocators, primarily
19 those related to demand-classified costs. While the TY 2023 ACROSS is
20 based on projected costs and revenues, it requires historical CP, NCP, and
21 loss factors in the formulation of schedule allocators because they are
22 difficult to forecast or estimate based on annual or monthly sales forecasts.

1 Notably, they do not tend to shift dramatically relative to sales levels,
2 year-to-year, so their use in the projected TY 2023 ACOSS is appropriate.

3 **II. DEVELOPMENT OF ACOSS FOR KIUC**

4 **Q. WHAT IS THE PURPOSE OF THE ACOSS?**

5 A. The ACOSS prepared by Daymark apportions costs among utility functions,
6 classifies costs as related to the provision of energy, demand (i.e., fixed
7 system capacity) and customer service, and allocates them to the customer
8 classes set forth in KIUC Tariff No. 1. The purpose of the ACOSS is to
9 determine cost causation among the functions, classified costs, and rate
10 classes, and to determine what, if any, shifts in revenue collection need to
11 occur. It also is used to determine whether the energy, demand, and
12 customer components of rates are matched to and adequately collecting
13 the assigned costs.

14 **Q. WHAT METHODOLOGY WAS USED TO PREPARE THE TY 2023**
15 **ACOSS ANALYSIS?**

16 A. The TY 2023 ACOSS model was developed with projected TY Total
17 Expenses at proposed rates (see Exhibit 6 to the Application, line 27,
18 column E) and billing determinants (see testimonies of Mr. Koehler
19 (Exhibit 10-T-500) and Mr. Yuh (Exhibit 10-T-700)).

20 Daymark then functionalized, classified, and allocated the TY 2023
21 revenue requirement as discussed in the testimony of Mr. Koehler
22 (Exhibit 10-T-500). Daymark also functionalized, classified, and allocated

1 the projected rate base and depreciation expenses for 2023 so that costs
2 could be disaggregated by function (i.e., Generation, Transmission,
3 Distribution, and Customer Service), classified as either energy-related,
4 demand-related or customer-related, and allocated appropriately to KIUC's
5 customer classes.

6 **Q. PLEASE DESCRIBE THE INPUTS NEEDED FOR THE ACROSS?**

7 A. KIUC provided Daymark with historical 2021 AMI data in order to prepare
8 the LRS, CP and NCP ratios and loss factors, as previously explained. That
9 was combined with projected TY 2023 expenses, depreciation and Taxes
10 Other Than Income Taxes, rate base, and depreciation information, in order
11 to functionalize, classify and allocate direct and indirect costs of service by
12 rate class.

13 **Q. HOW WAS THE FUNCTIONALIZATION PORTION OF THE ACROSS**
14 **ANALYSIS PERFORMED?**

15 A. Using KIUC's account information from the TY 2023 projected budget,
16 Daymark assigned the costs associated with certain accounts directly to the
17 Generation, Transmission, Distribution, or Customer Service functions
18 where appropriate. For other overhead and related costs which were not
19 directly assignable to a specific utility function, the costs were apportioned
20 by way of internally-generated allocators built up from those direct cost
21 assignments.

1 **Q. WHAT WERE THE RESULTS OF THE FUNCTIONALIZATION STEP OF**
2 **THE ACROSS ANALYSIS?**

3 A. KIUC's TY 2023 electric revenue of approximately \$193.7 million was
4 functionalized as follows:

5 **Table 1 – KIUC Cost of Service by Function**
6

Function	Value (\$Millions)	Value (%)
Generation	141.0	72.8%
Transmission	10.3	5.3%
Distribution	35.6	18.4%
Customer Service	6.9	3.6%

7
8 **Q. HOW WAS THE CLASSIFICATION PORTION OF THE ACROSS**
9 **ANALYSIS PERFORMED?**

10 A. After each expense or balance underlying the TY revenue requirement had
11 been functionalized, Daymark further developed either direct or
12 internally-generated allocators for each account in order to classify KIUC's
13 costs of service to Energy, Demand, or Customer Service-related costs.
14 Generation-functionalized costs were classified to Energy (e.g., fuel) or
15 Demand (e.g., capital costs of specific generating units).
16 Transmission-functionalized costs were all classified as Demand-related.
17 Distribution-functionalized costs were apportioned on the basis of Demand
18 or Customer Service (in the case of service drops). Customer-functionalized
19 costs were apportioned solely to Customer Service.

1 **Q. WHAT WERE THE RESULTS OF THE CLASSIFICATION STEP OF THE**
2 **ANALYSIS?**

3 A. KIUC's TY 2023 electric revenue of approximately \$193.7 million was
4 classified as follows:

5 **Table 2 – KIUC Cost of Service by Cost Classification**
6

Classification	Value (\$Millions)	Value (%)
Energy	102.2	52.7%
Demand	82.0	42.4%
Customer	9.5	4.9%

7
8 **Q. HOW WAS THE CUSTOMER CLASS ALLOCATION PORTION OF THE**
9 **ANALYSIS PERFORMED?**

10 A. After the classification step, Daymark took each functionalized and
11 classified cost sub-grouping and allocated those costs to each customer
12 class rate schedule. Energy-classified costs were allocated according to
13 2023 forecasted kilowatt-hour generation requirements by customer class
14 (sales plus system losses). The demand-classified costs of service
15 assigned to the Generation and Transmission functions were generally
16 allocated using the average and excess demand (capacity) method,³ after
17 excluding the Irrigation class.⁴ Distribution demand functionalized and

³ See National Association of Regulatory Utility Commissioners, Electric Utility Cost Allocation Manual (January 1992), at pages 49-52.

⁴ See supra n. 1.

1 classified costs were generally allocated using the NCP allocation factor for
2 each class. Customer-classified costs were generally either directly
3 allocated to a specific customer class based on the number of customers,
4 or by weighting driven in part by numbers of customers and various
5 customer service costs including service drops (e.g., meter costs).

6 **Q. HOW WERE THE DEMAND ALLOCATION FACTORS DEVELOPED?**

7 A. As previously discussed, Daymark performed and prepared the LRS for use
8 in the ACOSS model. The LRS provided NCP Load Factors, CP Load
9 Factors, and Loss Factors for each rate class. Using these factors, and the
10 forecasted 2023 annual kilowatt-hour (rounded to megawatt-hour) sales
11 forecast (see Exhibit 8-1 to the Application, page 2, line 8, column G), an
12 “Average & Excess” factor was developed by solving for average demand
13 level and the non-coincident peak demand level for each class (the
14 difference of which represents the “excess” portion). As discussed above,
15 the Irrigation class⁵ is interruptible, is served under various PPAs, and
16 therefore there is no excess demand level based on KIUC plant or other
17 investments.

18 **Q. HOW WAS THE ENERGY ALLOCATION FACTOR DEVELOPED?**

19 A. Energy-classified costs are allocated by the Generation allocator, which
20 grosses up the 2023 projected annual kilowatt-hours (rounded to

⁵ See supra n. 1.

1 megawatt-hours) sales per class forecasted (see Exhibit 8-1 to the
2 Application, page 2, line 8, column G) by the loss factors calculated in the
3 LRS.

4 **Q. HOW WERE THE CUSTOMER ALLOCATION FACTORS DEVELOPED?**

5 A. Customer counts were provided by KIUC as part of its TY revenue forecast.
6 The average of the projected twelve months ending December 2023 was
7 used as the count for each customer class. For weighted customer count
8 allocators, for example, the replacement cost of each customer class's
9 meter was considered for weighted meter cost and customer-related O&M
10 costs factors.

11 **Q. WHAT WERE THE RESULTS OF THE ALLOCATION PORTION OF THE**
12 **KIUC TY ACROSS ANALYSIS?**

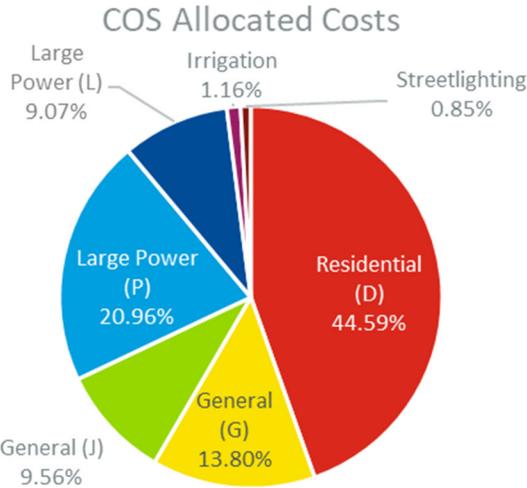
13 A. The costs assignable to each of the customer classes are presented below:

14 Schedule "D" Residential: 44.59%
15 Schedule "G" Small Commercial: 13.80%
16 Schedule "J" Large Commercial: 9.56%
17 Schedule "L" Large Power Primary: 9.07%
18 Schedule "P" Large Power Secondary: 20.96%
19 Irrigation class:⁶ 1.16%
20 Schedule "SL" Street Lights: 0.85%

⁶ See supra n. 1.

1

Figure 1



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Table 3 – Cost of Service by Class (\$1000s)

	Total System	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation	Streetlighting
Operations and Maintenance Expense	142,577	63,801	19,732	13,718	30,218	13,242	1,029	836
Depreciation & Amortization	16,337	7,464	2,277	1,448	3,080	1,241	436	391
Taxes	14,813	6,553	2,044	1,374	2,963	1,242	422	216
Interest	7,192	3,252	986	653	1,397	578	191	135
Other Expenses	-	0	0	0	0	0	0	0
Patronage Capital or Margins	(4,839)	(2,575)	(729)	(354)	(725)	(306)	(61)	(89)
Non-Sales Revenue	954	440	129	84	174	69	34	25
2023 ALLOCATED COST OF SERVICE (FORECAST)	177,034	78,934	24,439	16,924	37,108	16,065	2,050	1,513
		44.59%	13.80%	9.56%	20.96%	9.07%	1.16%	0.85%

5

6

Q. HOW DO THE RESULTS OF THE ACROSS ANALYSIS COMPARE TO PROJECTED TY 2023 ELECTRIC SALES REVENUES AT PRESENT RATES?

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9

A. The difference between the 2023 ACROSS-indicated cost of service, and the 2023 Revenue at Current Rates by class, is summarized below:

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**Table 4 – Comparison of ACOSS Results to Current Rates Revenue
(\$1000s)**

	Total System	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation	Streetlighting
2023 ALLOCATED COST OF SERVICE (AT REQUESTED DSC)	193,716	86,372	26,742	18,519	40,604	17,579	2,244	1,656
2023 REVENUE COLLECTED AT CURRENT RATES	177,034	76,174	26,034	18,183	39,017	16,757	152	716
(DEFICIENCY)/SURPLUS	(16,682)	(10,198)	(708)	(336)	(1,587)	(821)	(2,092)	(940)
RATE INCREASE/(DECREASE) TO EQUAL COS	9.4%	13.4%	2.7%	1.8%	4.1%	4.90%	1380.0%	131.2%

4

5

These results indicate that while the overall KIUC system requires an average rate increase of 9.4%, the residential class, if moved immediately to its allocated cost of service, would require an additional rate increase of another four percent (4.0%). At the same time, KIUC’s small and large commercial classes would, if based solely on their indicated cost of service, experience rate increases less than the overall system increase of 9.4%.

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Additionally, the ACOSS shows that current rate structures for the projected TY 2023 do not recover the classified costs of Energy, Demand, or Customer expenses as indicated by the ACOSS. The vast majority of current rate revenue is collected via the Energy Charge, with the Demand related costs being under-recovered under a strict cost-of-service indicated rate structure. A side-by-side breakdown is provided below:

13

14

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Figure 2

Classification - TY 2023 ACOSS

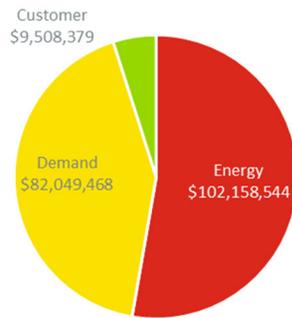
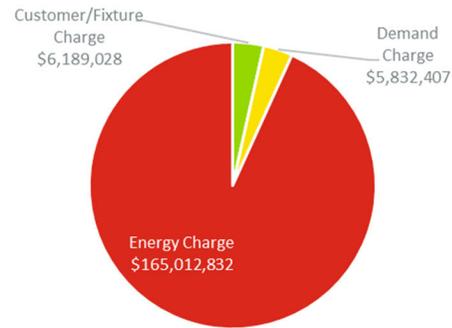


Figure 3

Classification - 2023 Current Rates



2

3 **Q. DOES MR. KOEHLER (EXHIBIT 10-T-500) PROPOSE RATES THAT**
4 **MOVE CUSTOMER CLASSES TO THEIR INDICATED CLASS COST OF**
5 **SERVICE IN THIS RATE CASE?**

6 A. No, not completely. The ACOSS results offer a guide regarding relative
7 customer class contributions to overall cost of service, but in utility
8 ratemaking, other principles and concerns should also factor into decisions
9 on rate adjustments. Specifically, recognizing that KIUC
10 members/customers are collectively facing an almost double-digit cost of
11 service increase, movements towards class-indicated cost of service are
12 limited by practical considerations like avoidance of rate shock and ensuring
13 gradualism in rate adjustments. In this case, Mr. Koehler has decided to
14 gradually move KIUC's major customer classes' rates towards cost-based
15 class rate components.

1 **Q. OTHERWISE THEN, HOW DOES THE ACOSS INFORM THE RATE**
2 **DESIGN PROPOSALS OF MR. KOEHLER IN THIS RATE CASE?**

3 A. The ACOSS results support the proposed Rate Design discussed in the
4 testimony of Mr. Koehler (Exhibit 10-T-500) in several ways. The ACOSS
5 has been used to apportion class revenue requirements responsibly as
6 noted above, and drive the proposed Rate Design at the individual class
7 rate components level, by considering (but not strictly adhering to) the
8 functionalized and classified cost results. For example, the ACOSS results
9 indicate that the fixed demand and customer costs are not being sufficiently
10 recovered from demand charges in the various commercial classes, and
11 from customer charges for the residential class. The ACOSS does inform
12 movements in these rate components, as explained more fully in the
13 testimony of Mr. Koehler (Exhibit 10-T-500).

14 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

15 A. Yes.

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

ATTACHMENT KRP-601

(1 PAGE)



AREAS OF EXPERTISE

Regulatory advisory services

Financial evaluation of energy assets

Rate design

Economic analysis, particularly in the area of cost-benefit and cost-effectiveness testing

Clean energy strategy and policy

BACKGROUND

Daymark Energy Advisors
2019 - Present

Maine International Trade Center
2018

EDUCATION

M.A., Law and Diplomacy
The Fletcher School at Tufts
University

B.A., Political Science
University of Maine

Kevin Pierce

Senior Consultant

Kevin works with project developers, utilities, and regulators. He helps clients navigate interconnection processes, facilitates competitive procurement of energy, capacity, and renewable attributes, and supports long-term planning, load forecasting, production cost modeling, and economic impact analysis.

SELECTED EXPERIENCE

- Evaluated the cost effectiveness and deliverability of Efficiency Manitoba's initial 3-year plan as part of the Independent Expert Consultant team.
- Developed a supply and demand model to forecast the price of Connecticut Class II Renewable Energy Credits for the Materials Innovation and Recycling Authority's trash-to-energy generation in order to value their output.
- Previously engaged in an independent corporate separation audit of First Energy's affiliated electric distribution companies operating in Ohio on behalf of the Public Utilities Commission of Ohio (PUCO); initial results include recommendations to both the regulatory commission and First Energy designed to improve reporting and enhance transparency.
- Drafted and filed seasonal cost of gas documentation for Blackstone Gas Company with the Massachusetts Department of Public Utilities as well as preparing monthly compliance filings.
- Analyzed load patterns and authored a load research report as part of a team developing allocated cost of service rate structures for Kaua'i Island Utility Cooperative.
- Operated PCI GenTrader modelling software for Kaua'i Island Utility Cooperative to determine optimal dispatch and fuel costs in support of annual regulatory filings with the Hawaii PUC.
- Developed regression models to perform load forecast modeling for Southern Louisiana Electric Membership Corporation for use in evaluating resource supply options as part of the development of a power supply RFP.
- Assisted the Massachusetts Department of Energy Resources in developing renewable thermal technology models and adoption rate forecasts as part of our assessment of the long-term efficacy of the Massachusetts Alternative Portfolio Standard; as part of this effort, researched the costs of a variety of alternative equipment for thermal heating in order to support the financial model development that assesses the relative benefits of many thermal heating systems.

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

ATTACHMENT KRP-602

(49 PAGES)



KAUA'I ISLAND UTILITY COOPERATIVE: LOAD RESEARCH STUDY

AUGUST 25, 2022

PREPARED FOR

Kaua'i Island Utility Cooperative

PREPARED BY

Daymark Energy Advisors

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LIST OF ACRONYMS

ACOSS	allocated cost-of-service study
AMI	advanced metering infrastructure
CP	coincident peak
KIUC	Kaua'i Island Utility Cooperative
NCP	non-coincident peak
SL	Street Lighting
TOU	time of use

I. INTRODUCTION

Daymark Energy Advisors was engaged by Kaua'i Island Utility Cooperative (KIUC) to conduct various studies and modeling work supporting an allocated cost-of-service study (ACOSS) and potential filing of a rate case and rate redesign. As a foundational piece of an ACOSS, the load research study identifies the electric demand patterns of KIUC's various customer classes. Results from this study will be used as inputs to the ACOSS, and in supporting rate design decisions such as whether to consolidate existing customer classes, the development of time of use (TOU) rates including those pertaining to electric vehicles, and can be used in setting up demand-side management programs.

II. METHODOLOGY

A. Data sources

KIUC has had substantial advanced metering infrastructure (AMI) in place across all customer classes since 2013. As of 2022, KIUC still maintains 1,607 non-AMI meters, and 35,493 AMI meters. Daymark received from KIUC hourly data by meter number, for all AMI meters, covering calendar year 2021. Hourly data for the streetlighting and irrigation customer segments were not provided. Streetlighting is not metered on an hourly basis, and estimates are instead used in the billing process.

Due to the almost full deployment of AMI in the KIUC system, samples were not used to estimate totals. Given KIUC's relatively small size and computing advances, Daymark was able to use the entire customer population (or "census") in the examined classes to generate average load shapes.

B. Assumptions

Load shapes described later in this study were constructed using raw AMI meter data given by KIUC. The data and subsequent load shapes have not been weather normalized.

As noted in Section II.A, there are 1,607 non-AMI meters remaining in KIUC's system. This represents a relatively small fraction of the total KIUC meters (approximately 4.3% of the average number of 2021 meters) and, therefore, the data represented in this report is only representative of the customers with AMI meters. Even if hourly data for this relatively small number of non-AMI meters were added to the dataset, we do not believe the results presented herein would materially change.

C. Customer classes

KIUC's system is split into four main customer classes: (1) Residential, (2) Commercial, (3) Large Power, and (4) Other. For all classes, metered data provided by KIUC and used in this study does not include any on-site consumption of distributed generation, which does not pass through the meter. Furthermore, exports of distributed generation to the KIUC system were not included in the study.

The Residential (D) class does not contain any subclasses for the purpose of this study.

The Commercial class is currently segmented into two subclasses, Small (G) and Large (J) commercial customers. G customers have a demand of less than 30kW and less than

10,000 kWh of consumption per month. J customers have between 30 and 100 kW of demand and 10,000 kWh or more consumption per month.

The Large Power class is similarly split into two subclasses, Primary (L) and Secondary (P). Both customer classes feature customers with greater than 100kW of demand. L customers are metered on the primary (higher voltage) side of the transmission & distribution system, while P customers are metered on the secondary side.

The two subclasses comprising the Other class are Street Lighting (SL) and Irrigation. SL customers are not metered directly; instead, estimates based on nighttime usage, device type, dimming levels, and number of devices are used for billing purposes. Hourly energy consumption for Irrigation was not readily available, but previous studies have found no tangible direct impact on system peak loads.¹

D. System losses and reconciliation to billing

While the KIUC electric grid represents a unique “islanded” system in many respects, it still suffers losses between generation and end-users like all other electric systems. In 2021, KIUC experienced 20,678,790 kWh of losses or an average 4.51% from generation resources and power purchase agreements to individual customer meters. Losses can be allocated to classes using the hourly demand of each class, squared. Using an individual hour’s squared demand as the numerator and the sum of the total squared hourly values across the system as the denominator, losses can be applied per class and per hour.² All figures and numbers reported in this study are customer-facing numbers, and net out transmission and distribution losses.

When comparing the annual totals of the hourly AMI data to the billed data as reported by KIUC, there are some differences. While some of these differences may be explained by a lack of AMI for certain customers, other differences are attributed to the allocation of so-called “unbilled” kWh.

While the discrepancy between billed and AMI data merits further investigation, it is unlikely to significantly alter the results of the load research as detailed in this report, and the insights gained remain useful for the purposes of the study described in Section I. As such, we did not further investigate the differences between the billed and AMI data and relied on the AMI data for this study.

¹ Leidos 2014 Load Research Study for KIUC, Table 4-11.

² This same methodology was employed by Leidos in the 2013 Load Research report.

III. RESULTS

A. System demand

KIUC's system is somewhat unique in comparison to other utility systems in the mainland United States. It has no interconnections to any other system – therefore all demand must be met by on-island resources. KIUC's system has been reliably summer peaking. However, in 2021, its systemwide peak at the customer meter level actually occurred on November 23, at 67.3 MW as measured over a one-hour interval, in the hour beginning at 6pm. KIUC attributes this anomaly to the lingering impact of COVID-19 on tourism during the summer of 2021. The lowest periods of demand were the winter months of January through March, with the lowest monthly peak recording at 54.6 MW on February 15, at 7pm. Despite the 2021 system peak, we have no reason to believe that KIUC's summer seasonal peak demand has permanently shifted to the shoulder months.

B. Customer meter level demands

This load research study looks at hourly demands at the customer meter level.

Table 1 below displays the monthly peak date, time, and hourly demand for KIUC system sales. Peak load commonly occurred at the hours beginning 19 (or 7pm) and 18 (or 6pm), with only two months seeing peaks occur outside these times (June and December). Nevertheless, even these two months' peaks occurred at 5pm and 8pm, respectively, demonstrating consistency to KIUC's early evening system peak demand profile.

Table 1. KIUC system monthly peaks in 2021; hourly demands at customer meter level

Month	System Peak		
	Demand (kW)	Day	Hour Beginning
Jan	56,126	25	18
Feb	54,673	15	19
Mar	54,925	24	19
Apr	58,644	19	19
May	63,373	25	19
Jun	65,406	30	20
Jul	66,640	25	19
Aug	66,628	11	19
Sep	66,003	16	18
Oct	66,661	13	18
Nov	67,389	23	18
Dec	66,442	31	17

In terms of total energy, KIUC sales were 415,280 MWh based upon hourly load data for five of the load classes.

On an average day, KIUC load served almost doubled from just under 35 MW around 3am to approximately 59 MW in the 7pm hour. Figure 1 shows little difference between weekend and weekday loads, other than a slower morning ramp on weekends between 6am and 9am compared to weekdays, while maintaining a lower load throughout the early afternoon.

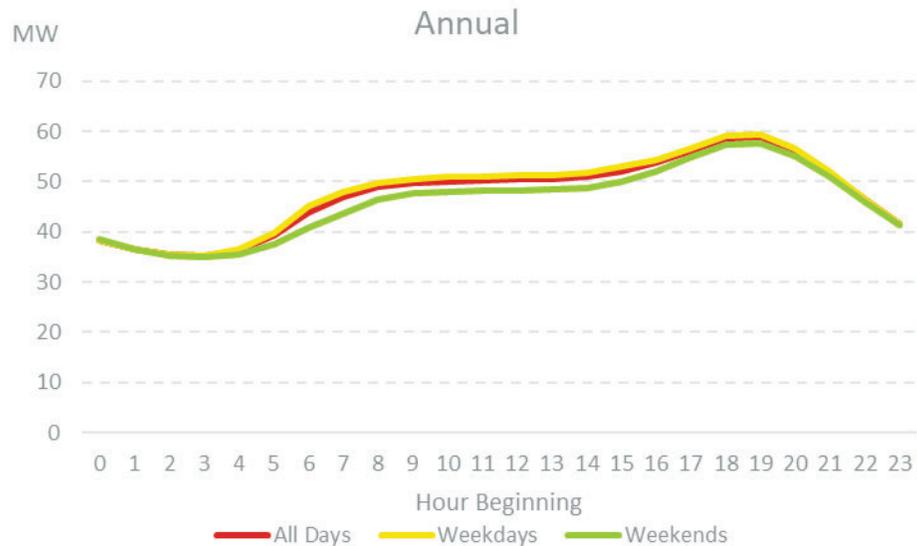


Figure 1. KIUC system average load shape in 2021; meter level

C. Load factors

Load factors are an important measure of an electric system’s capacity utilization. These metrics can be split into system coincident peak and non-coincident peak load factors.

Coincident peak (CP) load factors are defined as the customer class’s average demand divided by that class’s demand at the system’s coincident peak. These CP load factors are used in the allocated cost of service study to assign fixed generation and transmission costs to specific customer classes. Non-coincident peak (NCP) load factors are defined as the customer class’s average demand divided by the class’s peak demand. These NCP load factors, which consider maximum demands regardless of when they occur, are used in the ACOSS to assign fixed distribution costs to specific customer classes.

Generally speaking, classes with higher load factors will provide more predictable usage patterns without much need for excess infrastructure to handle class peaks. On the other hand, classes with lower load factors require that infrastructure be in place to serve demand levels that may only occur a few times a year.

KIUC’s system is fairly typical with respect to load factors by class. Given a generally tourism-driven economy, with relatively little concentration of large customers with swing loads, one would expect KIUC’s commercial and large power loads to be steadier

and more predictable over the working day, and they are. Generation, transmission, and distribution planners can typically serve new, large customers with enough fixed plant infrastructure that they know will be regularly utilized.

The Residential class has a much wider range of demand values, as would be expected in almost any system. Increased capacity in generation, transmission, and distribution resources must therefore be placed into service to serve this and other classes' variable load. Table 2 below demonstrates these differences in load factors.

Table 2. KIUC customer class annual load factors in 2021

	NCP Load Factor	CP Load Factor
Residential	0.56	0.61
G	0.61	0.82
J	0.67	0.83
L	0.69	0.81
P	0.70	0.75

D. Monthly peaks

Monthly peaks are detailed in Table 3, including the day, hour, and class contribution as a percentage of the monthly peak's demand. KIUC's system peaks are at higher levels of demand in the summer months, with lower demands in late winter and early spring.

Residential customer demand comprises almost half of all demand at the time of each month's peak, followed by Class P, Secondary Large Power, Class G, Small Commercial, and Class J, Large Commercial. With the fewest number of customers, including large resorts and US Navy accounts, and operating at typically higher load factors, Class L, Primary Large Power, contributes the least of the metered classes to system peak demands.

Table 3. Monthly system Coincident peak hour and class contribution in 2021

Month	System Peak		Class Demand (% of Peak)					
	Demand (kW)	Day	Hour Beginning	Res	G	J	L	P
Jan	56,126	25	18	54%	12%	10%	7%	18%
Feb	54,673	15	19	54%	11%	10%	7%	18%
Mar	54,925	24	19	51%	12%	10%	8%	19%
Apr	58,644	19	19	52%	12%	10%	8%	18%
May	63,373	25	19	49%	12%	10%	9%	20%
Jun	65,406	30	20	49%	12%	10%	9%	20%
Jul	66,640	25	19	50%	11%	10%	9%	20%
Aug	66,628	11	19	50%	12%	10%	8%	21%
Sep	66,003	16	18	47%	12%	11%	9%	21%
Oct	66,661	13	18	47%	12%	10%	9%	22%
Nov	67,389	23	18	48%	12%	10%	8%	21%
Dec	66,442	31	17	52%	11%	9%	8%	20%

E. Rate class load shapes

The following sub-sections provide information about individual class peaks, average daily load shapes, and commentary regarding variation of the class load on a month-to-month basis. Each section contains a figure illustrating the daily load shape averaged over 2021; class average load shapes over a given month can be found in the Appendix.

Residential

The Residential class is comprised of approximately 30,260 meters and accounts for nearly 43% of KIUC’s 2021 sales, totaling 186,243 MWh. Contribution to the monthly system peak, as noted in Table 3 above, stands slightly higher than the sales figures, ranging from 47% to 54%, reflecting lower load factors for this class. As shown in Table 4 below, the Residential class peaked in December 2021.

Table 4. Residential class peaks by month in 2021

Month	Peak Day	Peak Hour	Peak kW
Jan	25	18	30,378
Feb	15	19	29,251
Mar	10	18	30,389
Apr	19	19	30,448
May	31	20	32,003
Jun	29	20	32,776
Jul	25	20	33,427
Aug	15	19	33,625
Sep	26	19	32,396
Oct	24	18	31,767
Nov	21	18	32,860
Dec	6	18	35,452

Contrary to the system as a whole, the Residential class’s annual average load shape shows higher average use throughout the mid-day period on weekends as compared to weekdays. Additionally, the Residential class ramps to this higher daytime level more slowly on weekends.

Month-to-month variation in Residential class load shape is more pronounced than in other classes. Winter months see a significant dip in demand from the morning peak until around 3pm or 4pm, ticking upwards until reaching the daily peak at approximately 7pm. This is contrasted against the flat or gently upward ramp of the summer month shapes throughout the mid-day. This is consistent with the average load shape for the Residential class in 2021 as shown in Figure 2 below. Given the mild winters of Hawaii and the prevalence of rooftop solar in the KIUC system, these trends are likely due to extensive behind-the-meter solar production affecting KIUC’s AMI data. This distributed generation reduces load throughout the daytime, including air conditioning load in the summer months, and drives the peaks to a time period after the sun begins to set when these behind-the-meter solar resources are no longer generating.

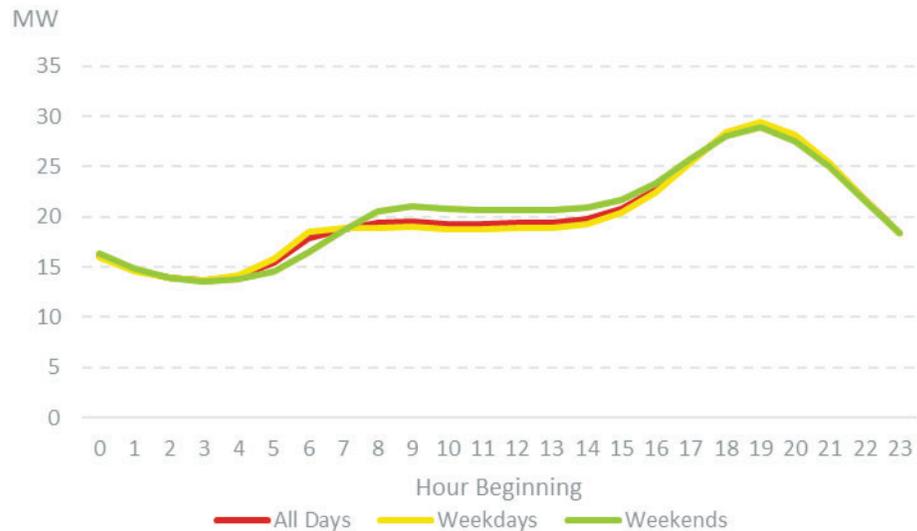


Figure 2. Residential class average load shape in 2021

Small commercial

The Small Commercial class is comprised of approximately 4,800 meters and accounts for nearly 14% of KIUC’s 2021 sales, totaling 60,188. Table 5 shows the peak kW by month, day, and hour, where Class G, Small Commercial peaked in June 2021 at 11am.

Table 5. Small commercial G class peaks by month in 2021

Month	Peak Day	Peak Hour	Peak kW
Jan	15	13	8,694
Feb	16	14	8,434
Mar	30	14	8,710
Apr	27	13	9,264
May	24	13	10,046
Jun	30	11	10,779
Jul	27	13	10,589
Aug	18	13	10,619
Sep	16	12	10,669
Oct	6	12	10,329
Nov	19	13	10,476
Dec	1	13	10,214

Notably, Class G had its class peak between the hours of 11am and 2pm each month, as shown in Table 5 above. This follows the expected pattern for smaller commercial businesses and is reflected in Figure 3, which shows the load shape of Class G on an average day for all days, weekdays, and weekends. The load shape is consistent with expectations as most small business activity in Kaua’i occurs during daytime.

Further, consistent with expectations, as Class G consists primarily of small commercial business activity, noted that weekends featured almost 3 MW of Class G load reduction during the daytime peak as compared to the same hour on weekdays. An examination of month-over-month load shapes shows little substantial difference.

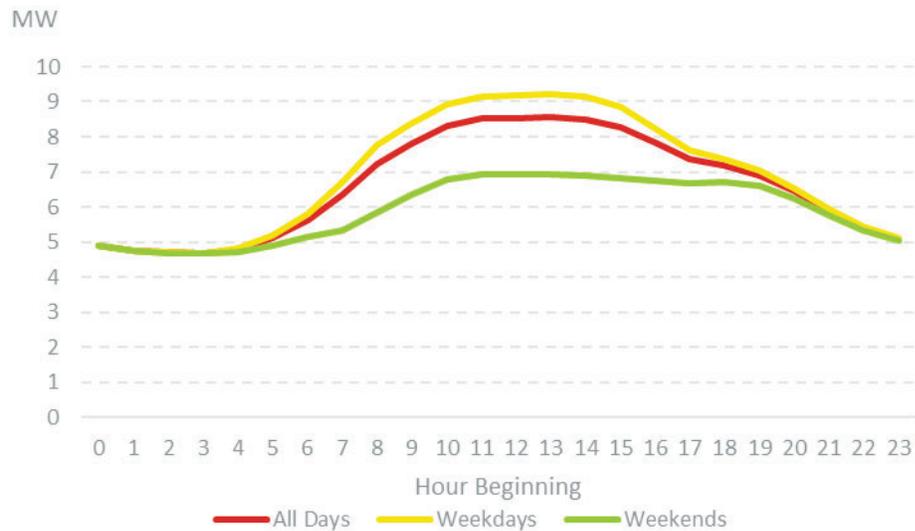


Figure 3. Small commercial G class average load shape in 2021

Large commercial

The Large Commercial class is comprised of 301 meters and accounts for just over 11% of KIUC’s 2021 sales, totaling 48,348 MWh. As shown in Table 6 below, Class J peaked in August 2021. The timing of Class J daily peaks had a wider range than other classes, but generally occurred between 11am and 2pm, similar to Class G. Demand peaks are higher in the summer and fall months, as opposed to the winter and early spring, consistent with the rest of KIUC customer classes.

Table 6. Large commercial J class peaks by month in 2021

Month	Peak Day	Peak Hour	Peak kW
Jan	15	14	6,722
Feb	16	10	6,591
Mar	29	14	6,566
Apr	27	13	7,161
May	25	13	7,454
Jun	30	11	7,931
Jul	28	10	7,892
Aug	11	11	8,144
Sep	16	14	8,050
Oct	27	11	7,418
Nov	2	14	7,544
Dec	2	13	7,438

Like the Class G, Small Commercial, Class J does not feature much variation month-to-month in terms of the overall load shape. Demand levels during the daytime are slightly lower on average during winter months, likely indicative of less air conditioning and other cooling, despite retaining the general shape of the summer months. Figure 4 shows the average load shape of Class J on an average day for all days, weekdays, and weekends, where load reduction noted during the daytime peak on weekends as compared to the same hour on weekdays.

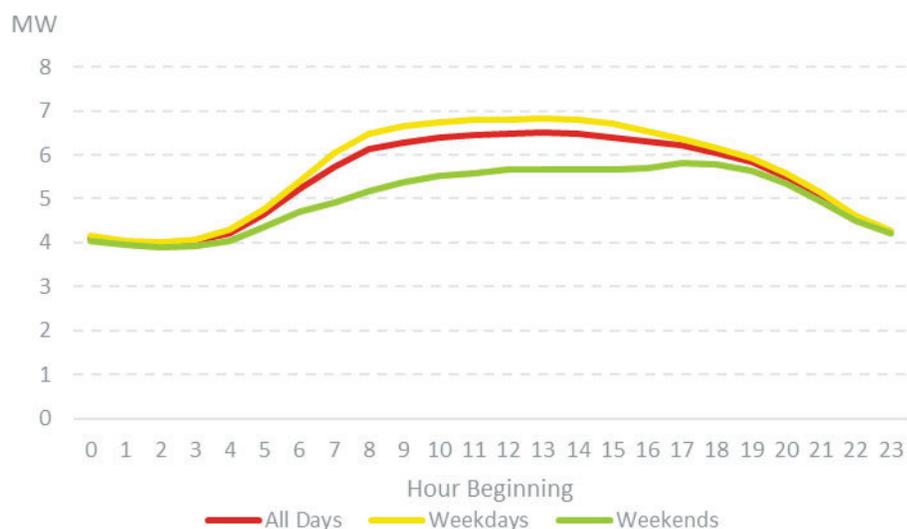


Figure 4. Large commercial J class average load shape in 2021

Primary large power

The Primary Large Power class is comprised of 22 meters and accounts for just over 9% of KIUC’s 2021 sales, totaling 40,153 MWh. As shown in Table 7 below, Class L peaked in August and fell to the lowest levels of demand in the winter months. The peak trend for Class L is in the mid-to-late afternoon, between 3pm and 4pm, with the exception of January, where it peaked at 10am.

Table 7. Large power L class peaks by month in 2021

Month	Peak Day	Peak Hour	Peak kW
Jan	11	10	4,425
Feb	16	16	4,793
Mar	31	16	4,785
Apr	27	16	5,463
May	26	15	6,240
Jun	30	15	6,397
Jul	26	16	6,564
Aug	23	16	6,711
Sep	2	16	6,413
Oct	12	16	6,510
Nov	22	15	6,583
Dec	2	15	6,292

Class L load shape reflects a typical business pattern, rising in the mornings and staying relatively flat until a slight increase between 4pm and 5pm before falling for the night. Visual analysis of the monthly load shapes reveals little differentiation between months, with the only variance occurring in magnitude of demand, rather than pattern. Figure 5 shows the average load shape of Class L on an average day for all days, weekdays, and weekends.

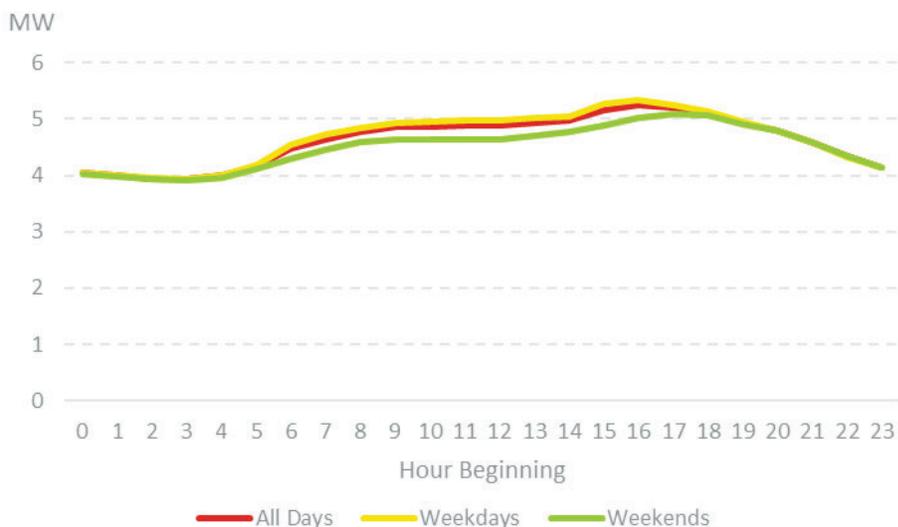


Figure 5. Large power L class average load shape in 2021

Secondary large power

The Secondary Large Power class is made up of 114 meters and accounts for approximately 23% of KIUC’s 2021 sales, totaling 98,582 MWh. Class P is unique by KIUC standards, in that it has a wide range of hours at which it has peaked each month. As shown in Table 8 below, while the data largely indicates either early morning or evening peaks, it also indicates peaks at 12pm and twice at 1pm in the months of March, April, and December, respectively. Table 8 shows that Class P peaked in October.

Table 8. Large power P class peaks by month in 2021

Month	Peak Day	Peak Hour	Peak kW
Jan	20	8	11,125
Feb	17	9	11,090
Mar	10	12	11,251
Apr	20	13	11,797
May	26	19	12,944
Jun	4	19	13,541
Jul	14	19	13,715
Aug	11	19	13,684
Sep	27	8	14,504
Oct	13	16	15,267
Nov	2	16	15,170
Dec	2	13	14,672

Class P’s load shape is also unique in that it features a morning peak often on par with the evening peak, including a dip in the middle of the day. This pattern holds true through all months, while the mid-day dip appears to be more severe through the fall and early winter months. Figure 6 shows the average load shape of Class P on an average day for all days, weekdays, and weekends.

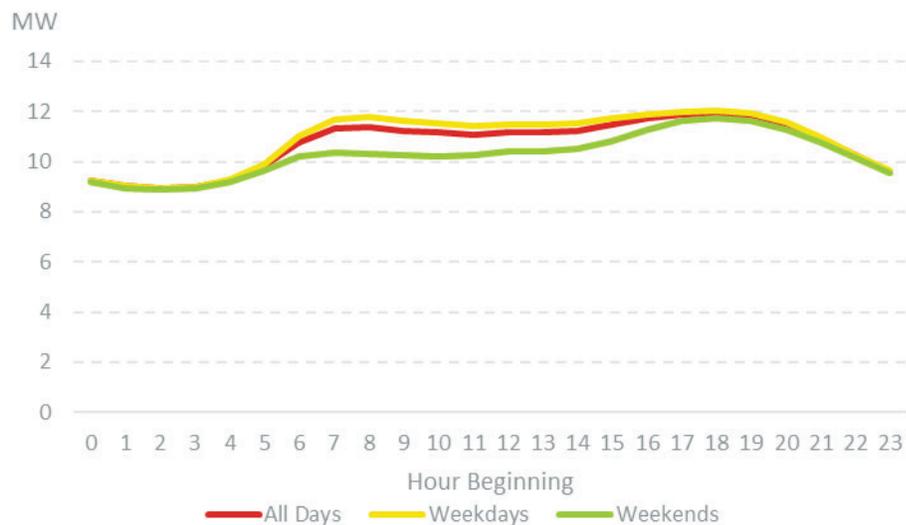


Figure 6. Large power P class average load shape in 2021

Street lighting

The Street Lighting class is not metered directly, therefore, estimates are used for billing based on nighttime operating hours, device type, number, and dimming levels. Based on data provided by KIUC, there are approximately 3,700 street lighting fixtures in the system with both conventional and LED technologies. Using an estimate of 360 lighting hours per month based on sunrise and sunset data,³ as well as billing data by device type, Daymark estimates class demand to be 182 kW, which assumes streetlights are on from sunset until sunrise without exception.

Table 9. Estimation parameters for KIUC street lighting demand and load

Month	Sunrise	Sunset	2021 Average		Estimated	
			Daylight Hours	Night Hours	Demand (kW)	Monthly Load (MWh)
Jan	7:19	18:15	10.94	13.06	182	74
Feb	7:08	18:35	11.45	12.55	182	64
Mar	6:46	18:47	12.02	11.98	182	68
Apr	6:17	18:57	12.67	11.33	182	62
May	5:58	19:10	13.20	10.80	182	61
Jun	5:54	19:22	13.47	10.53	182	58
Jul	6:03	19:24	13.35	10.65	182	60
Aug	6:15	19:08	12.88	11.12	182	63
Sep	6:24	18:40	12.27	11.73	182	64
Oct	6:34	18:12	11.63	12.37	182	70
Nov	6:49	17:54	11.08	12.92	182	71
Dec	7:09	17:56	10.78	13.22	182	75

Table 9 provides some of the estimation parameters Daymark used to formulate average load shapes in Figure 7 below. As one might expect, winter months with less daylight hours will feature more nighttime usage compared to other months. These earlier sunset and later sunrise times account for the load ramp up depicted in Figure 7.

The Street Lighting class accounts for 0.18% of KIUC’s 2021 sales, totaling 768 MWh.

³ U.S. Department of Commerce, National Oceanic & Atmospheric Administration (NOAA) website, “NOAA Solar Calculator,” available at: <https://www.esrl.noaa.gov/gmd/grad/solcalc/>.

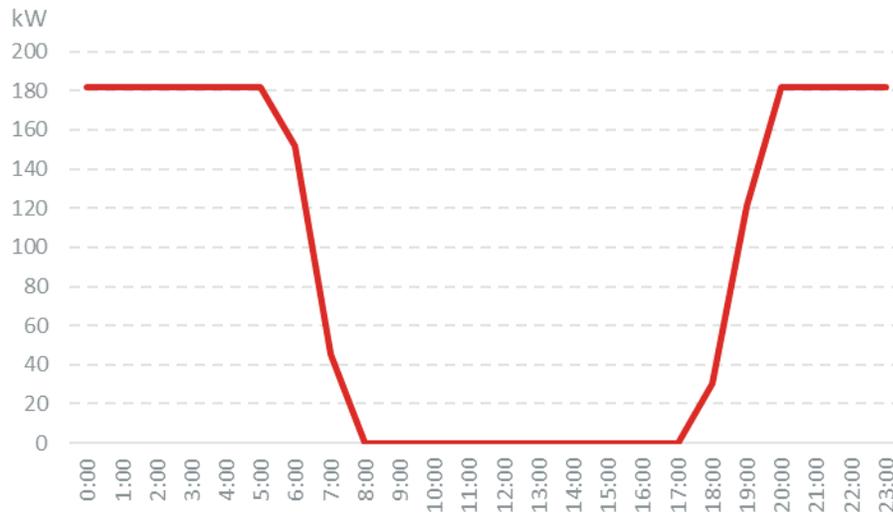


Figure 7. Street lighting average load shape

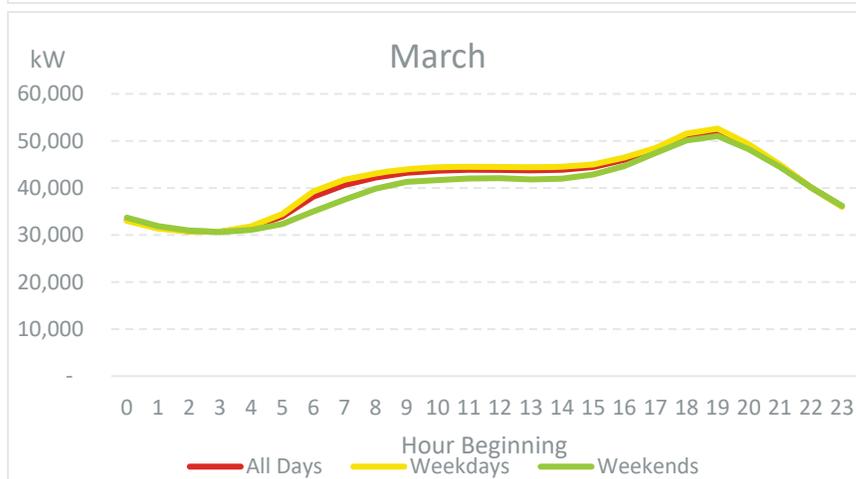
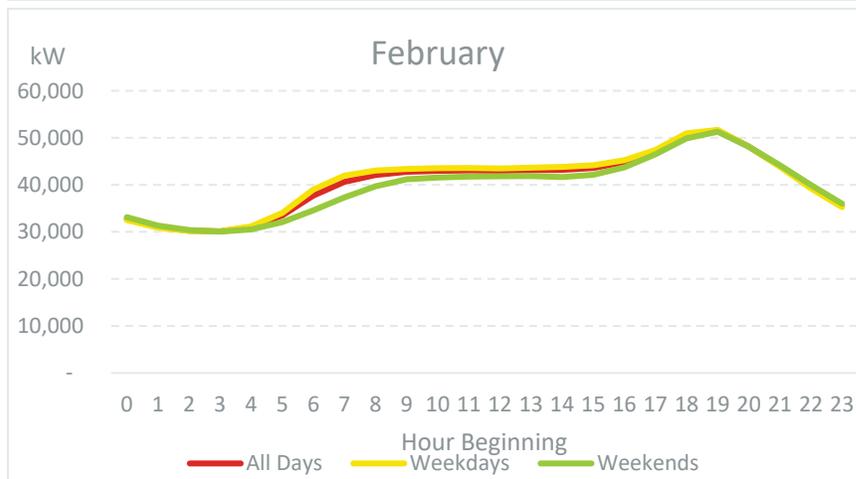
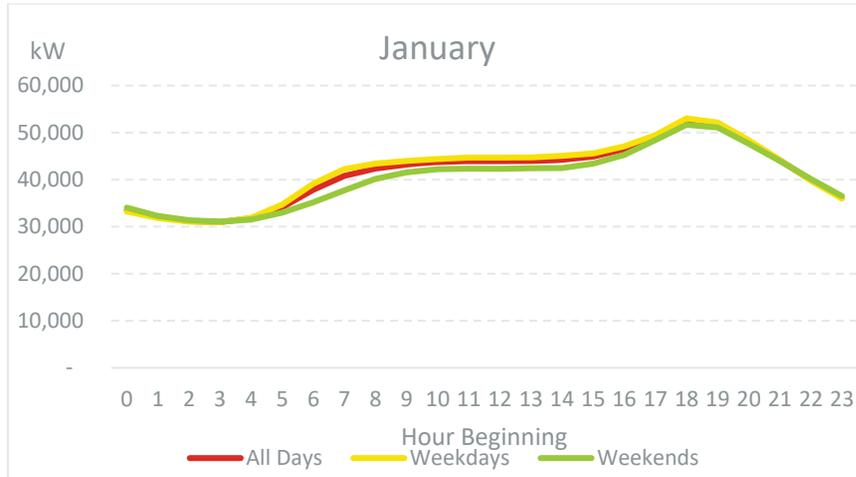
IV. CONCLUSION

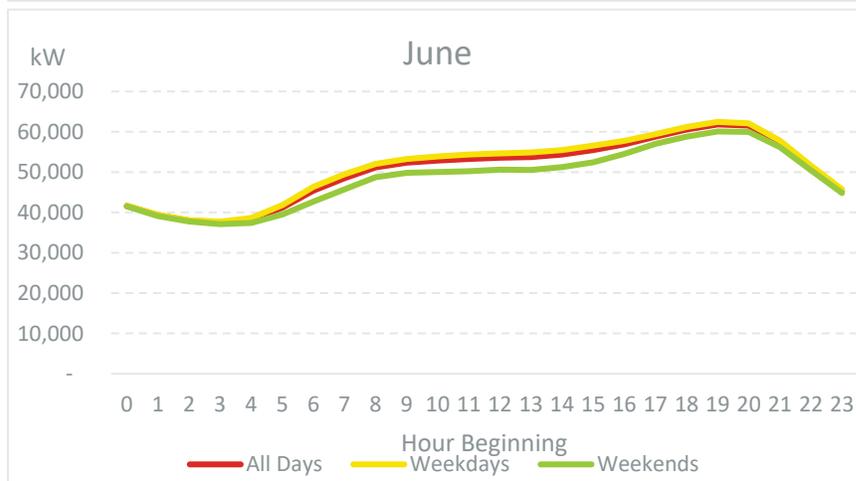
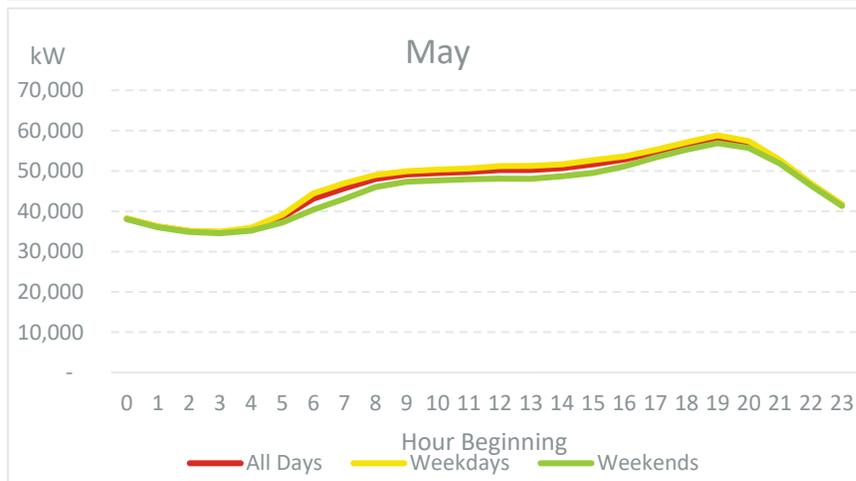
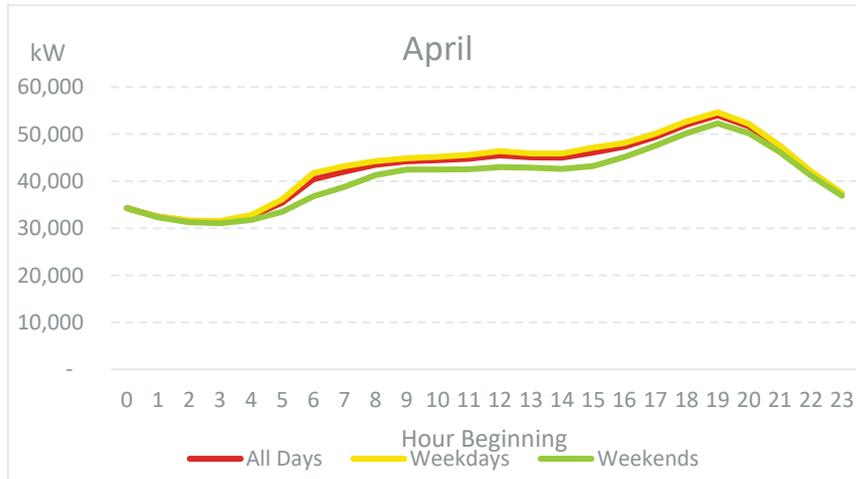
KIUC's load, while unique in some respects, is fairly typical, especially for a tourist-based economy, relatively close to the Equator, and tends to follow normal patterns of behavior associated with the specific rate classes. The Residential class displays the largest swings between average use and peaks, typical of households whose members are at work or school during the day and returning in the evening – though anecdotal and other data suggest more members and students work from home during the pandemic. The Commercial and Large Power class consumption profiles reflect a vibrant tourism industry, active during the day and evening hours as visitors and the locals who staff these businesses spend time in shops, restaurants, resorts and various community-access facilities.

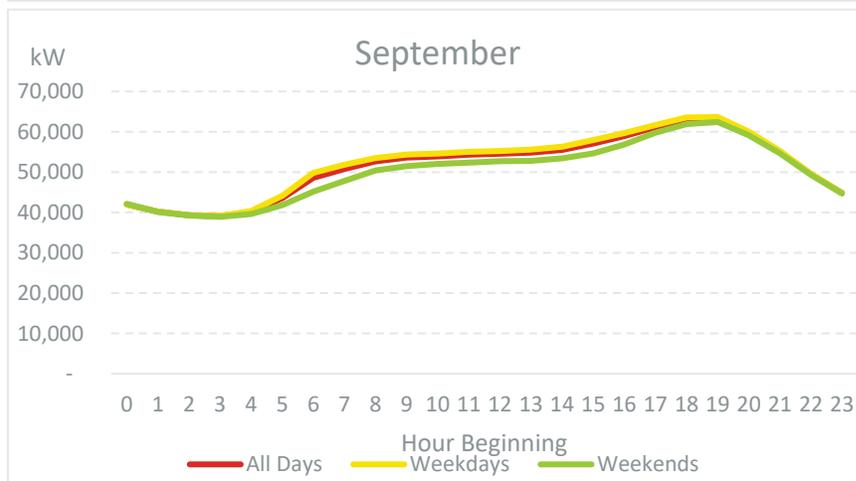
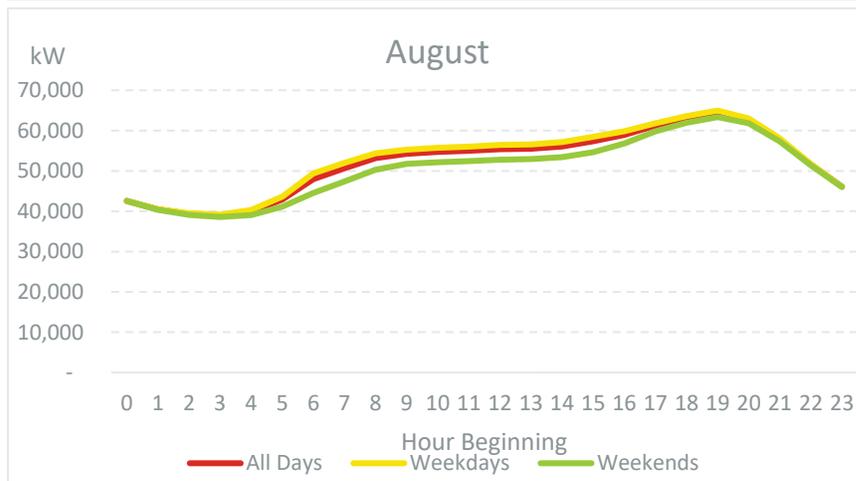
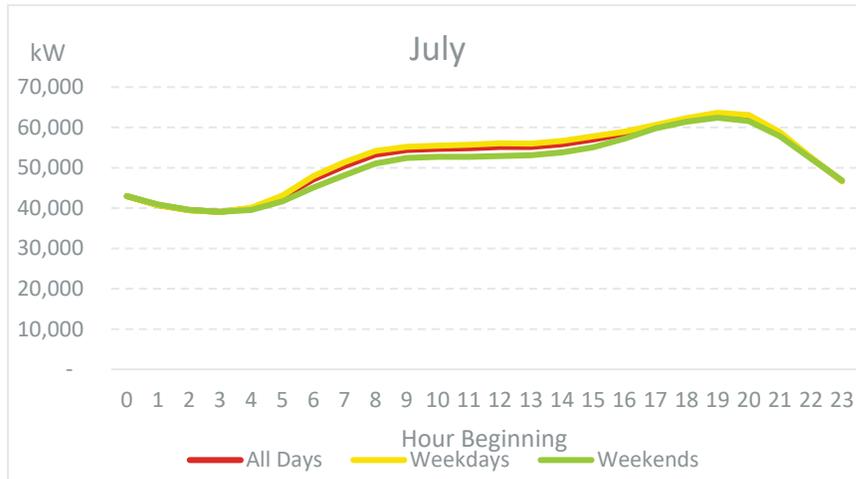
Consistent with past load research studies we have prepared, both the Commercial classes (G & J), and Large Power classes (L & P) exhibit largely similar load shapes. Unless significant cost of service differences are found, the opportunity for Commercial class (G with J) and Large Power (L with P) consolidation continues. Since this load research study will be used to generate CP and NCP allocators for an updated ACOSS to follow this report, Daymark will prepare the ACOSS in a manner which both retains and consolidates the current Commercial and Large Power classes to determine whether class consolidation should be pursued.

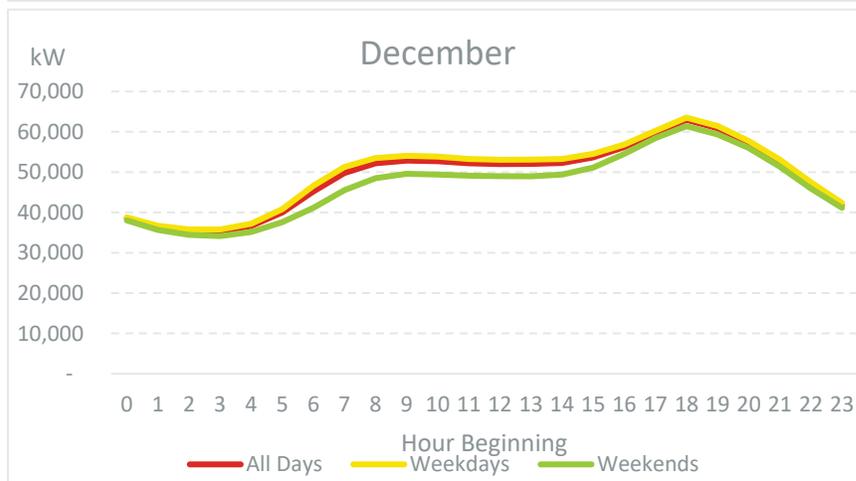
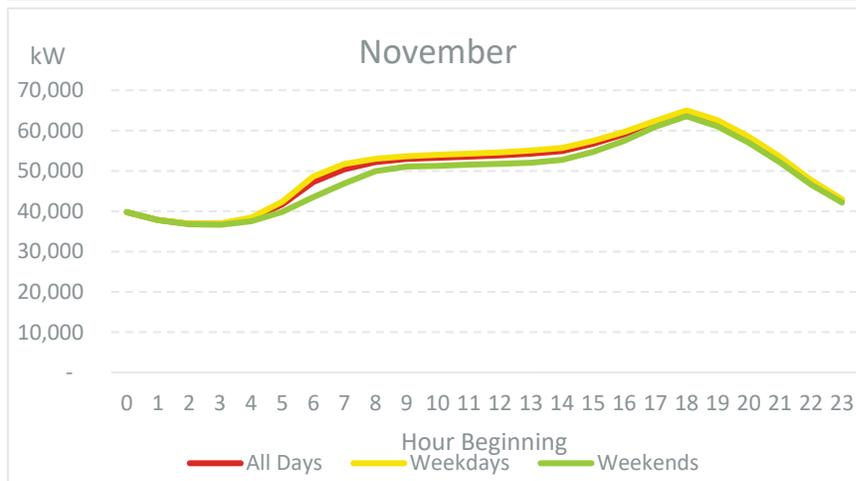
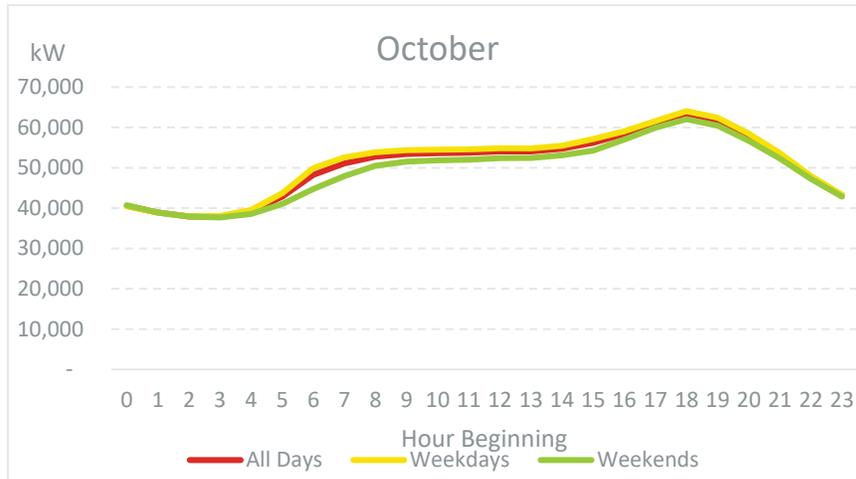
V. APPENDIX

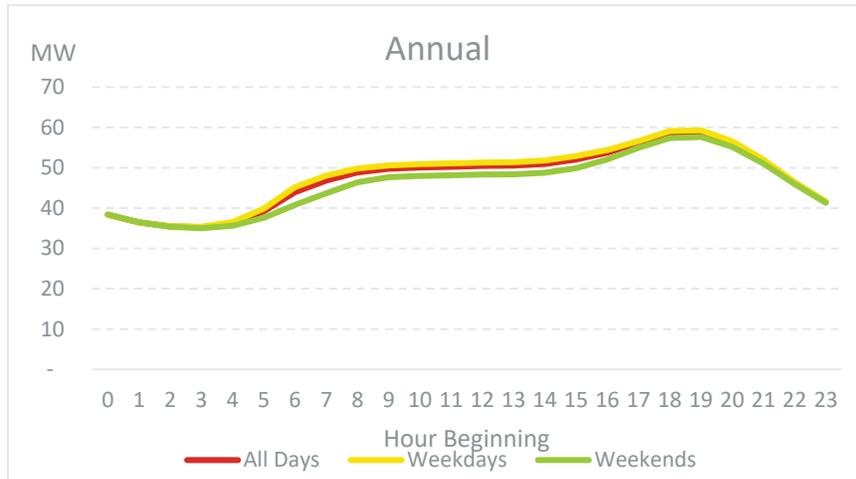
System Graphs



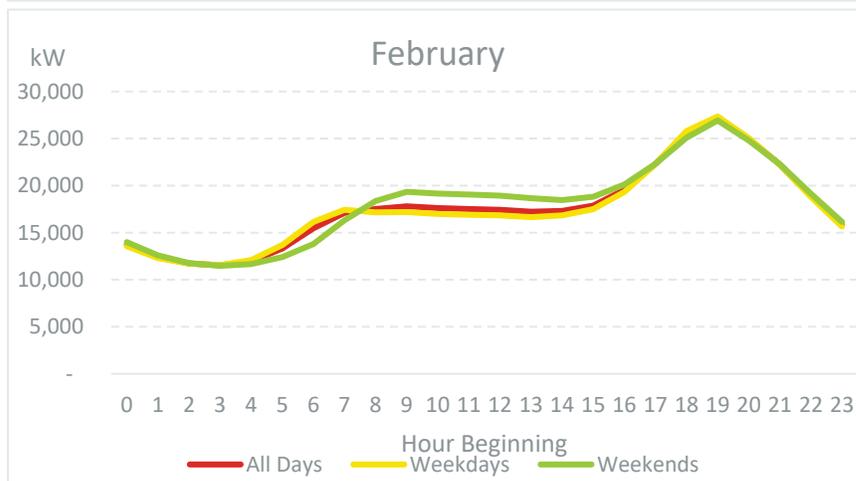
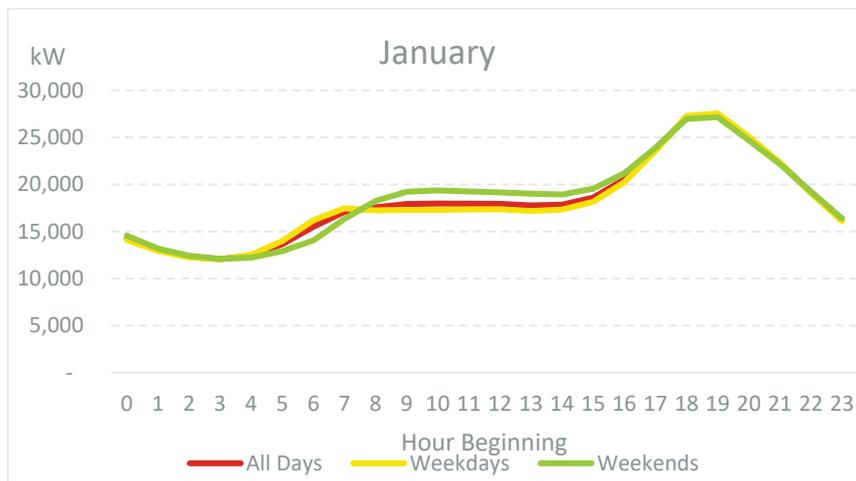


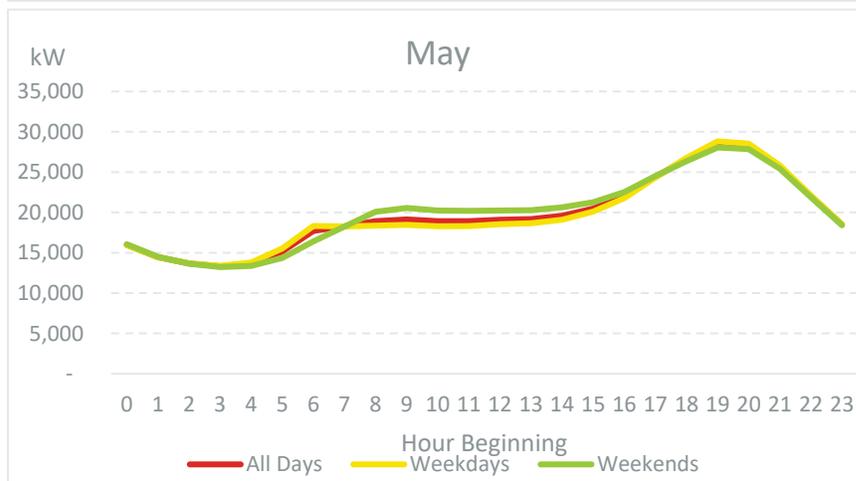
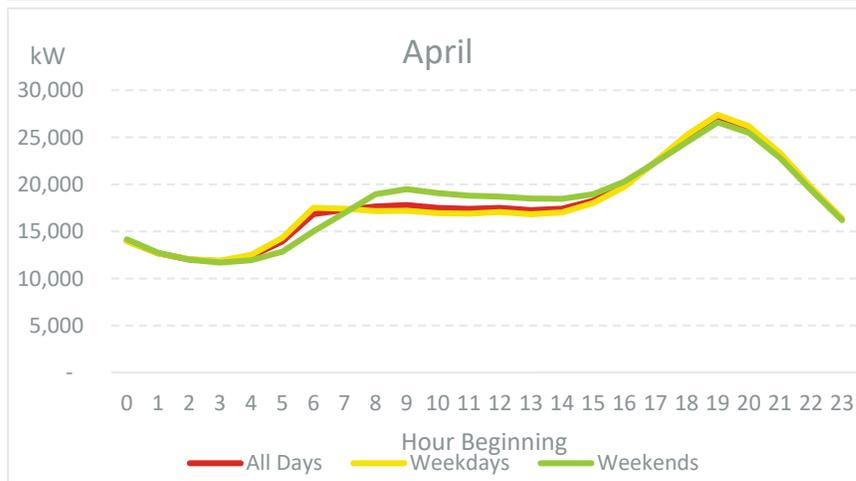
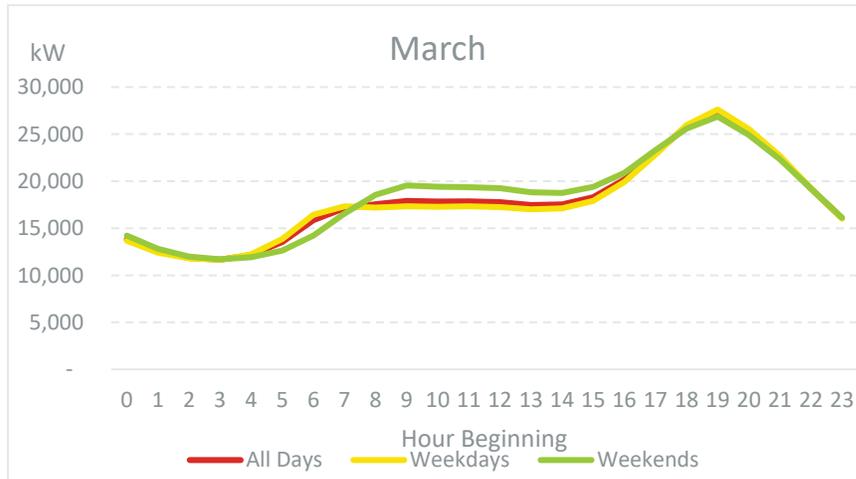


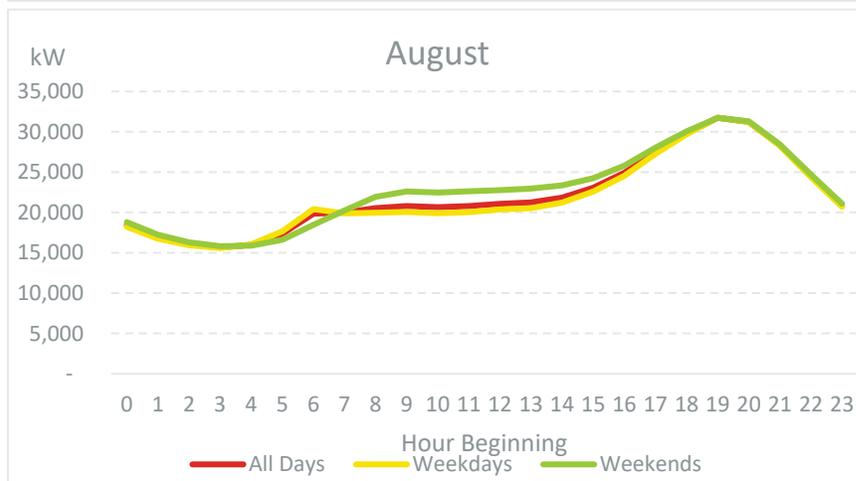
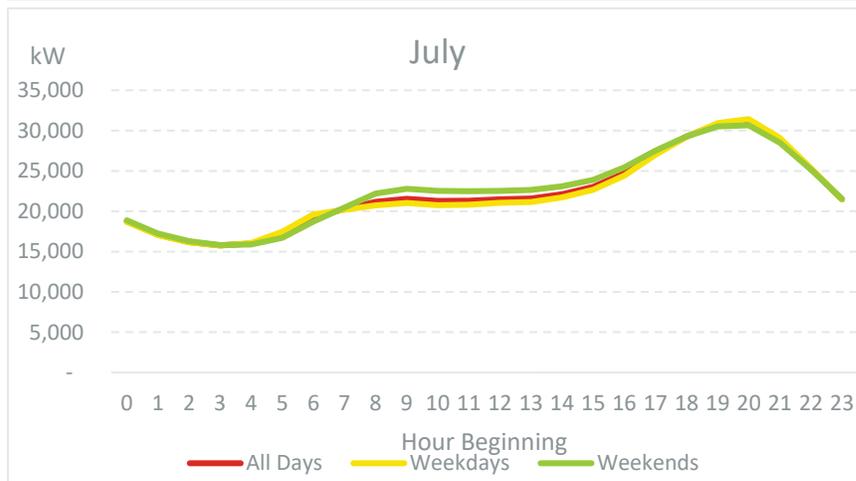
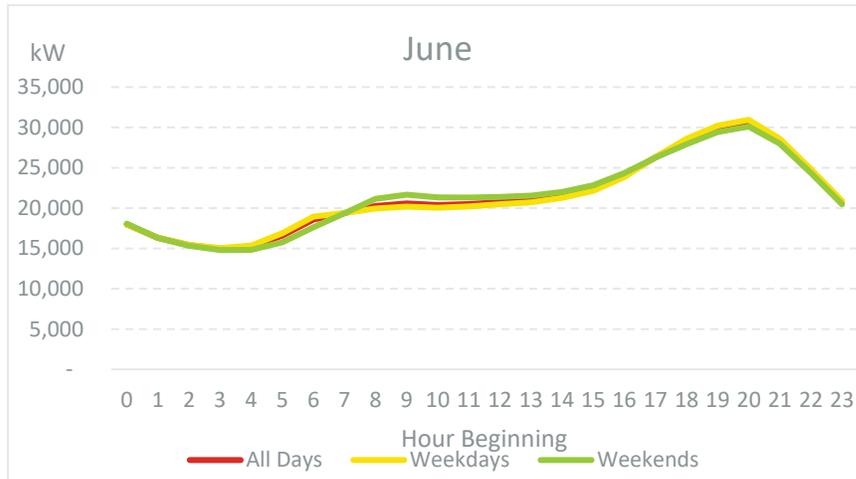


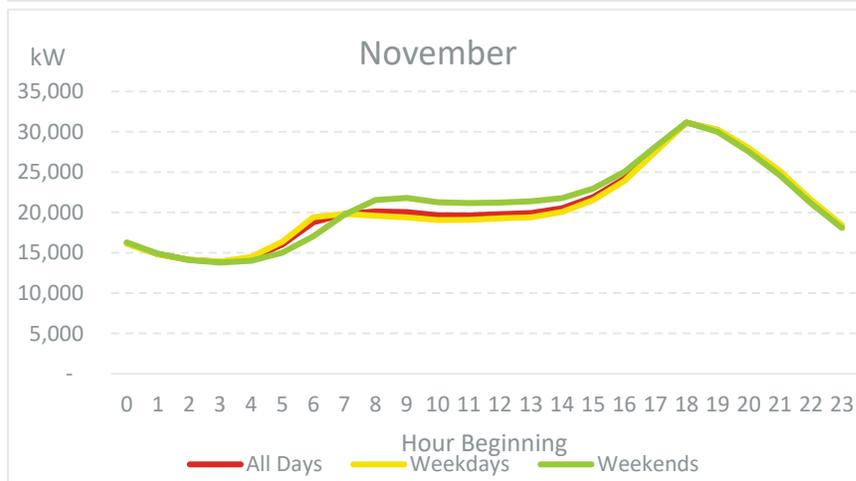
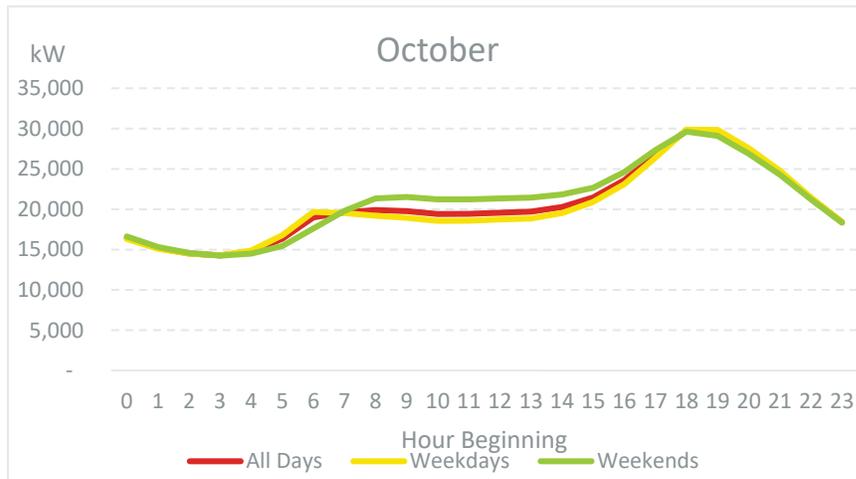
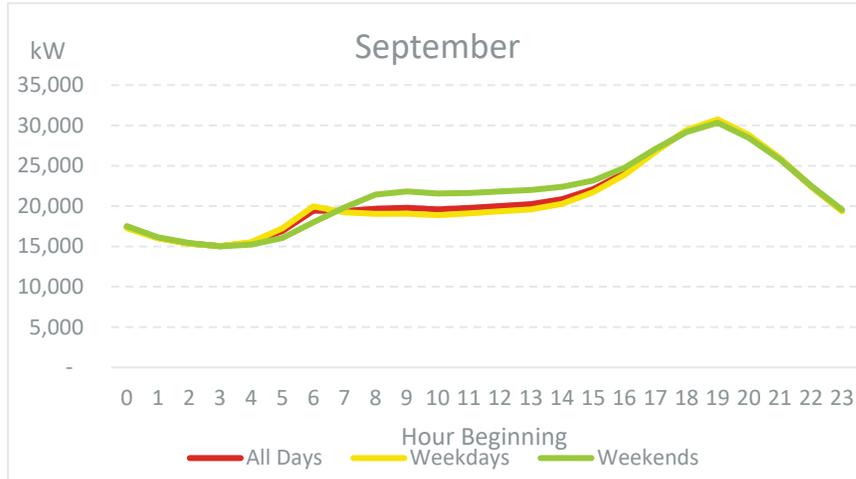


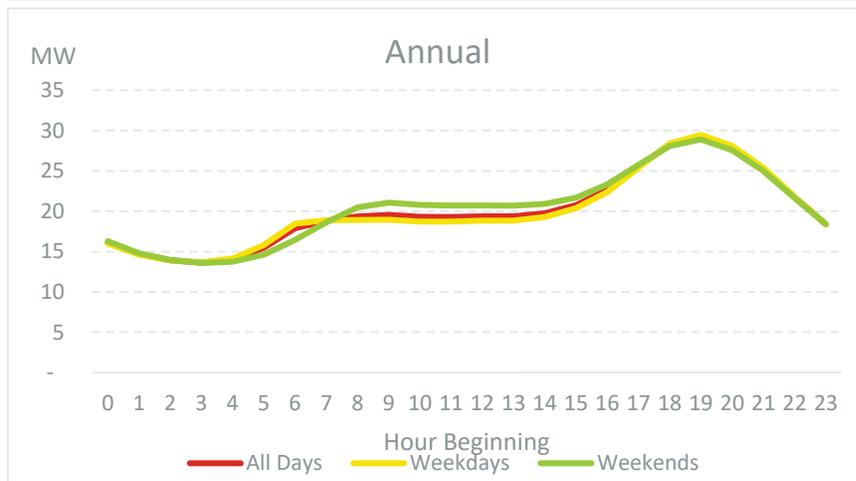
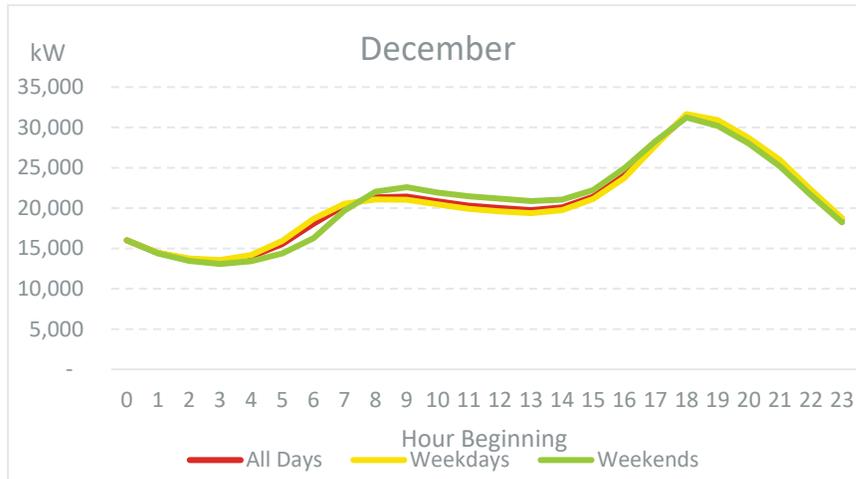
Residential Graphs



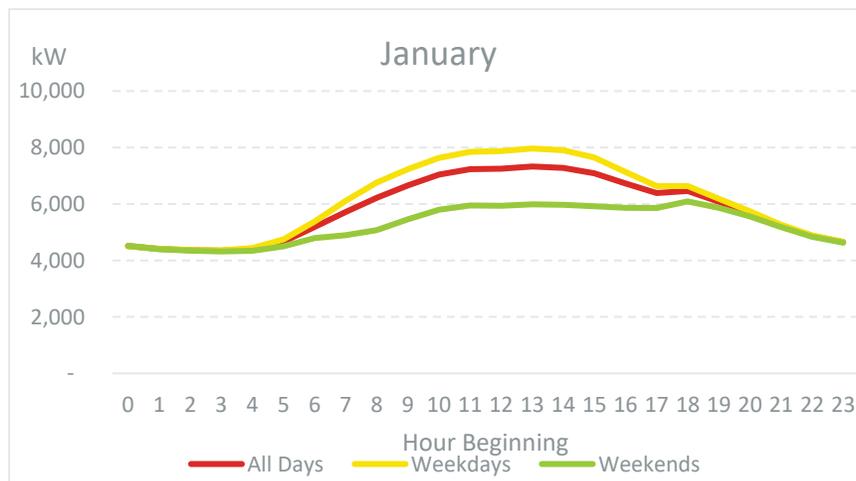


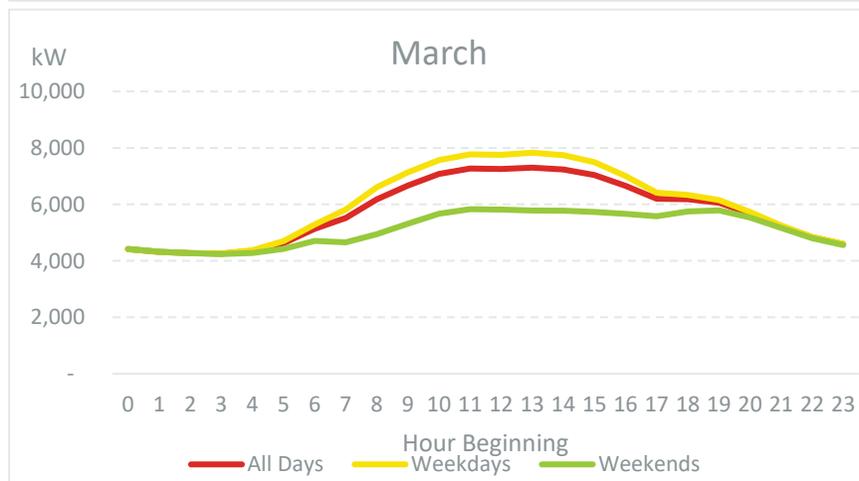
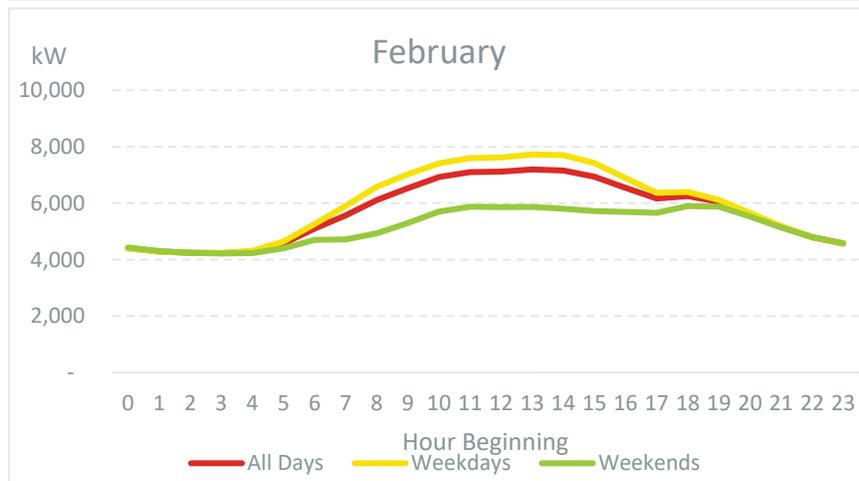
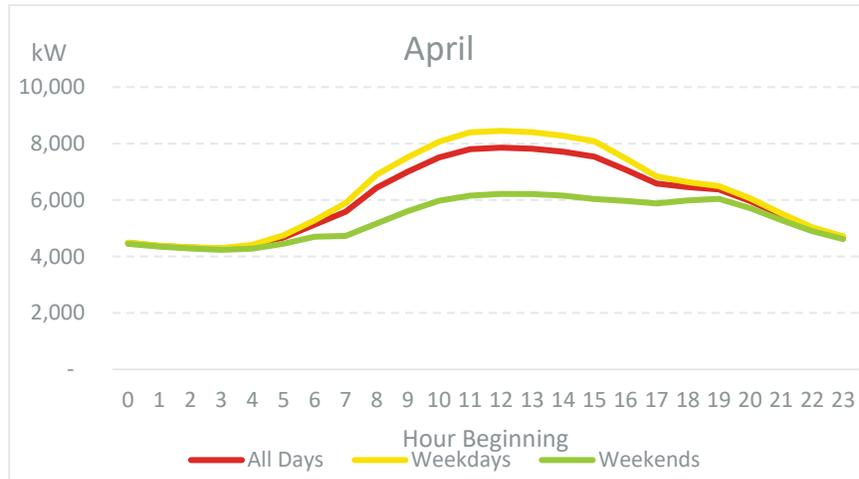


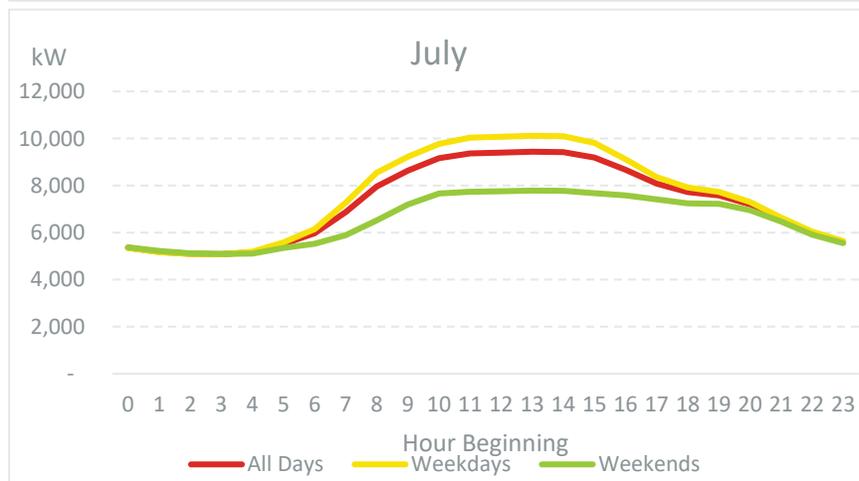
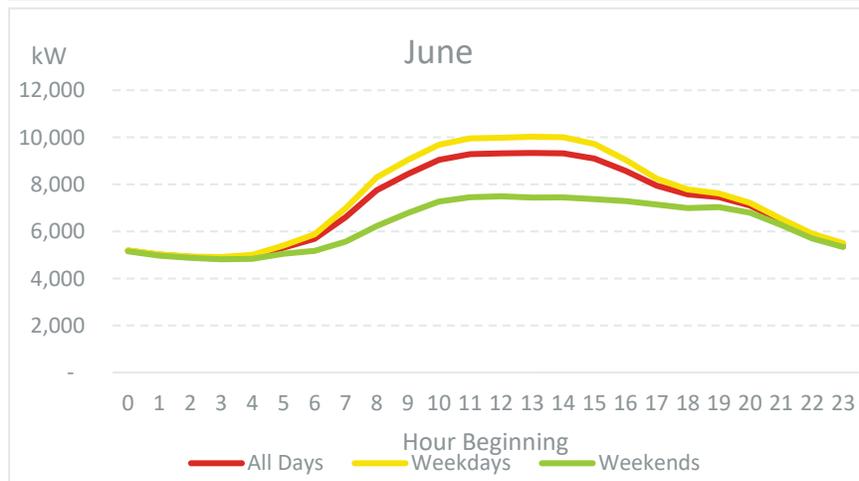
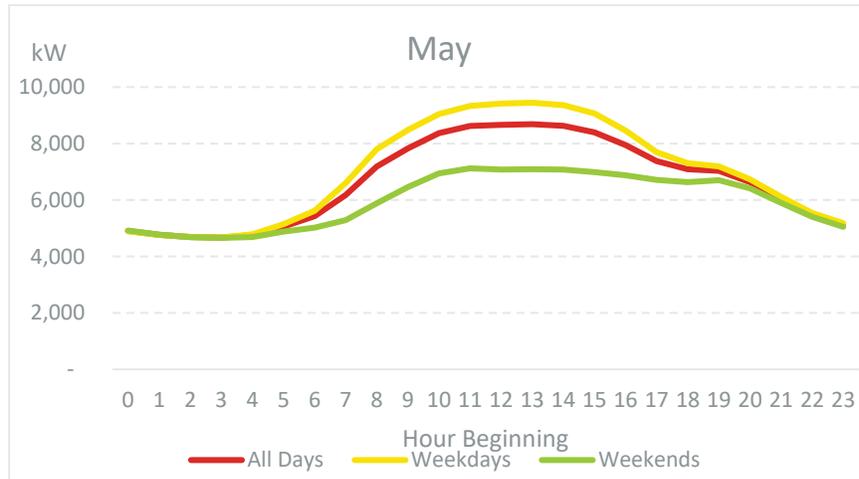


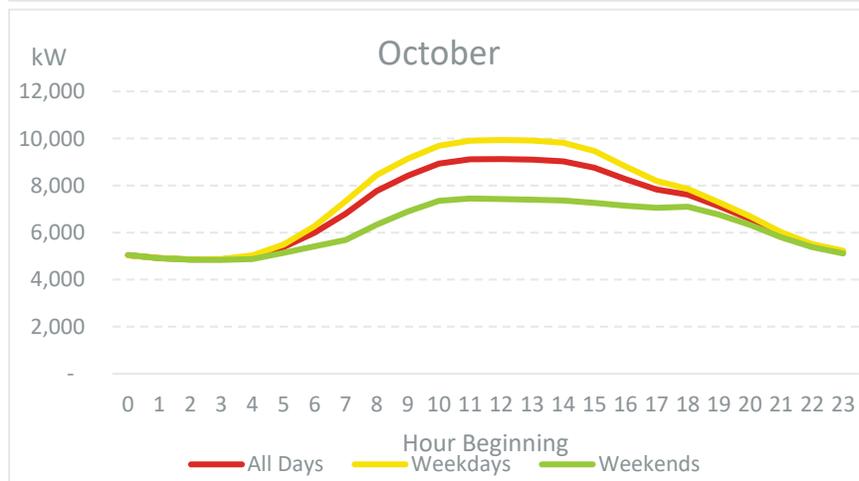
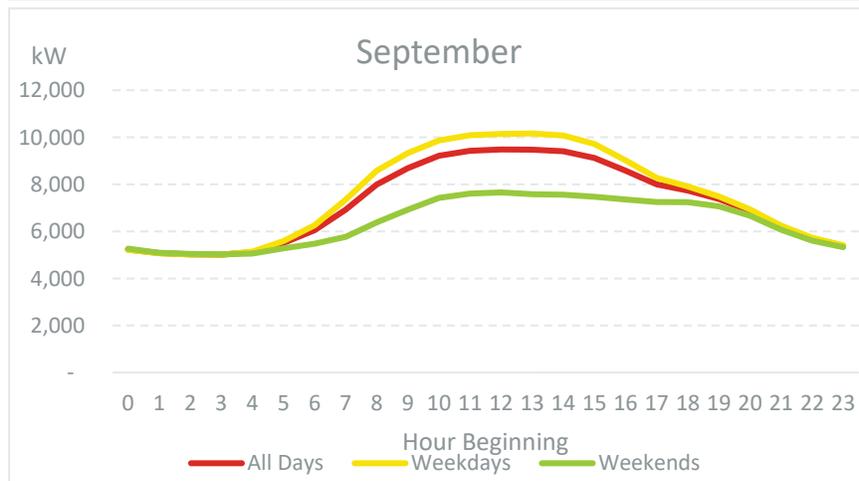
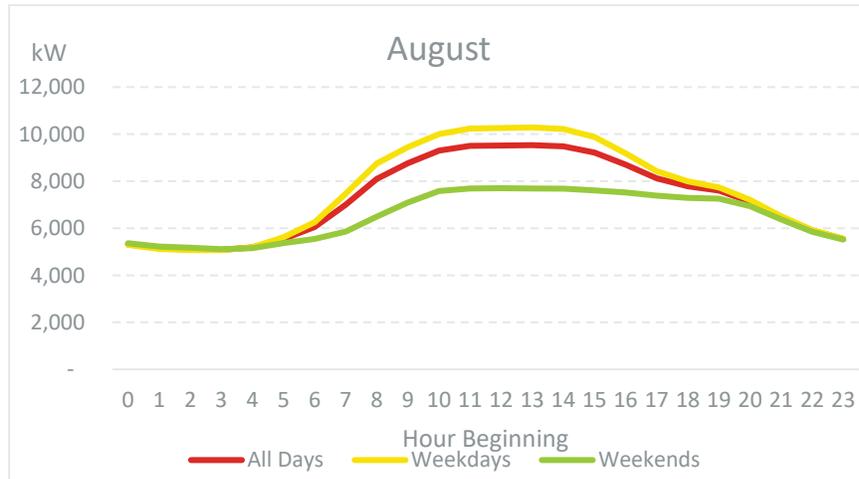


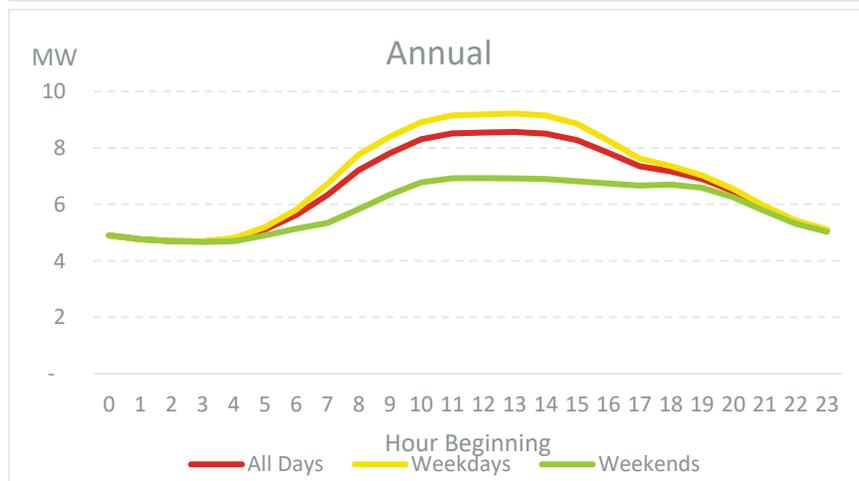
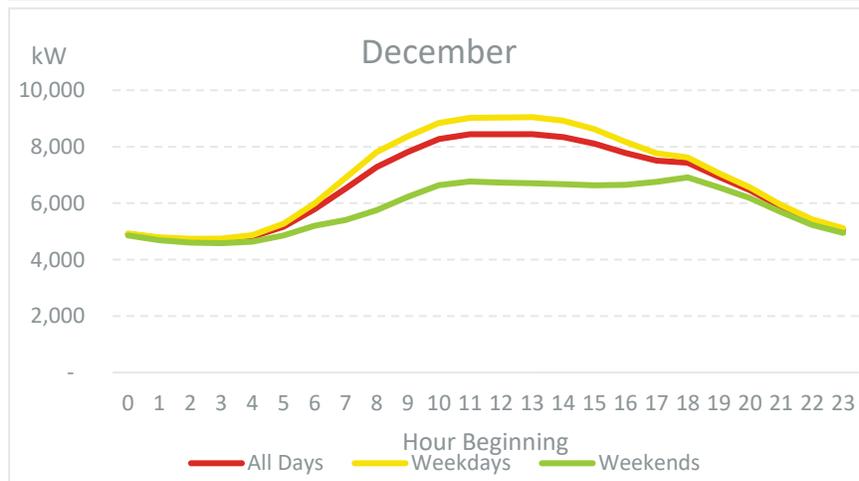
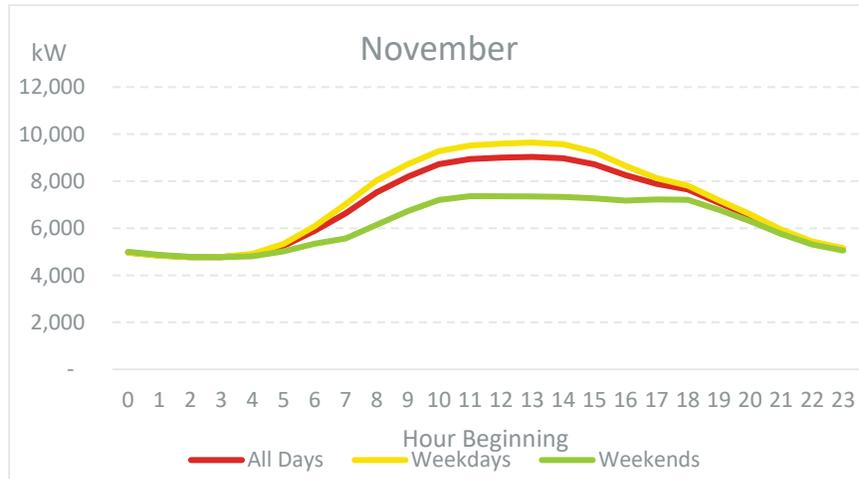
Small Commercial Graphs



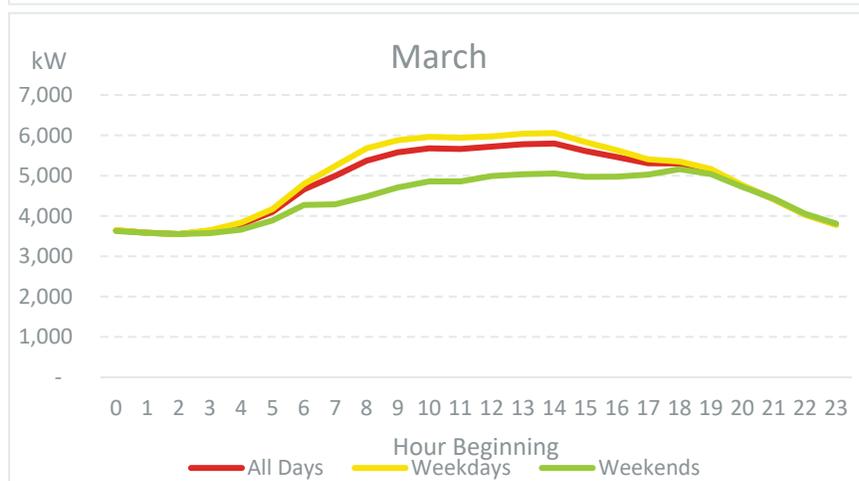
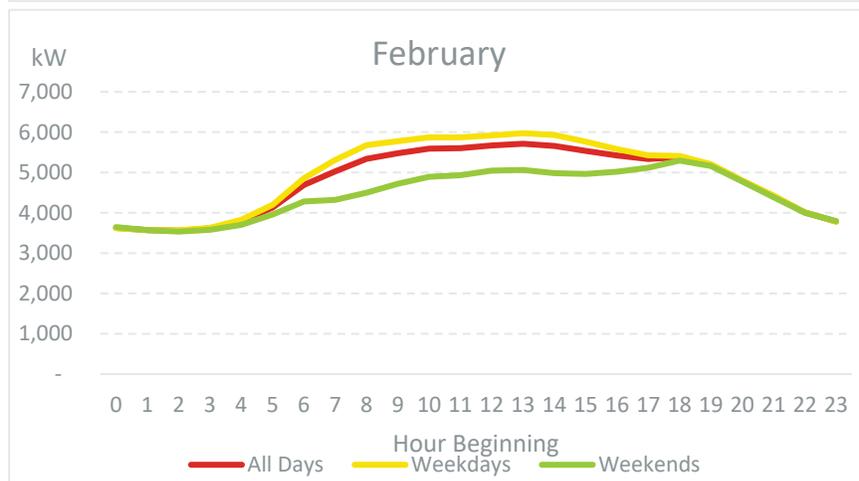
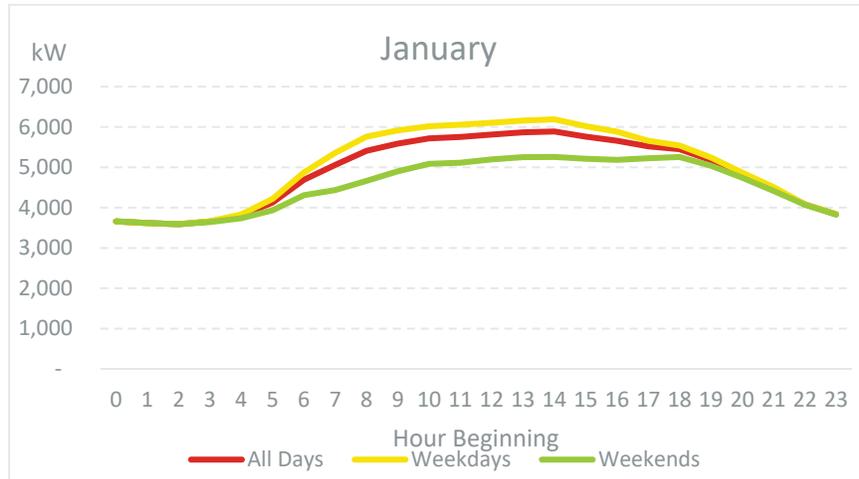


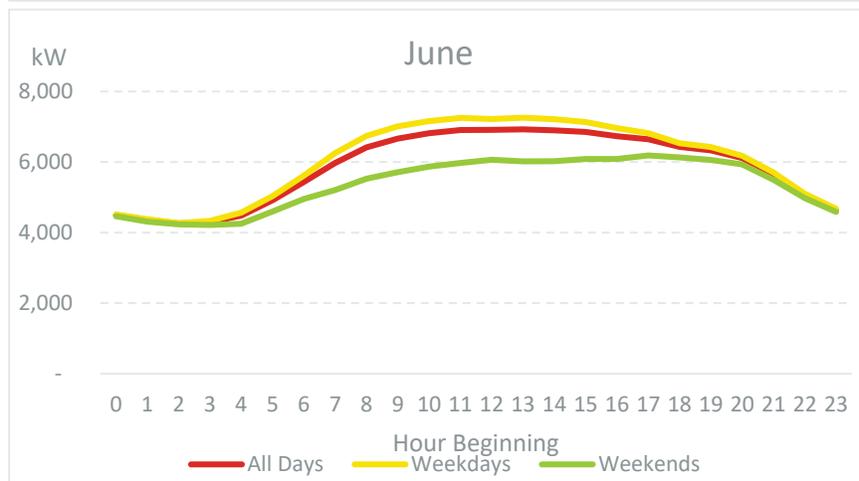
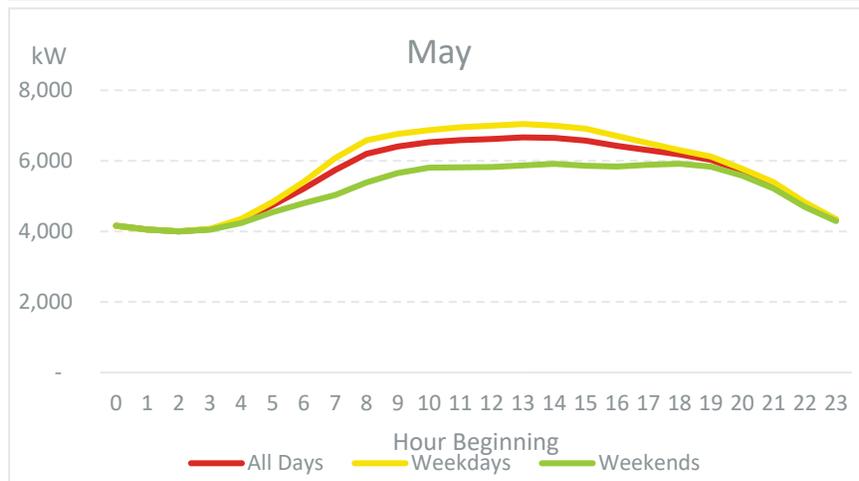
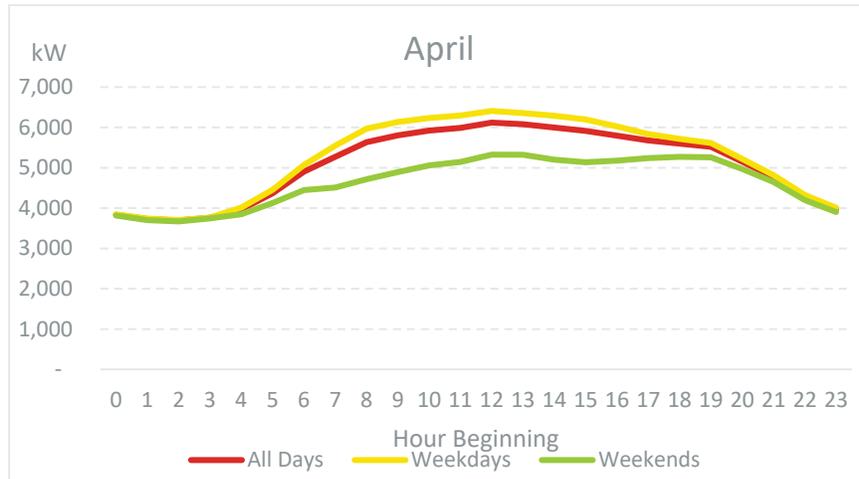


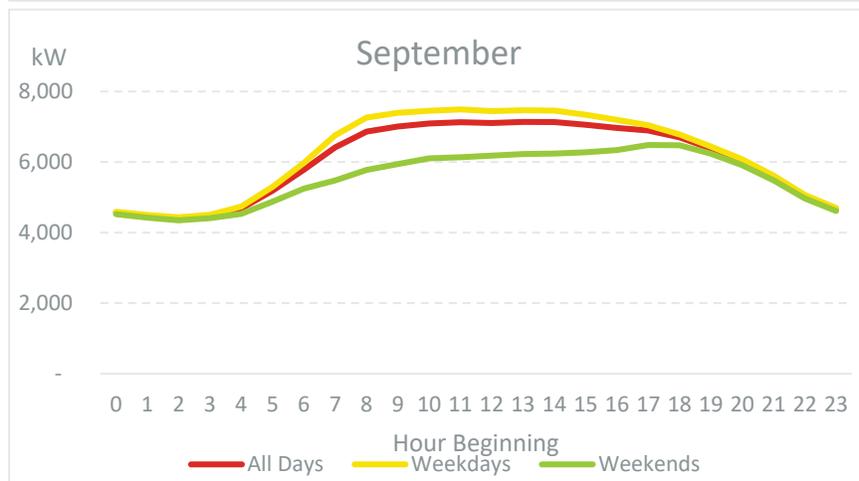
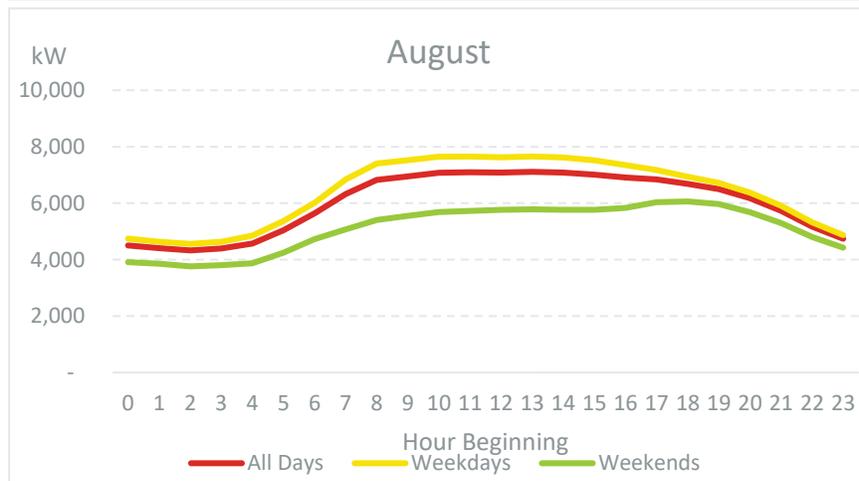
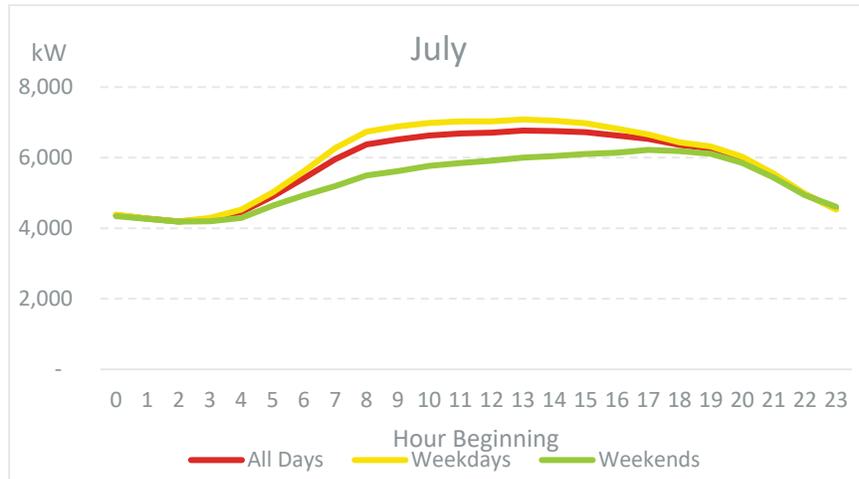


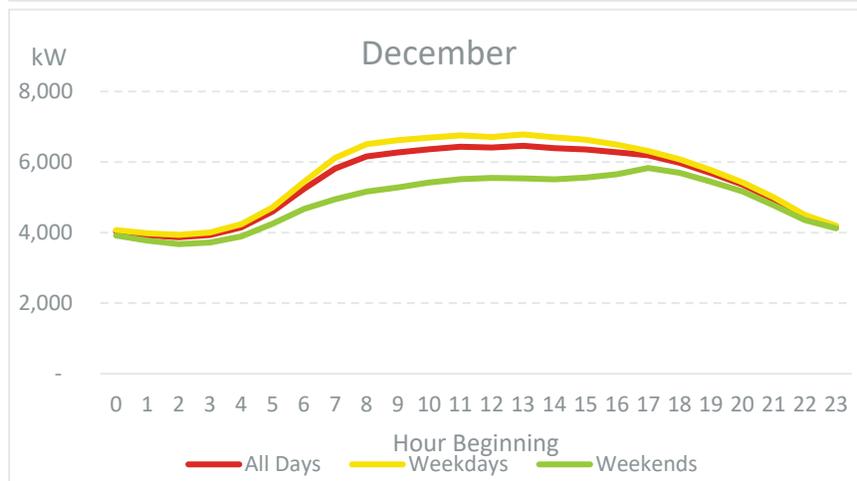
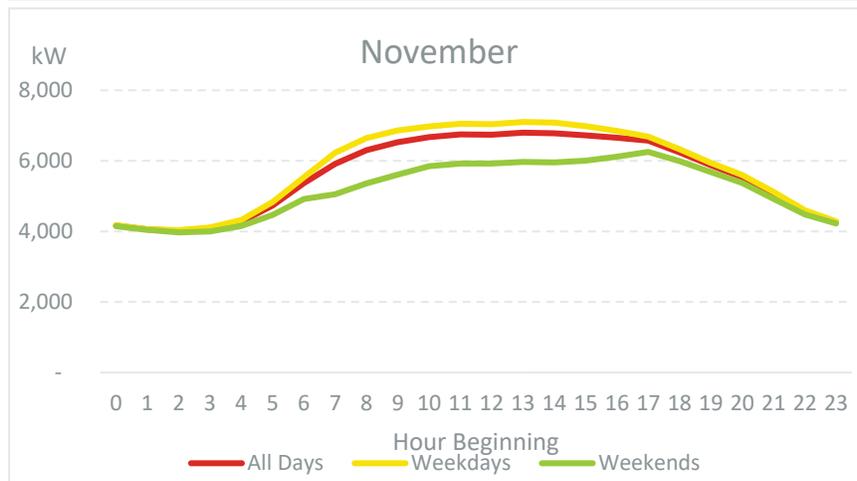
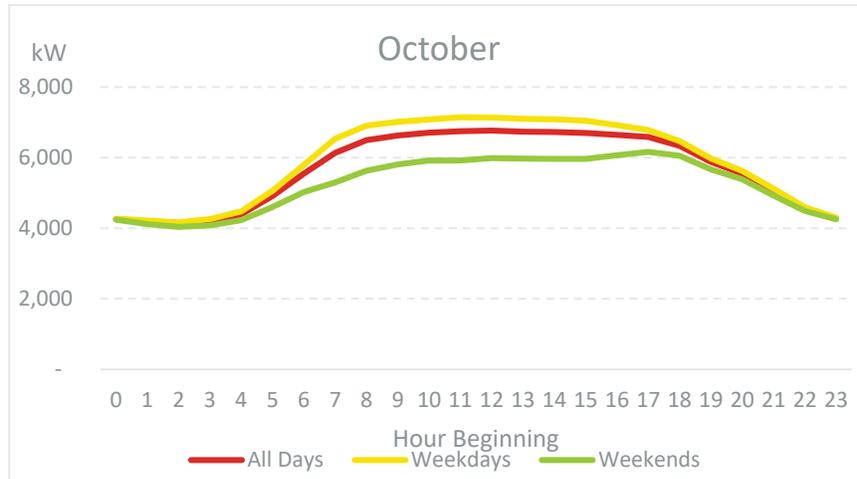


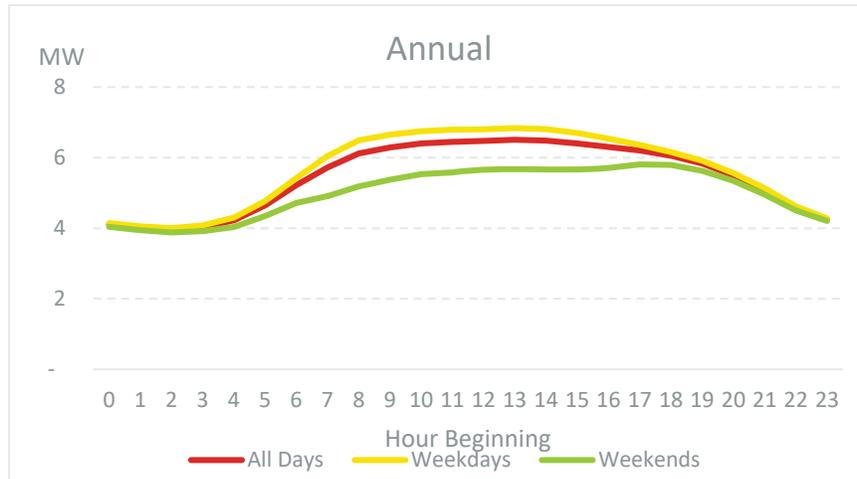
Large Commercial Graphs



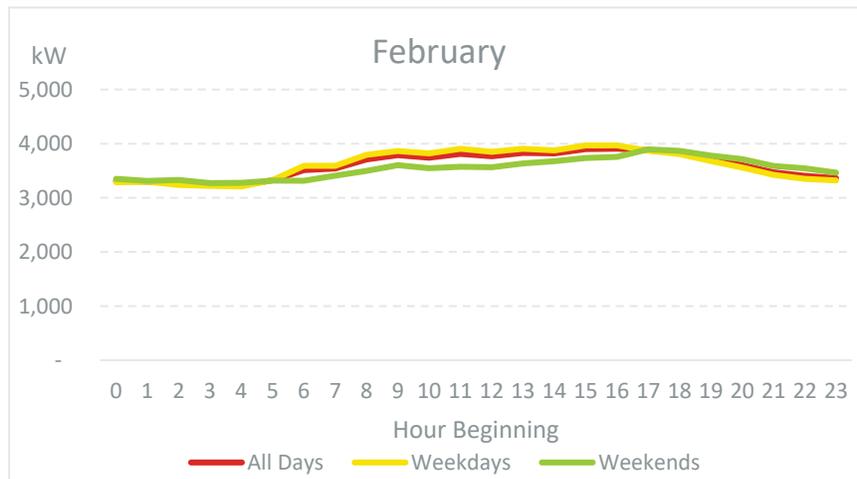
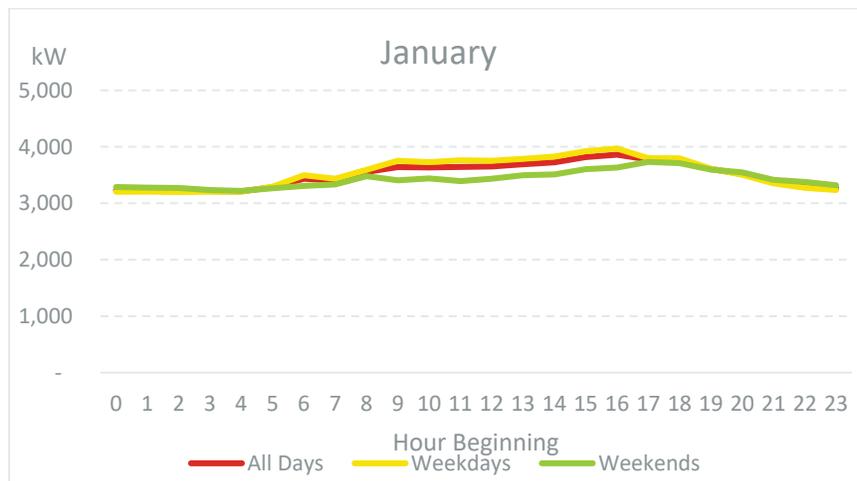


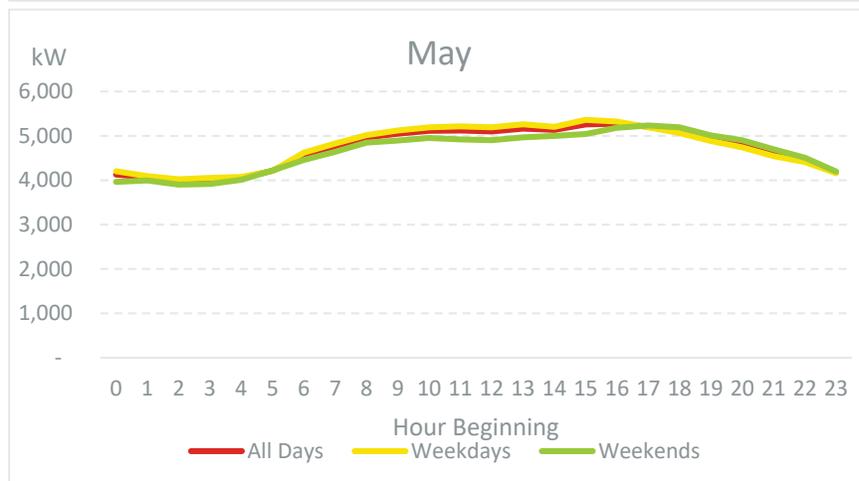
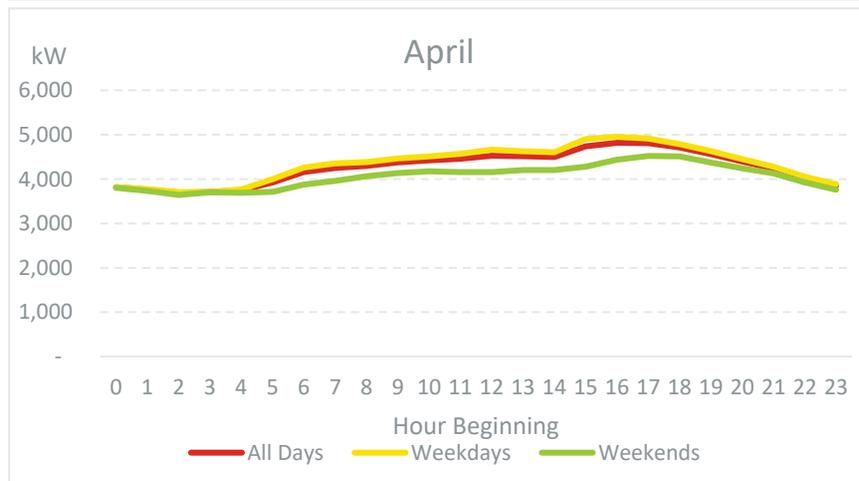
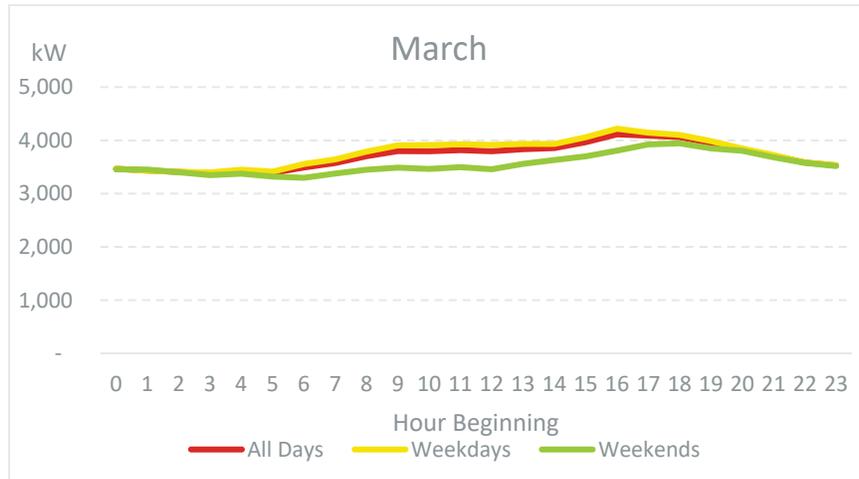


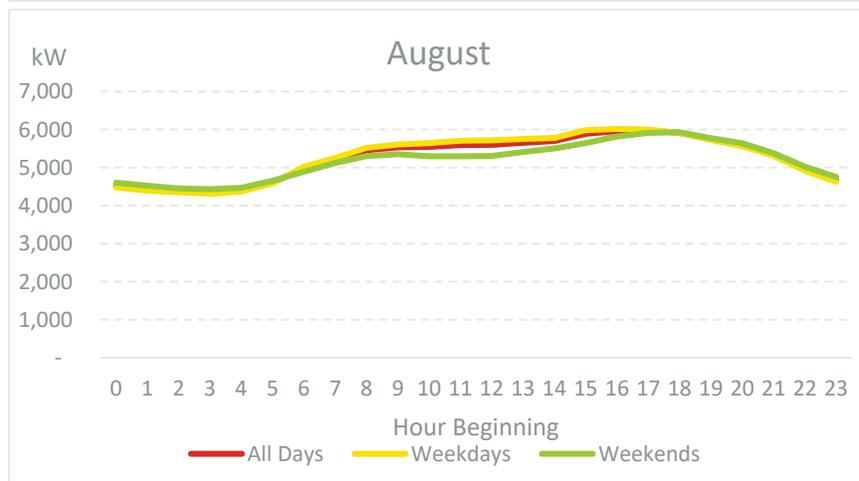
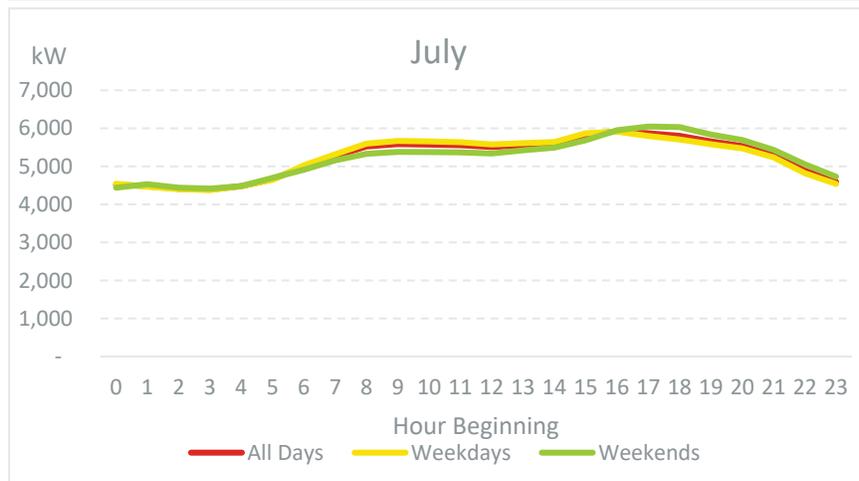
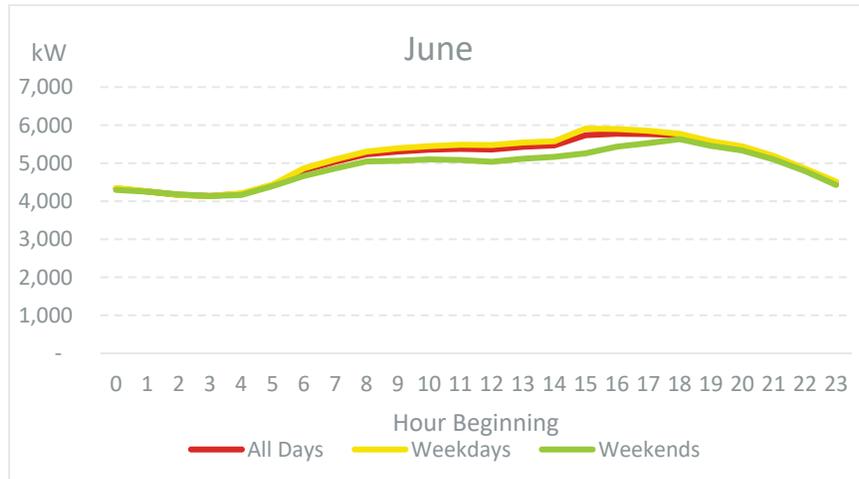


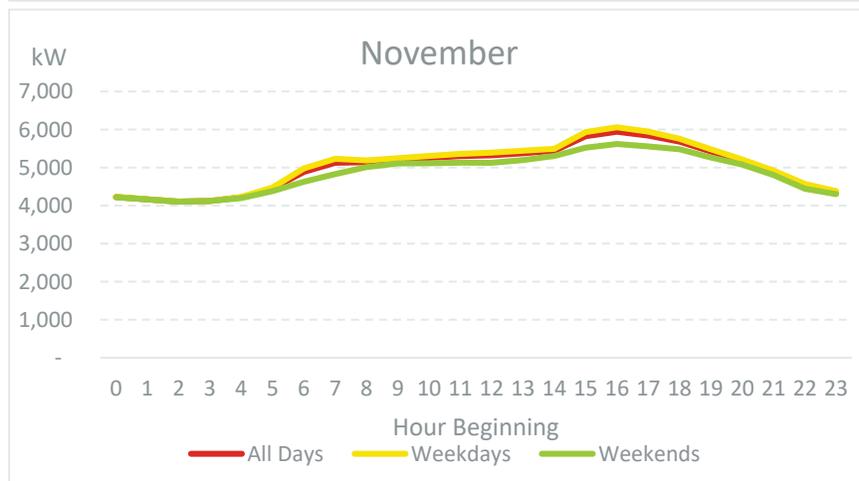
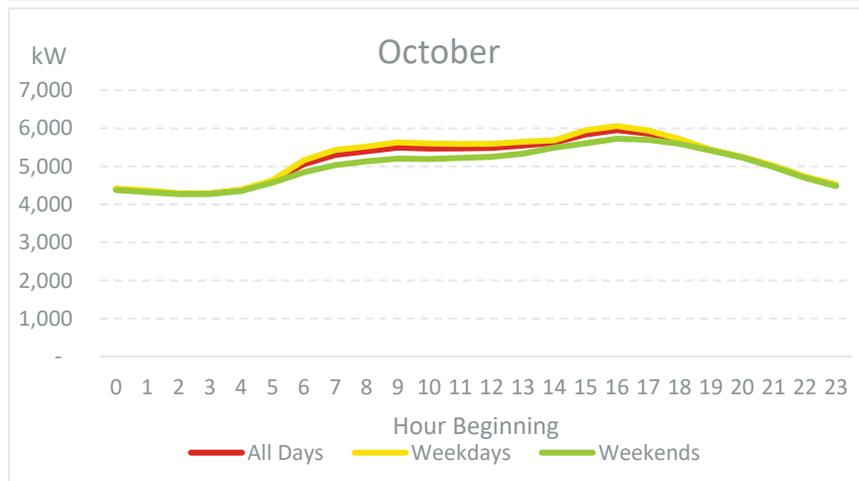
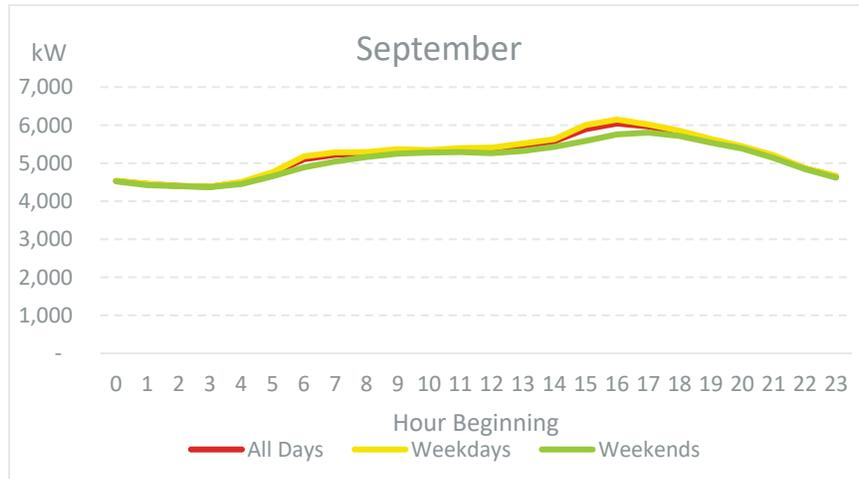


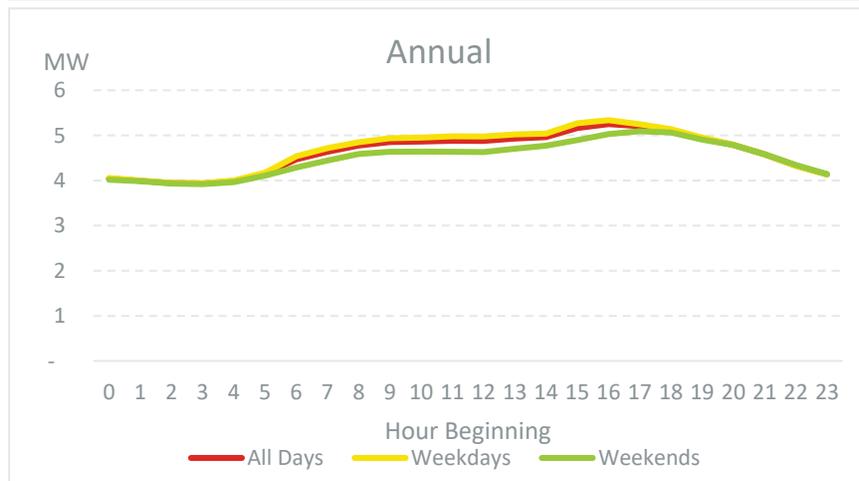
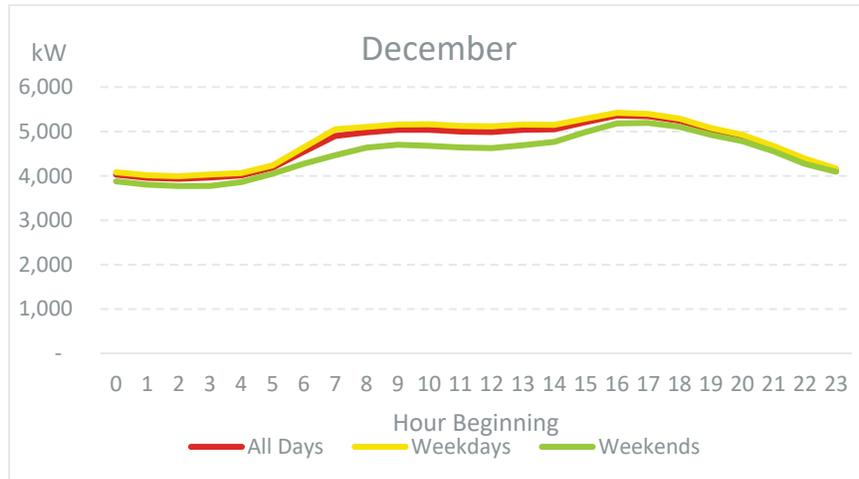
Large Power L Graphs



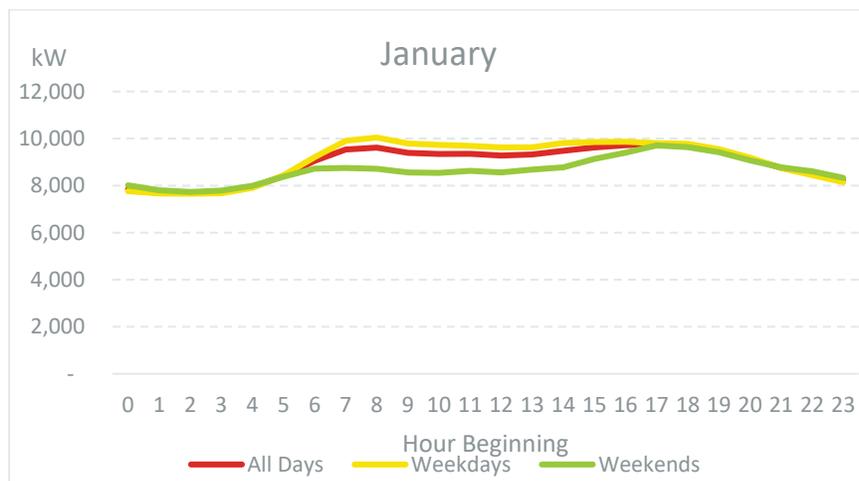


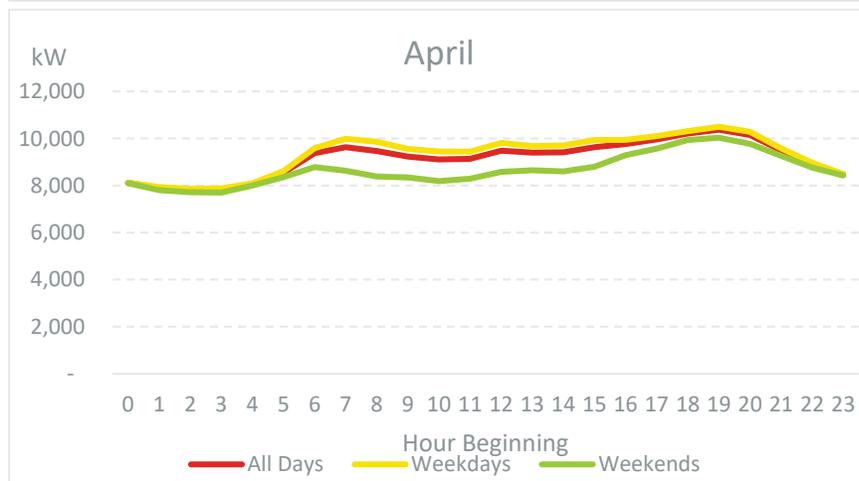
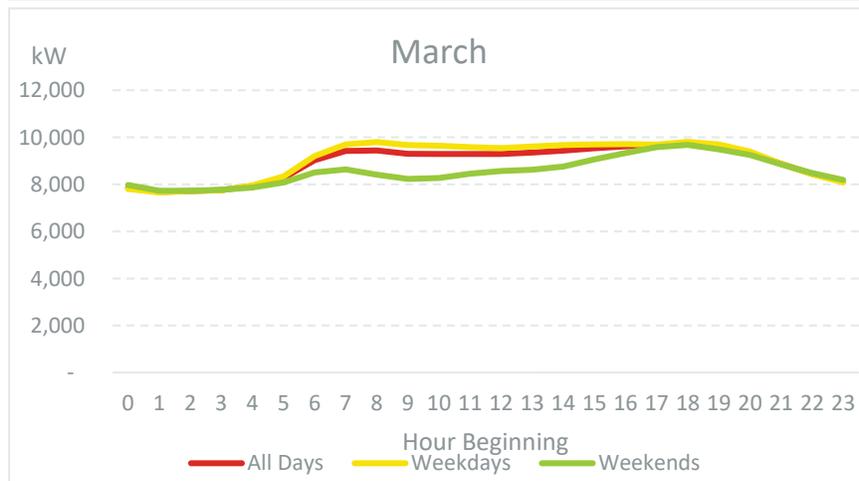
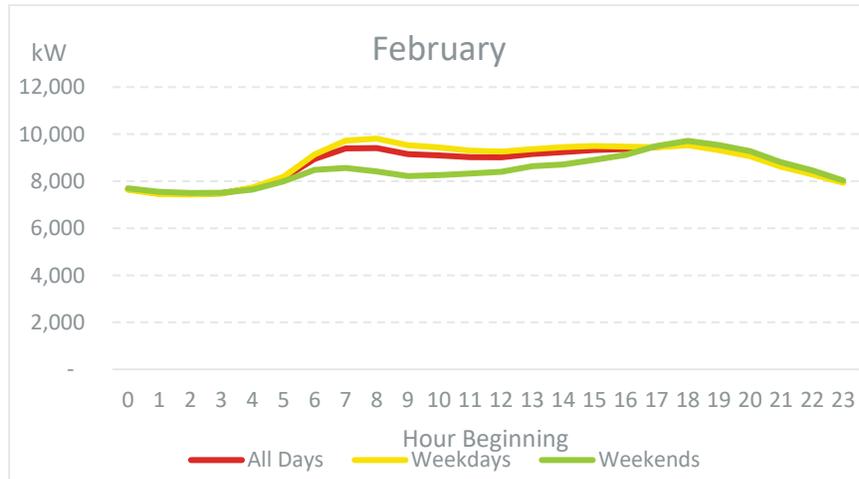


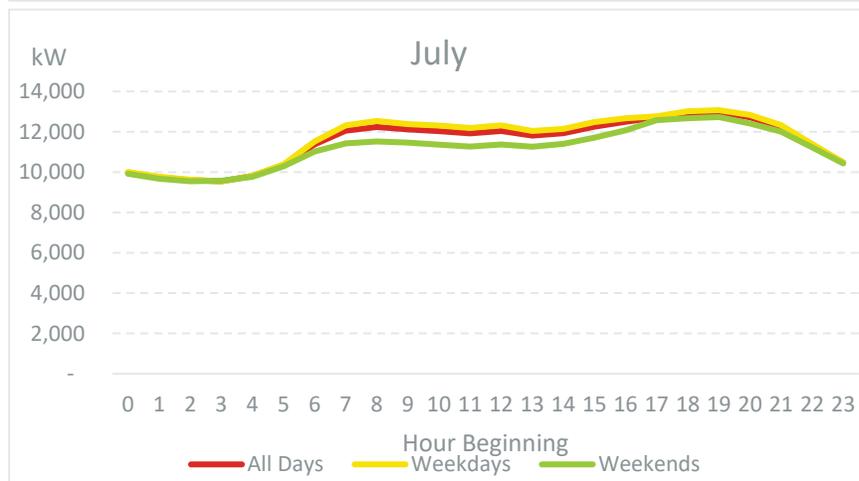
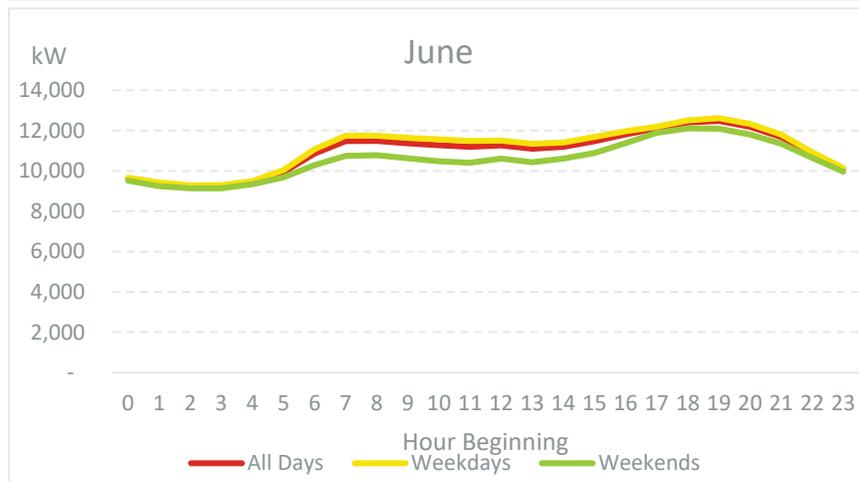
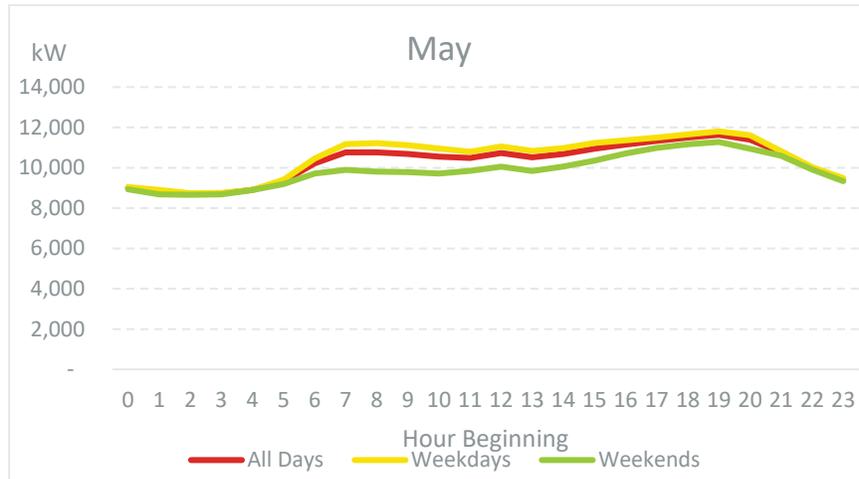


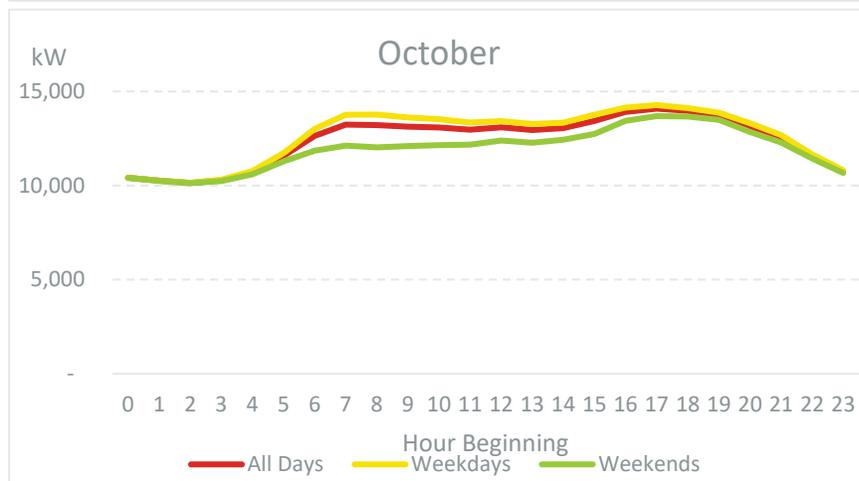
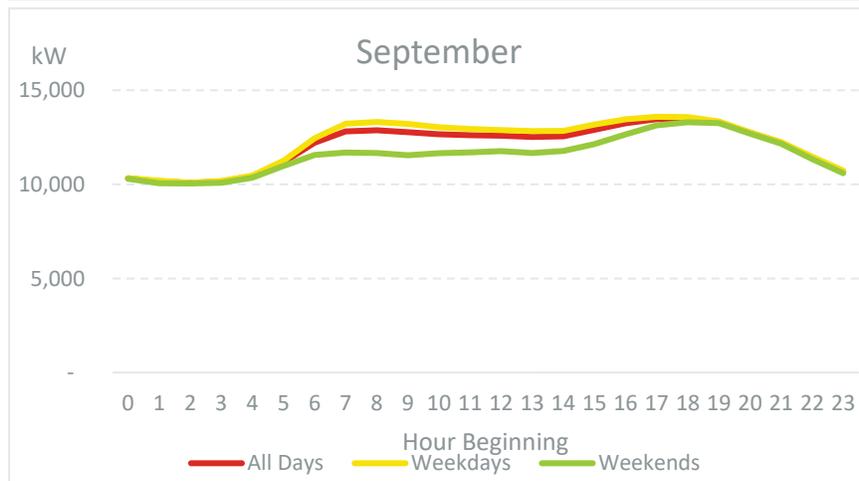
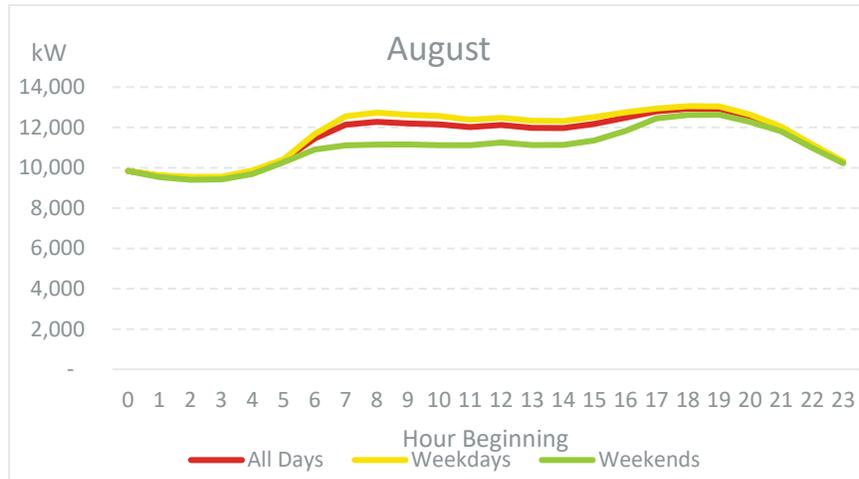


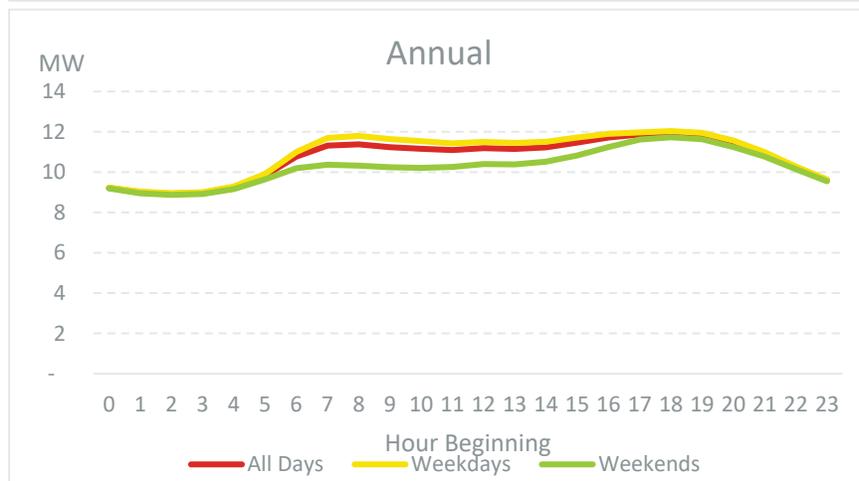
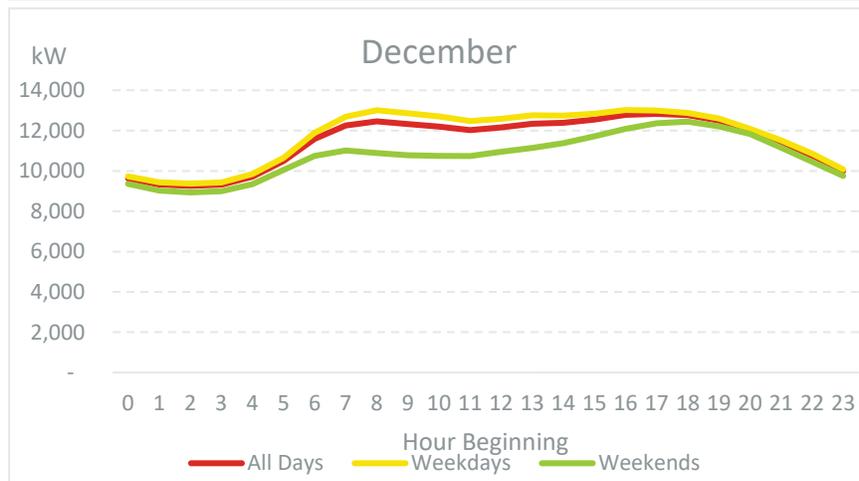
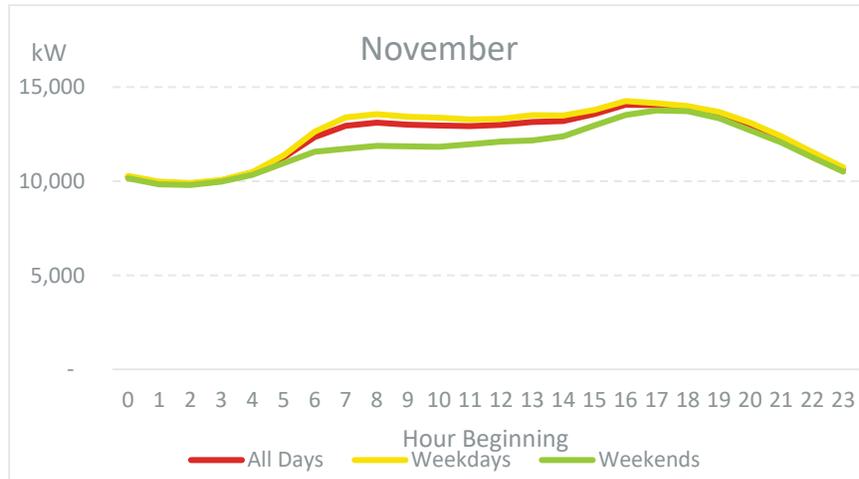
Large Power P Graphs











KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

ATTACHMENT KRP-603

(82 PAGES)

Daymark Allocated Cost of Service Model									
Kauai Island Utility Cooperative									
Total Allocated Costs									
Total Allocated Costs									
		Total System	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation	Streetlighting
1	Operations and Maintenance Expense	142,577	63,801	19,732	13,718	30,218	13,242	1,029	836
2	Depreciation & Amortization	16,337	7,464	2,277	1,448	3,080	1,241	436	391
3	Taxes	14,813	6,553	2,044	1,374	2,963	1,242	422	216
4	Interest	7,192	3,252	986	653	1,397	578	191	135
5	Other Expenses	-	0	0	0	0	0	0	0
6	Patronage Capital or Margins	(4,839)	(2,575)	(729)	(354)	(725)	(306)	(61)	(89)
7	Non-Sales Revenue	954	440	129	84	174	69	34	25
8	2023 ALLOCATED COST OF SERVICE (FORECAST)	177,034	78,934	24,439	16,924	37,108	16,065	2,050	1,513
			44.59%	13.80%	9.56%	20.96%	9.07%	1.16%	0.85%
8	2023 ALLOCATED COST OF SERVICE (AT REQUESTED DSC)	193,716	86,372	26,742	18,519	40,604	17,579	2,244	1,656
9	2023 REVENUE COLLECTED AT CURRENT RATES	177,034	76,174	26,034	18,183	39,017	16,757	152	716
10	(DEFICIENCY)/SURPLUS	(16,682)	(10,198)	(708)	(336)	(1,587)	(821)	(2,092)	(940)
11	RATE INCREASE/(DECREASE) TO EQUAL COS	9.4%	13.4%	2.7%	1.8%	4.1%	4.90%	1380.0%	131.2%

Daymark Allocated Cost of Service Model

Kauai Island Utility Cooperative

Total Generation Costs

	Total System	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation	Streetlighting
1 Operations and Maintenance Expense	118,426,516	50,435,796	16,505,498	12,179,933	27,039,387	11,875,337	180,867	209,699
2 Depreciation & Amortization	5,037,262	2,272,859	707,629	495,325	1,070,174	475,216	5,814	10,245
3 Taxes	4,268,544	1,820,337	595,028	438,577	973,075	427,461	6,483	7,584
4 Interest	2,185,361	986,055	306,997	214,891	464,283	206,167	2,522	4,445
5 Other Expenses	-	0	0	0	0	0	0	0
6 Patronage Capital or Margins	(1,470,393)	(663,455)	(206,559)	(144,587)	(312,387)	(138,717)	(1,697)	(2,991)
7 Non-Sales Revenue	417,203	219,906	59,990	35,379	68,796	31,939	15	1,178
Revenue Needed to Meet Requested DSC	12,143,034	5,189,444	1,693,198	1,245,689	2,761,283	1,213,451	18,281	21,688
8 TOTAL REVENUE REQUIREMENT FROM RATES	141,007,527	60,260,943	19,661,780	14,465,207	32,064,610	14,090,854	212,286	251,848
9 REVENUE AT CURRENT RATES	128,864,492	55,447,872	18,950,506	13,235,851	28,400,697	12,197,869	110,354	521,343
10 (DEFICIENCY)/SURPLUS	(12,143,034)	(4,813,070)	(711,274)	(1,229,355)	(3,663,914)	(1,892,985)	(101,931)	269,495
11 RATE INCREASE TO EQUAL COS	9.4%	8.7%	3.8%	9.3%	12.9%	15.5%	92.4%	-51.7%

Daymark Allocated Cost of Service Model									
Kauai Island Utility Cooperative									
Total Transmission Costs									
		Total System	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation	Streetlighting
1	Operations and Maintenance Expense	3,287,170	1,483,201	461,778	323,234	698,364	310,112	3,794	6,686
2	Depreciation & Amortization	2,470,766	1,114,832	347,090	242,956	524,918	233,092	2,852	5,025
3	Taxes	3,193,182	1,440,793	448,575	313,992	678,396	301,245	3,686	6,495
4	Interest	1,480,364	667,954	207,960	145,567	314,506	139,658	1,709	3,011
5	Other Expenses	-	0	0	0	0	0	0	0
6	Patronage Capital or Margins	(996,045)	(449,425)	(139,923)	(97,943)	(211,611)	(93,967)	(1,150)	(2,026)
7	Non-Sales Revenue	(49,508)	(22,339)	(6,955)	(4,868)	(10,518)	(4,671)	(57)	(101)
	Revenue Needed to Meet Requested DSC	884,446	399,070	124,246	86,969	187,902	83,439	1,021	1,799
8	TOTAL REVENUE REQUIREMENT FROM RATES	10,270,374	4,634,088	1,442,770	1,009,908	2,181,957	968,908	11,854	20,889
9	REVENUE AT CURRENT RATES	9,385,928	4,038,582	1,380,272	964,042	2,068,583	888,440	8,038	37,972
10	(DEFICIENCY)/SURPLUS	(884,446)	(595,506)	(62,498)	(45,866)	(113,374)	(80,469)	(3,817)	17,083
11	RATE INCREASE TO EQUAL COS	9.4%	14.7%	4.5%	4.8%	5.5%	9.1%	47.5%	-45.0%

Daymark Allocated Cost of Service Model									
Kauai Island Utility Cooperative									
Total Distribution Costs									
		Total System	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation	Streetlighting
1	Operations and Maintenance Expense	14,578,091	6,869,254	2,048,094	1,169,951	2,441,963	1,051,024	843,651	154,154
2	Depreciation & Amortization	8,825,667	4,073,658	1,221,961	709,987	1,485,244	532,344	427,200	375,274
3	Taxes	7,350,551	3,290,784	1,000,527	621,419	1,311,575	512,835	412,017	201,394
4	Interest	3,470,883	1,554,060	464,635	292,199	618,183	231,853	186,352	123,600
5	Other Expenses	-	0	0	0	0	0	0	0
6	Patronage Capital or Margins	(2,335,341)	(1,432,791)	(377,814)	(110,766)	(201,062)	(73,646)	(58,167)	(81,096)
7	Non-Sales Revenue	601,232	253,442	77,217	53,916	115,509	42,099	33,884	25,164
	Revenue Needed to Meet Requested DSC	3,061,668	1,376,565	417,879	257,883	543,846	216,402	173,850	75,243
8	TOTAL REVENUE REQUIREMENT FROM RATES	35,552,751	15,984,972	4,852,499	2,994,589	6,315,258	2,512,912	2,018,789	873,733
9	REVENUE AT CURRENT RATES	32,491,082	13,980,278	4,778,061	3,337,204	7,160,773	3,075,494	27,824	131,448
10	(DEFICIENCY)/SURPLUS	(3,061,668)	(2,004,695)	(74,438)	342,616	845,515	562,582	(1,990,964)	(742,285)
11	RATE INCREASE TO EQUAL COS	9.4%	14.3%	1.6%	-10.3%	-11.8%	-18.3%	7155.6%	564.7%

Daymark Allocated Cost of Service Model

Kauai Island Utility Cooperative

Total Customer Service Costs

	Total System	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation	Streetlighting	
1	Operations and Maintenance Expense	6,285,522	5,013,210	716,961	44,964	38,632	5,626	700	465,430
2	Depreciation & Amortization	2,877	2,223	345	22	8	1	0	278
3	Taxes	791	629	90	6	5	1	0	60
4	Interest	55,391	44,082	6,288	394	350	51	6	4,220
5	Other Expenses	-	0	0	0	0	0	0	0
6	Patronage Capital or Margins	(37,269)	(29,660)	(4,231)	(265)	(236)	(34)	(4)	(2,839)
7	Non-Sales Revenue	(14,548)	(11,261)	(1,739)	(109)	(41)	(6)	(1)	(1,391)
	Revenue Needed to Meet Requested DSC	592,974	472,967	67,631	4,241	3,648	531	66	43,889
8	TOTAL REVENUE REQUIREMENT FROM RATES	6,885,737	5,492,191	785,344	49,252	42,366	6,170	768	509,647
9	REVENUE AT CURRENT RATES	6,292,764	2,707,653	925,399	646,339	1,386,874	595,651	5,389	25,458
10	(DEFICIENCY)/SURPLUS	(592,974)	(2,784,538)	140,055	597,086	1,344,509	589,482	4,621	(484,188)
11	RATE INCREASE TO EQUAL COS	9.4%	102.8%	-15.1%	-92.4%	-96.9%	-99.0%	-85.8%	1901.9%

Daymark Allocated Cost of Service Model
Kauai Island Utility Cooperative
Total Energy-Related Costs

	Total System	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation	Streetlighting
1 Operations and Maintenance Expense	91,112,812	38,111,601	12,668,500	9,494,118	21,236,549	9,298,559	149,340	154,145
2 Depreciation & Amortization	-	0	0	0	0	0	0	0
3 Taxes	3,209,992	1,342,708	446,323	334,487	748,184	327,597	5,261	5,431
4 Interest	-	0	0	0	0	0	0	0
5 Other Expenses	-	0	0	0	0	0	0	0
6 Patronage Capital or Margins	-	0	0	0	0	0	0	0
7 Non-Sales Revenue	(961,767)	(402,298)	(133,726)	(100,218)	(224,168)	(98,154)	(1,576)	(1,627)
Revenue Needed to Meet Requested DSC	8,797,507	3,679,911	1,223,222	916,716	2,050,520	897,834	14,420	14,884
8 TOTAL REVENUE REQUIREMENT FROM RATES	102,158,544	42,731,922	14,204,320	10,645,103	23,811,085	10,425,836	167,445	172,832
9 TOTAL KWH CONSUMED	455,721,000	190,379,000	63,283,000	47,426,000	106,083,000	47,034,000	746,000	770,000
10 ENERGY UNIT COST (\$/kWH)	0.224	0.224	0.224	0.224	0.224	0.222	0.224	0.224

Daymark Allocated Cost of Service Model									
Kauai Island Utility Cooperative									
Total Demand-Related Costs									
	Total System	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation	Streetlighting	
1	Operations and Maintenance Expense	43,237,290	19,214,752	5,953,379	4,144,676	8,928,709	3,935,432	878,972	181,370
2	Depreciation & Amortization	15,292,400	6,678,333	2,061,627	1,429,366	3,072,349	1,239,259	435,866	375,600
3	Taxes	11,096,733	4,830,474	1,488,342	1,029,658	2,210,586	913,143	416,887	207,644
4	Interest	6,898,196	3,027,595	935,262	648,933	1,395,428	577,435	190,583	122,960
5	Other Expenses	-	0	0	0	0	0	0	0
6	Patronage Capital or Margins	(3,475,401)	(1,541,622)	(477,674)	(332,573)	(716,472)	(304,977)	(61,014)	(41,069)
7	Non-Sales Revenue	1,934,460	856,586	265,316	184,644	397,695	167,393	35,304	27,521
	Revenue Needed to Meet Requested DSC	7,065,789	3,115,854	963,630	669,484	1,440,632	615,110	178,719	82,360
8	TOTAL REVENUE REQUIREMENT FROM RATES	82,049,468	36,181,973	11,189,882	7,774,187	16,728,926	7,142,795	2,075,318	956,385
9	TOTAL SUM OF MAX BILLED DEMAND				171,816	284,722	109,267		
10	DEMAND UNIT COST (\$/kw)				45.25	58.76	65.37		

Daymark Allocated Cost of Service Model
Kauai Island Utility Cooperative
Total Customer Costs

	Total System	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation	Streetlighting
1 Operations and Maintenance Expense	8,227,196	6,475,109	1,110,450	79,287	53,088	8,108	700	500,453
2 Depreciation & Amortization	1,044,173	785,239	215,398	18,924	7,994	1,394	0	15,224
3 Taxes	506,344	379,361	109,554	9,849	4,282	802	37	2,459
4 Interest	293,804	224,556	50,617	4,119	1,894	294	6	12,316
5 Other Expenses	-	0	0	0	0	0	0	0
6 Patronage Capital or Margins	(1,363,649)	(1,033,709)	(250,853)	(20,989)	(8,823)	(1,387)	(4)	(47,883)
7 Non-Sales Revenue	(18,314)	(14,539)	(3,076)	(108)	219	121	113	(1,043)
Revenue Needed to Meet Requested DSC	818,826	642,280	116,101	8,583	5,527	879	80	45,375
8 TOTAL REVENUE REQUIREMENT FROM RATES	9,508,379	7,458,298	1,348,191	99,664	64,180	10,212	933	526,901
9 TOTAL CUSTOMERS	467,514	361,266	56,064	3,516	1,236	180	24	45,228
10 MONTHLY CUSTOMER UNIT COST	20.34	20.6	24.0	28.3	51.9	56.7	38.9	11.6

Daymark Allocated Cost of Service Model								
Kauai Island Utility Cooperative								
Functional Allocation Model								
FERC				2	3	4	5	
Line No.	Account Number	Account Description	Total System	Alloc. Factor	Generation	Transmission	Distribution	Customer Service
1 OPERATING EXPENSES								
2 Generation Expense								
3	5000	Operation, Supervision & Engineering	1,059,150	G	1,059,150	0	0	0
4	5020	Steam Expense	1,231,716	G	1,231,716	0	0	0
5	5060	Rents	-	G	0	0	0	0
6	5100	Maintenance Supervision & Engineering	-	G	0	0	0	0
7	5110	Maintenance of Structures	186,780	G	186,780	0	0	0
8	5120	Maintenance of Boilers	105,360	G	105,360	0	0	0
9	5130	Maintenance of Electric Plant - Steam	34,300	G	34,300	0	0	0
10	5360	Water for Power	144,000	G	144,000	0	0	0
11	5420	Maintenance of Structures	7,200	G	7,200	0	0	0
12	5430	Maintenance of Reservoirs, Dams & Waterways	216,000	G	216,000	0	0	0
13	5440	Maintenance of Electric Plant - Hydro	6,300	G	6,300	0	0	0
14	5460	Operation Supervision & Engineering - Hydro	710,509	G	710,509	0	0	0
15	5473	Fuel	43,517,851	G	43,517,851	0	0	0
16	5480	Generation Expense	3,621,767	G	3,621,767	0	0	0
17	5490	Misc. Other power Generation Expense	792,464	G	792,464	0	0	0
18	5510	Maintenance Supervision & Engineering	628,813	G	628,813	0	0	0
19	5520	Maintenance of Structures	98,900	G	98,900	0	0	0
20	5530	Maintenance of Generation & Electric Equip	5,770,952	G	5,770,952	0	0	0
21	5560	System Control & Load Dispatch	86,400	G	86,400	0	0	0
22	0	Purchased Power	47,594,961	G	47,594,961	0	0	0
23		Total Generation	105,813,423		105,813,423	-	-	-

Daymark Allocated Cost of Service Model								
Kauai Island Utility Cooperative								
Functional Allocation Model								
FERC				2	3	4	5	
Line No.	Account Number	Account Description	Total System	Alloc. Factor	Generation	Transmission	Distribution	Customer Service
24								
25		Transmission Expense						
26	5600	Operation, Supervision & Engineering	-	T	0	0	0	0
27	5620	Station Expense	222,998	T	0	222,998	0	0
28	5630	Overhead Line Expense	11,160	T	0	11,160	0	0
29	5660	Miscellaneous Transmission Expense	192,647	T	0	192,647	0	0
30	5661	Environmental HCP	-	T	0	0	0	0
31	5670	Rents	65,164	T	0	65,164	0	0
32		Total Transmission - Operations	491,969		-	491,969	-	-
33								
34	5700	Maintenance of Station Equipment	359,059	T	0	359,059	0	0
35	5710	Maintenance of Overhead Lines	610,200	T	0	610,200	0	0
36		Total Transmission - Maintenance	969,259		-	969,259	-	-
37								
38		Distribution Expense						
39	5800	Operation, Supervision & Engineering	48,295	D	0	0	48,295	0
40	5820	Station Expense	254,360	D	0	0	254,360	0
41	5830	Overhead Line Expense	15,964	D	0	0	15,964	0
42	5840	Underground Line Expense	18,846	D	0	0	18,846	0
43	5860	Meter Expense	553,029	D	0	0	553,029	0
44	5880	Miscellaneous Distribution Expense	514,631	D	0	0	514,631	0
45	5881	Environmental HCP	-	D	0	0	0	0
46	5890	Rents	14,376	D	0	0	14,376	0
47		Total Distribution - Operations	1,419,503		-	-	1,419,503	-
48								
49	5900	Maintenance Supervision & Engineering	245,338	D	0	0	245,338	0
50	5910	Maintenance of Structures	-	D	0	0	0	0
51	5920	Maintenance of Station Equipment	563,319	D	0	0	563,319	0
52	5930	Maintenance of Overhead Lines	3,856,118	D	0	0	3,856,118	0
53	5940	Maintenance of Underground Lines	603,104	D	0	0	603,104	0
54	5950	Maintenance of Line Transformers	1,380	D	0	0	1,380	0
55	5960	Maintenance of Street Lights & Signal Systems	22,437	D	0	0	22,437	0
56	5970	Maintenance of Meters	14,400	D	0	0	14,400	0
57		Total Distribution - Maintenance	5,306,096		-	-	5,306,096	-

Daymark Allocated Cost of Service Model								
Kauai Island Utility Cooperative								
Functional Allocation Model								
FERC				2	3	4	5	
Line No.	Account Number	Account Description	Total System	Alloc. Factor	Generation	Transmission	Distribution	Customer Service
58								
59		Customer Accounts						
60	9010	Supervision - Customer Accounts	456,536	C	0	0	0	456,536
61	9020	Meter Reading Expense	342,402	C	0	0	0	342,402
62	9030	Customer Records & Collection	1,972,055	C	0	0	0	1,972,055
63	9040	Uncollectible Accounts	176,210	C	0	0	0	176,210
64		Total Customer Accounts	2,947,203		-	-	-	2,947,203
65								
66		Customer Service						
67	9070	Supervision - Customer Service Activities	-	C	0	0	0	0
68	9080	Solar Replacement Program	14,000	C	0	0	0	14,000
69	9081	Solar Water Heater Rebate	51,000	C	0	0	0	51,000
70	9082	Solar Water Heater Loan	4,800	C	0	0	0	4,800
71	9083	Appliance Rebate	131,800	C	0	0	0	131,800
72	9084	Efficient Water Heater	7,500	C	0	0	0	7,500
73	9085	Key Accounts	22,500	C	0	0	0	22,500
74	9086	Surge Protection Program	-	C	0	0	0	0
75	9087	CFL Program / Light Up A Life Program	26,750	C	0	0	0	26,750
76	9088	HBI Program	16,000	C	0	0	0	16,000
77	9089	In-Home Displays	73,500	C	0	0	0	73,500
78	9090	Information & Instructional Advertising	94,768	C	0	0	0	94,768
79	9100	Member Relations	21,000	C	0	0	0	21,000
80		Total Customer Service	463,618		-	-	-	463,618
81								
82		Marketing & Sales						
83	9110	Sales Expense	-	C	0	0	0	0
84		Total Marketing & Sales	-		-	-	-	-

Daymark Allocated Cost of Service Model								
Kauai Island Utility Cooperative								
Functional Allocation Model								
FERC				2	3	4	5	
Line No.	Account Number	Account Description	Total System	Alloc. Factor	Generation	Transmission	Distribution	Customer Service
85								
86		Administrative						
87	9200	Administrative & General Services	9,832,959	LBR	5,417,993	294,492	2,649,425	1,471,049
88	9210	Office Supplies & Expenses	1,117,706	LBR	615,860	33,475	301,158	167,213
89	9230	Outside / Professional Services	6,614,023	OM_CWC	3,522,315	423,906	1,879,958	787,843
90	9240	Property Insurance	1,218,300	PLNT	351,066	262,623	604,546	65
91	9260	Employee Benefits	-					
92	9280	Regulatory Commission Expense-HPUC Fee	881,043	OM_CWC	469,202	56,468	250,426	104,947
93	9280	Regulatory Commission Expense-Other	1,218,404	OM_CWC	648,864	78,090	346,317	145,133
94	9289	Legislative Expense	141,996	OM_CWC	75,620	9,101	40,361	16,914
95	9300	Other General Expense	826,903	LBR	455,626	24,765	222,804	123,708
96	9301	Community Outreach	370,246	LBR	204,007	11,089	99,760	55,390
97	9302	USFFW SOS Shearwater Program Outreach	15,250	LBR	8,403	457	4,109	2,281
98	9310	Rents	1,421,112	GEN	409,509	306,342	705,185	76
99	9350	Maintenance of General Plant	1,508,285	GEN	434,629	325,134	748,442	81
100		Total Administrative	25,166,227		12,613,093	1,825,941	7,852,492	2,874,700
101								
102		TOTAL OPERATIONS EXPENSE	142,577,298		118,426,516	3,287,170	14,578,091	6,285,522
103								
104	4030	Depreciation Expense - System	16,336,572	DEP	5,037,262	2,470,766	8,825,667	2,877
105								
106	4060	Amortization Expense - Acquisition Adj	-	GTD	0	0	0	0
107		TOTAL DEPRECIATION AND AMORTIZATION	16,336,572		5,037,262	2,470,766	8,825,667	2,877
108								

Daymark Allocated Cost of Service Model								
Kauai Island Utility Cooperative								
Functional Allocation Model								
FERC				2	3	4	5	
Line No.	Account Number	Account Description	Total System	Alloc. Factor	Generation	Transmission	Distribution	Customer Service
109	Taxes other than Income Tax							
110	4082	State HPUC Tax	10,369,860	GTD	2,988,186	2,235,381	5,145,739	554
111	4081	CK Franchise & License Tax	4,405,208	PLNT	1,269,408	949,610	2,185,955	235
112	4080	Income Tax on Non-Op Income	38,000	PLNT	10,950	8,191	18,856	2
113		State Income Tax	-	PLNT	0	0	0	0
114		Federal Income Tax	-	PLNT	0	0	0	0
115		TOTAL TAXES OTHER THAN INCOME	14,813,068		4,268,544	3,193,182	7,350,551	791
116								
117		TOTAL COST OF ELECTRIC SERVICE	173,726,938		127,732,322	8,951,118	30,754,309	6,289,190
118								
119	Interest on ST Debt							
120	4311	Interest Expense - Customer Deposits	-					
121		Additional Short-Term Debt	462,000	OM_CWC	246,039	29,611	131,318	55,032
122		TOTAL INTEREST ON SHORT TERM DEBT	462,000		246,039	29,611	131,318	55,032
123								
124	Interest on LT Debt							
125	4271	Interest Expense - RUS	-	PLNT	0	0	0	0
126	4272	Interest Expense - CFC	2,617,600	PLNT	754,289	564,264	1,298,907	140
127	4273	Interest Expense - FFB	3,445,400	PLNT	992,829	742,708	1,709,679	184
128	4275	Interest Expense - CoBank	667,000	PLNT	192,203	143,782	330,979	36
129	4277	Interest Expense - SBA PPP	-	PLNT	0	0	0	0
130		TOTAL INTEREST ON LONG TERM DEBT	6,730,000		1,939,321	1,450,754	3,339,565	359
131								
132	OTHER DEDUCTIONS							
133	4261	Contributions & Donations	-	CWC	0	0	0	0
134	4265	Other Deductions	-	CWC	0	0	0	0
135		TOTAL CONTRIBUTIONS AND DONATIONS	-		-	-	-	-
136								
137		TOTAL OPERATING COST OF SERVICE	180,918,938		129,917,683	10,431,482	34,225,192	6,344,582
138								

Daymark Allocated Cost of Service Model								
Kauai Island Utility Cooperative								
Functional Allocation Model								
FERC			2	3	4	5		
Line No.	Account Number	Account Description	Total System	Alloc. Factor	Generation	Transmission	Distribution	Customer Service
139	Other Income and Capital Credits							
140	4240	Capital Credits	225,000	CWC	171,080	7,393	32,787	13,740
141	4180	Income (Loss) from KRS1 / KRS2H	(1,499,692)	G	(1,499,692)	0	0	0
142	4210	RLF Annual Admin Fee	-					
143	4213	PPA Liquidated Damages	-					
144		TOTAL OTHER NON-OPERATING INCOME	(1,274,692)		(1,328,612)	7,393	32,787	13,740
145								
146	Interest During Construction							
147	4214	SBA PPP Loan Forgiveness	-	CWC	0	0	0	0
148	4190	Interest Income - General	240	CWC	182.4855185	8	35	15
149	4191	Interest Income - DSM/IRP	-	INT	0	0	0	0
150	4192	Interest Income - RUS COC	2,500	INT	760	515	1,207	19
151	4193	Interest Income - FHB BSCM	-	INT	0	0	0	0
152	4194	Interest Income - CFC DF	75,000	INT	22,789	15,438	36,195	578
153	4195	Interest Income - CFC CP	-	INT	0	0	0	0
154	4196	Interest Income - CFC MTN	-	INT	0	0	0	0
155	4197	Interest Income - Member Capital	24,860	INT	7,554	5,117	11,998	191
156	4198	Interest Income - Select Notes	-	INT	0	0	0	0
157	4199	Interest Income - KRS1	852,000	G	852,000	0	0	0
158		Net Jobbing Sales	94,056	D	0	0	94,056	0
159	4181	Net Rental Income - Eleele	97,596	GEN	28,123	21,038	48,429	5
160		TOTAL INTEREST INCOME	1,146,252		911,409	42,115	191,919	808
161								
162		CAPITALIZED INTEREST	-					
163								
164		Patronage Capital or Margins	(4,839,049)	INT	(1,470,393)	(996,045)	(2,335,341)	(37,269)
165								
166		Operating Revenue Requirement	176,079,889		128,447,290	9,435,437	31,889,851	6,307,312
167		Less Non-Operating Revenue	(128,440)		(417,203)	49,508	224,706	14,548
168		Less Other Electric Revenues	(825,938)	D	0	0	(825,938)	0
169		Revenue Requirement from Rates	177,034,267		128,864,492	9,385,928	32,491,082	6,292,764
170								
171								
172								
173								
174								
175		TOTAL REVENUE REQUIREMENT BEFORE TAXES & OTHER REVENUE	153,365,733		119,879,947	5,625,181	22,623,469	5,237,135

Daymark Allocated Cost of Service Model								
Kauai Island Utility Cooperative								
Functional Allocation Model								
FERC			2	3	4	5		
Line No.	Account Number	Account Description	Total System	Alloc. Factor	Generation	Transmission	Distribution	Customer Service
176								
177		SUMMARY						
178		Operations and Maintenance Expense	142,577,298		118,426,516	3,287,170	14,578,091	6,285,522
179		Depreciation & Amortization	16,336,572		5,037,262	2,470,766	8,825,667	2,877
180		Taxes	14,813,068		4,268,544	3,193,182	7,350,551	791
181		Interest	7,192,000		2,185,361	1,480,364	3,470,883	55,391
182		Other Expenses	-		-	-	-	-
183		Patronage Capital or Margins	(4,839,049)		(1,470,393)	(996,045)	(2,335,341)	(37,269)
184		Non-Sales Revenue	954,378		417,203	(49,508)	601,232	(14,548)
185		TOTAL REVENUE REQUIREMENT FROM RATES	177,034,267		128,864,492	9,385,928	32,491,082	6,292,764
186								
187		REVENUE AT CURRENT RATES	177,034,267	TOTAL	128,864,492	9,385,928	32,491,082	6,292,764
188								
189		(DEFICIENCY)/SURPLUS	-		-	-	-	-
190								
191		RATE INCREASE TO EQUAL COS	-		0.0%	0.0%	0.0%	0.0%

Daymark Allocated Cost of Service Model

Kauai Island Utility Cooperative

Classification

FERC		2					3				
Line	Account										
No.	Number	Account Description	Alloc	Generation	% Energy	Energy	Demand	Transmission	% Energy	Energy	Demand
1	OPERATING EXPENSES										
2	Generation Expense										
3	5000	Operation, Supervision & Engineering	Dmd	1,059,150	0%	0	1,059,150	0	0%	0	0
4	5020	Steam Expense	Dmd	1,231,716	0%	0	1,231,716	0	0%	0	0
5	5060	Rents	Dmd	0	0%	0	0	0	0%	0	0
6	5100	Maintenance Supervision & Engineering	Dmd	0	0%	0	0	0	0%	0	0
7	5110	Maintenance of Structures	Dmd	186,780	0%	0	186,780	0	0%	0	0
8	5120	Maintenance of Boilers	Dmd	105,360	0%	0	105,360	0	0%	0	0
9	5130	Maintenance of Electric Plant - Steam	Dmd	34,300	0%	0	34,300	0	0%	0	0
10	5360	Water for Power	Dmd	144,000	0%	0	144,000	0	0%	0	0
11	5420	Maintenance of Structures	Dmd	7,200	0%	0	7,200	0	0%	0	0
12	5430	Maintenance of Reservoirs, Dams & Waterways	Dmd	216,000	0%	0	216,000	0	0%	0	0
13	5440	Maintenance of Electric Plant - Hydro	Dmd	6,300	0%	0	6,300	0	0%	0	0
14	5460	Operation Supervision & Engineering - Hydro	Dmd	710,509	0%	0	710,509	0	0%	0	0
15	5473	Fuel	Energy	43,517,851	100%	43,517,851	0	0	0%	0	0
16	5480	Generation Expense	Dmd	3,621,767	0%	0	3,621,767	0	0%	0	0
17	5490	Misc. Other power Generation Expense	Dmd	792,464	0%	0	792,464	0	0%	0	0
18	5510	Maintenance Supervision & Engineering	Dmd	628,813	0%	0	628,813	0	0%	0	0
19	5520	Maintenance of Structures	Dmd	98,900	0%	0	98,900	0	0%	0	0
20	5530	Maintenance of Generation & Electric Equip	Dmd	5,770,952	0%	0	5,770,952	0	0%	0	0
21	5560	System Control & Load Dispatch	Dmd	86,400	0%	0	86,400	0	0%	0	0
22		Purchased Power	Energy	47,594,961	100%	47,594,961	0	0	0%	0	0
23		Total Generation		105,813,423		91,112,812	14,700,611	0		0	0
24											

Daymark Allocated Cost of Service Model											
Kauai Island Utility Cooperative											
Classification											
FERC		2					3				
Line No.	Account Number	Account Description	Alloc	Generation	% Energy	Energy	Demand	Transmission	% Energy	Energy	Demand
25	Transmission Expense										
26	5600	Operation, Supervision & Engineering	Dmd	0	0%	0	0	0	0%	0	0
27	5620	Station Expense	Dmd	0	0%	0	0	222,998	0%	0	222,998
28	5630	Overhead Line Expense	Dmd	0	0%	0	0	11,160	0%	0	11,160
29	5660	Miscellaneous Transmission Expense	Dmd	0	0%	0	0	192,647	0%	0	192,647
30	5661	Environmental HCP	Dmd	0	0%	0	0	0	0%	0	0
31	5670	Rents	Dmd	0	0%	0	0	65,164	0%	0	65,164
32		Total Transmission - Operations		0		0	0	491,969		0	491,969
33											
34	5700	Maintenance of Station Equipment	Dmd	0	0%	0	0	359,059	0%	0	359,059
35	5710	Maintenance of Overhead Lines	Dmd	0	0%	0	0	610,200	0%	0	610,200
36		Total Transmission - Maintenance		0		0	0	969,259		0	969,259
37											
38	Distribution Expense										
39	5800	Operation, Supervision & Engineering	Dmd	0	0%	0	0	0	0%	0	0
40	5820	Station Expense	Dmd	0	0%	0	0	0	0%	0	0
41	5830	Overhead Line Expense	Dmd	0	0%	0	0	0	0%	0	0
42	5840	Underground Line Expense	Dmd	0	0%	0	0	0	0%	0	0
43	5860	Meter Expense	Cust	0	0%	0	0	0	0%	0	0
44	5880	Miscellaneous Distribution Expense	Cust	0	0%	0	0	0	0%	0	0
45	5881	Environmental HCP		0	0%	0	0	0	0%	0	0
46	5890	Rents	Cust	0	0%	0	0	0	0%	0	0
47		Total Distribution - Operations		0		0	0	0		0	0
48											
49	5900	Maintenance Supervision & Engineering	Dmd	0	0%	0	0	0	0%	0	0
50	5910	Maintenance of Structures	Dmd	0	0%	0	0	0	0%	0	0
51	5920	Maintenance of Station Equipment	Dmd	0	0%	0	0	0	0%	0	0
52	5930	Maintenance of Overhead Lines	Dmd	0	0%	0	0	0	0%	0	0
53	5940	Maintenance of Underground Lines	Dmd	0	0%	0	0	0	0%	0	0
54	5950	Maintenance of Line Transformers	Dmd	0	0%	0	0	0	0%	0	0
55	5960	Maintenance of Street Lights & Signal Systems	Dmd	0	0%	0	0	0	0%	0	0
56	5970	Maintenance of Meters	Cust	0	0%	0	0	0	0%	0	0
57		Total Distribution - Maintenance		0		0	0	0		0	0
58											

Daymark Allocated Cost of Service Model											
Kauai Island Utility Cooperative											
Classification											
FERC											
Line	Account			2				3			
No.	Number	Account Description	Alloc	Generation	% Energy	Energy	Demand	Transmission	% Energy	Energy	Demand
59	Customer Accounts										
60	9010	Supervision - Customer Accounts	Cust	0	0%	0	0	0	0%	0	0
61	9020	Meter Reading Expense	Cust	0	0%	0	0	0	0%	0	0
62	9030	Customer Records & Collection	Cust	0	0%	0	0	0	0%	0	0
63	9040	Uncollectible Accounts	Cust	0	0%	0	0	0	0%	0	0
64		Total Customer Accounts		0		0	0	0		0	0
65											
66	Customer Service										
67	9070	Supervision - Customer Service Activities		0	0%	0	0	0	0%	0	0
68	9080	Solar Replacement Program	Cust	0	0%	0	0	0	0%	0	0
69	9081	Solar Water Heater Rebate	Cust	0	0%	0	0	0	0%	0	0
70	9082	Solar Water Heater Loan	Cust	0	0%	0	0	0	0%	0	0
71	9083	Appliance Rebate	Cust	0	0%	0	0	0	0%	0	0
72	9084	Efficient Water Heater	Cust	0	0%	0	0	0	0%	0	0
73	9085	Key Accounts	Cust	0	0%	0	0	0	0%	0	0
74	9086	Surge Protection Program	Cust	0	0%	0	0	0	0%	0	0
75	9087	CFL Program / Light Up A Life Program	Cust	0	0%	0	0	0	0%	0	0
76	9088	HBI Program	Cust	0	0%	0	0	0	0%	0	0
77	9089	In-Home Displays	Cust	0	0%	0	0	0	0%	0	0
78	9090	Information & Instructional Advertising	Cust	0	0%	0	0	0	0%	0	0
79	9100	Member Relations	Cust	0	0%	0	0	0	0%	0	0
80		Total Customer Service		0		0	0	0		0	0
81											
82	Marketing & Sales										
83	9110	Sales Expense		0	0%	0	0	0	0%	0	0
84		Total Marketing & Sales		0		0	0	0		0	0
85											

Daymark Allocated Cost of Service Model											
Kauai Island Utility Cooperative											
Classification											
FERC		2					3				
Line No.	Account Number	Account Description	Alloc	Generation	% Energy	Energy	Demand	Transmission	% Energy	Energy	Demand
86	Administrative										
87	9200	Administrative & General Services	LBR	5,417,993	0%	0	5,417,993	294,492	0%	0	294,492
88	9210	Office Supplies & Expenses	LBR	615,860	0%	0	615,860	33,475	0%	0	33,475
89	9230	Outside / Professional Services	OM_CWC	3,522,315	0%	0	3,522,315	423,906	0%	0	423,906
90	9240	Property Insurance	PLNT	351,066	0%	0	351,066	262,623	0%	0	262,623
91	9260	Employee Benefits	0								
92	9280	Regulatory Commission Expense-HPUC Fee	OM_CWC	469,202	0%	0	469,202	56,468	0%	0	56,468
93	9280	Regulatory Commission Expense-Other	OM_CWC	648,864	0%	0	648,864	78,090	0%	0	78,090
94	9289	Legislative Expense	OM_CWC	75,620	0%	0	75,620	9,101	0%	0	9,101
95	9300	Other General Expense	LBR	455,626	0%	0	455,626	24,765	0%	0	24,765
96	9301	Community Outreach	LBR	204,007	0%	0	204,007	11,089	0%	0	11,089
97	9302	USFFW SOS Shearwater Program Outreach	LBR	8,403	0%	0	8,403	457	0%	0	457
98	9310	Rents	GEN	409,509	0%	0	409,509	306,342	0%	0	306,342
99	9350	Maintenance of General Plant	GEN	434,629	0%	0	434,629	325,134	0%	0	325,134
100		Total Administrative		12,613,093		0	12,613,093	1,825,941		0	1,825,941
101											
102		TOTAL OPERATIONS EXPENSE		118,426,516	77%	91,112,812	27,313,704	3,287,170	0%	0	3,287,170
103											
104	4030	Depreciation Expense - System		5,037,263	0%	0	5,037,263	2,470,766	0%	0	2,470,766
105											
106	4060	Amortization Expense - Acquisition Adj		0	0%	0	0	0	0%	0	0
107		TOTAL DEPRECIATION AND AMORTIZATION		5,037,262		0	5,037,263	2,470,766		0	2,470,766
108											
109		State HPUC Tax	COS	2,988,186	75%	2,247,149	741,037	2,235,381	0%	0	2,235,381
110		CK Franchise & License Tax	COS	1,269,408	75%	954,609	314,799	949,610	0%	0	949,610
111		Income Tax on Non-Op Income	COS	10,950	75%	8,235	2,716	8,191	0%	0	8,191
112		State Income Tax	COS	0	75%	0	0	0	0%	0	0
113		Federal Income Tax	COS	0	75%	0	0	0	0%	0	0
114		TOTAL TAXES OTHER THAN INCOME		1,939,321		3,209,992	1,058,552	1,450,754		0	3,193,182
115											
116		TOTAL COST OF ELECTRIC SERVICE		127,732,322	74%	94,322,804	33,409,518	8,951,118	0%	-	8,951,118

Daymark Allocated Cost of Service Model											
Kauai Island Utility Cooperative											
Classification											
		2					3				
FERC											
Line	Account										
No.	Number	Account Description	Alloc	Generation	% Energy	Energy	Demand	Transmission	% Energy	Energy	Demand
117											
118		Interest on ST Debt									
119		Interest Expense - Customer Deposits		0	0%	0	0	0	0%	0	0
120		Additional Short-Term Debt	CWC	246,039	0%	0	246,039	29,611	0%	0	29,611
121		TOTAL INTEREST ON SHORT TERM DEBT		246,039	0%	0	246,039	29,611	0%	0	29,611
122											
123		Interest on LT Debt									
124		Interest Expense - RUS	PLNT	0	0%	0	0	0	0%	0	0
125		Interest Expense - CFC	PLNT	754,289	0%	0	754,289	564,264	0%	0	564,264
126		Interest Expense - FFB	PLNT	992,829	0%	0	992,829	742,708	0%	0	742,708
127		Interest Expense - CoBank	PLNT	192,203	0%	0	192,203	143,782	0%	0	143,782
128		Interest Expense - SBA PPP	PLNT	0	0%	0	0	0	0%	0	0
129											
130		TOTAL INTEREST ON LONG TERM DEBT		4,268,544	0%	0	1,939,321	3,193,182	0%	0	1,450,754
131											
132		CONTRIBUTIONS AND DONATIONS									
133	4261	Contributions & Donations		0	0%	0	0	0	0%	0	0
134	4265	Other Deductions		0	0%	0	0	0	0%	0	0
135		TOTAL CONTRIBUTIONS AND DONATIONS		0		0	0	0		0	0
136											
137		TOTAL OPERATING COST OF SERVICE		129,917,683		94,322,804	35,594,879	10,431,482		0	10,431,482
138											
139		NET OTHER NON-OPERATING INCOME									
140	4240	Capital Credits	CWC	171,080	64%	109,650	61,430	7,393	0%	0	7,393
141	4180	Income (Loss) from KRS1 / KRS2H	GTD	(1,499,692)	0%	0	(1,499,692)	0	0%	0	0
142	4210	RLF Annual Admin Fee		0	0%	0	0	0	0%	0	0
143	4213	PPA Liquidated Damages		0	0%	0	0	0	0%	0	0
144		TOTAL OTHER NON-OPERATING INCOME		(1,328,612)		109,650	(1,438,262)	7,393		0	7,393
145											
146		INTEREST INCOME									
147	4214	SBA PPP Loan Forgiveness	CWC	0	64%	0	0	0	0%	0	0
148	4190	Interest Income - General	CWC	182	64%	117	66	8	0%	0	8
149	4191	Interest Income - DSM/IRP	INT	0	0%	0	0	0	0%	0	0
150	4192	Interest Income - RUS COC	INT	760	0%	0	760	515	0%	0	515
151	4193	Interest Income - FHB BSCM	INT	0	0%	0	0	0	0%	0	0
152	4194	Interest Income - CFC DF	INT	22,789	0%	0	22,789	15,438	0%	0	15,438
153	4195	Interest Income - CFC CP	INT	0	0%	0	0	0	0%	0	0
154	4196	Interest Income - CFC MTN	INT	0	0%	0	0	0	0%	0	0
155	4197	Interest Income - Member Capital	INT	7,554	0%	0	7,554	5,117	0%	0	5,117
156	4198	Interest Income - Select Notes	INT	0	0%	0	0	0	0%	0	0
157	4199	Interest Income - KRS1	Energy	852,000	100%	852,000	0	0	100%	0	0
158		0 Net Jobbing Sales	Rate_Base	0	0%	0	0	0	0%	0	0
159	4181	Net Rental Income - Eleele	GEN	28,123	0%	0	28,123	21,038	0%	0	21,038
160		TOTAL INTEREST INCOME		911,409		852,117	59,292	42,115		0	42,115

Daymark Allocated Cost of Service Model											
Kauai Island Utility Cooperative											
Classification											
FERC		2					3				
Line No.	Account Number	Account Description	Alloc	Generation	% Energy	Energy	Demand	Transmission	% Energy	Energy	Demand
161											
162		CAPITALIZED INTEREST		0	0%	0	0	0	0%	0	0
163											
164											
165		Patronage Capital or Margins	INT	(1,470,393)	0%	0	(1,470,393)	(996,045)	0%	0	(996,045)
166											
167		Operating Revenue Requirement		128,447,290	73%	94,322,804	34,124,486	9,435,437	0%	-	9,435,437
168		Less Non-Operating Revenue		(417,203)		961,767	(1,378,970)	49,508	0%	-	49,508
169		Less Other Electric Revenues	Rate_Base	0	0%	0	0	0	0%	0	0
170		Revenue Requirement from Rates		128,864,492	72%	93,361,037	35,503,456	9,385,928	0%	0	9,385,929
171											
172											
173											
174											
175											
176		TOTAL REVENUE REQUIREMENT BEFORE TAXES & OTHER REVENUE		119,879,947	75%	90,151,045	29,728,903	5,625,181	0%	-	5,625,181
177											
178		SUMMARY									
179		Operations and Maintenance Expense		118,426,516		91,112,812	27,313,704	3,287,170		-	3,287,170
180		Depreciation & Amortization		5,037,262		-	5,037,263	2,470,766		-	2,470,766
181		Taxes		4,268,544		3,209,992	1,058,552	3,193,182		-	3,193,182
182		Interest		2,185,361		-	2,185,361	1,480,364		-	1,480,364
183		Other Expenses		0		-	-	0		-	-
184		Patronage Capital or Margins		(1,470,393)		-	(1,470,393)	(996,045)		-	(996,045)
185		Non-Sales Revenue		417,203		(961,767)	1,378,970	(49,508)		-	(49,508)
186		TOTAL REVENUE REQUIREMENT FROM RATES		128,864,492	72%	93,361,037	35,503,456	9,385,928	0%	-	9,385,929
187											
188		REVENUE AT CURRENT RATES	TOTAL	128,864,492	72%	93,361,037	35,503,456	9,385,928	0%	0	9,385,928
189											
190		(DEFICIENCY)/SURPLUS		0		-	(1)	0		-	(0)
191											
192		RATE INCREASE TO EQUAL COS		0.0%		0.0%	0.0%	0.0%			0.0%

Daymark Allocated Cost of Service Model									
Kauai Island Utility Cooperative									
Classification		4				5			
Line No.	Account No. Account Description	Alloc	Distribution	% Demand	Demand	Customer	Customer Service	% Customer	Customer
1	OPERATING EXPENSES								
2	Generation Expense								
3	5000 Operation, Supervision & Engineering	Dmd	0	100%	0	0	0	100%	0
4	5020 Steam Expense	Dmd	0	100%	0	0	0	100%	0
5	5060 Rents	Dmd	0	100%	0	0	0	100%	0
6	5100 Maintenance Supervision & Engineering	Dmd	0	100%	0	0	0	100%	0
7	5110 Maintenance of Structures	Dmd	0	100%	0	0	0	100%	0
8	5120 Maintenance of Boilers	Dmd	0	100%	0	0	0	100%	0
9	5130 Maintenance of Electric Plant - Steam	Dmd	0	100%	0	0	0	100%	0
10	5360 Water for Power	Dmd	0	100%	0	0	0	100%	0
11	5420 Maintenance of Structures	Dmd	0	100%	0	0	0	100%	0
12	5430 Maintenance of Reservoirs, Dams & Waterways	Dmd	0	100%	0	0	0	100%	0
13	5440 Maintenance of Electric Plant - Hydro	Dmd	0	100%	0	0	0	100%	0
14	5460 Operation Supervision & Engineering - Hydro	Dmd	0	100%	0	0	0	100%	0
15	5473 Fuel	Energy	0	100%	0	0	0	100%	0
16	5480 Generation Expense	Dmd	0	100%	0	0	0	100%	0
17	5490 Misc. Other power Generation Expense	Dmd	0	100%	0	0	0	100%	0
18	5510 Maintenance Supervision & Engineering	Dmd	0	100%	0	0	0	100%	0
19	5520 Maintenance of Structures	Dmd	0	100%	0	0	0	100%	0
20	5530 Maintenance of Generation & Electric Equip	Dmd	0	100%	0	0	0	100%	0
21	5560 System Control & Load Dispatch	Dmd	0	100%	0	0	0	100%	0
22	Purchased Power	Energy	0	100%	0	0	0	100%	0
23	Total Generation		0		0	0	0		0
24									

Daymark Allocated Cost of Service Model										
Kauai Island Utility Cooperative										
Classification				4		5				
Line No.	Account Number	Account Description	Alloc	Distribution	% Demand	Demand	Customer	Customer Service	% Customer	Customer
25	Transmission Expense									
26	5600	Operation, Supervision & Engineering	Dmd	0	100%	0	0	0	100%	0
27	5620	Station Expense	Dmd	0	100%	0	0	0	100%	0
28	5630	Overhead Line Expense	Dmd	0	100%	0	0	0	100%	0
29	5660	Miscellaneous Transmission Expense	Dmd	0	100%	0	0	0	100%	0
30	5661	Environmental HCP	Dmd	0	100%	0	0	0	100%	0
31	5670	Rents	Dmd	0	100%	0	0	0	100%	0
32	Total Transmission - Operations			0		0	0	0		0
33										
34	5700	Maintenance of Station Equipment	Dmd	0	100%	0	0	0	100%	0
35	5710	Maintenance of Overhead Lines	Dmd	0	100%	0	0	0	100%	0
36	Total Transmission - Maintenance			0		0	0	0		0
37										
38	Distribution Expense									
39	5800	Operation, Supervision & Engineering	Dmd	48,295	100%	48,295	0	0	100%	0
40	5820	Station Expense	Dmd	254,360	100%	254,360	0	0	100%	0
41	5830	Overhead Line Expense	Dmd	15,964	100%	15,964	0	0	100%	0
42	5840	Underground Line Expense	Dmd	18,846	100%	18,846	0	0	100%	0
43	5860	Meter Expense	Cust	553,029	0%	0	553,029	0	100%	0
44	5880	Miscellaneous Distribution Expense	Cust	514,631	0%	0	514,631	0	100%	0
45	5881	Environmental HCP		0		0	0	0	100%	0
46	5890	Rents	Cust	14,376	0%	0	14,376	0	100%	0
47	Total Distribution - Operations			1,419,503		337,466	1,082,036	0		0
48										
49	5900	Maintenance Supervision & Engineering	Dmd	245,338	100%	245,338	0	0	100%	0
50	5910	Maintenance of Structures	Dmd	0	100%	0	0	0	100%	0
51	5920	Maintenance of Station Equipment	Dmd	563,319	100%	563,319	0	0	100%	0
52	5930	Maintenance of Overhead Lines	Dmd	3,856,118	100%	3,856,118	0	0	100%	0
53	5940	Maintenance of Underground Lines	Dmd	603,104	100%	603,104	0	0	100%	0
54	5950	Maintenance of Line Transformers	Dmd	1,380	100%	1,380	0	0	100%	0
55	5960	Maintenance of Street Lights & Signal Systems	Dmd	22,437	100%	22,437	0	0	100%	0
56	5970	Maintenance of Meters	Cust	14,400	0%	0	14,400	0	100%	0
57	Total Distribution - Maintenance			5,306,096		5,291,696	14,400	0		0
58										

Daymark Allocated Cost of Service Model										
Kauai Island Utility Cooperative										
Classification										
				4			5			
FERC										
Line	Account									
No.	Number	Account Description	Alloc	Distribution	% Demand	Demand	Customer	Customer Service	% Customer	Customer
59	Customer Accounts									
60	9010	Supervision - Customer Accounts	Cust	0	100%	0	0	456,536	100%	456,536
61	9020	Meter Reading Expense	Cust	0	100%	0	0	342,402	100%	342,402
62	9030	Customer Records & Collection	Cust	0	100%	0	0	1,972,055	100%	1,972,055
63	9040	Uncollectible Accounts	Cust	0	100%	0	0	176,210	100%	176,210
64	Total Customer Accounts			0		0	0	2,947,203		2,947,203
65										
66	Customer Service									
67	9070	Supervision - Customer Service Activities		0	100%	0	0	0	100%	0
68	9080	Solar Replacement Program	Cust	0	100%	0	0	14,000	100%	14,000
69	9081	Solar Water Heater Rebate	Cust	0	100%	0	0	51,000	100%	51,000
70	9082	Solar Water Heater Loan	Cust	0	100%	0	0	4,800	100%	4,800
71	9083	Appliance Rebate	Cust	0	100%	0	0	131,800	100%	131,800
72	9084	Efficient Water Heater	Cust	0	100%	0	0	7,500	100%	7,500
73	9085	Key Accounts	Cust	0	100%	0	0	22,500	100%	22,500
74	9086	Surge Protection Program	Cust	0	100%	0	0	0	100%	0
75	9087	CFL Program / Light Up A Life Program	Cust	0	100%	0	0	26,750	100%	26,750
76	9088	HBI Program	Cust	0	100%	0	0	16,000	100%	16,000
77	9089	In-Home Displays	Cust	0	100%	0	0	73,500	100%	73,500
78	9090	Information & Instructional Advertising	Cust	0	100%	0	0	94,768	100%	94,768
79	9100	Member Relations	Cust	0	100%	0	0	21,000	100%	21,000
80	Total Customer Service			0		0	0	463,618		463,618
81										
82	Marketing & Sales									
83	9110	Sales Expense		0	100%	0	0	0	100%	0
84	Total Marketing & Sales			0		0	0	0		0
85										

Daymark Allocated Cost of Service Model											
Kauai Island Utility Cooperative											
Classification											
				4			5				
Line No.	Account Number	Account Description	Alloc	Distribution	% Demand	Demand	Customer	Customer Service	% Customer	Customer	
86	Administrative										
87	9200	Administrative & General Services	LBR	2,649,425	89%	2,355,923	293,503	1,471,049	100%	1,471,049	
88	9210	Office Supplies & Expenses	LBR	301,158	89%	267,796	33,362	167,213	100%	167,213	
89	9230	Outside / Professional Services	OM_CWC	1,879,958	87%	1,629,564	250,394	787,843	100%	787,843	
90	9240	Property Insurance	PLNT	604,546	93%	561,387	43,159	65	100%	65	
91	9260	Employee Benefits	0								
92	9280	Regulatory Commission Expense-HPUC Fee	OM_CWC	250,426	87%	217,072	33,355	104,947	100%	104,947	
93	9280	Regulatory Commission Expense-Other	OM_CWC	346,317	87%	300,191	46,126	145,133	100%	145,133	
94	9289	Legislative Expense	OM_CWC	40,361	87%	34,985	5,376	16,914	100%	16,914	
95	9300	Other General Expense	LBR	222,804	89%	198,121	24,682	123,708	100%	123,708	
96	9301	Community Outreach	LBR	99,760	89%	88,709	11,051	55,390	100%	55,390	
97	9302	USFFW SOS Shearwater Program Outreach	LBR	4,109	89%	3,654	455	2,281	100%	2,281	
98	9310	Rents	GEN	705,185	93%	654,842	50,343	76	100%	76	
99	9350	Maintenance of General Plant	GEN	748,442	93%	695,011	53,431	81	100%	81	
100	Total Administrative			7,852,492		7,007,255	845,238	2,874,700		2,874,700	
101											
102	TOTAL OPERATIONS EXPENSE				14,578,091	87%	12,636,417	1,941,674	6,285,522	100%	6,285,522
103											
104	4030	Depreciation Expense - System		8,825,668	88%	7,784,372	1,041,296	2,877	100%	2,877	
105											
106	4060	Amortization Expense - Acquisition Adj		0	100%	0	0	0	100%	0	
107	TOTAL DEPRECIATION AND AMORTIZATION			8,825,667		7,784,372	1,041,296	2,877		2,877	
108											
109		State HPUC Tax	COS	5,145,739	93%	4,791,828	353,911	554	100%	554	
110		CK Franchise & License Tax	COS	2,185,955	93%	2,035,611	150,345	235	100%	235	
111		Income Tax on Non-Op Income	COS	18,856	93%	17,559	1,297	2	100%	2	
112		State Income Tax	COS	0	93%	0	0	0	100%	0	
113		Federal Income Tax	COS	0	93%	0	0	0	100%	0	
114	TOTAL TAXES OTHER THAN INCOME			3,339,565		6,844,998	505,553	359		791	
115											
116	TOTAL COST OF ELECTRIC SERVICE				30,754,309	89%	27,265,787	3,488,523	6,289,190	100%	6,289,190

Daymark Allocated Cost of Service Model										
Kauai Island Utility Cooperative										
Classification				4		5				
Line No.	Account Number	Account Description	Alloc	Distribution	% Demand	Demand	Customer	Customer Service	% Customer	Customer
117		FERC								
118		Interest on ST Debt								
119		Interest Expense - Customer Deposits		0	100%	0	0	0	100%	0
120		Additional Short-Term Debt	CWC	131,318	100%	131,318	0	55,032	100%	55,032
121		TOTAL INTEREST ON SHORT TERM DEBT		131,318	100%	131,318	0	55,032	100%	55,032
122										
123		Interest on LT Debt								
124		Interest Expense - RUS	PLNT	0	100%	0	0	0	100%	0
125		Interest Expense - CFC	PLNT	1,298,907	93%	1,206,178	92,729	140	100%	140
126		Interest Expense - FFB	PLNT	1,709,679	93%	1,587,625	122,054	184	100%	184
127		Interest Expense - CoBank	PLNT	330,979	93%	307,351	23,629	36	100%	36
128		Interest Expense - SBA PPP	PLNT	0	93%	0	0	0	100%	0
129										
130		TOTAL INTEREST ON LONG TERM DEBT		7,350,551	42%	3,101,153	238,412	791	45%	359
131										
132		CONTRIBUTIONS AND DONATIONS								
133	4261	Contributions & Donations		0	100%	0	0	0	100%	0
134	4265	Other Deductions		0	100%	0	0	0	100%	0
135		TOTAL CONTRIBUTIONS AND DONATIONS		0		0	0	0		0
136										
137		TOTAL OPERATING COST OF SERVICE		34,225,192		30,498,258	3,726,935	6,344,582		6,344,582
138										
139		NET OTHER NON-OPERATING INCOME								
140	4240	Capital Credits	CWC	32,787	87%	28,420	4,367	13,740	100%	13,740
141	4180	Income (Loss) from KRS1 / KRS2H	GTD	0	93%	0	0	0	100%	0
142	4210	RLF Annual Admin Fee		0	0%	0	0	0	0%	0
143	4213	PPA Liquidated Damages		0	0%	0	0	0	0%	0
144		TOTAL OTHER NON-OPERATING INCOME		32,787		28,420	4,367	13,740		13,740
145										
146		INTEREST INCOME								
147	4214	SBA PPP Loan Forgiveness	CWC	0	87%	0	0	0	100%	0
148	4190	Interest Income - General	CWC	35	87%	30	5	15	100%	15
149	4191	Interest Income - DSM/IRP	INT	0	43%	0	0	0	100%	0
150	4192	Interest Income - RUS COC	INT	1,207	43%	521	685	19	100%	19
151	4193	Interest Income - FHB BSCM	INT	0	43%	0	0	0	100%	0
152	4194	Interest Income - CFC DF	INT	36,195	43%	15,638	20,557	578	100%	578
153	4195	Interest Income - CFC CP	INT	0	43%	0	0	0	100%	0
154	4196	Interest Income - CFC MTN	INT	0	43%	0	0	0	100%	0
155	4197	Interest Income - Member Capital	INT	11,998	43%	5,183	6,814	191	100%	191
156	4198	Interest Income - Select Notes	INT	0	43%	0	0	0	100%	0
157	4199	Interest Income - KRS1	Energy	0	0%	0	0	0	0%	0
158		0 Net Jobbing Sales	Rate_Base	94,056	96%	89,928	4,128	0	0%	0
159	4181	Net Rental Income - Eleele	GEN	48,429	93%	44,972	3,457	5	100%	5
160		TOTAL INTEREST INCOME		191,919		156,273	35,647	808		808

		Daymark Allocated Cost of Service Model								
		Kauai Island Utility Cooperative								
		Classification								
						4		5		
FERC										
Line No.	Account Number	Account Description	Alloc	Distribution	% Demand	Demand	Customer	Customer Service	% Customer	Customer
161										
162		CAPITALIZED INTEREST		0	100%	0	0	0	100%	0
163										
164										
165		Patronage Capital or Margins	INT	(2,335,341)	43%	(1,008,962)	(1,326,379)	(37,269)	100%	(37,269)
166										
167		Operating Revenue Requirement		31,889,851	92%	29,489,296	2,400,556	6,307,312	100%	6,307,312
168		Less Non-Operating Revenue		224,706	82%	184,693	40,014	14,548	100%	14,548
169		Less Other Electric Revenues	Rate_Base	(825,938)	96%	(789,690)	(36,248)	0	0%	0
170		Revenue Requirement from Rates		32,491,082	93%	30,094,294	2,396,790	6,292,764	100%	6,292,764
171										
172										
173										
174										
175										
176		TOTAL REVENUE REQUIREMENT BEFORE TAXES & OTHER REVENUE		22,623,469	93%	21,067,483	1,555,987	5,237,135	100%	5,237,135
177										
178		SUMMARY								
179		Operations and Maintenance Expense		14,578,091		12,636,417	1,941,674	6,285,522		6,285,522
180		Depreciation & Amortization		8,825,667		7,784,372	1,041,296	2,877		2,877
181		Taxes		7,350,551		6,844,998	505,553	791		791
182		Interest		3,470,883		3,232,471	238,412	55,391		55,391
183		Other Expenses		0		-	-	0		-
184		Patronage Capital or Margins		(2,335,341)		(1,008,962)	(1,326,379)	(37,269)		(37,269)
185		Non-Sales Revenue		601,232		604,998	(3,766)	(14,548)		(14,548)
186		TOTAL REVENUE REQUIREMENT FROM RATES		32,491,082	93%	30,094,294	2,396,790	6,292,764	100%	6,292,764
187										
188		REVENUE AT CURRENT RATES	TOTAL	32,491,082	93%	30,094,294	2,396,789	6,292,764	100%	6,292,764
189										
190		(DEFICIENCY)/SURPLUS		0		-	(1)	-		-
191										
192		RATE INCREASE TO EQUAL COS		0.0%		0.0%	0.0%	0.0%		0.0%

Daymark Allocated Cost of Service Model										
Kauai Island Utility Cooperative										
Generation - Energy										
FERC										
Line	Account			2	3	4	5	6	7	8
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation Streetlighting
81										
82		Marketing & Sales								
83	9110.00	Sales Expense	-							
84		Total Marketing & Sales	-		0	0	0	0	0	0
85										
86		Administrative								
87	9200.00	Administrative & General Services	-							
88	9210.00	Office Supplies & Expenses	-							
89	9230.00	Outside / Professional Services	-							
90	9240.00	Property Insurance	-							
91	9260.00	Employee Benefits	-							
92	9280.00	Regulatory Commission Expense-HPUC Fee	-							
93	9280.00	Regulatory Commission Expense-Other	-							
94	9289.00	Legislative Expense	-							
95	9300.00	Other General Expense	-							
96	9301.00	Community Outreach	-							
97	9302.00	USFFW SOS Shearwater Program Outreach	-							
98	9310.00	Rents	-							
99	9350.00	Maintenance of General Plant	-							
100		Total Administrative	-		0	0	0	0	0	0
101										
102		TOTAL OPERATIONS EXPENSE	91,112,812		38,111,601	12,668,500	9,494,118	21,236,549	9,298,559	149,340 154,145
103										
104	4030.00	Depreciation Expense - System	-							
105										
106	4060.00	Amortization Expense - Acquisition Adj	-							
107		TOTAL DEPRECIATION AND AMORTIZATION	-		0	0	0	0	0	0
108										
109		State HPUC Tax	2,247,149	Generation	939,960	312,448	234,157	523,765	229,334	3,683 3,802
110		CK Franchise & License Tax	954,609	Generation	399,304	132,731	99,472	222,500	97,423	1,565 1,615
111		Income Tax on Non-Op Income	8,235	Generation	3,444	1,145	858	1,919	840	13 14
112		State Income Tax	-	Generation						
113		Federal Income Tax	-	Generation						
114		TOTAL TAXES OTHER THAN INCOME	3,209,992		1,342,708	446,323	334,487	748,184	327,597	5,261 5,431
115										
116		TOTAL COST OF ELECTRIC SERVICE	94,322,804		39,454,309	13,114,824	9,828,605	21,984,733	9,626,156	154,602 159,575
117										
118		Interest Expense - Customer Deposits	-							
119		Additional Short-Term Debt	-							
120		TOTAL INTEREST ON SHORT TERM DEBT	-		0	0	0	0	0	0
121										

Daymark Allocated Cost of Service Model										
Kauai Island Utility Cooperative										
Generation - Energy										
FERC										
Line	Account									
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation Streetlighting
122		INTEREST EXPENSE								
123		Interest Expense - RUS	-							
124		Interest Expense - CFC	-							
125		Interest Expense - FFB	-							
126		Interest Expense - CoBank	-							
127		Interest Expense - SBA PPP	-							
128										
129		TOTAL INTEREST ON LONG TERM DEBT	-		0	0	0	0	0	0
130										
131		OTHER DEDUCTIONS								
132	4261.00	Contributions & Donations	-							
133	4265.00	Other Deductions	-							
134		TOTAL CONTRIBUTIONS AND DONATIONS	-		0	0	0	0	0	0
135										
136		Total Electric COS	94,322,804		39,454,309	13,114,824	9,828,605	21,984,733	9,626,156	154,602 159,575
137										
138		Other Income & Capital Credits								
139	4240.00	Capital Credits	109,650	Generation	45,866	15,246	11,426	25,557	11,190	180 186
140	4180.00	Income (Loss) from KRS1 / KRS2H	-	Generation						
141	4210.00	RLF Annual Admin Fee	-							
142	4213.00	PPA Liquidated Damages	-							
143		TOTAL OTHER NON-OPERATING INCOME	109,650		45,866	15,246	11,426	25,557	11,190	180 186
144										
145		Interest During Construction								
146	4214.00	SBA PPP Loan Forgiveness	-	Generation						
147	4190.00	Interest Income - General	117	Generation	49	16	12	27	12	0 0
148	4191.00	Interest Income - DSM/IRP	-	Generation						
149	4192.00	Interest Income - RUS COC	-	Generation						
150	4193.00	Interest Income - FHB BSCM	-	Generation						
151	4194.00	Interest Income - CFC DF	-	Generation						
152	4195.00	Interest Income - CFC CP	-	Generation						
153	4196.00	Interest Income - CFC MTN	-	Generation						
154	4197.00	Interest Income - Member Capital	-	Generation						
155	4198.00	Interest Income - Select Notes	-	Generation						
156	4199.00	Interest Income - KRS1	852,000	Generation	356,383	118,464	88,780	198,584	86,951	1,396 1,441
157	0.00	Net Jobbing Sales	-							
158	4181.00	Net Rental Income - Eleele	-	Generation						
159		TOTAL INTEREST INCOME	852,117		356,432	118,480	88,792	198,611	86,963	1,397 1,442
160										
161		CAPITALIZED INTEREST	-							
162										
163		Patronage Capital or Margins	-		0	0	0	0	0	0
164										
165		Operating Revenue Requirement	94,322,804		39,454,309	13,114,824	9,828,605	21,984,733	9,626,156	154,602 159,575
166		Less Non-Operating Revenue	961,767		402,298	133,726	100,218	224,168	98,154	1,576 1,627
167		Less Other Electric Revenues	-		0	0	0	0	0	0

Daymark Allocated Cost of Service Model											
Kauai Island Utility Cooperative											
Generation - Energy											
FERC				2	3	4	5	6	7	8	
Line No.	Account Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation	Streetlighting
168		Revenue Requirement from Rates	93,361,037		39,052,011	12,981,098	9,728,387	21,760,564	9,528,003	153,025	157,948
169											
170											
171											
172											
173											
174		TOTAL REVENUE REQUIREMENT BEFORE TAXES & OTHER REVENUE	90,151,045		37,709,303	12,534,774	9,393,901	21,012,380	9,200,405	147,764	152,518
175											
176		SUMMARY									
177		Operations and Maintenance Expense	91,112,812		38,111,601	12,668,500	9,494,118	21,236,549	9,298,559	149,340	154,145
178		Depreciation & Amortization	-		-	-	-	-	-	-	-
179		Taxes	3,209,992		1,342,708	446,323	334,487	748,184	327,597	5,261	5,431
180		Interest	-		-	-	-	-	-	-	-
181		Other Expenses	-		-	-	-	-	-	-	-
182		Patronage Capital or Margins	-		-	-	-	-	-	-	-
183		Non-Sales Revenue	(961,767)		(402,298)	(133,726)	(100,218)	(224,168)	(98,154)	(1,576)	(1,627)
184		TOTAL REVENUE REQUIREMENT FROM RATES	93,361,037		39,052,011	12,981,098	9,728,387	21,760,564	9,528,003	153,025	157,948
185											
186		REVENUE AT CURRENT RATES	93,361,037	Revenues	40,171,429	13,729,452	9,589,242	20,576,021	8,837,234	79,951	377,708
187											
188		(DEFICIENCY)/SURPLUS	-		1,119,418	748,354	(139,145)	(1,184,544)	(690,768)	(73,075)	219,759
189											
190		RATE INCREASE TO EQUAL COS	0.0%		-2.8%	-5.5%	1.5%	5.8%	7.8%	91.4%	-58.2%
191											

Daymark Allocated Cost of Service Model										
Kauai Island Utility Cooperative										
Generation - Demand										
FERC										
Line	Account									
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation Streetlighting
1 OPERATING EXPENSES										
2 Generation Expense										
3	5000	Operation, Supervision & Engineering	1,059,150	A&E wo Irrig Excess	477,898	148,788	104,148	225,018	99,920	1,223 2,154
4	5020	Steam Expense	1,231,716	A&E wo Irrig Excess	555,762	173,030	121,117	261,680	116,200	1,422 2,505
5	5060	Rents	-	A&E wo Irrig Excess						
6	5100	Maintenance Supervision & Engineering	-	A&E wo Irrig Excess						
7	5110	Maintenance of Structures	186,780	A&E wo Irrig Excess	84,277	26,239	18,366	39,682	17,621	216 380
8	5120	Maintenance of Boilers	105,360	A&E wo Irrig Excess	47,539	14,801	10,360	22,384	9,940	122 214
9	5130	Maintenance of Electric Plant - Steam	34,300	A&E wo Irrig Excess	15,476	4,818	3,373	7,287	3,236	40 70
10	5360	Water for Power	144,000	A&E wo Irrig Excess	64,974	20,229	14,160	30,593	13,585	166 293
11	5420	Maintenance of Structures	7,200	A&E wo Irrig Excess	3,249	1,011	708	1,530	679	8 15
12	5430	Maintenance of Reservoirs, Dams & Waterways	216,000	A&E wo Irrig Excess	97,461	30,343	21,240	45,890	20,377	249 439
13	5440	Maintenance of Electric Plant - Hydro	6,300	A&E wo Irrig Excess	2,843	885	619	1,338	594	7 13
14	5460	Operation Supervision & Engineering - Hydro	710,509	A&E wo Irrig Excess	320,588	99,811	69,866	150,949	67,030	820 1,445
15	5473	Fuel	-							
16	5480	Generation Expense	3,621,767	A&E wo Irrig Excess	1,634,175	508,782	356,136	769,450	341,678	4,180 7,366
17	5490	Misc. Other power Generation Expense	792,464	A&E wo Irrig Excess	357,567	111,324	77,925	168,360	74,761	915 1,612
18	5510	Maintenance Supervision & Engineering	628,813	A&E wo Irrig Excess	283,726	88,335	61,833	133,592	59,322	726 1,279
19	5520	Maintenance of Structures	98,900	A&E wo Irrig Excess	44,625	13,893	9,725	21,011	9,330	114 201
20	5530	Maintenance of Generation & Electric Equip	5,770,952	A&E wo Irrig Excess	2,603,907	810,697	567,470	1,226,048	544,432	6,661 11,738
21	5560	System Control & Load Dispatch	86,400	A&E wo Irrig Excess	38,984	12,137	8,496	18,356	8,151	100 176
22	0	Purchased Power	-	A&E wo Irrig Excess						
23		Total Generation	14,700,611		6,633,051	2,065,125	1,445,542	3,123,167	1,386,857	16,968 29,900
24										
25 Transmission Expense										
26	5600.00	Operation, Supervision & Engineering	-							
27	5620.00	Station Expense	-							
28	5630.00	Overhead Line Expense	-							
29	5660.00	Miscellaneous Transmission Expense	-							
30	5661.00	Environmental HCP	-							
31	5670.00	Rents	-							
32		Total Transmission - Operations	-		0	0	0	0	0	0 0
33										
34	5700.00	Maintenance of Station Equipment	-							
35	5710.00	Maintenance of Overhead Lines	-							
36		Total Transmission - Maintenance	-		0	0	0	0	0	0 0

Daymark Allocated Cost of Service Model										
Kauai Island Utility Cooperative										
Generation - Demand										
FERC										
Line	Account									
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation Streetlighting
37										
38		Distribution Expense								
39	5800.00	Operation, Supervision & Engineering	-							
40	5820.00	Station Expense	-							
41	5830.00	Overhead Line Expense	-							
42	5840.00	Underground Line Expense	-							
43	5860.00	Meter Expense	-							
44	5880.00	Miscellaneous Distribution Expense	-							
45	5881.00	Environmental HCP	-							
46	5890.00	Rents	-							
47		Total Distribution - Operations	-		0	0	0	0	0	0
48										
49	5900.00	Maintenance Supervision & Engineering	-							
50	5910.00	Maintenance of Structures	-							
51	5920.00	Maintenance of Station Equipment	-							
52	5930.00	Maintenance of Overhead Lines	-							
53	5940.00	Maintenance of Underground Lines	-							
54	5950.00	Maintenance of Line Transformers	-							
55	5960.00	Maintenance of Street Lights & Signal Systems	-							
56	5970.00	Maintenance of Meters	-							
57		Total Distribution - Maintenance	-		0	0	0	0	0	0
58										
59		Customer Accounts								
60	9010.00	Supervision - Customer Accounts	-							
61	9020.00	Meter Reading Expense	-							
62	9030.00	Customer Records & Collection	-							
63	9040.00	Uncollectible Accounts	-							
64		Total Customer Accounts	-		0	0	0	0	0	0
65										
66		Customer Service								
67	9070.00	Supervision - Customer Service Activities	-							
68	9080.00	Solar Replacement Program	-							A&E wo Irrig Excess
69	9081.00	Solar Water Heater Rebate	-							A&E wo Irrig Excess
70	9082.00	Solar Water Heater Loan	-							A&E wo Irrig Excess
71	9083.00	Appliance Rebate	-							A&E wo Irrig Excess
72	9084.00	Efficient Water Heater	-							A&E wo Irrig Excess
73	9085.00	Key Accounts	-							
74	9086.00	Surge Protection Program	-							
75	9087.00	CFL Program / Light Up A Life Program	-							A&E wo Irrig Excess
76	9088.00	HBI Program	-							A&E wo Irrig Excess
77	9089.00	In-Home Displays	-							A&E wo Irrig Excess
78	9090.00	Information & Instructional Advertising	-							
79	9100.00	Member Relations	-							
80		Total Customer Service	-		0	0	0	0	0	0

Daymark Allocated Cost of Service Model										
Kauai Island Utility Cooperative										
Generation - Demand										
FERC										
Line	Account									
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation Streetlighting
81										
82		Marketing & Sales								
83	9110.00	Sales Expense	-							
84		Total Marketing & Sales	-		0	0	0	0	0	0
85										
86		Administrative								
87	9200.00	Administrative & General Services	5,417,993	A&E wo Irrig Excess	2,444,649	761,113	532,763	1,151,061	511,134	6,254 11,020
88	9210.00	Office Supplies & Expenses	615,860	A&E wo Irrig Excess	277,882	86,515	60,559	130,840	58,100	711 1,253
89	9230.00	Outside / Professional Services	3,522,315	A&E wo Irrig Excess	1,589,301	494,811	346,357	748,321	332,296	4,066 7,164
90	9240.00	Property Insurance	351,066	A&E wo Irrig Excess	158,404	49,317	34,521	74,585	33,120	405 714
91	9260.00	Employee Benefits		A&E wo Irrig Excess						
92	9280.00	Regulatory Commission Expense-HPUC Fee	469,202	A&E wo Irrig Excess	211,708	65,913	46,138	99,683	44,265	542 954
93	9280.00	Regulatory Commission Expense-Other	648,864	A&E wo Irrig Excess	292,774	91,152	63,804	137,852	61,214	749 1,320
94	9289.00	Legislative Expense	75,620	A&E wo Irrig Excess	34,121	10,623	7,436	16,066	7,134	87 154
95	9300.00	Other General Expense	455,626	A&E wo Irrig Excess	205,583	64,006	44,803	96,798	42,984	526 927
96	9301.00	Community Outreach	204,007	A&E wo Irrig Excess	92,050	28,659	20,060	43,342	19,246	235 415
97	9302.00	USFFW SOS Shearwater Program Outreach	8,403	A&E wo Irrig Excess	3,791	1,180	826	1,785	793	10 17
98	9310.00	Rents	409,509	A&E wo Irrig Excess	184,774	57,527	40,268	87,001	38,633	473 833
99	9350.00	Maintenance of General Plant	434,629	A&E wo Irrig Excess	196,108	61,056	42,738	92,337	41,003	502 884
100		Total Administrative	12,613,093		5,691,144	1,771,873	1,240,272	2,679,671	1,189,921	14,558 25,654
101										
102		TOTAL OPERATIONS EXPENSE	27,313,704		12,324,196	3,836,997	2,685,815	5,802,838	2,576,778	31,526 55,554
103										
104	4030.00	Depreciation Expense - System	5,037,263	A&E wo Irrig Excess	2,272,859	707,629	495,325	1,070,174	475,216	5,814 10,245
105										
106	4060.00	Amortization Expense - Acquisition Adj	-	A&E wo Irrig Excess						
107		TOTAL DEPRECIATION AND AMORTIZATION	5,037,263		2,272,859	707,629	495,325	1,070,174	475,216	5,814 10,245
108										
109		State HPUC Tax	741,037	A&E wo Irrig Excess	334,363	104,100	72,868	157,434	69,910	855 1,507
110		CK Franchise & License Tax	314,799	A&E wo Irrig Excess	142,040	44,223	30,955	66,880	29,698	363 640
111		Income Tax on Non-Op Income	2,716	A&E wo Irrig Excess	1,225	381	267	577	256	3 6
112		State Income Tax	-	A&E wo Irrig Excess						
113		Federal Income Tax	-	A&E wo Irrig Excess						
114		TOTAL TAXES OTHER THAN INCOME	1,058,552		477,628	148,704	104,090	224,891	99,864	1,222 2,153
115										
116		TOTAL COST OF ELECTRIC SERVICE	33,409,518		15,074,683	4,693,330	3,285,229	7,097,903	3,151,858	38,562 67,953
117										
118		Interest Expense - Customer Deposits	-	A&E wo Irrig Excess						
119		Additional Short-Term Debt	246,039	A&E wo Irrig Excess	111,015	34,563	24,194	52,271	23,211	284 500
120		TOTAL INTEREST ON SHORT TERM DEBT	246,039		111,015	34,563	24,194	52,271	23,211	284 500
121										

Daymark Allocated Cost of Service Model										
Kauai Island Utility Cooperative										
Generation - Demand										
FERC										
Line	Account			2	3	4	5	6	7	8
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation Streetlighting
122	INTEREST EXPENSE									
123		Interest Expense - RUS	-	A&E wo Irrig Excess						
124		Interest Expense - CFC	754,289	A&E wo Irrig Excess	340,342	105,962	74,171	160,250	71,160	871 1,534
125		Interest Expense - FFB	992,829	A&E wo Irrig Excess	447,974	139,471	97,627	210,928	93,664	1,146 2,019
126		Interest Expense - CoBank	192,203	A&E wo Irrig Excess	86,724	27,000	18,900	40,834	18,132	222 391
127		Interest Expense - SBA PPP	-	A&E wo Irrig Excess						
128										
129		TOTAL INTEREST ON LONG TERM DEBT	1,939,321		875,040	272,434	190,698	412,012	182,956	2,238 3,944
130										
131	CONTRIBUTIONS AND DONATIONS									
132	4261.00	Contributions & Donations	-	A&E wo Irrig Excess						
133	4265.00	Other Deductions	-	A&E wo Irrig Excess						
134		TOTAL CONTRIBUTIONS AND DONATIONS	-		0	0	0	0	0	0
135										
136		Total Electric COS	35,594,879		16,060,738	5,000,327	3,500,120	7,562,186	3,358,025	41,085 72,398
137										
138	NET OTHER NON-OPERATING INCOME									
139	4240.00	Capital Credits	61,430	A&E wo Irrig Excess	27,718	8,630	6,041	13,051	5,795	71 125
140	4180.00	Income (Loss) from KRS1 / KRS2H	(1,499,692)	A&E wo Irrig Excess	(676,675)	(210,675)	(147,468)	(318,612)	(141,481)	(1,731) (3,050)
141	4210.00	RLF Annual Admin Fee	-							
142	4213.00	PPA Liquidated Damages	-							
143		TOTAL OTHER NON-OPERATING INCOME	(1,438,262)		(648,957)	(202,045)	(141,427)	(305,561)	(135,686)	(1,660) (2,925)
144										
145	INTEREST INCOME									
146	4214.00	SBA PPP Loan Forgiveness	-	A&E wo Irrig Excess						
147	4190.00	Interest Income - General	66	A&E wo Irrig Excess	30	9	6	14	6	0 0
148	4191.00	Interest Income - DSM/IRP	-	A&E wo Irrig Excess						
149	4192.00	Interest Income - RUS COC	760	A&E wo Irrig Excess	343	107	75	161	72	1 2
150	4193.00	Interest Income - FHB BSCM	-	A&E wo Irrig Excess						
151	4194.00	Interest Income - CFC DF	22,789	A&E wo Irrig Excess	10,283	3,201	2,241	4,842	2,150	26 46
152	4195.00	Interest Income - CFC CP	-	A&E wo Irrig Excess						
153	4196.00	Interest Income - CFC MTN	-	A&E wo Irrig Excess						
154	4197.00	Interest Income - Member Capital	7,554	A&E wo Irrig Excess	3,408	1,061	743	1,605	713	9 15
155	4198.00	Interest Income - Select Notes	-	A&E wo Irrig Excess						
156	4199.00	Interest Income - KRS1	-	A&E wo Irrig Excess						
157	0.00	Net Jobbing Sales	-	A&E wo Irrig Excess						
158	4181.00	Net Rental Income - Eleele	28,123	A&E wo Irrig Excess	12,690	3,951	2,765	5,975	2,653	32 57
159		TOTAL INTEREST INCOME	59,292	A&E wo Irrig Excess	26,753	8,329	5,830	12,597	5,594	68 121
160										
161		CAPITALIZED INTEREST	-							
162										
163		Patronage Capital or Margins	(1,470,393)	A&E wo Irrig Excess	(663,455)	(206,559)	(144,587)	(312,387)	(138,717)	(1,697) (2,991)
164										
165		Operating Revenue Requirement	34,124,486		15,397,283	4,793,768	3,355,533	7,249,799	3,219,308	39,388 69,407
166		Less Non-Operating Revenue	(1,378,970)		(622,204)	(193,716)	(135,597)	(292,964)	(130,092)	(1,592) (2,805)
167		Less Other Electric Revenues	-		0	0	0	0	0	0 0

Daymark Allocated Cost of Service Model											
Kauai Island Utility Cooperative											
Generation - Demand											
FERC											
Line No.	Account Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation	Streetlighting
168		Revenue Requirement from Rates	35,503,456		16,019,488	4,987,484	3,491,130	7,542,763	3,349,400	40,979	72,212
169											
170											
171											
172											
173											
174		TOTAL REVENUE REQUIREMENT BEFORE TAXES & OTHER REVENUE	29,728,903		13,413,956	4,176,282	2,923,306	6,315,951	2,804,628	34,314	60,467
175											
176		SUMMARY									
177		Operations and Maintenance Expense	27,313,704		12,324,196	3,836,997	2,685,815	5,802,838	2,576,778	31,526	55,554
178		Depreciation & Amortization	5,037,263		2,272,859	707,629	495,325	1,070,174	475,216	5,814	10,245
179		Taxes	1,058,552		477,628	148,704	104,090	224,891	99,864	1,222	2,153
180		Interest	2,185,361		986,055	306,997	214,891	464,283	206,167	2,522	4,445
181		Other Expenses	-		-	-	-	-	-	-	-
182		Patronage Capital or Margins	(1,470,393)		(663,455)	(206,559)	(144,587)	(312,387)	(138,717)	(1,697)	(2,991)
183		Non-Sales Revenue	1,378,970		622,204	193,716	135,597	292,964	130,092	1,592	2,805
184		TOTAL REVENUE REQUIREMENT FROM RATES	35,503,456		16,019,488	4,987,484	3,491,130	7,542,763	3,349,400	40,979	72,212
185											
186		REVENUE AT CURRENT RATES	35,503,456	Revenues	15,276,443	5,221,054	3,646,609	7,824,676	3,360,635	30,404	143,635
187											
188		(DEFICIENCY)/SURPLUS	(1)		(743,044)	233,570	155,479	281,913	11,235	(10,575)	71,424
189											
190		RATE INCREASE TO EQUAL COS	0.0%		4.9%	-4.5%	-4.3%	-3.6%	-0.3%	34.8%	-49.7%

Daymark Allocated Cost of Service Model											
Kauai Island Utility Cooperative											
Generation - Total											
FERC											
Line	Account		2	3	4	5	6	7	8		
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation	Streetlighting
1 OPERATING EXPENSES											
2 Generation Expense											
3	5000	Operation, Supervision & Engineering	1,059,150		477,898	148,788	104,148	225,018	99,920	1,223	2,154
4	5020	Steam Expense	1,231,716		555,762	173,030	121,117	261,680	116,200	1,422	2,505
5	5060	Rents	-		0	0	0	0	0	0	0
6	5100	Maintenance Supervision & Engineering	-		0	0	0	0	0	0	0
7	5110	Maintenance of Structures	186,780		84,277	26,239	18,366	39,682	17,621	216	380
8	5120	Maintenance of Boilers	105,360		47,539	14,801	10,360	22,384	9,940	122	214
9	5130	Maintenance of Electric Plant - Steam	34,300		15,476	4,818	3,373	7,287	3,236	40	70
10	5360	Water for Power	144,000		64,974	20,229	14,160	30,593	13,585	166	293
11	5420	Maintenance of Structures	7,200		3,249	1,011	708	1,530	679	8	15
12	5430	Maintenance of Reservoirs, Dams & Waterways	216,000		97,461	30,343	21,240	45,890	20,377	249	439
13	5440	Maintenance of Electric Plant - Hydro	6,300		2,843	885	619	1,338	594	7	13
14	5460	Operation Supervision & Engineering - Hydro	710,509		320,588	99,811	69,866	150,949	67,030	820	1,445
15	5473	Fuel	43,517,851		18,203,093	6,050,806	4,534,638	10,143,129	4,441,234	71,329	73,624
16	5480	Generation Expense	3,621,767		1,634,175	508,782	356,136	769,450	341,678	4,180	7,366
17	5490	Misc. Other power Generation Expense	792,464		357,567	111,324	77,925	168,360	74,761	915	1,612
18	5510	Maintenance Supervision & Engineering	628,813		283,726	88,335	61,833	133,592	59,322	726	1,279
19	5520	Maintenance of Structures	98,900		44,625	13,893	9,725	21,011	9,330	114	201
20	5530	Maintenance of Generation & Electric Equip	5,770,952		2,603,907	810,697	567,470	1,226,048	544,432	6,661	11,738
21	5560	System Control & Load Dispatch	86,400		38,984	12,137	8,496	18,356	8,151	100	176
22	0	Purchased Power	47,594,961		19,908,508	6,617,695	4,959,480	11,093,420	4,857,325	78,011	80,521
23		Total Generation	105,813,423		44,744,652	14,733,625	10,939,661	24,359,716	10,685,416	166,308	184,045
24											
25 Transmission Expense											
26	5600.00	Operation, Supervision & Engineering	-		0	0	0	0	0	0	0
27	5620.00	Station Expense	-		0	0	0	0	0	0	0
28	5630.00	Overhead Line Expense	-		0	0	0	0	0	0	0
29	5660.00	Miscellaneous Transmission Expense	-		0	0	0	0	0	0	0
30	5661.00	Environmental HCP	-		0	0	0	0	0	0	0
31	5670.00	Rents	-		0	0	0	0	0	0	0
32		Total Transmission - Operations	-		0	0	0	0	0	0	0
33											
34	5700.00	Maintenance of Station Equipment	-		0	0	0	0	0	0	0
35	5710.00	Maintenance of Overhead Lines	-		0	0	0	0	0	0	0
36		Total Transmission - Maintenance	-		0	0	0	0	0	0	0

Daymark Allocated Cost of Service Model										
Kauai Island Utility Cooperative										
Generation - Total										
FERC										
Line	Account		2	3	4	5	6	7	8	
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation Streetlighting
37										
38		Distribution Expense								
39	5800.00	Operation, Supervision & Engineering	-		0	0	0	0	0	0
40	5820.00	Station Expense	-		0	0	0	0	0	0
41	5830.00	Overhead Line Expense	-		0	0	0	0	0	0
42	5840.00	Underground Line Expense	-		0	0	0	0	0	0
43	5860.00	Meter Expense	-		0	0	0	0	0	0
44	5880.00	Miscellaneous Distribution Expense	-		0	0	0	0	0	0
45	5881.00	Environmental HCP	-		0	0	0	0	0	0
46	5890.00	Rents	-		0	0	0	0	0	0
47		Total Distribution - Operations	-		0	0	0	0	0	0
48										
49	5900.00	Maintenance Supervision & Engineering	-		0	0	0	0	0	0
50	5910.00	Maintenance of Structures	-		0	0	0	0	0	0
51	5920.00	Maintenance of Station Equipment	-		0	0	0	0	0	0
52	5930.00	Maintenance of Overhead Lines	-		0	0	0	0	0	0
53	5940.00	Maintenance of Underground Lines	-		0	0	0	0	0	0
54	5950.00	Maintenance of Line Transformers	-		0	0	0	0	0	0
55	5960.00	Maintenance of Street Lights & Signal Systems	-		0	0	0	0	0	0
56	5970.00	Maintenance of Meters	-		0	0	0	0	0	0
57		Total Distribution - Maintenance	-		0	0	0	0	0	0
58										
59		Customer Accounts								
60	9010.00	Supervision - Customer Accounts	-		0	0	0	0	0	0
61	9020.00	Meter Reading Expense	-		0	0	0	0	0	0
62	9030.00	Customer Records & Collection	-		0	0	0	0	0	0
63	9040.00	Uncollectible Accounts	-		0	0	0	0	0	0
64		Total Customer Accounts	-		0	0	0	0	0	0
65										
66		Customer Service								
67	9070.00	Supervision - Customer Service Activities	-		0	0	0	0	0	0
68	9080.00	Solar Replacement Program	-		0	0	0	0	0	0
69	9081.00	Solar Water Heater Rebate	-		0	0	0	0	0	0
70	9082.00	Solar Water Heater Loan	-		0	0	0	0	0	0
71	9083.00	Appliance Rebate	-		0	0	0	0	0	0
72	9084.00	Efficient Water Heater	-		0	0	0	0	0	0
73	9085.00	Key Accounts	-		0	0	0	0	0	0
74	9086.00	Surge Protection Program	-		0	0	0	0	0	0
75	9087.00	CFL Program / Light Up A Life Program	-		0	0	0	0	0	0
76	9088.00	HBI Program	-		0	0	0	0	0	0
77	9089.00	In-Home Displays	-		0	0	0	0	0	0
78	9090.00	Information & Instructional Advertising	-		0	0	0	0	0	0
79	9100.00	Member Relations	-		0	0	0	0	0	0
80		Total Customer Service	-		0	0	0	0	0	0

Daymark Allocated Cost of Service Model										
Kauai Island Utility Cooperative										
Generation - Total										
FERC										
Line	Account		2	3	4	5	6	7	8	
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation Streetlighting
81										
82		Marketing & Sales								
83	9110.00	Sales Expense	-		0	0	0	0	0	0
84		Total Marketing & Sales	-		0	0	0	0	0	0
85										
86		Administrative								
87	9200.00	Administrative & General Services	5,417,993		2,444,649	761,113	532,763	1,151,061	511,134	6,254 11,020
88	9210.00	Office Supplies & Expenses	615,860		277,882	86,515	60,559	130,840	58,100	711 1,253
89	9230.00	Outside / Professional Services	3,522,315		1,589,301	494,811	346,357	748,321	332,296	4,066 7,164
90	9240.00	Property Insurance	351,066		158,404	49,317	34,521	74,585	33,120	405 714
91	9260.00	Employee Benefits								
92	9280.00	Regulatory Commission Expense-HPUC Fee	469,202		211,708	65,913	46,138	99,683	44,265	542 954
93	9280.00	Regulatory Commission Expense-Other	648,864		292,774	91,152	63,804	137,852	61,214	749 1,320
94	9289.00	Legislative Expense	75,620		34,121	10,623	7,436	16,066	7,134	87 154
95	9300.00	Other General Expense	455,626		205,583	64,006	44,803	96,798	42,984	526 927
96	9301.00	Community Outreach	204,007		92,050	28,659	20,060	43,342	19,246	235 415
97	9302.00	USFFW SOS Shearwater Program Outreach	8,403		3,791	1,180	826	1,785	793	10 17
98	9310.00	Rents	409,509		184,774	57,527	40,268	87,001	38,633	473 833
99	9350.00	Maintenance of General Plant	434,629		196,108	61,056	42,738	92,337	41,003	502 884
100		Total Administrative	12,613,093		5,691,144	1,771,873	1,240,272	2,679,671	1,189,921	14,558 25,654
101										
102		TOTAL OPERATIONS EXPENSE	118,426,516		50,435,796	16,505,498	12,179,933	27,039,387	11,875,337	180,867 209,699
103										
104	4030.00	Depreciation Expense - System	5,037,262		2,272,859	707,629	495,325	1,070,174	475,216	5,814 10,245
105										
106	4060.00	Amortization Expense - Acquisition Adj	-		0	0	0	0	0	0 0
107		TOTAL DEPRECIATION AND AMORTIZATION	5,037,262		2,272,859	707,629	495,325	1,070,174	475,216	5,814 10,245
108										
109		State HPUC Tax	2,988,186		1,274,323	416,548	307,025	681,199	299,243	4,539 5,309
110		CK Franchise & License Tax	1,269,408		541,344	176,953	130,427	289,379	127,121	1,928 2,255
111		Income Tax on Non-Op Income	10,950		4,670	1,526	1,125	2,496	1,097	17 19
112		State Income Tax	-		0	0	0	0	0	0 0
113		Federal Income Tax	-		0	0	0	0	0	0 0
114		TOTAL TAXES OTHER THAN INCOME	4,268,544		1,820,337	595,028	438,577	973,075	427,461	6,483 7,584
115										
116		TOTAL COST OF ELECTRIC SERVICE	127,732,322		54,528,992	17,808,154	13,113,834	29,082,636	12,778,014	193,164 227,528
117										
118		Interest Expense - Customer Deposits								
119		Additional Short-Term Debt	246,039		111,015	34,563	24,194	52,271	23,211	284 500
120		TOTAL INTEREST ON SHORT TERM DEBT	246,039		111,015	34,563	24,194	52,271	23,211	284 500
121										

Daymark Allocated Cost of Service Model										
Kauai Island Utility Cooperative										
Generation - Total										
FERC			2	3	4	5	6	7	8	
Line	Account									
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation Streetlighting
122		INTEREST EXPENSE								
123		Interest Expense - RUS	-		0	0	0	0	0	0
124		Interest Expense - CFC	754,289		340,342	105,962	74,171	160,250	71,160	1,534
125		Interest Expense - FFB	992,829		447,974	139,471	97,627	210,928	93,664	2,019
126		Interest Expense - CoBank	192,203		86,724	27,000	18,900	40,834	18,132	391
127		Interest Expense - SBA PPP	-		0	0	0	0	0	0
128										
129		TOTAL INTEREST ON LONG TERM DEBT	1,939,321		875,040	272,434	190,698	412,012	182,956	2,238 3,944
130										
131		CONTRIBUTIONS AND DONATIONS								
132	4261.00	Contributions & Donations	-		0	0	0	0	0	0
133	4265.00	Other Deductions	-		0	0	0	0	0	0
134		TOTAL CONTRIBUTIONS AND DONATIONS	-		0	0	0	0	0	0
135										
136		Total Electric COS	129,917,683		55,515,047	18,115,151	13,328,726	29,546,919	12,984,181	195,686 231,973
137										
138		NET OTHER NON-OPERATING INCOME								
139	4240.00	Capital Credits	171,080		73,583	23,876	17,466	38,608	16,986	251 310
140	4180.00	Income (Loss) from KRS1 / KRS2H	(1,499,692)		(676,675)	(210,675)	(147,468)	(318,612)	(141,481)	(1,731) (3,050)
141	4210.00	RLF Annual Admin Fee								
142	4213.00	PPA Liquidated Damages								
143		TOTAL OTHER NON-OPERATING INCOME	(1,328,612)		(603,092)	(186,799)	(130,002)	(280,004)	(124,495)	(1,480) (2,740)
144										
145		INTEREST INCOME								
146	4214.00	SBA PPP Loan Forgiveness	-		0	0	0	0	0	0
147	4190.00	Interest Income - General	182		78	25	19	41	18	0
148	4191.00	Interest Income - DSM/IRP	-		0	0	0	0	0	0
149	4192.00	Interest Income - RUS COC	760		343	107	75	161	72	1 2
150	4193.00	Interest Income - FHB BSCM	-		0	0	0	0	0	0
151	4194.00	Interest Income - CFC DF	22,789		10,283	3,201	2,241	4,842	2,150	26 46
152	4195.00	Interest Income - CFC CP	-		0	0	0	0	0	0
153	4196.00	Interest Income - CFC MTN	-		0	0	0	0	0	0
154	4197.00	Interest Income - Member Capital	7,554		3,408	1,061	743	1,605	713	9 15
155	4198.00	Interest Income - Select Notes	-		0	0	0	0	0	0
156	4199.00	Interest Income - KRS1	852,000		356,383	118,464	88,780	198,584	86,951	1,396 1,441
157	0.00	Net Jobbing Sales	-		0	0	0	0	0	0
158	4181.00	Net Rental Income - Eleele	28,123		12,690	3,951	2,765	5,975	2,653	32 57
159		TOTAL INTEREST INCOME	911,409		383,185	126,809	94,622	211,208	92,557	1,465 1,562
160										
161		CAPITALIZED INTEREST								
162										
163		Patronage Capital or Margins	(1,470,393)		(663,455)	(206,559)	(144,587)	(312,387)	(138,717)	(1,697) (2,991)
164										
165		Operating Revenue Requirement	128,447,290		54,851,592	17,908,592	13,184,139	29,234,532	12,845,464	193,989 228,982
166		Less Non-Operating Revenue	(417,203)		(219,906)	(59,990)	(35,379)	(68,796)	(31,939)	(15) (1,178)
167		Less Other Electric Revenues	-		0	0	0	0	0	0

Daymark Allocated Cost of Service Model										
Kauai Island Utility Cooperative										
Transmission - Demand										
FERC										
Line	Account									
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation Streetlighting
1 OPERATING EXPENSES										
2 Generation Expense										
3	5000	Operation, Supervision & Engineering	-							
4	5020	Steam Expense	-							
5	5060	Rents	-							
6	5100	Maintenance Supervision & Engineering	-							
7	5110	Maintenance of Structures	-							
8	5120	Maintenance of Boilers	-							
9	5130	Maintenance of Electric Plant - Steam	-							
10	5360	Water for Power	-							
11	5420	Maintenance of Structures	-							
12	5430	Maintenance of Reservoirs, Dams & Waterways	-							
13	5440	Maintenance of Electric Plant - Hydro	-							
14	5460	Operation Supervision & Engineering - Hydro	-							
15	5473	Fuel	-							
16	5480	Generation Expense	-							
17	5490	Misc. Other power Generation Expense	-							
18	5510	Maintenance Supervision & Engineering	-							
19	5520	Maintenance of Structures	-							
20	5530	Maintenance of Generation & Electric Equip	-							
21	5560	System Control & Load Dispatch	-							
22	0	Purchased Power	-							
23		Total Generation	-		0	0	0	0	0	0
24										
25 Transmission Expense										
26	5600.00	Operation, Supervision & Engineering	-	A&E wo Irrig Excess						
27	5620.00	Station Expense	222,998	A&E wo Irrig Excess	100,619	31,326	21,928	47,376	21,038	257 454
28	5630.00	Overhead Line Expense	11,160	A&E wo Irrig Excess	5,035	1,568	1,097	2,371	1,053	13 23
29	5660.00	Miscellaneous Transmission Expense	192,647	A&E wo Irrig Excess	86,924	27,063	18,943	40,928	18,174	222 392
30	5661.00	Environmental HCP	-	A&E wo Irrig Excess						
31	5670.00	Rents	65,164	A&E wo Irrig Excess	29,403	9,154	6,408	13,844	6,148	75 133
32		Total Transmission - Operations	491,969		221,981	69,111	48,376	104,520	46,412	568 1,001
33										
34	5700.00	Maintenance of Station Equipment	359,059	A&E wo Irrig Excess	162,011	50,440	35,307	76,283	33,874	414 730
35	5710.00	Maintenance of Overhead Lines	610,200	A&E wo Irrig Excess	275,328	85,720	60,002	129,638	57,566	704 1,241
36		Total Transmission - Maintenance	969,259		437,339	136,160	95,309	205,921	91,440	1,119 1,971

Daymark Allocated Cost of Service Model										
Kauai Island Utility Cooperative										
Transmission - Demand										
FERC										
Line	Account									
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation Streetlighting
37										
38		Distribution Expense								
39	5800.00	Operation, Supervision & Engineering	-							
40	5820.00	Station Expense	-							
41	5830.00	Overhead Line Expense	-							
42	5840.00	Underground Line Expense	-							
43	5860.00	Meter Expense	-							
44	5880.00	Miscellaneous Distribution Expense	-							
45	5881.00	Environmental HCP	-							
46	5890.00	Rents	-							
47		Total Distribution - Operations	-		0	0	0	0	0	0
48										
49	5900.00	Maintenance Supervision & Engineering	-							
50	5910.00	Maintenance of Structures	-							
51	5920.00	Maintenance of Station Equipment	-							
52	5930.00	Maintenance of Overhead Lines	-							
53	5940.00	Maintenance of Underground Lines	-							
54	5950.00	Maintenance of Line Transformers	-							
55	5960.00	Maintenance of Street Lights & Signal Systems	-							
56	5970.00	Maintenance of Meters	-							
57		Total Distribution - Maintenance	-		0	0	0	0	0	0
58										
59		Customer Accounts								
60	9010.00	Supervision - Customer Accounts	-							
61	9020.00	Meter Reading Expense	-							
62	9030.00	Customer Records & Collection	-							
63	9040.00	Uncollectible Accounts	-							
64		Total Customer Accounts	-		0	0	0	0	0	0
65										
66		Customer Service								
67	9070.00	Supervision - Customer Service Activities	-							
68	9080.00	Solar Replacement Program	-							
69	9081.00	Solar Water Heater Rebate	-							
70	9082.00	Solar Water Heater Loan	-							
71	9083.00	Appliance Rebate	-							
72	9084.00	Efficient Water Heater	-							
73	9085.00	Key Accounts	-							
74	9086.00	Surge Protection Program	-							
75	9087.00	CFL Program / Light Up A Life Program	-							
76	9088.00	HBI Program	-							
77	9089.00	In-Home Displays	-							
78	9090.00	Information & Instructional Advertising	-							
79	9100.00	Member Relations	-							
80		Total Customer Service	-		0	0	0	0	0	0

Daymark Allocated Cost of Service Model											
Kauai Island Utility Cooperative											
Transmission - Demand											
FERC											
Line	Account				2	3	4	5	6	7	8
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation	Streetlighting
81											
82		Marketing & Sales									
83	9110.00	Sales Expense	-								
84		Total Marketing & Sales	-		0	0	0	0	0	0	0
85											
86		Administrative									
87	9200.00	Administrative & General Services	294,492	A&E wo Irrig Excess	132,877	41,370	28,958	62,565	27,782	340	599
88	9210.00	Office Supplies & Expenses	33,475	A&E wo Irrig Excess	15,104	4,702	3,292	7,112	3,158	39	68
89	9230.00	Outside / Professional Services	423,906	A&E wo Irrig Excess	191,270	59,550	41,684	90,060	39,991	489	862
90	9240.00	Property Insurance	262,623	A&E wo Irrig Excess	118,498	36,893	25,824	55,795	24,776	303	534
91	9260.00	Employee Benefits		A&E wo Irrig Excess							
92	9280.00	Regulatory Commission Expense-HPUC Fee	56,468	A&E wo Irrig Excess	25,479	7,933	5,553	11,997	5,327	65	115
93	9280.00	Regulatory Commission Expense-Other	78,090	A&E wo Irrig Excess	35,235	10,970	7,679	16,590	7,367	90	159
94	9289.00	Legislative Expense	9,101	A&E wo Irrig Excess	4,106	1,278	895	1,933	859	11	19
95	9300.00	Other General Expense	24,765	A&E wo Irrig Excess	11,174	3,479	2,435	5,261	2,336	29	50
96	9301.00	Community Outreach	11,089	A&E wo Irrig Excess	5,003	1,558	1,090	2,356	1,046	13	23
97	9302.00	USFFW SOS Shearwater Program Outreach	457	A&E wo Irrig Excess	206	64	45	97	43	1	1
98	9310.00	Rents	306,342	A&E wo Irrig Excess	138,224	43,035	30,123	65,083	28,900	354	623
99	9350.00	Maintenance of General Plant	325,134	A&E wo Irrig Excess	146,703	45,674	31,971	69,075	30,673	375	661
100		Total Administrative	1,825,941		823,882	256,506	179,549	387,924	172,260	2,108	3,714
101											
102		TOTAL OPERATIONS EXPENSE	3,287,170		1,483,201	461,778	323,234	698,364	310,112	3,794	6,686
103											
104	4030.00	Depreciation Expense - System	2,470,766	A&E wo Irrig Excess	1,114,832	347,090	242,956	524,918	233,092	2,852	5,025
105											
106	4060.00	Amortization Expense - Acquisition Adj	-	A&E wo Irrig Excess							
107		TOTAL DEPRECIATION AND AMORTIZATION	2,470,766		1,114,832	347,090	242,956	524,918	233,092	2,852	5,025
108											
109		State HPUC Tax	2,235,381	A&E wo Irrig Excess	1,008,625	314,024	219,810	474,910	210,886	2,580	4,547
110		CK Franchise & License Tax	949,610	A&E wo Irrig Excess	428,473	133,400	93,377	201,746	89,586	1,096	1,931
111		Income Tax on Non-Op Income	8,191	A&E wo Irrig Excess	3,696	1,151	805	1,740	773	9	17
112		State Income Tax	-	A&E wo Irrig Excess							
113		Federal Income Tax	-	A&E wo Irrig Excess							
114		TOTAL TAXES OTHER THAN INCOME	3,193,182		1,440,793	448,575	313,992	678,396	301,245	3,686	6,495
115											
116		TOTAL COST OF ELECTRIC SERVICE	8,951,118		4,038,827	1,257,443	880,182	1,901,679	844,450	10,332	18,206

Daymark Allocated Cost of Service Model										
Kauai Island Utility Cooperative										
Transmission - Demand										
FERC				2	3	4	5	6	7	8
Line	Account									
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation Streetlighting
117										
118		Interest Expense - Customer Deposits	-	A&E wo Irrig Excess						
119		Additional Short-Term Debt	29,611	A&E wo Irrig Excess	13,361	4,160	2,912	6,291	2,793	34 60
120		TOTAL INTEREST ON SHORT TERM DEBT	29,611		13,361	4,160	2,912	6,291	2,793	34 60
121										
122		INTEREST EXPENSE								
123		Interest Expense - RUS	-	A&E wo Irrig Excess						
124		Interest Expense - CFC	564,264	A&E wo Irrig Excess	254,601	79,267	55,485	119,879	53,233	651 1,148
125		Interest Expense - FFB	742,708	A&E wo Irrig Excess	335,117	104,335	73,032	157,790	70,067	857 1,511
126		Interest Expense - CoBank	143,782	A&E wo Irrig Excess	64,876	20,198	14,138	30,547	13,564	166 292
127		Interest Expense - SBA PPP	-	A&E wo Irrig Excess						
128										
129		TOTAL INTEREST ON LONG TERM DEBT	1,450,754		654,594	203,800	142,656	308,215	136,864	1,675 2,951
130										
131		CONTRIBUTIONS AND DONATIONS								
132	4261.00	Contributions & Donations	-	A&E wo Irrig Excess						
133	4265.00	Other Deductions	-	A&E wo Irrig Excess						
134		TOTAL CONTRIBUTIONS AND DONATIONS	-		0	0	0	0	0	0
135										
136		Total Electric COS	10,431,482		4,706,781	1,465,402	1,025,750	2,216,184	984,107	12,040 21,217
137										
138		NET OTHER NON-OPERATING INCOME								
139	4240.00	Capital Credits	7,393	A&E wo Irrig Excess	3,336	1,039	727	1,571	697	9 15
140	4180.00	Income (Loss) from KRS1 / KRS2H	-	A&E wo Irrig Excess						
141	4210.00	RLF Annual Admin Fee	-							
142	4213.00	PPA Liquidated Damages	-							
143		TOTAL OTHER NON-OPERATING INCOME	7,393		3,336	1,039	727	1,571	697	9 15
144										
145		INTEREST INCOME								
146	4214.00	SBA PPP Loan Forgiveness	-	A&E wo Irrig Excess						
147	4190.00	Interest Income - General	8	A&E wo Irrig Excess	4	1	1	2	1	0 0
148	4191.00	Interest Income - DSM/IRP	-	A&E wo Irrig Excess						
149	4192.00	Interest Income - RUS COC	515	A&E wo Irrig Excess	232	72	51	109	49	1 1
150	4193.00	Interest Income - FHB BSCM	-	A&E wo Irrig Excess						
151	4194.00	Interest Income - CFC DF	15,438	A&E wo Irrig Excess	6,966	2,169	1,518	3,280	1,456	18 31
152	4195.00	Interest Income - CFC CP	-	A&E wo Irrig Excess						
153	4196.00	Interest Income - CFC MTN	-	A&E wo Irrig Excess						
154	4197.00	Interest Income - Member Capital	5,117	A&E wo Irrig Excess	2,309	719	503	1,087	483	6 10
155	4198.00	Interest Income - Select Notes	-	A&E wo Irrig Excess						
156	4199.00	Interest Income - KRS1	-	A&E wo Irrig Excess						
157	0.00	Net Jobbing Sales	-	A&E wo Irrig Excess						
158	4181.00	Net Rental Income - Eleele	21,038	A&E wo Irrig Excess	9,493	2,955	2,069	4,470	1,985	24 43
159		TOTAL INTEREST INCOME	42,115	A&E wo Irrig Excess	19,003	5,916	4,141	8,947	3,973	49 86
160										
161		CAPITALIZED INTEREST	-							
162										

Daymark Allocated Cost of Service Model										
Kauai Island Utility Cooperative										
Transmission - Total										
FERC										
Line	Account		2	3	4	5	6	7	8	
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation Streetlighting
1	OPERATING EXPENSES									
2	Generation Expense									
3	5000	Operation, Supervision & Engineering	-		0	0	0	0	0	0
4	5020	Steam Expense	-		0	0	0	0	0	0
5	5060	Rents	-		0	0	0	0	0	0
6	5100	Maintenance Supervision & Engineering	-		0	0	0	0	0	0
7	5110	Maintenance of Structures	-		0	0	0	0	0	0
8	5120	Maintenance of Boilers	-		0	0	0	0	0	0
9	5130	Maintenance of Electric Plant - Steam	-		0	0	0	0	0	0
10	5360	Water for Power	-		0	0	0	0	0	0
11	5420	Maintenance of Structures	-		0	0	0	0	0	0
12	5430	Maintenance of Reservoirs, Dams & Waterways	-		0	0	0	0	0	0
13	5440	Maintenance of Electric Plant - Hydro	-		0	0	0	0	0	0
14	5460	Operation Supervision & Engineering - Hydro	-		0	0	0	0	0	0
15	5473	Fuel	-		0	0	0	0	0	0
16	5480	Generation Expense	-		0	0	0	0	0	0
17	5490	Misc. Other power Generation Expense	-		0	0	0	0	0	0
18	5510	Maintenance Supervision & Engineering	-		0	0	0	0	0	0
19	5520	Maintenance of Structures	-		0	0	0	0	0	0
20	5530	Maintenance of Generation & Electric Equip	-		0	0	0	0	0	0
21	5560	System Control & Load Dispatch	-		0	0	0	0	0	0
22	0	Purchased Power	-		0	0	0	0	0	0
23		Total Generation	-		0	0	0	0	0	0
24										
25	Transmission Expense									
26	5600.00	Operation, Supervision & Engineering	-		0	0	0	0	0	0
27	5620.00	Station Expense	222,998		100,619	31,326	21,928	47,376	21,038	257 454
28	5630.00	Overhead Line Expense	11,160		5,035	1,568	1,097	2,371	1,053	13 23
29	5660.00	Miscellaneous Transmission Expense	192,647		86,924	27,063	18,943	40,928	18,174	222 392
30	5661.00	Environmental HCP	-		0	0	0	0	0	0 0
31	5670.00	Rents	65,164		29,403	9,154	6,408	13,844	6,148	75 133
32		Total Transmission - Operations	491,969		221,981	69,111	48,376	104,520	46,412	568 1,001
33										
34	5700.00	Maintenance of Station Equipment	359,059		162,011	50,440	35,307	76,283	33,874	414 730
35	5710.00	Maintenance of Overhead Lines	610,200		275,328	85,720	60,002	129,638	57,566	704 1,241
36		Total Transmission - Maintenance	969,259		437,339	136,160	95,309	205,921	91,440	1,119 1,971

Daymark Allocated Cost of Service Model											
Kauai Island Utility Cooperative											
Transmission - Total											
FERC											
Line	Account		2	3	4	5	6	7	8		
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation	Streetlighting
37											
38		Distribution Expense									
39	5800.00	Operation, Supervision & Engineering	-		0	0	0	0	0	0	0
40	5820.00	Station Expense	-		0	0	0	0	0	0	0
41	5830.00	Overhead Line Expense	-		0	0	0	0	0	0	0
42	5840.00	Underground Line Expense	-		0	0	0	0	0	0	0
43	5860.00	Meter Expense	-		0	0	0	0	0	0	0
44	5880.00	Miscellaneous Distribution Expense	-		0	0	0	0	0	0	0
45	5881.00	Environmental HCP	-		0	0	0	0	0	0	0
46	5890.00	Rents	-		0	0	0	0	0	0	0
47		Total Distribution - Operations	-		0	0	0	0	0	0	0
48											
49	5900.00	Maintenance Supervision & Engineering	-		0	0	0	0	0	0	0
50	5910.00	Maintenance of Structures	-		0	0	0	0	0	0	0
51	5920.00	Maintenance of Station Equipment	-		0	0	0	0	0	0	0
52	5930.00	Maintenance of Overhead Lines	-		0	0	0	0	0	0	0
53	5940.00	Maintenance of Underground Lines	-		0	0	0	0	0	0	0
54	5950.00	Maintenance of Line Transformers	-		0	0	0	0	0	0	0
55	5960.00	Maintenance of Street Lights & Signal Systems	-		0	0	0	0	0	0	0
56	5970.00	Maintenance of Meters	-		0	0	0	0	0	0	0
57		Total Distribution - Maintenance	-		0	0	0	0	0	0	0
58											
59		Customer Accounts									
60	9010.00	Supervision - Customer Accounts	-		0	0	0	0	0	0	0
61	9020.00	Meter Reading Expense	-		0	0	0	0	0	0	0
62	9030.00	Customer Records & Collection	-		0	0	0	0	0	0	0
63	9040.00	Uncollectible Accounts	-		0	0	0	0	0	0	0
64		Total Customer Accounts	-		0	0	0	0	0	0	0
65											
66		Customer Service									
67	9070.00	Supervision - Customer Service Activities	-		0	0	0	0	0	0	0
68	9080.00	Solar Replacement Program	-		0	0	0	0	0	0	0
69	9081.00	Solar Water Heater Rebate	-		0	0	0	0	0	0	0
70	9082.00	Solar Water Heater Loan	-		0	0	0	0	0	0	0
71	9083.00	Appliance Rebate	-		0	0	0	0	0	0	0
72	9084.00	Efficient Water Heater	-		0	0	0	0	0	0	0
73	9085.00	Key Accounts	-		0	0	0	0	0	0	0
74	9086.00	Surge Protection Program	-		0	0	0	0	0	0	0
75	9087.00	CFL Program / Light Up A Life Program	-		0	0	0	0	0	0	0
76	9088.00	HBI Program	-		0	0	0	0	0	0	0
77	9089.00	In-Home Displays	-		0	0	0	0	0	0	0
78	9090.00	Information & Instructional Advertising	-		0	0	0	0	0	0	0
79	9100.00	Member Relations	-		0	0	0	0	0	0	0
80		Total Customer Service	-		0	0	0	0	0	0	0

Daymark Allocated Cost of Service Model											
Kauai Island Utility Cooperative											
Transmission - Total											
FERC											
Line	Account		2	3	4	5	6	7	8		
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation	Streetlighting
81											
82		Marketing & Sales									
83	9110.00	Sales Expense	-		0	0	0	0	0	0	0
84		Total Marketing & Sales	-		0	0	0	0	0	0	0
85											
86		Administrative									
87	9200.00	Administrative & General Services	294,492		132,877	41,370	28,958	62,565	27,782	340	599
88	9210.00	Office Supplies & Expenses	33,475		15,104	4,702	3,292	7,112	3,158	39	68
89	9230.00	Outside / Professional Services	423,906		191,270	59,550	41,684	90,060	39,991	489	862
90	9240.00	Property Insurance	262,623		118,498	36,893	25,824	55,795	24,776	303	534
91	9260.00	Employee Benefits									
92	9280.00	Regulatory Commission Expense-HPUC Fee	56,468		25,479	7,933	5,553	11,997	5,327	65	115
93	9280.00	Regulatory Commission Expense-Other	78,090		35,235	10,970	7,679	16,590	7,367	90	159
94	9289.00	Legislative Expense	9,101		4,106	1,278	895	1,933	859	11	19
95	9300.00	Other General Expense	24,765		11,174	3,479	2,435	5,261	2,336	29	50
96	9301.00	Community Outreach	11,089		5,003	1,558	1,090	2,356	1,046	13	23
97	9302.00	USFFW SOS Shearwater Program Outreach	457		206	64	45	97	43	1	1
98	9310.00	Rents	306,342		138,224	43,035	30,123	65,083	28,900	354	623
99	9350.00	Maintenance of General Plant	325,134		146,703	45,674	31,971	69,075	30,673	375	661
100		Total Administrative	1,825,941		823,882	256,506	179,549	387,924	172,260	2,108	3,714
101											
102		TOTAL OPERATIONS EXPENSE	3,287,170		1,483,201	461,778	323,234	698,364	310,112	3,794	6,686
103											
104	4030.00	Depreciation Expense - System	2,470,766		1,114,832	347,090	242,956	524,918	233,092	2,852	5,025
105											
106	4060.00	Amortization Expense - Acquisition Adj	-		0	0	0	0	0	0	0
107		TOTAL DEPRECIATION AND AMORTIZATION	2,470,766		1,114,832	347,090	242,956	524,918	233,092	2,852	5,025
108											
109		State HPUC Tax	2,235,381		1,008,625	314,024	219,810	474,910	210,886	2,580	4,547
110		CK Franchise & License Tax	949,610		428,473	133,400	93,377	201,746	89,586	1,096	1,931
111		Income Tax on Non-Op Income	8,191		3,696	1,151	805	1,740	773	9	17
112		State Income Tax	-		0	0	0	0	0	0	0
113		Federal Income Tax	-		0	0	0	0	0	0	0
114		TOTAL TAXES OTHER THAN INCOME	3,193,182		1,440,793	448,575	313,992	678,396	301,245	3,686	6,495
115											
116		TOTAL COST OF ELECTRIC SERVICE	8,951,118		4,038,827	1,257,443	880,182	1,901,679	844,450	10,332	18,206

Daymark Allocated Cost of Service Model											
Kauai Island Utility Cooperative											
Distribution - Demand											
FERC											
Line	Account				2	3	4	5	6	7	8
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation	Streetlighting
1	OPERATING EXPENSES										
2	Generation Expense										
3	5000	Operation, Supervision & Engineering	-								
4	5020	Steam Expense	-								
5	5060	Rents	-								
6	5100	Maintenance Supervision & Engineering	-								
7	5110	Maintenance of Structures	-								
8	5120	Maintenance of Boilers	-								
9	5130	Maintenance of Electric Plant - Steam	-								
10	5360	Water for Power	-								
11	5420	Maintenance of Structures	-								
12	5430	Maintenance of Reservoirs, Dams & Waterways	-								
13	5440	Maintenance of Electric Plant - Hydro	-								
14	5460	Operation Supervision & Engineering - Hydro	-								
15	5473	Fuel	-								
16	5480	Generation Expense	-								
17	5490	Misc. Other power Generation Expense	-								
18	5510	Maintenance Supervision & Engineering	-								
19	5520	Maintenance of Structures	-								
20	5530	Maintenance of Generation & Electric Equip	-								
21	5560	System Control & Load Dispatch	-								
22	0	Purchased Power	-								
23		Total Generation	-		0	0	0	0	0	0	0
24											
25	Transmission Expense										
26	5600.00	Operation, Supervision & Engineering	-								
27	5620.00	Station Expense	-								
28	5630.00	Overhead Line Expense	-								
29	5660.00	Miscellaneous Transmission Expense	-								
30	5661.00	Environmental HCP	-								
31	5670.00	Rents	-								
32		Total Transmission - Operations	-		0	0	0	0	0	0	0
33											
34	5700.00	Maintenance of Station Equipment	-								
35	5710.00	Maintenance of Overhead Lines	-								
36		Total Transmission - Maintenance	-		0	0	0	0	0	0	0

Daymark Allocated Cost of Service Model										
Kauai Island Utility Cooperative										
Distribution - Demand										
FERC										
Line	Account			2	3	4	5	6	7	8
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation Streetlighting
37										
38		Distribution Expense								
39	5800.00	Operation, Supervision & Engineering	48,295	NCP	20,720	6,340	4,351	9,302	4,149	3,338 96
40	5820.00	Station Expense	254,360	NCP	109,126	33,392	22,918	48,990	21,850	17,580 505
41	5830.00	Overhead Line Expense	15,964	NCP	6,849	2,096	1,438	3,075	1,371	1,103 32
42	5840.00	Underground Line Expense	18,846	NCP	8,085	2,474	1,698	3,630	1,619	1,303 37
43	5860.00	Meter Expense	-							
44	5880.00	Miscellaneous Distribution Expense	-	Dmd - Dist Plant						
45	5881.00	Environmental HCP	-							
46	5890.00	Rents	-	Dmd - Dist Plant						
47		Total Distribution - Operations	337,466		144,780	44,302	30,406	64,996	28,989	23,324 670
48										
49	5900.00	Maintenance Supervision & Engineering	245,338	NCP	105,256	32,207	22,105	47,252	21,075	16,957 487
50	5910.00	Maintenance of Structures	-	NCP						
51	5920.00	Maintenance of Station Equipment	563,319	NCP	241,676	73,951	50,756	108,495	48,390	38,934 1,118
52	5930.00	Maintenance of Overhead Lines	3,856,118	NCP	1,654,359	506,220	347,441	742,686	331,244	266,517 7,652
53	5940.00	Maintenance of Underground Lines	603,104	NCP	258,745	79,174	54,340	116,157	51,807	41,684 1,197
54	5950.00	Maintenance of Line Transformers	1,380	NCP Secondary	701	214	147	315	0	0 3
55	5960.00	Maintenance of Street Lights & Signal Systems	22,437	StreetLt	0	0	0	0	0	0 22,437
56	5970.00	Maintenance of Meters	-							
57		Total Distribution - Maintenance	5,291,696		2,260,736	691,766	474,789	1,014,905	452,515	364,091 32,893
58										
59		Customer Accounts								
60	9010.00	Supervision - Customer Accounts	-							
61	9020.00	Meter Reading Expense	-							
62	9030.00	Customer Records & Collection	-							
63	9040.00	Uncollectible Accounts	-							
64		Total Customer Accounts	-		0	0	0	0	0	0 0
65										
66		Customer Service								
67	9070.00	Supervision - Customer Service Activities	-							
68	9080.00	Solar Replacement Program	-							
69	9081.00	Solar Water Heater Rebate	-							
70	9082.00	Solar Water Heater Loan	-							
71	9083.00	Appliance Rebate	-							
72	9084.00	Efficient Water Heater	-							
73	9085.00	Key Accounts	-							
74	9086.00	Surge Protection Program	-							
75	9087.00	CFL Program / Light Up A Life Program	-							
76	9088.00	HBI Program	-							
77	9089.00	In-Home Displays	-							
78	9090.00	Information & Instructional Advertising	-							
79	9100.00	Member Relations	-							
80		Total Customer Service	-		0	0	0	0	0	0 0

Daymark Allocated Cost of Service Model										
Kauai Island Utility Cooperative										
Distribution - Demand										
			2	3	4	5	6	7	8	
FERC										
Line	Account									
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation Streetlighting
81										
82		Marketing & Sales								
83	9110.00	Sales Expense	-							
84		Total Marketing & Sales	-		0	0	0	0	0	0
85										
86		Administrative								
87	9200.00	Administrative & General Services	2,355,923	Dmd - Dist Labor	1,008,709	308,656	211,844	452,836	200,482	161,307 12,088
88	9210.00	Office Supplies & Expenses	267,796	Dmd - Dist Labor	114,659	35,085	24,080	51,474	22,789	18,336 1,374
89	9230.00	Outside / Professional Services	1,629,564	Dmd - Dist OM CWC	697,321	213,374	146,448	313,046	135,218	108,795 15,363
90	9240.00	Property Insurance	561,387	Dmd - Dist Plant	240,993	73,742	50,612	108,188	40,536	32,615 14,700
91	9260.00	Employee Benefits								
92	9280.00	Regulatory Commission Expense-HPUC Fee	217,072	Dmd - Dist OM CWC	92,889	28,423	19,508	41,700	18,012	14,492 2,046
93	9280.00	Regulatory Commission Expense-Other	300,191	Dmd - Dist OM CWC	128,457	39,307	26,978	57,668	24,909	20,042 2,830
94	9289.00	Legislative Expense	34,985	Dmd - Dist OM CWC	14,971	4,581	3,144	6,721	2,903	2,336 330
95	9300.00	Other General Expense	198,121	Dmd - Dist Labor	84,827	25,956	17,815	38,081	16,860	13,565 1,017
96	9301.00	Community Outreach	88,709	Dmd - Dist Labor	37,981	11,622	7,977	17,051	7,549	6,074 455
97	9302.00	USFFW SOS Shearwater Program Outreach	3,654	Dmd - Dist Labor	1,564	479	329	702	311	250 19
98	9310.00	Rents	654,842	Dmd - Dist Plant	281,111	86,018	59,038	126,198	47,285	38,045 17,147
99	9350.00	Maintenance of General Plant	695,011	Dmd - Dist Plant	298,355	91,294	62,659	133,940	50,185	40,379 18,199
100		Total Administrative	7,007,255		3,001,838	918,537	630,432	1,347,606	567,038	456,236 85,567
101										
102		TOTAL OPERATIONS EXPENSE	12,636,417		5,407,355	1,654,604	1,135,627	2,427,506	1,048,542	843,651 119,130
103										
104	4030.00	Depreciation Expense - System	7,784,372		3,290,642	1,006,908	691,085	1,477,257	530,951	427,200 360,329
105										
106	4060.00	Amortization Expense - Acquisition Adj	-	Dmd - Dist Plant						
107		TOTAL DEPRECIATION AND AMORTIZATION	7,784,372		3,290,642	1,006,908	691,085	1,477,257	530,951	427,200 360,329
108										
109		State HPUC Tax	4,791,828	Dmd - Dist COS	2,039,312	624,012	428,287	915,502	363,863	292,762 128,091
110		CK Franchise & License Tax	2,035,611	Dmd - Dist Non Ops	865,276	264,767	181,721	388,446	146,904	118,198 70,298
111		Income Tax on Non-Op Income	17,559	Dmd - Dist Non Ops	7,464	2,284	1,568	3,351	1,267	1,020 606
112		State Income Tax	-	Dmd - Dist Non Ops						
113		Federal Income Tax	-	Dmd - Dist Non Ops						
114		TOTAL TAXES OTHER THAN INCOME	6,844,998		2,912,052	891,063	611,576	1,307,298	512,034	411,980 198,996
115										
116		TOTAL COST OF ELECTRIC SERVICE	27,265,787		11,610,049	3,552,575	2,438,288	5,212,062	2,091,527	1,682,832 678,455

Daymark Allocated Cost of Service Model										
Kauai Island Utility Cooperative										
Distribution - Demand										
FERC				2	3	4	5	6	7	8
Line No.	Account Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation Streetlighting
117										
118		Interest Expense - Customer Deposits	-							
119		Additional Short-Term Debt	131,318	Dmd - Dist Net Plant	55,801	17,075	11,719	25,051	9,409	7,571 4,692
120		TOTAL INTEREST ON SHORT TERM DEBT	131,318		55,801	17,075	11,719	25,051	9,409	7,571 4,692
121										
122		INTEREST EXPENSE								
123		Interest Expense - RUS	-	Dmd - Dist Net Plant						
124		Interest Expense - CFC	1,206,178	Dmd - Dist Net Plant	512,546	156,835	107,642	230,095	86,424	69,536 43,100
125		Interest Expense - FFB	1,587,625	Dmd - Dist Net Plant	674,635	206,433	141,684	302,862	113,755	91,527 56,730
126		Interest Expense - CoBank	307,351	Dmd - Dist Net Plant	130,604	39,964	27,429	58,631	22,022	17,719 10,982
127		Interest Expense - SBA PPP	-	Dmd - Dist Net Plant						
128										
129		TOTAL INTEREST ON LONG TERM DEBT	3,101,153		1,317,784	403,231	276,755	591,589	222,201	178,782 110,811
130										
131		CONTRIBUTIONS AND DONATIONS								
132	4261.00	Contributions & Donations	-	Dmd - Dist OM CWC						
133	4265.00	Other Deductions	-	Dmd - Dist OM CWC						
134		TOTAL CONTRIBUTIONS AND DONATIONS	-		0	0	0	0	0	0
135										
136		Total Electric COS	30,498,258		12,983,635	3,972,881	2,726,762	5,828,701	2,323,137	1,869,184 793,959
137										
138		NET OTHER NON-OPERATING INCOME								
139	4240.00	Capital Credits	28,420	Dmd - Dist Rate Base	12,080	3,697	2,537	5,423	2,051	1,650 981
140	4180.00	Income (Loss) from KRS1 / KRS2H	-	Dmd - Dist Plant						
141	4210.00	RLF Annual Admin Fee	-							
142	4213.00	PPA Liquidated Damages	-							
143		TOTAL OTHER NON-OPERATING INCOME	28,420		12,080	3,697	2,537	5,423	2,051	1,650 981
144										
145		INTEREST INCOME								
146	4214.00	SBA PPP Loan Forgiveness	-	Dmd - Dist OM CWC						
147	4190.00	Interest Income - General	30	Dmd - Dist OM CWC	13	4	3	6	3	2 0
148	4191.00	Interest Income - DSM/IRP	-	Dmd - Dist OM CWC						
149	4192.00	Interest Income - RUS COC	521	Dmd - Dist OM CWC	223	68	47	100	43	35 5
150	4193.00	Interest Income - FHB BSCM	-	Dmd - Dist OM CWC						
151	4194.00	Interest Income - CFC DF	15,638	Dmd - Dist OM CWC	6,692	2,048	1,405	3,004	1,298	1,044 147
152	4195.00	Interest Income - CFC CP	-	Dmd - Dist OM CWC						
153	4196.00	Interest Income - CFC MTN	-	Dmd - Dist OM CWC						
154	4197.00	Interest Income - Member Capital	5,183	Dmd - Dist OM CWC	2,218	679	466	996	430	346 49
155	4198.00	Interest Income - Select Notes	-	Dmd - Dist OM CWC						
156	4199.00	Interest Income - KRS1	-	Dmd - Dist OM CWC						
157	0.00	Net Jobbing Sales	89,928	Dmd - Dist OM CWC	38,482	11,775	8,082	17,276	7,462	6,004 848
158	4181.00	Net Rental Income - Eleele	44,972	Dmd - Dist OM CWC	19,244	5,889	4,042	8,639	3,732	3,002 424
159		TOTAL INTEREST INCOME	156,273	Dmd - Dist OM CWC	66,872	20,462	14,044	30,021	12,967	10,433 1,473
160										
161		CAPITALIZED INTEREST	-							
162										
163		Patronage Capital or Margins	(1,008,962)	Dmd - Dist Net Plant	(428,742)	(131,191)	(90,042)	(192,474)	(72,293)	(58,167) (36,053)
164										

Daymark Allocated Cost of Service Model											
Kauai Island Utility Cooperative											
Distribution - Demand											
FERC			2	3	4	5	6	7	8		
Line No.	Account Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation	Streetlighting
165		Operating Revenue Requirement	29,489,296		12,554,892	3,841,689	2,636,720	5,636,228	2,250,844	1,811,017	757,906
166		Less Non-Operating Revenue	184,693		78,952	24,159	16,581	35,444	15,018	12,084	2,455
167		Less Other Electric Revenues	(789,690)	Dmd - Dist Rate Base	(335,673)	(102,713)	(70,497)	(150,693)	(56,990)	(45,853)	(27,271)
168		Revenue Requirement from Rates	30,094,294		12,811,613	3,920,244	2,690,635	5,751,476	2,292,815	1,844,787	782,723
169											
170											
171											
172											
173											
174		TOTAL REVENUE REQUIREMENT BEFORE TAXES & OTHER REVENUE	21,067,483		8,965,924	2,743,496	1,882,981	4,025,043	1,599,739	1,287,142	563,158
175											
176		SUMMARY									
177		Operations and Maintenance Expense	12,636,417		5,407,355	1,654,604	1,135,627	2,427,506	1,048,542	843,651	119,130
178		Depreciation & Amortization	7,784,372		3,290,642	1,006,908	691,085	1,477,257	530,951	427,200	360,329
179		Taxes	6,844,998		2,912,052	891,063	611,576	1,307,298	512,034	411,980	198,996
180		Interest	3,232,471		1,373,586	420,306	288,474	616,640	231,610	186,352	115,504
181		Other Expenses	-		-	-	-	-	-	-	-
182		Patronage Capital or Margins	(1,008,962)		(428,742)	(131,191)	(90,042)	(192,474)	(72,293)	(58,167)	(36,053)
183		Non-Sales Revenue	604,998		256,721	78,554	53,915	115,249	41,971	33,770	24,817
184		TOTAL REVENUE REQUIREMENT FROM RATES	30,094,294		12,811,613	3,920,244	2,690,635	5,751,476	2,292,815	1,844,787	782,723
185											
186		REVENUE AT CURRENT RATES	30,094,294	Revenues	12,948,986	4,425,595	3,091,027	6,632,540	2,848,622	25,772	121,752
187											
188		(DEFICIENCY)/SURPLUS	-		137,373	505,351	400,392	881,064	555,807	(1,819,015)	(660,971)
189											
190		RATE INCREASE TO EQUAL COS	0.0%		-1.1%	-11.4%	-13.0%	-13.3%	-19.5%	7058.2%	542.9%

Daymark Allocated Cost of Service Model											
Kauai Island Utility Cooperative											
Distribution - Customer											
FERC											
Line	Account				2	3	4	5	6	7	8
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation	Streetlighting
1 OPERATING EXPENSES											
2 Generation Expense											
3	5000	Operation, Supervision & Engineering	-								
4	5020	Steam Expense	-								
5	5060	Rents	-								
6	5100	Maintenance Supervision & Engineering	-								
7	5110	Maintenance of Structures	-								
8	5120	Maintenance of Boilers	-								
9	5130	Maintenance of Electric Plant - Steam	-								
10	5360	Water for Power	-								
11	5420	Maintenance of Structures	-								
12	5430	Maintenance of Reservoirs, Dams & Waterways	-								
13	5440	Maintenance of Electric Plant - Hydro	-								
14	5460	Operation Supervision & Engineering - Hydro	-								
15	5473	Fuel	-								
16	5480	Generation Expense	-								
17	5490	Misc. Other power Generation Expense	-								
18	5510	Maintenance Supervision & Engineering	-								
19	5520	Maintenance of Structures	-								
20	5530	Maintenance of Generation & Electric Equip	-								
21	5560	System Control & Load Dispatch	-								
22	0	Purchased Power	-								
23		Total Generation	-		0	0	0	0	0	0	0
24											
25 Transmission Expense											
26	5600.00	Operation, Supervision & Engineering	-								
27	5620.00	Station Expense	-								
28	5630.00	Overhead Line Expense	-								
29	5660.00	Miscellaneous Transmission Expense	-								
30	5661.00	Environmental HCP	-								
31	5670.00	Rents	-								
32		Total Transmission - Operations	-		0	0	0	0	0	0	0
33											
34	5700.00	Maintenance of Station Equipment	-								
35	5710.00	Maintenance of Overhead Lines	-								
36		Total Transmission - Maintenance	-		0	0	0	0	0	0	0

Daymark Allocated Cost of Service Model										
Kauai Island Utility Cooperative										
Distribution - Customer										
FERC										
Line	Account									
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation Streetlighting
37										
38		Distribution Expense								
39	5800.00	Operation, Supervision & Engineering	-							
40	5820.00	Station Expense	-							
41	5830.00	Overhead Line Expense	-							
42	5840.00	Underground Line Expense	-							
43	5860.00	Meter Expense	553,029	Cust Meter O&M	413,824	122,548	11,062	4,725	869	0
44	5880.00	Miscellaneous Distribution Expense	514,631	Cust - Dist Plant	390,656	91,230	7,493	3,073	456	0
45	5881.00	Environmental HCP	-							
46	5890.00	Rents	14,376	Cust - Dist Plant	10,913	2,548	209	86	13	0
47		Total Distribution - Operations	1,082,036		815,393	216,327	18,765	7,884	1,338	0
48										
49	5900.00	Maintenance Supervision & Engineering	-							
50	5910.00	Maintenance of Structures	-							
51	5920.00	Maintenance of Station Equipment	-							
52	5930.00	Maintenance of Overhead Lines	-							
53	5940.00	Maintenance of Underground Lines	-							
54	5950.00	Maintenance of Line Transformers	-							
55	5960.00	Maintenance of Street Lights & Signal Systems	-							
56	5970.00	Maintenance of Meters	14,400	Cust Meter O&M	10,775	3,191	288	123	23	0
57		Total Distribution - Maintenance	14,400		10,775	3,191	288	123	23	0
58										
59		Customer Accounts								
60	9010.00	Supervision - Customer Accounts	-							
61	9020.00	Meter Reading Expense	-							
62	9030.00	Customer Records & Collection	-							
63	9040.00	Uncollectible Accounts	-							
64		Total Customer Accounts	-		0	0	0	0	0	0
65										
66		Customer Service								
67	9070.00	Supervision - Customer Service Activities	-							
68	9080.00	Solar Replacement Program	-							
69	9081.00	Solar Water Heater Rebate	-							
70	9082.00	Solar Water Heater Loan	-							
71	9083.00	Appliance Rebate	-							
72	9084.00	Efficient Water Heater	-							
73	9085.00	Key Accounts	-							
74	9086.00	Surge Protection Program	-							
75	9087.00	CFL Program / Light Up A Life Program	-							
76	9088.00	HBI Program	-							
77	9089.00	In-Home Displays	-							
78	9090.00	Information & Instructional Advertising	-							
79	9100.00	Member Relations	-							
80		Total Customer Service	-		0	0	0	0	0	0

Daymark Allocated Cost of Service Model											
Kauai Island Utility Cooperative											
Distribution - Customer											
FERC											
Line	Account				2	3	4	5	6	7	8
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation	Streetlighting
81											
82		Marketing & Sales									
83	9110.00	Sales Expense	-								
84		Total Marketing & Sales	-		0	0	0	0	0	0	0
85											
86		Administrative									
87	9200.00	Administrative & General Services	293,503	Cust - Dist Labor	219,716	64,662	5,825	2,486	455	0	359
88	9210.00	Office Supplies & Expenses	33,362	Cust - Dist Labor	24,975	7,350	662	283	52	0	41
89	9230.00	Outside / Professional Services	250,394	Cust - Dist OM CWC	188,523	50,744	4,426	1,864	320	0	4,517
90	9240.00	Property Insurance	43,159	Cust - Dist Plant	32,762	7,651	628	258	38	0	1,822
91	9260.00	Employee Benefits									
92	9280.00	Regulatory Commission Expense-HPUC Fee	33,355	Cust - Dist OM CWC	25,113	6,759	590	248	43	0	602
93	9280.00	Regulatory Commission Expense-Other	46,126	Cust - Dist OM CWC	34,729	9,348	815	343	59	0	832
94	9289.00	Legislative Expense	5,376	Cust - Dist OM CWC	4,047	1,089	95	40	7	0	97
95	9300.00	Other General Expense	24,682	Cust - Dist Labor	18,477	5,438	490	209	38	0	30
96	9301.00	Community Outreach	11,051	Cust - Dist Labor	8,273	2,435	219	94	17	0	14
97	9302.00	USFFW SOS Shearwater Program Outreach	455	Cust - Dist Labor	341	100	9	4	1	0	1
98	9310.00	Rents	50,343	Cust - Dist Plant	38,215	8,924	733	301	45	0	2,125
99	9350.00	Maintenance of General Plant	53,431	Cust - Dist Plant	40,560	9,472	778	319	47	0	2,255
100		Total Administrative	845,238		635,731	173,972	15,271	6,449	1,122	0	12,693
101											
102		TOTAL OPERATIONS EXPENSE	1,941,674		1,461,899	393,490	34,324	14,456	2,482	0	35,024
103											
104	4030.00	Depreciation Expense - System	1,041,296		783,016	215,053	18,902	7,987	1,393	0	14,946
105	0.00		0.00	Cust - Dist Iniki							
106	4060.00	Amortization Expense - Acquisition Adj	-								
107		TOTAL DEPRECIATION AND AMORTIZATION	1,041,296		783,016	215,053	18,902	7,987	1,393	0	14,946
108											
109		State HPUC Tax	353,911	Cust - Dist COS	265,128	76,645	6,892	2,994	561	26	1,665
110		CK Franchise & License Tax	150,345	Cust - Dist COS	112,629	32,559	2,928	1,272	238	11	708
111		Income Tax on Non-Op Income	1,297	Cust - Dist Non Ops	974	260	23	11	2	1	25
112		State Income Tax	-	Cust - Dist Non Ops							
113		Federal Income Tax	-	Cust - Dist Non Ops							
114		TOTAL TAXES OTHER THAN INCOME	505,553		378,732	109,464	9,843	4,277	801	37	2,398
115											
116		TOTAL COST OF ELECTRIC SERVICE	3,488,523		2,623,647	718,007	63,069	26,719	4,676	37	52,367

Daymark Allocated Cost of Service Model										
Kauai Island Utility Cooperative										
Distribution - Customer										
FERC				2	3	4	5	6	7	8
Line	Account									
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation Streetlighting
117										
118		Interest Expense - Customer Deposits	-							
119		Additional Short-Term Debt	-	Cust - Dist Net Plant						
120		TOTAL INTEREST ON SHORT TERM DEBT	-		0	0	0	0	0	0
121										
122		INTEREST EXPENSE								
123		Interest Expense - RUS	-	Cust - Dist Net Plant						
124		Interest Expense - CFC	92,729	Cust - Dist Net Plant	70,195	17,242	1,449	600	95	3,149
125		Interest Expense - FFB	122,054	Cust - Dist Net Plant	92,393	22,694	1,907	790	124	4,145
126		Interest Expense - CoBank	23,629	Cust - Dist Net Plant	17,887	4,393	369	153	24	802
127		Interest Expense - SBA PPP	-	Cust - Dist Net Plant						
128										
129		TOTAL INTEREST ON LONG TERM DEBT	238,412		180,474	44,330	3,725	1,544	243	8,096
130										
131		CONTRIBUTIONS AND DONATIONS								
132	4261.00	Contributions & Donations	-							
133	4265.00	Other Deductions	-							
134		TOTAL CONTRIBUTIONS AND DONATIONS	-		0	0	0	0	0	0
135										
136		Total Electric COS	3,726,935		2,804,121	762,336	66,794	28,263	4,920	37 60,464
137										
138		NET OTHER NON-OPERATING INCOME								
139	4240.00	Capital Credits	4,367	Cust - Dist Rate Base	3,227	806	86	72	24	16 136
140	4180.00	Income (Loss) from KRS1 / KRS2H	-	Cust - Dist Plant						
141	4210.00	RLF Annual Admin Fee	-							
142	4213.00	PPA Liquidated Damages	-							
143		TOTAL OTHER NON-OPERATING INCOME	4,367		3,227	806	86	72	24	16 136
144										
145		INTEREST INCOME								
146	4214.00	SBA PPP Loan Forgiveness	-	Cust - Dist OM CWC						
147	4190.00	Interest Income - General	5	Cust - Dist OM CWC	4	1	0	0	0	0
148	4191.00	Interest Income - DSM/IRP	-	Cust - Dist OM CWC						
149	4192.00	Interest Income - RUS COC	685	Cust - Dist OM CWC	516	139	12	5	1	0 12
150	4193.00	Interest Income - FHB BSCM	-	Cust - Dist OM CWC						
151	4194.00	Interest Income - CFC DF	20,557	Cust - Dist OM CWC	15,478	4,166	363	153	26	0 371
152	4195.00	Interest Income - CFC CP	-	Cust - Dist OM CWC						
153	4196.00	Interest Income - CFC MTN	-	Cust - Dist OM CWC						
154	4197.00	Interest Income - Member Capital	6,814	Cust - Dist OM CWC	5,130	1,381	120	51	9	0 123
155	4198.00	Interest Income - Select Notes	-	Cust - Dist OM CWC						
156	4199.00	Interest Income - KRS1	-	Cust - Dist OM CWC						
157	0.00	Net Jobbing Sales	4,128	Cust - Dist OM CWC	3,108	837	73	31	5	0 74
158	4181.00	Net Rental Income - Eleele	3,457	Cust - Dist OM CWC	2,603	701	61	26	4	0 62
159		TOTAL INTEREST INCOME	35,647		26,839	7,224	630	265	46	0 643
160										
161		CAPITALIZED INTEREST	-							
162										

Daymark Allocated Cost of Service Model										
Kauai Island Utility Cooperative										
Distribution - Total										
FERC										
Line	Account		2	3	4	5	6	7	8	
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation Streetlighting
81										
82		Marketing & Sales								
83	9110.00	Sales Expense	-		0	0	0	0	0	0
84		Total Marketing & Sales	-		0	0	0	0	0	0
85										
86		Administrative								
87	9200.00	Administrative & General Services	2,649,425		1,228,425	373,318	217,669	455,322	200,937	161,307 12,447
88	9210.00	Office Supplies & Expenses	301,158		139,634	42,435	24,742	51,756	22,840	18,336 1,415
89	9230.00	Outside / Professional Services	1,879,958		885,844	264,118	150,874	314,910	135,538	108,795 19,879
90	9240.00	Property Insurance	604,546		273,755	81,393	51,241	108,446	40,575	32,615 16,522
91	9260.00	Employee Benefits								
92	9280.00	Regulatory Commission Expense-HPUC Fee	250,426		118,002	35,183	20,098	41,949	18,055	14,492 2,648
93	9280.00	Regulatory Commission Expense-Other	346,317		163,186	48,655	27,793	58,011	24,968	20,042 3,662
94	9289.00	Legislative Expense	40,361		19,018	5,670	3,239	6,761	2,910	2,336 427
95	9300.00	Other General Expense	222,804		103,304	31,394	18,305	38,290	16,898	13,565 1,047
96	9301.00	Community Outreach	99,760		46,255	14,057	8,196	17,145	7,566	6,074 469
97	9302.00	USFFW SOS Shearwater Program Outreach	4,109		1,905	579	338	706	312	250 19
98	9310.00	Rents	705,185		319,327	94,942	59,771	126,499	47,329	38,045 19,272
99	9350.00	Maintenance of General Plant	748,442		338,915	100,766	63,437	134,259	50,232	40,379 20,454
100		Total Administrative	7,852,492		3,637,569	1,092,509	645,703	1,354,054	568,160	456,236 98,261
101										
102		TOTAL OPERATIONS EXPENSE	14,578,091		6,869,254	2,048,094	1,169,951	2,441,963	1,051,024	843,651 154,154
103										
104	4030.00	Depreciation Expense - System	8,825,667		4,073,658	1,221,961	709,987	1,485,244	532,344	427,200 375,274
105										
106	4060.00	Amortization Expense - Acquisition Adj	-		0	0	0	0	0	0 0
107		TOTAL DEPRECIATION AND AMORTIZATION	8,825,667		4,073,658	1,221,961	709,987	1,485,244	532,344	427,200 375,274
108										
109		State HPUC Tax	5,145,739		2,304,440	700,657	435,179	918,496	364,423	292,788 129,757
110		CK Franchise & License Tax	2,185,955		977,905	297,326	184,649	389,718	147,142	118,209 71,006
111		Income Tax on Non-Op Income	18,856		8,438	2,544	1,591	3,362	1,269	1,020 632
112		State Income Tax	-		0	0	0	0	0	0 0
113		Federal Income Tax	-		0	0	0	0	0	0 0
114		TOTAL TAXES OTHER THAN INCOME	7,350,551		3,290,784	1,000,527	621,419	1,311,575	512,835	412,017 201,394
115										
116		TOTAL COST OF ELECTRIC SERVICE	30,754,309		14,233,695	4,270,582	2,501,357	5,238,781	2,096,203	1,682,869 730,822

Daymark Allocated Cost of Service Model										
Kauai Island Utility Cooperative										
Distribution - Total										
FERC			2	3	4	5	6	7	8	
Line	Account									
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation Streetlighting
117										
118		Interest Expense - Customer Deposits								
119		Additional Short-Term Debt	131,318		55,801	17,075	11,719	25,051	9,409	4,692
120		TOTAL INTEREST ON SHORT TERM DEBT	131,318		55,801	17,075	11,719	25,051	9,409	4,692
121										
122		INTEREST EXPENSE								
123		Interest Expense - RUS	-		0	0	0	0	0	0
124		Interest Expense - CFC	1,298,907		582,740	174,076	109,091	230,696	86,519	46,249
125		Interest Expense - FFB	1,709,679		767,028	229,127	143,591	303,652	113,880	60,874
126		Interest Expense - CoBank	330,979		148,490	44,357	27,798	58,784	22,046	11,785
127		Interest Expense - SBA PPP	-		0	0	0	0	0	0
128										
129		TOTAL INTEREST ON LONG TERM DEBT	3,339,565		1,498,259	447,560	280,480	593,132	222,444	118,908
130										
131		CONTRIBUTIONS AND DONATIONS								
132	4261.00	Contributions & Donations	-		0	0	0	0	0	0
133	4265.00	Other Deductions	-		0	0	0	0	0	0
134		TOTAL CONTRIBUTIONS AND DONATIONS	-		0	0	0	0	0	0
135										
136		Total Electric COS	34,225,192		15,787,756	4,735,217	2,793,556	5,856,964	2,328,056	1,869,221 854,422
137										
138		NET OTHER NON-OPERATING INCOME								
139	4240.00	Capital Credits	32,787		15,308	4,503	2,624	5,495	2,075	1,666 1,117
140	4180.00	Income (Loss) from KRS1 / KRS2H	-		0	0	0	0	0	0
141	4210.00	RLF Annual Admin Fee								
142	4213.00	PPA Liquidated Damages								
143		TOTAL OTHER NON-OPERATING INCOME	32,787		15,308	4,503	2,624	5,495	2,075	1,666 1,117
144										
145		INTEREST INCOME								
146	4214.00	SBA PPP Loan Forgiveness	-		0	0	0	0	0	0
147	4190.00	Interest Income - General	35		16	5	3	6	3	2 0
148	4191.00	Interest Income - DSM/IRP	-		0	0	0	0	0	0
149	4192.00	Interest Income - RUS COC	1,207		739	207	59	105	44	35 17
150	4193.00	Interest Income - FHB BSCM	-		0	0	0	0	0	0
151	4194.00	Interest Income - CFC DF	36,195		22,170	6,214	1,769	3,157	1,324	1,044 518
152	4195.00	Interest Income - CFC CP	-		0	0	0	0	0	0
153	4196.00	Interest Income - CFC MTN	-		0	0	0	0	0	0
154	4197.00	Interest Income - Member Capital	11,998		7,348	2,060	586	1,046	439	346 172
155	4198.00	Interest Income - Select Notes	-		0	0	0	0	0	0
156	4199.00	Interest Income - KRS1	-		0	0	0	0	0	0
157	0.00	Net Jobbing Sales	94,056		41,590	12,612	8,155	17,306	7,467	6,004 922
158	4181.00	Net Rental Income - Eleele	48,429		21,847	6,589	4,103	8,665	3,736	3,002 486
159		TOTAL INTEREST INCOME	191,919		93,711	27,686	14,674	30,286	13,013	10,433 2,116
160										
161		CAPITALIZED INTEREST								
162										

Daymark Allocated Cost of Service Model											
Kauai Island Utility Cooperative											
Distribution - Total											
FERC			2	3	4	5	6	7	8		
Line	Account										
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation	Streetlighting
163		Patronage Capital or Margins	(2,335,341)		(1,432,791)	(377,814)	(110,766)	(201,062)	(73,646)	(58,167)	(81,096)
164											
165		Operating Revenue Requirement	31,889,851		14,354,965	4,357,403	2,682,790	5,655,903	2,254,410	1,811,054	773,326
166		Less Non-Operating Revenue	224,706		109,018	32,189	17,298	35,781	15,087	12,099	3,233
167		Less Other Electric Revenues	(825,938)		(362,460)	(109,406)	(71,214)	(151,290)	(57,186)	(45,983)	(28,398)
168		Revenue Requirement from Rates	32,491,082		14,608,407	4,434,620	2,736,706	5,771,412	2,296,509	1,844,938	798,491
169											
170											
171											
172											
173											
174		TOTAL REVENUE REQUIREMENT BEFORE TAXES & OTHER REVENUE	22,623,469		10,131,574	3,080,468	1,913,283	4,038,206	1,602,204	1,287,256	570,480
175											
176		SUMMARY									
177		Operations and Maintenance Expense	14,578,091		6,869,254	2,048,094	1,169,951	2,441,963	1,051,024	843,651	154,154
178		Depreciation & Amortization	8,825,667		4,073,658	1,221,961	709,987	1,485,244	532,344	427,200	375,274
179		Taxes	7,350,551		3,290,784	1,000,527	621,419	1,311,575	512,835	412,017	201,394
180		Interest	3,470,883		1,554,060	464,635	292,199	618,183	231,853	186,352	123,600
181		Other Expenses	-		0	0	0	0	0	0	0
182		Patronage Capital or Margins	(2,335,341)		(1,432,791)	(377,814)	(110,766)	(201,062)	(73,646)	(58,167)	(81,096)
183		Non-Sales Revenue	601,232		253,442	77,217	53,916	115,509	42,099	33,884	25,164
184		TOTAL REVENUE REQUIREMENT FROM RATES	32,491,082		14,608,407	4,434,620	2,736,706	5,771,412	2,296,509	1,844,938	798,491
185											
186		REVENUE AT CURRENT RATES	32,491,082		13,980,278	4,778,061	3,337,204	7,160,773	3,075,494	27,824	131,448
187											
188		(DEFICIENCY)/SURPLUS	-		(628,129)	343,441	600,498	1,389,361	778,985	(1,817,114)	(667,043)
189											
190		RATE INCREASE TO EQUAL COS	0.0%		4.5%	-7.2%	-18.0%	-19.4%	-25.3%	6530.7%	507.5%

Daymark Allocated Cost of Service Model											
Kauai Island Utility Cooperative											
Customer Service - Total											
FERC											
Line	Account				2	3	4	5	6	7	8
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation	Streetlighting
1	OPERATING EXPENSES										
2	Generation Expense										
3	5000	Operation, Supervision & Engineering	-								
4	5020	Steam Expense	-								
5	5060	Rents	-								
6	5100	Maintenance Supervision & Engineering	-								
7	5110	Maintenance of Structures	-								
8	5120	Maintenance of Boilers	-								
9	5130	Maintenance of Electric Plant - Steam	-								
10	5360	Water for Power	-								
11	5420	Maintenance of Structures	-								
12	5430	Maintenance of Reservoirs, Dams & Waterways	-								
13	5440	Maintenance of Electric Plant - Hydro	-								
14	5460	Operation Supervision & Engineering - Hydro	-								
15	5473	Fuel	-								
16	5480	Generation Expense	-								
17	5490	Misc. Other power Generation Expense	-								
18	5510	Maintenance Supervision & Engineering	-								
19	5520	Maintenance of Structures	-								
20	5530	Maintenance of Generation & Electric Equip	-								
21	5560	System Control & Load Dispatch	-								
22	0	Purchased Power	-								
23		Total Generation	-		0	0	0	0	0	0	0
24											
25	Transmission Expense										
26	5600.00	Operation, Supervision & Engineering	-								
27	5620.00	Station Expense	-								
28	5630.00	Overhead Line Expense	-								
29	5660.00	Miscellaneous Transmission Expense	-								
30	5661.00	Environmental HCP	-								
31	5670.00	Rents	-								
32		Total Transmission - Operations	-		0	0	0	0	0	0	0
33											
34	5700.00	Maintenance of Station Equipment	-								
35	5710.00	Maintenance of Overhead Lines	-								
36		Total Transmission - Maintenance	-		0	0	0	0	0	0	0

Daymark Allocated Cost of Service Model											
Kauai Island Utility Cooperative											
Customer Service - Total											
		2	3	4	5	6	7	8			
FERC											
Line	Account										
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation	Streetlighting
37											
38		Distribution Expense									
39	5800.00	Operation, Supervision & Engineering	-								
40	5820.00	Station Expense	-								
41	5830.00	Overhead Line Expense	-								
42	5840.00	Underground Line Expense	-								
43	5860.00	Meter Expense	-								
44	5880.00	Miscellaneous Distribution Expense	-								
45	5881.00	Environmental HCP	-								
46	5890.00	Rents	-								
47		Total Distribution - Operations	-		0	0	0	0	0	0	0
48											
49	5900.00	Maintenance Supervision & Engineering	-								
50	5910.00	Maintenance of Structures	-								
51	5920.00	Maintenance of Station Equipment	-								
52	5930.00	Maintenance of Overhead Lines	-								
53	5940.00	Maintenance of Underground Lines	-								
54	5950.00	Maintenance of Line Transformers	-								
55	5960.00	Maintenance of Street Lights & Signal Systems	-								
56	5970.00	Maintenance of Meters	-								
57		Total Distribution - Maintenance	-		0	0	0	0	0	0	0
58											
59		Customer Accounts									
60	9010.00	Supervision - Customer Accounts	456,536	Cust - CS Labor	359,158	55,737	3,495	1,229	179	19	36,718
61	9020.00	Meter Reading Expense	342,402	Cust Mtr Rd	292,942	45,461	2,851	1,002	146	0	0
62	9030.00	Customer Records & Collection	1,972,055	Customers	1,523,883	236,488	14,831	5,214	759	101	190,780
63	9040.00	Uncollectible Accounts	176,210	Cust Uncollectible	151,264	23,474	1,472	0	0	0	0
64		Total Customer Accounts	2,947,203		2,327,247	361,160	22,650	7,445	1,084	121	227,498
65											
66		Customer Service									
67	9070.00	Supervision - Customer Service Activities	-								
68	9080.00	Solar Replacement Program	14,000	Cust - Res Programs	14,000	0	0	0	0	0	0
69	9081.00	Solar Water Heater Rebate	51,000	Cust - Res Programs	51,000	0	0	0	0	0	0
70	9082.00	Solar Water Heater Loan	4,800	Cust - Res Programs	4,800	0	0	0	0	0	0
71	9083.00	Appliance Rebate	131,800	Cust - Res Programs	131,800	0	0	0	0	0	0
72	9084.00	Efficient Water Heater	7,500	Cust - Res Programs	7,500	0	0	0	0	0	0
73	9085.00	Key Accounts	22,500	Cust - Large	0	0	0	19,313	2,813	375	0
74	9086.00	Surge Protection Program	-								
75	9087.00	CFL Program / Light Up A Life Program	26,750	Cust - Res Programs	26,750	0	0	0	0	0	0
76	9088.00	HBI Program	16,000	Cust - Res Programs	16,000	0	0	0	0	0	0
77	9089.00	In-Home Displays	73,500	Cust - Res Programs	73,500	0	0	0	0	0	0
78	9090.00	Information & Instructional Advertising	94,768	Customers	73,231	11,365	713	251	36	5	9,168
79	9100.00	Member Relations	21,000	Customers	16,228	2,518	158	56	8	1	2,032
80		Total Customer Service	463,618		414,808	13,883	871	19,619	2,857	381	11,200

Daymark Allocated Cost of Service Model										
Kauai Island Utility Cooperative										
Customer Service - Total										
FERC				2	3	4	5	6	7	8
Line	Account									
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation Streetlighting
81										
82		Marketing & Sales								
83	9110.00	Sales Expense	-							
84		Total Marketing & Sales	-		0	0	0	0	0	0
85										
86		Administrative								
87	9200.00	Administrative & General Services	1,471,049	Cust - CS Labor	1,157,278	179,595	11,263	3,959	577	63 118,313
88	9210.00	Office Supplies & Expenses	167,213	Cust - CS Labor	131,547	20,414	1,280	450	66	7 13,449
89	9230.00	Outside / Professional Services	787,843	Cust - CS OM CWC	626,986	89,430	5,609	4,982	726	90 60,021
90	9240.00	Property Insurance	65	Customers	50	8	0	0	0	0 6
91	9260.00	Employee Benefits								
92	9280.00	Regulatory Commission Expense-HPUC Fee	104,947	Cust - CS OM CWC	83,520	11,913	747	664	97	12 7,995
93	9280.00	Regulatory Commission Expense-Other	145,133	Cust - CS OM CWC	115,500	16,474	1,033	918	134	17 11,057
94	9289.00	Legislative Expense	16,914	Cust - CS OM CWC	13,461	1,920	120	107	16	2 1,289
95	9300.00	Other General Expense	123,708	Cust - CS Labor	97,321	15,103	947	333	48	5 9,950
96	9301.00	Community Outreach	55,390	Cust - CS Labor	43,576	6,762	424	149	22	2 4,455
97	9302.00	USFFW SOS Shearwater Program Outreach	2,281	Cust - CS Labor	1,795	279	17	6	1	0 183
98	9310.00	Rents	76	Customers	59	9	1	0	0	0 7
99	9350.00	Maintenance of General Plant	81	Customers	62	10	1	0	0	0 8
100		Total Administrative	2,874,700		2,271,155	341,918	21,443	11,568	1,685	199 226,732
101										
102		TOTAL OPERATIONS EXPENSE	6,285,522		5,013,210	716,961	44,964	38,632	5,626	700 465,430
103										
104	4030.00	Depreciation Expense - System	2,877		2,223	345	22	8	1	0 278
105										
106	4060.00	Amortization Expense - Acquisition Adj	-							
107		TOTAL DEPRECIATION AND AMORTIZATION	2,877		2,223	345	22	8	1	0 278
108										
109		State HPUC Tax	554	Cust - CS OM CWC	441	63	4	4	1	0 42
110		CK Franchise & License Tax	235	Cust - CS OM CWC	187	27	2	1	0	0 18
111		Income Tax on Non-Op Income	2	Cust - CS Non Ops	2	0	0	0	0	0 0
112		State Income Tax	-	Cust - CS Non Ops	-	-	-	-	-	- 0
113		Federal Income Tax	-	Cust - CS Non Ops	-	-	-	-	-	- 0
114		TOTAL TAXES OTHER THAN INCOME	791		629	90	6	5	1	0 60
115										
116		TOTAL COST OF ELECTRIC SERVICE	6,289,190		5,016,063	717,396	44,991	38,644	5,628	700 465,768

Daymark Allocated Cost of Service Model										
Kauai Island Utility Cooperative										
Customer Service - Total										
FERC				2	3	4	5	6	7	8
Line	Account									
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation Streetlighting
117										
118		Interest Expense - Customer Deposits	-							
119		Additional Short-Term Debt	55,032	Cust - CS OM CWC	43,796	6,247	392	348	51	6,4193
120		TOTAL INTEREST ON SHORT TERM DEBT	55,032		43,796	6,247	392	348	51	6,4193
121										
122		INTEREST EXPENSE								
123		Interest Expense - RUS	-	Cust - CS OM CWC						
124		Interest Expense - CFC	140	Cust - CS OM CWC	111	16	1	1	0	11
125		Interest Expense - FFB	184	Cust - CS OM CWC	146	21	1	1	0	14
126		Interest Expense - CoBank	36	Cust - CS OM CWC	28	4	0	0	0	3
127		Interest Expense - SBA PPP	-	Cust - CS OM CWC						
128										
129		TOTAL INTEREST ON LONG TERM DEBT	359		286	41	3	2	0	27
130										
131		CONTRIBUTIONS AND DONATIONS								
132	4261.00	Contributions & Donations	-	Cust - CS OM CWC						
133	4265.00	Other Deductions	-	Cust - CS OM CWC						
134		TOTAL CONTRIBUTIONS AND DONATIONS	-		0	0	0	0	0	0
135										
136		Total Electric COS	6,344,582		5,060,145	723,683	45,385	38,995	5,679	707,469,988
137										
138		NET OTHER NON-OPERATING INCOME								
139	4240.00	Capital Credits	13,740	Customers	10,618	1,648	103	36	5	1,1,329
140	4180.00	Income (Loss) from KRS1 / KRS2H	-	Customers						
141	4210.00	RLF Annual Admin Fee	-							
142	4213.00	PPA Liquidated Damages	-							
143		TOTAL OTHER NON-OPERATING INCOME	13,740		10,618	1,648	103	36	5	1,1,329
144										
145		INTEREST INCOME								
146	4214.00	SBA PPP Loan Forgiveness	-	Cust - CS OM CWC						
147	4190.00	Interest Income - General	15	Cust - CS OM CWC	12	2	0	0	0	1
148	4191.00	Interest Income - DSM/IRP	-	Cust - CS OM CWC						
149	4192.00	Interest Income - RUS COC	19	Cust - CS OM CWC	15	2	0	0	0	1
150	4193.00	Interest Income - FHB BSCM	-	Cust - CS OM CWC						
151	4194.00	Interest Income - CFC DF	578	Cust - CS OM CWC	460	66	4	4	1	44
152	4195.00	Interest Income - CFC CP	-	Cust - CS OM CWC						
153	4196.00	Interest Income - CFC MTN	-	Cust - CS OM CWC						
154	4197.00	Interest Income - Member Capital	191	Cust - CS OM CWC	152	22	1	1	0	15
155	4198.00	Interest Income - Select Notes	-	Cust - CS OM CWC						
156	4199.00	Interest Income - KRS1	-	Cust - CS OM CWC						
157	0.00	Net Jobbing Sales	-	Cust - CS OM CWC						
158	4181.00	Net Rental Income - Eleele	5	Cust - CS OM CWC	4	1	0	0	0	0
159		TOTAL INTEREST INCOME	808	Cust - CS OM CWC	643	92	6	5	1	62
160										
161		CAPITALIZED INTEREST	-							
162										

Daymark Allocated Cost of Service Model											
Kauai Island Utility Cooperative											
Customer Service - Total											
FERC			2	3	4	5	6	7	8		
Line	Account										
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation	Streetlighting
163		Patronage Capital or Margins	(37,269)	Cust - CS OM CWC	(29,660)	(4,231)	(265)	(236)	(34)	(4)	(2,839)
164											
165		Operating Revenue Requirement	6,307,312		5,030,485	719,453	45,120	38,759	5,644	703	467,149
166		Less Non-Operating Revenue	14,548		11,261	1,739	109	41	6	1	1,391
167		Less Other Electric Revenues	-		0	0	0	0	0	0	0
168		Revenue Requirement from Rates	6,292,764		5,019,224	717,713	45,011	38,717	5,638	702	465,758
169											
170											
171											
172											
173											
174		TOTAL REVENUE REQUIREMENT BEFORE TAXES & OTHER REVENUE	5,237,135		4,179,128	597,886	37,496	32,042	4,666	581	385,336
175											
176		SUMMARY									
177		Operations and Maintenance Expense	6,285,522		5,013,210	716,961	44,964	38,632	5,626	700	465,430
178		Depreciation & Amortization	2,877		2,223	345	22	8	1	0	278
179		Taxes	791		629	90	6	5	1	0	60
180		Interest	55,391		44,082	6,288	394	350	51	6	4,220
181		Other Expenses	-		-	-	-	-	-	-	-
182		Patronage Capital or Margins	(37,269)		(29,660)	(4,231)	(265)	(236)	(34)	(4)	(2,839)
183		Non-Sales Revenue	(14,548)		(11,261)	(1,739)	(109)	(41)	(6)	(1)	(1,391)
184		TOTAL REVENUE REQUIREMENT FROM RATES	6,292,764		5,019,224	717,713	45,011	38,717	5,638	702	465,758
185											
186		REVENUE AT CURRENT RATES	6,292,764	Revenues	2,707,653	925,399	646,339	1,386,874	595,651	5,389	25,458
187											
188		(DEFICIENCY)/SURPLUS	-		(2,311,571)	207,686	601,328	1,348,157	590,013	4,687	(440,300)
189											
190		RATE INCREASE TO EQUAL COS	0.0%		85.4%	-22.4%	-93.0%	-97.2%	-99.1%	-87.0%	1729.5%

Daymark Allocated Cost of Service Model										
Kauai Island Utility Cooperative										
Total Allocated Costs										
FERC			2	3	4	5	6	7	8	
Line	Account									
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation Streetlighting
81										
82		Marketing & Sales								
83	9110.00	Sales Expense	-		0	0	0	0	0	0
84		Total Marketing & Sales	-		0	0	0	0	0	0
85										
86		Administrative								
87	9200.00	Administrative & General Services	9,832,959		4,963,229	1,355,396	790,653	1,672,908	740,431	167,963 142,378
88	9210.00	Office Supplies & Expenses	1,117,706		564,167	154,067	89,873	190,158	84,164	19,092 16,184
89	9230.00	Outside / Professional Services	6,614,023		3,293,401	907,909	544,523	1,158,273	508,550	113,441 87,926
90	9240.00	Property Insurance	1,218,300		550,707	167,611	111,586	238,825	98,470	33,324 17,776
91	9260.00	Employee Benefits	-		0	0	0	0	0	0 0
92	9280.00	Regulatory Commission Expense-HPUC Fee	881,043		438,708	120,941	72,535	154,292	67,743	15,111 11,713
93	9280.00	Regulatory Commission Expense-Other	1,218,404		606,695	167,251	100,309	213,372	93,683	20,897 16,197
94	9289.00	Legislative Expense	141,996		70,706	19,492	11,690	24,867	10,918	2,435 1,888
95	9300.00	Other General Expense	826,903		417,383	113,982	66,490	140,683	62,267	14,125 11,973
96	9301.00	Community Outreach	370,246		186,883	51,036	29,771	62,991	27,880	6,324 5,361
97	9302.00	USFFW SOS Shearwater Program Outreach	15,250		7,698	2,102	1,226	2,595	1,148	260 221
98	9310.00	Rents	1,421,112		642,384	195,513	130,162	278,583	114,863	38,871 20,736
99	9350.00	Maintenance of General Plant	1,508,285		681,789	207,506	138,147	295,672	121,909	41,256 22,008
100		Total Administrative	25,166,227		12,423,751	3,462,806	2,086,967	4,433,217	1,932,025	473,101 354,361
101										
102		TOTAL OPERATIONS EXPENSE	142,577,298		63,801,462	19,732,330	13,718,082	30,218,345	13,242,099	1,029,012 835,968
103										
104	4030.00	Depreciation Expense - System	16,336,572		7,463,573	2,277,025	1,448,289	3,080,343	1,240,654	435,866 390,824
105										
106	4060.00	Amortization Expense - Acquisition Adj	-		0	0	0	0	0	0 0
107		TOTAL DEPRECIATION AND AMORTIZATION	16,336,572		7,463,573	2,277,025	1,448,289	3,080,343	1,240,654	435,866 390,824
108										
109		State HPUC Tax	10,369,860		4,587,829	1,431,291	962,017	2,074,608	874,553	299,907 139,654
110		CK Franchise & License Tax	4,405,208		1,947,909	607,707	408,455	880,845	363,850	121,233 75,211
111		Income Tax on Non-Op Income	38,000		16,806	5,222	3,521	7,598	3,139	1,046 668
112		State Income Tax	-		0	0	0	0	0	0 0
113		Federal Income Tax	-		0	0	0	0	0	0 0
114		TOTAL TAXES OTHER THAN INCOME	14,813,068		6,552,544	2,044,219	1,373,993	2,963,051	1,241,542	422,186 215,533
115										
116		TOTAL COST OF ELECTRIC SERVICE	173,726,938		77,817,578	24,053,574	16,540,364	36,261,740	15,724,294	1,887,065 1,442,325

Daymark Allocated Cost of Service Model											
Kauai Island Utility Cooperative											
Total Allocated Costs											
FERC			2	3	4	5	6	7	8		
Line	Account										
No.	Number	Account Description	Total System	Alloc. Factor	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation	Streetlighting
117											
118		Interest Expense - Customer Deposits	-		0	0	0	0	0	0	0
119		Additional Short-Term Debt	462,000		223,973	62,045	39,216	83,961	35,465	7,895	9,446
120		TOTAL INTEREST ON SHORT TERM DEBT	462,000		223,973	62,045	39,216	83,961	35,465	7,895	9,446
121											
122		INTEREST EXPENSE									
123		Interest Expense - RUS	-		0	0	0	0	0	0	0
124		Interest Expense - CFC	2,617,600		1,177,795	359,321	238,748	510,825	210,911	71,058	48,941
125		Interest Expense - FFB	3,445,400		1,550,265	472,954	314,251	672,371	277,610	93,530	64,418
126		Interest Expense - CoBank	667,000		300,118	91,560	60,836	130,165	53,743	18,107	12,471
127		Interest Expense - SBA PPP	-		0	0	0	0	0	0	0
128											
129		TOTAL INTEREST ON LONG TERM DEBT	6,730,000		3,028,178	923,835	613,836	1,313,361	542,265	182,695	125,830
130											
131		CONTRIBUTIONS AND DONATIONS									
132	4261.00	Contributions & Donations	-		0	0	0	0	0	0	0
133	4265.00	Other Deductions	-		0	0	0	0	0	0	0
134		TOTAL CONTRIBUTIONS AND DONATIONS	-		0	0	0	0	0	0	0
135											
136		Total Electric COS	180,918,938		81,069,729	25,039,454	17,193,416	37,659,062	16,302,024	2,077,655	1,577,601
137											
138		NET OTHER NON-OPERATING INCOME									
139	4240.00	Capital Credits	225,000		99,508	30,026	20,193	44,140	19,066	1,917	2,757
140	4180.00	Income (Loss) from KRS1 / KRS2H	(1,499,692)		(673,339)	(209,636)	(146,741)	(317,041)	(140,784)	(1,722)	(3,035)
141	4210.00	RLF Annual Admin Fee	-		0	0	0	0	0	0	0
142	4213.00	PPA Liquidated Damages	-		0	0	0	0	0	0	0
143		TOTAL OTHER NON-OPERATING INCOME	(1,274,692)		(573,831)	(179,610)	(126,548)	(272,902)	(121,718)	195	(278)
144											
145		INTEREST INCOME									
146	4214.00	SBA PPP Loan Forgiveness	-		0	0	0	0	0	0	0
147	4190.00	Interest Income - General	240		110	33	22	49	21	2	2
148	4191.00	Interest Income - DSM/IRP	-		0	0	0	0	0	0	0
149	4192.00	Interest Income - RUS COC	2,500		1,329	388	184	376	164	36	21
150	4193.00	Interest Income - FHB BSCM	-		0	0	0	0	0	0	0
151	4194.00	Interest Income - CFC DF	75,000		39,878	11,649	5,532	11,282	4,931	1,088	640
152	4195.00	Interest Income - CFC CP	-		0	0	0	0	0	0	0
153	4196.00	Interest Income - CFC MTN	-		0	0	0	0	0	0	0
154	4197.00	Interest Income - Member Capital	24,860		13,218	3,861	1,834	3,740	1,634	361	212
155	4198.00	Interest Income - Select Notes	-		0	0	0	0	0	0	0
156	4199.00	Interest Income - KRS1	852,000		356,383	118,464	88,780	198,584	86,951	1,396	1,441
157	0.00	Net Jobbing Sales	94,056		41,590	12,612	8,155	17,306	7,467	6,004	922
158	4181.00	Net Rental Income - Eleele	97,596		44,034	13,496	8,937	19,109	8,374	3,059	587
159		TOTAL INTEREST INCOME	1,146,252		496,542	160,504	113,444	250,446	109,543	11,947	3,826
160											
161		CAPITALIZED INTEREST	-		0	0	0	0	0	0	0
162											

Daymark Allocated Cost of Service Model													
Kauai Island Utility Cooperative													
Labor Allocator													
				2	3	4	5						
FERC		Alloc.				Customer		Distribution		%			
Account Number	Account Description	Labor Expense	Factor	Generation	Transmission	Distribution	Service	Total	Check	Classification	Demand	Demand	Customer
1	Generation Expense												
2	5000 Operation, Supervision & Engineering	1,059,150	G	1,059,150	0	0	0	1,059,150	0	0		0	0
3	5020 Steam Expense	1,211,896	G	1,211,896	0	0	0	1,211,896	0	0		0	0
4	5060 Rents	0	G	0	0	0	0	0	0	0		0	0
5	5100 Maintenance Supervision & Engineering	0	G	0	0	0	0	0	0	0		0	0
6	5110 Maintenance of Structures	0	G	0	0	0	0	0	0	0		0	0
7	5120 Maintenance of Boilers	0	G	0	0	0	0	0	0	0		0	0
8	5130 Maintenance of Electric Plant - Steam	0	G	0	0	0	0	0	0	0		0	0
9	5360 Water for Power	0	G	0	0	0	0	0	0	0		0	0
10	5420 Maintenance of Structures	0	G	0	0	0	0	0	0	0		0	0
11	5430 Maintenance of Reservoirs, Dams & Waterways	0	G	0	0	0	0	0	0	0		0	0
12	5440 Maintenance of Electric Plant - Hydro	0	G	0	0	0	0	0	0	0		0	0
13	5460 Operation Supervision & Engineering - Hydro	710,509	G	710,509	0	0	0	710,509	0	0		0	0
14	5473 Fuel	0	G	0	0	0	0	0	0	0		0	0
15	5480 Generation Expense	3,355,947	G	3,355,947	0	0	0	3,355,947	0	0		0	0
16	5490 Misc. Other power Generation Expense	0	G	0	0	0	0	0	0	0		0	0
17	5510 Maintenance Supervision & Engineering	628,813	G	628,813	0	0	0	628,813	0	0		0	0
18	5520 Maintenance of Structures	0	G	0	0	0	0	0	0	0		0	0
19	5530 Maintenance of Generation & Electric Equip	2,095,030	G	2,095,030	0	0	0	2,095,030	0	0		0	0
20	5560 System Control & Load Dispatch	0	G	0	0	0	0	0	0	0		0	0
21	5552 Purchased Power	0	G	0	0	0	0	0	0	0		0	0
22	Total Generation	9,061,345		9,061,345	0	0	0	9,061,345	0	0		0	0
23													
24	Transmission Expense												
25	5600 Operation, Supervision & Engineering	0	T	0	0	0	0	0	0	0		0	0
26	5620 Station Expense	144,698	T	0	144,698	0	0	144,698	0	0		0	0
27	5630 Overhead Line Expense	0	T	0	0	0	0	0	0	0		0	0
28	5660 Miscellaneous Transmission Expense	111,407	T	0	111,407	0	0	111,407	0	0		0	0
29	5661 Environmental HCP	0	T	0	0	0	0	0	0	0		0	0
30	5670 Rents	0	T	0	0	0	0	0	0	0		0	0
31	Total Transmission - Operations	256,105		0	256,105	0	0	256,105	0	0		0	0
32													
33	5700 Maintenance of Station Equipment	236,419	T	0	236,419	0	0	236,419	0	0		0	0
34	5710 Maintenance of Overhead Lines	0	T	0	0	0	0	0	0	0		0	0
35	Total Transmission - Maintenance	236,419		0	236,419	0	0	236,419	0	0		0	0
36													
37	Total Transmission	492,524		0	492,524	0	0	492,524	0	0		0	0
38													

Daymark Allocated Cost of Service Model													
Kauai Island Utility Cooperative													
Labor Allocator													
				2	3	4	5						
FERC	Account	Alloc.					Customer			Distribution	%		
Number	Account Description	Labor Expense	Factor	Generation	Transmission	Distribution	Service	Total	Check	Classification	Demand	Demand	Customer
39	Distribution Expense												
40	5800 Operation, Supervision & Engineering	48,295	D	0	0	48,295	0	48,295	0	48,295	100%	48,295	0
41	5820 Station Expense	144,380	D	0	0	144,380	0	144,380	0	144,380	100%	144,380	0
42	5830 Overhead Line Expense	13,564	D	0	0	13,564	0	13,564	0	13,564	100%	13,564	0
43	5840 Underground Line Expense	15,246	D	0	0	15,246	0	15,246	0	15,246	100%	15,246	0
44	5860 Meter Expense	476,649	D	0	0	476,649	0	476,649	0	476,649	0%	0	476,649
45	5880 Miscellaneous Distribution Expense	195,071	D	0	0	195,071	0	195,071	0	195,071	93%	180,851	14,221
46	5881 Environmental HCP	0	D	0	0	0	0	0	0	0		0	0
47	5890 Rents	0	D	0	0	0	0	0	0	0		0	0
48	Total Distribution - Operations	893,207		0	0	893,207	0	893,207	0	893,207		402,337	490,870
49													
50	5900 Maintenance Supervision & Engineering	245,338	D	0	0	245,338	0	245,338	0	245,338	100%	245,338	0
51	5910 Maintenance of Structures	0	D	0	0	0	0	0	0	0		0	0
52	5920 Maintenance of Station Equipment	416,439	D	0	0	416,439	0	416,439	0	416,439	100%	416,439	0
53	5930 Maintenance of Overhead Lines	2,324,918	D	0	0	2,324,918	0	2,324,918	0	2,324,918	100%	2,324,918	0
54	5940 Maintenance of Underground Lines	543,104	D	0	0	543,104	0	543,104	0	543,104	100%	543,104	0
55	5950 Maintenance of Line Transformers	0	D	0	0	0	0	0	0	0		0	0
56	5960 Maintenance of Street Lights & Signal Systems	8,037	D	0	0	8,037	0	8,037	0	8,037	100%	8,037	0
57	5970 Maintenance of Meters	0	D	0	0	0	0	0	0	0		0	0
58	Total Distribution - Maintenance	3,537,836		0	0	3,537,836	0	3,537,836	0	3,537,836		3,537,836	0
59													
60	Total Distribution	4,431,042		0	0	4,431,042	0	4,431,042	0	4,431,042		3,940,173	490,870
61													
62	Customer Accounts												
63	9010 Supervision - Customer Accounts	456,536	C	0	0	0	456,536	456,536	0	0		0	0
64	9020 Meter Reading Expense	337,894	C	0	0	0	337,894	337,894	0	0		0	0
65	9030 Customer Records & Collection	1,665,831	C	0	0	0	1,665,831	1,665,831	0	0		0	0
66	9040 Uncollectible Accounts	0	C	0	0	0	0	0	0	0		0	0
67	Total Customer Accounts	2,460,261		0	0	0	2,460,261	2,460,261	0	0		0	0
68													
69	Total Labor Expense for Labor Allocator	16,445,173		9,061,345	492,524	4,431,042	2,460,261	16,445,173	0	4,431,042		3,940,173	490,870
70													
71	Labor Allocator	100%		55%	3%	27%	15%					89%	11%

Daymark Allocated Cost of Service Model
Kauai Island Utility Cooperative
Functional Allocators

Line No.	Allocator Description	Allocator	Generation	Transmission	Distribution	Customer Service
1	Generation	G	100%			
2	Transmission	T		100%		
3	Distribution	D			100%	
4	Customer Service	C				100%
5	<u>Special Study</u>					
6	Labor	LBR	55%	3%	27%	15%
7	<u>Internal Allocators</u>					
8	Gross Plant G, T, D	GTD	29%	22%	50%	0%
9	General Plant	GEN	29%	22%	50%	0%
10	Total Gross Completed Plant	PLNT	29%	22%	50%	0%
11	Interest Expense	INT	30%	21%	48%	1%
12	Working Capital	CWC	76%	3%	15%	6%
13	O&M Minus Commodities and Uncollectibles	OM_CWC	53%	6%	28%	12%
14	Depreciation	DEP	31%	15%	54%	0%
15	Revenue Requirement Before Tax and Other Revenues	COS	78%	4%	15%	3%
16	Total Cost of Service	TOTAL	73%	5%	18%	4%

Daymark Allocated Cost of Service Model
Kauai Island Utility Cooperative
Classification Ratios

Line No.	Allocator Description	Allocator	Generation (%) Energy)	Transmission (% Energy)	Distribution (% Demand)	Customer Service (% Customer)
1	Demand	Dmd	0%	0%	100%	0%
2	Energy	Energy	100%	100%	0%	0%
3	Customer	Cust	0%	0%	0%	100%
4	<u>Special Study</u>					
5	Labor	LBR	0%	0%	89%	100%
6	<u>Internal Allocators</u>					
7	Gross Plant G, T, D	GTD	0%	0%	93%	100%
8	General Plant	GEN	0%	0%	93%	100%
9	Depreciation	DEP	0%	0%	88%	100%
10	Total Gross Completed Plant	PLNT	0%	0%	93%	100%
11	O&M Minus Commodities and Uncollectibles	OM_CWC	0%	0%	87%	100%
12	Working Capital	CWC	64%	0%	87%	100%
13	Interest Expense	INT	0%	0%	43%	100%
14	Revenue Requirement Before Tax and Other Revenues	COS	75%	0%	93%	100%
15	Rate Base	Rate_Base			96%	
16	Total Cost of Service	TOTAL	72%	0%	93%	100%

Daymark Allocated Cost of Service Model
Kauai Island Utility Cooperative
Rate Class Allocators

Line No.	Allocator Description	Allocator	Residential (D)	General (G)	General (J)	Large Power (P)	Large Power (L)	Irrigation	Streetlighting	Total	
	External Allocators										
1	NCP	NCP	42.9%	13.1%	9.0%	19.3%	8.6%	6.9%	0.2%	100.0%	
2	NCP Secondary	NCP Secondary	50.8%	15.5%	10.7%	22.8%	0.0%	0.0%	0.2%	100.0%	
3	Average & Excess wo Irrig Excess	A&E wo Irrig Excess	45.1%	14.0%	9.8%	21.2%	9.4%	0.1%	0.2%	100.0%	
4	Retail Energy Sales (MWh)	Energy	41.8%	13.9%	10.4%	23.3%	10.3%	0.2%	0.2%	100.0%	
5	Generation (MWh)	Generation	41.8%	13.9%	10.4%	23.3%	10.2%	0.2%	0.2%	100.0%	
6	Customers	Customers	77.3%	12.0%	0.8%	0.3%	0.0%	0.0%	9.7%	100.0%	
7	Customers Secondary	Customers Secondary	77.3%	12.0%	0.8%	0.3%	0.0%	0.0%	9.7%	100.0%	
8	Street Lighting	StreetLt	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	
9	Customer Meter Operation & Maintenance	Cust Meter O&M	75%	22%	2%	1%	0%	0%	0%	100.0%	
10	Customer Meter Reading	Cust Mtr Rd	85.6%	13.3%	0.8%	0.3%	0.0%	0.0%	0.0%	100.0%	
11	Customer Meter Costs	Cust Meter Costs	75%	22%	2%	1%	0%	0%	0%	100.0%	
12	Customer - Large	Cust - Large	0.0%	0.0%	0.0%	85.8%	12.5%	1.7%	0.0%	100.0%	
13	Customer - Residential Programs	Cust - Res Programs	100%	0%	0%	0%	0%	0%	0%	100.0%	
14	Customer Uncollectible	Cust Uncollectible	86%	13%	1%	0%	0%	0%	0%	100.0%	
	Internal Allocators										
16	Gross Distribution Plant - Demand	Dmd - Dist Plant	43%	13%	9%	19%	7%	6%	3%	100.0%	
17	Distribution Labor - Demand	Dmd - Dist Labor	43%	13%	9%	19%	9%	7%	1%	100.0%	
18	Distribution Net Plant - Demand	Dmd - Dist Net Plant	42%	13%	9%	19%	7%	6%	4%	100.0%	
19	Distribution OM CWC - Demand	Dmd - Dist OM CWC	43%	13%	9%	19%	8%	7%	1%	100.0%	
20	Distribution Rate Base - Demand	Dmd - Dist Rate Base	43%	13%	9%	19%	7%	6%	3%	100.0%	
21	Distribution COS - Demand	Dmd - Dist COS	43%	13%	9%	19%	8%	6%	3%	100.0%	
22	Distribution Non-Ops - Demand	Dmd - Dist Non Ops	43%	13%	9%	19%	7%	6%	3%	100.0%	
23	Gross Distribution Plant - Customer	Cust - Dist Plant	76%	18%	1%	1%	0%	0%	4%	100.0%	
24	Distribution Labor - Customer	Cust - Dist Labor	75%	22%	2%	1%	0%	0%	0%	100.0%	
25	Distribution Net Plant - Customer	Cust - Dist Net Plant	76%	19%	2%	1%	0%	0%	3%	100.0%	
26	Distribution OM CWC - Customer	Cust - Dist OM CWC	75%	20%	2%	1%	0%	0%	2%	100.0%	
27	Distribution Rate Base - Customer	Cust - Dist Rate Base	74%	18%	2%	2%	1%	0%	3%	100.0%	
28	Distribution COS - Customer	Cust - Dist COS	75%	22%	2%	1%	0%	0%	0%	100.0%	
29	Distribution Non-Ops - Customer	Cust - Dist Non Ops	75%	20%	2%	1%	0%	0%	2%	100.0%	
30	Customer Service - Labor	Cust - CS Labor	79%	12%	1%	0%	0%	0%	8%	100.0%	
31	Customer Service OM CWC	Cust - CS OM CWC	79.6%	11.4%	0.7%	0.6%	0.1%	0.0%	7.6%	100.0%	
32	Customer Service COS	Cust - CS COS	80%	11%	1%	1%	0%	0%	7%	100.0%	
33	Customer Service Non-Ops	Cust - CS Non Ops	77%	12%	1%	0%	0%	0%	10%	100.0%	
34	Revenues	Revenues	43%	15%	10%	22%	9%	0%	0%	100.0%	
35											

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

EXHIBIT 10

TESTIMONY OF CHRISTOPHER YUH
(EXHIBIT 10-T-700)

(26 PAGES)

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KAUAI ISLAND UTILITY COOPERATIVE
DOCKET NO. 2022-0208
EXHIBIT 10-T-700

DIRECT TESTIMONY
OF
CHRISTOPHER YUH

9 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

10 A. My name is Christopher Yuh. My business address is 4463 Pahee Street,
11 Suite 1, Lihue, Hawaii 96766-2000.

12 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

13 A. I am employed by Kauai Island Utility Cooperative (“KIUC”) as the Manager
14 of Finance, Risk and Analytics.

15 **Q. PLEASE SUMMARIZE YOUR EDUCATION.**

16 A. I have a Bachelor of Science in Accounting degree, with a minor in
17 Information Systems, from the University of Nevada, Las Vegas.

18 **Q. PLEASE DESCRIBE YOUR WORK EXPERIENCE.**

19 A. I have been employed at KIUC since 2020. Prior to holding my current
20 position as the Manager of Finance, Risk and Analytics, I previously held
21 the titles of Senior Financial Analyst and Finance Manager at KIUC. Prior
22 to my employment with KIUC, I held various finance and analytics roles with
23 Hawaiian Airlines for about nine years, and concluded my employment as
24 Director of Analytics, Cargo. Prior to that, I was employed with Enterprise
25 Holdings, Inc. (the parent company of Enterprise Rent-A-Car, National Car

1 Rental, and Alamo Rent A Car) in their Nevada group for about six years in
2 their Accounting/Finance track, with my tenure ending as Accounting
3 Manager.

4 **Q. WHAT ARE YOUR DUTIES AND RESPONSIBILITIES AS KIUC'S**
5 **MANAGER OF FINANCE, RISK AND ANALYTICS?**

6 A. I am responsible for directing the operations of KIUC's Finance department,
7 which includes, but is not limited to, the following functions: financial
8 modeling, investments, long term debt, forecasting, insurance coverage
9 program, financial oversight of the Habitat Conservation Plan ("HCP") and
10 Save our Shearwaters ("SOS") activities, budgeting, trend analysis, data
11 management, reporting, and process improvements. In addition, I am
12 responsible for managing KIUC's inventory and warehouse staff.

13 **I. PURPOSE OF TESTIMONY**

14 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**
15 **PROCEEDING?**

16 A. The purpose of my testimony is to discuss KIUC's operating budget, and to
17 describe the process undertaken to develop the budget and how that
18 information was used to determine the 2023 calendar test year ("Test Year")
19 revenue requirement being proposed in the subject Application. I will also
20 discuss KIUC's endangered species-related Test Year costs and expenses.

1 With respect to the KIUC operating budget, I will be covering the
2 following:

- 3 A. Purpose and goal of KIUC’s budget process
- 4 B. The process to develop the operating budget
- 5 C. Budget sources for Test Year revenue requirement and
6 supporting exhibits
 - 7 1. Source of expenses and rate base elements
 - 8 2. Source of Test Year operations and maintenance
9 (“O&M”) expenses
 - 10 3. Payroll and transportation overhead
 - 11 4. Interest income
 - 12 5. Patronage income
 - 13 6. Long-term debt and interest
 - 14 7. Non-Operating Margin
 - 15 8. Patronage capital refunds/retirements
- 16 D. Pro-forma adjustments to the Test Year revenue
17 requirement

18 With respect to the endangered species-related Test Year costs and
19 expenses, I will be covering the following:

- 20 A. Test Year O&M costs for KIUC’s HCP and SOS activities
- 21 B. Test Year capital costs for the HCP and SOS activities

1 **Q. OTHER THAN THIS TESTIMONY, ARE YOU SPONSORING ANY OF**
2 **THE OTHER APPLICATION EXHIBITS?**

3 A. In connection with the purpose of my testimony discussed above and in
4 support of Exhibit 6 to the Application, I am sponsoring Exhibits 8-1
5 (page 2), 8-13, 8-16, 8-21 to 8-32, and Workpaper 8-1, and am
6 co-sponsoring Workpaper 8-3 (page 2) with Stacie Dellamano (whose
7 testimony is submitted as Exhibit 10-T-200). I am also submitting the
8 following attachment in support of my testimony, which is incorporated
9 herein:

10 Attachment CY-701 – Actual Total Endangered Species O&M Costs
11 from 2010 through October 2022 and the forecasted costs for the
12 remaining months in 2022 and for the 2023 Test Year.

13 **II. KIUC'S OPERATING BUDGET**

14 **A. PURPOSE AND GOAL OF KIUC'S BUDGETING PROCESS**

15 **Q. BRIEFLY DESCRIBE THE PURPOSE AND GOAL OF KIUC'S BUDGET**
16 **PROCESS.**

17 A. The goal of KIUC's budget is to efficiently allocate resources to ensure that
18 KIUC's customers/members have safe and reliable electric service during
19 the applicable budget year, while also being able to work towards achieving
20 the goals set forth in KIUC's Strategic Plan approved by KIUC's
21 member-elected Board of Directors. See David J. Bissell's testimony
22 (Exhibit 10-T-100) for a further discussion regarding KIUC's strategic
23 planning and KIUC's member-elected Board of Directors.

1 **B. DEVELOPMENT OF OPERATING BUDGET**

2 **Q. PLEASE SUMMARIZE THE STEPS IN KIUC’S BUDGETING PROCESS.**

3 **A.** KIUC’s budget process starts with the preparation of a kilowatt hour (“kWh”)
4 sales forecast. This forecast was prepared by Thomas A. Lovas, who is an
5 economist and electric system consultant, and the owner of Energy &
6 Resource Economics, as discussed in his testimony submitted as
7 Exhibit 10-T-1000. The kWh sales forecast is then given to KIUC’s
8 Production department to be used in preparing the Commodities budget,
9 which is developed using a production simulation model. The kWh sales
10 forecast and the Commodities budget are submitted to KIUC’s Finance
11 department and used to derive the revenue budget. Each department
12 manager is responsible for preparing their own department’s O&M and
13 payroll budgets. Budgets are based on the previous year’s actuals,
14 removing one-time non-recurring costs, and then adding in future
15 adjustments. In addition, the budgets reflect the overhead projections and
16 salary increase levels that are provided by the KIUC Finance department.
17 All of the departmental budgets are also submitted to the Finance
18 department, where they are assembled with the revenue budget and other
19 income and expense item budgets into a draft operating budget.

20 After development of the draft operating budget, the KIUC Finance
21 department provides projections for tax, depreciation and amortization,
22 interest expense, and other non-operating items to complete the budget.

1 The draft budget is then reviewed for reasonableness and completeness by
2 key KIUC management personnel, which includes the: (1) Chief Executive
3 Officer, (2) Chief Financial Officer, and (3) Manager of Finance, Risk and
4 Analytics. These positions are currently held respectively by David Bissell,
5 Stacie Dellamano, and myself. A workshop session is then scheduled with
6 KIUC's Board of Directors and the department managers to review the draft
7 budget in detail. If there are any modifications to the budget as a result of
8 the workshop, the draft budget is revised. The revised draft budget is then
9 presented to the Board of Directors for its final approval at a General Board
10 meeting.

11 **Q. PLEASE EXPLAIN WHY THE APPROVAL OF THE OPERATING**
12 **BUDGET BY THE BOARD OF DIRECTORS IS IMPORTANT FROM A**
13 **REGULATORY STANDPOINT.**

14 A. As discussed in Mr. Bissell's testimony (Exhibit 10-T-100), an electric
15 cooperative is owned by its members who are all customers receiving
16 service from the cooperative. Each KIUC electric customer is automatically
17 a member of the cooperative, and currently over 99.6% of KIUC's electric
18 customers are members of KIUC. These members elect the members of
19 the Board of Directors who have overall governance responsibility over
20 KIUC. As part of this responsibility, including to the membership that
21 elected them, the Board approves the operating budget as well as the

1 Strategic Plan mentioned above and further discussed by Mr. Bissell in his
2 testimony (Exhibit 10-T-100).

3 **C. BUDGET SOURCES FOR TEST YEAR REVENUE**
4 **REQUIREMENT AND SUPPORTING EXHIBITS**

5 **Q. WHAT WAS YOUR ROLE IN THE PREPARATION OF THE BUDGETED**
6 **DATA AS SHOWN IN EXHIBIT 6 AND EXHIBITS 8-1 TO 8-32 TO THE**
7 **APPLICATION?**

8 A. With respect to the preparation of the budgeted data shown in the
9 above-referenced exhibits, I was responsible for preparing the accounting,
10 HCP and SOS activities' O&M budgets, all other components of the O&M
11 budget, and the compilation of all O&M items for the results of operations.
12 In addition, and as part of my review, I compared the future years' budget
13 data to historic years' actual data and brought any significant variances to
14 the attention of the Chief Financial Officer, Stacie Dellamano, for further
15 review and adjustment, if necessary, based on such review.

16 **1. Source of Revenues, Expenses and Rate Base Elements**

17 **Q. WHAT IS THE SOURCE OF INFORMATION FOR KIUC'S BUDGETED**
18 **DATA FOR REVENUES, EXPENSES AND RATE BASE ELEMENTS AS**
19 **SHOWN IN THE VARIOUS EXHIBITS OF THE TEST YEAR REVENUE**
20 **REQUIREMENT?**

21 A. The source data for this information were the budgets for 2021 and 2022
22 and historical actuals for 2018 to October 2022 year-to-date. KIUC's

1 budgeted revenues were derived from a sales forecast that used Mr. Lovas'
2 2023 load forecast studies. After receiving Mr. Lovas' 2023 load forecast
3 (March 2022 version), KIUC compared historic actuals from 2018-2021 as
4 well as its 2022 sales forecast at the time (July 2022) to project 2023 sales.
5 In doing so, KIUC concluded that using the average of Mr. Lovas' base case
6 and high case scenarios would be the most feasible forecast to use in
7 preparing KIUC's 2023 budget. In September 2022, KIUC asked Mr. Lovas
8 to update his load forecast model using more recent 2022 data. Mr. Lovas
9 performed this update and noted that the results of the September updated
10 forecast were comparable to his March 2022 forecast, and concluded that
11 the March 2022 forecast provided a realistic and reasonable estimate of
12 what can be expected for the 2023 Test Year. KIUC thus made the decision
13 to continue to use its budgeted 455,721,000 kWh¹ (rounded to
14 455,721 MWh) sales for 2023, as reflected in the Application at Exhibit 8-1
15 (page 2, line 8, column G) and Workpaper 8-1 (line 8, columns K and L).
16 Mr. Lovas' load forecast methodology is discussed further in his testimony
17 (Exhibit 10-T-1000). Revenue source data is discussed in further detail in
18 the testimony of Corinne Cuaresma (Exhibit 10-T-800).

¹ As shown on Attachment TAL-1004, Part 1, the 2023 Sales Forecast based on the March 2022 analysis amounted to 449,515 MWh and 461,925 MWh for the Base and High case, respectively. The average of these two numbers (i.e., 449,515 MWh and 461,925 MWh) results in 455,720 MWh, which is 1 MWh less than the 455,721,000 kWh (i.e., 455,721 MWh) used to determine the approximately \$177.0 million 2023 electric sales revenues at present rates shown in Exhibit 6 to the Application (line 1, column C). This 1 MWh difference is due to rounding.

1 Category types are O&M, capital (i.e., direct and/or administrative and
2 general), and billables. Payroll overhead consists of insurance, payroll
3 taxes, and employee benefits such as pension, 401k, and healthcare.
4 Transportation overhead includes all company vehicle costs. The increase
5 in pension expense for the Test Year is discussed in further detail in the
6 testimony of Ms. Dellamano (Exhibit 10-T-200).

7 As shown in Table 1 below, the labor allocation percentages are
8 based on labor hours that do not fluctuate much from year-to-year because
9 KIUC anticipates continued use of internal manpower to execute capital
10 jobs in 2023. Thus, a 19% capitalization rate provides a reasonable
11 projection of the capitalized labor and related costs for the Test Year.

Table 1

Dept	O&M	Capital		Billables 1861	TOTAL
		Direct	A&G		
PS	97.6%	0.8%	0.8%	0.9%	100.0%
T&D	66.8%	22.2%	9.4%	1.6%	100.0%
MS	99.0%	0.0%	1.0%	0.0%	100.0%
Comm	100.0%				100.0%
ES	100.0%				100.0%
HR	100.0%				100.0%
Exec	100.0%				100.0%
S&F	100.0%				100.0%
Reg	87.8%	0.0%	12.2%	0.0%	100.0%
Engr	42.9%	0.0%	57.1%	0.0%	100.0%
F&CS	77.1%	0.0%	22.1%	0.8%	100.0%
IT	100.0%				100.0%
Total	81.0%	6.0%	9.0%	4.0%	100.0%

13

14 **Q. AFTER APPLYING THE CAPITALIZATION RATE TO THE TOTAL**
15 **LABOR AND LABOR RELATED COSTS, HOW MUCH OF KIUC'S**

1 **TOTAL TEST YEAR O&M EXPENSE IS COMPRISED OF LABOR AND**
2 **LABOR RELATED EXPENSE?**

3 A. Page 1 of Exhibit 8-3 to the Application reflects the portion of each
4 department or program's total Test Year O&M expense that is comprised of
5 labor and labor related expense (i.e., the non-capitalized labor and labor
6 related costs).² Each department's or program's total O&M expense,
7 reflecting the labor and labor related expense, and non-labor expense is
8 shown on Exhibits 8-4 to 8-18 to the Application. The activities conducted
9 by department or program and the non-labor O&M expense incurred to
10 conduct each activity are reflected on each of the above exhibits. The
11 exhibits also reflect the actual expenses for each year from 2018 to 2021,
12 year-to-date October 2022 and projected 2022 and the Test Year.

13 **4. Non-Operating Revenues and Expense**

14 **Q. WHAT DOES KIUC'S NON-OPERATING REVENUE AND EXPENSE**
15 **REPRESENT?**

16 A. As shown on Exhibit 8 to the Application at lines 29-40, KIUC's
17 non-operating revenue and expense consist of: interest and dividend

² As discussed in Ms. Dellamano's testimony (Exhibit 10-T-200), even though listed on Exhibit 8-3 and separately listed on Exhibits 8-13 and 8-16 to the Application, KIUC does not have an SOS or Habitat Conservation department. As discussed below in this testimony, these habitat conservation and SOS activities are in furtherance of KIUC's efforts to obtain incidental take authorizations to legally operate and avoid fines and criminal penalties under endangered/threatened species protection laws. As noted by Ms. Dellamano, for clarity in understanding the various costs of these activities and efforts, rather than separate the program costs across multiple departments, KIUC presented these program costs separately due to the significant expenditures that are incurred.

1 income, other operating income (net), income/losses from the KRS1 and
2 KRS2 subsidiary solar farm operations (which were the subject of previous
3 Commission Docket Nos. 2011-0323, 2012-0383 and 2013-0202),
4 non-operating income (net), liquidated damages, gains/losses from the
5 disposition of property, capital credits and patronage allocation,
6 sponsorships and contributions, other deductions, and interest expense on
7 long and short term debt. Exhibits 8-21 to 8-32 to the Application show the
8 actual results for 2018 to October 2022 year-to-date and the projected
9 amounts for 2022 and the Test Year for each of the above. The total
10 non-operating revenues and expenses from each of the above is expected
11 to result in a loss of approximately (\$7.4 million)³, which is primarily due to
12 the projected losses from KRS1 and KRS2 and the projected interest on
13 long-term debt. The following is a discussion of the significant
14 non-operating revenue and expense activities.

15 a. **Interest Income**

16 **Q. HOW MUCH INTEREST INCOME IS BUDGETED FOR THE TEST YEAR?**

17 A. Total interest income is projected to be about \$1.0 million as shown on
18 Exhibit 8 to the Application (line 29, column H) and as detailed in
19 Exhibit 8-21 (line 11, column I). In the Test Year, KIUC projects interest
20 income from KIUC's Sweep Account, commercial paper placed with its

³ The approximately (\$7.4 million) is the total of the amounts shown on Exhibit 8 to the Application (lines 29 to 40, column H).

1 lender National Rural Utilities Cooperative Finance Corporation (“CFC”),
2 remaining Cushion of Credit Interest left at beginning of year, and other local
3 deposit interest earned at financial institutions. Excess cash will be invested
4 in maturities to maximize earnings.

5 **b. Losses from KRS1 and KRS2**

6 **Q. HOW MUCH ARE THE PROJECTED LOSSES FROM KRS1 AND KRS2**
7 **FOR THE TEST YEAR?**

8 A. The projected Test Year loss from KRS1 is about \$1.3 million, as reflected
9 in the Application at Exhibit 8 (line 31, column H) and Exhibit 8-23 (line 17,
10 column I). The projected Test Year loss from KRS2 is about \$0.2 million,
11 as reflected in the Application at Exhibit 8 (line 32, column H) and
12 Exhibit 8-24 (line 21, column I)). These losses can be attributed to
13 depreciation and amortization expense of about \$1.8 million for KRS1
14 (see Exhibit 8-23, line 8, column I) and about \$1.6 million for KRS 2 (see
15 Exhibit 8-24, line 7, column I), and interest expense of about \$0.9 million for
16 KRS1 (see Exhibit 8-23, lines 14-15, column I) and about \$0.6 million for
17 KRS2 (see Exhibit 8-24, line 13, column I). For reference, KRS1 and KRS2
18 have net plant in service balances of approximately \$26.9 million and
19 \$26.9 million, respectively, and long-term debt balances of approximately
20 \$34.7 million and \$13.1 million, respectively, as of September 30, 2022.

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D. PRO-FORMA ADJUSTMENTS

Q. WERE ANY PRO-FORMA ADJUSTMENTS APPLIED TO THE BOARD OF DIRECTOR APPROVED 2023 OPERATING BUDGET IN ORDER TO DERIVE THE TEST YEAR REVENUE REQUIREMENTS? IF SO, WHAT WERE THEY AND EXPLAIN WHY THE ADJUSTMENT IS NECESSARY FOR RATE MAKING PURPOSES.

A. Yes, pro-forma adjustments were made to derive the 2023 Test Year revenue requirement. Two of these adjustments are shown in Exhibit 6 to the Application (lines 25 and 35, column B) and consist of the following: (a) an adjustment in the amount of about \$0.08 million to remove the costs for sponsorships and contributions expense (line 35, column B); and (b) an adjustment in the amount of about \$2.2 million to remove the amortization of the acquisition adjustment (line 25, column B).

In addition, and as further discussed in Ms. Dellamano’s testimony (Exhibit 10-T-200), there are also: (1) an adjustment from the 2023 operating budget to reflect the actual pension cost as determined by KIUC’s actuaries and to include the 10-year amortization of the pension regulatory asset, resulting in a total adjustment of \$2.15 million as reflected in Workpaper 8-3 to the Application (page 1, line 13, column E); (2) an adjustment in the amount of \$1.28 million to reflect the recovery of the 10-year amortization of the Lost Gross Margin (LGM) regulatory asset, as reflected in Exhibit 8-1 to the Application (line 12, column H); and (3) an

1 adjustment of \$0.8 million to reflect the recovery of the 3-year amortization
2 of the rate case expense for the instant proceeding, as reflected in the
3 Application at Exhibit 8-3 (page 1, line 44, column H).

4 Further, as discussed in Ms. Cuaresma's testimony
5 (Exhibit 10-T-800), a \$2.0 million depreciation expense adjustment was
6 made to the 2023 operating budget to reflect the additional depreciation
7 expense that results from the application of the 2017 Depreciation Study
8 rates that are supported and discussed in Ms. Hughes' testimony
9 (Exhibit 10-T-1100). This adjustment is shown in Exhibit 8-19 to the
10 Application (line 1, column H).

11 **Q. PLEASE EXPLAIN WHY EACH OF THE ABOVE ADJUSTMENTS IS**
12 **REASONABLE FOR PURPOSES OF DEVELOPING THE TEST YEAR**
13 **REVENUE REQUIREMENT.**

14 A. In KIUC's last rate case (Docket No. 2009-0050), the Consumer Advocate
15 recommended that the Commission remove the cost of sponsorships and
16 contributions, as well as the amortization of the acquisition premium
17 resulting from the Kauai Electric acquisition approved in Docket
18 No. 02-0060 from the expense components used to establish KIUC's
19 revenue requirement in that docket. Although KIUC believes that these
20 costs are prudent and should be specifically included in determining KIUC's
21 rate case revenue requirement, KIUC has removed those items from its
22 expense and revenue requirement schedules in this proceeding in order to

1 minimize issues. KIUC reserves the right to include these items in the
2 revenue requirement for future rate proceedings.

3 Regarding the pension adjustment, as explained by Ms. Dellamano
4 in her testimony (Exhibit 10-T-200), the annual pension expense as
5 determined by KIUC's actuaries is a legitimate and necessary operating
6 expense to recruit and retain qualified employees. Ms. Dellamano also
7 explains the reasonableness of the adjustments to recover the amortization
8 of the pension regulatory asset, the LGM regulatory asset, and the rate case
9 expense. Ms. Cuaresma discusses the depreciation expense adjustment
10 in her testimony (Exhibit 10-T-800).

11 **II. ENDANGERED SPECIES-RELATED TEST YEAR O&M**
12 **AND CAPITAL COSTS**

13 **Q. PLEASE DESCRIBE THE PURPOSE OF KIUC'S HCP AND SOS**
14 **ACTIVITIES.**

15 A. As further discussed in the testimony of Mr. Bissell (Exhibit 10-T-100), KIUC
16 must obtain an incidental take permit from U.S. Fish and Wildlife Service
17 and an incidental take license from the Hawaii Department of Land and
18 Natural Resources in order to legally operate and avoid fines and criminal
19 penalties under endangered/threatened species protection laws. The
20 efforts and costs undertaken by KIUC for these HCP and SOS activities are
21 in furtherance of KIUC's efforts to obtain these incidental take
22 authorizations. This includes the need as discussed by Mr. Bissell for KIUC

1 to have in place an approved HCP, which KIUC has been working on with
2 various agencies for many years and, when approved, is expected to cover
3 a 30 to 50-year timeframe to mitigate the impacts of KIUC's operations
4 through various conservation measures. As part of its efforts in developing
5 the HCP and obtaining its incidental take authorizations, KIUC has agreed
6 to undertake various measures over the years while the HCP has been
7 worked on. Some of these measures have been or are currently the subject
8 of certain Commission dockets (see for example Docket Nos. 2011-0045,
9 2020-0040 and 2022-0045) as noted in Mr. Bissell's testimony.

10 **Q. WHAT ARE KIUC'S O&M EXPENSES FOR ITS HCP AND SOS**
11 **ACTIVITIES?**

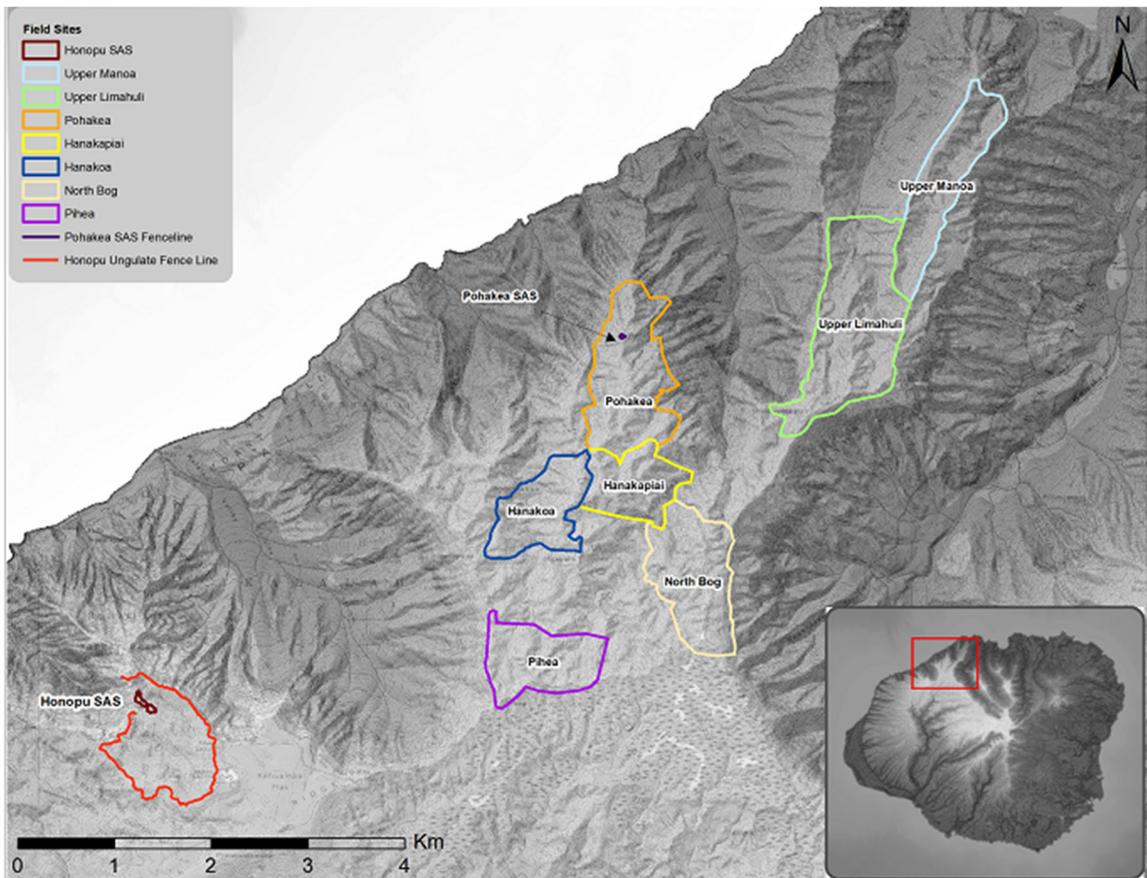
12 A. Attachment CY-701 to my testimony reflects the actual total endangered
13 species O&M costs from 2010 through 2021, and the forecasted cost for
14 2022 (which includes actual costs through October 2022 and forecasted for
15 the remaining months in 2022). This also reflects the projected 2023 Test
16 Year O&M expense amount for HCP/SOS combined of approximately
17 \$4.9 million. As shown in Attachment CY-701, this approximately
18 \$4.9 million amount consists of (1) about \$4.5 million for HCP mitigation,
19 which is also reflected in the Application at Exhibit 8-3 (page 1, line 46,
20 column I) and Exhibit 8-16 (line 7, column I); and (2) about \$0.4 million for
21 SOS mitigation, which is also reflected at Exhibit 8-3 (page 1, line 43,
22 column I) and Exhibit 8-13 (line 4, column I).

1 **Q. HOW WERE THE PROJECTED O&M EXPENSES FOR THE HCP**
2 **EFFORTS DETERMINED?**

3 A. The majority of KIUC's O&M costs for its HCP efforts represent quotes from
4 KIUC's contracted vendors who are retained to assist KIUC in its mitigation
5 efforts. In determining the reasonableness of the various vendor
6 quotations, KIUC compared the quotes to previous years and validated any
7 major variances with each vendor before awarding the contract. KIUC's
8 highest O&M costs are for the following:

Vendor	Acronym	Description
Archipelago Research and Conservation LLC	ARC	Bird Monitoring/Site surveys
Hallax Ecosystem Restoration LLC	HER	Predator and vegetation control
National Tropical Botanical Gardens	NTBG	Predator and vegetation control
Pono Pacific	Pono Pacific	Facility maintenance/repair
Garden Island Resource Conservation & Development, Inc	KRCP	Vegetation control

9
10 The areas currently serviced by these vendors are: Upper Limahuli
11 Preserve, Upper Manoa Valley (until December 31, 2022), Pihea, North
12 Bog, Pohakea, Hanakapiai, Hanakoa and Honopu as shown in the figure
13 below.



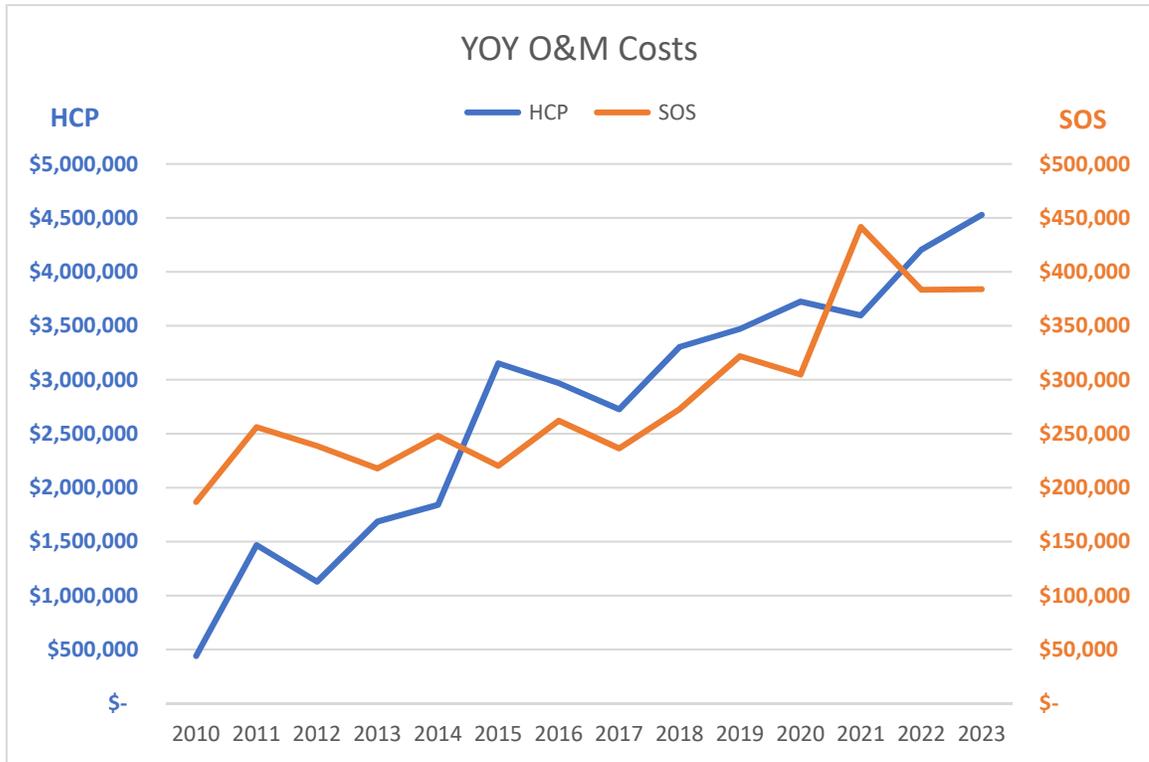
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2 **Q. WHAT IS THE OVERALL TREND IN KIUC'S HCP O&M COSTS?**

3 A. HCP O&M costs have increased over the years due to the need for KIUC
4 to do more minimization and mitigation activities as part of its efforts with
5 the various agencies on developing the HCP needed to obtain the incidental
6 take authorizations, as well as an increase in vendor costs. The table below
7 shows the growing HCP and SOS O&M costs from 2010-2023, with 2022
8 consisting of January 2022 to October 2022 actuals and November 2022 to

1 December 2022 being forecasted, and with 2023 being a Test Year
2 budget.⁴

3 **Table 2**



4

	Actual 2010	Actual 2011	Actual 2012	Actual 2013	Actual 2014	Actual 2015	Actual 2016
HCP	\$ 439,569	\$1,466,801	\$1,128,070	\$1,685,165	\$1,840,465	\$3,152,214	\$2,968,547
SOS	\$ 186,675	\$ 256,115	\$ 238,714	\$ 217,723	\$ 247,960	\$ 220,202	\$ 262,069

5

⁴ As noted in Attachment CY-701, the above HCP O&M costs do not include any costs associated with the 2010 United States Justice Department's lawsuit against KIUC for taking of endangered and threatened seabirds from flying into the utility's power lines and poles or the related Earthjustice lawsuit, which also took place during this period. The Justice Department lawsuit is discussed and addressed in Docket Nos. 2011-0045, 2020-0040 and 2022-0045.

	Actual 2017	Actual 2018	Actual 2019	Actual 2020	Actual 2021	Actual + Forecast 2022	Budget 2023
HCP	\$2,726,699	\$3,303,733	\$3,471,295	\$3,724,481	\$3,596,893	\$4,205,256	\$4,528,175
SOS	\$ 236,338	\$ 272,757	\$ 321,853	\$ 304,760	\$ 441,669	\$ 383,378	\$ 384,028

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Total SOS O&M expenses for the Test Year are about \$0.4 million as reflected above. KIUC’s SOS program is an independently operated, non-profit organization that KIUC funds through contract. The O&M costs that are funded include rent, personnel, overhead, office supplies, utilities, repairs/maintenance, etc.

Q. WHAT ARE KIUC’S TEST YEAR CAPITAL EXPENSES FOR KIUC’S HCP AND SOS ACTIVITIES?

A. The total endangered species capital costs for the 2023 Test Year are about \$14.1 million, and all relate to the HCP capital plan. KIUC’s capital costs include the minimization of KIUC’s powerlines and mitigation to protect against the declining numbers of endangered birds through the erection of predator proof fences. A breakdown of KIUC’s minimization activities for 2023 is shown below with estimates based on minimization projects that were previously completed in previous years as part of the early HCP implementation. KIUC must complete these projects as soon as reasonably possible pursuant to the current HCP draft commitment. The following table depicts a summary of the endangered species capital costs for the 2023 Test Year.

740c		HCP	<u>2023</u>
		HCP MINIMIZATION & MITIGATION PROJECTS	7,135,200
xx1006	ACTIVITY		
	HCP Minimization Projects-Tr	Diverters/Static line removal/Predator proof fences	4,135,200
	HCP Incidental Take Permit	LTHCP/EIS Drafting	3,000,000
		NORTHSHORE TRANSMISSION LINE & SEABIRD MITIGATION	7,012,500
260801B	ACTIVITY		
	Projects - Predator Proof Fencing	Site to be Determined (replaces UMV)	3,383,000
	Projects - Predator Proof Fencing	ULP	3,629,500
TOTAL			14,147,700

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The above HCP Minimization & Mitigation Projects costs are shown in Attachment BR-902 to Brad Rockwell’s testimony (Exhibit 10-T-900) as: (1) ”HCP Minimization Projects-Tr” in the amount of \$4,135,200 (rounded), as reflected on page 2 of Attachment BR-902 and as discussed on pages 43-44 of Attachment BR-903 and pages 39-40 of Attachment BR-904 to Mr. Rockwell’s testimony; and (2) “HCP Incidental Take Permit” in the amount of \$3,000,000, as reflected on page 4 of Attachment BR-902 and as discussed on pages 65-66 of Attachment BR-904. The Northshore Transmission Line & Seabird Mitigation costs as depicted in the table above are shown in Attachment BR-902 as “Seabird Mitigation” in the amount of \$7,012,500 (rounded), as reflected on page 6 of Attachment BR-902 and as discussed on pages 79-81 of Attachment BR-904. There are currently no capital projects planned for the SOS activities.

1 **Q. THE ABOVE TABLE REFERS TO PREDATOR PROOF FENCING**
2 **ACTIVITIES. ARE THESE THE SAME ACTIVITIES THAT ARE**
3 **CURRENTLY THE SUBJECT OF AN APPLICATION BEFORE THE**
4 **COMMISSION?**

5 A. Yes. The predator proof activities are the subject of an application currently
6 pending before the Commission in Docket No. 2022-0045, whereby KIUC
7 is seeking Commission approval to commit funds for this protection plan
8 under Section 2.3.g.2 of Commission General Order No. 7.

9 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

10 A. Yes.

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

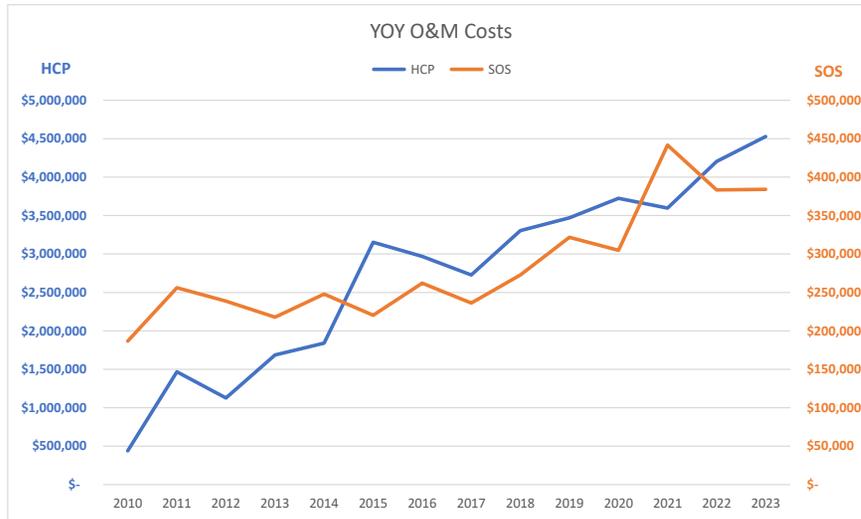
ATTACHMENT CY-701

(1 PAGE)

	Actual 2010	Actual 2011	Actual 2012	Actual 2013	Actual 2014	Actual 2015	Actual 2016	Actual 2017	Actual 2018	Actual 2019	Actual 2020	Actual 2021	Actual + Forecast 2022	Budget 2023
HCP	\$ 439,569	\$ 1,466,801	\$ 1,128,070	\$ 1,685,165	\$ 1,840,465	\$ 3,152,214	\$ 2,968,547	\$ 2,726,699	\$ 3,303,733	\$ 3,471,295	\$ 3,724,481	\$ 3,596,893	\$ 4,205,256	\$ 4,528,175
SOS	\$ 186,675	\$ 256,115	\$ 238,714	\$ 217,723	\$ 247,960	\$ 220,202	\$ 262,069	\$ 236,338	\$ 272,757	\$ 321,853	\$ 304,760	\$ 441,669	\$ 383,378	\$ 384,028

**Note: HCP costs does not include any costs associated with the 2010 United States Justice Department's lawsuit against KIUC or the related Earthjustice lawsuit*

HCP	234%	-23%	49%	9%	71%	-6%	-8%	21%	5%	7%	-3%	17%	8%
SOS	37%	-7%	-9%	14%	-11%	19%	-10%	15%	18%	-5%	45%	-13%	0%



KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

EXHIBIT 10

TESTIMONY OF CORINNE CUARESMA
(EXHIBIT 10-T-800)

(13 PAGES)

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KAUAI ISLAND UTILITY COOPERATIVE
DOCKET NO. 2022-0208
EXHIBIT 10-T-800

DIRECT TESTIMONY
OF
CORINNE CUARESMA

9 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

10 A. My name is Corinne Cuaresma. My business address is 4463 Pahee
11 Street, Suite 1, Lihue, Hawaii 96766-2000.

12 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

13 A. I am employed by Kauai Island Utility Cooperative (“KIUC”) as the
14 Controller.

15 **Q. PLEASE SUMMARIZE YOUR EDUCATION.**

16 A. In December 1994, I graduated from the University of Hawaii at Manoa, in
17 Honolulu, Hawaii. I earned a Bachelor of Business Administration degree,
18 majoring in Accounting. In August 2008, I earned a Master of Business
19 Administration from the University of Hawaii at Manoa.

20 **Q. PLEASE DESCRIBE YOUR WORK EXPERIENCE.**

21 A. I have over 25 years of experience in accounting. From June 1995 to
22 August 2001, I was employed by Kauai Lagoons Resort Company as an
23 accountant. During my time there, I was responsible for payroll, fixed
24 assets and depreciation, operating and capital budgeting and forecasting,
25 financial reporting and analysis, and general cashiering. From

1 August 2001 to December 2004, I was employed by Poipu Resort
2 Partners, L.P., dba Embassy Vacation Resort at Poipu Point. As assistant
3 controller for the vacation ownership sales and marketing side of the
4 business, I worked for the developer of the property and managed the
5 operations of the accounting department. My responsibilities included
6 financial statement preparation and analysis, fixed assets and
7 depreciation, internal and external audits, analyzing, developing, and
8 implementing accounting procedures for new marketing programs, and
9 overseeing payroll, accounts payable, accounts receivable, cash
10 management, and supervising a staff of six.

11 From December 2004 to current, I have been employed by KIUC.
12 I was initially hired as Plant Accountant to oversee and coordinate work
13 order and plant accounting processes, prepare the annual capital budget
14 and related depreciation expense and 5-year construction plan, perform
15 month-end and year-end closing for work orders, plant assets, and
16 accumulated depreciation, and reconcile work order, plant assets, and
17 accumulated depreciation subsidiary ledgers to the general ledger. I was
18 promoted to regulatory analyst in February 2012. While working in the
19 regulatory affairs department, I was responsible for ensuring timely and
20 accurate filing of all monthly and annual regulatory reports. I assisted with
21 organizing and reviewing tariff transmittals and docket filings. This
22 included preparing applications, schedules, exhibits, narratives, and

1 responses to information requests. I was promoted to Controller in
2 May 2014.

3 **Q. WHAT ARE YOUR DUTIES AND RESPONSIBILITIES AS THE**
4 **CONTROLLER OF KIUC?**

5 A. As the Controller, I am responsible for directing the operations of the
6 Accounting department, maintaining and ensuring compliance with
7 appropriate accounting systems, internal control structures, company
8 policies and procedures, financial and reporting compliance, rules and
9 regulations of tax agencies, and rules and regulations of other regulatory
10 agencies.

11 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

12 A. The purpose of my testimony is to discuss the following three areas:
13 (1) KIUC's recorded historical accounting and financial data (see Exhibit 8
14 to the Application); (2) KIUC's 2023 calendar year ("Test Year") estimates
15 for depreciation expense (see Exhibit 8-19 to the Application and
16 Workpaper 8-19, pages 1-4); and (3) KIUC's Test Year estimates for
17 accumulated depreciation (see Exhibit 3 of the Application, line 58,
18 column B).

1 **Q. ARE YOU SPONSORING ANY OF THE APPLICATION EXHIBITS?**

2 A. Yes. In connection with the purpose of my testimony discussed above
3 and in support of Exhibit 6 to the Application, I am sponsoring Exhibit 8-19
4 to the Application and the following Workpapers:

- 5 • Workpaper 8-19, page 1: Computation of 12/31/22 Depreciable
6 Plant Balance
- 7 • Workpaper 8-19, page 2: Computation of 2023 Projected
8 Depreciable Plant Balance (Using 2012 Retirement Rates)
- 9 • Workpaper 8-19, page 3: Computation of 2023 Test Year
10 Depreciable Plant Balance (Using 2017 Retirement Rates)
- 11 • Workpaper 8-19, page 4: Computation of 2023 Test Year
12 Depreciation Expense Adjustment

13 **Q. HOW IS YOUR TESTIMONY ORGANIZED?**

14 A. My testimony is organized by the areas of discussion identified above.

15 **I. KIUC'S HISTORIC DATA**

16 **Q. WHAT WAS YOUR ROLE IN THE PREPARATION OF THE HISTORIC
17 DATA AS SHOWN IN EXHIBIT 8 TO THE APPLICATION?**

18 A. I supervised the compilation and verified the accuracy of KIUC's historic
19 audited financial data for the years 2018 to 2021, as well as the
20 year-to-date October 2022 data, as presented in Exhibits 8 and 8-1
21 through 8-32 to the Application. KIUC's budget process and pro-forma
22 adjustments made for the Test Year revenue requirements are discussed
23 in the direct testimony of Christopher Yuh (see Exhibit 10-T-700). The
24 development of the projected data and adjustments for the Test Year

1 are discussed in the direct testimony of Stacie A. Dellamano (see
2 Exhibit 10-T-200).

3 **Q. WHAT IS THE SOURCE OF INFORMATION FOR KIUC'S 2018 – 2021,**
4 **AS WELL AS THE YEAR-TO-DATE OCTOBER 2022 HISTORIC DATA**
5 **FOR REVENUES AS SHOWN IN EXHIBIT 8 TO THE APPLICATION?**

6 A. The source for the historic revenue data, all of KIUC's 2018 to 2021
7 historic data, as well as the year-to-date October 2022 data, presented in
8 Exhibits 8 and 8-1 through 8-32 to the Application, is KIUC's accounting
9 records as recorded in its general ledger for each year. These accounting
10 records also provide the basis for KIUC's annual audited financial
11 statements. KIUC's latest audited financial statement for the year ended
12 December 31, 2021, is provided as Exhibit 2, Schedule 4 to the
13 Application. Similar audited financial statements are available for each of
14 the prior three years (i.e., 2018, 2019 and 2020).

15 **Q. WHAT IS THE SOURCE OF INFORMATION FOR KIUC'S 2018 – 2021**
16 **HISTORIC DATA FOR KWH SALES AND NUMBER OF CUSTOMERS**
17 **AS SHOWN IN EXHIBIT 8-1, PAGE 2 TO THE APPLICATION?**

18 A. The customer information system, for each year presented, is the source
19 of information for the 2018 – 2021 historic data for kWh sales and number
20 of meters as shown in Exhibit 8-1, page 2 to the Application. The
21 customer information system is one of the data information systems
22 annually audited by KIUC's independent auditors.

1 **Q. WHAT IS THE SOURCE OF INFORMATION FOR KIUC’S 2018 – 2021,**
2 **AS WELL AS THE YEAR-TO-DATE OCTOBER 2022 HISTORIC DATA**
3 **FOR OPERATING EXPENSES AS SHOWN IN EXHIBITS 8-2**
4 **THROUGH 8-32 TO THE APPLICATION?**

5 A. The operating expense data in Exhibits 8-2 through 8-32 were obtained
6 from KIUC’s accounting records as recorded in its general ledger for each
7 year. As discussed above, these accounting records are the basis for the
8 annual audited financial statements. These exhibits present major
9 expense categories, as well as costs by departments. Within each
10 department, costs are coded to be sorted by expense type such as
11 salaries and wages, operations and maintenance, and administrative
12 expense.

13 **II. DEPRECIATION EXPENSE**

14 **Q. WHAT IS THE TEST YEAR ESTIMATE FOR DEPRECIATION EXPENSE**
15 **AS SHOWN IN EXHIBIT 8-19 TO THE APPLICATION?**

16 A. The Test Year estimate for depreciation expense is \$16.3 million, as
17 shown in Exhibit 8-19 to the Application (line 1, column I).

18 **Q. PLEASE EXPLAIN THE PROCESS THROUGH WHICH KIUC**
19 **DETERMINED THE PROJECTED DEPRECIATION EXPENSE FOR THE**
20 **TEST YEAR?**

21 A. KIUC first determined the projected depreciable plant in service balance at
22 December 31, 2022 (see Workpaper 8-19 to the Application, page 1) and

1 December 31, 2023 (see Workpaper 8-19, page 3) at the asset class
2 level. Next, KIUC determined the average depreciable plant in service for
3 2022 and 2023 by adding the balances at the end of the previous year to
4 the balance at the end of the year, and dividing the sum by two (2). This
5 process was done for each plant account at the asset class level. Using
6 the depreciation rates for each plant account, KIUC then applied the
7 depreciation rates that would be in effect for 2022 and 2023 to the
8 average depreciable plant in service for each respective year. The result
9 is the projected depreciation expense for KIUC's 2022 and 2023
10 Operating Budget.

11 **Q. HOW DID KIUC DETERMINE THE PROJECTED DEPRECIABLE**
12 **PLANT IN SERVICE BALANCE FOR 2022 AND 2023?**

13 A. For each plant account, the depreciable plant in service balance for 2022
14 started with the actual recorded and audited plant in service balance at
15 December 31, 2021. KIUC then identified the fully depreciated plant in
16 service amounts and removed these amounts from the beginning plant in
17 service balance. Next, KIUC determined the capital projects that would be
18 completed and placed in service by December 31, 2022. Lastly, KIUC
19 determined the cost of plant in service that would be retired and taken out
20 of service in 2022. The historical cost of the retired items is removed from
21 plant in service and recorded in the related accumulated depreciation
22 account. The depreciable plant for 2022 is the sum of the above. See

1 Workpaper 8-19 to the Application (page 1, column G). The same
2 methodology was used to determine the Test Year depreciable plant for
3 the 2023 Test Year (see Workpaper 8-19, page 3).

4 **Q. PLEASE EXPLAIN WHY KIUC REMOVED THE COST OF FULLY**
5 **DEPRECIATED PLANT IN SERVICE WHEN DETERMINING THE**
6 **DEPRECIABLE PLANT FOR 2022 AND THE TEST YEAR.**

7 A. As described above, the depreciation expense is determined by applying
8 the appropriate depreciation rate to the average plant in service balance
9 for each plant account. If the cost of fully depreciated plant is not removed
10 when determining the plant in service balance at year end, KIUC would
11 compute depreciation on the fully depreciated plant.

12 **Q. WHAT IS THE BASIS OF THE DEPRECIATION RATES?**

13 A. The annual depreciation accrual rates used to compute the Test Year
14 depreciation expense were developed using the straight-line method,
15 vintage group procedure, and remaining life technique. KIUC retained
16 NewGen Strategies and Solutions, LLC to perform a depreciation study of
17 electric plant in service as of December 31, 2017 (“2017 Depreciation
18 Study”), which is discussed in the direct testimony of Nancy Heller Hughes
19 (Exhibit 10-T-1100). The annual depreciation rates proposed in the
20 2017 Depreciation Study were used in calculating the Test Year
21 depreciation expense.

1 **Q. HOW WERE THE DEPRECIATION RATES APPLIED IN COMPUTING**
2 **THE TEST YEAR ESTIMATE FOR DEPRECIATION EXPENSE?**

3 A. For each asset class, the proposed depreciation rate was applied to the
4 average depreciable plant balance to determine the depreciation expense
5 related to the specific asset class. Asset classes are grouped into the
6 following functional categories:

- 7 • Steam Production Plant
- 8 • Hydro Production Plant
- 9 • Other Production Plant
- 10 • Transmission Plant
- 11 • Distribution Plant
- 12 • General Plant

13 Depreciation for all asset classes is totaled and the depreciation for
14 transportation equipment (i.e., vehicles) is subtracted from the total to
15 calculate the amount of depreciation expense included in operating
16 expense. Since depreciation expense on transportation equipment is
17 allocated to O&M and capital projects, it is appropriate to exclude the
18 amount from the depreciation expense.

19 **Q. WHAT DOES THE \$2.0 MILLION SHOWN IN EXHIBIT 8-19 TO THE**
20 **APPLICATION (LINE 1, COLUMN H) REPRESENT?**

21 A. This reflects the difference between the 2023 operating budget and the
22 2023 Test Year depreciation expense. This difference reflects the

1 additional depreciation expense that results from the application of the
2 2017 Depreciation Study rates that are supported and discussed in
3 Ms. Hughes' testimony (Exhibit 10-T-1100). The computation of the
4 2023 Test Year depreciation expense adjustment is provided in
5 Workpaper 8-19, page 4.

6 **Q. HOW DOES THE TEST YEAR DEPRECIATION RATES COMPARE**
7 **WITH THE DEPRECIATION RATES USED IN PREVIOUS YEARS?**

8 A. The depreciation rates used in the Test Year derive from the
9 2017 Depreciation Study as noted above. The depreciation rates used in
10 2019 – 2021 were derived from the 2012 depreciation study based on
11 KIUC's electric plant in service as of December 31, 2012
12 ("2012 Depreciation Study"). The 2012 Depreciation Study rates were the
13 subject of Docket No. 2015-0127.¹ See also the testimony of Ms. Hughes
14 (Exhibit 10-T-1100). When comparing the depreciation rates by
15 categories, the most significant change arises from general plant, more
16 specifically the computer equipment asset class 3911, which increased
17 from 2.96% to 17.76% as discussed by Ms. Hughes. The other production
18 plant category experienced a slight increase in the prime movers asset
19 class 3430, from 3.15% to 3.71%. The changes to the depreciation rates

¹ On May 8, 2015, KIUC filed a Petition for a Declaratory Ruling Regarding Changing Depreciation Rates in Docket No. 2015-0127 ("Petition"). As noted in footnote 1 of the Petition, KIUC is required by its lender Rural Utilities Service ("RUS") to periodically conduct depreciation studies to review the reasonableness of KIUC's depreciation rates, and KIUC is prohibited from adopting depreciation rates that have not yet been previously approved for KIUC by RUS. A copy of the 2012 Depreciation Study is attached to the Petition as Exhibit 2.

1 from the 2012 Depreciation Study to the 2017 Depreciation Study are
2 discussed in further detail by Ms. Hughes in her testimony
3 (Exhibit 10-T-1100).

4 **Q. HOW DOES THE TEST YEAR ESTIMATE FOR DEPRECIATION**
5 **EXPENSE COMPARE WITH THE ACTUAL AMOUNTS RECORDED IN**
6 **PREVIOUS YEARS?**

7 A. The Test Year depreciation expense of \$16.3 million is higher than the
8 \$13.0 million expense recorded in 2021, KIUC's most recent audited year.
9 The years 2019 through 2021 showed slight increases year over year, a
10 trend that is forecasted through the end of 2022. As previously
11 mentioned, depreciation expense for 2019 through 2021 was calculated
12 using depreciation rates derived from the 2012 Depreciation Study. The
13 increase in the Test Year depreciation expense results from the higher
14 depreciation rates in the 2017 Depreciation Study, more specifically in the
15 areas of other production plant, and especially computer equipment, as
16 discussed by Ms. Hughes (see Exhibit 10-T-1100).

17 **Q. WHEN DOES KIUC EXPECT TO PERFORM ITS NEXT DEPRECIATION**
18 **STUDY?**

19 A. In general, it is KIUC's practice to perform a depreciation study of electric
20 plant in service every five years. As noted in the testimony of Ms. Hughes
21 (Exhibit 10-T-1100), KIUC is planning to conduct its next depreciation
22 study in 2023 based on plant in service as of December 31, 2022.

1 prepared for KIUC. The retirement rates used in the Test Year were
2 derived from the 2017 Depreciation Study cycle. The retirement rates for
3 2018 through 2022 were derived from the 2012 Depreciation Study cycle.

4 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

5 A. Yes, it does.

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

EXHIBIT 10

TESTIMONY OF BRAD ROCKWELL
(EXHIBIT 10-T-900)

(30 PAGES)

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**KAUAI ISLAND UTILITY COOPERATIVE
DOCKET NO. 2022-0208
EXHIBIT 10-T-900

DIRECT TESTIMONY
OF
BRAD ROCKWELL**

9 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

10 A. My name is Brad Rockwell. My business address is 4463 Pahee Street,
11 Suite 1, Lihue, Hawaii 96766-2000.

12 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

13 A. I am employed by Kauai Island Utility Cooperative (“KIUC”) as Chief of
14 Operations.

15 **Q. PLEASE SUMMARIZE YOUR EDUCATION.**

16 A. I have a Bachelor of Science in Marine Engineering from the United States
17 Naval Academy at Annapolis and a Master of Business Administration from
18 the University of Hawaii at Manoa. I am a Registered Professional
19 Mechanical Engineer in the State of Hawaii.

20 **Q. PLEASE DESCRIBE YOUR WORK EXPERIENCE.**

21 A. I have worked for KIUC for about 20 years in various roles ranging from
22 power plant manager to my current role as Chief of Operations. Prior to
23 KIUC, I was employed by PurEnergy LLC, General Electric, Solar Turbines,
24 and the U.S. Navy as a Surface Warfare Officer. I served in the U.S. Navy
25 Reserve concurrently while working for KIUC, retiring in 2021.

1 **Q. WHAT ARE YOUR DUTIES AND RESPONSIBILITIES AS KIUC'S CHIEF**
2 **OF OPERATIONS.**

3 A. I am responsible for the areas of Power Supply (which includes power
4 plants, purchased power, grid operations, and utility-scale energy
5 development), Transmission and Distribution, Engineering (which includes
6 planning), and Information Technology.

7 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE UTILITY REGULATORY**
8 **COMMISSIONS?**

9 A. Yes. In my previous role as KIUC's Production Manager, I presented
10 Rebuttal Testimony during KIUC's first and only rate case before this
11 Commission in Docket No. 2009-0050.

12 **I. PRIMARY PURPOSE OF TESTIMONY**

13 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

14 A. The purpose of my testimony is to discuss KIUC's capital expenditures and
15 projects during both 2022 and the 2023 calendar test year ("Test Year") that
16 will contribute to KIUC plant, as well as plant that is being removed or retired
17 from service. I will also discuss non-labor expenses for both the Power
18 Supply and Transmission and Distribution ("T&D") departments. Finally,
19 I will discuss KIUC's commodities costs, the Energy Rate Adjustment
20 Clause ("ERAC") mechanism, and proposed changes to the ERAC
21 mechanism.

1 **Q. OTHER THAN THIS TESTIMONY, ARE YOU SPONSORING ANY OF**
2 **THE OTHER APPLICATION EXHIBITS?**

3 A. Yes. In connection with the purpose of my testimony above, I am
4 sponsoring the following Exhibits in support of Exhibit 6 to the Application:

- 5 • Exhibit 8-2, Commodities
- 6 • Exhibit 8-4, Power Supply (Non-labor)¹
- 7 • Exhibit 8-5, Transmission & Distribution (Non-labor)²

8 In addition, my testimony provides various underlying support for the plant
9 additions as shown in Exhibit 3 to the Application. Many of the supporting
10 documents for the capital expenditure and plant addition projects are
11 discussed in and/or attached to my testimony as Attachments BR-901
12 through BR-904.³ I am also providing Attachment BR-905, which contains
13 the projected fuel prices provided by KIUC's third party consultant, Stillwater
14 Associates, LLC, that were used as part of the inputs to the production
15 simulation discussed below in my testimony.

¹ The labor and labor related costs are addressed by Stacie Dellamano in her testimony (Exhibit 10-T-200).

² Supra fn. 1.

³ Note that the numbers in Attachments BR-901 and BR-902 are rounded to the thousands.

1 identified or corrective plans investigated, and how the project aligns with
2 KIUC's strategic goals. In some instances, where the projects result from
3 planning studies that have been performed, these planning studies analyze
4 the need for specific capital projects to target specific objectives, such as
5 reliability, aging facilities and overall service issues affecting KIUC's
6 Generation, Transmission, and Distribution facilities.

7 Once the need for and timing of the project is determined, the project
8 is included in the proposed annual capital expenditure plan, where it is
9 reviewed by KIUC's President and Chief Executive Officer and its Chief
10 Financial Officer. If there are any modifications to the capital expenditure
11 plan or any specific project as a result of these efforts, the plan is revised
12 accordingly prior to the plan being submitted for approval by KIUC's Board
13 of Directors.

14 **Q. WHAT IS KIUC'S TEST YEAR CAPITAL BUDGET?**

15 A. The Test Year capital budget is approximately \$46.4 million as shown in the
16 table below. Of this amount, about 30%, or \$14.1 million is directly
17 attributable to endangered/threatened bird-related projects such as Seabird
18 Mitigation, Habitat Conservation Plan ("HCP") Incidental Take Permit, and
19 HCP Minimization Projects as further discussed in Christopher Yuh's
20 testimony (Exhibit 10-T-700). David Bissell's testimony (Exhibit 10-T-100)
21 explains the need for these HCP and bird-related efforts. One of these
22 efforts, involving a protection plan for Newell's Shearwaters and Hawaiian

1 Petrels, is currently the subject of Docket No. 2022-0045 before this
2 Commission.

3 The projects comprising the \$46.4 million capital budget are listed in
4 the table below.

Major Projects (\$M's)	Project Description
\$7.0	SEABIRD MITIGATION
\$4.9	KILOHANA SWITCHYARD
\$4.1	HCP MINIMIZATION PROJECTS
\$3.0	HCP INCIDENTAL TAKE PERMIT
\$3.0	PUHI SUBDIVISION 12.47KV UPGRADE
\$2.5	NORTH SHORE ENERGY RESILIENCY PROJECT
\$1.9	PAGS SYNCHRONOUS CONDENSER CONVERSION
\$1.5	HANAIEI TAP-PRINCEVILLE TRANSMISSION LINE
\$1.4	KILOHANA / HANAHANAPUNI 69KV LINE
\$1.1	KPS OTSG TUBE REPLACEMENT
\$1.0	PAGS NEW CONTROL ROOM DISPATCH CTR
\$3.2	Other non-recurring
\$11.8	Other normal and recurring
\$46.4	TOTAL

5

6 The \$14.1 million that is directly attributable to
7 endangered/threatened bird-related projects is further discussed in
8 Mr. Yuh's testimony (Exhibit 10-T-700) and consists of (1) "HCP
9 Minimization Projects-Tr" in the amount of \$4,135,200 as reflected on
10 page 2 of Attachment BR-902 to this testimony and discussed on
11 pages 43-44 of Attachment BR-903 and pages 39-40 of
12 Attachment BR-904; (2) "HCP Incidental Take Permit" in the amount of
13 \$3,000,000 as reflected on page 4 of Attachment BR-902 and discussed on

1 pages 65-66 of Attachment BR-904; and (3) “Seabird Mitigation” in the
2 amount of \$7,012,500 as reflected on page 6 of Attachment BR-902 and
3 discussed on pages 79-81 of Attachment BR-904.

4 **Q. WHAT IS KIUC’S ESTIMATE OF ITS TOTAL CAPITAL EXPENDITURES**
5 **(I.E., PLANT ADDITIONS) DURING CALENDAR YEAR 2022 AND TEST**
6 **YEAR 2023?**

7 A. Attachment BR-901 to my testimony provides KIUC’s 2022 capital budget.
8 As shown on page 6 in that attachment, 2022 capital expenditures are
9 budgeted at \$43,318,600 gross, and \$42,239,600 net of Contributions in
10 Aid of Construction (“CIAC”) of \$9,000 and customer advances for
11 construction of \$1,070,000.

12 Attachment BR-902 to my testimony provides KIUC’s 2023 capital
13 budget. As shown on page 7 in that attachment, capital expenditures for
14 the 2023 Test Year are projected at \$46,357,800 gross, and
15 \$44,619,800 net of CIAC of \$10,000, grant funding of \$1,000,000 for an
16 expected battery project, and customer advances for construction of
17 \$728,000.

18 **Q. PLEASE LIST EACH CAPITAL PROJECT BUDGETED FOR CALENDAR**
19 **YEAR 2022.**

20 A. See Attachment BR-901 to my testimony. Capital projects are categorized
21 by normal and recurring, non-recurring, and carryover. Within each
22 category, projects are further sorted by department or activity – Production,

1 T&D, Financial & Corporate Services, Human Resources, HCP, Safety &
2 Facilities, and Information Systems. The capital budget for General Plant,
3 such as vehicles, office furniture & equipment, and tools & equipment, is
4 generally shared across multiple departments.

5 **Q. PLEASE LIST EACH CAPITAL PROJECT BUDGETED FOR THE 2023**
6 **TEST YEAR.**

7 A. See Attachment BR-902 to my testimony. Similar to the 2022 capital budget
8 discussed above, capital projects are categorized by normal and recurring,
9 non-recurring, and carryover. Within each category, projects are further
10 sorted by department or activity – Production, T&D, Financial & Corporate
11 Services, Human Resources, HCP, Safety & Facilities, Engineering, and
12 Information Systems. The capital budget for General Plant is generally
13 shared across multiple departments.

14 **Q. PLEASE DESCRIBE EACH OF THE ABOVE PLANT ADDITIONS FOR**
15 **2022 AND TEST YEAR 2023.**

16 A. The purpose of these plant additions/capital expenditures are to ensure
17 KIUC's ability to continue to provide continuous, safe and reliable service to
18 KIUC's customers/members. The descriptions are included in Attachments
19 BR-903 and BR-904 to my testimony, which contain the Project Justification
20 Sheets by project for 2022 and 2023, respectively. As noted above, these
21 Justification Sheets set forth the need for the project, a description of the
22 work, a planned start/completion date, estimated cost, the planned results

1 and benefits, alternatives identified or corrective plans investigated, and
2 how the project aligns with KIUC's strategic goals. The Project Justification
3 Sheets for the 2022 capital budget (Attachment BR-903) are arranged in
4 order of the 2022 capital budget listing in Attachment BR-901. Similarly, the
5 Project Justification Sheets for the 2023 Test Year capital budget
6 (Attachment BR-904) are arranged in order of the 2023 capital budget listing
7 in Attachment BR-902.

8 **Q. ARE ANY OF THE 2022 AND 2023 PLANT ADDITIONS THE SUBJECT**
9 **OF A COMPLETED, PENDING OR SOON-TO-BE-FILED APPLICATION**
10 **BEFORE THIS COMMISSION?**

11 A. Yes. See the below information:

12 (1) The predator fencing and exclusion efforts are the subject of Docket
13 No. 2022-0045, which is currently before this Commission. This
14 project is reflected in Attachments BR-903 (pages 61-63) and
15 BR-904 (pages 79-81) to my testimony, under Budget Title Seabird
16 Mitigation, Budget # 220801.

17 (2) The Anahola Service Center was previously the subject of Docket
18 No. 2018-0211, with approval obtained in Decision and Order
19 No. 36213 issued on March 11, 2019. This project is reflected in
20 Attachment BR-903 (pages 75-76) to my testimony, under Budget
21 Title Anahola Service Center, Budget # 201321-CO2.

- 1 (3) The Kilohana Switchyard project is currently the subject of an
2 application filed with this Commission on November 15, 2022 in
3 Docket No. 2022-0230. This project is reflected in
4 Attachment BR-904 (page 72) to my testimony, under Budget Title
5 Kilohana Switchyard, Budget #230901.
- 6 (4) An application for the installation of a new 69kV transmission line
7 from Kilohana Tap to Hanahanapuni Tap is expected to be filed with
8 this Commission in early 2023. This work is expected to improve
9 KIUC system reliability through the installation of about 5.6 miles of
10 559 AAAC conductor and insulators strung in on existing steel towers
11 to create a transmission loop from Port Allen to Princeville,
12 Princeville to Kapaa, and Kapaa back to Port Allen. This project is
13 reflected in Attachment BR-904 (page 71) to my testimony, under
14 Budget Title Kilohana/Hanahanapuni 69kV Line, Budget # 230803.
- 15 (5) An application for the installation of a new 69 kV transmission line
16 from Hanalei Tap to Princeville Substation is expected to be filed with
17 this Commission in early 2023. This work would improve reliability
18 by creating an express 69kV feed directly to Princeville Switchyard.
19 This work is reflected in Attachment BR-904 (page 73) to my
20 testimony, under Budget Title Hanalei Tap-Princeville Transmission
21 Line, Budget # 231028.

1 (6) An application to convert Port Allen unit No. S-1 to a synchronous
2 condenser is expected to be filed with this Commission in early 2023.
3 This work would provide an alternative to running Kapaia unit CT-1
4 as a synchronous condenser, resulting in less parasitic losses. This
5 project is reflected in Attachment BR-904 (pages 77-78) to my
6 testimony, under Budget Title PAGS Synchronous Condenser
7 Conversion, Budget # 221202P-CO1.

8 **Q. IN YOUR OPINION, DO THE PLANT ADDITIONS FOR 2022 AND THE**
9 **2023 TEST YEAR ASSIST KIUC IN PROVIDING CONTINUOUS, SAFE**
10 **AND RELIABLE SERVICE TO ITS CUSTOMERS AND MEMBERS?**

11 A. Yes, they do.

12 **III. PLANT RETIREMENTS**

13 **Q. WHAT ARE PLANT RETIREMENTS?**

14 A. Plant retirements involve facilities that were used and useful for utility
15 purposes in the past, but which have been or will be removed and retired
16 from service. As such, these plant retirements are or will no longer be used
17 or useful for utility purposes. In most instances, new utility plant has been
18 constructed to replace the retired plant if such plant is needed to continue
19 to provide service to customers.

1 **Q. DOES KIUC HAVE ANY PLANT RETIREMENTS FOR 2022 AND TEST**
2 **YEAR 2023?**

3 A. Yes.

4 **Q. WHAT ARE THE PLANT RETIREMENTS FOR 2022?**

5 A. The plant retirements for 2022 amount to \$7.6 million, as shown in
6 Workpaper 8-19 to the Application (page 1, line 64, column F).

7 **Q. WHAT ARE THE PLANT RETIREMENTS FOR TEST YEAR 2023?**

8 A. The plant retirements for 2023 amount to \$9.2 million, as shown in
9 Workpaper 8-19 to the Application (page 3, line 64, column E).

10 **IV. NON-LABOR EXPENSES FOR POWER SUPPLY AND T&D**

11 **Q. WHAT IS THE TEST YEAR NON-LABOR EXPENSE FOR THE POWER**
12 **SUPPLY DEPARTMENT?**

13 A. As shown on Exhibit 8-4 to the Application (line 17, column I), the Test Year
14 non-labor expense is about \$5.6 million. This amount reflects the 2023 Test
15 Year operating budget amount of \$5.525 million (line 17, column G) plus
16 adjustments amounting to \$0.027 million (line 17, column H) which are
17 explained in notes b-d of said Exhibit 8-4.

18 **Q. WHAT ACTIVITY RESULTS IN A SIGNIFICANT PERCENTAGE OF THE**
19 **TOTAL NON-LABOR EXPENSE NOTED ABOVE?**

20 A. As noted on Exhibit 8-4 to the Application (line 16), the cost of performing
21 maintenance of general and electric plant represents approximately 66% of

1 the total non-labor costs. These maintenance costs are attributed to the
2 Port Allen and Kapaia power generating plants. The budget includes the
3 costs of routine maintenance of the two plants and all of the generating units
4 at each plant, plus the costs to perform major overhauls on each generating
5 unit. Routine maintenance includes the estimated expenses for parts,
6 services, consumables (like water, chemicals, lubricating oil, etc.), training,
7 licensing fees, and building repairs. Overhauls of generating units are
8 typically determined based upon the number of fired hours each generating
9 unit is operated, but some generating unit overhauls may also be based
10 upon the number of fired starts each generating unit totals. The Test Year
11 overhaul costs are based upon the projected timing and the estimated cost
12 of each required overhaul.

13 As noted on Exhibit 8-4 to the Application (line 16), the non-labor
14 Power Supply departmental costs have decreased in recent years from the
15 amounts incurred in 2018 and 2019. The decrease is primarily due to the
16 increase in generation from independent power producers (“IPPs”) that
17 supply KIUC with renewable energy pursuant to the terms of a
18 Commission-approved purchased power agreement (“PPA”). The
19 increased purchase of renewable energy reduces the need to dispatch
20 KIUC generation that would have otherwise occurred. KIUC notes that the
21 significant reduction in the 2020 and 2021 expenses is also attributed to the
22 reduction in sales caused by the COVID-19 pandemic discussed by

1 Thomas Lovas in his testimony (Exhibit 10-T-1000) – the significant
2 decreases in kWh sales starting in early 2020 from the COVID-19 pandemic
3 required less dispatch of KIUC generating assets to help meet the lessened
4 demand (and therefore less O&M expenses). In sum, reducing the dispatch
5 of KIUC generation reduces the need for routine maintenance and
6 lengthens the interval between scheduled overhauls, which reduces the
7 annual maintenance costs of KIUC generation.

8 **Q. IS KIUC EXPECTING THE REDUCED NEED TO DISPATCH KIUC**
9 **GENERATION TO CONTINUE IN THE 2023 TEST YEAR AND BEYOND,**
10 **THEREBY EXTENDING THE NEED TO PERFORM ROUTINE**
11 **OVERHAULS ON KIUC GENERATION?**

12 A. No. As the government imposed COVID-19 restrictions have eased in
13 2022, kWh sales have begun to increase to reflect an economic recovery
14 on Kauai. At the same time, KIUC has not recently added any new
15 generation from IPPs. Thus, the dispatch of KIUC generating units has
16 increased, which increases routine maintenance and reduces the interval
17 between scheduled overhauls of KIUC generation. The result is an increase
18 in the Test Year maintenance of generation expense from the 2021
19 expense.

1 **Q. WHY IS THE PROJECTED INCREASE REASONABLE FOR**
2 **RATESETTING PURPOSES?**

3 A. KIUC expects to increase the dispatch of KIUC generation for
4 three reasons. First, KIUC does not expect to have generated energy from
5 any significant new IPPs until 2026, at the earliest. Second, KIUC expects
6 an increase in energy needs as kWh sales continue to increase in years
7 subsequent to the Test Year. Third, as discussed in Stacie Dellamano's
8 testimony (Exhibit 10-T-200), KIUC has been experiencing inflationary
9 pressures on prices for parts, services, and consumables.

10 **Q. WHAT IS THE TEST YEAR NON-LABOR EXPENSE FOR THE T&D**
11 **(TRANSMISSION AND DISTRIBUTION) DEPARTMENT?**

12 A. As shown on Exhibit 8-5 to the Application (line 23, columns G and I), the
13 Test Year non-labor expense is \$3.3 million, which is the 2023 Test Year
14 operating budget amount.⁴

15 **Q. WHAT ACTIVITY RESULTS IN A SIGNIFICANT PERCENTAGE OF THE**
16 **TOTAL NON-LABOR EXPENSE NOTED ABOVE?**

17 A. As noted on Exhibit 8-5 to the Application, the cost of maintenance of
18 overhead lines – both transmission lines (line 10, column G) and distribution
19 lines (line 18, column G) – represents approximately 65% of the total

⁴ See the testimony of Mr. Yuh (Exhibit 10-T-700) for a discussion of the budget process.

1 non-labor costs. This includes repairs to the lines as well as tree trimming,
2 clearing, and other necessary right-of-way maintenance expenses.

3 **Q. HOW DOES THE FORECASTED 2023 TEST YEAR EXPENSE FOR THE**
4 **MAINTENANCE OF OVERHEAD LINES COMPARE TO THE EXPENSE**
5 **INCURRED IN 2018 THROUGH OCTOBER 2022, AND FORECASTED**
6 **FOR ALL OF 2022?**

7 A. The cost of maintaining the overhead lines has increased each year since
8 2018, with an exception projected in 2022 caused by a lower level of
9 vegetation management - particularly tree trimming efforts - as a result of
10 the pandemic. KIUC's tree trimming contractor has been unable to maintain
11 adequate work crews to meet KIUC's vegetation management goals as
12 discussed in Mr. Bissell's testimony (Exhibit 10-T-100).

13 **Q. IS KIUC EXPECTING THE 2022 REDUCED COST TO MAINTAIN**
14 **OVERHEAD LINES TO CONTINUE IN THE 2023 TEST YEAR AND**
15 **BEYOND?**

16 A. No. Going forward, KIUC is required to increase tree trimming efforts for
17 the foreseeable future to meet vegetation management goals that are
18 designed to ensure the safety and reliability of KIUC's system and
19 operations. In addition, as discussed in Ms. Dellamano's testimony
20 (Exhibit 10-T-200) and noted above, KIUC has been experiencing
21 inflationary pressures on prices for parts, services, and consumables that
22 require increases to budget amounts.

1 **V. COMMODITIES COSTS**

2 **Q. WHAT ARE THE PROJECTED COMMODITIES COSTS FOR THE TEST**
3 **YEAR?**

4 A. As shown on Exhibit 8-2 to the Application (line 3, columns G and I), the
5 Test Year costs of commodities amount to \$91.1 million, which is comprised
6 of \$43.5 million in fuel costs and \$47.6 million in purchased power costs.
7 These amounts are also reflected in Exhibit 6 to the Application (lines 4-6,
8 column E).

9 **Q. WHAT DO KIUC'S COMMODITIES COSTS REPRESENT?**

10 A. The Test Year commodities expense represents the costs of operating
11 KIUC's generation and the costs of purchasing energy and capacity from
12 IPPs.

13 **Q. HOW ARE KIUC'S COMMODITIES COSTS DETERMINED?**

14 A. Using the kWh sales forecast and available generation for the Test Year,
15 the commodity budget is developed by KIUC using a production simulation
16 model. The model is a computer program that attempts to simulate the
17 dispatch of all generating resources to produce the energy needed by
18 KIUC's customers, plus system losses and company use. The objective of
19 the production simulation is to determine the most cost-effective dispatch of
20 all available generating resources, thus resulting in the lowest possible
21 commodity cost.

1 **Q. IN ADDITION TO THE SALES FORECAST AND AVAILABLE**
2 **GENERATION, WHAT OTHER INPUTS ARE NECESSARY TO**
3 **PERFORM THE PRODUCTION SIMULATION?**

4 A. Other inputs to the production simulation include projected fuel prices,
5 which are provided by KIUC's third party consultant, Stillwater Associates,
6 LLC, and included as Attachment BR-905 to this testimony; projected
7 maintenance schedule of KIUC generating units and IPPs; the costs of
8 energy and capacity purchased from IPPs under a PPA; company use
9 generation; and system losses.

10 **Q. WHAT FUEL PRICES WERE USED IN THE PRODUCTION SIMULATION**
11 **RUN FOR THE TEST YEAR?**

12 A. The projected fuel prices for the Test Year are \$3.49 per gallon for ultra-low
13 sulfur diesel (ULSD) and \$2.70 for naphtha.

14 **Q. WHAT PRICES WERE USED IN THE PRODUCTION SIMULATION FOR**
15 **THE ENERGY PRODUCED BY INDEPENDENT POWER PRODUCERS**
16 **(IPPs) AND SOLD TO KIUC?**

17 A. The following table contains the projected Test Year cost of energy and
18 capacity purchased under each IPP PPA.

IPP	\$ / MWh
ADC Hydro	93.91
G&R Hydro	
<=18,000 MWh	150.00
18,000 - 21,000	180.00
21,000 - 24,000	165.00
>24,000	150.00
O&M (Tier I only)	47.10
McBryde Hydro	
<=20,000 MWh	203.14
20,000 - 24,500	223.14
>24,500	243.14
Green Hydro	241.37
Green Biomass	
Capacity (\$/kW-yr @ 6.7 MW)	71.45
Energy	
<= 51,200 MWh	153.97
> 51,200 MWh	183.79
PV Anahola KRS1	128.00
PV Koloa KRS2	122.00
PV McBryde	200.00
PV Pioneer	110.00
PV MP2 Kaneshiro	200.00
PV Kapaa	200.00
Q Export	241.37
NEM	250.00
NEM Pilot Export	200.00
SolarCity	139.00
AES Lawai	110.80
AES PMRF	108.50

1 **Q. WHAT ARE SYSTEM LOSSES AS USED IN THE PRODUCTION**
2 **SIMULATION?**

3 A. System losses represents that percentage of energy generated, but not
4 delivered to customers, and which is lost as the energy is transmitted
5 through the T&D system.

6 **Q. WHAT IS COMPANY USE AS USED IN THE PRODUCTION**
7 **SIMULATION?**

8 A. Company use represents that percentage of energy generated, but not
9 delivered to customers, and which is necessary for KIUC's own operations.

10 **Q. WHY MUST SYSTEM LOSSES AND COMPANY USE BE CONSIDERED**
11 **IN THE PRODUCTION SIMULATION?**

12 A. In order to provide accurate results, the production simulation must consider
13 the full amount of the energy generation required by KIUC's system – this
14 includes not only the energy that is delivered (i.e., sold) to customers, but
15 also the energy that is lost through system losses and that which is
16 necessary for KIUC's own operations.

17 **Q. WHAT PERCENTAGE WAS USED FOR SYSTEM LOSSES AND**
18 **COMPANY USE IN THE PRODUCTION SIMULATION FOR THE TEST**
19 **YEAR AND HOW WAS IT DETERMINED?**

20 A. In the Test Year, KIUC projects 5.09% for both system losses and company
21 use. The 5.09% was calculated as (system losses + company use) / total
22 generation.

1 **Q. HOW DOES THE TEST YEAR LOSS PERCENTAGE COMPARE TO**
2 **RECENT YEARS' ACTUAL LOSS PERCENTAGE?**

3 A. The 2021 and 2020 combined system losses and company use
4 percentages were 5.09% and 5.08%, respectively. For 2022 year to date
5 (through November), the combined percentage was 5.45%.

6 **VI. ERAC MECHANISM**

7 **Q. WHAT IS THE ERAC?**

8 A. KIUC's ERAC (Energy Rate Adjustment Clause) is a mechanism approved
9 by this Commission and set forth in KIUC Tariff No. 1 that in effect allows
10 KIUC to adjust its charges in relation to the fuel and purchased energy
11 prices upon which the 2010 test year commodity costs were based in
12 Docket No. 2009-0050.

13 **Q. WHY IS THE ERAC AN IMPORTANT MECHANISM FOR KIUC?**

14 A. As noted above, the commodities cost represents the largest expense for
15 KIUC. Although KIUC has been able to generate most of its power from
16 renewable resources that don't utilize fossil fuel, KIUC's cost of generation
17 is still materially impacted by the fluctuating prices of fossil fuel. Without the
18 ERAC mechanism, these fluctuating fuel prices would have a significant
19 impact on the annual net margins for KIUC (providing excess margins
20 during periods of lower fuel prices as compared to a fixed test year amount
21 and insufficient margins during higher fuel price periods). The ERAC is a

1 mechanism that minimizes these financial risks by allowing KIUC to timely
2 adjust its charges for electric service due to changes in the price of fuel as
3 well as to include the costs of PPAs approved by this Commission that come
4 on-line between rate cases, without having to file a rate application when
5 new PPAs are added to KIUC's system and/or during high fuel price
6 periods.

7 **Q. PLEASE DESCRIBE KIUC'S CURRENT ERAC MECHANISM.**

8 A. KIUC current ERAC mechanism was established during its last rate
9 proceeding in Docket No. 2009-0050. The current mechanism is set forth
10 in KIUC's Tariff No. 1 on file with the Commission, and provides as follows:

11 Energy Rate Adjustment Clause (ERAC):

12 This ERAC shall include the following:

13 FUEL AND PURCHASED ENERGY - The above rates are
14 based on a cost of fuel for Company generation of
15 1735.83 cents per million Btu for fuel delivered in its service
16 tanks and a cost for purchased energy (Purchased Energy) of
17 17.381 cents per kilowatt hour. The term "Purchased Energy"
18 shall mean all capacity and purchased energy charges and
19 payments (including revenue taxes) that the Commission has
20 authorized to include in this ERAC. Company-generated
21 energy from non-fuel sources shall be considered as zero fuel
22 cost in the determination of the composite fuel cost. When the
23 Company-generated net energy cost is more or less than
24 1735.83 cents per million Btu, and/or the Purchased Energy
25 cost is more or less than 17.381 cents per kilowatt hour, a
26 corresponding adjustment (Energy Rate Adjustment Factor) to
27 the energy charge shall be made. This adjustment shall be
28 comprised of a Company Generation Component and a
29 Purchased Energy Component.

30 The Company Generation Component shall be the difference in
31 current generation cost and base generation cost, adjusted for

1 additional revenue taxes. The current generation cost shall be
2 determined by the current fuel cost in cents per million Btu,
3 multiplied by a generation conversion factor of 0.009850 million
4 Btu per kilowatt hour, weighted by the proportion of current
5 Company generation to total system net energy in kilowatt
6 hours. The base generation cost is the base fuel cost of
7 1735.83 cents per million Btu multiplied by a generation
8 conversion factor of 0.009850 million Btu per kilowatt hour,
9 weighted by the proportion of the 2010 test year generation to
10 total system energy in kilowatt hours.

11 The Purchased Energy Component shall be the difference
12 between (1) the current Purchased Energy cost weighted by the
13 proportion of current Purchased Energy to total system net
14 energy, and (2) the base Purchased Energy cost of
15 17.381 cents per kilowatt hour weighted by the proportion of the
16 2010 test year Purchased Energy to total system net energy,
17 adjusted to the sales delivery level and for additional revenue
18 taxes. The Energy Rate Adjustment Factor shall be the sum of
19 the Generation Component and the Purchased Energy
20 Component.

21 The revenue tax requirement shall be calculated using current
22 rates of the Franchise Tax, Public Service Company Tax, and
23 Public Utilities Commission fee.

24 The Energy Rate Adjustment shall be effective on the date of
25 cost change. When a cost change occurs during a customer's
26 billing period, the Energy Rate Adjustment will be prorated for
27 the number of days each cost was in effect.

28 This ERAC is consistent with the terms of the Company's
29 operations and Purchased Energy contracts and may be
30 revised to reflect any revisions or changes in operations and the
31 Purchased Energy contracts, subject to approval by the
32 Commission.

33 Reconciliation Adjustment:

34 In order to reconcile any differences that may occur between
35 recorded and forecasted Energy Rate Adjustment Clause
36 revenues, the year-to-date recorded revenue from the Energy
37 Rate Adjustment Clause will be compared with the year-to-date
38 revenue expected from the Energy Rate Adjustment Clause on

1 a quarterly basis. If there is a variance between the recorded
2 Energy Rate Adjustment Clause revenue and the expected
3 Energy Rate Adjustment Clause revenue, an adjustment,
4 lagged by two months, shall be made to the Energy Rate
5 Adjustment Clause to reconcile the revenue variance over the
6 sales estimated for the subsequent quarter.

7 In addition, for any given month, if the Company operates either
8 below or above the range of 0.00980 million Btu per kilowatt
9 hour to 0.00990 million Btu per kilowatt hour, the Company can
10 elect to modify its Generation Component such that the
11 Generation Component will recover only the difference between
12 the Company's actual generation cost and base generation cost
13 for that month by providing notice to the Commission together
14 with a written report, which election will be effective upon the
15 filing of the notice. This difference shall be reflected as an
16 adjustment to the actual revenues collected for the period in
17 question and applied as part of the reconciliation adjustment.
18 The report will explain the reasons why the Company operated
19 outside of the range, the expected duration that it will operate
20 outside of the range, and, if the Company is operating above
21 the range, what steps it will be taking to attempt to rectify the
22 situation. Upon review of the written report, the Commission
23 and the Division of Consumer Advocacy will have the
24 opportunity to make further inquiries on the matter, and the
25 Commission, at its discretion, may institute an investigatory
26 proceeding on the matter should it believe such proceeding is
27 warranted.

28 **Q. IS KIUC PROPOSING ANY CHANGES TO ITS CURRENT ERAC**
29 **MECHANISM AS PART OF THIS PROCEEDING?**

30 A. Yes. KIUC is proposing certain changes to the ERAC mechanism mainly
31 to reflect the 2023 Test Year data presented in this proceeding (as
32 compared to the 2010 test year data from the last rate case in Docket
33 No. 2009-0050), as well as to update the generation conversion factor to
34 account for KIUC's current energy mix (which is now primarily renewable,

1 or non-fuel, sources) and to adjust the system loss factor to better reflect
2 the current level of distributed generation resources on KIUC's system.

3 **Q. PLEASE SUMMARIZE THE PROPOSED CHANGES TO THE ERAC**
4 **MECHANISM.**

5 A. The following summarizes the proposed changes to the ERAC mechanism:

- 6 (1) Update the reference from "2010 test year" to "2023 test year" for the
7 purpose of reflecting the use of a 2023 test year for the subject rate
8 proceeding as compared to the 2010 test year utilized in KIUC's last
9 rate proceeding in Docket No. 2009-0050.
- 10 (2) Update the reference from "1735.83 cents per million Btu" that was
11 based on a 2010 test year and determined in Docket No. 2009-0050,
12 to "2301.98 cents per million Btu" to reflect the 2023 Test Year cost
13 of fuel for KIUC generation.
- 14 (3) Update the reference from "17.381 cents per kilowatt hour" that was
15 based on a 2010 test year and determined in Docket No. 2009-0050,
16 to "17.443 cents per kilowatt hour" to reflect the 2023 Test Year cost
17 of Purchased Energy.
- 18 (4) Adjust the generation conversion factor from "0.009850 million Btu
19 per kilowatt hour" to "0.009950 million Btu per kilowatt hour". And,
20 maintain the same +/- 0.000050 million Btu per kilowatt hour range,
21 but in light of the adjusted generation conversion factor, revise the
22 language stating "the range of 0.00980 million Btu per kilowatt hour

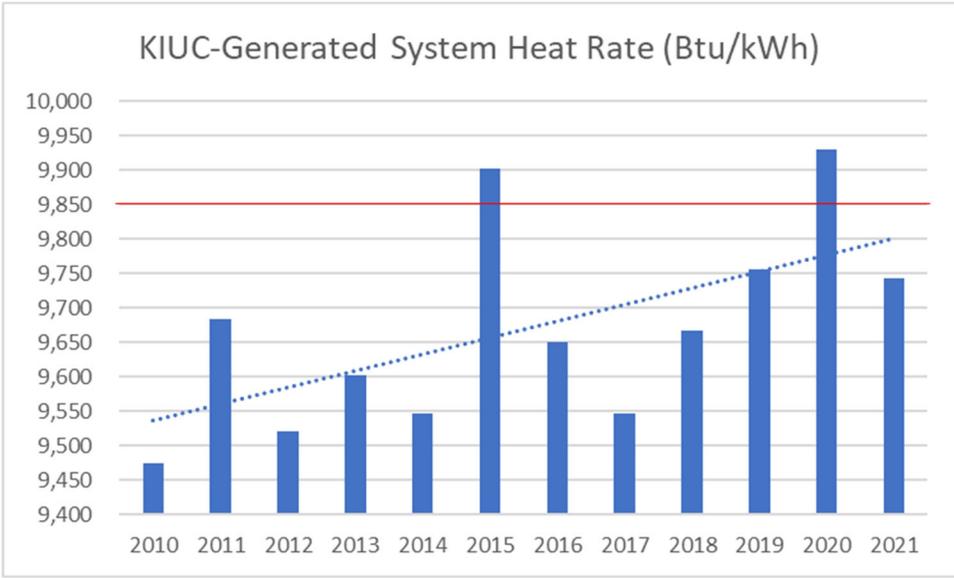
1 to 0.00990 million Btu per kilowatt hour” to “the range of
2 0.00990 million Btu per kilowatt hour to 0.01000 million Btu per
3 kilowatt hour”.

4 (5) Adjust the system loss factor from 4.49% to 5.09% to better reflect
5 the much higher level of distributed generation resources on KIUC’s
6 system today than at the time of the last rate case.

7 **Q. PLEASE FURTHER EXPLAIN THE PURPOSE FOR THE PROPOSED**
8 **ADJUSTMENT TO THE GENERATION CONVERSION FACTOR AND ITS**
9 **ASSOCIATED RANGE, AS WELL AS THE PROPOSED ADJUSTMENT**
10 **OF THE SYSTEM LOSS FACTOR TO 5.09%.**

11 A. KIUC’s energy mix has changed dramatically since the time of its 2010 rate
12 case in Docket No. 2009-0050, where the energy mix is now dominated by
13 renewable (or non-fuel) energy. As a result, the current
14 0.009850 million Btu per kilowatt hour generation conversion factor has
15 become more difficult to achieve due to the material increase in renewable
16 sources, and this difficulty will become even greater as KIUC continues its
17 efforts to achieve the State’s 100% Renewable Portfolio Standards (“RPS”)
18 goal. As an example of how KIUC’s energy mix has changed dramatically,
19 the “Company Generation Component” (i.e., KIUC generation) from fuel
20 sources consisted of 93.9% of all kWh sales in 2010, as compared to just
21 40.7% in 2021. As the amount of KIUC generation decreases in favor of
22 low/fixed-price renewables that will, among other things, lessen the State’s

1 dependence on fossil fuels, the efficiency of KIUC's generation suffers from
2 a heat rate standpoint (i.e., the heat rate increases) due to more operation
3 of KIUC generation at lower loads, and more generating unit starts and
4 stops, in response to the intermittent nature of PV renewable resources.
5 System losses also increase due to significantly more distributed generation
6 sources that are not necessarily located near the load centers of Kauai, the
7 need for KIUC to maintain quick-start readiness of generating units even
8 when offline (i.e., auxiliary loads remain), and synchronous condenser
9 operation during periods of 100% renewable operation. Auxiliary loads
10 such as pumps, compressors, and heaters require significant energy
11 consumption, but are necessary to ensure that generating units are ready
12 to start quickly as needed to maintain reliable service to KIUC's
13 customers/members. The synchronous condenser, while consuming no
14 fuel, uses energy from the electric grid but provides valuable voltage
15 support, inertia, and short-circuit current capability required for
16 100% renewable operation. The above impacts from increased renewables
17 have resulted in an increasing trend to KIUC's system heat rate, which has
18 made it increasingly difficult to meet the efficiency factor of 0.00985 million
19 Btu per kilowatt hour (indicated by the red line), as shown in the chart below:



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Based upon the expected and required future addition of renewables to meet the State's RPS and the continued need to maintain operational flexibility of KIUC generation and synchronous condenser operation to maintain system reliability, the generation conversion factor should be increased to 0.00995 million Btu per kilowatt hour in recognition of the increasing trend shown in the chart above, and the system loss factor should be increased to 5.09%. This will allow for a continued efficiency incentive mechanism until the next expected rate case filing, especially in light of the continuing impacts that RPS compliance efforts will have on KIUC's system heat rate and system losses. KIUC also notes that the generation conversion factor was 0.01123 million Btu per kilowatt hour and the system loss factor used in the ERAC mechanism was 6.0% prior to Docket No. 2009-0050.

1 Regarding the language in the current ERAC mechanism that
2 provides that, for any given month, if KIUC operates either below or above
3 the range of 0.00980 million Btu per kilowatt hour to 0.0990 million Btu per
4 kilowatt hour, KIUC can elect to modify its Generation Component such that
5 the Generation Component will recover only the difference between its
6 actual generation cost and base generation cost for that month, KIUC is not
7 seeking any change to the +/- 0.000050 million Btu per kilowatt hour range.
8 However, in light of the proposed adjustment of the generation conversion
9 factor to 0.00995 million Btu per kilowatt hour, this range from
10 “0.00980 million Btu per kilowatt hour to 0.00990 million Btu per kilowatt
11 hour” should be revised to “0.00990 million Btu per kilowatt hour to
12 0.01000 million Btu per kilowatt hour”.

13 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

14 **A.** Yes, it does.

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

ATTACHMENT BR-901

(6 PAGES)

**KAUAI ISLAND UTILITY COOPERATIVE
2022 CAPITAL BUDGET**

740c <u>Code</u>	<u>PROJECT</u>	<u>(In 000's)</u>
<u>NORMAL AND RECURRING</u>		
PRODUCTION		
xx1201	SAFETY	25.0
xx1202	RELIABILITY	200.0
xx1203	ENVIRONMENTAL	50.0
xx1204	EFFICIENCY	25.0
xx1205	HYDRO IMPROVEMENTS	25.0
xx1206	DIESEL OVERHAULS	200.0
xx1208	BUILDING & GROUNDS	250.0
	TOTAL-PRODUCTION	775.0
TRANSMISSION & DISTRIBUTION		
xx0101B	LINE EXTENSIONS - UG	200.0
xx0102B	LINE EXTENSIONS - OH	200.0
xx0301B	LINE REPLACEMENTS - UG	220.0
xx0302B	LINE REPLACEMENTS - OH	550.0
xx0101C	NEW SERVICES - UG	50.0
xx0102C	NEW SERVICES - OH	40.0
xx0101D	DEVELOPER WORK - UG	1,000.0
xx0102D	DEVELOPER WORK - OH	100.0
xx0301C	RECONDUCTORING PROJECTS - UG	10.0
xx0302C	RECONDUCTORING PROJECTS - OH	10.0
xx0301D	SYSTEM RELIABILITY & INSPECTION-UG	20.0
xx0302D	SYSTEM RELIABILITY & INSPECTION-OH	20.0
xx1001	TRANSMISSION INSULATOR REPLACE	600.0
xx0606A	POLE REPLACEMENTS	1,000.0
xx03011	UG SYSTEM IMPROVEMENTS	300.0
xx0501	SUBSTATION REPL/UPGRADES - DIST	200.0

**KAUAI ISLAND UTILITY COOPERATIVE
2022 CAPITAL BUDGET**

740c <u>Code</u>	<u>PROJECT</u>	<u>(In 000's)</u>
xx1002	SUBSTATION REPL/UPGRADES - TR	400.0
xx1235	SUBSTATION TRANSFORMER REPL-GSU	1,600.0
xx1004	SYSTEM PROTECTION UPGR/REPL-TR	160.0
xx0503	SYSTEM PROTECTION UPGR/REPL-DIST	120.0
xx0615A	COMMUNICATION SYSTEM UPGR/REPL	140.0
xx0601A	DISTRIBUTION XFMR-UG-NEW CUST	1,210.0
xx0601B	DISTRIBUTION XFMR-UG-UPGR	20.0
xx0601C	DISTRIBUTION XFMR-OH NEW CUST	750.0
xx0601D	DISTRIBUTION XFMR-OH-UPGR	50.0
xx0601E	TRANSFORMER OIL DISPOSAL - UG	50.0
xx0601F	TRANSFORMER OIL DISPOSAL - OH	50.0
xx0601G	METERS - NEW CONSUMERS	120.0
xx0601H	METERS - REPLACEMENTS	450.0
xx0607A	STREET & AREA LIGHTS - REPL	25.0
xx0702A	STREET & AREA LIGHTS - NEW	4.0
xx1511	BUILDING & FACILITY REPL/UPGRADES	12.0
xx0704B	SCADA SYSTEM UPGRADES/REPL	80.0
	TOTAL-TRANSMISSION & DISTRIBUTION	9,761.0
	HUMAN RESOURCES	
xx1515	HR ADVOCATE CUSTOMIZATIONS	50.0
	TOTAL-HUMAN RESOURCES	50.0
	HCP	
xx1006	HCP MINIMIZATION PROJECTS-TR	11,126.6
	TOTAL-HCP	11,126.6

**KAUAI ISLAND UTILITY COOPERATIVE
2022 CAPITAL BUDGET**

740c <u>Code</u>	<u>PROJECT</u>	<u>(In 000's)</u>
SAFETY & FACILITIES		
xx1504	SAFETY EQUIPMENT	60.0
xx1505	SECURITY SYSTEM/FACILITIES UPGRADES	600.0
	TOTAL-SAFETY & FACILITIES	660.0
INFORMATION SERVICES		
xx1506	SYSTEM REPLACEMENTS	759.0
xx1507	SYSTEM IMPROVEMENTS	640.0
	TOTAL-INFORMATION SERVICES	1,399.0
GENERAL PLANT		
xx1508	VEHICLES	850.0
xx1509	OFFICE FURNITURE AND EQUIPMENT	15.2
xx1510	TOOLS AND EQUIPMENT	177.0
	TOTAL-GENERAL PLANT	1,042.2
	TOTAL-NORMAL AND RECURRING	24,813.7

**KAUAI ISLAND UTILITY COOPERATIVE
2022 CAPITAL BUDGET**

740c <u>Code</u>	<u>PROJECT</u>	<u>(In 000's)</u>
<u>NON-RECURRING</u>		
PRODUCTION		
221202M	PAGS OIL & WATER SEPARATOR	500.0
221202N	S1 EXCITER	400.0
221202P	PAGS SYNCHRONOUS CONDENSER CONVERSION	1,500.0
221202Q	KPS E-CELL STACKS REPLACEMENT	210.0
221205A	WAIAHI BRIDGE UPGRADE	100.0
221208D	SCADA & CONTROL ROOM AC UPGRADE	200.0
	TOTAL-PRODUCTION	2,910.0
TRANSMISSION & DISTRIBUTION		
220801B	SEABIRD MITIGATION	9,794.4
	TOTAL-TRANSMISSION & DISTRIBUTION	9,794.4
FINANCIAL & CORPORATE SERVICES		
221566	ELEELE MATLS WHSE IMPROVEMENTS-PHASE 2	405.0
	TOTAL-FINANCIAL & CORPORATE SERVICES	405.0
	TOTAL-NON-RECURRING	13,109.4

**KAUAI ISLAND UTILITY COOPERATIVE
2022 CAPITAL BUDGET**

740c <u>Code</u>	<u>PROJECT</u>	<u>(In 000's)</u>
<u>CARRYOVER PROJECTS-PRIOR YEARS</u>		
181202A-CO4	KPS OTSG UPGRADE	121.5
191204A-CO3	ADVANCED AGC SYSTEM INSTALLATION	50.0
191295-CO3	ILILIULA 36" SIPHON REPLACEMENT	1,073.0
201203B-CO2	KPS CATALYST REPLACEMENT	50.0
211202G-CO1	GT1 EXCITER REPLACEMENT	200.0
211202J-CO1	KPS FUEL NOZZLES FOR GT	100.0
211282-CO1	PAGS NEW CONTROL ROOM DISPATCH CENTER	750.0
200102G-CO2	LIHUE AIRPORT ELECTRICAL DIST HARDENING	520.0
201023-CO2	WAILUA CORRIDOR	750.0
201321-CO2	ANAHOLA SERVICE CENTER	1,000.0
210539-CO1	DECOMMISSIONING-LAWAI SUBSTATION	150.0
211323-CO1	ANAHOLA POLEYARD STORAGE & WAREHOUSE	363.0
211324-CO1	KAPAIA XFMR/POLE YARD	200.0
211564-CO1	ELEELE MATLS WHSE IMPROVEMENTS-PHASE 1	68.0
	TOTAL-CARRYOVER PROJECTS	5,395.5

**KAUAI ISLAND UTILITY COOPERATIVE
2022 CAPITAL BUDGET**

740c		
<u>Code</u>	<u>PROJECT</u>	<u>(In 000's)</u>
	TOTAL-ANNUAL CAPITAL EXPENDITURE	43,318.6
	CUSTOMER ADVANCES	
xx0101B	LINE EXTENSIONS - UG	(40.0)
xx0102B	LINE EXTENSIONS - OH	(40.0)
xx0101D	DEVELOPER WORK - UG	(900.0)
xx0102D	DEVELOPER WORK - OH	(90.0)
	TOTAL CUSTOMER ADVANCES	(1,070.0)
	CONTRIBUTION IN AID OF CONSTRUCTION	
xx0101C	NEW SERVICES - UG	(5.0)
xx0102C	NEW SERVICES - OH	(4.0)
	TOTAL CONTRIBUTION IN AID OF CONSTRUCTION	(9.0)
		-
	TOTAL-CAPEX CASH REQTS BEFORE AVAILABLE FUNDING	42,239.6

KAUAI ISLAND UTILITY COOPERATIVE

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(7 PAGES)

**KAUAI ISLAND UTILITY COOPERATIVE
2023 CAPITAL BUDGET**

740c
Code

PROJECTS

(In 000's)

NORMAL AND RECURRING

PRODUCTION

xx1201	SAFETY	25.0
xx1202	RELIABILITY	300.0
xx1203	ENVIRONMENTAL	50.0
xx1204	EFFICIENCY	25.0
xx1205	HYDRO IMPROVEMENTS	75.0
xx1206	DIESEL OVERHAULS	200.0
xx1208	BUILDING & GROUNDS	250.0
	TOTAL-PRODUCTION	925.0

TRANSMISSION & DISTRIBUTION

xx0101B	LINE EXTENSIONS - UG	200.0
xx0102B	LINE EXTENSIONS - OH	200.0
xx0301B	LINE REPLACEMENTS - UG	240.0
xx0302B	LINE REPLACEMENTS - OH	480.0
xx0101C	NEW SERVICES - UG	60.0
xx0102C	NEW SERVICES - OH	40.0
xx0101D	DEVELOPER WORK - UG	640.0
xx0102D	DEVELOPER WORK - OH	80.0
xx0301D	SYSTEM RELIABILITY & INSPECTION-UG	40.0
xx1001	TRANSMISSION INSULATOR REPLACE	480.0
xx0606A	POLE REPLACEMENTS	600.0
xx03011	UG SYSTEM IMPROVEMENTS	200.0
xx0501	SUBSTATION REPL/UPGRADES - DIST	160.0
xx1002	SUBSTATION REPL/UPGRADES - TR	400.0
xx1235	SUBSTATION TRANSFORMER REPL-GSU	1,400.0
xx1004	SYSTEM PROTECTION UPGR/REPL-TR	200.0

**KAUAI ISLAND UTILITY COOPERATIVE
2023 CAPITAL BUDGET**

740c Code	<u>PROJECTS</u>	<u>(In 000's)</u>
xx0503	SYSTEM PROTECTION UPGR/REPL-DIST	80.0
xx0615A	COMMUNICATION SYSTEM UPGR/REPL	100.0
xx0601A	DISTRIBUTION XFMR-UG-NEW CUST	1,200.0
xx0601C	DISTRIBUTION XFMR-OH NEW CUST	800.0
xx0601E	TRANSFORMER OIL DISPOSAL - UG	100.0
xx0601F	TRANSFORMER OIL DISPOSAL - OH	250.0
xx0601G	METERS - NEW CONSUMERS	100.0
xx0601H	METERS - REPLACEMENTS	600.0
xx0607A	STREET & AREA LIGHTS - REPL	32.0
xx0702A	STREET & AREA LIGHTS - NEW	12.0
xx1511	BUILDING & FACILITY REPL/UPGRADES	80.0
xx0704B	SCADA SYSTEM UPGRADES/REPL	100.0
	TOTAL-TRANSMISSION & DISTRIBUTION	8,874.0
	HUMAN RESOURCES	
xx1515	HR CUSTOMIZATIONS	50.0
	TOTAL-HUMAN RESOURCES	50.0
	HCP	
xx1006	HCP MINIMIZATION PROJECTS-TR	4,135.2
	TOTAL-HCP	4,135.2
	SAFETY & FACILITIES	
xx1504	SAFETY EQUIPMENT	60.0
xx1505	SECURITY SYSTEM/FACILITIES UPGRADES	150.0
	TOTAL-SAFETY & FACILITIES	210.0

**KAUAI ISLAND UTILITY COOPERATIVE
2023 CAPITAL BUDGET**

740c Code	<u>PROJECTS</u>	<u>(In 000's)</u>
INFORMATION SERVICES		
xx1506	SYSTEM REPLACEMENTS	405.0
xx1507	SYSTEM IMPROVEMENTS	730.1
	TOTAL-INFORMATION SERVICES	1,135.1
GENERAL PLANT		
xx1508	VEHICLES	290.0
xx1509	OFFICE FURNITURE AND EQUIPMENT	113.0
xx1510	TOOLS AND EQUIPMENT	223.0
	TOTAL-GENERAL PLANT	626.0
	TOTAL-NORMAL AND RECURRING	15,955.3

**KAUAI ISLAND UTILITY COOPERATIVE
2023 CAPITAL BUDGET**

740c Code	<u>PROJECTS</u>	<u>(In 000's)</u>
	<u>NON-RECURRING</u>	
	PRODUCTION	
231202M	PAGS OIL & WATER SEPARATOR	500.0
231202N	S1 EXCITER	400.0
231202R	KPS OTSG TUBE REPLACEMENT	1,050.0
231206B	SWD TURBO REPLACEMENT	250.0
231206C	SWD GEARS	220.0
231206D	D9 INTERMEDIATE GEAR	200.0
231208E	KPS PLANT ROAD UPGRADE	750.0
231282	PAGS NEW CONTROL ROOM DISPATCH CTR	1,000.0
	TOTAL-PRODUCTION	4,370.0
	TRANSMISSION & DISTRIBUTION	
2303014	PUHI SUBDIVISION 12.47KV UPGRADE	3,000.0
	TOTAL-TRANSMISSION & DISTRIBUTION	3,000.0
	HCP	
231540	HCP INCIDENTAL TAKE PERMIT	3,000.0
	TOTAL-HCP	3,000.0
	SAFETY & FACILITIES	
231569	ELEELE SEWER LINE	100.0
231570	HANA KUKUI GENERATOR	200.0
	TOTAL-HUMAN RESOURCES	300.0

**KAUAI ISLAND UTILITY COOPERATIVE
2023 CAPITAL BUDGET**

740c Code	<u>PROJECTS</u>	<u>(In 000's)</u>
	ENGINEERING	
230547	NORTH SHORE ENERGY RESILIENCY PROJECT	2,500.0
230803	KILOHANA/HANAHANAPUNI 69KV LINE	1,365.0
230901	KILOHANA SWITCHYARD	4,875.0
231028	HANAIEI TAP-PRINCEVILLE TRANSMISSION LINE	1,500.0
	TOTAL-ENGINEERING	10,240.0
	FINANCIAL & CORPORATE SERVICES	
231567	ELEELE MATLS WHSE IMPROVEMENTS-PHASE 3	150.0
	TOTAL-FINANCIAL & CORPORATE SERVICES	150.0
	TOTAL-NON-RECURRING	21,060.0

**KAUAI ISLAND UTILITY COOPERATIVE
2023 CAPITAL BUDGET**

740c

Code

PROJECTS

(In 000's)

CARRYOVER PROJECTS-PRIOR YEARS

191204A-CO4	ADVANCED AGC SYSTEM INSTALLATION	30.0
221202J-CO1	KPS FUEL NOZZLES FOR GT	300.0
221202P-CO1	PAGS SYNCHRONOUS CONDENSER CONVERSION	1,900.0
220801B-CO1	SEABIRD MITIGATION	7,012.5
221566-CO1	ELEELE MATLS WHSE IMPROVEMENTS-PHASE 2	100.0
TOTAL-CARRYOVER PROJECTS		<u>9,342.5</u>

**KAUAI ISLAND UTILITY COOPERATIVE
2023 CAPITAL BUDGET**

740c Code	<u>PROJECTS</u>	(In 000's)
	TOTAL-ANNUAL CAPITAL EXPENDITURE	46,357.8
	CUSTOMER ADVANCES	
xx0101B	LINE EXTENSIONS - UG	(40.0)
xx0102B	LINE EXTENSIONS - OH	(40.0)
xx0101D	DEVELOPER WORK - UG	(576.0)
xx0102D	DEVELOPER WORK - OH	(72.0)
	TOTAL CUSTOMER ADVANCES	(728.0)
	CONTRIBUTION IN AID OF CONSTRUCTION	
xx0101C	NEW SERVICES - UG	(6.0)
xx0102C	NEW SERVICES - OH	(4.0)
	TOTAL CONTRIBUTION IN AID OF CONSTRUCTION	(10.0)
230803	GRANT FUNDING	(1,000.0)
	TOTAL-CAPEX CASH REQTS BEFORE AVAILABLE FUNDING	44,619.8

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

ATTACHMENT BR-903

(80 PAGES)

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2022

Budget Title	Safety	<i>Check One:</i>	
Budget #	221201	Regulatory	X
<i>Project Start</i>	1/1/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	
Total Cost	\$25,000		

Description of Proposed Construction: (Location, Components, Scope)

This is a recurring budget item that covers power plant safety improvements to ensure compliance with OSHA/HIOSH. Other safety projects may occur outside of this scope, as any project that is estimated at \$100,000 or greater will receive its own project number.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The Waiahi hydro units were installed in the first half of the 20th century. The Port Allen Power Plant was built in the late 1960s, and significantly added to in the mid-1970s. Even Kapaia Power Station was built nearly twenty years ago. The age of these facilities, coupled with improved or new safety regulations that inevitably occur as time goes on, drives KIUC to add or modify its facilities, whether in response to a specific rule or to comply with the OSHA General Duty Clause.

The typical annual budget for this recurring project ranges from \$25,000 to \$75,000, but can be higher in years when specific projects are identified.

Alignment with strategic goals:

KIUC’s Strategic Plan lists three key areas, one of which is to deliver power safely and reliably. By ensuring our people and equipment operate safely, KIUC can better serve its Members.

Results/Benefits of Proposed Construction: (Members, Operations)

Projects in this category will result in improved OSHA compliance, personnel safety performance and reliability.

Alternatives Identified or Corrective Plans Investigated:

Alternatives are to budget less and move capital safety jobs to later years or spend O&M monies.

Submitted by: Gregg Matsuo

Date: 6/25/21

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2022

Budget Title	Reliability	<i>Check One:</i>	
Budget #	221202	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	
Total Cost	\$200,000		

Description of Proposed Construction: (Location, Components, Scope)

This is a recurring budget item that covers power plant reliability improvements to ensure that generating units that make up our Adequacy of Supply (AOS) statement remain reliable. Other reliability projects may occur outside of this scope, as any project that is estimated at \$100,000 or greater will receive its own project number.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The Waiahi hydro units were installed in the first half of the 20th century. The Port Allen Power Plant was built in the late 1960s, and significantly added to in the seventies and eighties. Even the Kapaia Power Station was built nearly twenty years ago. The age of these facilities, coupled with improved or more reliable designs that inevitably occur as time goes on, drives KIUC to add or modify equipment to ensure continued reliability of its generating units.

The typical annual budget for this recurring project ranges from \$100,000 to \$500,000.

Alignment with strategic goals:

One of the three key areas of KIUC’s Strategic Plan is Safe & Reliable Power Supply. By ensuring our facilities are reliable, KIUC can provide better value to its members.

Results/Benefits of Proposed Construction: (Members, Operations)

Reliability improvements typically result in either preventing or reducing un-planned equipment outages. These outages result in either increased cost due to expediting tools, material, and labor in an emergency and/or result in power outages around the island.

Alternatives Identified or Corrective Plans Investigated:

The alternative of not performing reliability capital spending is to either perform the same work as a maintenance expense or not perform the work at all and take the risk of more outages and more expensive operation.

Submitted by: Gregg Matsuo

Date: 6/25/21

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2022

Budget Title	Environmental	<i>Check One:</i>	
Budget #	221203	Regulatory	X
<i>Project Start</i>	1/1/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	
Total Cost	\$50,000		

Description of Proposed Construction: (Location, Components, Scope)

This is a recurring budget item that covers power plant environmental improvements to ensure compliance with EPA/HDOH. Other environmental projects may occur outside of this scope, as any project that is estimated at \$100,000 or greater will receive its own project number.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The Waiahi hydro units were installed in the first half of the 20th century. The Port Allen Power Plant was built in the late 1960s, and significantly added to in the mid-1970s. Even Kapaia Power Station was built nearly twenty years ago. The age of these facilities, coupled with improved or new environmental regulations that inevitably occur as time goes on, drives KIUC to add or modify its facilities, whether in response to a rule or to comply with KIUC's Strategic Plan.

The typical annual budget for this recurring project ranges from \$25,000 to \$75,000, but can be higher in years when specific projects are identified.

Alignment with strategic goals:

KIUC's Mission Statement states environmental responsibility is a goal. By ensuring our facilities operate within environmental rules, KIUC can act as a steward for its Members.

Results/Benefits of Proposed Construction: (Members, Operations)

Projects are designed to allow both plants to continue to achieve high reliability with regard to engine compliance, but also include items such as berms, sumps, and controls for plant site compliance.

Alternatives Identified or Corrective Plans Investigated:

The alternative would be to not spend the capital dollars, and risk compliance issues and fines.

Submitted by: Gregg Matsuo

Date: 6/25/21

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2022

Budget Title	Efficiency	<i>Check One:</i>	
Budget #	221204	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	X
		Growth/Development	
Total Cost	\$25,000		

Description of Proposed Construction: (Location, Components, Scope)

This is a recurring budget item that covers minor power plant efficiency improvements that are shown to provide good return on investment in the areas of fuel, labor, or other O&M savings. Other efficiency projects may occur outside of this scope, as any project that is estimated at \$100,000 or greater will receive its own project number.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The Waiahi hydro units were installed in the first half of the 20th century. The Port Allen Power Plant was built in the late 1960s, and significantly added to in the mid-1970s. Even Kapaia Power Station was built nearly twenty years ago. The age of these facilities, coupled with improved or new efficiency measures that inevitably occur as time goes on, drives KIUC to add or modify its facilities whenever significant savings can be realized through such modifications.

The typical annual budget for this recurring project ranges from \$25,000 to \$100,000, but can be higher in years when specific projects are identified.

Alignment with strategic goals:

KIUC’s Strategic Plan lists three key areas, one of which is to ensure fair and reasonable rates. By ensuring our equipment operates efficiently, KIUC can keep costs down, which translates into lower effective rates.

Results/Benefits of Proposed Construction: (Members, Operations)

Projects in this category are rate of return justified, meaning that KIUC and thereby the members should see lower costs due to the project implementation. Savings can be in the form of energy savings, fuel savings, etc.

Alternatives Identified or Corrective Plans Investigated:

Alternatives would be to not save over the long term because of short term priorities.

Submitted by: Gregg Matsuo

Date: 6/25/21

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2022

Budget Title	Hydro Improvements	<i>Check One:</i>	
Budget #	221205	Regulatory	X
<i>Project Start</i>	1/1/2022	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	X
		Growth/Development	
Total Cost	\$25,000		

Description of Proposed Construction: (Location, Components, Scope)

This is a recurring budget item that covers minor hydroelectric plant upgrades as required to meet regulatory requirements such as safety or environmental rules, ensure long-term reliability of the generating units, or simply show to be economically justified. Other hydro related projects may occur outside of this scope, as any project that is estimated at \$100,000 or greater will receive its own project number.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The Waiahi hydro units were installed in the first half of the 20th century. The age of these facilities, coupled with improved or new designs that inevitably occur as time goes on, drives KIUC to add or modify its facilities whenever properly justified.

The typical annual budget for this recurring project ranges from \$10,000 to \$50,000, but can be higher in years when specific projects are identified.

Alignment with strategic goals:

Maintaining the hydroelectric units, KIUC’s only firm renewable generating units, helps KIUC meet its Strategic Plan by ensuring sustainable power supply to grid. In addition, these units can provide some of the cheapest power on the island, and therefore help KIUC keep costs down, which translates into lower rates.

Results/Benefits of Proposed Construction: (Members, Operations)

This budget will result in the continued excellent reliability of the Waiahi hydro-electric units.

Alternatives Identified or Corrective Plans Investigated:

Not applicable.

Submitted by: Gregg Matsuo

Date: 6/25/21

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2022

Budget Title	Diesel Overhauls	<i>Check One:</i>	
Budget #	221206	Regulatory	X
<i>Project Start</i>	1/1/2022	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	X
		Growth/Development	
Total Cost	\$200,000		

Description of Proposed Construction: (Location, Components, Scope)

This is a recurring budget item that covers diesel plant upgrades as required to meet regulatory requirements such as safety or environmental rules, ensure long-term reliability of the generating units, or simply show to be economically justified.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The KIUC diesel generating units fall into two categories: Electro-Motive Diesel (EMD) and Stork-Wartsila Diesel (SWD). The five EMD units were installed in the mid to late 1960s and are the oldest generating units in KIUC’s fleet. Upgrades to these units are rare, and do not cost much to implement, for example a replacement turbocharger. The four SWD units were installed in the late 1980s to early 1990s and are the most efficient generating units at Port Allen. Their continued reliability depends on periodic replacement or rehabilitation of major engine components such as pistons, liners, cylinder heads, and turbochargers.

Alignment with strategic goals:

Maintaining the diesel units helps KIUC meet its Strategic Plan by ensuring adequate and reliable power supply to grid. These units are quick starting, capable of using biodiesel, and have good heat rates across the full load range. Because of these features, they will work well to complement future solar projects that can be variable and intermittent in nature.

Results/Benefits of Proposed Construction: (Members, Operations)

As this project is for the purchase of major components that extend the life of the diesel units, the benefit is continued use of the units themselves.

Alternatives Identified or Corrective Plans Investigated:

The alternative to this capital spending would be to let the SWD and EMD units increase downtime to the point of not running any more.

Submitted by: Gregg Matsuo

Date: 6/25/21

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2022

Budget Title	Buildings & Grounds	<i>Check One:</i>	
Budget #	221208	Regulatory	X
<i>Project Start</i>	1/1/2022	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	X
Total Cost	\$250,000		

Description of Proposed Construction: (Location, Components, Scope)

This is a recurring budget item that covers facility upgrades as required to meet regulatory requirements such as safety or environmental rules, ensure long-term reliability of the generating unit, or to meet growth. Other related projects may occur outside of this scope, as any project that is estimated at \$100,000 or greater will receive its own project number.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The KIUC generating station facilities can be divided into two areas: Port Allen and Kapaia. Port Allen was installed in the late 1960s and remains a critical piece of infrastructure due to the fact that the system operations center resides there. Over the years, the harsh environment has forced KIUC to continuously maintain or replace portions of the facility to ensure the plant remains reliable. Kapaia is a much newer facility, but it is preferred to keep the facility from degenerating into a state of poor reliability so occasional upgrades are required.

The typical annual budget for this recurring project ranges from \$50,000 to \$200,000.

Alignment with strategic goals:

Maintaining the power generating facilities helps KIUC meet its Strategic Plan by ensuring adequate and reliable power supply to grid and compliance with DOH/EPA permits.

Results/Benefits of Proposed Construction: (Members, Operations)

The projects identified for 2021-24 will continue to assure reliability of structures and operations at both plants.

Alternatives Identified or Corrective Plans Investigated:

The alternative would be to pursue less or none the projects specified.

Submitted by: Gregg Matsuo

Date: 6/25/21

Type Project	Distribution – New Lines
CFR/740c	100
Dept/Section	T&D
Year	2022

Budget Title	Line Extensions > \$4K-UG	<i>Check One:</i>	
Budget #	XX0101B	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	X
Total Cost	\$ 200,000		

Description of Proposed Construction: (Location, Components, Scope)

Blanket Budget Item that captures costs to construct and serve our member’s request for underground electrical service to their residence or business.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

1. Driven by customer demand & time schedules.

Alignment with strategic goals:

- 1 Member Satisfaction.
2. Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)

Member receives electrical service to their residence and/or business

Alternatives Identified or Corrective Plans Investigated:

This budget is solely dependent on customer demand and the obligation that KIUC has as a utility company to serve the people on Kauai with electrical service.

Submitted by: jcox/fp

Date: 7/1/21

Type Project	Distribution – New Lines
CFR/740c	100
Dept/Section	T&D
Year	2022

Budget Title	Line Extensions - OH	<i>Check One:</i>	
Budget #	XX0102B	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	X
Total Cost	\$ 200,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket budget Item that captures the costs to construct and serve our member’s request for overhead electrical service to their residence or business.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

1. Driven by customer demand & time schedules.

Alignment with strategic goals:

1. Member Satisfaction.
2. Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)

Member receives electrical service to their residence and/or business.

Alternatives Identified or Corrective Plans Investigated:

This budget is solely dependent on customer demand and the obligation that KIUC has as a utility company to serve the people on Kauai with electrical service.

Submitted by: jcox/fp

Date: 7/1/21

Type Project	Distribution – Conversions or Line Changes
CFR/740c	300
Dept/Section	T & D
Year	2022

Budget Title	Line Replacements-UG	<i>Check One:</i>	
Budget #	XX0301B	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	X
Total Cost	\$ 220,000		

Description of Proposed Construction: (Location, Components, Scope)

Blanket Budget Item that captures costs to replace and/or upgrade underground facilities (residential or business). These types of actions do not normally require an Environmental Report (ER) per *NEPA Part 1794 - Environmental Policies and Procedures* §1794.21 (14) & (15).

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

1. Driven by customer demand and time schedules.
2. Periodic replacement of aged or substandard facilities.

Alignment with strategic goals:

1. Member Satisfaction.
2. Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)

1. Member receives electrical service to their residence and/or business.
2. Facilities are upgraded to meet current standards.

Alternatives Identified or Corrective Plans Investigated:

This budget is solely dependent on customer demand and the obligation that KIUC has as a utility company to serve the people on Kauai with electrical service.

Submitted by: jcox/fp

Date: 7/1/21

Type Project	Distribution – Conversions or Line Changes
CFR/740c	300
Dept/Section	T & D
Year	2022

Budget Title	Line Replacements-OH	<i>Check One:</i>	
Budget #	XX0302B	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	X
Total Cost	\$ 550,000		

Description of Proposed Construction: (Location, Components, Scope)

Blanket Budget Item that captures the costs to replace and/or upgrade facilities and serve our member’s request for changes to the overhead electrical service to their residence or business. These types of actions do not normally require an Environmental Report (ER) per *NEPA Part 1794 - Environmental Policies and Procedures* §1794.21 (14) & (15). In addition, these actions are covered activities in KIUC’s Short –Term Seabird Habitat Conservation Plan 2.2.1.7 *In-situ Replacement of Existing Lines or Other Facilities*.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

1. Driven by customer demand and time schedules.
2. Periodic replacement of aged or substandard facilities.

Alignment with strategic goals:

1. Member Satisfaction.
2. Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)

Member receives electrical service to their residence and/or business.

Alternatives Identified or Corrective Plans Investigated:

This budget is solely dependent on customer demand and the obligation that KIUC has as a utility company to serve the people on Kauai with electrical service.

Submitted by: jcox/fp

Date: 7/1/21

Type Project	Distribution – New Lines
CFR/740c	100
Dept/Section	T & D
Year	2022

Budget Title	New Services-UG	<i>Check One:</i>	
Budget #	XX0101C	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	X
Total Cost	\$ 50,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket Budget Item that captures costs to construct and serve our member’s request for new underground electrical service to their residence or business.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

1. Driven by customer demand and time schedules.

Alignment with strategic goals:

1. Member satisfaction.
2. Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)

Member receives electrical service to their residence and/or business.

Alternatives Identified or Corrective Plans Investigated:

This budget is solely dependent on customer demand and the obligation that KIUC has as a utility company to serve the people on Kauai with electrical service.

Submitted by: jcox/fp

Date: 7/1/21

Type Project	Distribution – New Lines
CFR/740c	100
Dept/Section	T & D
Year	2022

Budget Title	New Services-OH	<i>Check One:</i>	
Budget #	XX0102C	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	X
Total Cost	\$ 40,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket Budget Item that captures costs to construct and serve our member’s request for new overhead electrical service to their residence or business.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

1. Driven by customer demand and time schedules.

Alignment with strategic goals:

1. Member Satisfaction.
2. Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)

Member receives electrical service to their residence and/or business.

Alternatives Identified or Corrective Plans Investigated:

This budget is solely dependent on customer demand and the obligation that KIUC has as a utility company to serve the people on Kauai with electrical service.

Submitted by: jcox/fp

Date: 7/1/21

Type Project	Distribution - New Lines
CFR/740c	100
Dept/Section	T&D
Year	2022

Budget Title	Developer Work-UG	<i>Check One:</i>	
Budget #	XX0101D	Regulatory	
<i>Project Start</i>	1/01/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	X
Total Cost	\$ 1,000,000		

Description of Proposed Construction: (Location, Components, Scope)

Blanket Budget Item that captures costs to construct and serve our member’s request for new underground electrical service to their development or business.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

1. Driven by customer demand & time schedules.

Alignment with strategic goals:

1. Member Satisfaction.
2. Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)

1. Member receives electrical service to their commercial development or residential subdivision.

Alternatives Identified or Corrective Plans Investigated:

This budget item is solely dependent on large development projects scheduled work and the obligation that KIUC has as a utility company to serve the large developments of Kauai. KIUC distribution planner reviews consultant drawings to work on the most economical design for service to the development and which meets all government and safety requirements.

Serving these types of larger customers or developments, may require upgrades or new facilities on KIUC’s existing facilities.

Submitted by: jcox/fp

Date: 7/1/21

Type Project	Distribution - New Lines
CFR/740c	100
Dept/Section	T&D
Year	2022

Budget Title	Developer Work-OH	<i>Check One:</i>	
Budget #	XX0102D	Regulatory	
<i>Project Start</i>	1/01/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	X
Total Cost	\$ 100,000		

Description of Proposed Construction: (Location, Components, Scope)

Blanket Budget Item that captures costs to construct and serve our member's request for new overhead electrical service to their development or business.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

1. Driven by customer demand & time schedules.

Alignment with strategic goals:

1. Member Satisfaction.
2. Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)

1. Member receives electrical service to their commercial development or residential subdivision.

Alternatives Identified or Corrective Plans Investigated:

This budget item is solely dependent on large development projects scheduled work and the obligation that KIUC has as a utility company to serve the large developments of Kauai. KIUC planner reviews consultant drawings to work on the most economical design or options of service to developer, which meets all government and safety requirements.

Serving these types of larger customers or developments, may require upgrades or new facilities on KIUC's existing facilities.

Submitted by: jcox/fp

Date: 7/1/21

Type Project	Distribution – Conversions or Line Changes
CFR/740c	300
Dept/Section	T & D
Year	2022

Budget Title	Reconductoring Projects-UG	<i>Check One:</i>	
Budget #	XX0301C	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	
Total Cost	\$ 10,000		

Description of Proposed Construction: (Location, Components, Scope)

This budget captures costs to re-conductor underground electrical lines as needed in areas where aged or substandard facilities exist. These types of actions do not normally require an Environmental Report (ER) per *NEPA Part 1794 - Environmental Policies and Procedures* §1794.21 (14) & (15).

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

This project will convert aged, direct buried cables in residential subdivisions up to current KIUC standards, increase transfer capacity, improve reliability, reduce system losses and outage periods.

Alignment with strategic goals:

Improve Reliability.

Results/Benefits of Proposed Construction: (Members, Operations)

New improved system is less likely to have failures. Conversion will allow area to be compatible with current standards.

Alternatives Identified or Corrective Plans Investigated:

Allow the system to remain as is and repair areas as needed.

Submitted by: jcox/fp

Date: 7/1/21

Type Project	Distribution – Conversions or Line Changes
CFR/740c	300
Dept/Section	T & D
Year	2022

Budget Title	Reconductoring Projects-OH	<i>Check One:</i>	
Budget #	XX0302C	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	
Total Cost	\$ 10,000		

Description of Proposed Construction: (Location, Components, Scope)

Blanket Budget Item that captures the costs to re-conductor overhead electrical service in the system. These types of actions do not normally require an Environmental Report (ER) per *NEPA Part 1794 - Environmental Policies and Procedures* §1794.21 (14) & (15). In addition, these actions are covered activities in KIUC’s Short –Term Seabird Habitat Conservation Plan 2.2.1.7 *In-situ Replacement of Existing Lines or Other Facilities*.

Reconductoring:

1. Reconductoring 12 kV distribution circuits throughout the island.
2. Periodic replacement of aged or substandard facilities.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

This project will replace conductors, increase transfer capacity, improve voltage, and reduce system losses and outage periods.

Alignment with strategic goals:

Improve Reliability.

Results/Benefits of Proposed Construction: (Members, Operations)

1. New improved system is less likely to have failures.
2. Increase capacity of line conductor for greater reliability.

Alternatives Identified or Corrective Plans Investigated:

KIUC could continue to patch and repair circuit upon failures.

Submitted by: jcox / fp

Date: 7/1/21

Type Project	Distribution – Conversions or Line Changes
CFR/740c	300
Dept/Section	T & D
Year	2022

Budget Title	System Reliability & Inspection-UG	<i>Check One:</i>	
Budget #	XX0301D	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	
Total Cost	\$ 20,000		

Description of Proposed Construction: (Location, Components, Scope)

This includes both specified as well as unspecified capital projects that become necessary during the budget year. These projects involve underground improvements and upgrades that enhance electric system reliability. These types of actions do not normally require an Environmental Report (ER) per *NEPA Part 1794 - Environmental Policies and Procedures* §1794.21 (14) & (15).

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

When problems are found and repairs are made, planners along with construction supervisors determine if an area needs additional improvements and/or upgrades to prevent more outages and equipment failures to occur. These are proactive measures to ensure reliable service to our customers.

Alignment with strategic goals:

1. Member satisfaction.
2. Increase and improve reliability.

Results/Benefits of Proposed Construction: (Members, Operations)

Actions will improve reliability and less customer outage.

Alternatives Identified or Corrective Plans Investigated:

Improvements and upgrades can be deferred, and work may be performed on an as needed basis after equipment failures.

Submitted by: jcox/fp

Date: 7/1/21

Type Project	Distribution – Conversions or Line Changes
CFR/740c	300
Dept/Section	T & D
Year	2022

Budget Title	System Reliability & Inspection-OH	<i>Check One:</i>	
Budget #	XX0302D	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	
Total Cost	\$ 20,000		

Description of Proposed Construction: (Location, Components, Scope)

This includes both specified as well as unspecified capital projects that become necessary during the budget year. These projects involve overhead improvements and upgrades that enhance electric system reliability. These types of actions do not normally require an Environmental Report (ER) per *NEPA Part 1794 - Environmental Policies and Procedures* §1794.21 (14) & (15). In addition, these actions are covered activities in KIUC’s Short –Term Seabird Habitat Conservation Plan 2.2.1.7 *In-situ Replacement of Existing Lines or Other Facilities*.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

When problems are found and repairs are made, planners along with construction supervisors determine if an area needs additional improvements and/or upgrades to prevent more outages and equipment failures to occur. These are proactive measures to ensure reliable service to our customers.

Alignment with strategic goals:

1. Member satisfaction.
2. Increase and improve reliability.

Results/Benefits of Proposed Construction: (Members, Operations)

Actions will improve reliability and less customer outage.

Alternatives Identified or Corrective Plans Investigated:

Improvements and upgrades can be deferred, and work may be performed on an as needed basis after equipment failures.

Submitted by: jcox/ fp

Date: 7/1/21

Type Project	Transmission
CFR/740c	1000
Dept/Section	T & D
Year	2022

Budget Title	TRANSMISSION INSULATOR REPLACE	<i>Check One:</i>	
Budget #	XX1001	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	
Total Cost	\$ 600,000		

Description of Proposed Construction: (Location, Components, Scope)

Contractor to Replace Transmission Insulators during yearly HCP work.

Areas to Address: Fujita to Kilohana (Double Circuit from Port Allen, and Single Circuit Steel from Green)

Components: Transmission insulators and associated hardware

Scope: Replace existing porcelain insulators with polymer

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

History: Segments of transmission line has a history of failed insulator brackets and insulators causing transmission line faults.

Design Criteria: Replacement hardware is a direct replacement for existing hardware

Alignment with strategic goals:

C. Hold controllable cost increases at or below the actual level of inflation and maintain system reliability at 99.96% or better availability.

Results/Benefits of Proposed Construction: (Members, Operations)

Members will benefit from a more reliable transmission line whereas previous faults have caused lines to fall on residential properties. Operationally this new construction will yield less call-outs.

Alternatives Identified or Corrective Plans Investigated:

n/a

Submitted by: jcox

Date: 7/1/21

Type Project	Distribution – Miscellaneous Distribution Equipment
CFR/740c	600
Dept/Section	T & D
Year	2022

Budget Title	Pole Replacements	<i>Check One:</i>	
Budget #	XX0606A	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	
Total Cost	\$ 1,000,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket Budget Item that captures the costs to replace poles designated by our annual termite inspection contractor, Osmost, as being in a condition requiring replacement, i.e., termite infested. This termite treatment program began in 1994. This blanket also covers replacement of substandard poles, poles which may need additional or new height requirements, and ones damaged from auto accidents.

This blanket covers an average of about 200 poles of various lengths annually. KIUC replaces poles by priority.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

Trend: 2020	Budget: \$500,000	Spent: \$ 469,635
2019	Budget: \$ 675,000	Spent: \$ 240,167
2018	Budget: \$ 675,000	Spent: \$ 261,998
2017	Budget: \$ 675,000	Spent: \$ 752,780
2016	Budget: \$ 675,000	Spent: \$ 709,194

Alignment with strategic goals:

Safety and Reliability

Results/Benefits of Proposed Construction: (Members, Operations)

Preventive maintenance to maintain system reliability.

Alternatives Identified or Corrective Plans Investigated:

KIUC could return to some pole restorations to alleviate the cost to replace all poles or wait until a critical failure occurs before acting on a problem pole.

Submitted by: jcox/fp

Date: 7/1/21

Type Project	Distribution – Conversions or Line Changes
CFR/740c	300
Dept/Section	T & D
Year	2022

Budget Title	Underground System Improvements	<i>Check One:</i>	
Budget #	XX03011	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	
Total Cost	\$ 300,000		

Description of Proposed Construction: (Location, Components, Scope)

A continuing KIUC effort to upgrade the Princeville Subdivision direct buried underground distribution system that has been in place for over twenty years. The upgrade projects involve cable, conduit, and switchgear upgrades to replace the deteriorating infrastructure. Kauai Electric acquired the infrastructure from the Princeville and is working to bring this area up to our present construction installation standards of service. Additional underground areas include but are not limited to the Kekaha Gardens, Molokoa, and Puhi which will also be upgraded as necessary.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

A program to upgrade the Princeville underground distribution system has been in place for twenty years, and continues KIUC’s efforts on providing reliable service to for our members

Numerous past failures of direct buried systems on Kauai have prompted KIUC to address these vulnerable areas prior to failure and customer outages.

Areas are prioritized based on existing reliability issues.

Alignment with strategic goals:

Customer Satisfaction and System Reliability.

Results/Benefits of Proposed Construction: (Members, Operations)

Reliability of service and reduction of outage hours.

Alternatives Identified or Corrective Plans Investigated:

KIUC could just continue to repair and patch these problem areas, but wanted to take a proactive approach to improve reliability to the customers in the area.

Submitted by: jcox/fp

Date: 7/1/21

Type Project	Distribution - Substations, Switching Stations & Metering Point Changes
CFR/740c	500
Dept/Section	T&D
Year	2022

Budget Title	Substation Repl/Upgrades-Dist	<i>Check One:</i>	
Budget #	xx0501	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	
Total Cost	\$200,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket Budget item to replace and upgrade distribution substation equipment.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

1. Upgrade of distribution breakers and replacement with faster operating breakers. Upgrade existing switches and install pad-mounted and overhead cap bank for VAR support.
2. Upgrade of substation distribution risers for redundancy. Replacement of switches and other ancillary equipment.
3. Repair hotspots, and corroded equipment.

Miscellaneous: Re-rock switchyards and substations

Alignment with strategic goals:
Increased reliability and member satisfaction.

Results/Benefits of Proposed Construction: (Members, Operations)

1. Station hardening, ease/ flexibility of operation, VAR support.

Alternatives Identified or Corrective Plans Investigated:
n/a

Submitted by: jcox
Date: 7/1/21

Type Project	Transmission - Line & Other Station Changes
CFR/740c	1000
Dept/Section	T&D
Year	2022

Budget Title	Substation Replacements & Upgrades-Trans	<i>Check One:</i>	
Budget #	XX1002	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	
Total Cost	\$ 400,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket Budget item to install, replace and upgrade transmission substation equipment at the various substation sites throughout the island.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

1. Installation, replacement and upgrade of transmission breakers, busses, switches, and other equipment.
2. Increased reliability especially in our highly corrosive salt environment.
3. Upgrade hotspots, and corroded equipment.
4. Continue elimination of oil insulated transmission breakers and replacement with faster operating SF6 insulated breakers.
5. Implement smart grid options.

Alignment with strategic goals:
Increased reliability and member satisfaction.

Results/Benefits of Proposed Construction: (Members, Operations)

1. Station hardening, flexibility of operation, and for contingency.
2. Provide significantly increased service reliability to all customers.

Alternatives Identified or Corrective Plans Investigated:
Investigated replacing different breakers, and installation of spill containment facilities for breakers.

Submitted by: jcox
Date: 7/1/21

Type Project	Generation – Substations, Switching Station and Metering Point Changes
CFR/740c	500
Dept/Section	T & D
Year	2022

Budget Title	Substation Transformer Replace (GSU)	<i>Check One:</i>	
Budget #	XX1235	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	
Total Cost	\$ 1,600,000		

Description of Proposed Construction: (Location, Components, Scope)

This is a Blanket Budget item to replace existing substation transformers with new units at the various substations throughout Kauai. This budget includes both specified or planned change outs below, as well as unspecified capital purchases that become necessary during the budget year. These projects involve improvements and upgrades that will ensure continued service and reliability to our consumers.

A tentative plan is as follows:

2022: T-51 Kapaia - \$1,600,000

2023: T-2 Port Allen - \$1,200,000

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

Customer Satisfaction and to accommodate system growth

Alignment with strategic goals:

Increased reliability and member satisfaction.

Results/Benefits of Proposed Construction: (Members, Operations)

Members will benefit from additional capacity for switching capabilities from Kekaha Substation. Operationally, a new transformer will result in lower risk of failure.

Alternatives Identified or Corrective Plans Investigated:

Due to the long lead times to order substation transformers, it is pertinent that KIUC plans to maintain enough capacity, and a high level of reliability from our substations that serve the island community.

Submitted by: jcox

Date: 7/1/21

Type Project	Transmission– Line and Other Station Changes
CFR/740c	1000
Dept/Section	T & D
Year	2022

Budget Title	System Protection Upgrades/Replacement	<i>Check One:</i>	
Project #	XX1004	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	
Total Cost	\$ 160,000		

Description of Proposed Construction: (Location, Components, Scope)
Upgrade 3 transmission line’s protective relays (12 relays total) to prepare for Kilohana Switchyard installation.

Upgrade transmission line relays, transformer differential relays, meters, control switches, terminal servers & converters, isolation switches, panels and other equipment at the various substations island-wide.

This Blanket Budget Item will be reviewed each year, and revised dependent on project priorities and needs at the individual substations. Previous budget cuts have limited and postponed many projects.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
To replace old equipment at all the substations that feed the island of Kauai to meet the increased needs for greater system reliability due to customer growth,

Alignment with strategic goals:
Increased reliability and member satisfaction.

Results/Benefits of Proposed Construction: (Members, Operations)
Provide increased system stability and reliability in transient situations and outages, increased protection to large capital items, provide operations with fault identification information.

Alternatives Identified or Corrective Plans Investigated:
Use existing relays and protection scheme.
Replace all existing wiring feeding bus differentials.

Submitted by: jcox
Date: 7/1/21

Type Project	Distribution - Substation Changes
CFR/740c	503
Dept/Section	T & D
Year	2022

Budget Title	System Protection Upgrades/Repl - Dist	<i>Check One:</i>	
Budget #	XX0503	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	
Total Cost	\$ 120,000		

Description of Proposed Construction: (Location, Components, Scope)
Upgrade distribution line relays, meters, control switches, terminal servers & converters, isolation switches, panels and other equipment at the various substations island-wide.

This Blanket Budget Item will be reviewed each year, and revised dependent on project priorities and needs at the individual substations. Previous budget cuts have limited and postponed many projects.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
To replace old equipment at all the substations that feed the island of Kauai to meet the increased needs for greater system reliability due to customer growth.

Alignment with strategic goals:
Increased reliability and member satisfaction.

Results/Benefits of Proposed Construction: (Members, Operations)
Provide increased system stability and reliability in transient situations and outages, increased protection to large capital items, provide operations with fault identification information.

Alternatives Identified or Corrective Plans Investigated:
Use existing relays and protection scheme.

Submitted by: jcox
Date: 7/1/21

Type Project	Distribution – Miscellaneous Distribution Equipment
CFR/740c	600
Dept/Section	T & D
Year	2022

Budget Title	Communication System Upgr/Repl		
Budget #	XX0615A	<i>Check One:</i>	
<i>Project Start</i>	1/1/2022	Regulatory	
<i>Project End</i>	12/31/2022	Reliability	X
		Economically Justified	
		Growth/Development	
Total Cost	\$ 140,000		

Description of Proposed Construction: (Location, Components, Scope)
Installation and upgrade of all communication such as radios, microwaves, radio links, and any communication networks and devices.

Fiber optic cable interconnection with Oceanic Time Warner Cable at various locations to provide redundancy for networking equipment carrying network, telephone, SCADA, voice radio, protective relay, video surveillance data and other needs.

To remediate a break in KIUC’s fiber backbone, wireless communication radios will be installed to provide an alternate form of communication.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
To maintain continuity between our communication sites.

Alignment with strategic goals:
Increased reliability, reduced operating cost, and continuity of our communications system.

Results/Benefits of Proposed Construction: (Members, Operations)
Fiber optic cable island-wide provides a continuous communication network and redundancy for the company.

Alternatives Identified or Corrective Plans Investigated:
Rely on existing communication avenues.

Submitted by: jcox
Date: 7/1/21

Type Project	Distribution - Miscellaneous Distribution Equipment
CFR/740c	600
Dept/Section	T & D
Year	2022

Budget Title	UG Transformers – New Consumers	<i>Check One:</i>	
Budget #	XX0601A	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	X
Total Cost	\$ 1,210,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket Budget Item that captures the costs to purchase distribution transformers to service new construction projects, customer upgrades, and equipment failures, etc.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
Driven by Customer Demand and Time Schedules.

Alignment with strategic goals:
Member Satisfaction & Reliability.
Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)
Member receives electrical service to their residence and/or business.

Alternatives Identified or Corrective Plans Investigated:
KIUC has been in an alliance with ABB since 1991. This alliance meets monthly to monitor transformer design standards, inventory, and delivery schedules for optimum efficiency at the best cost to KIUC.

Submitted by: jcox/fp
Date: 7/1/21

Type Project	Distribution - Miscellaneous Distribution Equipment
CFR/740c	600
Dept/Section	T & D
Year	2022

Budget Title	UG Transformers – Upgrades	<i>Check One:</i>	
Budget #	XX0601B	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	X
Total Cost	\$ 20,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket Budget Item that captures the costs to purchase distribution transformers to service new construction projects, customer upgrades, and equipment failures, etc.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
Driven by Customer Demand and Time Schedules.

Alignment with strategic goals:
Member Satisfaction & Reliability. Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction:
Member receives electrical service to their residence and/or business.

Alternatives Identified or Corrective Plans Investigated:
KIUC has been in an alliance with ABB since 1991. This alliance meets monthly to monitor transformer design standards, inventory, and delivery schedules for optimum efficiency at the best cost to KIUC.

Submitted by: jcox/fp
Date: 7/1/21

Type Project	Distribution - Miscellaneous Distribution Equipment
CFR/740c	600
Dept/Section	T & D
Year	2022

Budget Title	OH Transformers – New Consumers		
Budget #	XX0601C	<i>Check One:</i>	
<i>Project Start</i>	1/1/2022	Regulatory	
<i>Project End</i>	12/31/2022	Reliability	
		Economically Justified	
		Growth/Development	X
Total Cost	\$ 750,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket Budget Item that captures the costs to purchase distribution transformers to service new construction projects, customer upgrades, and equipment failures, etc. For this year, the total cost includes transformers purchased for storm readiness.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
Driven by Customer Demand and Time Schedules.

Alignment with strategic goals:
Member Satisfaction & Reliability.
Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)
Member receives electrical service to their residence and/or business.

Alternatives Identified or Corrective Plans Investigated:
KIUC has been in an alliance with ABB since 1991. This alliance meets monthly to monitor transformer design standards, inventory, and delivery schedules for optimum efficiency at the best cost to KIUC.

Submitted by: jcox/fp
Date: 7/1/21

Type Project	Distribution - Miscellaneous Distribution Equipment
CFR/740c	600
Dept/Section	T & D
Year	2022

Budget Title	OH Transformers – Upgrades	<i>Check One:</i>	
Budget #	XX0601D	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	X
Total Cost	\$ 50,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket Budget Item that captures the costs to purchase overhead distribution transformer replacements to service new construction projects, customer upgrades, and equipment failures, etc.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
Driven by Customer Demand and Time Schedules.

Alignment with strategic goals:
Member Satisfaction & Reliability.
Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)
Member receives electrical service to their residence and/or business.

Alternatives Identified or Corrective Plans Investigated:
KIUC has been in an alliance with ABB since 1991. This alliance meets monthly to monitor transformer design standards, inventory, and delivery schedules for optimum efficiency at the best cost to KIUC.

Submitted by: jcox/fp
Date: 7/1/21

Type Project	Distribution - Miscellaneous Distribution Equipment
CFR/740c	600
Dept/Section	T & D
Year	2022

Budget Title	UG Transformer Oil Disposal (incl. carcass)	<i>Check One:</i>	
Budget #	XX0601E	Regulatory	X
<i>Project Start</i>	1/1/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	
Total Cost	\$ 50,000		

Description of Proposed Construction: (Location, Components, Scope)

Blanket Budget Item that captures the costs to semi-annually test and dispose of transformer oil from removed underground transformers and empty transformer carcasses. Additionally, GSU or Substation Transformers that are replaced or fail will also be tested and disposed of separately, adding approximately \$20K - \$30K to the budget.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

Trend: 2020	Budget:	\$ 50,000	Spent:	\$ 27,452
2019	Budget:	\$ 50,000	Spent:	\$ 12,842
2018	Budget:	\$ 50,000	Spent:	\$ 38,834
2017	Budget:	\$ 47,900	Spent:	\$ 16,687
2016	Budget:	\$ 47,000	Spent:	\$ 75,371
2015	Budget:	\$ 80,000	Spent:	\$ 57,102

Alignment with strategic goals:

Safety-Meet Environmental & Regulatory guidelines in handling hazardous material.

Results/Benefits of Proposed Construction: (Members, Operations)

Protects the island environment.

Alternatives Identified or Corrective Plans Investigated:

Some of the waste oil is reused and burned as fuel. It was deemed more feasible to contract the draining of oil, packing and disposal by an outside vendor than to perform in-house as was done in the past. More stringent environmental fines and possible liability to the company if some problem occurs, was a risk to KIUC that assisted in the decision to contract this service twice annually.

Submitted by: jcox

Date: 7/1/21

Type Project	Distribution - Miscellaneous Distribution Equipment
CFR/740c	600
Dept/Section	T & D
Year	2022

Budget Title	OH Transformer Oil Disposal (incl. carcass)	<i>Check One:</i>	
Budget #	XX0601F	Regulatory	X
<i>Project Start</i>	1/1/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	
Total Cost	\$ 50,000		

Description of Proposed Construction: (Location, Components, Scope)

Blanket Budget Item that captures the costs to semi-annually test and dispose of transformer oil from removed overhead transformers and empty transformer carcasses.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

Trend: 2020	Budget	\$ 50,000	Spent:	\$ 39,503
2019	Budget	\$ 50,000	Spent:	\$ 38,527
2018	Budget	\$ 50,000	Spent:	\$ 29,829
2017	Budget	\$ 38,800	Spent:	\$ 38,611
2016	Budget	\$ 38,000	Spent:	\$ 23,864
2015	Budget	\$ 56,000	Spent:	\$ 41,676

Alignment with strategic goals:

Safety-Meet Environmental & Regulatory guidelines in handling hazardous material.

Results/Benefits of Proposed Construction: (Members, Operations)

Protects the island environment.

Alternatives Identified or Corrective Plans Investigated:

Some of the waste oil is reused and burned as fuel. It was deemed more feasible to contract the draining of oil, packing and disposal by an outside vendor than to perform in-house as was done in the past. More stringent environmental fines and possible liability to the company if some problem occurs, was a risk to KIUC that assisted in the decision to contract this service twice annually.

Submitted by: jcox

Date: 7/1/21

Type Project	Miscellaneous Distribution Equipment
CFR/740c	600
Dept/Section	T & D
Year	2022

Budget Title	Meters-New Consumers	<i>Check One:</i>	
Budget #	xx0601G	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	X
Total Cost	\$120,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket Budget Item that captures the costs to purchase & install meters and instrument transformer metering equipment to serve our new member’s request for electrical service to their residence and/or business.

Trend:

2020	Spent: \$67,341
2019	Spent: \$29,408
2018	Spent: \$166,031
2017	Spent: \$51,281

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
Driven by Customer Demand and Regulatory requirements:

Alignment with strategic goals:

Member Satisfaction.
Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)
Member receives electrical service to their residence and/or business.

Alternatives Identified or Corrective Plans Investigated:

none

Submitted by: jcox

Date: 7/8/20

Type Project	Miscellaneous Distribution Equipment
CFR/740c	600
Dept/Section	T & D
Year	2022

Budget Title	Meters - Replacements	<i>Check One:</i>	
Budget #	xx0601H	Regulatory	
<i>Project Start</i>	01/01/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	X
Total Cost	\$450,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket Budget Item that captures the costs to purchase & replace existing metering equipment to serve our member’s request for electrical service to their residence and/or business.

Trend:

2020	Spent: \$431,269
2019	Spent: \$422,641
2018	Spent: \$802,315
2017	Spent: \$135,864

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
Driven by Customer Demand and Regulatory requirements:

Alignment with strategic goals:

Member Satisfaction.
Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)
Replace meters due to meter failure and prevent potential lost revenues from inaccurate meters and ensure members receive accurate billings.

Alternatives Identified or Corrective Plans Investigated:

Replace meters if the condition or life expectancy of the meter will cause it to be questionable.

Submitted by: jcox

Date: 7/8/20

Type Project	Distribution - Miscellaneous Distribution Equipment
CFR/740c	600
Dept/Section	T & D
YEAR	2022

Budget Title	Street & Area Lights Replacements	<i>Check One:</i>	
Budget #	XX0607A	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	X
Total Cost	\$ 25,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket Budget Item that captures costs to construct and serve our member's request (majority from County of Kauai and State of Hawaii) for electrical streetlight replacements and upgrades.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

Driven by Customer Demands:

Trend: 2020	Budget: \$ 20,000	Spent: \$ 26,206
2019	Budget: \$ 38,100	Spent: \$ 32,643
2018	Budget: \$ 37,400	Spent: \$ 5,982
2017	Budget: \$ 36,700	Spent: \$ 9,665
2016	Budget: \$ 36,000	Spent: \$ 31,035

Alignment with strategic goals:

Member Satisfaction.

Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)

Member receives electrical service to their streetlights.

Alternatives Identified or Corrective Plans Investigated:

None: Driven by customer demand, safety and liability issues

Submitted by: jcox/fp

Date: 7/1/21

Type Project	Distribution - Other Distribution Items
CFR/740c	700
Dept/Section	T & D
YEAR	2022

Budget Title	Street & Area Lights – New Installations	<i>Check One:</i>	
Budget #	XX0702A	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	X
Total Cost	\$ 4,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket Budget Item that captures costs to construct and serve our member’s request (majority from County of Kauai and State of Hawaii) for new electrical streetlights.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
Driven by Customer Demands:

Trend: 2020	Budget:	\$20,000	Spent:	\$ 1,219
2019	Budget:	\$ 30,000	Spent:	\$ 1,783
2018	Budget:	\$ 3,200	Spent:	\$ 3,718
2017	Budget:	\$ 3,100	Spent:	\$ 1,595
2016	Budget:	\$ 3,000	Spent:	\$ 3,256

Alignment with strategic goals:

Member Satisfaction.
Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)
Member receives electrical service to their streetlights.

Alternatives Identified or Corrective Plans Investigated:

None: Driven by customer demand, safety, and liability issues

Submitted by: jcox/fp

Date: 7/1/21

Type Project	All Other
CFR/740c	1500
Dept/Section	T & D
Year	2022

Budget Title	Building & Facility Repl/Upgrades – T&D	<i>Check One:</i>	
Budget #	XX1511	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	X
Total Cost	\$ 12,000		

Description of Proposed Construction: (Location, Components, Scope)
 Blanket Budget Item that captures the costs to upgrade, maintain, or replace existing building and facility structures.

Minor upkeep and replacements to roofs, a/c units, plumbing, doors, etc. at the various T&D office and warehouse buildings

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
 Employee satisfaction and safety, and to prolong the life of the building facilities.

Alignment with strategic goals:
 Employee Satisfaction.

Results/Benefits of Proposed Construction: (Members, Operations)
 To maintain a good working environment for the employees that work out of the Eleele and Kapaa Service Centers and Eleele office locations.

Alternatives Identified or Corrective Plans Investigated:
 KIUC could wait until problems arise before replacement or repairs.

Submitted by: jcox
Date: 7/1/21

Type Project	Distribution – Other Distribution Items
CFR/740c	700
Dept/Section	T & D
Year	2022

Budget Title	SCADA System Upgrade/Repl	<i>Check One:</i>	
Budget #	XX0704B	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	
Total Cost	\$ 80,000		

Description of Proposed Construction: (Location, Components, Scope)
Upgrade and replace various components of the SCADA System. This includes workstations, RTU's, switches, panels, communication units, and various other equipment.

This Blanket Budget Item will be reviewed each year, and revised dependent on project priorities and needs of the SCADA System.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
To replace old and/or damaged equipment on the SCADA System.

Alignment with strategic goals:
Increased reliability and member satisfaction.

Results/Benefits of Proposed Construction: (Members, Operations)
Provide increased system stability and reliability in managing our electrical grid. Upgrades are also driven by Operations for ease of use. Projects also include integration of smart grid components.

Alternatives Identified or Corrective Plans Investigated:
Use existing equipment and repair as needed.

Submitted by: jcox
Date: 7/1/21

Type Project	HR Advocate Customizations
CFR Code	1500
Dept/Section	Human Resources
Year	2022

Budget Title	HR Advocate Customizations	<i>Check One:</i>	
Budget #	xx1515	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	x
Total Cost	\$ 50,000		

Description of Proposed Construction: (Location, Components, Scope)

Location: HR Office
Performance Review, Application Tracking System
Scope of Work to include:

- Custom programming will address process and procedures specific to HR goals and efficiencies. It may include creating improvement to the HR system such as custom programming to incorporate HR processes like recruitment and training.
- Create custom reports specific to KIUC for compliance, audit and/or on-demand.
- On-site training.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The HRA system is an HR information system that was upgraded in 2013. These customizations will accommodate any KIUC specific requirement that the current system lacks. The enhancements identified are to accommodate the following KIUC specific processes:

- Upload or data entry of employee data.
- Training
- Designing other enhancements to the system such as Performance Evaluation, Learning Management System, Application Tracking System, and Benefits
- Create custom reports.

Cost is based on programming hours and cost of a new module to develop.

Alignment with strategic goals:

The enhancement aligns with KIUC’s Member Satisfaction and Human Resources goals in providing better service to our employees, benefit providers

and applicants. This system will assist HR in automating specific HR process and information collection.

Results/Benefits of Proposed Construction: (Members, Operations)

Customizations will increase efficiency through improved interfaces, increase accuracy through data transfers and controls, reduce duplication of efforts and have a more streamlined process. Reporting for payroll data, annual compliance, audits, survey, and data analysis will be more simplified.

Alternatives Identified or Corrective Plans Investigated:

We currently enter all applications from job openings. The HR Advocate system has a Candidate Self-Serve where applicants can create their account, respond to some questions and fill out our application online. On the HR side, we will be using an Applicant Tracking System to select candidates. The ATS will be our tool to communicate to the applicants. If the candidate is hired, we pull their data from the ATS to the HR core and the process will reduce data entry and eliminate errors.

Training information of employees are in sign in sheets and in every employee file. We would like to enter that into the system so each employee can track in ESS. With a multitude of in-house and external training modules, we need a system that will manage and track our compliance training.

As far as reporting, we run two or more reports, merge them together, then run queries to produce the report.

Submitted by: Pia Gregorio

Date: 6/30/2021

Type Project	Transmission – Line and other Station Changes
CFR/740c	1000
Dept/Section	HCP
Year	2022

Budget Title	HCP Minimization Projects-Tr	<i>Check One:</i>	
Budget #	XX1006	Regulatory	X
<i>Project Start</i>	01/01/2022	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
2022	\$ 11,126,556	Growth/Development	
2023	\$ 4,135,234		
Total Cost	\$ 15,261,790		

Description of Proposed Construction: (Location, Components, Scope)

Reconfigure existing overhead transmission facilities in areas designated as high risk for endangered and threatened seabirds (Newell’s Shearwater, Hawaiian Petrel and Band-rumped Storm Petrel). This may include, but is not limited to, undergrounding, reconfiguration, removal, relocating, rerouting and etc. of existing facilities.

Locations are designated as high risk for collision or will be identified as high risk areas as the result of information derived from Save Our Shearwater rehabilitation program data, acoustic monitoring and visual surveys, or other available information.

Project may include reconfiguring of lines, the use of diverters or any other material or action considered a minimization measure.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

Regulatory

KIUC obtained a Federal Incidental Take Permit (ITP) from the USFWS in May 2011 for five years. Through the 2011 ITP and development of KIUC’s Habitat Conservation Program (HCP) for a 30-year ITP term, minimization projects are being identified that KIUC will be required to implement as part of its HCP. These minimization projects reduce the risk of take of the protected seabirds that have the potential to collide with KIUC’s overhead lines. KIUC currently funds a monitoring program, the data of which supports the selection of minimization projects.

Even though KIUC’s 2011 Incidental Take Permit expired in May 2016, it remains in effect while KIUC develops the HCP and applies for a renewal of its permit. KIUC anticipates completion of the HCP in mid – 2022, and issuance of the Federal ITP and State Incidental Take License (ITL) in the fall of 2022.

Summary of Scope of Project

- Diverter deployment around high traffic bird flight routes
- Remove static wire around high traffic bird flight routes
- Reconfigure transmission lines from vertical to more horizontal arrangement
 - Reduce height where possible from three high/two across to two high/three across
 - Locations identified at this time include:
 - Powerline trail
 - Central line
 - Kilauea
- Install predator proof fencing around target bird nesting areas to be covered under xx801 for UMV and ULP
- Long-term HCP and EIS drafting

2022-2023 estimated spend:

740c Code	HCP 2021-2024	Forecast 2021	Budget 2022	2023	2024	2025	2026	TOTAL 5 Years		
NORMAL AND RECURRING										
xx0302E	HCP MINIMIZATION PROJECTS-DISTR	-	-	-	-	-	-	-	-	5-yr plan total
xx1006	MINIMIZATION PROJECTS	4,385,858	10,006,461	4,135,234				14,141,695	15,261,790	
	Projects - Reconfigure E-Ki Kilauea	100,000								
	Projects - Reconfigure Preliminary Work PSI - P048	10,763								
	Projects - Reconfigure PLT-N1									
	Projects - Reconfigure PLT-S2									
	Diverters	1,155,000	1,741,230	1,245,463				2,986,693		
	Static Line	2,000,000	1,936,633	14,603				1,951,236		
	Static and Diverters		1,106,356	671,687				1,778,044		
	LED Diverters		2,877,622	60,420				2,938,042		
	Remove 69kVPlusStatic		141,164					141,164		
	Projects - Predator Proof Fencing Site to be Determined - A			850,000				850,000		
	Projects - Predator Proof Fencing Site to be Determined - B			850,000				850,000		
	Overhead 12%		936,360.68	443,060.79				1,379,421		
	LTHCP Drafting/EIS PSI	1,120,094	1,267,095					1,267,095		

Alignment with strategic goals:

Environmental Stewardship in preserving our native resources.

Results/Benefits of Proposed Construction: (Members, Operations)

Reduce the risk of incidental take of threatened and endangered seabird species (Newell’s Shearwater, Hawaiian Petrel and Band-rumped Storm Petrel) that have the potential to collide with KIUC’s overhead lines. Minimization in key areas reduces the number of birds impacted, and reduces the mitigation requirements throughout the 30-year term of the ITP and ITL.

Alternatives Identified or Corrective Plans Investigated:

The projects are selected from overhead line segments based on SOS Program recovery data, acoustic monitoring and visual surveys, and other available information. The projects are identified through discussion with USFWS (U. S. Fish and Wildlife Service), DOFAW (State of Hawaii, Department of Forestry and Wildlife), and KESRP (Kauai Endangered Seabird Recovery Program).

Submitted by: Chris Yuh

Date: 08/27/2021

Type Project	All Other
CFR/740c	1500
Dept/Section	Human Resources
Year	2023

Budget Title	Safety	<i>Check One:</i>	
Budget #	XX1504	Regulatory	X
<i>Project Start</i>	1/1/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	X
Total Cost	\$60,000		

Description of Proposed Construction: (Location, Components, Scope)

Safety equipment to prevent the indirect and hidden costs of accidents.

Safety equipment to include:

- Lifesaving equipment
- Signs and Lighting to improve safety for employees and members while crews are working at night or in traffic.
- Ergonomic products
- RESAP – areas of improvement
- Technology to streamline safety to ensure compliance

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

Prevent indirect and hidden costs of accidents and avoid fines by being in compliance with government, union, and other organizations' safety laws, rules and guidelines.

Indirect and Hidden Costs of Accidents:

- Time lost from work by injured
- Loss in earning power
- Economic loss to injured's family
- Loss of efficiency due to break up of crew
- Lost time by supervision
- Damage to tools and equipment
- Overhead cost (while work was disrupted)
- Loss of production

Alignment with strategic goals:

- To meet safety goal of zero safety incidences and to protect the safety and health of all employees.

Results/Benefits of Proposed Construction: (Members, Operations)

- Fewer incidents and accidents
- Reduce workers comp costs

- Reinforcement of the organization's operational goals
- Improved performance
- Compliance with government, union and other organizations' safety laws, rules and guidelines

Alternatives Identified or Corrective Plans Investigated:

- n/a

Submitted by: Tracie Shimatsu

Date: 10/18/22

Type Project	All Other
CFR/740c	1500
Dept/Section	Human Resources
Year	2022

Budget Title	Security System/Facilities Upgrades		
Budget #	xx1505	<i>Check One:</i> Regulatory	X
<i>Project Start</i>	1/1/22	Reliability	
<i>Project End</i>	12/31/22	Economically Justified	
		Growth/Development	
Total Cost	\$ 600,000		

Description of Proposed Construction: (Location, Components, Scope)
Various KIUC properties to monitor and control access points. Troubleshooting electrical system faults and failures.

Normal Recurring Budget	75,000
Hana Kukui Building Gates	50,000
Anahola Service Center Cameras	25,000
Eleele Sewer Line Repair	100,000
Access Control Upgrade	50,000
Lihue Generator Replacement	300,000
Total Cost	600,000

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
Monitor and prevent unauthorized entry to KIUC properties. Minimize electrical troubleshooting and outage response time.

Alignment with strategic goals:
Protection of employees and facilities.

Results/Benefits of Proposed Construction: (Members, Operations)
Reduced property damage and travel time.

Alternatives Identified or Corrective Plans Investigated:
Prohibitive cost associated with security personal visiting each site on an hourly basis.

Submitted by: Kevin Akita
Date: 9/1/21

Type Project	ALL OTHER
CFR/740c	1500
Dept/Section	T&D
Project Year	2022

Budget Title	Vehicles	<i>Check One:</i>	
Budget #	XX1508	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	
Total Cost	\$ 850,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket Budget Item to cover replacement and purchases of all vehicles: cars, trucks, large construction trucks and generators.

Kapaa Line Truck: \$320,000. Ordered in 2021, to receive in 2022
Port Allen Line Truck: \$340,000. Order in 2022, to receive in 2023
West Linecrew Supervisor 4wd Full Size Truck: \$80,000
Port Allen Warehouse 4wd Full Size Truck: \$80,000

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
Vehicles are assessed by age, mileage, external body condition, and maintenance records for scheduling replacements.

Alignment with strategic goals:
Employee Satisfaction.
Providing the necessary tools, equipment, and transportation to perform their job.

Results/Benefits of Proposed Construction: (Members, Operations)
Reliable and efficient service from our KIUC employees.

Alternatives Identified or Corrective Plans Investigated:
Lease options were looked at, along with purchasing used. Due to past history, vehicles are replaced after about 5-7 years life and 70,000 miles of use, or when maintenance costs are high. Large trucks are replaced about every 10 years.

Submitted by: jcox
Date: 7/1/21

Type Project	Macbook
CFR/740c	221509
Dept/Section	Communications
Year	2022

Budget Title	Macbook	<i>Check One:</i>	
Budget #	221509	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	X
<i>Project End</i>	06/30/2022	Economically Justified	
		Growth/Development	
Total Cost	\$5,200.00		

Description of Proposed Construction: (Location, Components, Scope)
Purchase Macbook for website management, presentations, video editing and other communication needs.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
To assist communications staff with the appropriate tools to provide Members with up-to-date information.

Alignment with strategic goals:
Supports Strategic Goal K: Continue investing in technology.

Results/Benefits of Proposed Construction: (Members, Operations)
Improved Member Satisfaction, improved efficiency of Communications Team, ability to use new/evolving media applications.

Alternatives Identified or Corrective Plans Investigated:

Continue to use existing available equipment that is not adequate for utilizing current applications for messaging and communications.

Submitted by: S. Paik
Date: 06/23/2022

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2022

Budget Title	Production Office Furniture & Equipment	<i>Check One:</i>	
Budget #	XX1509	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	X
		Growth/Development	
Total Cost	\$10,000		

Description of Proposed Construction: (Location, Components, Scope)

Purchase new office furniture and equipment.

Control room chairs that is design for 24-hour use environment and multi-user adjustability:
\$3,000 each

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

Purchase new office furniture and equipment to provide ergonomically correct office furniture and equipment.

Alignment with strategic goals:

Provide employees satisfaction by supplying new office furniture and equipment.

Results/Benefits of Proposed Construction: (Members, Operations)

Support employees with new office furniture and equipment.

Alternatives Identified or Corrective Plans Investigated:

Use existing office furniture that causes discomfort and equipment that requires repair.

Submitted by: Gregg Matsuo

Date: 9/2/21

Type Project	All Other
CFR/740c	1500
Dept/Section	T&D
Project Year	2022

Budget Title	T&D-Tools & Equipment	<i>Check One:</i>	
Budget #	XX1510	Regulatory	
<i>Project Start</i>	01/01/2022	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	
Total Cost	\$ 164,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket Budget Item that captures the costs to purchase general plant tools and equipment for the department.

Construction \$ 40K + \$44K (dump trailer for East and West Line crews)
Systems \$ 40K
Discretionary \$ 40K

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

2019	Budget:	\$ 138,000	Spent:	\$ 104,037
2018	Budget:	\$ 138,000	Spent:	\$ 125,762
2017	Budget:	\$ 150,000	Spent:	\$ 79,229
2016	Budget:	\$ 150,000	Spent:	\$ 87,241

Alignment with strategic goals:

Employee satisfaction and safety.
Providing the necessary tools, equipment, and transportation to perform their job safely and efficiently.

Results/Benefits of Proposed Construction: (Members, Operations)

Reliable and efficient service from our KIUC employees.

Alternatives Identified or Corrective Plans Investigated:

Use existing tools.

Submitted by: jcox

Date: 7/1/21

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2022

Budget Title	Production Tools & Equipment	<i>Check One:</i>	
Budget #	XX1510	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	X
		Growth/Development	
Total Cost	\$10,000		

Description of Proposed Construction: (Location, Components, Scope)

Purchase tools and equipment for the Production department.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

Purchase tools and equipment so employees can perform their duties effectively and safe.

Alignment with strategic goals:

Provide employees satisfaction by supplying reliable tools and equipment.

Results/Benefits of Proposed Construction: (Members, Operations)

Support employees with new tools and equipment.

Alternatives Identified or Corrective Plans Investigated:

Use existing tools.

Submitted by: Gregg Matsuo

Date: 9/2/21

Type Project	Tools & Equipment
CFR Code	1500
Dept/Section	Financial & Corporate Services/Port Allen Warehouse
Year	2022

Budget Title	Eleele Materials Warehouse Window A/C Units	<i>Check One:</i>	
Budget #	xx1510	Regulatory	
<i>Project Start</i>	1/1/22	Reliability	X
<i>Project End</i>	12/31/22	Economically Justified	
		Growth/Development	
Total Cost	\$3,000		

Description of Proposed Construction: (Location, Components, Scope)

To purchase replacement general plant office equipment for the Port Allen Warehouse.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

To allow for two replacements in the event of a failure. One unit was replaced in 2018 and one in 2021. All units run 24 hrs a day/7 days a week.

Office equipment: 2 each 12,000BTU window air conditioner @ \$1,500 ea = \$3,000

Alignment with strategic goals:

Employee satisfaction – By providing the necessary equipment to perform their job functions.

Results/Benefits of Proposed Construction: (Members, Operations)

Reliable and efficient member service.

Alternatives Identified or Corrective Plans Investigated:

Submitted by:
Date: 6/23/21

Alan Nadatani

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2022

Budget Title	PAGS Oil & Water Separator	<i>Check One:</i>	
Budget #	221202M	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	
Total Cost	\$500,000		

Description of Proposed Construction: (Location, Components, Scope)

Upgrade Port Allen Generating Station (PAGS) oil and water separator to increase reliability of this function.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

Currently, the single oil and water separator performs adequately at treating the required oil and water from the SWD generation and captured surface water. At high demands this single unit struggles to keep up with increase demand. Also, if this single unit fails then all oil and water separation does not function, which could create a major waste water treatment challenge.

The upgrade to a higher efficient oil and water separator increases the reliability of this function and treatment capacity. The upgrade unit would operate as the primary oil and water separator and the exiting unit act as a backup. This provides a backup that currently does not exists.

Alignment with strategic goals:

Maintaining the oil and water separation function helps the PAGS units operate reliably to meet the KIUC Strategic Plan by ensuring adequate and reliable power supply to grid.

Results/Benefits of Proposed Construction: (Members, Operations)

This project provides a higher efficiency oil and water separation process, plus a backup system, which allows PAGS to treat the required waste water and oil.

Alternatives Identified or Corrective Plans Investigated:

Operate with the current oil and water separator as the sole unit at PAGS to perform this function. If this single oil and water separator fails then all oil and water treatment at PAGS stops, which could lead to reduce PAGS reliability.

Submitted by: Gregg Matsuo

Date: 6/25/21

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2022

Budget Title	S-1 Exciter Replacement	<i>Check One:</i>	
Budget #	221202N	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	
Total Cost	\$ 400,000		

Description of Proposed Construction: (Location, Components, Scope)

This project will include the replacement of the S-1 generator’s exciter transformer (PPT) and static excitation system.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The exciter failed in December 2020 during steam plant start up and is currently not in working condition.

Alignment with strategic goals:

One of the three key areas of KIUC’s Strategic Plan is Safe & Reliable Power Supply. By ensuring our facilities are reliable, KIUC can provide better value to its members.

Results/Benefits of Proposed Construction: (Members, Operations)

Reliability improvements typically result in either preventing or reducing un-planned equipment outages. These outages result in either increased cost due to expediting tools, material, and labor in an emergency and/or result in power outages or rolling blackouts around the island.

Alternatives Identified or Corrective Plans Investigated:

The alternative of not replacing the S-1 exciter is to decommission the steam plant. This would no longer give us the option of running the gas turbines in combined cycle which greatly increases their efficiency and power output. Not replacing the S-1 exciter would also end the possibility of converting the unit into a synchronous condenser which would increase grid stability while running 100% renewable.

Submitted by: Byron Blanchard

Date: 06/25/21

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2022

Budget Title	PAGS Synchronous Condenser Conversion	<i>Check One:</i>	
Budget #	221202P	Regulatory	
<i>Project Start</i>	8/1/2022	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	X
2022	\$1,500,000	Growth/Development	
2023	\$ 900,000		
Total Cost	\$2,400,000		

Description of Proposed Construction: (Location, Components, Scope)

Project, located at the Port Allen Generating Station (PAGS), would convert the S1 steam turbine generator to a synchronous condenser.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The S1 steam turbine generator was installed at Port Allen in 1968 as part of the steam plant installation which also included a boiler and other associated equipment. The boiler was taken out of service in 2019. Although the steam turbine can still be fed by an HRSG installed in 1977, the HRSG has not been needed to operate in over a year and has not run consistently in over a decade.

The S1 generator was rewound in 2007 and is in excellent condition. The generator would be capable of importing or exporting almost 10 MVAR of reactive power as a synchronous condenser.

This project would involve dismantling the steam turbine and installing a motor to wind up the generator, and a clutching mechanism to allow the motor to de-couple once the generator was synchronized to the grid. The project would also require oil piping modifications, electrical work, and controls work. Lastly, the current exciter is obsolete and not working and will require replacement.

Alignment with strategic goals:

This project will result in more grid stability at minimal cost.

Results/Benefits of Proposed Construction: (Members, Operations)

Unit S1 will have a parasitic load of less than 0.1 MW, far less than the current 1.5 MW it takes to run the KPS unit as a synchronous condenser, thus saving roughly \$150 to \$300 per hour of operation when the grid is not curtailing. In 2020 KPS ran as a synchronous condenser over 1000 hours. This also allow KIUC to run 100% renewable with KPS down for maintenance.

Alternatives Identified or Corrective Plans Investigated:

1. Utilize PAGES unit GT-2 as a synchronous condenser. This unit could export or import twice the MVAR of S1 but would require more mechanical expertise as this unit is needed to be available as a prime mover as well. Also, this unit would have to be started by the prime mover every time used, costing about \$400 per start in fuel and maintenance.
2. Perform the project, but keep the steam turbine. This will increase the cost of the project by approximately \$1MM and the steam turbine has only runs at best once a year.

Submitted by: Richard Vetter

Date: 6/25/21

Type Project	Generation
CFR Code	1200
Dept/Section	Power Supply / Kapaia Power Station
Year	2027

Budget Title	KPS E-Cell Upgrade	<i>Check One:</i>	
Budget #	221202Q	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	
Total Cost	\$210,000		

Description of Proposed Construction: (Location, Components, Scope)

Procurement and installation of new G.E MK3 electrodeionization (EDI) system at KPS.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

KPS presently utilizes the G.E. MK2 EDI system that is no longer supported by G.E. MK2 E-Cell stacks can no longer be purchased for existing MK2 system. The new MK3 system is a direct replacement for the obsolete MK2, with beneficial design improvements. For example, the new MK3 does not require the use of brine injection in the water treatment process.

Alignment with strategic goals:

KPS retains ability to produce ultra-pure deionized water to supply the power plant's boiler for steam production.

Results/Benefits of Proposed Construction: (Members, Operations)

Firm capacity reliability of KPS power plant, as steam production is essential for power augmentation and emissions control of NOx pollutants (environmental).

Alternatives Identified or Corrective Plans Investigated:

Other solutions would require a complete reconstruction of the deionization phase of the water treatment system. Additional down time and construction costs, as well as limited vendor/manufacturer options for this specialized process make a like-for-like direct retrofit the best choice.

Submitted by: Gregg Matsuo

Date: 11/7/21

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2022

Budget Title	Waiahi Bridge Upgrade	<i>Check One:</i>	
Budget #	221205A	Regulatory	X
<i>Project Start</i>	1/1/2022	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	X
		Growth/Development	
Total Cost	\$ 100,000		

Description of Proposed Construction: (Location, Components, Scope)

Waiahi walking bridge upgrade.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The Waiahi hydro units were installed in the first half of the 20th century. The age of these facilities, coupled with improved or new designs that inevitably occur as time goes on, drives KIUC to add or modify its facilities whenever properly justified.

The Waiahi walking bridge is used during storm events as a secondary access across the Waiahi stream to service the hydro units. This secondary access allows people to cross the stream during rain events that prohibits vehicles from driving across the Waiahi Stream.

Alignment with Strategic Goals:

Maintaining the hydroelectric units, KIUC's only firm renewable generating units, helps KIUC meet its Strategic Plan by ensuring sustainable power supply to grid. In addition, these units can provide some of the cheapest power on the island, and therefore help KIUC keep costs down, which translates into lower rates.

Results/Benefits of Proposed Construction: (Members, Operations)

This budget will result in the continued excellent reliability of the Waiahi hydroelectric units.

Alternatives Identified or Corrective Plans Investigated:

Alternate to leave the bridge in an unsafe condition and not allow people to cross the stream to service hydro units.

Submitted by: Gregg Matsuo

Date: 6/25/21

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2022

Budget Title	SCADA & Control Room AC Upgrade	<i>Check One:</i>	
Budget #	221208D	Regulatory	X
<i>Project Start</i>	1/1/2022	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	X
Total Cost	\$200,000		

Description of Proposed Construction: (Location, Components, Scope)

The SCADA and Control Room AC Upgrade at Port Allen helps ensure sufficient cooling of the SCADA equipment and Control room area. The existing AC unit services both the SCADA and Control rooms so the intent is to upgrade the existing unit to cool both rooms.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The existing AC that cools the SCADA and Control rooms is at the end of its useful life and if this AC fails then the SCADA equipment and operators will experience a very warm area. The SCADA equipment generates heat, which requires cooling to operate efficiently. The SCADA equipment requires cooling to prevent overheating and failures. The control room operators require cooling to work in a comfortable environment.

Alignment with strategic goals:

This AC upgrade helps ensure sufficient cooling to the SCADA equipment and control room operators, which in turn helps with reliability of the grid.

Results/Benefits of Proposed Construction: (Members, Operations)

The result of the project provides a level of comfort knowing that an AC upgrade is in service to cool the SCADA equipment and operators in the Control Room.

Alternatives Identified or Corrective Plans Investigated:

The alternative would be a failed AC, which will cause the SCADA equipment to overheat and operators a very uncomfortable area to work. This could lead to failed SCADA equipment and operators working in a warm and uncomfortable area.

Submitted by: Gregg Matsuo

Date: 8/31/21

Type Project	Predator Proof Fencing
CFR Code	800
Dept/Section	HCP
Year	2022-2023

Budget Title	Seabird Mitigation	<i>Check One:</i>	
Budget #	220801	Regulatory	X
<i>Project Start</i>	01/01/2022	Reliability	X
<i>Project End</i>	12/31/2026	Economically Justified	
2022	\$ 9,794,400	Growth/Development	
2023	\$ 2,436,000		
Total Cost	\$ 12,230,400		

Description of Proposed Construction: (Location, Components, Scope)

History:

Since 2011, KIUC has been studying the impact of seabirds with our transmission system. Transmission lines are the highest conductors on our overhead facilities and are typically at risk for collision. We plan to design and construct the line with very minimal risk of collision.

KIUC will also be constructing two predator proof fences to mitigate for incidental take of endangered and threatened seabirds, specifically the Newell’s Shearwater, Hawaiian Petrel, and the Band-Rumped storm petrel. In Upper Limahuli Preserve (National Tropical Botanical Gardens), KIUC will be replacing the ungulate proof fence presently providing protection for the seabird colonies. In Upper Manoa Valley, KIUC will be constructing a new predator proof fence for the small colony that is present.

2011-2017: Short Term Habitat Conservation Plan and Transmission Project on hold

KIUC obtains an incidental take permit from the USFWS in 2011 and initiates various minimization projects to reconfigure lines to minimize impacts to seabirds and several mitigation projects to protect seabird colonies. KIUC also initiates an Underline Monitoring Program to quantify the impact to seabirds.

Results confirm collisions on transmission lines and also identifies the proposed mitigation sites that can accommodate predator proof fences.

2022 Goals:

- Re-start. Re-Plan;
- Community Outreach
- Submit PUC Application, Public Hearings, Authorizing Expenditure;
- Complete Detailed Engineering (Site Survey, construction drawings);

- Obtained Permits and Approvals (SMA, CDUP, HDOT, County, Easement)
- Coordination with HTCO, OTWC
- RFP / Award Contract / Purchase Long Lead Material if needed;

2022-2023 Goals

- Construction predator proof fences

Summary of Scope of Project

Upper Manoa Valley

- Construct 2.7 mile long fence enclosing 157 acres
- Fence to allow unrestricted stream flow
- To include social attraction site for drawing in new seabirds
- Complete fencing by 2022
- Total cost of \$5,992,000 (includes 12% OH)

Upper Limahuli Preserve

- Construct 3.5 mile long fence enclosing 363 acres
- Fence to allow unrestricted stream flow
- Complete fencing by 2022
- Total cost of \$6,238,400 (includes 12% OH)

Reason for Proposed Construction: (Design Criteria, Cost Basis)

The primary operational objective of this project is to:

- Mitigate for KIUC's incidental take of protected seabirds

Operational Criteria:

- Comply with Endangered Species Act

Other Design Criteria:

- Minimize environmental impacts to native habitats and to threatened and endangered birds that may collide with the power lines.

Alignment with strategic goals:

- The North Shore project is part of the HCP approved by USFWS in May 13, 2011. It is also in KIUC's proposed 30-year Long Term HCP that is currently in draft form.
- It is aligned with KIUC's strategic goal to continue to be compliant with federal and state permits for conservation of endangered seabirds

Results/Benefits of Proposed Construction: (Members, Operations)

The predator proof fences will provide protection from rats, cats, and pigs allowing a greater percentage for survival of our protected seabirds using the area. The predator proof fences are the greatest opportunity for population growth for the colony and is the major mitigation for the Long Term HCP.

Alternatives Identified or Corrective Plans Investigated:

KIUC is currently providing mitigation for seabirds at other non-fenced colonies. It is more cost effective to protect a fenced colony than an unfenced colony over the longer term and it also projects a population growth that is desirable for the preservation of the species.

Submitted by: Chris Yuh
Date: 03/23/2022

Type Project	Facility Repairs
CFR/740c	1500
Dept/Section	Financial & Corporate Services/Port Allen Warehouse
Year	2022

Budget Title	Eleele Materials Warehouse Improvements – Phase 2	<i>Check One:</i>	
Budget #	221566	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	
		Growth/Development	
Total Cost	\$405,000		

Description of Proposed Construction: (Location, Components, Scope)

To repair the Port Allen Warehouse Facility. Estimated breakdown of spend:

1. Replace shelving/racks \$200,000
2. Repair/replace ceiling and internal insulation \$70,000
3. Replace 16 ceiling fans across warehouse not working \$15,000
4. Repair solar panels on roof falling off \$10,000
5. Repair 1 inverter from the solar system \$5,000
6. KIUC OH \$105,000

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The Port Allen Warehouse was constructed prior to Hurricane Iniki, minor/temporary repairs were made after the hurricane. However, over the years the damage has continued to build. Please see attached pictures of damage due to wear and tear.

Alignment with strategic goals:

Project is to provide our employees with a solid and reliable structure to work from as they strike towards workplace excellence in serving our membership.

Results/Benefits of Proposed Construction: (Members, Operations)

Protect KIUC's assets (employees and inventory) from the weather and environmental conditions.

Alternatives Identified or Corrective Plans Investigated:

For years the Warehouse team has had to move inventory around the warehouse to protect inventory from certain areas of the building where weather comes in. This is an inefficient use of space and continues to handcuff the team. An alternative would be to wait for a big storm/hurricane to bring the building down, however that is unsafe, could take years, and will be at the cost of possibly losing existing inventory.

Submitted by: Chris Yuh

Date: 8/27/2021

Type Project	Generation
CFR/740c	1200
Dept/Section	Power Supply / Kapaia Power Station
Year	2022

Budget Title	KPS OTSG Upgrade	<i>Check One:</i>	
Budget #	181202A-CO4	Regulatory	
<i>Project Start</i>	1/1/2018	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	X
<i>2021 CWIP</i>	\$ 28,000		
<i>2022</i>	\$ 121,500		
Total Cost	\$ 149,500		

Description of Proposed Construction: (Location, Components, Scope)
Replacement of worn components within the Once-Through-Steam-Generator (OTSG) at Kapaia Power Station. Leaking tube bends, warped end-seal floor plates and stack damper drive-rack arms all require replacement or upgrade.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
OTSG degradation is normal under the extreme temperature and flue gas exposure of the system. Presently, four boiler tube circuits are capped out of service due to leaks found during last six years of hydrostatic testing. In order to prevent loss of power production and ensure continuous, safe operation of the boiler, periodic repairs and maintenance are required. Last renovation was performed in 2010. OEM, Innovative Steam Technologies, provides specialized expertise in the servicing of Kapaia’s system; particularly the boiler tube-bend replacements that require orbital welding in tight locations.

Alignment with strategic goals:
Reliability

Results/Benefits of Proposed Construction: (Members, Operations)
Maintaining optimal steam production through OTSG ensures best plant performance and heat rate. Steam is also necessary to effectively control NOx emissions and compliance with the plant’s Covered Source Permit.

Alternatives Identified or Corrective Plans Investigated:
None

Submitted by: Brooks Braun

Date: 6/24/21

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2022

Budget Title	Advance AGC System Installation	<i>Check One:</i>	
Budget #	191204A-CO3	Regulatory	X
<i>Project Start</i>	1/1/2019	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	X
<i>2019 CWIP</i>	\$ 55,000	Growth/Development	
<i>2020 CWIP</i>	\$ 12,000		
<i>2021 CWIP</i>	\$ 20,000		
<i>2022</i>	\$ 50,000		
Total Cost	\$ 137,000		

Description of Proposed Construction: (Location, Components, Scope)

Due to existing SCADA system replacement and increasing renewable energy sources, KIUC requires a new Automatic Generator Control (AGC) system. The new system will be programmed to dispatch both fossil fuel and renewable units.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The dispatch of existing fossil fuel and increasing renewable units requires replacing the existing SCADA system. This will allow operators to dispatch both fossil fuel and renewable units as required to renewable energy dispatch goals

Alignment with strategic goals:

Create an efficient method of dispatching renewable units and fossil units to meet renewable energy goals.

Results/Benefits of Proposed Construction: (Members, Operations)

This project will provide an efficient method of dispatching both fossil fuel and renewable units. This SCADA system replacement allows operators to dispatch an increasing number of renewable units.

Alternatives Identified or Corrective Plans Investigated:

Inefficient dispatch of renewable units and fossil units.

Submitted by: Gregg Matsuo

Date: 9-30-20

Type Project	Production
CFR/740c	1200
Dept/Section	Production
Year	2019 - 2022

Budget Title	Ililiula 36" Siphon Replacement	<i>Check One:</i>	
Budget #	191295-CO3	Regulatory	
<i>Project Start</i>	1/1/2019	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	X
<i>2021 CWIP</i>	\$ 195,000	Growth/Development	
<i>2022</i>	\$ 1,073,000		
Total Cost	\$ 1,268,000		

Description of Proposed Construction: (Location, Components, Scope)

The water supply to the Upper Waiahi Powerhouse travels along a series of open ditches and tunnels from Bluehole to the powerhouse. During Spring storms, a landslide catastrophically displaced the 36" siphon located North of the Ililiula diversion. Replacement of the siphon is required to operate the Upper Waiahi Powerhouse at anywhere near full capacity.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The 36" Ililiula siphon was installed during 2004 to replace a failing flume structure that supplies water from Bluehole to the Upper Waiahi Powerhouse. The recent storms caused a landslide, which displaced the 36 siphon, large albizzia trees, and hillside. The priority is to stabilize the hillside so that the siphon can be safely and permanently replaced. The stabilization of the hillside requires soil and civil engineering design to create a stable area before engineering of the 36" siphon.

Alignment with strategic goals:

The Upper Waiahi Powerhouse is one of only two KIUC owned and operated sources of firm renewable power. Running this unit helps KIUC meet its Strategic Plan by ensuring sustainable power supply to the grid. In addition, the Waiahi hydros can provide some of the cheapest power on the island, and therefore help KIUC keep costs down, which translates into lower rates.

Results/Benefits of Proposed Construction: (Members, Operations)

This project will improve the reliability and availability of our current hydro plant along with providing added price stability to our members.

Alternatives Identified or Corrective Plans Investigated:

Operate without the Upper Waiahi hydro unit or run the unit at less than 50% output.

Submitted by: Gregg Matsuo

Date: 9/11/20

Type Project	Generation
CFR/740c	1200
Dept/Section	Production / Kapaia Power Station
Year	2022

Budget Title	KPS Catalyst Replacement	<i>Check One:</i>	
Budget #	201203B-CO2	Regulatory	X
<i>Project Start</i>	1/1/2020	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
<i>2020 CWIP</i>	\$ 299,300	Growth/Development	
<i>2021 CWIP</i>	\$ 1,700		
<i>2022</i>	\$ 50,000		
Total Cost	\$ 351,000		

Description of Proposed Construction: (Location, Components, Scope)

Location: Kapaia Power Station

Components: One complete set of framed SCR catalyst modules

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

To replace Ceram catalyst that will be nearing depletion in year 2020. Long lead-time on this material. Maintaining the selective catalytic reduction (SCR) system for NOx emissions reduction is a Federal and State air emissions requirement as outlined in Covered Source Permit.

Alignment with strategic goals:

Environmental protection.

Results/Benefits of Proposed Construction: (Members, Operations)

To operate in an environmentally responsible manner in compliance with NOx emissions limits as outlined in Covered Source Permit for Kapaia Power Station.

Alternatives Identified or Corrective Plans Investigated:

None. Best available control technology is implemented using SCR system.

Submitted by: Brooks Braun

Date: 6/24/21

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2022

Budget Title	GT1 Exciter Replacement	<i>Check One:</i>	
Budget #	211202G-CO1	Regulatory	
<i>Project Start</i>	1/1/2021	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	
<i>2021 CWIP</i>	\$100,000	Growth/Development	
<i>2022</i>	\$200,000		
Total Cost	\$300,000		

Description of Proposed Construction: (Location, Components, Scope)

This project will include the replacement of GT-1 generator’s exciter transformer (PPT), auxiliary transformer, and static excitation system.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

After the island wide outage in July 2019 the exciter failed and although it is working right now it requires replacement next year.

Alignment with strategic goals:

One of the three key areas of KIUC’s Strategic Plan is Safe & Reliable Power Supply. By ensuring our facilities are reliable, KIUC can provide better value to its members.

Results/Benefits of Proposed Construction: (Members, Operations)

Reliability improvements typically result in either preventing or reducing un-planned equipment outages. These outages result in either increased cost due to expediting tools, material, and labor in an emergency and/or result in power outages or rolling blackouts around the island.

Alternatives Identified or Corrective Plans Investigated:

The alternative of not replacing GT-1 exciter is to possibly have a failure in the excitation system again and not have enough generation available, resulting in rolling blackouts.

Submitted by: Royce Ramos

Date: September 25, 2019

Type Project	Generation
CFR Code	1200
Dept/Section	Production/Kapaia Power Station
Year	2021-2022

Budget Title	KPS Fuel Nozzles for GT	<i>Check One:</i>	
Budget #	211202J-CO1	Regulatory	
<i>Project Start</i>	1/1/2021	Reliability	X
<i>Project End</i>	3/31/2022	Economically Justified	
2021 CWIP	\$400,000	Growth/Development	
2022	\$100,000		
Total Cost	\$500,000		

Description of Proposed Construction: (Location, Components, Scope)

Acquisition of up to thirty (30) gas turbine fuel nozzles will be used during Kapaia Power Station’s next major overhaul, possibly within the four-year period.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

One full set of the nozzles must be on-hand at all times to ensure availability of KPS for power production. These same nozzles are also necessary for installation on a G.E. lease engine during overhaul, or in the event of catastrophic failure of the Kapaia unit.

Alignment with strategic goals:

KPS remains available as most efficient firm-capacity unit.

Results/Benefits of Proposed Construction: (Members, Operations)

Reliability of KPS in providing 26.4 MW to members 355 days/yr.

Alternatives Identified or Corrective Plans Investigated:

Condition of in-service fuel nozzles during overhaul will determine necessity of carrying out this work order. Partial order may be placed if full set replacement is not warranted.

Submitted by: **Gregg Matsuo**

Date: **9/11/20**

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2022

Budget Title	PAGS New Control Room Dispatch Center	<i>Check One:</i>	
Budget #	211282-CO1	Regulatory	
<i>Project Start</i>	1/1/22	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
<i>2021 CWIP</i>	\$ 50,000	Growth/Development	
<i>2022</i>	\$ 750,000		
<i>2023</i>	\$ 200,000		
Total Cost	\$ 1,000,000		

Description of Proposed Construction: (Location, Components, Scope)

As of this writing, the location and scope are still to be determined. A preliminary project has been opened to engineer and scope this project. The most likely scenario will be a new building located on the Port Allen property. This will allow KIUC the flexibility of keeping staffing levels the same or staffing up depending on future needs.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The island of Kauai has been dispatched from the current Port Allen control room since the 1960's. The control room is designed to operate the power plant with 60's and 70's controls, not dispatch the island with computer screens. There is no room to add interactive grid monitoring. Current systems like AMI are on shared computers with customer databases and regular internet connections. The power plant control systems are stacked on each other making it difficult to reach a keyboard.

The dollar figure above is based upon utilizing extra building space, new furniture, and moving the computer based control systems.

Alignment with strategic goals:

KIUC, more and more into the future, will become a service provider. With the advent of so much distributed generation, the control room function is now much more grid focused than plant focused. The new center will still control generation, but will be architecturally designed for the large screens necessary for grid monitoring, multiple phones and radios, and offices for emergency response decisions.

Results/Benefits of Proposed Construction: (Members, Operations)

The result will be an ergonomically superior work place. This will improve responsiveness to member problems and prevent grid problems from occurring in the first place.

Alternatives Identified or Corrective Plans Investigated:

Once the PSI project is completed, alternatives will be prioritized. Obviously the last alternative is to leave the control room as is.

Submitted by: Gregg Matsuo

Date: 6/25/21

Type Project	Distribution - New Lines
CFR/740c	100
Dept/Section	T&D
Year	2020-2022

Budget Title	Lihue Airport Electrical Dist. Hardening	<i>Check One:</i>	
Budget #	20102G-CO2	Regulatory	
<i>Project Start</i>	1/01/2020	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
CWIP	\$ 10,000		
2022	\$ 520,000	Growth/Development	X
Total Cost	\$ 530,000		

Description of Proposed Construction: (Location, Components, Scope)

This project will consist of installing a second distribution feeder Kapaia circuit 3314 to the Lihue airport and surrounding area and the installation of an auto transfer switchgear. This will provide an alternative feeder in the event a loss of power to the main circuit. Currently the airport is served via Lihue circuit 1325. Project will be integrated into KIUC’s smart grid and as part of Lihue Hardening Plan, increasing reliability and hardening electrical service to the critical and essential facilities in the Lihue area.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

1. To provide reliability by providing a “back up” circuit in the event the primary source circuit is unavailable. Additionally, FEMA will subsidize a portion of the construction cost after the work has been completed.
2. Providing this “back up” circuit will keep the airport and surrounding area in operation. Passenger and cargo flow, helicopters, fueling, FAA control tower, National Weather and emergency aviation are maintained during emergency situations. Also provides power to County of Kauai, Lihue Refuse Transfer station and FAA Radar facility.

Alignment with strategic goals:

1. Member Satisfaction.
2. Providing reliability of service to the customer by mitigating outage with back up circuit.

Results/Benefits of Proposed Construction: (Members, Operations)

Member receives reliable electrical service to their commercial development or residential subdivision.

Alternatives Identified or Corrective Plans Investigated:

Switches on overhead poles can be installed in place of underground auto transfer switchgear however, the equipment may be susceptible to damage by auto accident or from storm related events.

Submitted by: jcox/fp

Date: 7/1/2021

Type Project	Transmission – Line and Other Station Changes
CFR Code	1000
Dept/Section	T & D
Year	2020-2022

Budget Title	Wailua Corridor	<i>Check One:</i>	
Budget #	201023-CO2	Regulatory	
<i>Project Start</i>	1/1/2020	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
<i>2021 CWIP</i>	\$ 250,000	Growth/Development	X
<i>2022</i>	\$ 750,000		
Project Total	\$ 1,000,000		

Description of Proposed Construction: (Location, Components, Scope)

State Department of Transportation Project to widen the portion of Kuhio Highway between the Wailua Bridge and the Kapaa temporary bypass road. Relocate overhead electric utilities to accommodate road widening project.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

Due to the use of federal funds for highway widening, the US Fish & Wildlife provided comments to Federal Highways and State DOT which included the need to relocate overhead utilities to underground to mitigate endangered seabird collision of overhead facilities. Project was estimated at \$18M. There were many delays due to the requirement to relocate overhead facilities to underground, including community opposition to undergrounding in certain areas.

State DOT met with USFWS and Federal Highways in April 2015 and at that time, USFWS reported that undergrounding of this project was no longer required based on current information not indicating it to be a high-risk area to traveling seabirds.

Plans have been revised by consultant to relocate existing overhead poles and wires and maintain lines overhead except for an area in front of existing building to be installed underground.

Alignment with strategic goals:

The proposed project will provide member & environmental satisfaction and will accommodate future growth on the island.

Results/Benefits of Proposed Construction: (Members, Operations)

The project is in line with State DOT plans to improve traffic flow in the Wailua Corridor.

Alternatives Identified or Corrective Plans Investigated:

Undergrounding at a total project cost at \$18M.

Submitted by: jcox/fp

Date: 7/1/21

Type Project	Headquarters Facilities
CFR/740c	1300
Dept/Section	T&D
Year	2020-2022

Budget Title	Anahola Service Center	<i>Check One:</i>	
Budget #	201321-CO2	Regulatory	
<i>Project Start</i>	10/01/2020	Reliability	
<i>Project End</i>	12/31/2022	Economically Justified	
<i>2021 CWIP</i>	\$ 9,000,000	Growth/Development	X
<i>2022</i>	\$ 1,000,000		
Total Cost	\$10,000,000		

Description: (summarize purpose, location, components, scope of work, history, and basis for cost.)

T&D is still providing service to all of its members today with the same number of line personnel utilized back in 1988; and continues operating from the same two service centers, Eleele and Kapaa.

A study was performed in 2005 that indicated the need for three service centers, Eleele, Anahola, and a centrally located facility. Some of the issues involve member growth on the North Shore, difficulties in entering and exiting the Kapaa facility with large equipment, insufficient space for material storage at the Kapaa facility, traffic problems that significantly extend crew drive times, and poor access for members to meet with Planners.

The proposed service center will reside adjacent to the KIUC Renewable Solutions One LLC solar field. KIUC has a lease with the Department of Hawaiian Home Lands (DHHL) for a 60 acre parcel. Plans for the new facility provide office space, garage, warehouse, and outside material yard. Future projects include a pole yard storage and a small secured warehouse. Access for members to meet with Planners will be greatly improved, and a small bill pay satellite area is always an option.

The Anahola location also does not have a tidal or flooding risk during tsunami, hurricane, or heavy rainfall events.

The garage will protect KIUC's fleet vehicles from the corrosive salt breeze. This will extend the life of T&D vehicles.

Once the addition of the Anahola Service Center is completed, the Kapaa facility will be used similar to any substation, but with some additional storage. Planning can also take place regarding redesign of the Kapaa Switchyard. This facility will serve the East and North Shore population for many years.

How does this project align with strategic goals?

Customer and Employee Satisfaction.

Improve employee working conditions, space, and member accessibility.

Financial

Protection of our line vehicles from the elements will reduce our fleet procurement in the long run.

What are the benefits to our members or operations of this project?

Maintain a desirable level of service for our members. Relocation puts the crew closer to the north shore where growth is occurring.

The significantly larger storage area will allow for more materials to be kept for east and north projects. The area is also out of the tsunami inundation zone. Crews presently evacuate and relocate vehicles and equipment under threat conditions.

Baseyard will have more space for equipment storage and personnel to operate in.

Alternatives Identified or Corrective Plans Investigated:

Continue use of Kapaa Substation area as the Eastside Service Center.

Submitted by: jcox/fp

Date: 7/1/21

Type Project	Distribution – Substations, Switching Station and Metering Point Changes
CFR Code	500
Dept/Section	T&D
Year	2021-2022

Budget Title	Decommissioning-Lawai Substation	<i>Check One:</i>	
Budget #	210539-CO1	Regulatory	
<i>Project Start</i>	1/1/2021	Reliability	X
<i>Project End</i>	12/31/2022	Economically Justified	
<i>CWIP</i>	\$ 25,000	Growth/Development	
<i>2022</i>	\$150,000		
Total Cost	\$ 175,000		

Description of Proposed Construction: (Location, Components, Scope)
Decommission and remove Lawai Substation, associated transmission lines and switches. Initiate after all 4 Aepo Feeders commissioned.

Location: Lawai Substation
Components: Removal of Lawai Tap and substation
Scope: Remove Lawai Tap, 69kV conductor to substation, transformer, switchgear, control house, and perimeter wall.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
Electric system reliability and neighborhood cleanup.
History: Lawai Substation is used for feeding power to the Lawai, Kalaheo, and Omao areas.
Design Criteria: No new design.
Cost Basis: Basis for costs are estimates from retirement jobs.

Alignment with strategic goals:
Reliability, environmental, and member satisfaction.
Current Lawai loads will be shifted to Aepo and Green Energy Substations.

Results/Benefits of Proposed Construction: (Members, Operations)
Location of substation is inappropriate and electrically weak due to tap design.

Alternatives Identified or Corrective Plans Investigated:
Do nothing. Not appropriate.

Submitted by: jcox
Date: 10/22/21

Type Project	Headquarters-Facilities
CFR/740c	1300
Dept/Section	T&D
Year	2021-2022

Budget Title	Anahola Poleyard Storage and Warehouse	<i>Check One:</i>	
Budget #	211323-CO1	Regulatory	
<i>Project Start</i>	1/1/2021	Reliability	
<i>Project End</i>	6/30/2022	Economically Justified	
2021 CWIP	\$ 87,000	Growth/Development	X
2022	\$ 363,000		
Total Project Cost	\$ 450,000		

Description: (summarize purpose, location, components, scope of work, history, and basis for cost.)

Construct a pole storage facility and a warehouse at Anahola Service Center.

How does this project align with strategic goals?

Will support financial goals by protecting KIUC's assets and comply with environmental best practices. Employee Satisfaction

What are the benefits to our members or operations of this project?

Warehouse provides the necessary storage space for employee's large materials, supplies, and equipment and also provides protection from the weather. The warehouse also provides a more secure facility to store its higher priced items.

Alternatives Identified or Corrective Plans Investigated:

Covering the pole pile with tarp is possible but inconvenient. The pole storage at Port Allen meets the needs of the warehouse personnel and meets SPCC requirements

Submitted by: jcox/fp

Date: 7/1/2021

Type Project	Headquarters and Service Facilities
CFR/740c	1300
Dept/Section	T&D
Year	2021-2022

Budget Title	Kapaia Xfmr/Pole Yard	<i>Check One:</i>	
Budget #	211324-CO1	Regulatory	
<i>Project Start</i>	6/1/2021	Reliability	X
<i>Project End</i>	6/30/2022	Economically Justified	
<i>2021 CWIP</i>	\$ 200,000	Growth/Development	
<i>2022</i>	\$ 200,000		
Total Cost	\$ 400,000		

Description of Proposed Construction: (Location, Components, Scope)
Construct a pole storage (gravel) and distribution transformer (spill containment) laydown facility at Kapaia Power Station.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
Site will be utilized for yearly storm preparation overflow. (Distribution pole-top transformers (qty-100) and composite/fiberglass poles (qty-75))

Alignment with strategic goals:
Kapaia is centrally located between Port Allen Warehouse and Anahola Service Center. During disasters or system contingencies, poles/transformers will be readily available to support the surrounding areas of Lihue.

Results/Benefits of Proposed Construction: (Members, Operations)
Increase storm preparation inventory levels of long lead time items.

Alternatives Identified or Corrective Plans Investigated:
Utilization of Aepo Substation: Aepo has the capacity, but access could be a problem during storm events.

Submitted by: jcox
Date: 7/1/2021

Type Project	Facility Repairs
CFR/740c	1500
Dept/Section	Financial & Corporate Services/Port Allen Warehouse
Year	2022

Budget Title	Eleele Materials Warehouse Improvements – Phase 2	<i>Check One:</i>	
Budget #	221566	Regulatory	
2021	101,000	Reliability	X
2022	68,000	Economically Justified	
		Growth/Development	
Total Cost	\$169,000		

Description of Proposed Construction: (Location, Components, Scope)

To repair the Port Allen Warehouse Facility.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The Port Allen Warehouse was constructed prior to Hurricane Iniki, minor/temporary repairs were made after the hurricane. However, over the years the damage has continued to build. Please see attached pictures of damage due to wear and tear.

Alignment with strategic goals:

Project is to provide our employees with a solid and reliable structure to work from as they strike towards workplace excellence in serving our membership.

Results/Benefits of Proposed Construction: (Members, Operations)

Protect KIUC's assets (employees and inventory) from the weather and environmental conditions.

Alternatives Identified or Corrective Plans Investigated:

For years the Warehouse team has had to move inventory around the warehouse to protect inventory from certain areas of the building where weather comes in. This is an inefficient use of space and continues to handcuff the team. An alternative would be to wait for a big storm/hurricane to bring the building down, however that is unsafe, could take years, and will be at the cost of possibly losing existing inventory.

Submitted by: Chris Yuh

Date: 8/27/2021

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

ATTACHMENT BR-904

(82 PAGES)

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2023

Budget Title	Safety	<i>Check One:</i>	
Budget #	XX1201	Regulatory	X
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	
Total Cost	\$25,000		

Description of Proposed Construction: (Location, Components, Scope)

This is a recurring budget item that covers power plant safety improvements to ensure compliance with OSHA/HIOSH. Other safety projects may occur outside of this scope, as any project that is estimated at \$100,000 or greater will receive its own project number.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The Waiahi hydro units were installed in the first half of the 20th century. The Port Allen Power Plant was built in the late 1960s, and significantly added to in the mid-1970s. Even Kapaia Power Station was built nearly twenty years ago. The age of these facilities, coupled with improved or new safety regulations that inevitably occur as time goes on, drives KIUC to add or modify its facilities, whether in response to a specific rule or to comply with the OSHA General Duty Clause.

The typical annual budget for this recurring project ranges from \$25,000 to \$75,000, but can be higher in years when specific projects are identified.

Alignment with strategic goals:

KIUC's Strategic Plan lists three key areas, one of which is to deliver power safely and reliably. By ensuring our people and equipment operate safely, KIUC can better serve its Members.

Results/Benefits of Proposed Construction: (Members, Operations)

Projects in this category will result in improved OSHA compliance, personnel safety performance and reliability.

Alternatives Identified or Corrective Plans Investigated:

Alternatives are to budget less and move capital safety jobs to later years or spend O&M monies.

Submitted by: Gregg Matsuo

Date: 5/12/22

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2023

Budget Title	Reliability	<i>Check One:</i>	
Budget #	XX1202	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	
Total Cost	\$300,000		

Description of Proposed Construction: (Location, Components, Scope)

This is a recurring budget item that covers power plant reliability improvements to ensure that generating units that make up our Adequacy of Supply (AOS) statement remain reliable. Other reliability projects may occur outside of this scope, as any project that is estimated at \$100,000 or greater will receive its own project number.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The Waiahi hydro units were installed in the first half of the 20th century. The Port Allen Power Plant was built in the late 1960s, and significantly added to in the seventies and eighties. Even the Kapaia Power Station was built nearly twenty years ago. The age of these facilities, coupled with improved or more reliable designs that inevitably occur as time goes on, drives KIUC to add or modify equipment to ensure continued reliability of its generating units.

The typical annual budget for this recurring project ranges from \$100,000 to \$500,000.

Alignment with strategic goals:

One of the three key areas of KIUC’s Strategic Plan is Safe & Reliable Power Supply. By ensuring our facilities are reliable, KIUC can provide better value to its members.

Results/Benefits of Proposed Construction: (Members, Operations)

Reliability improvements typically result in either preventing or reducing un-planned equipment outages. These outages result in either increased cost due to expediting tools, material, and labor in an emergency and/or result in power outages around the island.

Alternatives Identified or Corrective Plans Investigated:

The alternative of not performing reliability capital spending is to either perform the same work as a maintenance expense or not perform the work at all and take the risk of more outages and more expensive operation.

Submitted by: Gregg Matsuo

Date: 5/12/22

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2023

Budget Title	Environmental	<i>Check One:</i>	
Budget #	XX1203	Regulatory	X
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	
Total Cost	\$50,000		

Description of Proposed Construction: (Location, Components, Scope)

This is a recurring budget item that covers power plant environmental improvements to ensure compliance with EPA/HDOH. Other environmental projects may occur outside of this scope, as any project that is estimated at \$100,000 or greater will receive its own project number.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The Waiahi hydro units were installed in the first half of the 20th century. The Port Allen Power Plant was built in the late 1960s, and significantly added to in the mid-1970s. Even Kapaia Power Station was built nearly twenty years ago. The age of these facilities, coupled with improved or new environmental regulations that inevitably occur as time goes on, drives KIUC to add or modify its facilities, whether in response to a rule or to comply with KIUC’s Strategic Plan.

The typical annual budget for this recurring project ranges from \$25,000 to \$75,000 but can be higher in years when specific projects are identified.

Alignment with strategic goals:

KIUC’s Mission Statement states environmental responsibility is a goal. By ensuring our facilities operate within environmental rules, KIUC can act as a steward for its members.

Results/Benefits of Proposed Construction: (Members, Operations)

Projects are designed to allow both plants to continue to achieve high reliability regarding engine compliance, but also include items such as berms, sumps, and controls for plant site compliance.

Alternatives Identified or Corrective Plans Investigated:

The alternative would be to not spend the capital dollars, and risk compliance issues and fines.

Submitted by: Gregg Matsuo

Date: 5/12/22

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2023

Budget Title	Efficiency	<i>Check One:</i>	
Budget #	XX1204	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	X
		Growth/Development	
Total Cost	\$25,000		

Description of Proposed Construction: (Location, Components, Scope)

This is a recurring budget item that covers minor power plant efficiency improvements that are shown to provide good return on investment in the areas of fuel, labor, or other O&M savings. Other efficiency projects may occur outside of this scope, as any project that is estimated at \$100,000 or greater will receive its own project number.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The Waiahi hydro units were installed in the first half of the 20th century. The Port Allen Power Plant was built in the late 1960s, and significantly added to in the mid-1970s. Even Kapaia Power Station was built nearly twenty years ago. The age of these facilities, coupled with improved or new efficiency measures that inevitably occur as time goes on, drives KIUC to add or modify its facilities whenever significant savings can be realized through such modifications.

The typical annual budget for this recurring project ranges from \$25,000 to \$100,000 but can be higher in years when specific projects are identified.

Alignment with strategic goals:

KIUC's Strategic Plan lists three key areas, one of which is to ensure fair and reasonable rates. By ensuring our equipment operates efficiently, KIUC can keep costs down, which translates into lower effective rates.

Results/Benefits of Proposed Construction: (Members, Operations)

Projects in this category are rate of return justified, meaning that KIUC and thereby the members should see lower costs due to the project implementation. Savings can be in the form of energy savings, fuel savings, etc.

Alternatives Identified or Corrective Plans Investigated:

Alternatives would be to not save over the long term because of short term priorities.

Submitted by: Gregg Matsuo

Date: 5/12/22

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2023

Budget Title	Hydro Improvements	<i>Check One:</i>	
Budget #	XX1205	Regulatory	X
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	X
		Growth/Development	
Total Cost	\$75,000		

Description of Proposed Construction: (Location, Components, Scope)

This is a recurring budget item that covers minor hydroelectric plant upgrades as required to meet regulatory requirements such as safety or environmental rules, ensure long-term reliability of the generating units, or simply show to be economically justified. Other hydro related projects may occur outside of this scope, as any project that is estimated at \$100,000 or greater will receive its own project number.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The Waiahi hydro units were installed in the first half of the 20th century. The age of these facilities, coupled with improved or new designs that inevitably occur as time goes on, drives KIUC to add or modify its facilities whenever properly justified.

The typical annual budget for this recurring project ranges from \$10,000 to \$50,000 but can be higher in years when specific projects are identified.

Alignment with strategic goals:

Maintaining the hydroelectric units, KIUC’s only firm renewable generating units, helps KIUC meet its Strategic Plan by ensuring sustainable power supply to grid. In addition, these units can provide some of the cheapest power on the island, and therefore help KIUC keep costs down, which translates into lower rates.

Results/Benefits of Proposed Construction: (Members, Operations)

This budget will result in the continued excellent reliability of the Waiahi hydro-electric units.

Alternatives Identified or Corrective Plans Investigated:

Not applicable.

Submitted by: Gregg Matsuo

Date: 5/12/22

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2023

Budget Title	Diesel Overhauls	<i>Check One:</i>	
Budget #	XX1206	Regulatory	X
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	X
		Growth/Development	
Total Cost	\$200,000		

Description of Proposed Construction: (Location, Components, Scope)

This is a recurring budget item that covers diesel plant upgrades as required to meet regulatory requirements such as safety or environmental rules, ensure long-term reliability of the generating units, or simply show to be economically justified.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The KIUC diesel generating units fall into two categories: Electro-Motive Diesel (EMD) and Stork-Wartsila Diesel (SWD). The five EMD units were installed in the mid to late 1960s and are the oldest generating units in KIUC’s fleet. Upgrades to these units are rare, and often do not cost much to implement. The four SWD units were installed in the late 1980s to early 1990s and are the most efficient generating units at Port Allen. Their continued reliability depends on periodic replacement or rehabilitation of major engine components such as pistons, liners, cylinder heads, and turbochargers.

Alignment with strategic goals:

Maintaining the diesel units helps KIUC meet its Strategic Plan by ensuring adequate and reliable power supply to grid. These units are quick starting, capable of using biodiesel, and have good heat rates across the full load range. Because of these features, they will work well to complement future solar projects that can be variable and intermittent in nature.

Results/Benefits of Proposed Construction: (Members, Operations)

As this project is for the purchase of major components that extend the life of the diesel units, the benefit is continued use of the units themselves.

Alternatives Identified or Corrective Plans Investigated:

The alternative to this capital spending would be to let the SWD and EMD units increase downtime to the point of not running any more.

Submitted by: Gregg Matsuo

Date: 5/12/22

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2023

Budget Title	Buildings & Grounds	<i>Check One:</i>	
Budget #	XX1208	Regulatory	X
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	X
Total Cost	\$250,000		

Description of Proposed Construction: (Location, Components, Scope)

This is a recurring budget item that covers facility upgrades as required to meet regulatory requirements such as safety or environmental rules, ensure long-term reliability of the generating unit, or to meet growth. Other related projects may occur outside of this scope, as any project that is estimated at \$100,000 or greater will receive its own project number.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The KIUC generating station facilities can be divided into two areas: Port Allen and Kapaia. Port Allen was installed in the late 1960s and remains a critical piece of infrastructure because the system operations center resides there. Over the years, the harsh environment has forced KIUC to continuously maintain or replace portions of the facility to ensure the plant remains reliable. Kapaia is a much newer facility, but it is preferred to keep the facility from degenerating into a state of poor reliability so occasional upgrades are required.

The typical annual budget for this recurring project ranges from \$50,000 to \$200,000.

Alignment with strategic goals:

Maintaining the power generating facilities helps KIUC meet its Strategic Plan by ensuring adequate and reliable power supply to grid and compliance with DOH/EPA permits.

Results/Benefits of Proposed Construction: (Members, Operations)

The projects identified will continue to assure reliability of structures and operations at both plants.

Alternatives Identified or Corrective Plans Investigated:

The alternative would be to pursue less or none of the projects specified.

Submitted by: Gregg Matsuo

Date: 5/12/22

Type Project	Distribution – New Lines
CFR/740c	100
Dept/Section	T&D
Year	2023

Budget Title	Line Extensions-UG	<i>Check One:</i>	
Budget #	XX0101B	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	X
Total Cost	\$ 200,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket Budget Item that captures costs to construct and serve our member’s request for underground electrical service to their residence or business.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
1. Driven by customer demand & time schedules.

Alignment with strategic goals:
1. Member Satisfaction.
2. Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)
Member receives electrical service to their residence and/or business.

Alternatives Identified or Corrective Plans Investigated:
This budget is solely dependent on customer demand and the obligation that KIUC has as a utility company to serve the people on Kauai with electrical service.

Submitted by: jcox/fp
Date: 10/18/22

Type Project	Distribution – New Lines
CFR/740c	100
Dept/Section	T&D
Year	2023

Budget Title	Line Extensions-OH	<i>Check One:</i>	
Budget #	XX0102B	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	X
Total Cost	\$ 200,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket budget Item that captures the costs to construct and serve our member’s request for overhead electrical service to their residence or business.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
1. Driven by customer demand & time schedules.

Alignment with strategic goals:
1 Member Satisfaction.
2. Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)
Member receives electrical service to their residence and/or business.

Alternatives Identified or Corrective Plans Investigated:
This budget is solely dependent on customer demand and the obligation that KIUC has as a utility company to serve the people on Kauai with electrical service.

Submitted by: jcox/fp
Date: 10/18/22

Type Project	Distribution – Conversions or Line Changes
CFR/740c	300
Dept/Section	T&D
Year	2023

Budget Title	Line Replacements-UG	<i>Check One:</i>	
Budget #	XX0301B	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	X
Total Cost	\$ 240,000		

Description of Proposed Construction: (Location, Components, Scope)

Blanket Budget Item that captures costs to replace and/or upgrade underground facilities (residential or business). These types of actions do not normally require an Environmental Report (ER) per *NEPA Part 1794 - Environmental Policies and Procedures* §1794.21 (14) & (15).

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

1. Driven by customer demand and time schedules.
2. Periodic replacement of aged or substandard facilities.

Alignment with strategic goals:

1. Member Satisfaction.
2. Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)

1. Member receives electrical service to their residence and/or business.
2. Facilities are upgraded to meet current standards.

Alternatives Identified or Corrective Plans Investigated:

This budget is solely dependent on customer demand and the obligation that KIUC has as a utility company to serve the people on Kauai with electrical service.

Submitted by: jcox/fp

Date: 10/18/22

Type Project	Distribution – Conversions or Line Changes
CFR/740c	300
Dept/Section	T&D
Year	2023

Budget Title	Line Replacements-OH	<i>Check One:</i>	
Budget #	XX0302B	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	X
Total Cost	\$ 480,000		

Description of Proposed Construction: (Location, Components, Scope)

Blanket Budget Item that captures the costs to replace and/or upgrade facilities and serve our member’s request for changes to the overhead electrical service to their residence or business. These types of actions do not normally require an Environmental Report (ER) per *NEPA Part 1794 - Environmental Policies and Procedures* §1794.21 (14) & (15). In addition, these actions are covered activities in KIUC’s Short –Term Seabird Habitat Conservation Plan 2.2.1.7 *In-situ Replacement of Existing Lines or Other Facilities*.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

1. Driven by customer demand and time schedules.
2. Periodic replacement of aged or substandard facilities.

Alignment with strategic goals:

1. Member Satisfaction.
2. Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)

Member receives electrical service to their residence and/or business.

Alternatives Identified or Corrective Plans Investigated:

This budget is solely dependent on customer demand and the obligation that KIUC has as a utility company to serve the people on Kauai with electrical service.

Submitted by: jcox/fp

Date: 10/18/22

Type Project	Distribution – New Lines
CFR/740c	100
Dept/Section	T&D
Year	2023

Budget Title	New Services-UG	<i>Check One:</i>	
Budget #	XX0101C	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	X
Total Cost	\$ 60,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket Budget Item that captures costs to construct and serve our member’s request for new underground electrical service to their residence or business.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
1. Driven by customer demand and time schedules.

Alignment with strategic goals:
1. Member satisfaction.
2. Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)
Member receives electrical service to their residence and/or business.

Alternatives Identified or Corrective Plans Investigated:
This budget is solely dependent on customer demand and the obligation that KIUC has as a utility company to serve the people on Kauai with electrical service.

Submitted by: jcox/fp
Date: 10/18/22

Type Project	Distribution – New Lines
CFR/740c	100
Dept/Section	T&D
Year	2023

Budget Title	New Services-OH	<i>Check One:</i>	
Budget #	XX0102C	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	X
Total Cost	\$ 40,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket Budget Item that captures costs to construct and serve our member’s request for new overhead electrical service to their residence or business.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
1. Driven by customer demand and time schedules.

Alignment with strategic goals:
1. Member Satisfaction.
2. Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)
Member receives electrical service to their residence and/or business.

Alternatives Identified or Corrective Plans Investigated:
This budget is solely dependent on customer demand and the obligation that KIUC has as a utility company to serve the people on Kauai with electrical service.

Submitted by: jcox/fp
Date: 10/18/22

Type Project	Distribution - New Lines
CFR/740c	100
Dept/Section	T&D
Year	2023

Budget Title	Developer Work-UG	<i>Check One:</i>	
Budget #	XX0101D	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	X
Total Cost	\$ 640,000		

Description of Proposed Construction: (Location, Components, Scope)

Blanket Budget Item that captures costs to construct and serve our member’s request for new underground electrical service to their development or business.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

Driven by customer demand & time schedules.

Alignment with strategic goals:

1. Member Satisfaction.
2. Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)

Member receives electrical service to their commercial development or residential subdivision.

Alternatives Identified or Corrective Plans Investigated:

This budget item is solely dependent on large development projects scheduled work and the obligation that KIUC has as a utility company to serve the large developments of Kauai. KIUC distribution planner reviews consultant drawings to work on the most economical design for service to the development and which meets all government and safety requirements. Serving these types of larger customers or developments, may require upgrades or new facilities on KIUC’s existing facilities.

Submitted by: jcox/fp

Date: 10/18/22

Type Project	Distribution - New Lines
CFR/740c	100
Dept/Section	T&D
Year	2023

Budget Title	Developer Work-OH	<i>Check One:</i>	
Budget #	XX0102D	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	X
Total Cost	\$ 80,000		

Description of Proposed Construction: (Location, Components, Scope)

Blanket Budget Item that captures costs to construct and serve our member’s request for new overhead electrical service to their development or business.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

Driven by customer demand & time schedules.

Alignment with strategic goals:

- 1 Member Satisfaction.
- 2 Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)

Member receives electrical service to their commercial development or residential subdivision.

Alternatives Identified or Corrective Plans Investigated:

This budget item is solely dependent on large development projects scheduled work and the obligation that KIUC has as a utility company to serve the large developments of Kauai. KIUC planner reviews consultant drawings to work on the most economical design or options of service to developer, which meets all government and safety requirements.

Serving these types of larger customers or developments, may require upgrades or new facilities on KIUC’s existing facilities.

Submitted by: jcox/fp

Date: 10/18/22

Type Project	Distribution – Conversions or Line Changes
CFR/740c	300
Dept/Section	T&D
Year	2023

Budget Title	System Reliability & Inspection-UG	<i>Check One:</i>	
Budget #	XX0301D	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	
Total Cost	\$ 40,000		

Description of Proposed Construction: (Location, Components, Scope)

This includes both specified as well as unspecified capital projects that become necessary during the budget year. These projects involve underground improvements and upgrades that enhance electric system reliability. These types of actions do not normally require an Environmental Report (ER) per *NEPA Part 1794 - Environmental Policies and Procedures* §1794.21 (14) & (15).

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

When problems are found and repairs are made, planners along with construction supervisors determine if an area needs additional improvements and/or upgrades to prevent more outages and equipment failures to occur. These are proactive measures to ensure reliable service to our customers.

Alignment with strategic goals:

1. Member satisfaction.
2. Increase and improve reliability.

Results/Benefits of Proposed Construction: (Members, Operations)

Actions will improve reliability and less customer outage.

Alternatives Identified or Corrective Plans Investigated:

Improvements and upgrades can be deferred, and work may be performed on an as needed basis after equipment failures.

Submitted by: jcox/fp

Date: 10/18/22

Type Project	Transmission Line and Other Station Changes
CFR/740c	1000
Dept/Section	T&D
Year	2023

Budget Title	Transmission Insulator Replace		
Budget #	XX1001	<i>Check One:</i>	
<i>Project Start</i>	1/1/2023	Regulatory	
<i>Project End</i>	12/31/2023	Reliability	X
		Economically Justified	
		Growth/Development	
Total Cost	\$ 480,000		

Description of Proposed Construction: (Location, Components, Scope)
Contractor and/or KIUC to Replace Transmission Insulators during yearly HCP work.

Components: Transmission insulators and associated hardware
Scope: Replace existing porcelain insulators with polymer

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
History: Segments of transmission line has a history of failed insulator brackets and insulators causing transmission line faults.
Design Criteria: Replacement hardware is a direct replacement for existing hardware

Alignment with strategic goals:
Hold controllable cost increases at or below the actual level of inflation and maintain system reliability at 99.96% or better availability.

Results/Benefits of Proposed Construction: (Members, Operations)
Members will benefit from a more reliable transmission line whereas previous faults have caused lines to fall on residential properties. Operationally this new construction will yield less call-outs.

Alternatives Identified or Corrective Plans Investigated:
n/a

Submitted by: jcox
Date: 10/18/22

Type Project	Distribution – Miscellaneous Distribution Equipment
CFR/740c	600
Dept/Section	T&D
Year	2023

Budget Title	Pole Replacements	<i>Check One:</i>	
Budget #	XX0606A	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	
Total Cost	\$ 600,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket Budget Item that captures the costs to replace poles designated by our annual termite inspection contractor Osmose as being in a condition requiring replacement, i.e., termite infested. This termite treatment program began in 1994. This blanket also covers replacement of substandard poles, poles which may need additional or new height requirements, and ones damaged from auto accidents.

This blanket covers an average of about 200 poles of various lengths annually. KIUC replaces poles by priority.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

Trend:	2021	Budget:	\$ 600,000	Spent:	\$ 749,630
	2020	Budget:	\$ 500,000	Spent:	\$ 469,635
	2019	Budget:	\$ 675,000	Spent:	\$ 240,167
	2018	Budget:	\$ 675,000	Spent:	\$ 261,998
	2017	Budget:	\$ 675,000	Spent:	\$ 752,780

Alignment with strategic goals:

Safety and Reliability.

Results/Benefits of Proposed Construction: (Members, Operations)

Preventive maintenance to maintain system reliability.

Alternatives Identified or Corrective Plans Investigated:

KIUC could return to some pole restorations to alleviate the cost to replace all poles or wait until a critical failure occurs before acting on a problem pole.

Submitted by: jcox/fp

Date: 10/18/22

Type Project	Distribution – Miscellaneous Distribution Equipment
CFR/740c	600
Dept/Section	T&D
Year	2023

Budget Title	Pole Replacements	<i>Check One:</i>	
Budget #	XX0606A	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	
Total Cost	\$ 600,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket Budget Item that captures the costs to replace poles designated by our annual termite inspection contractor Osmose as being in a condition requiring replacement, i.e., termite infested. This termite treatment program began in 1994. This blanket also covers replacement of substandard poles, poles which may need additional or new height requirements, and ones damaged from auto accidents.

This blanket covers an average of about 200 poles of various lengths annually. KIUC replaces poles by priority.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

Trend:	2021	Budget:	\$ 600,000	Spent:	\$ 749,630
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	2017	Budget:	\$ 675,000	Spent:	\$ 752,780

Alignment with strategic goals:

Safety and Reliability.

Results/Benefits of Proposed Construction: (Members, Operations)

Preventive maintenance to maintain system reliability.

Alternatives Identified or Corrective Plans Investigated:

KIUC could return to some pole restorations to alleviate the cost to replace all poles or wait until a critical failure occurs before acting on a problem pole.

Submitted by: jcox/fp

Date: 10/18/22

Type Project	Distribution – Conversions or Line Changes
CFR/740c	300
Dept/Section	T&D
Year	2023

Budget Title	Underground System Improvements	<i>Check One:</i>	
Budget #	XX03011	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	
Total Cost	\$ 200,000		

Description of Proposed Construction: (Location, Components, Scope)

A continuing KIUC effort to upgrade the Princeville Subdivision direct buried underground distribution system that has been in place for over twenty years. The upgrade projects involve cable, conduit, and switchgear upgrades to replace the deteriorating infrastructure. Kauai Electric acquired the infrastructure from the Princeville and we are working to bring this area up to our present construction installation standards of service. Additional underground areas include but are not limited to the Kekaha Gardens, Molokoa, and Puhi which also will be upgraded as necessary.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

A program to upgrade the Princeville underground distribution system has been in place for twenty years, and continues KIUC’s efforts on providing reliable service to for our members

Numerous past failures of direct buried systems on Kauai have prompted KIUC to address these vulnerable areas prior to failure and customer outages.

Areas are prioritized based on existing reliability issues.

Alignment with strategic goals:

Customer Satisfaction and System Reliability.

Results/Benefits of Proposed Construction: (Members, Operations)

Reliability of service and reduction of outage hours.

Alternatives Identified or Corrective Plans Investigated:

KIUC could just continue to repair and patch these problem areas but we are taking a proactive approach to improve reliability to the customers in the area.

Submitted by: jcox/fp

Date: 10/18/22

Type Project	Distribution - Substations, Switching Stations & Metering Point Changes
CFR/740c	500
Dept/Section	T&D
Year	2023

Budget Title	Substation Repl/Upgrades-Dist	<i>Check One:</i>	
Budget #	xx0501	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	
Total Cost	\$160,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket Budget item to replace and upgrade distribution substation equipment.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

1. Upgrade of distribution breakers and replacement with faster operating breakers. Upgrade existing switches and install pad-mounted and overhead cap bank for VAR support.
2. Upgrade of substation distribution risers for redundancy. Replacement of switches and other ancillary equipment.
3. Repair hotspots, and corroded equipment.

Miscellaneous: Re-rock switchyards and substations

Alignment with strategic goals:
Increased reliability and member satisfaction.

Results/Benefits of Proposed Construction: (Members, Operations)
Station hardening, ease/ flexibility of operation, VAR support.

Alternatives Identified or Corrective Plans Investigated:
n/a

Submitted by: jcox
Date: 10/18/22

Type Project	Transmission - Line & Other Station Changes
CFR/740c	1000
Dept/Section	T&D
Year	2023

Budget Title	Substation Replacements & Upgrades-Trans	<i>Check One:</i>	
Budget #	XX1002	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	
Total Cost	\$ 400,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket Budget item to install, replace and upgrade transmission substation equipment at the various substation sites throughout the island.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

1. Installation, replacement and upgrade of transmission breakers, busses, switches, and other equipment.
2. Increased reliability especially in our highly corrosive salt environment.
3. Upgrade hotspots, and corroded equipment.
4. Continue elimination of oil insulated transmission breakers and replacement with faster operating SF6 insulated breakers.
5. Implement smart grid options.

Alignment with strategic goals:
Increased reliability and member satisfaction.

Results/Benefits of Proposed Construction: (Members, Operations)

1. Station hardening, flexibility of operation, and for contingency.
2. Would provide significantly increased service reliability to all customers.

Alternatives Identified or Corrective Plans Investigated:
Investigated replacing different breakers, and installation of spill containment facilities for breakers.

Submitted by: jcox
Date: 10/18/22

Type Project	Generation
CFR/740c	1200
Dept/Section	T&D
Year	2023

Budget Title	Substation Transformer Replace (GSU)	<i>Check One:</i>	
Budget #	XX1235	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	
Total Cost	\$ 1,400,000		

Description of Proposed Construction: (Location, Components, Scope)

This is a Blanket Budget item to replace existing substation transformers with new units at the various substations throughout Kauai. This budget includes both specified and planned change outs below, as well as unspecified capital purchases that become necessary during the budget year. These projects involve improvements and upgrades that will ensure continued service and reliability to our consumers.

A tentative plan is as follows:

- 2023: T-51 Kapaia - \$1,400,000 – lead time may push to 2024
- Next: T-2 Port Allen - \$1,200,000

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

Customer Satisfaction and to accommodate system growth.

Alignment with strategic goals:

Increased reliability and member satisfaction.

Results/Benefits of Proposed Construction: (Members, Operations)

Members will benefit from additional capacity for switching capabilities from Kekaha Substation. Operationally, a new transformer will result in lower risk of failure.

Alternatives Identified or Corrective Plans Investigated:

Due to the long lead times to order substation transformers, it is pertinent that KIUC plans to maintain enough capacity, and a high level of reliability from our substations that serve the island community.

Submitted by: jcox

Date: 10/18/22

Type Project	Transmission– Line and Other Station Changes
CFR/740c	1000
Dept/Section	T&D
Year	2023

Budget Title	System Protection Upgrades/Replacement -Trans		
Project #	XX1004	<i>Check One:</i>	
<i>Project Start</i>	1/1/2023	Regulatory	
<i>Project End</i>	12/31/2023	Reliability	X
		Economically Justified	
		Growth/Development	
Total Cost	\$ 200,000		

Description of Proposed Construction: (Location, Components, Scope)
Upgrade transmission line relays, transformer differential relays, meters, control switches, terminal servers & converters, isolation switches, panels and other equipment at the various substations island-wide.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
To replace old equipment at all the substations that feed the island of Kauai to meet the increased needs for greater system reliability due to customer growth,

Alignment with strategic goals:
Increased reliability and member satisfaction.

Results/Benefits of Proposed Construction: (Members, Operations)
Provide increased system stability and reliability in transient situations and outages, increased protection to large capital items, provide operations with fault identification information.

Alternatives Identified or Corrective Plans Investigated:
n/a

Submitted by: jcox
Date: 10/18/22

Type Project	Distribution - Substation Changes
CFR/740c	500
Dept/Section	T&D
Year	2023

Budget Title	System Protection Upgrades/Repl - Dist	<i>Check One:</i>	
Budget #	XX0503	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	
Total Cost	\$ 80,000		

Description of Proposed Construction: (Location, Components, Scope)
Upgrade distribution line relays, meters, control switches, terminal servers & converters, isolation switches, panels and other equipment at the various substations island-wide.

This Blanket Budget Item will be reviewed each year, and revised dependent on project priorities and needs at the individual substations. Previous budget cuts have limited and postponed many projects.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
To replace old equipment at all the substations that feed the island of Kauai to meet the increased needs for greater system reliability due to customer growth.

Alignment with strategic goals:
Increased reliability and member satisfaction.

Results/Benefits of Proposed Construction: (Members, Operations)
Provide increased system stability and reliability in transient situations and outages, increased protection to large capital items, provide operations with fault identification information.

Alternatives Identified or Corrective Plans Investigated:
Use existing relays and protection scheme.

Submitted by: jcox
Date: 10/18/22

Type Project	Distribution – Miscellaneous Distribution Equipment
CFR/740c	600
Dept/Section	T&D
Year	2023

Budget Title	Communication System Upgr/Repl		
Budget #	XX0615A	<i>Check One:</i> Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	
Total Cost	\$ 100,000		

Description of Proposed Construction: (Location, Components, Scope)
Installation and upgrade of all communication such as radios, microwaves, radio links, and any communication networks and devices.

Fiber optic cable interconnection with Oceanic Time Warner Cable at various locations to provide redundancy for networking equipment carrying network, telephone, SCADA, voice radio, protective relay, video surveillance data and other needs.

To remediate a break in KIUC’s fiber backbone, wireless communication radios will be installed to provide an alternate form of communication.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
To maintain continuity between our communication sites.

Alignment with strategic goals:
Increased reliability, reduced operating cost, and continuity of our communications system.

Results/Benefits of Proposed Construction: (Members, Operations)
Fiber optic cable island-wide provides a continuous communication network and redundancy for the company.

Alternatives Identified or Corrective Plans Investigated:
Rely on existing communication avenues.

Submitted by: jcox
Date: 10/18/22

Type Project	Distribution - Miscellaneous Distribution Equipment
CFR/740c	600
Dept/Section	T&D
Year	2023

Budget Title	Distribution Transformer UG – New Customer	<i>Check One:</i>	
Budget #	XX0601A	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	X
Total Cost	\$ 1,200,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket Budget Item that captures the costs to purchase distribution transformers to service new construction projects, customer upgrades, and equipment failures, etc.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
Driven by Customer Demand and Time Schedules.

Alignment with strategic goals:
Member Satisfaction & Reliability.
Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)
Member receives electrical service to their residence and/or business.

Alternatives Identified or Corrective Plans Investigated:
KIUC has been in an alliance with ABB since 1991. This alliance meets monthly to monitor transformer design standards, inventory, and delivery schedules for optimum efficiency at the best cost to KIUC.

Submitted by: jcox/fp
Date: 10/18/22

Type Project	Distribution - Miscellaneous Distribution Equipment
CFR/740c	600
Dept/Section	T&D
Year	2023

Budget Title	Distribution Transformer OH – New Customer	<i>Check One:</i>	
Budget #	XX0601C	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	X
Total Cost	\$ 800,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket Budget Item that captures the costs to purchase distribution transformers to service new construction projects, customer upgrades, and equipment failures, etc. For this year, the total cost includes transformers purchased for storm readiness.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
Driven by Customer Demand and Time Schedules.

Alignment with strategic goals:
Member Satisfaction & Reliability.
Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)
Member receives electrical service to their residence and/or business.

Alternatives Identified or Corrective Plans Investigated:
KIUC has been in an alliance with ABB since 1991. This alliance meets monthly to monitor transformer design standards, inventory, and delivery schedules for optimum efficiency at the best cost to KIUC.

Submitted by: jcox/fp
Date: 10/18/22

Type Project	Distribution - Miscellaneous Distribution Equipment
CFR/740c	600
Dept/Section	T&D
Year	2023

Budget Title	Transformer Oil Disposal UG (incl. carcass)	<i>Check One:</i>	
Budget #	XX0601E	Regulatory	X
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	
Total Cost	\$ 100,000		

Description of Proposed Construction: (Location, Components, Scope)

Blanket Budget Item that captures the costs to semi-annually test and dispose of transformer oil from removed underground transformers, and the empty transformer carcasses. Additionally, GSU or Substation Transformers that are replaced or fail will also be tested and disposed of separately, adding approximately \$20K - \$30K to the budget.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

Trend:2021	Budget:	\$ 50,000	Spent:	\$ 26,130
2020	Budget:	\$ 50,000	Spent:	\$ 27,452
2019	Budget:	\$ 50,000	Spent:	\$ 12,842
2018	Budget:	\$ 50,000	Spent:	\$ 38,834
2017	Budget:	\$ 47,900	Spent:	\$ 16,687
2016	Budget:	\$ 47,000	Spent:	\$ 75,371
2015	Budget:	\$ 80,000	Spent:	\$ 57,102

Alignment with strategic goals:

Safety-Meet Environmental & Regulatory guidelines in handling hazardous material.

Results/Benefits of Proposed Construction: (Members, Operations)

Protects the island environment.

Alternatives Identified or Corrective Plans Investigated:

Some of the waste oil is reused and burned as fuel. It was deemed more feasible to contract the draining of oil, packing and disposal by an outside vendor than to perform in-house as was done in the past. More stringent environmental fines and possible liability to the company if some problem occurs, was a risk to KIUC that assisted in the decision to contract this service twice annually.

Submitted by: jcox

Date: 10/18/22

Type Project	Distribution - Miscellaneous Distribution Equipment
CFR/740c	600
Dept/Section	T&D
Year	2023

Budget Title	Transformer Oil Disposal OH (incl. carcass)	<i>Check One:</i>	
Budget #	XX0601F	Regulatory	X
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	
Total Cost	\$ 250,000		

Description of Proposed Construction: (Location, Components, Scope)

Blanket Budget Item that captures the costs to test and dispose of transformer oil from removed overhead transformers, and the empty transformer carcasses semi-annually.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

Additional budget \$'s required to dispose of Koloa BESS and Port Allen BESS units.

Trend: 2021	Budget	\$ 50,000	Spent:	\$ 36,084
2020	Budget	\$ 50,000	Spent:	\$ 39,503
2019	Budget	\$ 50,000	Spent:	\$ 38,527
2018	Budget	\$ 50,000	Spent:	\$ 29,829
2017	Budget	\$ 38,800	Spent:	\$ 38,611
2016	Budget	\$ 38,000	Spent:	\$ 23,864
2015	Budget	\$ 56,000	Spent:	\$ 41,676

Alignment with strategic goals:

Safety-Meet Environmental & Regulatory guidelines in handling hazardous material.

Results/Benefits of Proposed Construction: (Members, Operations)

Protects the island environment.

Alternatives Identified or Corrective Plans Investigated:

Some of the waste oil is reused and burned as fuel. It was deemed more feasible to contract the draining of oil, packing and disposal by an outside vendor than to perform in-house as was done in the past. More stringent environmental fines and possible liability to the company if some problem occurs, was a risk to KIUC that assisted in the decision to contract this service twice annually.

Submitted by: jcox

Date: 10/18/22

Type Project	Distribution - Miscellaneous Distribution Equipment
CFR/740c	600
Dept/Section	T&D
Year	2023

Budget Title	Meters-New Consumers	<i>Check One:</i>	
Budget #	XX0601G	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	X
Total Cost	\$100,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket budget item that captures the costs to purchase & install meters and instrument transformer metering equipment to serve our new member’s request for electrical service to their residence and/or business.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
Driven by customer demand and regulatory requirements:

Alignment with strategic goals:
Member satisfaction.
Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)
Member receives electrical service to their residence and/or business.

Alternatives Identified or Corrective Plans Investigated:
n/a

Submitted by: jcox
Date: 10/18/22

Type Project	Distribution - Miscellaneous Distribution Equipment
CFR/740c	600
Dept/Section	T&D
Year	2023

Budget Title	Meters-Replacements	<i>Check One:</i>	
Budget #	XX0601H	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	X
Total Cost	\$600,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket budget item that captures the costs to purchase & replace existing metering equipment to serve our member’s request for electrical service to their residence and/or business.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
Driven by customer demand and regulatory requirements:

Alignment with strategic goals:
Member satisfaction.
Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)
Replace meters due to meter failure and prevent potential loss revenues from inaccurate meters and ensure members receive accurate billings.

Alternatives Identified or Corrective Plans Investigated:
Replace meters if the condition or life expectancy of the meter will cause it to be questionable.

Submitted by: jcox
Date: 10/18/22

Type Project	Distribution - Miscellaneous Distribution Equipment
CFR/740c	600
Dept/Section	T&D
YEAR	2023

Budget Title	Street & Area Lights Replacements	<i>Check One:</i>	
Budget #	XX0607A	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	X
Total Cost	\$ 32,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket budget item that captures costs to construct and serve our member's request (majority from County of Kauai and State of Hawaii) for electrical streetlight replacements and upgrades.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
Driven by customer demand:

Trend: 2021	Budget: \$ 10,000	Spent: \$ 57,035
2020	Budget: \$ 20,000	Spent: \$ 26,206
2019	Budget: \$ 38,100	Spent: \$ 32,643

Alignment with strategic goals:

Member satisfaction.
Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)
Member receives electrical service to their streetlights.

Alternatives Identified or Corrective Plans Investigated:

None: Driven by customer demand, safety, and liability issues

Submitted by: jcox/fp

Date: 10/18/22

Type Project	Distribution - Other Distribution Items
CFR/740c	700
Dept/Section	T&D
YEAR	2023

Budget Title	Street & Area Lights – New Installations	<i>Check One:</i>	
Budget #	XX0702A	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	X
Total Cost	\$ 12,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket budget item that captures costs to construct and serve our member’s request (majority from County of Kauai and State of Hawaii) for new electrical streetlights.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
Driven by customer demand:

Trend: 2020	Budget:	\$20,000	Spent:	\$ 1,219
2019	Budget:	\$ 30,000	Spent:	\$ 1,783
2018	Budget:	\$ 3,200	Spent:	\$ 3,718
2017	Budget:	\$ 3,100	Spent:	\$ 1,595
2016	Budget:	\$ 3,000	Spent:	\$ 3,256

Alignment with strategic goals:

Member satisfaction.
Meeting the growth and development of our island community.

Results/Benefits of Proposed Construction: (Members, Operations)
Member receives electrical service to their streetlights.

Alternatives Identified or Corrective Plans Investigated:

None: Driven by customer demand, safety, and liability issues

Submitted by: jcox/fp

Date: 10/18/22

Type Project	All Other
CFR/740c	1500
Dept/Section	T&D
Year	2023

Budget Title	Building & Facility Repl/Upgrades – T&D	<i>Check One:</i>	
Budget #	XX1511	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	X
Total Cost	\$ 80,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket budget item that captures the costs to upgrade, maintain, or replace existing building and facility structures.

Minor upkeep and replacements to roofs, a/c units, plumbing, doors, etc. at the various T&D office and warehouse buildings.

2023: Address flood damage in T&D office restrooms

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
Employee satisfaction and safety, and to prolong the life of the building facilities.

Alignment with strategic goals:
Employee satisfaction.

Results/Benefits of Proposed Construction: (Members, Operations)
To maintain a good working environment for the employees that work out of the Eleele and Kapaa Service Centers and Eleele office locations.

Alternatives Identified or Corrective Plans Investigated:
KIUC could wait until problems arise before replacement or repairs.

Submitted by: jcox
Date: 10/18/22

Type Project	Distribution – Other Distribution Items
CFR/740c	700
Dept/Section	T&D
Year	2023

Budget Title	SCADA System Upgrades/Repl	<i>Check One:</i>	
Budget #	XX0704B	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	
Total Cost	\$ 100,000		

Description of Proposed Construction: (Location, Components, Scope)
Upgrade and replace various components of the SCADA System. This includes workstations, RTU’s, switches, panels, communication units, and various other equipment.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
To replace old and/or damaged equipment on the SCADA System.

Alignment with strategic goals:
Increased reliability and member satisfaction.

Results/Benefits of Proposed Construction: (Members, Operations)
Provide increased system stability and reliability in managing our electrical grid. Upgrades are also driven by Operations for ease of use. Projects also include integration of smart grid components.

Alternatives Identified or Corrective Plans Investigated:
Use existing equipment and repair as needed.

Submitted by: jcox
Date: 10/18/22

Type Project	All Other
CFR Code	1500
Dept/Section	Human Resources
Year	2023

Budget Title	HR Customizations	<i>Check One:</i>	
Budget #	XX1515	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	X
Total Cost	\$ 50,000		

Description of Proposed Construction: (Location, Components, Scope)

Location: HR Office

UKG Customizations

Scope of work to include:

- Custom programming to address process and procedures specific to HR goals and efficiencies.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

UKG is the new HR System. The system has core HR that will take care of employee information management and benefits, the Recruiting module takes care of job postings and applications, Performance Management takes care of performance reviews and appraisals. The customizations will address additional work from UKG to provide programming changes that will allow KIUC specific processes to work.

Alignment with strategic goals:

The enhancement aligns with KIUC’s member satisfaction and Human Resources goals in providing better service to our employees and applicants. This system will assist HR in automating specific HR process and information collection.

Results/Benefits of Proposed Construction: (Members, Operations)

Customizations will increase efficiency through improved interfaces, increase accuracy through data transfers and controls, reduce duplication of efforts, and have a more streamlined process. Reporting for payroll data, annual compliance, audits, survey, and data analysis will be more simplified.

Alternatives Identified or Corrective Plans Investigated:

Our previous HR System, HR Advocate, sunset in December 2021. We had to review, evaluate, and select a new HR system that will replace HR Advocate. We signed up with UKG in December 2021. UKG has a Recruiting module that takes care of external job postings and Candidate Self-Serve where applicants can create their account and fill out an application online. The core HR module takes care of employee data management from benefits, dependents,

employment history, training, and disciplinary information. The Performance Management module takes care of the performance reviews.

If we do not have an HR System, we will have to process everything manually, using several excel and word files that are not integrated. Having an HR system will help our department streamline our process, reduce data entry, and eliminate errors.

Submitted by: Pia Gregorio

Date: 10/18/22

Type Project	Transmission – Line and other Station Changes
CFR/740c	1000
Dept/Section	HCP
Year	2022-2023

Budget Title	HCP Minimization Projects-Tr	<i>Check One:</i>	
Budget #	XX1006	Regulatory	X
<i>Project Start</i>	01/01/2022	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
<i>2022</i>	\$ 11,126,556	Growth/Development	
<i>2023</i>	\$ 4,135,234		
Total Cost	\$ 15,261,790		

Description of Proposed Construction: (Location, Components, Scope)

Reconfigure existing overhead transmission facilities in areas designated as high risk for endangered and threatened seabirds (Newell’s Shearwater, Hawaiian Petrel and Band-rumped Storm Petrel). This may include, but is not limited to, undergrounding, reconfiguration, removal, relocating, rerouting and etc. of existing facilities.

Locations are designated as high risk for collision or will be identified as high risk areas as the result of information derived from Save Our Shearwater rehabilitation program data, acoustic monitoring and visual surveys, or other available information.

Project may include reconfiguring of lines, the use of diverters or any other material or action considered a minimization measure.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

Regulatory

KIUC obtained a Federal Incidental Take Permit (ITP) from the USFWS in May 2011 for five years. Through the 2011 ITP and development of KIUC’s Habitat Conservation Program (HCP) for a 30-year ITP term, minimization projects are being identified that KIUC will be required to implement as part of its HCP. These minimization projects reduce the risk of take of the protected seabirds that have the potential to collide with KIUC’s overhead lines. KIUC currently funds a monitoring program, the data of which supports the selection of minimization projects.

Even though KIUC’s 2011 Incidental Take Permit expired in May 2016, it remains in effect while KIUC develops the HCP and applies for a renewal of its permit. KIUC anticipates completion of the HCP in mid – 2022, and issuance of the Federal ITP and State Incidental Take License (ITL) in the fall of 2022.

Summary of Scope of Project

- Diverter deployment around high traffic bird flight routes
- Remove static wire around high traffic bird flight routes
- Reconfigure transmission lines from vertical to more horizontal arrangement
 - Reduce height where possible from three high/two across to two high/three across
 - Locations identified at this time include:
 - Powerline trail
 - Central line
 - Kilauea
- Install predator proof fencing around target bird nesting areas to be covered under xx801 for UMV and ULP
- Long-term HCP and EIS drafting

2022-2023 estimated spend:

740c Code	HCP 2021-2024	Forecast 2021	Budget 2022	2023	2024	2025	2026	TOTAL 5 Years		
NORMAL AND RECURRING										
xx0302E	HCP MINIMIZATION PROJECTS-DISTR	-	-	-	-	-	-	-	-	5-yr plan total
xx1006	MINIMIZATION HCP MINIMIZATION & MITIGATION PROJECTS	4,385,858	10,006,461	4,135,234				14,141,695	15,261,790	
	Projects - Reconfigure E-Ki Kilauea	100,000								
	Projects - Reconfigure Preliminary Work PSI - P048	10,763								
	Projects - Reconfigure PLT-N1									
	Projects - Reconfigure PLT-S2									
	Diverters	1,155,000	1,741,230	1,245,463				2,986,693		
	Static Line	2,000,000	1,936,633	14,603				1,951,236		
	Static and Diverters		1,106,356	671,687				1,778,044		
	LED Diverters		2,877,622	60,420				2,938,042		
	Remove 69kVPlusStatic		141,164					141,164		
	Projects - Predator Proof Fencing Site to be Determined - A			850,000				850,000		
	Projects - Predator Proof Fencing Site to be Determined - B			850,000				850,000		
	Overhead 12%		936,360.68	443,060.79				1,379,421		
	LTHCP Drafting/EIS PSI	1,120,094	1,267,095					1,267,095		

Alignment with strategic goals:

Environmental Stewardship in preserving our native resources.

Results/Benefits of Proposed Construction: (Members, Operations)

Reduce the risk of incidental take of threatened and endangered seabird species (Newell’s Shearwater, Hawaiian Petrel and Band-rumped Storm Petrel) that have the potential to collide with KIUC’s overhead lines. Minimization in key areas reduces the number of birds impacted and reduces the mitigation requirements throughout the 30-year term of the ITP and ITL.

Alternatives Identified or Corrective Plans Investigated:

The projects are selected from overhead line segments based on SOS Program recovery data, acoustic monitoring and visual surveys, and other available information. The projects are identified through discussion with USFWS (U. S. Fish and Wildlife Service), DOFAW (State of Hawaii, Department of Forestry and Wildlife), and KESRP (Kauai Endangered Seabird Recovery Program).

Submitted by: Chris Yuh

Date: 08/27/2021

Type Project	All Other
CFR/740c	1500
Dept/Section	Human Resources
Year	2023

Budget Title	Safety	<i>Check One:</i>	
Budget #	XX1504	Regulatory	X
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	X
Total Cost	\$60,000		

Description of Proposed Construction: (Location, Components, Scope)

Safety equipment to prevent the indirect and hidden costs of accidents.

Safety equipment to include:

- Lifesaving equipment
- Signs and Lighting to improve safety for employees and members while crews are working at night or in traffic.
- Ergonomic products
- RESAP – areas of improvement
- Technology to streamline safety to ensure compliance

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

Prevent indirect and hidden costs of accidents and avoid fines by being in compliance with government, union, and other organizations’ safety laws, rules and guidelines.

Indirect and Hidden Costs of Accidents:

- Time lost from work by injured
- Loss in earning power
- Economic loss to injured’s family
- Loss of efficiency due to break up of crew
- Lost time by supervision
- Damage to tools and equipment
- Overhead cost (while work was disrupted)
- Loss of production

Alignment with strategic goals:

- To meet safety goal of zero safety incidences and to protect the safety and health of all employees.

Results/Benefits of Proposed Construction: (Members, Operations)

- Fewer incidents and accidents
- Reduce workers comp costs

- Reinforcement of the organization's operational goals
- Improved performance
- Compliance with government, union and other organizations' safety laws, rules and guidelines

Alternatives Identified or Corrective Plans Investigated:

- n/a

Submitted by: Tracie Shimatsu

Date: 10/18/22

Type Project	All Other
CFR/740c	1500
Dept/Section	Human Resources
Year	2023

Budget Title	Security System/Facilities Upgrades		
Budget #	XX1505	<i>Check One:</i> Regulatory	X
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	
Total Cost	\$ 150,000		

Description of Proposed Construction: (Location, Components, Scope)
Various KIUC properties to monitor and control access points. Trouble shooting electrical system faults and failures.

Normal Recurring Budget	75,000
PMRF Camera System	25,000
Suprema/Velocity Control Upgrade	50,000
Total Cost	150,000

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
Monitor and prevent unauthorized entry to KIUC properties. Minimize electrical trouble shooting and outage response time.

Alignment with strategic goals:
Protection of employees and facilities.

Results/Benefits of Proposed Construction: (Members, Operations)
Reduced property damage and travel time.

Alternatives Identified or Corrective Plans Investigated:
Prohibitive cost associated with security personal visiting each site on an hourly basis.

Submitted by: Kevin Akita
Date: 9/19/22

Type Project	All Other: Information Technology General Plant
CFR Code	1500
Dept/Section	Information Services
Year	2023

Budget Title	System Replacements	<i>Check One:</i>	
Budget #	XX1506	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	X
Total Cost	\$ 405,000		

Description of Proposed Construction: (Location, Components, Scope)

This project covers system replacements of desktop workstations, laptops, servers, and printers for all KIUC sites. Also provides for replacement of hardware equipment and software upgrades and implementations for core business systems, network communications, and security systems.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

Core Business System Replacements: \$100,000

This covers replacement equipment for AMI, Telecommunications, NISC, and other Core Business Systems to include equipment purchases and replacement system implementation and other application upgrades.

Compute Replacements: \$165,000

This item covers replacement of printers and other desktop, notebook hardware as needed. Hardware replaced regularly as original warranty expires or have been in service for 3 years or more. It is much more cost efficient to replace units versus opting for extended warranty.

Cyber Replacements: \$0

This item covers the replacements to cyber security infrastructure.

Storage Replacements: \$130,000

This item covers the replacements to backup and recovery infrastructure.

Network Replacements: \$ 0

This item covers the replacements to network infrastructure (core, distribution, access, wireless).

Power Replacements: \$ 10,000

This item covers the replacements to power infrastructure (data center, access layer).

Alignment with strategic goals:

The KIUC Strategic Plan has multiple goals related to member satisfaction. The information technology resources and systems provide KIUC staff with the tools needed to provide service to our members. Constant upgrade and replacement of old technology provides for more reliable and efficient access to information which is a critical component for our KIUC staff to care for our members.

Replacing obsolete equipment has a financial benefit which is another strategic goal. Instead of extending warranties on aging equipment and increasing O&M, it is more beneficial to capitalize replacement purchases to depreciate expenses over several years.

Results/Benefits of Proposed Construction: (Members, Operations)

The benefit of this project is to replace older equipment that are end of life, no longer supported, unreliable and more expensive to support and maintain.

From an IT perspective, upgrading and implementation of new technologies whether it's hardware or software enables access to support and maintenance to be more readily available and provided by vendors.

Alternatives Identified or Corrective Plans Investigated:

None

Submitted by: Stephen Tangalin / Myles Aquino

Date: 5/16/22

Type Project	All Other: Information Technology General Plant
CFR Code	1500
Dept/Section	Information Services
Year	2023

Budget Title	System Improvements	<i>Check One:</i>	
Budget #	XX1507	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	X
Total Cost	\$ 730,100		

Description of Proposed Construction: (Location, Components, Scope)

This project covers system improvements related to cyber security, network communications, applications, computer equipment, power and storage infrastructure. Also includes implementation of new software, core business systems, services, and purchase of new software licenses.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

Core Business System Improvements: \$50,000

This covers the purchase of new software and implementation related to the KIUC applications, hypervisor platform, AMI, telecommunications, disaster recovery, and systems reliability. Also includes costs for new core business product licenses (Microsoft and NISC).

Power Improvements: \$ 25,000

This covers costs for improvements to KIUC power utility to the data center and MPLS core, licensing, and installation.

Storage Improvements: \$ 0

This covers costs for improvements to data storage systems.

Compute Improvements: \$ 5,000

This covers costs for hardware and software purchases and implementation services for improvements to computer systems.

Network improvements: \$ 120,000

This covers costs for hardware, software, licensing and implementation services for improvements to the enterprise network resiliency.

Cyber Security improvements: \$ 530,100

This covers costs for hardware, software purchase and implementation services to improve KIUC's security posture.

Alignment with strategic goals:

The KIUC Strategic Plan has multiple goals related to member satisfaction. The information technology resources and systems purchased and implemented via this project provide KIUC staff with the tools needed to provide service to our members. Constant upgrade and replacement of old technology provides for more reliable and efficient access to information which is a critical component for our KIUC staff to care for our members.

Results/Benefits of Proposed Construction: (Members, Operations)

The benefit to KIUC operations is quicker and more efficient access to information that's needed to provide service to our members and to communicate with our business partners and other external entities. Security and reliability of IT resources and KIUC data are also address with the Network Management Improvements portion of this project.

Alternatives Identified or Corrective Plans Investigated:

None

Submitted by: Stephen Tangalin / Myles Aquino

Date: 5/13/22

Type Project	All Other
CFR/740c	1500
Dept/Section	T&D
Project Year	2023

Budget Title	Vehicles	<i>Check One:</i>	
Budget #	XX1508	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	
Total Cost	\$ 290,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket budget item to cover replacement and purchases of all vehicles: cars, trucks, large construction trucks and generators.

T&D 4wd Full Size Truck: \$85,000
T&D Anahola Flatbed: \$120,000
COO 4wd Full Size Truck: \$85,000

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
Vehicles are assessed by age, mileage, external body condition, and maintenance records for scheduling replacements.

Alignment with strategic goals:
Employee Satisfaction.
Providing the necessary tools, equipment, and transportation to perform their job.

Results/Benefits of Proposed Construction: (Members, Operations)
Reliable and efficient service from our KIUC employees.

Alternatives Identified or Corrective Plans Investigated:
Lease options were looked at, along with purchasing used. Due to past history, vehicles are replaced after about 5-7 years life and 70,000 miles of use, or when maintenance costs are high. Large trucks are replaced about every 10 years.

Submitted by: jcox
Date: 10/18/22

Type Project	All Other
CFR Code	1500
Dept/Section	T&D
Year	2023

Budget Title	T&D Furniture/Equip – Anahola Service Center	<i>Check One:</i>	
Budget #	XX1509	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	X
Total Cost	\$100,000		

Description of Proposed Construction: (Location, Components, Scope)
Anahola Service Center: Additional office furniture and equipment to accommodate East Line Crew moving in to Building.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
East Line Crew moving from Kapaa to Anahola in 1st quarter of 2023.

Alignment with strategic goals:
Employee satisfaction – By providing the necessary equipment to perform their job functions.

Results/Benefits of Proposed Construction: (Members, Operations)
Reliable and efficient member service.

Alternatives Identified or Corrective Plans Investigated:
n/a

Submitted by: jcox
Date: 10/18/22

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2023

Budget Title	Production Office Furniture & Equipment	<i>Check One:</i>	
Budget #	XX1509	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	X
		Growth/Development	
Total Cost	\$8,000		

Description of Proposed Construction: (Location, Components, Scope)

Purchase new office furniture and equipment.

Control room chairs that is designed for 24-hour use environment and multi-user adjustability: \$3,000 each

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

Purchase new office furniture and equipment to provide ergonomically correct office furniture and equipment.

Alignment with strategic goals:

Provide employees satisfaction by supplying new office furniture and equipment.

Results/Benefits of Proposed Construction: (Members, Operations)

Support employees with new office furniture and equipment.

Alternatives Identified or Corrective Plans Investigated:

Use existing office furniture that causes discomfort and equipment that requires repair

Submitted by: Gregg Matsuo

Date: 5/12/22

Type Project	All Other
CFR Code	1500
Dept/Section	Engineering
Year	2023

Budget Title	Office Furniture & Equipment	<i>Check One:</i>	
Budget #	231509	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
Project Total	\$ 5,000	Growth/Development	

Description of Proposed Construction: (Location, Components, Scope)
Blanket budget items that capture the costs to purchase general plant items, office furniture, hardware/software, and office equipment for the department.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
Purchase new office furniture and equipment to provide ergonomically correct office furniture and equipment.

Alignment with strategic goals:
Employee satisfaction. Providing the necessary equipment to perform employee jobs.

Results/Benefits of Proposed Construction: (Members, Operations)
Productive employees will provide prompt and efficient service to our members throughout the island.

Alternatives Identified or Corrective Plans Investigated:
Utilize existing furniture.

Submitted by: Cameron Kruse
Date: 11/16/2022

Type Project	All Other
CFR/740c	1500
Dept/Section	T&D
Project Year	2023

Budget Title	T&D-Tools & Equipment	<i>Check One:</i>	
Budget #	XX1510	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	
Total Cost	\$ 140,000		

Description of Proposed Construction: (Location, Components, Scope)
Blanket budget item that captures the costs to purchase general plant tools and equipment for the department.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
2021 Budget: \$ 140,000 Spent: \$ 177,462

Alignment with strategic goals:
Employee satisfaction and safety.
Providing the necessary tools, equipment, and transportation to perform their job safely and efficiently.

Results/Benefits of Proposed Construction: (Members, Operations)
Reliable and efficient service from our KIUC employees.

Alternatives Identified or Corrective Plans Investigated:
Use existing tools.

Submitted by: jcox
Date: 10/18/22

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2023

Budget Title	Production Tools & Equipment	<i>Check One:</i>	
Budget #	xx1510	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	X
		Growth/Development	
Total Cost	\$60,000		

Description of Proposed Construction: (Location, Components, Scope)

Purchase tools and equipment for the production department.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

Purchase tools and equipment so employees can perform their duties effectively and safe.

- Tools - \$10,000
- Victaulic Crimper - \$10,000
- PV Data Logger - \$25,000
- KPS Lawn Mower - \$15,000

Alignment with strategic goals:

Provide employees satisfaction by supplying reliable tools and equipment.

Results/Benefits of Proposed Construction: (Members, Operations)

Support employees with new tools and equipment.

Alternatives Identified or Corrective Plans Investigated:

Use existing tools.

Submitted by: Gregg Matsuo

Date: 5/12/22

Type Project	Tools & Equipment
CFR/740c	1500
Dept/Section	Member Services
Year	2023

Budget Title	Meter Reading Handheld Replacement	<i>Check One:</i>	
Budget #	231510	Regulatory	
<i>Project Start</i>	1/31/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	X
Total Cost	\$ 18,000		

Description of Proposed Construction: (Location, Components, Scope)
Purchase upgraded hardware and software to key enter reads, maintain remote capability and upload reading information on non-standard meters to NISC CIS.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
Current equipment will no longer be supported. The upgrades to existing hardware and software are necessary to assure we have tools and equipment that is supported by the vendor and to ensure continuity of system interface with CIS.

Alignment with strategic goals:
Improve and enhance employee satisfaction and support.

Results/Benefits of Proposed Construction: (Members, Operations)
Increased efficiency and effectiveness of staff.

Alternatives Identified or Corrective Plans Investigated:
n/a

Submitted by: Tracie Jacintho
Date: 5/01/22

Type Project	All Other
CFR Code	1500
Dept/Section	Engineering
Year	2023

Budget Title	Tools & Equipment	<i>Check One:</i>	
Budget #	231510	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
Project Total	\$ 5,000	Growth/Development	X

Description of Proposed Construction: (Location, Components, Scope)

Blanket budget item that captures the cost to purchase general plant tools and equipment for the department.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

Purchase tools and equipment so employees can perform their duties safe and effectively.

Alignment with strategic goals:

Employee satisfaction and safety. Providing the necessary tools, equipment, and transportation to perform their job functions safely and efficiently.

Results/Benefits of Proposed Construction: (Members, Operations)

Reliable, efficient, and effective service from our KIUC employees and improved service for the membership.

Alternatives Identified or Corrective Plans Investigated:

Retain use of existing but less safe and effective tools and equipment.

Submitted by: Cameron Kruse

Date: 11/16/2022

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2023

Budget Title	PAGS Oil & Water Separator	<i>Check One:</i>	
Budget #	231202M	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	
Total Cost	\$500,000		

Description of Proposed Construction: (Location, Components, Scope)

Upgrade Port Allen Generating Station (PAGS) oil and water separator to increase reliability of this function.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

Currently, the single oil and water separator performs adequately at treating the required oil and water from the SWD generation and captured surface water. At high demands this single unit struggles to keep up with increase demand. Also, if this single unit fails then all oil and water separation does not function, which could create a major wastewater treatment challenge.

The upgrade to a higher efficient oil and water separator increases the reliability of this function and treatment capacity. The upgrade unit would operate as the primary oil and water separator and the exiting unit act as a backup. This provides a backup that currently does not exists.

Alignment with strategic goals:

Maintaining the oil and water separation function helps the PAGS units operate reliably to meet the KIUC Strategic Plan by ensuring adequate and reliable power supply to grid.

Results/Benefits of Proposed Construction: (Members, Operations)

This project provides a higher efficiency oil and water separation process, plus a backup system, which allows PAGS to treat the required wastewater and oil.

Alternatives Identified or Corrective Plans Investigated:

Operate with the current oil and water separator as the sole unit at PAGS to perform this function. If this single oil and water separator fails then all oil and water treatment at PAGS stops, which could lead to reduce PAGS reliability.

Submitted by: Gregg Matsuo

Date: 6/25/21

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2023

Budget Title	S1 Exciter	<i>Check One:</i>	
Budget #	231202N	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	
Total Cost	\$ 400,000		

Description of Proposed Construction: (Location, Components, Scope)

This project will include the replacement of the S-1 generator’s exciter transformer (PPT) and static excitation system.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The exciter failed during December 2020 steam plant start up and is currently not in working condition.

Alignment with strategic goals:

One of the three key areas of KIUC’s Strategic Plan is Safe & Reliable Power Supply. By ensuring our facilities are reliable, KIUC can provide better value to its members.

Results/Benefits of Proposed Construction: (Members, Operations)

Reliability improvements typically result in either preventing or reducing un-planned equipment outages. These outages result in either increased cost due to expediting tools, material, and labor in an emergency and/or result in power outages or rolling blackouts around the island.

Alternatives Identified or Corrective Plans Investigated:

The alternative of not replacing the S-1 exciter is to decommission the steam plant. This would no longer give us the option of running the gas turbines in combined cycle which greatly increases their efficiency and power output. Not replacing the S-1 exciter would also end the possibility of converting the unit into a synchronous condenser which would increase grid stability while running 100% renewable.

Submitted by: Byron Blanchard

Date: 06/25/21

Type Project	Generation
CFR/740c	1200
Dept/Section	Power Supply / Kapaia Power Station
Year	2023

Budget Title	KPS OTSG Tube Replacement	<i>Check One:</i>	
Budget #	231202R	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	X
Total Cost	\$ 1,050,000		

Description of Proposed Construction: (Location, Components, Scope)
Full replacement of severely warped and damaged fin tubes and return bend components within the upper sections of Once-Through-Steam-Generator (OTSG) at Kapaia Power Station. Leaking tube bends, warped end-seal floor plates and stack damper drive-rack arms all require replacement to ensure reliability of operation and maintaining efficiency.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
OTSG degradation is normal under the extreme temperature and flue gas exposure of the system. Even with routine maintenance, the useful life of the OTSG components requires full replacement of boiler sections. To prevent catastrophic failure, potential loss of power production and ensure continuous, safe operation of the boiler, periodic repairs and maintenance are required. Last renovation was performed in 2022 to repair 4 boiler tube circuits and keep OTSG efficient. OEM, Innovative Steam Technologies, provides specialized expertise in the servicing of Kapaia’s system; particularly the boiler tube-bend replacements that require orbital welding in tight locations.

Alignment with strategic goals:
Reliability and efficiency.

Results/Benefits of Proposed Construction: (Members, Operations)
Maintaining optimal steam production through OTSG ensures best plant performance and heat rate. Steam is also necessary to effectively control NOx emissions and compliance with the plant’s Covered Source Permit.

Alternatives Identified or Corrective Plans Investigated:
None

Submitted by: Brooks Braun
Date: 5/18/22

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2023

Budget Title	SWD Turbo Replacement	<i>Check One:</i>	
Budget #	231206B	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	
Total Cost	\$250,000		

Description of Proposed Construction: (Location, Components, Scope)
Port Allen Generating Station, SWD Plant, Turbo Rotor, Gas Inlet Casing

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
An SWD turbo rotor and a gas inlet casing are considered critical spares and are long lead items. There are used spares on site that can be utilized; inspected, and approved for service, but having a new spare available increases unit reliability in the event of a turbocharger failure.

Alignment with strategic goals:
Maintaining the SWD units helps KIUC meet its Strategic Plan by ensuring adequate and reliable power supply to grid. These units are quick starting, capable of using biodiesel, and have good heat rates across the full load range. Because of these features, they will work well to complement future solar projects that can be variable and intermittent in nature.

Results/Benefits of Proposed Construction: (Members, Operations)
As this project is for the purchase of major components that extend the life of the SWD units, the benefit is continued use of the most efficient diesel units themselves at PAGS.

Alternatives Identified or Corrective Plans Investigated:
The alternative to this capital spending would be to install an emergency spare part then ordering a new spare, which may or may not have been budgeted, and then taking the unit down again once the new part(s) arrive.

Submitted by: Russ D. Santiago
Date: 6/25/21

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2023

Budget Title	SWD Gears	<i>Check One:</i>	
Budget #	231206C	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	
Total Cost	\$220,000		

Description of Proposed Construction: (Location, Components, Scope)
Port Allen Generating Station, SWD Plant Gear Replacement

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
Creating this as a contingency to the D9 intermediate gear should additional damage to the drive gears risk failure. During a major overhaul in February 2022, a tooth of the intermediate gear was found to have damage. A review of the previous overhaul report that took place in late 2015 noted the same tooth to be damaged as well. However, in between both overhauls, cracks developed from the original damaged spot and poses the risk of failure. A failure of this type could cause significant damage to the engine. The intermediate gear is considered a critical engine part and has a long lead time to manufacture.

Alignment with strategic goals:
Maintaining the SWD units helps KIUC meet its Strategic Plan by ensuring adequate and reliable power supply to grid. These units are quick starting, capable of using biodiesel, and have good heat rates across the full load range. Because of these features, they work well to complement solar projects that can be variable and intermittent in nature, especially during times of inclement weather.

Results/Benefits of Proposed Construction: (Members, Operations)
As this project is for the purchase of a major component that will extend the life of D9, the benefit is continued use of one of the most efficient SWD diesel units at PAGS.

Alternatives Identified or Corrective Plans Investigated:
The alternative to this capital spending would be to limit dispatching the unit to minimize risk but could require the use of a lesser efficient generator in its place, depending on system demand at the time.

Submitted by: Russ D. Santiago
Date: 5/10/22

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2023

Budget Title	D9 Intermediate Gear	<i>Check One:</i>	
Budget #	231206D	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	
Total Cost	\$200,000		

Description of Proposed Construction: (Location, Components, Scope)
Port Allen Generating Station, SWD Plant, D9, Intermediate Gear Replacement

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
During a major overhaul in February 2022, a tooth of the intermediate gear was found to have damage. A review of the previous overhaul report that took place in late 2015 noted the same tooth to be damaged as well. However, in between both overhauls, cracks developed from the original damaged spot and poses the risk of failure. A failure of this type could cause significant damage to the engine. The intermediate gear is considered a critical engine part and has a long lead time to manufacture.

Alignment with strategic goals:
Maintaining the SWD units helps KIUC meet its Strategic Plan by ensuring adequate and reliable power supply to grid. These units are quick starting, capable of using biodiesel, and have good heat rates across the full load range. Because of these features, they work well to complement solar projects that can be variable and intermittent in nature, especially during times of inclement weather.

Results/Benefits of Proposed Construction: (Members, Operations)
As this project is for the purchase of a major component that will extend the life of D9, the benefit is continued use of one of the most efficient SWD diesel units at PAGS.

Alternatives Identified or Corrective Plans Investigated:
The alternative to this capital spending would be to limit dispatching the unit to minimize risk but could require the use of a lesser efficient generator in its place, depending on system demand at the time.

Submitted by: Russ D. Santiago
Date: 5/10/22

Type Project	Generation
CFR Code	1200
Dept/Section	Power Supply / Kapaia Power Station
Year	2023

Budget Title	KPS Plant Road Upgrade	<i>Check One:</i>	
Budget #	231208E	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	X
		Growth/Development	
Total Cost	\$750,000		

Description of Proposed Construction: (Location, Components, Scope)

KPS plant road repair to provide service work traffic safe transport and access into the plant and fuel unloading area. Resurface asphalt areas coming into the plant and concrete roadway construction around fueling area (fuel tank farm going to fuel unloading area). The coverage area is about 10,000 square feet of roadway which will reinforce the road infrastructure and improve drainage.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

KPS plant interior road maintenance needs to be performed after years of use. The surface is deteriorating from fuel truck traffic, daily use, and poor water drainage. The weather and recurring fuel truck traffic/weight has created sunken areas, potholes, and asphalt surface erosion. If road repairs are not done proactively soon, it will constrain mobility, raise vehicle operating costs, increase accident rates and their associated property/human costs.

Alignment with strategic goals:

With no direct fuel pipeline, KPS plant road infrastructure is a critical asset to fuel delivery, unit availability, and reliable operations.

Results/Benefits of Proposed Construction: (Members, Operations)

Provides critical infrastructure and safe transport of fuel to KPS via fuel delivery trucks to ensure a reliable fuel supply. Avoid potential fuel spills from poor road conditions. Additional benefit of less wear and tear, lower maintenance costs, and reliable operation of mechanical equipment/vehicles traveling on the road.

Alternatives Identified or Corrective Plans Investigated:

N/A

Submitted by: Brooks Braun

Date: 4/29/22

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2023

Budget Title	PAGS New Control Room Dispatch Center	<i>Check One:</i>	
Budget #	231282	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
Total Cost	\$ 1,000,000		

Description of Proposed Construction: (Location, Components, Scope)

As of this writing, the location and scope are still to be determined. A preliminary project has been opened to engineer and scope this project. The most likely scenario will be a new building located on the Port Allen property. This will allow KIUC the flexibility of keeping staffing levels the same or staffing up depending on future needs.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The island of Kauai has been dispatched from the current Port Allen control room since the 1960's. The control room is designed to operate the power plant with 60's and 70's controls, not dispatch the island with computer screens. There is no room to add interactive grid monitoring. Current systems like AMI are on shared computers with customer databases and regular internet connections. Even the power plant control systems are stacked on each other making it difficult to just reach a keyboard.

The dollar figure above is based upon utilizing extra building space, new furniture, and moving the computer based control systems.

Alignment with strategic goals:

KIUC, more and more into the future, will become a service provider. With the advent of so much distributed generation, the control room function is now much more grid focused than plant focused. The new center will still control generation but will be architecturally designed for the large screens necessary for grid monitoring, multiple phones and radios, and offices for emergency response decisions.

Results/Benefits of Proposed Construction: (Members, Operations)

The result will be an ergonomically superior workplace. This will improve responsiveness to member problems and prevent grid problems from occurring in the first place.

Alternatives Identified or Corrective Plans Investigated:

Once the PSI project is completed, alternatives will be prioritized. The last alternative is to leave the control room as is.

Submitted by: Gregg Matsuo

Date: 5/12/22

Type Project	Distribution – Conversions or Line Changes
CFR/740c	300
Dept/Section	T&D
Year	2023-2024

Budget Title	Puhi Subdivision 12.47kV Upgrade	<i>Check One:</i>	
Budget #	2303014	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2024	Economically Justified	
2023	\$3,000,000	Growth/Development	
2024	\$1,000,000		
Total Cost	\$4,000,000		

Description of Proposed Construction: (Location, Components, Scope)

- 1) Replace (12) existing 2.4/4kV pad transformer with new 50kVA 7.2/12kV transformers.
- 2) Replace approximately 10,000 feet of direct buried primary and secondary cables with new primary #2 15kV and secondary 350MCM 600v underground cables. Existing direct buried cables to be abandoned in place.
- 3) Install approximately 10,000 feet of 2” and 3” PVC conduit and associated handholes and transformer pads.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

To standardize existing 4kV underground line distribution to current standard 7.2/12kV. The conversion will improve customer reliability, eliminate the need for 4kV equipment inventory and reduce system losses by moving to higher voltage.

Alignment with strategic goals:

Improve Reliability.

Results/Benefits of Proposed Construction: (Members, Operations)

New improved system is less likely to have failures. Conversion will allow area to be compatible with current standards.

Alternatives Identified or Corrective Plans Investigated:

Allow the system to remain as is and repair areas as needed which over time will increase due to aging facilities.

Submitted by: jcox/fp

Date: 11/17/22

Type Project	All Other
CFR/740c	1500
Dept/Section	HCP
Year	2023

Budget Title	HCP Incidental Take Permit		
Budget #	231540	<i>Check One:</i> Regulatory	X
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
Total Cost	\$ 3,000,000	Growth/Development	

Description of Proposed Construction: (Location, Components, Scope)
KIUC obtained an incidental take permit from the US Fish and Wildlife Service in May 2011, which expired in May 2016. KIUC contracted with multiple vendors and consultants to assist KIUC in obtaining a long-term incidental take permit. In some capacity, vendors/consultants act as representatives of KIUC with US Fish and Wildlife Service and State of Hawaii DLNR to progress the collaborative effort of drafting a Habitat Conservation Plan to acquire an incidental take permit.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
Regulatory
KIUC obtained a Federal Incidental Take Permit (ITP) from the USFWS in May 2011 for five years. Through the 2011 ITP and development of KIUC’s Habitat Conservation Program (HCP) for a 30-year ITP term, minimization projects are being identified that KIUC will be required to implement as part of its HCP. These minimization projects reduce the risk of take of the protected seabirds that have the potential to collide with KIUC’s overhead lines. KIUC currently funds a monitoring program, the data of which supports the selection of minimization projects.

Even though KIUC’s 2011 Incidental Take Permit expired in May 2016, it remains in effect while KIUC develops the HCP and applies for a renewal of its permit. KIUC expects a public draft of the HCP to be published in late 2022. Completion of the HCP will likely be in late 2023 or even into 2024, and issuance of the Federal ITP and State Incidental Take License (ITL) is anticipated after that.

Summary of Scope of Project

- Long-term HCP and EIS drafting

Alignment with strategic goals:
Environmental Stewardship in preserving our native resources.

Results/Benefits of Proposed Construction: (Members, Operations)
Reduce the risk of incidental take of threatened and endangered seabird species (Newell’s Shearwater, Hawaiian Petrel and Band-rumped Storm Petrel) that have

the potential to collide with KIUC's overhead lines. Minimization in key areas reduces the number of birds impacted and reduces the mitigation requirements throughout the 30-year term of the ITP and ITL.

Alternatives Identified or Corrective Plans Investigated:

The projects are selected from overhead line segments based on SOS Program recovery data, acoustic monitoring and visual surveys, and other available information. The projects are identified through discussion with USFWS (U. S. Fish and Wildlife Service), DOFAW (State of Hawaii, Department of Forestry and Wildlife), and KESRP (Kauai Endangered Seabird Recovery Program).

Submitted by: Chris Yuh

Date: 12/13/21

Type Project	All Other
CFR/740c	1500
Dept/Section	Human Resources
Year	2023

Budget Title	Eleele Sewer Line	<i>Check One:</i>	
Budget #	231569	Regulatory	X
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	
Total Cost	\$ 100,000		

Description of Proposed Construction: (Location, Components, Scope)
 KIUC Eleele T&D properties to repair or replace deteriorating sewer line.

Eleele T&D Sewer Repair	100,000
Total Cost	100,000

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
 Prevent and minimize interruption to KIUC operation.

Alignment with strategic goals:
 Protection of employees and facilities.

Results/Benefits of Proposed Construction: (Members, Operations)
 Reduced property damage and time loss.

Alternatives Identified or Corrective Plans Investigated:
 N/A

Submitted by: Kevin Akita
Date: 9/19/22

Type Project	All Other
CFR/740c	1500
Dept/Section	Human Resources
Year	2023

Budget Title	Hana Kukui Generator	<i>Check One:</i>	
Budget #	231570	Regulatory	X
<i>Project Start</i>	1/1/2023	Reliability	
<i>Project End</i>	12/31/2023	Economically Justified	
		Growth/Development	
Total Cost	\$ 200,000		

Description of Proposed Construction: (Location, Components, Scope)
Lihue Hana Kukui building property to upgrade backup generator infrastructure. Trouble shooting electrical wiring and installation of new automatic transfer switch.

Hana Kukui Generator	200,000
Total Cost	200,000

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
Backup power to entire building. Minimize outage and downtime to the building.

Alignment with strategic goals:
Protection of employees and facilities.

Results/Benefits of Proposed Construction: (Members, Operations)
Full backup power to the building in the event of a disaster.

Alternatives Identified or Corrective Plans Investigated:
NA

Submitted by: Kevin Akita
Date: 9/19/22

Type Project	Substations, Switching Station and Metering Point Changes
CFR/740c	500
Dept/Section	Engineering
Year	2023

Budget Title	North Shore Energy Resiliency Project	Check One:	
Budget #	230547	Regulatory	
Project Start	1/1/2023	Reliability	X
Project End	12/31/2023	Economically Justified	
Total Cost	\$2,500,000	Growth/Development	

Description of Proposed Construction (Location, Components, Scope)

New Battery Energy Storage System (BESS) to be installed at either Wainiha Substation or Princeville Substation. Components will consist of batteries, inverters, transformer, and circuit breakers.

Reason for Proposed Construction (History, Design Criteria, Cost Basis)

Wainiha Substation loads and Princeville loads have been served via a single radial transmission line from Kapaa Substation. When this 24-mile line experiences a fault, all the loads at Wainiha Substation and Princeville Substation lose power. Additionally, Wainiha Hydro trips offline during these events.

Wainiha Substation is the preferred location for installation of the BESS as the existing demand is less than the capacity of a typical utility sized BESS.

In the case of the installation of the BESS at Wainiha Substation, the design criteria would be to first isolate Wainiha Substation via circuit breaker, then blackstart the BESS to energize the substation and begin to pick up the load and feeder breaker at Wainiha Substation. Once blackstart is successful, the hydro can then be turned on and be used to charge the battery and provide continuous power to the loads and feeder out of Wainiha Substation

In the case of the installation of the BESS at Princeville Substation, the design criteria would be to first isolate Princeville Substation via circuit breakers, then close the existing 12kV recloser tying circuits 4122 Princeville and 3512 Anahola. Once this is completed, the BESS at Princeville will sync to the incoming voltage sourced from Anahola and be able to provide real power to serve loads at Princeville Substation. It is noted that not all loads at Princeville Substation will be able to be served with a single utility sized BESS at Princeville Substation running in parallel with the Anahola source.

Cost Basis for this construction is based on latest material quotes from manufacturers, including KIUC overheads. KIUC is potentially receiving federal funding for this project and will work toward completion of this project pending approval of the federal funding.

Alignment with Strategic Goals

- Reliability

Results/Benefits of Proposed Construction (Members, Operations)

- Improve reliability to loads at Wainiha Sub and, to a lesser extent, Princeville Sub.
- Construction work on lattice towers between Hanalei Tap and Wainiha Substation will be more easily scheduled with a BESS at Wainiha Substation.

Alternatives Identified or Corrective Plans Investigated

Not applicable.

Submitted by: Cameron Kruse

Date: 11/14/22

Type Project	Transmission–New Lines
CFR/740c	800
Dept/Section	Engineering
Year	2023-2024

Budget Title	Kilohana/Hanahanapuni 69kV Line	Check One:	
Budget #	230803	Regulatory	
Project Start	1/31/2023	Reliability	X
Project End	12/31/2024	Economically Justified	
2023	\$1,365,000	Growth/Development	X
2024	\$1,365,000		
Total Cost	\$2,730,000		

Description of Proposed Construction (Location, Components, Scope)

New 69kV transmission line from Kilohana Tap to Hanahanapuni Tap. 5.6 miles of 559 AAC conductor and insulators strung in on existing steel towers.

Reason for Proposed Construction (History, Design Criteria, Cost Basis)

Line installed will create transmission loop from Port Allen to Princeville (express), Princeville to Kapaa, Kapaa back to Port Allen.

Note: The existing Port Allen to Lihue transmission line will be cut at Kilohana Tap and remain de-energized down to Lihue until Kilohana Switchyard comes online.

Under this configuration, Lihue Switchyard continues to meet the N-1 transmission line loss contingency. (Green to Lihue and Kapaia to Lihue transmission lines remain unaffected.)

Estimated Installed cost: \$488,000/mile.

Helicopter assistance will be required in some areas.

Alignment with Strategic Goals

- Reliability
- Complete North Shore Transmission Loop
- Create express 69kV feed directly to Princeville Switchyard

Results/Benefits of Proposed Construction (Members, Operations)

- Improve 69kV transmission reliability
- Improve transmission line losses provide voltage support for high generation output from west side of island

Alternatives Identified or Corrective Plans Investigated

Not applicable.

Submitted by: Cameron Kruse

Date: 05/10/22

Type Project	New Transmission Substations, New Switching Stations
CFR/740c	900
Dept/Section	Engineering
Year	2023-2024

Budget Title	Kilohana Switchyard	<i>Check One:</i>	
Budget #	230901	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2024	Economically Justified	
2023	\$ 4,875,000	Growth/Development	X
2024	\$ 14,625,000		
Total Cost	\$ 19,500,000		

Description of Proposed Construction: (Location, Components, Scope)

New switchyard at Kilohana near the intersection of seven 69kV transmission lines. Switchyard to be built while all lines remained energized; cutover to occur upon completion.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

8-Bay redundant 1.5 breaker 69kV configuration to be utilized.

- Line 1: from Port Allen 5706
- Line 2: from Port Allen 5714
- Line 3: from Green Energy 5724/5725
- Line 4: from Kapaa 5746
- Line 5: from Lihue 5735
- Line 6: from Lihue 5736
- Line 7: from Princeville 5752
- Line 8: future renewable interconnection

Alignment with strategic goals:

- Reliability: Ability to segment seven 69kV transmission lines. 69kV transmission loops are physically shorter in distance
- Growth/Development: Last bay will be reserved for possible renewable project 69kV interconnection point

Results/Benefits of Proposed Construction: (Members, Operations)

- Improve 69kV transmission reliability
- Improve transmission line losses

Alternatives Identified or Corrective Plans Investigated:

A new switchyard was evaluated at Hanahanapuni. Access to Hanahanapuni during storm/rain events will be an issue. Access roads to Kilohana are maintained.

Submitted by: Cameron Kruse

Date: 5/10/22

Type Project	Transmission – New Lines
CFR/740c	1000
Dept/Section	Engineering
Year	2023-2024

Budget Title	Hanalei Tap-Princeville Transmission Line	Check One:	
Budget #	231028	Regulatory	
Project Start	1/31/2023	Reliability	X
Project End	12/31/2024	Economically Justified	
2023	\$1,500,000	Growth/Development	X
2024	\$1,000,000		
Total Cost	\$2,500,000		

Description of Proposed Construction (Location, Components, Scope)

New 69kV transmission line from Hanalei Tap to Princeville Substation. 1.25 miles of 559 AAAC conductor and insulators strung in on existing transmission pole line.

Reason for Proposed Construction (History, Design Criteria, Cost Basis)

Line installed will create transmission loop from Port Allen to Princeville (express), Princeville to Kapaa, Kapaa back to Port Allen.

Note: The existing Port Allen to Lihue transmission line will be cut at Kilohana Tap and remain de-energized down to Lihue until Kilohana Switchyard comes online.

Under this configuration, Lihue Switchyard continues to meet the N-1 transmission line loss contingency. (Green to Lihue and Kapaia to Lihue transmission lines remain unaffected.)

Estimated Installed cost: \$1,600,000/mile (assumes 100% pole replacement)

Highway traffic control will be required in some areas.

Alignment with Strategic Goals

Reliability

Complete North Shore Transmission Loop

Create express 69kV feed directly to Princeville Switchyard

Results/Benefits of Proposed Construction (Members, Operations)

- Improve 69kV transmission reliability
- Improve transmission line losses provide voltage support for high generation output from west side of island

Alternatives Identified or Corrective Plans Investigated

Not applicable.

Submitted by: Cameron Kruse

Date: 05/10/22

Type Project	All Other: Facility Repairs
CFR/740c	1500
Dept/Section	Financial & Corporate Services/Port Allen Warehouse
Year	2023

Budget Title	Eleele Materials Warehouse Improvements – Phase 3	<i>Check One:</i>	
Budget #	231567	Regulatory	
<i>Project Start</i>	1/1/2023	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
Total Cost	\$150,000	Growth/Development	

Description of Proposed Construction: (Location, Components, Scope)

To repair the Port Allen Warehouse Facility. Estimated breakdown of spend:

1. New modular office solution, which includes:
 - a. Supervisors office with door
 - b. Staff office
 - c. Break area
2. Permanent his & her bathrooms

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The Port Allen Warehouse was constructed prior to Hurricane Iniki, minor/temporary repairs were made after the hurricane. However, over the years the damage has continued to build.

New module office solution is to move the admin office outside, making more storage space available in the warehouse for inventory. New his/her bathrooms to also be included, depending on plumbing.

Alignment with strategic goals:

Project is to provide our employees with a solid and reliable structure to work from as they strike towards workplace excellence in serving our membership.

Results/Benefits of Proposed Construction: (Members, Operations)

Protect KIUC's assets (employees and inventory) from the weather and environmental conditions.

Alternatives Identified or Corrective Plans Investigated:

For years the Warehouse team has had to move inventory around the warehouse to protect inventory from certain areas of the building where weather comes in. This is an inefficient use of space and continues to handcuff the team. An alternative would be to wait for a big storm/hurricane to bring the building down, however that is unsafe, could take years, and will be at the cost of possibly losing existing inventory.

Submitted by: Chris Yuh

Date: 5/13/22

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2019-2023

Budget Title	Advance AGC System Installation	<i>Check One:</i>	
Budget #	191204A-CO4	Regulatory	X
<i>Project Start</i>	1/1/2019	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	X
<i>2019 CWIP</i>	\$ 55,000	Growth/Development	
<i>2020 CWIP</i>	\$ 10,000		
<i>2021 CWIP</i>	\$ 5,000		
<i>2022</i>	\$ 0		
<i>2023</i>	\$ 30,000		
Total Cost	\$ 100,000		

Description of Proposed Construction: (Location, Components, Scope)
Due to existing SCADA system replacement and increasing renewable energy sources, KIUC requires a new Automatic Generator Control (AGC) system. The new system will be programmed to dispatch both fossil fuel and renewable units.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)
The dispatch of existing fossil fuel and increasing renewable units requires replacing the existing SCADA system. This will allow operators to dispatch both fossil fuel and renewable units as required to renewable energy dispatch goals.

Alignment with strategic goals:
Create an efficient method of dispatching renewable units and fossil units to meet renewable energy goals.

Results/Benefits of Proposed Construction: (Members, Operations)
The benefit of this project provides an efficient method of dispatching both fossil fuel and renewable units. This SCADA system replacement allows operators to dispatch the increasing number of renewable units.

Alternatives Identified or Corrective Plans Investigated:
Inefficient dispatch of renewable units and fossil units.

Submitted by: Gregg Matsuo
Date: 11/7/22

Type Project	Generation
CFR Code	1200
Dept/Section	Production/Kapaia Power Station
Year	2022-2023

Budget Title	KPS Fuel Nozzles for GT	<i>Check One:</i>	
Budget #	221202J-CO1	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	X
<i>Project End</i>	3/31/2023	Economically Justified	
2022	\$300,000	Growth/Development	
2023	\$300,000		
Total Cost	\$600,000		

Description of Proposed Construction: (Location, Components, Scope)

Acquisition of up to thirty (30) gas turbine fuel nozzles will be used during Kapaia Power Station’s next major overhaul, possibly within the four-year period.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

One full set of the nozzles must be on-hand at all times to ensure availability of KPS for power production. These same nozzles are also necessary for installation on a G.E. lease engine during overhaul, or in the event of catastrophic failure of the Kapaia unit.

Alignment with strategic goals:

KPS remains available as most efficient firm-capacity unit.

Results/Benefits of Proposed Construction: (Members, Operations)

Reliability of KPS in providing 26.4 MW to members 355 days/yr.

Alternatives Identified or Corrective Plans Investigated:

Condition of in-service fuel nozzles during overhaul will determine necessity of carrying out this work order. Partial order may be placed if full set replacement is not warranted.

Submitted by: Gregg Matsuo

Date: 9/11/20

Type Project	Generation
CFR/740c	1200
Dept/Section	Production
Year	2022-2023

Budget Title	PAGS Synchronous Condenser Conversion	<i>Check One:</i>	
Budget #	221202P-CO1	Regulatory	
<i>Project Start</i>	8/1/2022	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	X
2022	\$ 500,000	Growth/Development	
2023	\$ 1,900,000		
Total Cost	\$ 2,400,000		

Description of Proposed Construction: (Location, Components, Scope)

Project, located at the Port Allen Generating Station (PAGS), would convert the S1 steam turbine generator to a synchronous condenser.

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The S1 steam turbine generator was installed at Port Allen in 1968 as part of the steam plant installation which also included a boiler and other associated equipment. The boiler was taken out of service in 2019. Although the steam turbine can still be fed by an HRSG installed in 1977, the HRSG has not been needed to operate in over a year and has not run consistently in over a decade.

The S1 generator was rewound in 2007 and is in excellent condition. The generator would be capable of importing or exporting almost 10 MVAR of reactive power as a synchronous condenser.

This project would involve dismantling the steam turbine and installing a motor to wind up the generator, and a clutching mechanism to allow the motor to de-couple once the generator was synchronized to the grid. The project would also require oil piping modifications, electrical work, and controls work. Lastly, the current exciter is obsolete and not working and will require replacement.

Alignment with strategic goals:

This project will result in more grid stability at minimal cost.

Results/Benefits of Proposed Construction: (Members, Operations)

Unit S1 will have a parasitic load of less than 0.1 MW, far less than the current 1.5 MW it takes to run the KPS unit as a synchronous condenser, thus saving roughly \$150 to \$300 per hour of operation when the grid is not curtailing. In 2020 KPS ran as a synchronous

condenser over 1000 hours. This will also allow KIUC to run 100% renewable with KPS down for maintenance.

Alternatives Identified or Corrective Plans Investigated:

1. Utilize PAGES unit GT-2 as a synchronous condenser. This unit could export or import twice the MVAR of S1 but would require more mechanical expertise as this unit is needed to be available as a prime mover as well. Also, this unit would have to be started by the prime mover every time used, costing about \$400 per start in fuel and maintenance.
2. Perform the project but keep the steam turbine. This will increase the cost of the project by approximately \$1MM and the steam turbine only runs at best once a year.

Submitted by: Richard Vetter

Date: 6/25/21

Type Project	Transmission – New Lines
CFR Code	800
Dept/Section	HCP
Year	2022-2023

Budget Title	Seabird Mitigation	<i>Check One:</i>	
Budget #	220801B-CO1	Regulatory	X
<i>Project Start</i>	1/1/2022	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
2022	\$ 5,217,948	Growth/Development	
2023	\$ 7,012,452		
Total Cost	\$ 12,230,400		

Description of Proposed Construction: (Location, Components, Scope)

History:

Since 2011, KIUC has been studying the impact of seabirds with our transmission system. Transmission lines are the highest conductors on our overhead facilities and are typically at risk for collision. We plan to design and construct the line with very minimal risk of collision.

KIUC will also be constructing two predator proof fences to mitigate for incidental take of endangered and threatened seabirds, specifically the Newell’s Shearwater, Hawaiian Petrel, and the Band-Rumped storm petrel. In Upper Limahuli Preserve (National Tropical Botanical Gardens), KIUC will be replacing the ungulate proof fence presently providing protection for the seabird colonies. In Upper Manoa Valley, KIUC will be constructing a new predator proof fence for the small colony that is present.

2011-2017: Short Term Habitat Conservation Plan and Transmission Project on hold

KIUC obtains an incidental take permit from the USFWS in 2011 and initiates various minimization projects to reconfigure lines to minimize impacts to seabirds and several mitigation projects to protect seabird colonies. KIUC also initiates an Underline Monitoring Program to quantify the impact to seabirds.

Results confirm collisions on transmission lines and also identifies the proposed mitigation sites that can accommodate predator proof fences.

2022 Goals:

- Re-start. Re-Plan;
- Community Outreach
- Submit PUC Application, Public Hearings, Authorizing Expenditure;
- Complete Detailed Engineering (Site Survey, construction drawings);
- Obtained Permits and Approvals (SMA, CDUP, HDOT, County, Easement)
- Coordination with HTCO, OTWC

- RFP / Award Contract / Purchase Long Lead Material if needed;

2022-2023 Goals

- Construction predator proof fences

Summary of Scope of Project

Upper Manoa Valley

- Construct 2.7 mile long fence enclosing 157 acres
- Fence to allow unrestricted stream flow
- To include social attraction site for drawing in new seabirds
- Complete fencing by 2023
- Total cost of \$5,992,000 (includes 12% OH)

Upper Limahuli Preserve

- Construct 3.5 mile long fence enclosing 363 acres
- Fence to allow unrestricted stream flow
- Complete fencing by 2023
- Total cost of \$6,238,400 (includes 12% OH)

Reason for Proposed Construction: (Design Criteria, Cost Basis)

The primary operational objective of this project is to:

- Mitigate for KIUC's incidental take of protected seabirds

Operational Criteria:

- Comply with Endangered Species Act

Other Design Criteria:

- Minimize environmental impacts to native habitats and to threatened and endangered birds that may collide with the power lines.

Alignment with strategic goals:

- The North Shore project is part of the HCP approved by USFWS in May 13, 2011. It is also in KIUC's proposed 30-year Long Term HCP that is currently in draft form.
- It is aligned with KIUC's strategic goal to continue to be compliant with federal and state permits for conservation of endangered seabirds

Results/Benefits of Proposed Construction: (Members, Operations)

The predator proof fences will provide protection from rats, cats, and pigs allowing a greater percentage for survival of our protected seabirds using the area. The predator proof fences are the greatest opportunity for population growth for the colony and is the major mitigation for the Long Term HCP.

Alternatives Identified or Corrective Plans Investigated:

KIUC is currently providing mitigation for seabirds at other non-fenced colonies. It is more cost effective to protect a fenced colony than an unfenced colony over the

longer term and it also projects a population growth that is desirable for the preservation of the species.

Submitted by: Chris Yuh

Date: 5/13/22

Type Project	All Other: Facility Repairs
CFR/740c	1500
Dept/Section	Financial & Corporate Services/Port Allen Warehouse
Year	2022-2023

Budget Title	Eleele Materials Warehouse Improvements – Phase 2	<i>Check One:</i>	
Budget #	221566-CO1	Regulatory	
<i>Project Start</i>	1/1/2022	Reliability	X
<i>Project End</i>	12/31/2023	Economically Justified	
<i>CWIP</i>	\$305,000	Growth/Development	
<i>2023</i>	\$100,000		
Total Cost	\$405,000		

Description of Proposed Construction: (Location, Components, Scope)

To repair the Port Allen Warehouse Facility. Estimated breakdown of spend:

1. Replace shelving/racks \$200,000
2. Repair/replace ceiling and internal insulation \$70,000
3. Replace 16 ceiling fans across warehouse not working \$15,000
4. Repair solar panels on roof falling off \$10,000
5. Repair 1 inverter from the solar system \$5,000
6. KIUC OH \$105,000

Reason for Proposed Construction: (History, Design Criteria, Cost Basis)

The Port Allen Warehouse was constructed prior to Hurricane Iniki, minor/temporary repairs were made after the hurricane. However, over the years the damage has continued to build. Please see attached pictures of damage due to wear and tear.

Alignment with strategic goals:

Project is to provide our employees with a solid and reliable structure to work from as they strike towards workplace excellence in serving our membership.

Results/Benefits of Proposed Construction: (Members, Operations)

Protect KIUC's assets (employees and inventory) from the weather and environmental conditions.

Alternatives Identified or Corrective Plans Investigated:

For years the Warehouse team has had to move inventory around the warehouse to protect inventory from certain areas of the building where weather comes in. This is an inefficient use of space and continues to handcuff the team. An alternative would be to wait for a big storm/hurricane to bring the building down, however that is unsafe, could take years, and will be at the cost of possibly losing existing inventory.

Submitted by: Chris Yuh

Date: 5/13/22

KAUAI ISLAND UTILITY COOPERATIVE

DOCKET NO. 2022-0208

ATTACHMENT BR-905

(9 PAGES)

Fuel Price Forecast 2022

Prepared for
Kauai Island Utility Cooperative

By
Stillwater Associates LLC
Irvine, California, USA

October 4, 2022



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Stillwater Associates LLC prepared this report for the sole benefit of Kauai Island Utility Cooperative and no other party.

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1 Basis

This forecast is based on the Annual Energy Outlook (AEO) and Short-Term Energy Outlook (STEO) published by the Energy Information Administration (EIA), the statistical and analytical arm of the U.S. Department of Energy (DOE). The AEO is the most complete forecast of energy demand, use, supply, and prices that is publicly available and is commonly used as a reference for energy forecasting.¹ As the name implies, an Annual Energy Outlook is issued each year. In addition to the AEO, the EIA publishes a STEO. The STEO is a monthly publication that focuses on the short-term outlook and gives the short-term (current and next calendar year) assessment of energy supply, demand, and prices, as well as reflects current world events.² Since this assessment is made more frequently than the AEO, it better reflects the near-term current market conditions. To provide the most up-to-date forecast, the STEO is used for the initial years of the forecast and the AEO is used thereafter.

The Reference Case in the 2022 AEO, published on March 3, 2022, forms the basis for our Base Case forecast beyond 2024 and until 2050. The Reference Case reflects the EIA's judgment for the most likely supply and demand for petroleum based on expected economic growth, changes in crude oil production due to oil prices, the growth in unconventional and alternative liquids resources, and changes in energy consumption due to elasticity. The base case forecast for years 2022 and 2023 are based on the September 2022 STEO.

New this year, the Base Case and two high/low alternate cases include updated modeling to reflect the current contract pricing basis that was begun in April 2020 and excludes 500 ppm diesel that is no longer purchased.

The 2022 AEO Reference and alternate case highlights are summarized below:

- Real gross domestic product (GDP) grows by an average of 2.2% per year from 2022–2050.
- North Sea Brent crude oil price is the main benchmark for oil prices and is highly influenced by global conditions. Three oil price cases—Reference, High Oil Price, and Low Oil Price—examine the potential effects of alternative price paths on energy markets. The Brent crude oil price by 2050 is \$90/B in constant 2021 dollars in the Reference case, \$170/B in the High Oil Price case, and \$45/B in the Low Oil Price case. These cases form the projected range of crude oil price scenarios in the AEO that are used in this forecast.
- The AEO is based on current laws and regulations as of November 2021 and includes provisions from the Bipartisan Infrastructure Law.
- At the time of AEO publication, COVID-19 continued to be the main source of uncertainty. Note that the AEO development preceded the Russian invasion of Ukraine thus the invasion was not a factor considered. The use of the STEO for the forecasts through 2023 captures the impact of the invasion.
- Energy consumed by Light Duty Vehicles decreases by 3% from 2021 to 2050, from 54% to 51% due to increasing sales of electric and hybrid vehicles. U.S. Diesel demand is forecasted to decrease reducing diesel's price premium to crude oil price.
- Natural gas and natural gas plant liquids (NGPLs) show significant gains, stemming from growth in the industrial sector natural gas with projected low natural gas prices, as well as increasing demand for LNG exports. As a percentage, renewable energy shows the largest gains—lower technology costs and changing regulations are major contributors.
- U.S. industrial energy consumption is expected to at least double by 2050, returning to pre-pandemic levels by 2022. And transportation energy consumption is forecasted to reach pre-pandemic levels by 2025.

¹ EIA. *Annual Energy Outlook 2022*. March 3, 2022. <http://www.eia.gov/forecasts/aeo/index.cfm>

² EIA. *Short-Term Energy Outlook*. September 7, 2022. <http://www.eia.gov/steo/>

- The share of renewable diesel in the diesel pool and in the biomass-based diesel market increases due to state and federal incentives and targets. Although petroleum and other liquids remain the most consumed fuels through 2050.

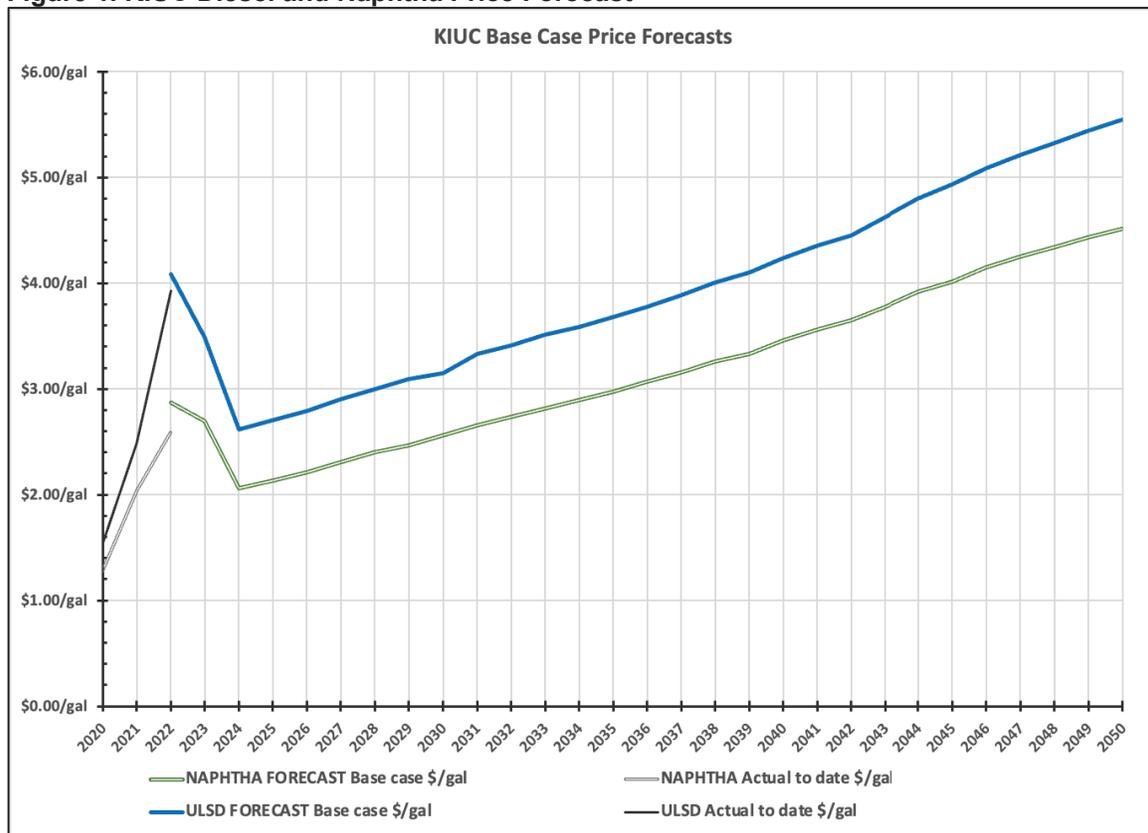
2 Forecasted Prices

The prices forecasted in this report are in “nominal” or “current” dollars that represent the price that is experienced in the forecast year. This differs from prices that are expressed as “real” or “constant” dollars, which are the prices corrected for the effects of inflation and are expressed in dollars valued at a point in time such as 2021.

To convert from the EIA price forecasts to Kauai Island Utility Cooperative (KIUC) forecast prices, correlated differentials based upon historical differentials were added to the AEO forecasted prices. For ULSD, the historic differentials of KIUC monthly prices were compared to LA Spot and wholesale ULSD in the Census Pacific Region to develop a normal differential. This differential was applied to the AEO forecast for wholesale ULSD in the Census Pacific Region. For naphtha the historic differentials of KIUC monthly prices were compared to Brent crude oil spot price to develop a normal differential that was applied to the AEO forecast for Brent crude.

The Base Case forecast KIUC prices for diesel and naphtha are shown below in Figure 1.

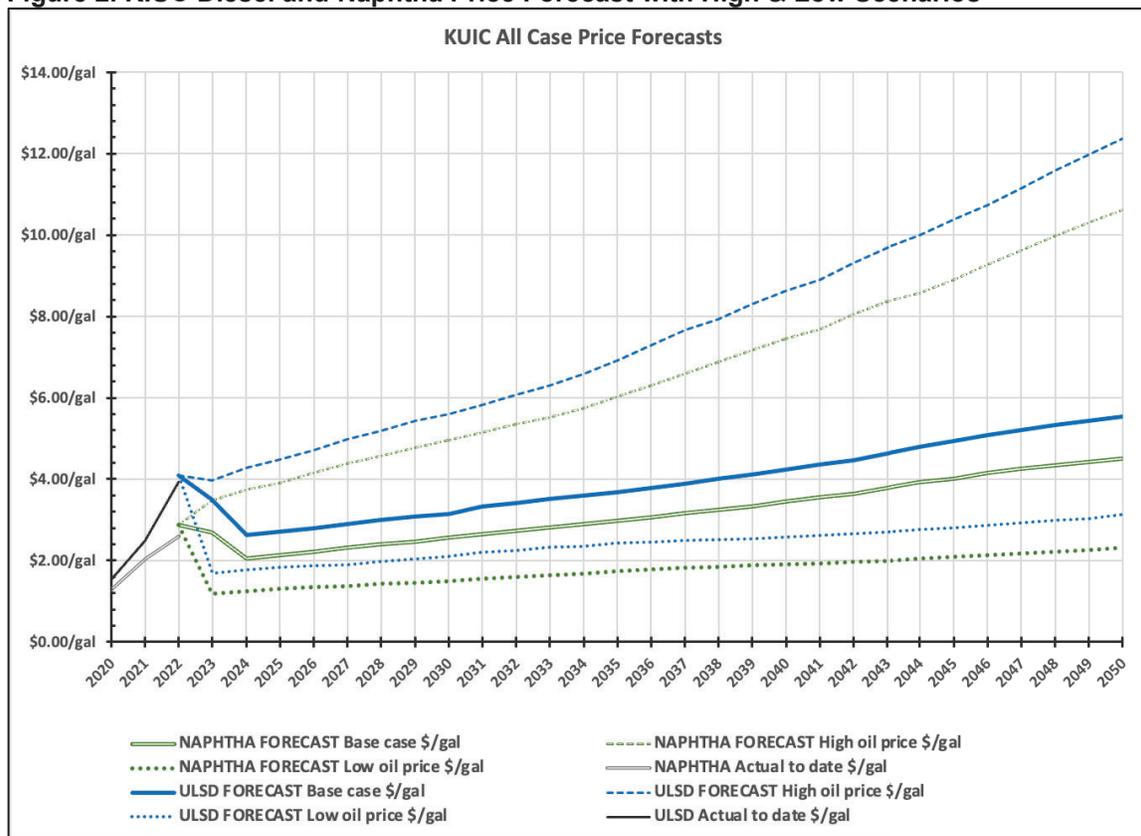
Figure 1. KIUC Diesel and Naphtha Price Forecast



The detailed prices used in the above figure and the following figures are tabulated in the attached Table 1.

To illustrate the potential range of forecasted naphtha and diesel prices, alternative forecasts were created based on the AEO High Oil Price and AEO Low Oil price cases. These alternate scenarios “represent international conditions that could collectively drive prices to extreme, sustained deviations from the Reference case price path.”³ These alternate cases and the base case are shown in Figure 2. For the 2022 and 2023 base case, the STEO forecasts that crude oil prices will remain high through 2023, driving U.S. crude production to record highs.⁴

Figure 2. KIUC Diesel and Naphtha Price Forecast with High & Low Scenarios



³ Ibid, 1.

⁴ Ibid, 2.

The current Base Case forecast for diesel and naphtha is compared to the last forecast issued in September 2019 in Figure 3. The differences in the forecasts, beyond the extended time period, is primarily the difference in the 2019 AEO and 2022 AEO Reference Case crude oil price forecast and to a lesser extent the change in forecast methodology mentioned previously including the switch from 500 ppm diesel to ULSD.

Figure 3. KIUC Price Forecast Comparison to Earlier Forecasts

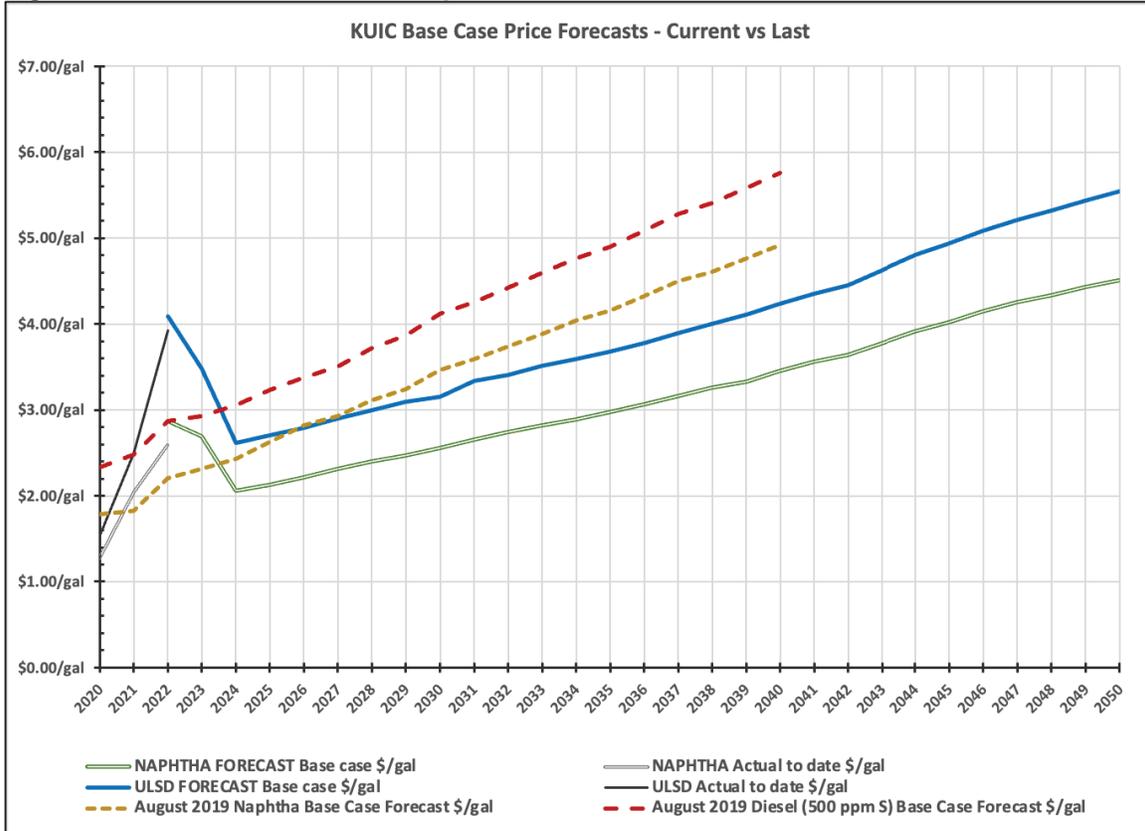
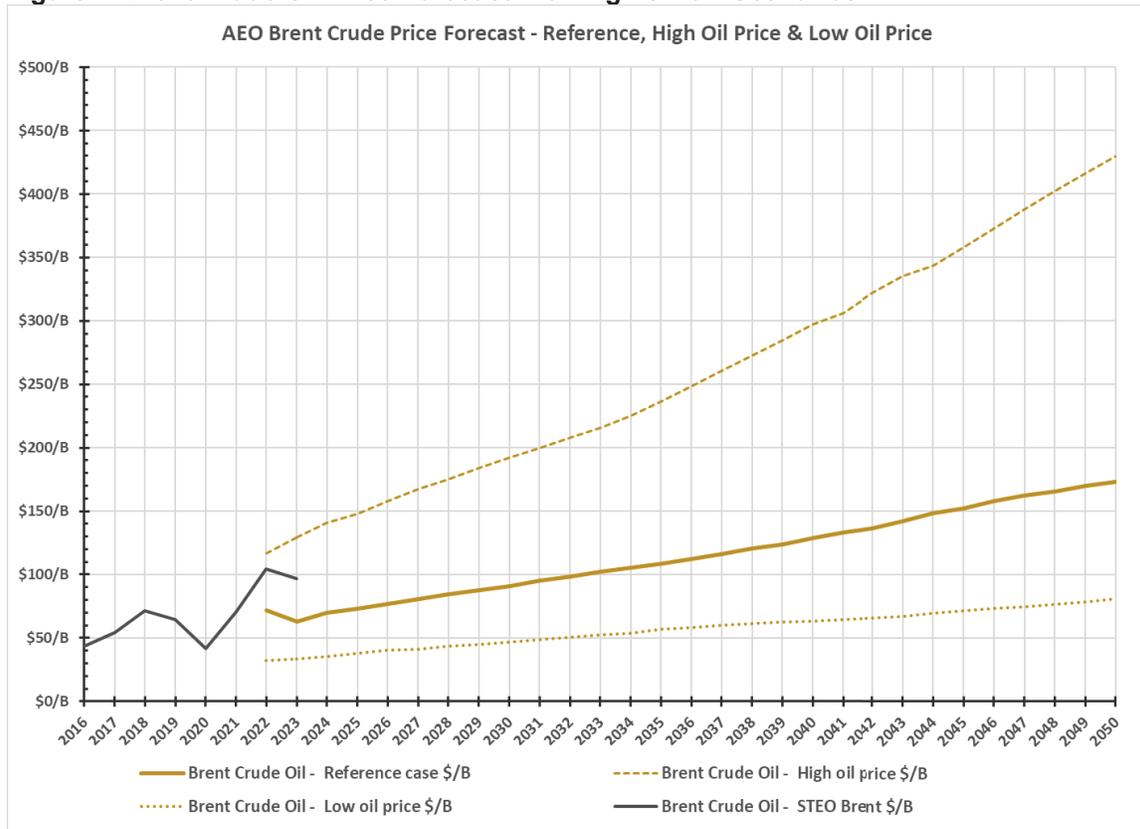


Figure 4 illustrates the three AEO Brent crude price forecasts. Global market balances, primarily non-domestic supply and demand factors will drive future crude oil prices. To account for these factors, oil prices are an external assumption in the AEO. The alternate AEO scenarios “represent international conditions that could collectively drive prices to extreme, sustained deviations from the Reference case price path.”⁵ The High Oil Price case assumes a scenario where there is higher global international oil demand and/or lower production relative to the Reference Case resulting in a need for development of more costly oil resources. The Low Oil Price case assumes the opposite, lower global demand for oil (perhaps because of displacement of oil by renewable fuels) and/or increased oil production than the Reference Case. In the High Oil Price scenario, Brent crude oil reaches \$170 per barrel (2021\$) by the year 2050; while, in the Low Oil Price scenario, crude oil dips to \$45 per barrel (2021\$). The Reference case is forecasted to be \$90 per barrel (2021\$) in 2050.

Figure 4. Brent Crude Oil Price Forecast with High & Low Scenarios



⁵ Ibid, 1.

Table 1. Forecasted Prices for Kauai Island Utility Cooperative

KIUC FUEL PRICE FORECAST - September 2022	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	
<u>NAPHTHA FORECAST</u>																	
Base case	\$/gal			\$2.87	\$2.70	\$2.06	\$2.13	\$2.22	\$2.31	\$2.40	\$2.47	\$2.56	\$2.65	\$2.74	\$2.82	\$2.89	\$2.97
High oil price	\$/gal			\$2.87	\$3.48	\$3.75	\$3.92	\$4.16	\$4.38	\$4.56	\$4.78	\$4.97	\$5.15	\$5.34	\$5.52	\$5.75	\$6.03
Low oil price	\$/gal			\$2.87	\$1.18	\$1.24	\$1.30	\$1.35	\$1.36	\$1.42	\$1.46	\$1.50	\$1.55	\$1.59	\$1.64	\$1.67	\$1.74
Actual to date <i>(2020 is Apr to Dec, 2022 is Jan to Aug)</i>	\$/gal	\$1.28	\$2.04	\$2.59													
<u>ULSD FORECAST</u>																	
Base case	\$/gal			\$4.09	\$3.49	\$2.62	\$2.71	\$2.79	\$2.90	\$3.00	\$3.09	\$3.15	\$3.33	\$3.41	\$3.51	\$3.59	\$3.68
High oil price	\$/gal			\$4.09	\$3.98	\$4.27	\$4.48	\$4.72	\$4.98	\$5.19	\$5.42	\$5.61	\$5.83	\$6.06	\$6.29	\$6.59	\$6.93
Low oil price	\$/gal			\$4.09	\$1.69	\$1.76	\$1.83	\$1.87	\$1.90	\$1.99	\$2.03	\$2.09	\$2.20	\$2.25	\$2.32	\$2.35	\$2.42
Actual to date <i>(2020 is Apr to Dec, 2022 is Jan to Aug)</i>	\$/gal	\$1.54	\$2.48	\$3.93													
		2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
<u>NAPHTHA FORECAST</u>																	
Base case	\$/gal	\$3.07	\$3.16	\$3.26	\$3.33	\$3.46	\$3.56	\$3.65	\$3.77	\$3.92	\$4.02	\$4.15	\$4.26	\$4.34	\$4.43	\$4.51	
High oil price	\$/gal	\$6.31	\$6.59	\$6.88	\$7.17	\$7.46	\$7.69	\$8.06	\$8.37	\$8.57	\$8.91	\$9.26	\$9.63	\$9.97	\$10.30	\$10.62	
Low oil price	\$/gal	\$1.78	\$1.83	\$1.85	\$1.89	\$1.90	\$1.93	\$1.96	\$1.99	\$2.05	\$2.09	\$2.13	\$2.17	\$2.21	\$2.25	\$2.32	
<u>ULSD FORECAST</u>																	
Base case	\$/gal	\$3.77	\$3.89	\$4.00	\$4.11	\$4.23	\$4.36	\$4.45	\$4.62	\$4.80	\$4.94	\$5.08	\$5.21	\$5.32	\$5.44	\$5.54	
High oil price	\$/gal	\$7.29	\$7.66	\$7.92	\$8.30	\$8.63	\$8.91	\$9.30	\$9.69	\$10.00	\$10.39	\$10.74	\$11.15	\$11.59	\$11.98	\$12.36	
Low oil price	\$/gal	\$2.46	\$2.50	\$2.51	\$2.54	\$2.58	\$2.62	\$2.65	\$2.69	\$2.76	\$2.81	\$2.86	\$2.92	\$2.99	\$3.03	\$3.13	