RICHARD T. BISSEN, JR.
Mayor

JOSIAH K. NISHITA
Managing Director

CYNTHIA D. LALLO
Chief of Staff

OFFICE OF THE MAYOR
COUNTY OF MAUI
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAI`I 96793
www.mauicounty.gov

June 1, 2026

Honorable Richard T. Bissen, Jr.
Mayor, County of Maui
200 South High Street
Wailuku, HI 96793

APPROVED FOR TRANSMITTAL

6/1/2026
Acting Mayor **Date**

For Transmittal to:

Honorable Yuki Lei K. Sugimura, Chair
BFED Committee
200 South High Street
Wailuku, HI 96793

Dear Chair Sugimura and BFED Committee;

SUBJECT: **JOHNSON CONTROLS, INC. ENERGY PERFORMANCE CONTRACT** (BFED-20(16))

In response to your inquiry dated May 26, 2026 please see response below:

1. A summary of Contract C7619, any executed amendments, and the proposed amendment described in the attached County Communication 93-26, including the proposed scope, contract amount, funding source, term, and current status of each.

Key Takeaways

- ***Self-funded model (no new taxpayer burden):*** *Improvements are financed and repaid through guaranteed energy and operational savings*
- ***Guaranteed savings protect the County:*** *If savings are not achieved, Johnson Controls must reimburse the County or implement additional measures*

- ***Phase 3 addresses deferred maintenance:*** *Energy savings are being leveraged to fund 12 roof repairs/replacements without competing for CIP funds*
- ***Continuation of original intent:*** *Phase 3 builds directly on the original RFP, HRS 36-41, and Contract C7619 framework to deliver cost-neutral facility improvements.*

The County of Maui Energy Savings Performance Contract (ESPC), Contract No. C7619, was established to implement a performance-based approach to infrastructure improvements across County facilities. The original Request for Proposals (RFP 21-22/ESPC) was issued under the authority of Hawaii Revised Statutes (HRS) Section 36-41, which enables public entities to implement energy savings performance contracts where project costs are paid over time from verified savings. The intent of the RFP and statute is to allow the County to modernize facilities, reduce utility consumption, and improve operations without requiring upfront capital, while ensuring that guaranteed savings meet or exceed project costs in each year of the contract term.

Contract C7619 was executed on May 6, 2022, as an Investment Grade Audit (IGA) agreement between the County of Maui and Johnson Controls, Inc. The purpose of the IGA phase was to evaluate County facilities, establish energy and water baselines, and identify cost-effective Facility Improvement Measures (FIMs) that could be implemented under a guaranteed savings framework (Contract C7619; IGA Volume 1). The IGA contract had a not-to-exceed amount of $150,000 and a defined performance period and included multiple administrative amendments that primarily extended time of performance while maintaining the original contract value (Amendments 1–5).

The IGA established the technical and financial foundation for the ESPC program. It identified a broad set of improvements across County facilities, including energy efficiency upgrades, water conservation measures, and infrastructure modernization. These improvements are designed to reduce utility consumption, lower operating costs, and address deferred maintenance needs. Consistent with HRS 36-41, the ESPC structure requires that all implemented measures generate measurable and verifiable savings, with Johnson Controls contractually responsible for ensuring those savings are achieved.

Following completion of the IGA and development of the initial implementation scope, the County and Johnson Controls advanced the project through subsequent amendments to Contract C7619, culminating in Amendment No. 6, which incorporates a Project Development Agreement (PDA) dated December 25, 2025 into the contract scope. The purpose of the PDA is to confirm the intent of both parties to develop an enhanced Phase 3 scope of work, establish a timeline, define deliverables, and support the development of financing and implementation agreements.

The Phase 3 PDA builds directly on the ESPC framework by identifying a targeted set of Facility Improvement Measures that are designed to generate sufficient energy and operational savings to fund additional facility improvements. Specifically, the PDA includes measures such as irrigation wells, smart irrigation controls, window film, and other efficiency improvements that create measurable savings. These savings are then leveraged to fund additional improvements that would otherwise require capital funding, including roof repair and replacement at multiple County facilities suffering from deferred maintenance. Importantly, these roof improvements are structured to be budget neutral, meaning they are funded through project savings rather than requiring new appropriations or competing with other Capital Improvement Program (CIP) priorities.

The PDA makes clear that certain improvements, such as roof repair and replacement, are contingent on the savings generated from the primary efficiency measures. This ensures that all work remains aligned with the ESPC statutory requirement that projects be self-funded through verified savings. The PDA also defines key project milestones, including scope development, financing approval, contract execution, and final implementation planning, with the goal of advancing the project to execution in 2026.

In terms of cost, the PDA development phase maintains consistency with the original IGA contract structure, with total development costs aligned to the existing $150,000 IGA contract value where applicable. The full implementation cost for Phase 3 will be established upon completion of development and financing and will be structured as part of the ESPC financing model, using a third-party financing mechanism such as a tax-exempt lease purchase. As with prior phases, repayment will be supported by guaranteed savings, ensuring no net increase to the County's operating budget.

The ESPC program, including Phase 3, operates over a long-term performance period of up to 20 years, as allowed under HRS 36-41 and defined in the RFP. During this term, energy and operational savings are measured, verified, and guaranteed annually, providing ongoing financial accountability and performance assurance. Construction and implementation are expected to occur over a defined period following contract execution, with continued maintenance, monitoring, and measurement and verification services throughout the life of the contract.

In summary, Contract C7619 and its amendments represent a structured, performance-based approach to upgrading County infrastructure. The original RFP and IGA established the foundation for a self-funded program that reduces energy use and operating costs. Phase 3, as developed through Amendment No. 6 and the Project Development Agreement, advances that original intent by leveraging energy savings to address critical deferred maintenance needs, specifically roof repairs and replacements, without requiring new capital funding. This approach allows the County to improve facility conditions, maintain budget discipline, and deliver long-term value to taxpayers while remaining fully consistent with the intent of HRS 36-41 and the ESPC program.

2. A report showing projected savings, guaranteed savings, actual savings, actual financing payments, and the variance between actual savings and financing payments, from the start of the contract through the most recent reporting period available. Please provide the report by year, quarter, or month, depending on how the County tracks the information.

   The County has completed the first year of the contract and is currently undergoing an independent third-party audit to validate performance and savings. Once the audit is complete, the County will be able to provide a report detailing projected savings, guaranteed savings, actual savings, actual financing payments, and the variance between actual savings and financing payments for the applicable reporting period.

   In the meantime, attached is the annual performance information provided by JCI for the first year of the contract. Please note that these

figures have not yet been independently verified and remain subject to the findings of the third-party audit.

3. Explain how contract savings are verified, how any shortfall from guaranteed savings is determined, and how any reimbursement, credit, payment, or other remedy is calculated and pursued.

   Upon completion of the audit, the verified actual savings will be compared to the guaranteed savings for the applicable performance period. If the audit determines that actual savings fall below the guaranteed savings level, the amount of the shortfall will be calculated based on the difference between the guaranteed savings and the independently verified savings achieved.

   Pursuant to the terms of the contract, JCI is responsible for making the County whole for any verified savings shortfall. Once the audit findings are finalized, the County will determine the amount owed and pursue the appropriate contractual remedy. This may include invoicing JCI for the value of the shortfall or utilizing any other reimbursement, credit, payment, or corrective measures available under the contract. The County will work with the contractor to ensure that any verified deficiency is addressed in accordance with the contract requirements.

4. A report showing the annual lease payments to Bank of Hawaii and amount received from JCI to the County or Bank of Hawaii based on their contractual obligation.

   The County has not received any payments from JCI related to the lease financing arrangement. Under the structure of the Energy Performance Contract, financing was provided through Bank of Hawaii, with funds disbursed directly to JCI for the implementation of the approved energy conservation measures and associated project costs.

   JCI is compensated in a manner similar to a construction project, whereby payments are made based on completed work, delivered equipment, and achieved project milestones in accordance with the contract terms. As a result, funds flow directly from the financing source to the contractor rather than through the County.

The County's financial obligation is limited to making the required lease payments to Bank of Hawaii under the financing agreement. Any performance guarantees provided by JCI are addressed through the contract's measurement, verification, and savings guarantee provisions, rather than through direct payments from JCI to the County or Bank of Hawaii. To date, no reimbursement, credit, or payment has been received from JCI because no verified savings shortfall has been identified. Any determination of a shortfall will be made following completion of the independent third-party audit currently underway.

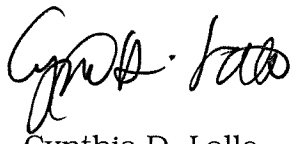
5. Copies of any verification reports, savings reports, reconciliation reports, or other documents used to determine actual savings under the contract.

   See attached Measurement and Verification Report from JCI for Year 1

6. The attached County Communication 93-26, from Mayor Bissen, indicates that the County must be positioned to issue a notice to proceed by mid-June. Please provide a detailed timeline from project initiation through issuance of the notice to proceed, including key procurement, review, approval, and execution steps. Please also provide the Request for Proposals and communications relating to the proposed mid-June deadline.

   No RFP is necessary for this as it is phase 3 of the original project.

Mahalo,



Cynthia D. Lallo

Chief of Staff

Guaranteed and Verified Savings

This report outlines the energy savings achieved by the county during Year 1 and installation period of the project. The guaranteed savings for this period amount to $1,570,928. Utility cost savings total $1,395,567, resulting in overall cost savings of $2,284,798. A detailed breakdown is presented in Table 1.

Table 1: Year 1 Period Cost Savings Summary

	Electric Savings (kWh)	Electric Cost Savings ($)	Electric Demand Savings (kW)	Demand Savings ($)	Water + Sewer Savings (kGal)	Water + Sewer Savings ($)	O&M Savings ($)	Total Cost Savings ($)
Proposed Original IGA	2,893,887	$1,188,548	598	$131,728	177,461	$828,746	$274,247	$2,423,269
Revised IGA	2,508,132	$971,058	597	$47,953	87,293	$301,400	$250,516	$1,570,928
Verified Year 1	2,415,632	$962,243	647	$45,624	85,829	$337,663	$250,596	$1,646,163
Variance	(98,466)	$11,678	50	($2,329)	4,571	$65,806	$80	$75,235
							Construction Period Savings	$637,717
							Year 1 Combined Savings	$2,283,880

Per revised investment grade audit document, the cost savings were escalated using the following table presented below.

Table 1.5: Year 1 Escalation Rates

Cost Type	Escalation Rates	Notes
Electric	5%	Rate Escalation started at Installation.
Water/Sewer	1%	Rate Escalation started at Installation.
O&M	5%	Rate Escalation for O&M starts at Year 1.

NEW Table: Totals over 20 year project term

	Guaranteed Savings ($)	Lease Payments ($)	M&V Costs ($)	Net Savings ($)
Total 20 Year Project Term	50,705,265	37,000,055	1,782,462	11,922,748

Que 3

C7619 Summary

Contract / Amendment	Date	Additional Certified Amount	Total Certified Amount	Time of Performance
Original	5/6/2022	N/A	$150,000.00	180 calendar days from Notice to Proceed (5/9/2022)
Amendment 1	9/29/2022	$0.00	$150,000.00	5/9/2022 - 1/4/2023
Amendment 2	11/28/2022	$0.00	$150,000.00	5/9/2022 - 1/4/2024
Amendment 3	1/27/2023	$0.00	$150,000.00	5/9/2022 - 11/20/2027
Amendment 4	8/23/2024	$0.00	$150,000.00	5/9/2022 - 11/20/2027
Amendment 5	11/19/2024	$0.00	$150,000.00	5/9/2022 - 11/20/2027
Amendment 6	2/4/2026	$0.00	$150,000.00	5/9/2022 - 11/20/2027

Description

Time extension, adendums

Investment grade audit, time of performance
Audit Phase 2A, time of performance
Phase 2 Solar PV Site List Clarification
Phase 1, updated savings and cashflow
Phase 3 - current discussion

County of Maui
AP2110M: OH Accounts Payable Detail by Post Date Range

ID	Check	St	PR #	EN PO	Refer	Reference	Post Date	Check	Add	En	Ck Jb	Job #	Batch ID	Pst	Index	Sobj	Dist Amt	Tax Amt	Misc	Prep	Div	PEID	PE Name	Description
BC	01433232	PD			OH126223	10/07/2024	10/07/2024	10/07/2024	R8	P	4703174	4703135	RPGPO07A	01	123000	6800	1,708,372.00	0.00		GNF	RP	003282	BANK OF HAWAII	Principal payment
BC	01460755	PD			OH128870	10/07/2025	10/09/2025	10/09/2025	R8	P	5029697	5029271	RPGQO08A	01	123000	6800	667,707.89	0.00		GNF	RP	003282	BANK OF HAWAII	Principal payment
BC	01460755	PD			OH128870	10/07/2025	10/09/2025	10/09/2025	R8	P	5029697	5029271	RPGQO08A	01	123000	6810	896,565.08	0.00		GNF	RP	003282	BANK OF HAWAII	Interest expense
BC	01460755	PD			OH128870	10/07/2025	10/09/2025	10/09/2025	R8	P	5029697	5029271	RPGQO08A	01	123001	6800	21,575.08	0.00		GNF	RP	003282	BANK OF HAWAII	Principal payment
BC	01460755	PD			OH128870	10/07/2025	10/09/2025	10/09/2025	R8	P	5029697	5029271	RPGQO08A	01	123001	6810	28,969.95	0.00		GNF	RP	003282	BANK OF HAWAII	Interest expense
																	1,614,818.00	**0.00**						
			Grand Total														**3,323,190.00**	**0.00**						

County of Maui
GT1010M: GL Multi-Year Transactions by Subobject and Index from 7/1/2024 to 6/30/2026

Post Date	Sub Reference	Second Ref	Check	Pei	Job No.	Batch ID	Description	Debit	Credit	Balance
Sobj Ch Obj B Ty Cafr O Ty Description										
Index Fd Sfd Fc Dp Prg Sc Acty Ds 2 3 Title										
10/07/2024	OH	OH126223	01433232	003282	4703135	RPGPO07A	BANK OF HAWAII Principal payme	1,708,372.00		1,708,372.00
10/09/2025	OH	OH128870	01460755	003282	5029271	RPGQO08A	BANK OF HAWAII Principal payme	667,707.89		2,376,079.89
6800 68 684 5 99 9010 6 XP Principal payment								**2,376,079.89**	**0.00**	**2,376,079.89**
10/09/2025	OH	OH128870	01460755	003282	5029271	RPGQO08A	BANK OF HAWAII Interest expens	896,565.08		896,565.08
6810 68 682 5 99 9000 6 XP Interest expense								**896,565.08**	**0.00**	**896,565.08**
123000 12 201 18 07 170 00 17003 09 1 1 FINANCE PURCHASE (JCI)								**3,272,644.97**	**0.00**	**3,272,644.97**
10/09/2025	OH	OH128870	01460755	003282	5029271	RPGQO08A	BANK OF HAWAII Principal payme	21,575.08		21,575.08
6800 68 684 5 99 9010 6 XP Principal payment								**21,575.08**	**0.00**	**21,575.08**
10/09/2025	OH	OH128870	01460755	003282	5029271	RPGQO08A	BANK OF HAWAII Interest expens	28,969.95		28,969.95
6810 68 682 5 99 9000 6 XP Interest expense								**28,969.95**	**0.00**	**28,969.95**
123001 12 201 18 07 170 00 17003 09 1 1 DWS FINANCE PURCHASE (JCI)								**50,545.03**	**0.00**	**50,545.03**
Grand Total								**3,323,190.00**	**0.00**	**3,323,190.00**

REQUEST FOR PROPOSAL
FOR
TAX-EXEMPT LEASE PURCHASE
FOR AN ENERGY PERFORMANCE CONTRACT PROJECT
FOR THE COUNTY OF MAUI

Proposals Due:
May 31, 2022 @ 9:00AM Hawaii-Aleutian Time (3:00PM Eastern Daylight Time)

RFP for Financing
Steve Goldberg
Johnson Controls, Inc.
507 East Michigan Street, Milwaukee, WI 53201
Tel (480) 217-7832

REQUEST FOR PROPOSAL

Tax-Exempt Lease Purchase for a Performance Contract Project

Introduction

This is a request for proposal ("RFP") administered by Johnson Controls, Inc. ("JCI") on behalf of the City and County of Maui (the "Customer"). The project was procured under the Hawaii Performance Contract Statute (HRS 36-41). Johnson Controls was selected and issued a notice of Award from the Customer in February 2022.

The purpose of this RFP is to solicit financing offers from qualified financial institutions (each a "Respondent"). It is contemplated that the selected Respondent, as lessor, will enter into a Master tax-exempt lease purchase ("TELP") with the Customer, as lessee, to finance the Customer's performance contracts to purchase certain Energy Conservation Measures ("ECMs") from JCI. The first schedule to the Master TELP will be for an initial phase to improve a portion of the facilities, with the remaining facilities to follow in subsequent phases as additional schedules to the Master-TELP. This RFP is specifically related to the first phase of the Customer's facilities.

The Customer would prefer a Master-TELP with a fixed rate over a 20-year performance period term but is open to alternative structuring to the TELP financing arrangements.

Project Background

This project involves the sale and installation of ECMs, which will be installed throughout the Customer's facilities. Specifically, the ECMs will include:

ECM No.	ECM Description
1	Lighting Retrofits
2	HVAC Upgrades
3	Building Envelope
4	Controls Upgrades
5	EV Charging Stations
6	Plug Load Controls
7	Transformers
8	PC Power Mgmt

The details of the ECMs and other project related information can be provided separately upon request.

Lease Information

1. The Master TELP involves a transaction between the selected Respondent, as lessor, and the Customer, as lessee. JCI is not a party to the Master TELP.

2. Respondents are allowed to use an escrow and paying agent if so desired.

3. Once installation commences, JCI will invoice the Customer on a monthly basis for the amount owed for the project. The Customer will direct the lessor to pay JCI from the TELP proceeds, which may be held in escrow. If such proceeds are not sufficient, due to a change order for scope expansion or other reason, the Customer is responsible for funding the additional cost. The Customer may ask the lessor to expand the credit capacity to finance the additional cost, but the lessor is not obligated to do so.

4. Subject to change due to state and local laws, to secure the transaction, the lessor will receive a first priority security interest in the ECMs and any money related to the project held in escrow. The security interest will be evidenced by a UCC-1 financing statement.

5. JCI will provide a payment and performance bond for the project and will list the lessor as a dual obligee.

6. The Customer, as lessee, is responsible for all maintenance and insurance. The Customer bears all risk of loss. Lessor shall be named as an additional insured and loss payee on the lessee's insurance policy, which is subject to lessor's approval.

7. Respondents shall clearly describe any prepayment rights, timing and expenses. Respondents shall clarify if the prepayment right is in whole or in part.

8. Respondents shall describe any closing costs and if they are capitalized in the TELP.

9. Title to the ECMs shall transfer to the Customer upon installation.

10. The lessor shall have the right to assign the TELP if it first obtains permission from the Customer, which permission shall not be unreasonably withheld.

11. Respondents shall offer a fixed interest rate for the term of the TELP. Respondents shall state the expiration date (i.e. the end of the lock period) for the offered rate and an index for how the fixed rate would be calculated at closing after the initial expiration date.

12. Respondents shall state a fixed rate above a specified index to be applied to future schedules within the Master TELP.

13. Respondents should assume that this transaction will be Non-Bank Qualified.

14. Respondents shall attach a table of cash flows in their responses that includes amounts financed, amortization of principal, interest due, payment amounts, payment dates and early termination values.

15. TELP payments for principal and interest shall be due annually and in advance of the savings / benefits. With the exception of the first TELP payment which is due on the expected commencement of the performance period, annual payments will be made on July 1st of each year.

16. The TELP payments shall not exceed the Annual Net Benefits listed in the Appendix in any year and should remain level throughout the financed term. In the highest acceptable rate scenario,

this will create a cash flow neutral project in year one and cash flow positive in years 2-20. If offered rates are lower, the term will remain the same and the debt service will be less than the Annual Net Benefits, thus making the project cash flow positive each year.

17. Proposed rate shall be locked through the estimated closing date provided in Appendix A.

18. During the Construction Period of 24 months, the 20-year TELP interest rate shall be locked. Offerors may lock the rate by using a method in their own discretion (i.e. provide the full amount of funds in Escrow or through an Interest Rate Swap).

19. Selected Offeror, upon mutual agreement between Customer and Offeror, may add additional Lease Schedules to the Master Lease as additional Phases of the project are developed (i.e. Phase 2, Phase 3 & Phase 4), using the same fixed rate above a specified index selected by Offeror for Phase 1.

Scoring Criteria

Proposals will be evaluated on a 100-point basis as follows:

- Interest rate and term = 80/100 points
- Prepayment rights and expenses = 10/100 points
- Other terms and conditions = 10/100 points

Response Deadline

Please submit your response to this RFP no later than **3:00 PM Eastern Daylight Time (9:00AM Hawaii-Aleutian Time)**. All responses should be emailed in "soft copy" form to Johnson Controls Structured Finance at the following address: **Steve.1.goldberg@jci.com** with copy to **brody.mcmurtry@jci.com.**

Selection

All responses will be provided to the Customer for their evaluation. The Customer is responsible for selection of the Respondent as well as the ultimate structure of the financing. Johnson Controls Structured Finance is not providing "advice" on selection.

Questions

For questions related to the RFP, related documents, project details or other pertinent issues, please contact JCI Structured Finance at the aforementioned contact information.

Disclaimer

Johnson Controls is not a registered Municipal Advisor with the U.S. Securities and Exchange Commission, and is not acting as a municipal or financial advisor to the Customer. The information provided in this document is not intended to be and should not be construed as "advice" within the meaning of Section 15B of the Securities Exchange Act of 1934 and the municipal advisor rules of the SEC. Johnson Controls is not acting as a broker, dealer, underwriter or placement agent with respect to the potential transactions discussed herein. This RFP pertains to a TELP and not the issuance of

securities. JCI is issuing this RFP and collecting responses as a matter of convenience for the Customer. All responses will be provided to the Customer for their evaluation.

RFP for Financing
Steve Goldberg
Johnson Controls, Inc.
507 East Michigan Street, Milwaukee, WI 53201
Tel (480) 217-7832

Appendix A
Dates and Amounts for Respondents to Assume

Project Price:	$20,000,000.00
Rebates:	($0.00)
Customer Provided Capital:	($0.00)
Net Amount Financed:	$20,000,000.00
Estimated Closing Date:	9/30/2022
Construction Term:	24 months

Construction Draws:

9/30/2022	25.00%	$	5,000,000
10/31/2022	15.00%	$	3,000,000
11/30/2022	10.00%	$	2,000,000
12/31/2022	8.00%	$	1,600,000
1/31/2023	5.00%	$	1,000,000
2/28/2023	5.00%	$	1,000,000
3/31/2023	5.00%	$	1,000,000
4/30/2023	4.00%	$	800,000
5/31/2023	3.00%	$	600,000
6/30/2023	3.00%	$	600,000
7/31/2023	2.00%	$	400,000
8/31/2023	2.00%	$	400,000
9/30/2023	2.00%	$	400,000
10/31/2023	1.00%	$	200,000
11/30/2023	1.00%	$	200,000
12/31/2023	1.00%	$	200,000
1/31/2024	1.00%	$	200,000
2/28/2024	1.00%	$	200,000
3/31/2024	1.00%	$	200,000
4/30/2024	1.00%	$	200,000
5/31/2024	1.00%	$	200,000
6/30/2024	1.00%	$	200,000
7/31/2024	1.00%	$	200,000
8/31/2024	1.00%	$	200,000

Start of the Performance:	9/1/2024
First Lease Payment:	9/1/2024
Last Lease Payment:	7/1/2044

RFP for Financing
Steve Goldberg
Johnson Controls, Inc.
507 East Michigan Street, Milwaukee, WI 53201
Tel (480) 217-7832

Performance Year	Gross Savings	Gross Performance Period Costs	Net Annual Benefits (Amount Available for TELP Payments)
1	$ 1,756,580	$380,931	$ 1,375,649
2	$ 1,809,277	$392,359	$ 1,416,918
3	$ 1,863,556	$404,130	$ 1,459,426
4	$ 1,919,462	$416,254	$ 1,503,209
5	$ 1,977,046	$428,741	$ 1,548,305
6	$ 2,036,357	$441,603	$ 1,594,754
7	$ 2,097,448	$454,852	$ 1,642,597
8	$ 2,160,372	$468,497	$ 1,691,875
9	$ 2,225,183	$482,552	$ 1,742,631
10	$ 2,291,938	$497,029	$ 1,794,910
11	$ 2,360,696	$511,939	$ 1,848,757
12	$ 2,431,517	$527,298	$ 1,904,220
13	$ 2,504,463	$543,117	$ 1,961,346
14	$ 2,579,597	$559,410	$ 2,020,187
15	$ 2,656,985	$576,192	$ 2,080,792
16	$ 2,736,694	$593,478	$ 2,143,216
17	$ 2,818,795	$611,282	$ 2,207,512
18	$ 2,903,359	$629,621	$ 2,273,738
19	$ 2,990,460	$648,510	$ 2,341,950
20	$ 3,080,173	$667,965	$ 2,412,208

Johnson Controls

INGENUITY WELCOME

COUNTY OF MAUI
STATE OF HAWAII

Measurement and Verification Year 1 Report

ENERGY SAVINGS PERFORMANCE CONTRACT: NO. C7619

November 2025

Executive Branch Office
County of Maui

November 25, 2025

Office of the Mayor
c/o Cynthia Lallo, Chief of Staff
Executive Branch Office
Kalana O Maui Building
200 South High Street
Wailuku, Maui, HI 96793

Dear Ms. Cynthia Lallo, Chief of Staff at the Office of the Mayor

Please find attached the Year 1 Annual Savings Report for the Energy Savings Performance Contract (ESPC) Report for Maui County Phase 1 Performance Contract. Pursuant to the contract signed September 2022, Johnson Control commenced construction immediately thereafter and started to realize energy savings. Year One started October 1, 2024, through September 30, 2025, the total cost savings amounted to $1,646,163; exceeding the guaranteed savings of $1,570,928 by $638,635.

In the following report includes a summary of measured data with respect to the Facility Improvement Measures (FIMs) verified during the Year 1 period. This effort serves as supporting documentation for energy savings for the reporting period.

Following review and acceptance of this Report please return a signed copy of this letter to:

Johnson Controls
Attn: Shaun Ortega
550 Paiea St #210
Honolulu, HI 96819
(808) 284-2799

ACCEPTANCE

The Post Installation Report for the Energy Savings Performance Contract is accepted by the undersigned.

Signature: _____ Date: _____

Title: _____

Sincerely,

Shaun Ortega
Energy Performance Engineer
shaun.ortega@jci.com

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Executive Summary

Maui County and Johnson Controls (JCI) entered a contract amendment No. C7169 on September 28, 2022, to implement a set of Facility Improvement Measures (FIMs) to reduce energy (electricity, water, and natural gas) usage, demand, and utility cost across all County of Maui Departments.

This report presents the results and impact of the Performance Contract from October 1, 2024 to September 30, 2025. The work defined in the Performance Contract, scope of work, was performed at multiple buildings across the county are provided in this report.

- Installation Period: October 1, 2022 to September 30, 2024
- Total Installation Period Achieved Savings: $637,717
- Performance Period: October 1, 2024 to September 30, 2025
- Measured Performance Period Utility Cost Avoidance: $1,396,769
- Total Performance Period Achieved Savings: $1,646,163
- Guaranteed Performance Period Savings: $1,570,926
- Performance Period Excess Savings (exceeded guaranteed by): $638,635
- Total Performance Period Electric Consumption Avoidance: 2,409,666 kWh
- Total Performance Period Electric Demand Avoidance: 647 kW
- Total Performance Period Water/Sewer Avoidance: 91,865 kGal

Background

Revised Investment Grade Audit

Maui County and Johnson Controls entered a revision to the contract on November 19, 2024, and substantially reduced or entirely removed the following FIMs: FIM 2: Exterior LED Lighting Retrofits and FIM 7: Irrigation Wells.

The FIMs included in this project continue to focus on optimizing energy efficiency and sustainability. The FIMs are listed below and will be discussed in detail in the remainder of this document:

FIM #	FIM Description
1	Interior LED Lighting Retrofits
4	Transformer Replacements
5	Domestic Water Plumbing Fixture Upgrades
6	Shower Tower Retrofits
7	Irrigation Wells Systems
8	On-Site Hypochlorite Generation & Smart Pool Pump Controls
9	Infiltration Reduction
10	Window Film

Guaranteed and Verified Savings

This report outlines the energy savings achieved by the county during Year 1 and installation period of the project. The guaranteed savings for this period amount to $1,570,928. Utility cost savings total $1,395,567, resulting in overall cost savings of $2,284,798. A detailed breakdown is presented in Table 1.

Table 1: Year 1 Period Cost Savings Summary

	Electric Savings (kWh)	Electric Cost Savings ($)	Electric Demand Savings (kW)	Demand Savings ($)	Water + Sewer Savings (kGal)	Water + Sewer Savings ($)	O&M Savings ($)	Total Cost Savings ($)
Proposed Original IGA	2,893,887	$1,188,548	598	$131,728	177,461	$828,746	$274,247	$2,423,269
Revised IGA	2,508,132	$971,058	597	$47,953	87,293	$301,400	$250,516	$1,570,928
Verified Year 1	2,415,632	$962,243	647	$45,624	85,829	$337,663	$250,596	$1,646,163
Variance	(98,466)	$11,678	50	($2,329)	4,571	$65,806	$80	$75,235
							Construction Period Savings	$637,717
							Year 1 Combined Savings	$2,283,880

Per revised investment grade audit document, the cost savings were escalated using the following table presented below.

Table 1.5: Year 1 Escalation Rates

Cost Type	Escalation Rates	Notes
Electric	5%	Rate Escalation started at Installation.
Water/Sewer	1%	Rate Escalation started at Installation.
O&M	5%	Rate Escalation for O&M starts at Year 1.

Proposed Year 1 savings total $1,570,928, driven by 2,508,132 kWh of electric savings, 597 kW of demand reduction, 87,293 kGal of water savings, and $250,516 in O&M savings. Interior lighting, pool pumps, and shower towers are the top contributors.

Table 2: Year 1 Annual Guarantee by FIM per Revised IGA

FIM	FIM Description	Electric Savings (kWh)	Electric Cost Savings ($)	Electric Demand (kW)	Demand Savings ($)	Water + Sewer Savings (kGal)	Water + Sewer Savings ($)	O&M Savings ($)	Total Cost Savings ($)
1	**Lighting Group**	0	$0	0	$0	0	0	$0	$0
1A	Interior Lighting Retrofit	1,306,406	$507,862	383	$42,432	0	0	$0	$550,293
1B	Lighting O&M	0	$0	0	$0	0	0	$21,091	$21,091
4	**Transformer Replacements**	159,315	$57,280	214	$5,522	0	0	$0	$62,802
5	**Domestic Water Plumbing Group**	0	$0	0	$0	0	0	$0	$0
5A	Domestic Water Plumbing	0	$0	0	$0	22,570	$96,824	$0	$96,825
5B	Domestic Hot Water - Non-measured	34,003	$13,665	0	$0	0	0	$0	$13,665
6	**Shower Towers**	0	$0	0	$0	54,005	$150,224	$0	$150,224
7	**Irrigation Wells**	0	$0	0	$0	1,663	$10,026	$0	$10,026
8	**On-Site Hypochlorite Generation Group**	0	$0	0	$0	0	0	$0	$0
8A	Pool Pumps	808,150	$314,243	0	$0	0	0	$0	$314,243
8B	Pools O&M - Chemicals	-94,692	($37,138)	0	$0	9,055	$44,325	$229,425	$236,613
9	**Building Envelope**	275,883	$107,594	0	$0	0	0	$0	$107,594
10	**Window Film**	19,067	$7,552	0	$0	0	0	$0	$7,552
Total Savings		**2,508,132**	**$971,058**	**596.98**	**$47,953**	**87,293**	**$301,400**	**$250,516**	**$1,570,928**

The table below demonstrates Year 1 verified savings totaled $1,646,163, driven primarily by lighting retrofits and water conservation measures. Combined electric savings were 2,409,666 kWh, water savings reached 91,865 kGal, and demand reductions totaled 647 kW, confirming strong performance across implemented Facility Improvement Measures (FIMs).

Table 3: Year 1 Verified Savings by FIM

FIM	FIM Description	Electric Savings (kWh)	Electric Cost Savings ($)	Electric Demand (kW)	Demand Savings ($)	Water + Sewer Savings (kGal)	Water + Sewer Savings ($)	O&M Savings ($)	Verified Year 1 Cost Savings ($)
1	**LIGHTING GROUP**								
1A	Interior Lighting Retrofit	1,336,194	$ 548,121	345	$ 38,235				$ 586,356
1B	Lighting O&M							$ 21,171	$ 21,171
4	**Transformer Replacements**	219,896	$ 78,994	301	$ 7,389				$ 86,383
5	**DOMESTIC WATER PLUMBING GROUP**								
5A	Domestic Water Plumbing					26,070	$ 104,314		$ 104,314
5B	Domestic Hot Water - Non-measured	45,822	$ 18,110						$ 18,110
6	**Shower Towers**					57,928	$ 222,497		$ 222,497
7	**Irrigation Wells**					1,663	$ 10,026		$ 10,026
8	**ON-SITE HYPOCHLORITE GENERATION GROUP**								
8A	Pool Pumps	553,684	$ 241,230						$ 241,230
8B	Pools Chemicals	(64,876)	$ (28,509)			6,204	$ 30,369	$ 229,425	$ 231,285
9	**Building Envelope**	293,624	$ 114,681						$ 114,681
10	**Window Film**	25,321	$ 10,111						$ 10,111
YEAR 1 TOTAL SAVINGS		**2,409,666**	**$ 982,737**	**647**	**$ 45,624**	**91,865**	**$ 367,206**	**$ 250,596**	**$ 1,646,163**

The table compares proposed and verified savings for each FIM across four categories: electric cost, demand, water and sewer, and operations and maintenance (O&M). Verified savings surpassed proposed values in most categories, demonstrating effective implementation and accurate performance tracking. Overall, the project is achieving 4.8% higher total savings than projected. Water conservation measures significantly outperformed expectations, while energy savings closely matched projections.

Table 3.1: Year 1 - Verified Vs. Expected Annual Cost Savings by FIM

FIM	FIM Description	Electric Cost Savings ($)		Demand Savings ($)		Water + Sewer Savings ($)		O&M Savings ($)		Year 1 Cost Savings ($)	
		Proposed	Verified	Proposed	Verified	Proposed	Verified	Proposed	Verified	Estimated	Verified
1	**LIGHTING**										
1A	Interior Lighting Retrofit	$507,862	$548,121	$42,432	$38,235					$550,293	$586,356
1B	Lighting O&M							$21,091	$21,171	$21,091	$21,171
4	**Transformer Replacements**	$57,280	$78,994	$5,522	$7,389					$62,802	$86,383
5	**Domestic Water Plumbing**										
5A	Domestic Water Plumbing					$96,825	$104,314			$96,825	$104,314
5B	Domestic Hot Water - Non-measured	$13,665	$18,110							$13,665	$18,110
6	**Shower Towers**					$150,224	$222,497			$150,224	$222,497
7	**Irrigation Wells**					$10,026	$10,026			$10,026	$10,026
8	**ON-SITE HYPOCHLORITE GENERATION**										
8A	Pool Pumps	$314,243	$241,230							$314,243	$241,230
8B	Pools - Chemicals	-$37,138	-$28,509			$44,326	$30,369	$229,425	$229,425	$236,613	$231,285
9	**Building Envelope**	$107,594	$114,681							$107,594	$114,681
10	**Window Film**	$7,552	$10,111							$7,552	$10,111
	Year 1 Total Savings	**$971,058**	**$982,737**	**$47,953**	**$45,624**	**$301,400**	**$367,206**	**$250,516**	**$250,596**	**$1,570,928**	**$1,646,163**

Rebates

No additional rebates are applicable during the performance period.

Johnson Controls applied for rebates during the construction period for two FIMS for this project: interior lighting retrofit and Transformers.

For Lighting, as of February 2025, Johnson Controls has so far submitted the rebate application, on behalf of the County Maui, for the amount of $10,399 under LED Fixtures, and additional 30 rebate applications are being prepared for submission.

For Transformers, Johnson Controls has so far submitted the rebate application for the amount of $36,505.10, and the rebate checks were mailed out from 2023 through 2024.

Measurement & Verification

Overview

The following is a brief overview of the measurement and verification methodologies applicable to the Improvement Measures set forth below. Johnson Controls shall apply these methodologies, as more fully detailed in the guidelines and standards of the International Measurement and Verification Protocol (IPMVP), in connection with the provision of M&V Services.

Option A: Retrofit Isolation: Key Parameter Measurement

Key Parameter Measurement savings are determined by field measurement of the key performance parameter(s) which define the energy use of the FIM's affected system(s) as part of the project. Measurement frequency ranges from short-term to continuous, depending on the expected variations in the measured parameter, and the length of the reporting period. Parameters not selected for field measurement are estimated. Estimates can based on historical data, manufacturer's specifications, or engineering judgment. Estimations will be shown in the M&V plan. Engineering calculations using measurements and estimates are used to calculate Measured Project Benefits for the duration of the Guarantee Term.

OV Approach: Operational Verification

Verification that the FIMs are installed and operating properly and have the potential to generate savings. No field measurements are required.

Table 4 lists each FIM, and corresponding M&V Option utilized for this program.

Table 4: Summary of M&V Options

FIM#	FIM Description	M&V Option	Report Frequency
1	**Lighting Group**		Post Installation
1A	*Interior Lighting Retrofit*	A – One time	
1B	*Lighting O&M*	Non-measured	
4	**Transformer Replacements**	A – One time	Post Installation
5	**Domestic Water Plumbing Group**		Post Installation
5A	*Domestic Water Plumbing*	A – One time	
5B	*Domestic Hot Water - Non-measured*	Non-measured	
6	**Shower Towers**	A – One time	Post Installation
7	**Irrigation Systems**	OV* – One time	Post Installation
8	**Hypochlorite Generation and Smart Pool Pump Controls**	OV* – One time	Annually
8A	*Smart Pool Pump Controls*	A – Quarterly	
8B	*Pools O&M - Chemicals*	Non-measured	
9	**Infiltration Reduction**	OV* – One time	Post Installation
10	**Window Film**	A – One time	Post Installation

*OV – Operation Verification

FIM 1: Interior LED Lighting Retrofits

FIM Description

Lighting energy efficiency upgrades provide a substantial energy benefit along with potential quality of light improvements. Facility owners realize significant operating utility savings, reduced maintenance costs, and improved overall lighting systems performance.

The existing lighting systems across Maui County consists of a wide variety of lighting technologies. The proposed solutions will result in improved efficiency. Effort has been made to standardize the installed components to reduce operational and maintenance costs over the life of the installed system. Johnson Controls provided an attic stock of materials and as described in the planned maintenance section provide maintenance services for the lighting scope of work. A detailed scope of work description is included in the Appendix 1-Interior Lighting Retrofits Scope of Work of the Post-Installation report.

Energy Savings Calculation Methodology

Lighting Retrofits Energy Savings

There are savings specifically associated with the reduction in wattage due to the lighting retrofits. The equations used are shown below:

Equations for Calculating Lighting Retrofit Savings

Demand (kW)

$$\textit{Connected kW Savings} = \sum_u [\ (\textit{kW/Fixture}_{baseline} \times \textit{Quantity}_{baseline} - \textit{kW/Fixture}_{post} \times \textit{Quantity}_{post})]_{t,u}$$
$$\textit{Actual kW Savings} = \sum_u [\ \textit{Connected kW Savings}_u \times \textit{Coincident Factor}_u]_{t,u}$$

where:

kW/fixturebaseline =	*lighting baseline demand per fixture for usage group u*
kW/fixturepost =	*lighting demand per fixture during post-installation period for usage group*
Quantitybaseline =	*quantity of affected fixtures before the lighting retrofit for usage group u*
Quantitypost =	*quantity of affected fixtures after the lighting retrofit for usage group u*
Coincident Factor =	*Coincident Factor is a percentage multiplier to account for Demand Diversity of each specific usage group u..*

Annual demand cost savings are determined by multiplying the kW demand savings by the corresponding facility demand rate ($/kW) times 12 months.

Energy (kWh)

$$\textit{kWh Savings}_{Lighting} = \sum_u [\ \textit{Connected kW Savings}_u \times \textit{Burn Hours}]_{t,u}$$

where:

Connected kW Savings$_u$ = total connected fixture demand reduction for usage group *u*

Burn Hours = number of operating hours during the time period *t* for the usage group *u*

Annual energy cost savings are determined by multiplying the kWh energy savings by the corresponding facility energy rate ($/kWh).

Lighting Controls Energy Savings

There are savings specifically associated with the reduction in lighting burn hours due to the lighting controls (occupancy sensors and/or daylighting controls) installed as part of the lighting retrofits.

The lighting system annual burn hours pre and post-retrofit vary by space type as shown below. Pre-retrofit burn hours were estimated by JCI. The percentage reduction in burn hours and the resulting post-retrofit burn hours as a result of lighting controls (occupancy sensors and/or daylight controls) are estimated when comparing various energy groups and sources, such as: Illuminating Engineering Society (VonNieda B, Maniccia D, & Tweed A. 2000. An analysis of the energy and cost savings potential of occupancy sensors for commercial lighting systems. Proceedings of the Illuminating Engineering Society Paper #43), which estimates a range of 25% to 60% savings can be achieved with occupancy sensors. JCI assumed a 30% reduction in burn hours to be derived from installation of occupancy sensors, where included.

Equations for Calculating Lighting Controls Savings

Energy (kWh)

$$kWh\ Savings_{Lighting\ controls} = \sum_u [\ kW\ Post_u \times (Pre\text{-}Hours\ of\ Operation - Post\text{-}Hours\ of\ Operation)]_{t,u}$$

where: *kW Post*$_u$ = kilowatt used during the post-installation time for usage group *u (will be equal to pre wattage if no fixture change)*

Pre-Hours of Operation = number of operating hours during the baseline time period *t* for the usage group *u*

Post-Hours of Operation = reduction in run time due to lighting controls

Annual energy cost savings are determined by multiplying the kWh energy savings by the corresponding facility energy rate ($/kWh).

Energy savings resulting from lighting controls are not cost effective to measure and verify, thus with the methodology described above, the Customer agrees that the savings generated through this reduction in lighting burn hours will be achieved. The lighting wattages were measured by JCI.

These savings will not be measured, and a table showing the total lighting controls savings is outlined in the Investment Grade Audit (IGA) document.

Operation and Maintenance (O&M) Cost Savings Calculations

Operation and Maintenance Cost avoidance achieved by reduced lighting material replacement resulting from installation of longer life LED technology. This is calculated on a room-by-room basis

according to the run time of the room space and the service life of the LED retrofit proposed compared to the existing lighting technology installed.

For calculating materials savings, the cost and manufacturer's lifetime of each lamp, and LED in the project is used and averaged over the contract term. The average lamp life for different types of lamps are shown below:

Table 3.2: Lighting Fixture Information

Lamp	Lamp Wattage or Type	Average Lamp Life (Hrs)
Incandescent	100W	5,000
	150W	750
	40W / 50W / 60W	1,500
	65W	1,125
HID	1000W MH	12,000
	100W MH	20,000
	150W MH	15,000
	175W MH / 250W MH	10,000
	400W MH	20,000
	70W HPS	24,000
T8 Fluorescent	4' 25W	32,000
	4' 32W / 2' 17W	24,000
	3' 25W	36,000
	8' 59W	15,000
T12 Fluorescent	2' 20W	10,000
	3' 30W	18,000
	4' 34W	20,000
	60W	12,000
LED lamps	PAR20/ PAR38/ MR16/ screw in	25,000
	Retrofit plug in	30,000
	Tube / Pin-based lamps / HID replacement lamps / recessed can kits / canopy	50,000
	Wall pack	75,000
	Flood / area light / high bay	100,000

The following are the formulas used to quantify the O&M Savings:

Lamp Unit Cost per Hour = Average Lamp Cost ÷ Average Lamp Life.

Ballast Unit Cost per Hour = Average Ballast Cost ÷ Average Ballast Life.

Existing Annual Lamp Material Cost = Existing Burn Hours × Quantity of Lamps × Lamp Unit Cost per Hour.

Existing Annual Ballast Material Cost = Existing Burn Hours × Quantity of Ballasts × Ballast Unit Cost per Hour.

Proposed Annual Lamp Material Cost = Existing Burn Hours × Quantity of Lamps × Lamp Unit Cost per Hour.

Proposed Annual Ballast Material Cost = Existing Burn Hours × Quantity of Ballasts × Ballast Unit Cost per Hour.

Proposed Annual Material Cost = Proposed Burn Hours × ((Quantity of Lamps × Lamp Unit Cost per Hour) + (Quantity of Ballasts × Ballast Unit Cost per Hour)).

Annualized Project Term Material Savings = ((Project Term × (Existing Annual Lamp Material Cost + Existing Annual Ballast Material Cost)) - ((Project Term - Proposed Lamp Warranty Period) × Proposed Annual Lamp Material Cost) + ((Project Term - Proposed Ballast Warranty Period) × Proposed Annual Ballast Material Cost))) ÷ Project Term.

The lighting material savings calculation was performed on the entire inventory of lighting fixtures.

Applying both the current cost and expected useful life, operational cost savings (material only) are calculated, and the results are shown in the IGA document.

Operational cost avoidance material savings are non-measured and will be considered as being achieved upon the County acceptance of the completed project. No labor savings have been calculated or included herein.

Measurement and Verification

The savings for the lighting retrofit part of this FIM were verified using IPMVP-2016 Option A, Retrofit Isolation with Key Parameter Measurement. The savings for this FIM are generated through a reduction in energy used by the lighting system; therefore, the measurement boundary is the lighting system itself.

Key Parameter	Measurement Frequency	Measurement Description
Pre-Retrofit Fixture Power Draw (kW)	See *Energy Savings Calculations* section in the *FIM Descriptions*	The pre-retrofit power draw has been determined based upon measurements taken between 7/25/22 and 8/5/22 on a sample of fixtures that meet a confidence level of at least 80% and a precision of 20%– assuming a coefficient of variance of 0.5 – using a true RMS meter. These values will not be measured again.
Post-Retrofit Fixture Power Draw (kW)	One-time	The post-retrofit power draw on a sample of fixtures that meet a confidence level of at least 80% and a precision of 20%– assuming a coefficient of variance of 0.5 – will be measured using a true RMS meter. Fixtures with similar lamps and ballasts, counts and types will be grouped together with a lamp/ballast code. Measured wattages will be used when possible. In some situations, such as when a certain type of lighting fixture is not available by itself on a switch, typical wattages as published by ANSI (American National Standards Institute) will be used. The savings will be updated.
Estimated Parameters	**Assumed Value**	**Justification, Source and Description**
Burn Hours	See *Energy Savings Calculations* section in the *FIM Descriptions*	The lighting system annual run hours by space type are agreed upon. These run hours are based on historical data from industry sources or from customer feedback. These values will not be measured.
Coincident Factor	See *Energy Savings Calculations* section in the *FIM Descriptions*	The coincident factor is estimated based on the number of fixtures in a space type expected to be operating at the same time during the on peak period and is agreed to remain at the same value after the retrofit. This estimate is based on industry standards.

Performance Verification

This FIM is part of a one-time evaluation during the installation period; therefore, no M&V activities were conducted during Year 1 performance period. Below is a summary of the post-installation M&V activities that were conducted during installation. Johnson Controls checked and verified proper installation and operation of the new lighting systems after system startup and report findings to the customer. Johnson Controls provided lighting system startup according to manufacturer's recommendations. Johnson Controls measured the pre-installation and post-installation wattages of a sample fixture of each retrofit, according to required quantities based on an 80% confidence level at 20% precision. Per M&V plan, fixture wattages were measured using calibrated meters, but it did not result in significant changes to the savings.

Table 3.3: Lighting Pre-Measurements Summary

Usage Group	Population Size	Samples	Rated Watts	Measured Watts	Variance %
2X25T8EBN	315	5	40	37.84	5%
1X32T8EBN	136	7	31	28.17	9%
3X32T8EBN	272	6	89	85.98	3%
2X34T12MB	363	5	72	66.15	8%
2X18T8U6LEDT	18	2	36	32.38	10%
1X400MH	99	3	458	440.02	4%

Usage Group	Population Size	Samples	Rated Watts	Measured Watts	Variance %
1X34T12MB	80	3	43	36.93	14%
4X32T8EBN	500	7	112	106.40	5%
2X32T8U6EBN	95	5	59	55.62	6%
2X32T8EBN	3,332	7	58	55.43	4%
3X32T8EBN2	32	6	90	81.20	10%
1X250MH	49	3	295	311.97	-6%
1X70HPS	195	4	95	86.35	9%
1X150HPS	173	10	188	170.29	9%
1X250HPS	39	6	295	269.36	9%
1X1000MH	11	12	1,080	1020.09	6%
1X1500MH	56	5	1,610	1511.47	6%
Total	**5,765**	**96**	**95.99***	**90.89 ***	**5%**

*Weighted Average

Table 3.3: Lighting Post-Measurements Summary

Usage Group	Population Size	Samples	Rated Watts	Measured Watts	Variance %
2X4LED-DK-HS	1,037	17	18	16.30	9%
2X4LED-DK-HS4L	563	7	24	24.83	-3%
2X4LED-DK-HS3L	568	8	21	20.03	5%
1X4LED-DK	1,621	17	24	15.51	35%
1X4LEDF-W2L	926	17	21	19.16	9%
2X4FTLEDTYPEB	1,368	7	21	20.30	3%
1X4LEDF-VP	479	5	29	34.75	-20%
1X8LEDF-S-H	177	6	56	53.76	4%
2X2LED-DK-HS	239	9	18	16.00	11%
1X4LEDF-W-H4L	108	6	27	26.18	3%
1XLEDF-6RC	202	15	13	10.12	22%
2X4LED-DK-H	75	4	30	27.42	9%
2X2LED-DKS	84	5	12	12.01	0%
2X2LED-DK	4	5	20	21.10	-6%
1X4LEDF-SS	170	5	26	19.10	28%
4X4FTLEDTYPEB	152	2	42	36.89	12%
1X9LEDSI	101	6	9	8.46	6%
2X9LEDSI	30	6	18	16.32	9%
Total	**7,904**	**147**	**22.83***	**20.39***	**11%**

*Weighted Average

Table 3.5: Energy Saving Analysis Summary

	Audit Qty	Proposed Qty	kW Saved	kWh Saved/Yr
Sold Total	11,902	11,902	386	1,452,364
As-Built Total	12,043	12,043	322	1,262,986

Additional Site Savings Total	392	392	23	73,208
Delta	533	533	(41)	(116,170)

Verified Savings

Energy Savings for lighting improvement change moderately by 29,788 kWh and $36,142 surplus savings from the revised scope of work as documented in the revised Investment Grade Audit. There were de-scoped fixtures, as well as added scope as part of the revised IGA. Below is summary of changes and cost savings impact. The cost savings were updated to reflect Year 1 rates. Detailed line by line spreadsheet documentation is electronically attached to the report as an appendix A of the post installation report.

Table 3.3: Lighting Savings Summary

	Electric Savings (kWh)	Electric Cost Savings ($)	Electric Demand (kW)	Demand Savings ($)	O&M Savings ($)	Total Proposed Cost Savings ($)
Proposed Original IGA	1,426,014	$ 549,746	378	$ 69,566	$ 21,449	$ 640,761
Revised IGA	1,306,406	$ 507,862	383	$ 42,432	$ 21,091	$ 571,384
Verified Year 1	1,336,194	$ 548,121	345	$ 38,235	$ 21,171	$ 607,527
Variance (Verified Year 1 - Revised IGA)	29,788	$ 40,259	(38)	$ (4,196)	$ 80	$ 36,142

FIM 4: Transformer Replacements

FIM Description

The proposed solution is to replace the existing dry type building distribution transformers (like for like nominal kVA capacity) with DOE-2016 efficiency transformers of the same configuration (i.e. 3-phase, delta-wye). No transformers will be relocated, resized, nor will changes be made to the building electrical design. By replacing the old transformers with new transformers, the same amount of electricity can be delivered to the building with lower losses thereby reducing overall energy costs.

The existing dry-type transformers will be removed and replaced with Powersmiths E-Saver ultra-low loss, dry-type transformers, or equivalent. The retrofit transformer will minimize installation cost by taking into account existing site conditions such as transformer footprint and pad dimensions, clearances to walls and other adjacent equipment, conduit entry points, and access (delivery to and from dock). While replacement transformers will not be exact dimensional matches for existing transformers, design of the replacement transformers will minimize installation conflicts and the need to splice conductors or add conduit.

Transformers that were surveyed that were newer (high efficiency), had code issues as discussed above, and/or had no direct/easy replacement (because of configuration or dimensions), will not be replaced.

The following table shows the quantities and sizes of the dry-type transformers that are good candidates for replacements, and are included in JCI's Scope of Work:

Site	Transformer size (kVA)												Total Qty
	14	15	25	30	37.5	45	50	63	75	112.5	150	225	
Kahului Baseyard						1			1				2
Kahului Pump Station				1									1
Kahului WRF		1	1	1		2	1						6
Kalana O Maui						1							1
Kihei Police Station		1										1	2
Kihei WRF				1	1	2			3	1	1		9
Lahaina WRF		1				2			1				4
Lahaina-1 Pump Station									1				1
Lahainaluna WTP									1				1
Mahinahina WTP	1				3								4
Olinda WTP				2									2
Piiholo WTP						2							2
Wailuku Police Station				2		6			1				9
War Memorial									1				1
Grand Total	**1**	**3**	**1**	**7**	**4**	**16**	**1**	**0**	**9**	**1**	**1**	**1**	**45**

Energy Savings Calculations Methodology

Transformer Retrofits Energy Savings

There are savings specifically associated with the reduction in wattage due to the transformer replacements. The equations used are shown below:

Equations for Calculating Transformer Retrofit Savings

The annual kWh savings will be calculated according to the following formulas:

$$Xmr\ Losses\ Normal\ kW = (No\ Load\ loss\ kW\ \ +\%Load\ Normal^2\ x\ (Full\ Load\ Loss\ kW - No\ Load\ Loss\ kW)$$

$$Xmr\ Losses\ Out\ kW = (No\ Load\ loss\ kW\ \ +\%Load\ Out^2\ x\ (Full\ Load\ Loss\ kW - No\ Load\ Loss\ kW)$$

kWh normal savings = [Xmr Losses Normal $kW_{(pre)}$ – Xmr Losses Normal $kW_{(post)}$] x Daily Hours of Operation x Days of Operation per Year

kWh out savings = [Xmr Losses Out $kW_{(pre)}$ – Xmr Losses Out $kW_{(post)}$] x (24 - Daily Hours of Operation) x Days of Operation per Year

Total kWh savings = kWh normal savings + kWh out savings

Where:

% Load Normal:	Typical % Load on transformer during normal operating hours (See Transformer Loading Table below)
% Load Out:	Typical % Load on transformer outside of normal operating hours (See Transformer Loading Table below)
Full Load Loss:	Full load losses on transformer (see Load Losses Table below)
No Load Loss:	No load losses on transformer (see Load Losses Table below)
Xmr losses Normal kW:	Transformer kW losses during Normal Operation hours
Xmr losses Out kW:	Transformer kW losses outside of Normal Operation hours
Daily Hrs Operation:	Estimated normal daily hours of operation; this variable will not be measured (see Operating Hours Table below).
Days of Operation:	Estimated days of operation per year; this variable will not be measured (see Operating Hours Table below).

Annual energy cost savings are determined by multiplying the kWh energy savings by the corresponding facility energy rate ($/kWh).

Measurement and Verification

The savings for this FIM were verified using IPMVP-2016 Option A, Retrofit Isolation with Key Parameter Measurement. The savings for this FIM are generated through a gain in efficiency in the new equipment compared to the existing equipment; therefore, the measurement boundary is the transformer itself.

Key Parameter	Measurement Frequency	Measurement Description
Baseline Transformer Input Losses	Short-Term	Transformer input losses (kW) is measured typically for a duration of 15 min of each transformer measured.
Baseline Transformer % Load	Short-Term	Transformer % Load is measured typically for a duration of 15 min of each transformer measured.
Post Installation Transformer Input Power	Short-Term	Line side power will be measured via a third-party certified test lab modeled to match pre-retrofit test (measurement) conditions
Post Installation Transformer Output Power	Short-Term	Load side power will be measured via a third-party certified test lab modeled to match pre-retrofit test (measurement) conditions
Estimated Parameters	**Assumed Value**	**Justification, Source and Description**
kVA	See *Scope of Work* section in the *FIM Descriptions*	Transformer rating, assumed to be the same pre and post.
Hours & Days of Operation	See *Energy Savings Calculations* section in the *FIM Descriptions*	Assumed to be derived from data collected during audit.

Performance Verification

This FIM is part of a one-time evaluation during the installation period; therefore, no M&V activities were conducted during Year 1 performance period. Field measurements were taken during construction and can be found in Appendix A – FIM 4 – Power Measurements.

Verified Savings

Energy savings for FIM 4, Transformers, resulted in an additional $23,581 saved. Johnson Controls used a conservative method to estimate energy savings for this FIM, and according to factory test data, the actual performance exceeded the initial projections. The cost savings were updated to reflect Year 1 rates.

Detail list of transformers and savings calculation is attached as Appendix B of the post installation report, electronically.

Table 4.1: Transformer Savings Summary

	Electric Savings (kWh)	Electric Cost Savings ($)	Electric Demand (kW)	Demand Savings ($)	Total Proposed Cost Savings ($)
Proposed Original IGA	160,512	$ 57,971	220	$ 62,163	$ 120,134
Revised IGA	159,315	$ 57,280	214	$ 5,522	$ 62,802
Verified Year 1	219,896	$ 78,994	301	$ 7,389	$ 86,383
Variance (Verified Year 1 - Revised IGA)	60,581	$ 21,713	87	$ 1,867	$ 23,581

FIM 5: Domestic Water Plumbing Fixture Upgrades

FIM Description

This measure entails the replacement of existing high-volume plumbing fixtures—including toilets, urinals, faucets, and showerheads—with high-efficiency, low-volume alternatives. The implementation of these upgrades will result in reduced consumption of both water and thermal energy, decreased maintenance requirements, and enhanced fixture performance. Notably, high-efficiency toilets and urinals deliver substantial reductions in water use, while efficient aerators and showerheads contribute further water and energy savings without compromising occupant comfort.

- High Efficiency Toilets (HET): Commercial flush-valve UHETs operated at 1.28 gallons per flush (gpf), more than 20% lower than their 1.6 gpf predecessors and over 60% less than older high-flow toilets. Tank-type HETs featured flowrates ranging from 0.8 to 1.28 gpf.
- Urinals: Existing high efficiency urinals had flush rates from 0.125 gpf (pint-flush) to 0.5 gpf, reducing consumption by up to 90% compared to standard fixtures. Some ultra-low flow urinals (1/8 gpf) remained unchanged.
- Bathroom Faucets/Aerators: High efficiency aerators and flow restrictors were available from 0.35 gallons per minute (gpm) up to 1.5 gpm, allowing facilities to tailor water savings to their needs.
- Showerheads: High efficiency showerheads were installed with flow rates spanning from 1.25 gpm to 2.0 gpm, balancing water conservation with user satisfaction.

These targeted flowrates for toilets, urinals, faucets, and showerheads collectively drove substantial improvements in water efficiency throughout the facility.

Water and Energy Savings Calculations Methodology

The savings were calculated according to the following formulas:

Domestic Fixture Water/Sewer Savings

There are water and sewer savings specifically associated with the reduction in water use or water flow per fixture for domestic water fixture retrofits. The equations used are shown below:

Equations for Calculating Water/Sewer Savings for Domestic Water Fixtures

$$Water\ Savings = \sum_{type} [(Usage\ Rate_{baseline} - Usage\ Rate_{post}) \times AAUF_{type} \times Quantity_{type}] / 1000$$

$$AAUF = \sum_{population\ group} [(Male\ Daily\ Use_{population\ group} \times Number\ Males_{population\ group} + Female\ Daily\ Use_{population\ group} \times Number\ Females_{population\ group})] \times Avg\ Days\ per\ Year\ Occupied$$

where:

$Water\ Savings$ =	water savings realized in kilogallons (kGal). These savings will result in water and sewer dollars saved.
$Usage\ Rate_{baseline}$ =	baseline fixture use rate in gpm (showers/faucets), or gpf (urinals/toilets)
$Usage\ Rate_{post}$ =	post installation fixture use rate in gpm (showers/faucets), or gpf (urinals/toilets)

AAUF = average annual use or flushes per fixture; faucets or showers in minutes per year, toilets or urinals in flushes per year =average people using x minutes/day (faucets/showers) or flushes/day (toilets/urinals) x days/year

Quantity = quantity of affected fixtures

Annual water and sewer cost savings are determined by multiplying the water kgal savings by the corresponding facility water and sewer rate ($/kgal).

The assumed Daily Use data for each fixture type and population group is in the table below:

Population Group	Gender	WATER CLOSET USE daily per person (flush)	URINAL USE daily per person (flush)	FAUCET USE daily per person (min)	SHOWER USE daily per person (min)
<2 hr Visitors	Male	0.35	0.15	0.06	0.05
	Female	0.50		0.06	0.05
<4 hr Visitors	Male	0.5	0.3	0.08	0.1
	Female	0.8		0.09	0.1
8 hr Regulars/Staff	Male	2.0	1.0	0.33	0.1
	Female	3.0		0.33	0.1
Emergency Services Staff	Male	2.0	1.0	0.6	8.2
	Female	3.0		0.8	8.2

The Population data (Number of Male/Female occupants) for each facility is in the table in the IGA document, as estimated by Johnson Controls (water balance calculations are performed for each facility to compare calculated water use to the actual water consumption baseline from the utility bills), as well as the Average Days per Year each facility is occupied. It is estimated that 50% of the population is male and 50% is female.

Hot Water Heating Energy Savings

Due to the reduction in domestic water use in showers and sinks, there will also be an associated reduction in hot water use and heating fuel/energy savings. These savings are only applied to fixtures that use hot water, and only in facilities that tend to use hot water (fire/police stations, aquatic centers).

A FIM to convert existing water heaters to Heat Pumps was not pursued due to existence of either Solar Thermal water heating or point of use instant hot water heaters.

Hot Water Heating Fuel Project Benefits

Energy Project Benefits =

$$Water\ savings \times (Temp_{hot} - Temp_{cold}) \times Specific\ Heat \times 1{,}000 \,/\, (3413 \times Efficiency)$$

where:

Energy Project Benefits = Fuel savings realized in kWh

$WaterProject\ Benefits_{f\text{-}sh}$ =	water savings for faucets and showers in kGal
$Temp_{hot}$ =	average water temperature = 85°F (faucets), 106°F (showers)
$Temp_{cold}$ =	average cold water temperature = 75°F (for Maui, HI)
Specific Heat =	8.34 Btu / (kgal) (°F) for water
Efficiency =	Water heater efficiency expressed as a fraction = 98% for electric DHW heaters

Annual energy cost savings are determined by multiplying the kWh energy savings by the corresponding facility energy rate ($/kWh).

Electric DHW heaters are assumed to have an efficiency of 98%.

Measurement and Verification

The savings for this FIM will be verified using IPMVP-2016 Option A, Retrofit Isolation with Key Parameter Measurement. The savings for this FIM are generated through a reduction in water usage at the fixture; therefore, the measurement boundary is the fixture itself.

Key Parameter	Measurement Frequency	Measurement Description
Pre- retrofit Fixture gallons/flush gallons/minute	See *Energy Savings Calculations* section in the *FIM Descriptions*	The pre-retrofit flow rates were based upon measurements taken between 7/18/22 and 7/22/22 on a sample of fixtures that meet a confidence level of at least 80% and a precision of 20. These measurements form the basis for the baseline water consumption and will not be measured again.
Post-retrofit Fixture gallons/flush gallons/minute	Short-term	The post-installation fixture usages will be measured one time using the same measurement procedures. The measurements will occur in the same locations, up to the required sample size.
Estimated Parameters	**Assumed Value**	**Justification, Source and Description**
Population	See *Energy Savings Calculations* section in the *FIM Descriptions*	The population counts are estimated or based on information collected during site audits. These values will not be measured.
Usage Factors	See *Energy Savings Calculations* section in the *FIM Descriptions*	The usage factors (flushes/day/person, seconds/handwashing/usage, etc.) values are based on American Water Works Association Research Foundation (AWWARF), 2000, Commercial and Institutional End Uses of Water, and some engineering estimates.
Efficiency	See *Energy Savings Calculations* section in the *FIM Descriptions*	The efficiency of the hot water heating equipment is based on manufacturer's data and will not be measured.
$Temp_{hot}$	See *Energy Savings Calculations* section in the *FIM Descriptions*	The hot water temperature is the typical temperature at which users wash their hands and take showers and will not be measured.
$Temp_{cold}$	See *Energy Savings Calculations* section in the *FIM Descriptions*	The cold-water temperature is the average annual ground water temperature from Maui.

Performance Verification

This FIM is part of a one-time evaluation during the installation period; therefore, no M&V activities were conducted during Year 1 performance period. Below is a summary of the post-installation M&V activities that were conducted during installation. A total of 148 fixtures across nine usage groups were evaluated to compare pre- and post-measurement flow rates against their rated specifications. The analysis included toilets, urinals, faucets, showerheads, and shower towers, with flow expressed in gallons per flush (GPF) for toilets and urinals and gallons per minute (GPM) for faucets and showers. The objective was to assess pre- and post-measurement flow rates relative to rated specifications and quantify water savings achieved through retrofit measures. The findings indicate substantial reductions in water consumption, with savings ranging from 32% to 93% across all fixture types. Urinal flush valves and shower towers delivered the most significant improvements, while toilets and faucets also demonstrated meaningful reductions. Post-retrofit flows consistently fell below rated values, confirming the effectiveness of conservation strategies and highlighting opportunities for long-term cost and resource savings. Highlights include:

- Significant reductions in water consumption were achieved across all categories, ranging from 32% to 93%.
- Urinal flush valves demonstrated the highest savings, with reductions of 92–93%, primarily due to ultra-low or waterless solutions.
- Shower towers showed substantial improvements, with one type reducing flow by 91% (16.75 to 1.52 GPM).
- Faucets and showerheads achieved reductions of 86% and 70%, respectively, indicating strong conservation measures.
- Toilet fixtures exhibited moderate reductions, between 32% and 53%, with post-measurement flows generally below rated specifications.

Post-retrofit flows were consistently reduced to below rated values, confirming effective implementation of water-saving strategies.

Table 5.1: Pre & Post Flowrate Measurements Summary

Usage Group	Samples	Rated Flowrate	Pre-Measurement Flowrate	Post-Measurement Flowrate	Reductions %
1.6 GPF Toilet Flush Valve	17	1.6	2.26	1.07	53%
1.28 GPF Toilet Flush Valve	17	1.28	1.95	1.20	39%
1.6 GPF Toilet TANK Type	17	1.6	1.66	1.14	32%
1.0 GPF Urinal Flush Valve	17	1	1.53	0.12	92%
1.5 GPF Urinal Flush Valve	12	1.5	1.74	0.12	93%
2.2 GPM Faucets	17	2.2	3.49	0.49	86%
2.5 GPM Showerhead	17	2.5	4.32	1.31	70%
Shower Towers	17		6.12	2.00	67%
Shower Towers	17		16.75	1.52	91%
Total	**148**				

Verified Savings

Energy savings for FIM 5 resulted in $11,935, more than initially expected. This increase is due to the installation of additional water fixtures (119 fixtures: 11 aerators, 15 showers, 75 toilets, 18 urinals) at the project site, while the guaranteed savings per the revised IGA remained unchanged. The cost savings were updated to reflect Year 1 rates.

Table 5.2: Domestic Water Plumbing Savings Summary

	Electric Savings (kWh)	Electric Cost Savings ($)	Water + Sewer Savings (kGal)	Water + Sewer Savings ($)	Total Proposed Cost Savings ($)
Proposed Original IGA	141,801	$ 56,751	29,999	$ 139,828	$ 196,580
Revised IGA	34,003	$ 13,665	22,570	$ 96,825	$ 110,489
Verified Year 1	45,822	$ 18,110	26,070	$ 104,314	$ 122,424
Variance (Verified Year 1 - Revised IGA)	11,819	$ 4,445	3,500	$ 7,490	$ 11,935

FIM 6: Shower Tower Retrofits

FIM Description

A During the development phase, water consumption at beach shower towers increased by approximately 35%. This higher usage was compounded by incidents of vandalism and frequent use by visitors and non-beach users beyond designated hours. To address these challenges and improve water efficiency, the original shower towers were replaced with low-flow models featuring a maximum flow rate of 2.5 gallons per minute.

All beach parks reported significant vandalism to plumbing fixtures. In response, future installations were recommended to use institutional-grade shower towers equipped with pressure-compensating spray nozzles designed for vandal resistance. These commercial-grade fixtures feature durable, non-porous polymer that resists rust and vandalism, include recessed anchor holes for safety, withstand extreme cold, and are ADA compliant. Colors are fade-resistant and minor damage can be heat blended.

Energy/Water Savings Calculations Methodology

The savings were calculated according to the following formulas:

Shower Tower Water/Sewer Savings

There are water and sewer savings specifically associated with the reduction in water use or water flow per fixture for domestic water fixture retrofits. The equations used are shown below:

Equations for Calculating Water/Sewer Savings for Domestic Water Fixtures

$$Water\ Savings = [(Usage\ Rate_{baseline} - Usage\ Rate_{post}) \times AAUF \times Quantity] / 1000$$

$$AAUF = Number\ of\ Users \times Avg\ Days\ per\ Year \times Shower\ Use\ (min/use)$$

where:

Water Savings =	water savings realized in kilogallons (kGal). These savings will result in water and sewer dollars saved.
$Usage\ Rate_{baseline}$ =	baseline fixture use rate in gpm (showers),
$Usage\ Rate_{post}$ =	post installation fixture use rate in gpm (showers),
AAUF =	average annual use for showers in minutes per year = Number of people using x minutes/day (showers)
Quantity =	quantity of affected fixtures

The number of people using the showers are estimated according to the annual water baseline provided by the County for each park.

Annual water and sewer cost savings are determined by multiplying the water kgal savings by the corresponding facility water and sewer rate ($/kgal).

The assumed Daily Use data is in the table below:

Location	QTY	TYPE	Days per Year	Number of Users	Shower Use (min)	AAUF
Charley Young	1	Manual	365	16.9	2.00	12,337
DT Fleming Park	1	Push Button	365	85	2.00	62,050
H A Baldwin	1	Push Button	365	116	2.00	84,680
Hanakao'o Park	2	Manual	365	228	2.00	166,440
Haycraft Park	1	Push Button	365	104	2.00	75,920
Honokowai Beach Park	1	Push Button	365	212	2.00	154,760
Hookipa Beach Park	1	Push Button	365	87	2.00	63,510
Hookipa Beach Park	1	Manual	365	87	2.00	63,510
Kalama Park	1	Manual	365	78	2.00	56,940
Kamaole I Beach Park	1	Push Button	365	360	2.00	262,800
Kamaole II Beach Park	1	Push Button	365	190	2.00	138,700
Kamaole III Beach Park	3	Push Button	365	295	2.00	215,350
Kanaha Beach Park	1	Manual	365	155	2.00	113,150
Kihei Aquatic Center	2	Push Button	365	55	2.00	40,150
Launiupoko Beach Park	1	Push Button	365	1925	2.00	1,405,250
Lower Paia Park	1	Push Button	365	210	2.00	153,300
Papohaku Beach Park	1	Manual	365	60	2.00	43,800
Papohaku Beach Park	2	Manual - Copper Shower Repipe	365	30	2.00	21,900
Wahikuli Wayside Park	1	Manual	365	100	5.00	182,500
Wailea Beach Park	1	Push Button	365	650	2.00	474,500
TOTAL	**25**					

Measurement and Verification

The savings for this FIM will be verified using IPMVP-2016 Option A, Retrofit Isolation with Key Parameter Measurement. The savings for this FIM are generated through a reduction in water usage at the fixture; therefore, the measurement boundary is the fixture itself.

Key Parameter	Measurement Frequency	Measurement Description
Pre- retrofit Fixture gallons/flush gallons/minute	See *Energy Savings Calculations* section in the *FIM Descriptions*	The pre-retrofit flow rates were based upon measurements taken between 7/18/22 and 7/22/22 on a sample of fixtures that meet a confidence level of at least 80% and a precision of 20. These measurements form the basis for the baseline water consumption and will not be measured again.
Post-retrofit Fixture gallons/flush gallons/minute	Short-term	The post-installation fixture usages will be measured one time using the same measurement procedures. The measurements will occur in the same locations, up to the required sample size.
Estimated Parameters	**Assumed Value**	**Justification, Source and Description**
Population	See *Energy Savings Calculations* section in the *FIM Descriptions*	The population counts are estimated or based on information collected during site audits. These values will not be measured.
Usage Factors	See *Energy Savings Calculations* section in the *FIM Descriptions*	The usage factors (flushes/day/person, seconds/handwashing/usage, etc.) values are based on American Water Works Association Research Foundation (AWWARF), 2000, Commercial and Institutional End Uses of Water, and some engineering estimates.
Efficiency	See *Energy Savings Calculations* section in the *FIM Descriptions*	The efficiency of the hot water heating equipment is based on manufacturer's data and will not be measured.
$Temp_{hot}$	See *Energy Savings Calculations* section in the *FIM Descriptions*	The hot water temperature is the typical temperature at which users wash their hands and take showers and will not be measured.
$Temp_{cold}$	See *Energy Savings Calculations* section in the *FIM Descriptions*	The cold-water temperature is the average annual ground water temperature from Maui.

Performance Verification

This FIM was assessed as part of a one-time evaluation during the installation phase; therefore, no M&V activities occurred during the first-year performance period. The analysis focused on comparing Push Button and Manual Shower Towers across multiple sites. Measurements of flush and flow rates (in gallons per minute) were taken during installation and applied to update water savings calculations.

Push Button	ShowerTowers Site Name	Location	Flush / Flow Rate
1	Kihei Aquatic	outside	**1.60**
2	Kihei Aquatic	outside	**2.20**
3	kamaole 3 beach park	outside	**2.50**
4	honokowai beach park	outside	**2.50**
10	wailea beach park	outside	**1.50**
17	laniupoko beack park	outside	**8.75**
		Average Usage	**3.18**

Manual	ShowerTowers Site Name	Location	Flush / Flow Rate
4	charley Young		**1.50**
5	hanakaoo park	outside	**3.00**
6	hanakaoo park	outside	**3.00**
7	kalama park	outside	**1.50**
8	kalama park	outside	**1.50**
		Average Usage	**2.73**

Verified Savings

The savings increased significantly by $72,273. This increase is attributed to better performance of the shower fixtures (actual flow rate) and due to adjustment of the baseline water consumption of the shower towers, triggered by the discovery of missing water bills for four meters at Kalama Park, Kamaole 1 and 2 Beach Parks, and Kanaha Beach Park.

The water usage at these sites increased from 87 million to 97 million gallons, an 11% rise, leading to a 15% increase in the baseline usage of the shower towers. While the post-installation usage remained the same, the increase in baseline usage altered the water savings calculation, resulting in significantly higher water savings.

Table 6.1: Shower Towers Savings Summary

	Water + Sewer Savings (kGal)	Water + Sewer Savings ($)	Total Proposed Cost Savings ($)
Proposed Original IGA	73,736	$ 304,789	$ 304,789
Revised IGA	54,005	$ 150,224	$ 150,224
Verified Year 1	57,928	$ 222,497	$ 222,497
Variance (Verified Year 1 - Revised IGA)	3,923	$ 72,273	$ 72,273

Operational Verification (OV) Approach:

OV approach provides verification of a system's capability to produce the projected energy savings.

Detailed M&V isn't cost effective for the On-Site Hypochlorite Generation and Infiltration Reduction due to the relatively small amount of energy savings attributed to these FIMs. Therefore, Post-installation M&V was conducted to verifying installation of the FIMs as outlined below.

FIM	Frequency	Task Description
Irrigation System	One Time – Post Installation	*Post Installation* • Visually verify and document via digital photographs the operation of the irrigation controller.
On-Site Hypochlorite Generation	One Time – Post installation	See *Energy Savings Calculations* section in the *FIM Descriptions* *Post Installation* • Onsite chlorine generator (Verify nameplate data). • Visually verify and document salt use to generate chlorine. Review the functional testing documents associated with the installation.
Infiltration Reduction	One Time – Post installation	*Post Installation* • Visually verify and document via digital photographs the areas affected by the envelope improvements. Review the pre and post leakage area (sqft).

FIM 7: Irrigation Systems

FIM Description

New Irrigation System at Kelawea Mauka Makai Park:

- Provide and Install new irrigation system, including: new valves following the original design with no additional areas.
- Provide dirt removal and replacement and re-seeding using hydroseed with Common Bermuda seed. Areas to be covered are the main effected area, which include the effected areas as well as all slopes and hillsides (approx.. 44,480 sqft), and the main ball field area as well (approx. 33,600 sqft)
- Provide and Install new battery-operated Hunter Bluetooth nodes in each valve box.
- Existing irrigation pipes will be abandoned in place, with the exception of anything that interferes with the new installation.
- Provide As-Built drawings showing the irrigation layout upon completion of the work.

Exclusions:

- Existing irrigation system and controls shall be re-used
- Excludes tree trimming or tree removal.

Water Savings Calculations

Irrigation System Water Savings

There are savings specifically associated with the new irrigation system at Kelawea Mauka Makai Park due to the elimination of the leaks in the existing irrigation system. The existing system has piping that are buried too deep and is suspected of leaking by the Parks Department.

Equations for Calculating Irrigation System Replacement Water Savings

Water kGal Savings = Water Baseline (kgal/yr) – New Water Use (kgal/yr)

Period Water Use (kGal/yr) = Qty Heads x GPM/Head x Min/Cycle x Cycles/week x Weeks/year / 1000

Total Water Use (kGal/yr) = Period 1 Water Use + Period 2 Water Use

Where:

Qty Heads =	Quantity of rotor heads as observed during a site visit
GPM/Head =	Estimated Flow per rotor/head based on existing models being used (Hunter Ultra Max rotor heads 360deg) with an assumed pressure of 45 psi.
Minutes/day =	Estimated duration of irrigation system operation per day. (Data provided by Department of Parks irrigation onsite indicated 20-40 minutes/day, and worst case scenario of 40 minutes/day was used in this analysis to be conservative).

Cycles/Week = Frequency of irrigation system operation per week. Data provided by Department of Parks irrigation onsite indicated that for about 3 months/year the system is only used 3 days/week and the rest of the time it's 5 days/week.

Water Baseline = Annual water use from water bills from April 2021 to March 2022.

Total Water Use = Total amount of water the irrigation system should use per year

The table below provides a calculation of the water savings:

Kelawea Mauka Park					Period 1			Period 2			
Zone	Rotor Heads	Assumed PSI	Degrees	GPM	Minutes per cycle	Days per Week	Weeks per Year	Minutes per cycle	Days per Week	Weeks per Year	Total Water use (kgal)
Box 1	6	45	360	5.78	40	5	39	40	3	13	324.60
"	7	45	360	5.78	40	5	39	40	3	13	378.71
Box 2	7	45	360	5.78	40	5	39	40	3	13	378.71
Box 3	6	45	360	5.78	40	5	39	40	3	13	324.60
Box 4	4	45	360	5.78	40	5	39	40	3	13	216.40
Box 5	6	45	360	5.78	40	5	39	40	3	13	324.60
Box 6	5	45	360	5.78	40	5	39	40	3	13	270.50
Box 7	5	45	360	5.78	40	5	39	40	3	13	270.50
Box 8	8	45	360	5.78	40	5	39	40	3	13	432.81
Sprayheads	20	45	360	1.2	40	5	39	40	3	13	224.64
Box 9	6	45	360	5.78	40	5	39	40	3	13	324.60
Sprayheads	20	45	360	1.2	40	5	39	40	3	13	224.64
Box 10	6	45	360	5.78	40	5	39	40	3	13	324.60
Box 11	6	45	360	5.78	40	5	39	40	3	13	324.60
										Total Calculated Water use	**4,344.54**
										Utility Baseline Water Use (Apr '21 to Mar '22)	**6,008.00**
										Savings (non-measured) = Calculated Use - Utility Baseline	**1,663.46**

Measurement and Verification

Water savings resulting from the elimination of water leaks on the existing irrigation system are not cost effective to measure and verify, thus with the methodology described above, the Customer agrees that the savings generated through this new irrigation system will be achieved. These savings will not be measured.

FIM	Frequency	Task Description
Irrigation System	One Time – Post Installation	*Post Installation* • Visually verify and document via digital photographs the operation of the irrigation controller.

Performance Verification

This FIM is part of a one-time evaluation during the installation period; therefore, no M&V activities were conducted during Year 1 performance period.

Verified Savings

The non-energy savings amount to 1,663 kGals, resulting in total cost savings of $10,026 attributed to changes of the irrigation system, as detailed in Table 7.1. The following table provides a breakdown of these savings during Year 1.

Table 7.1: Irrigation Systems Savings Summary

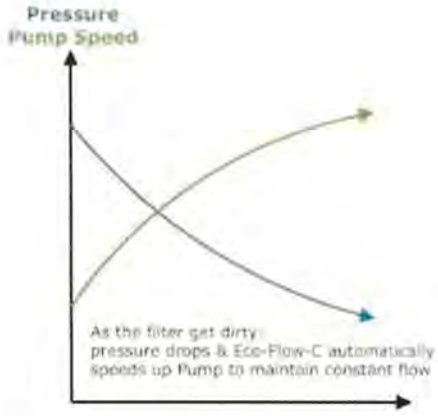
	Electric Savings (kWh)	Electric Cost Savings ($)	Water + Sewer Savings (kGal)	Water + Sewer Savings ($)	Total Proposed Cost Savings ($)
Proposed Original IGA	(61,908)	$ (25,953)	64,046	$ 335,764	$ 309,811
Revised IGA	-	$ -	1,663	$ 10,026	$ 10,026
Verified Year 1	-	$ -	1,663	$ 10,026	$ 10,026
Variance (Verified Year 1 - Revised IGA)	-	$ -	-	$ -	$ -

FIM 8: On-Site Hypochlorite Generation and Smart Pool Pump Controls

FIM Description

The proposed improvements included: install Smart Pump control systems with integration to Aquatic Systems, install On-Site Hypochlorite Generation (OSHG), install water chemistry controllers, and repair some of the noted deficiencies with the existing pool systems.

The Smart Pump control system with integration to aquatic systems provides system level control. This will simplify operations and save energy. Flow measuring devices will be installed and integrated into the control system. Knowing the flow is a critical aspect of maintaining efficient and effective pool filtration. The Smart Pump control system will use the flow rate to automatically adjust the speed of the pump to maintain the desired flow. The pump speed needed will change with the filter condition. Energy savings is achieved by matching the pump performance to the filter load as it dynamically changes during the filter cycle.



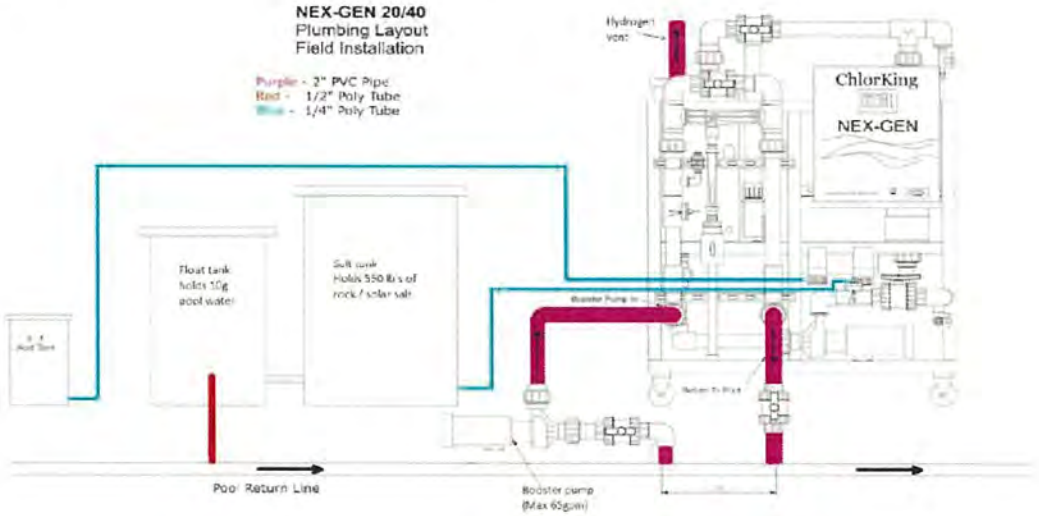
On-Site Sodium Hypochlorite Generation replaces the existing method of buying and storing chlorine for water treatment. The hypochlorite needed for pool water treatment is produced on-site and the need to purchase and store expensive chlorine is eliminated.

Sodium hypochlorite generators produce pool chlorination chemicals from the electrochemical reaction between salt, water, and electricity. On-site production of chlorine as a solution of sodium hypochlorite alleviates the risks to public health and safety relating to the storage and transportation of hazardous acid and concentrated chlorine solutions. The only raw material, salt, is an inert, safe compound that is stored in a feeder on-site and used as required by the chlorine generator.

On-site generation systems create a pH neutral chlorine. The pH neutral chlorine from OSHG reduces the need for chemicals such as CO2 / Muriatic/ Sulfuric Acids by 50% that are required to control pH in traditional chlorination systems.

Traditional chlorination systems introduce high levels of Calcium into the pool water. The amount of Calcium and other minerals is measured as Total Dissolved Solids (TDS). High TDS requires dilution with makeup water to keep it below the required amount. OSHG greatly reduces the TDS in pool water and is needed for dilution.

The system uses pool water (not make-up water) to determine how much sodium hypochlorite to add. This results in a more precise control of the pool chorine levels. By using pool water directly there is residual sodium already in the water. Thus, if the pool isn't drained, less salt will be required each year.



Water chemistry controllers will automate water treatment for the pools. The controllers will monitor and control the pool pH and Free Available Chlorine (FAC). Pool chemistry controllers will provide consistency across locations by automating a task that is currently manually performed by different people.

Water and Energy Savings Calculations

OSHG Water/Sewer Savings

OSHG reduces the amount of make-up water needed to dilute TDS in pools. The post-retrofit reduction is because Calcium Hypochlorite is 35% calcium by weight and will no longer be added to the pool water.

The Water/Sewer Savings are calculated with the following methodology and assumptions:

$kGal_{Savings}$ = *Pool Volume / 1000 (Gal/kGal) x Dilution x 12 (months/year)*
$Water_{Savings}$ = $kGal_{Savings}$ *x Water Rate*
$Sewer_{Savings}$ = $kGal_{Savings}$ *x Sewer Rate*

Where:

Pool Volume = *Total volume of the pool (Gal)*
Dilution = *Percent of pool volume needed to be replaced monthly to keep calcium below 500 ppm = 13.7%*
$Water_{Rate}$ = *Marginal water rate ($/kGal)*
$Sewer_{Rate}$ = *Sewer rate ($/kGal) = $6.7/kgal (where applicable)*

And:

Dilution = *Max Calcium / [Max Calcium + (*$CalHypo_{Daily\ Addition}$ *x* $Calcium_{CalHypo}$*) x 30 day/month]*

Max Calcium = *500 (ppm)*
$CalHypo_{DailyAddition}$ = *Daily chemical addition to pool = 8 (ppm)*
$Calcium_{CalHypo}$ = *Calcium by weight of Calcium Hypochlorite = 35%*
Dilution = *13.7%*

The water/sewer savings associated with the OSHG will not be measured, and below is a table showing the total water/sewer savings at baseline rates:

Facility	Pool Volume (Gal)	$kGal_{Savings}$ (kGal/Yr)	$Water_{Rate}$ ($/kGal)	$Sewer_{Rate}$ ($/kGal)	$Water_{Savings}$ ($/yr)	$Sewer_{Savings}$ ($/yr)	Total Savings ($/yr)
Coach Sakamoto Pool	410,670	675	$5.85	$0.00	$3,950	$0	$3,950
Cooke Memorial Pool	184,000	444	$3.90	$0.00	$1,731	$0	$1,731
Kokua Pool	190,000	N/A	$5.85	$6.70	N/A	N/A	N/A
Kihei Aquatic Center	1,057,500	1,739	$5.85	$6.70	$10,170	$11,648	$21,819
Lahaina Aquatic Center	522,300	859	$5.85	$6.70	$5,023	$5,753	$10,776
Upcountry Pool	453,588	746	$5.85	$0.00	$4,362	$0	$4,362
Wailuku Pool	40,000	66	$5.85	$0.00	$385	$0	$385
TOTAL	**2,944,058**	**4,529**			**$25,621**	**$17,401**	**$43,023**

OSHG Electric Penalty

OSHG will increase the electric usage at the pool facilities. This increase is because the chemical is being produced on-site by new equipment that uses electricity. The energy of the new equipment is partially offset by the removal of the existing Chloride Pump.

First calculate the post-retrofit penalty for new electrical usage by the OSHG equipment:

$OSHG_{Elec}$ = $Volt_{OSHG}$ *x* Amp_{OSHG} */ 1000(W/kW) x* $Hour_{OSHG}$ *x Days of Operation*

And:

$Hour_{OSHG}$ = *FAC Use /* $OSHG_{Capacity}$ *x 24 (hr/day)*

Where:

$Volts_{OSHG}$ = *Voltage of OSHG Equipment = 208V*
Days of Operation = *Days of Operation per year = 365*

The electric penalty associated with the OSHG will not be measured, and below is a table showing the assumptions and results:

Facility	$OSHG_{Capacity}$ (lb/day)	$Amps_{OSHG}$ (A)	FAC Use (lb/day)	$Hour_{OSHG}$ (hr/day)	$OSHG_{Elec}$ (kWh/Yr)	Elec Rate ($/kWh)	Penalty ($/yr)
Coach Sakamoto Pool	180	88	17.55	2.34	15,633	0.32663	**$5,106**
Cooke Memorial Pool	60	30	11.7	4.68	10,659	0.383907	**$4,092**
Kokua Pool	N/A	N/A	N/A	N/A	N/A	0.32663	**N/A**
Kihei Aquatic Center	240	116	46.15	4.62	40,643	0.32663	**$13,275**
Lahaina Aquatic Center	180	88	22.75	3.03	20,266	0.32663	**$6,619**
Upcountry Pool	180	88	17.55	2.34	15,633	0.372881	**$5,829**
Wailuku Pool	12	6	2.6	5.2	2,369	0.32663	**$774**
Total	**852**	**416**	**118.3**	**22.21**	**105,203**		**$35,695**

Chloride Pump Savings
Below are the savings generated by the removal of the chloride pump:

$$Chloride\ Pump_{Elec} = Volt_{ChlorPump} \times Amp_{ChlorPump} / 1000(W/kW) \times Hour_{ChlorPump} \times Days\ of\ Operation \times Quantity$$

Where:

$Volt_{ChlorPump}$ = *120 (V)*
$Amp_{ChlorPump}$ = *5 (A) (Estimated size of chloride pump)*
$Hour_{ChlorPump}$ = *8 (hr/day)*
Days of Operation = *365 (day/year)*
**Quantity* = *7*
**No Chloride Pump at Coach Shiraishi Memorial Pool*

The electric savings associated with the removal of the chloride pumps will not be measured. Below are the results.

$Chloride\ Pump_{Elec}$ = *12,264 (kWh/yr)*

Facility	Chloride $Pump_{Elec}$ (kWh/Yr)	Elec Rate ($/kWh)	Chloride Pump Savings ($/yr)
Coach Sakamoto Pool	1,752	0.32663	**$572**
Cooke Memorial Pool	1,752	0.383907	**$673**
Kokua Pool	N/A	0.32663	**N/A**
Kihei Aquatic Center	1,752	0.32663	**$572**
Lahaina Aquatic Center	1,752	0.32663	**$572**
Upcountry Pool	1,752	0.372881	**$653**
Wailuku Pool	1,752	0.32663	**$572**
Total	**10,512**		**$3,614**

Smart Pool Pump Control Electric Savings

The Smart Pump control systems will reduce the electric usage at the pool facilities. The savings will come from reducing pump energy by varying the speed needed to maintain desired flow.

Next determine the Pool Pump baseline electricity use (kWh):

$$Pool\ Pump_{Pre} = (Flow \times Head) / (3{,}960 \times Motor_{Eff} \times Pump_{Eff}) \times .746\ (kW/hp) \times Days\ of\ Operation \times Hour_{On} \times Qty$$

Where:

Flow = *Nameplate (gpm)*
Head = *Nameplate (Ft)*
Conversion Factor *3,960*
$Motor_{Eff}$ = *Motor Efficiency (%)*
$Pump_{Eff}$ = *Pump Efficiency (%)*
Days of Operation = *Days of operation per year = 365 day/year*
$Hour_{On}$ = *Hours of operation per day = 24hr/day*
Qty = *Number of identical pumps*

Facility	Location	Pump Flow (gpm)	Pump Head (ft)	Motor Efficiency (%)	Pump Efficiency (%)	Qty	Pool $Pump_{Pre}$ (kWh/yr)
Coach Sakamoto Pool	Lap Pool	1,300	65	92.40%	92.40%	1	163,328
Coach Siraishi Pool	Lap Pool	405	60	87.50%	87.50%	1	52,377
Cooke Memorial Pool	Lap Pool	200	80	87.50%	87.50%	2	68,973
Kihei Aquatic Center	Lap Pool	1,200	60	91.00%	91.00%	2	286,964
Kihei Aquatic Center	Training Pool	500	60	92.40%	92.40%	1	57,986
Kihei Aquatic Center	Keiki Pool	200	60	85.50%	85.50%	1	27,089
Kihei Aquatic Center	Keiki Feature	500	50	88.50%	88.50%	1	15,363
Lahaina Aquatic Center	Lap Pool	1,428	70	94.50%	94.50%	2	369,437
Lahaina Aquatic Center	Keiki Pool	135	60	91.00%	91.00%	1	16,142
Upcountry Pool	Lap Pool	1,142	50	89.50%	89.50%	1	117,635
Upcountry Pool	Teaching Pool	180	70	89.00%	89.00%	1	26,251
Upcountry Pool	Keiki Pool	110	60	89.00%	89.00%	1	13,750
Wailuku Pool	Lap Pool	95	60	87.00%	87.00%	2	24,855
Total							**1,240,150**

The Pool Pump Post electrical usage is calculated as:

$$Pool\ Pump_{Post} = Days\ of\ Operation \times [(Pump\ kW_{Occ} \times Hour_{Occ}) + (Pump\ kW_{Unocc} \times Hour_{Unocc})]$$

Where:

Days of Operation, Occupied hours, and Unoccupied hours will not be measured and the following table of values is used.

Days of Operation =	*Days of Operation per year = 365 (day/yr)*
$Hour_{Occ}$ =	*Occupied Hours per day = 7 (hr/day)*
$Hour_{Unocc}$ =	*Unoccupied Hours per day = 17 (hr/day)*

The Pool pump savings are simply calculated as:

$$Pool\ Pump_{Savings} = Pool\ Pump_{Pre} - Pool\ Pump_{Post}$$

Measurement and Verification

There are 2 M&V methodology for this FIM, Operational Verification M&V and IPMVP-2016 Option A.

For the OSHG water/sewer savings, OSHG pump penalty and chloride pumps saving, there will be a one-time post installation Operational Verification M&V.

FIM	Frequency	Task Description
Irrigation System	One Time – Post Installation	*Post Installation* • Visually verify and document via digital photographs the operation of the irrigation controller.
On-Site Hypochlorite Generation	One Time – Post installation	See *Energy Savings Calculations* section in the *FIM Descriptions* *Post Installation* • Onsite chlorine generator (Verify nameplate data). • Visually verify and document salt use to generate chlorine. Review the functional testing documents associated with the installation.

For the smart pump controls, the savings will be verified using IPMVP-2016 Option A, Retrofit Isolation with Key Parameter Measurement. The savings for this FIM are generated through a reduction in pump kW via VFDs and pump controllers; therefore, the measurement boundary is the pump itself.

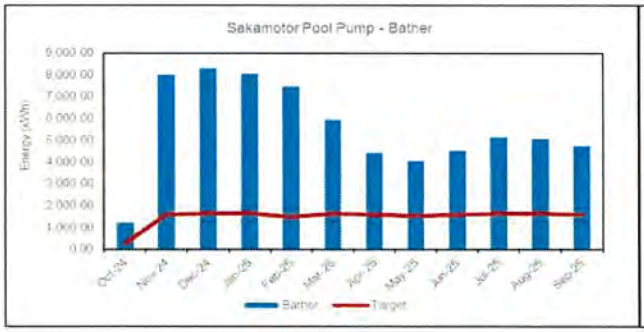
Key Parameter	Measurement Frequency	Measurement Description
Post-Retrofit kW	Short-term	Quarterly the power reads will be read via controller with remote access during hours of non-bathing and bathing periods to average over the year to illustrate reduced pump speed.
Estimated Parameters	**Assumed Value**	**Justification, Source and Description**
Baseline kWh	See *Energy Savings Calculations* section in the *FIM Descriptions*	The pre-retrofit pool pump energy use is based on the calculations shown. These values form the basis for the baseline pool pump energy use and will not be measured.
Run Hours – Baseline and Post-Retrofit	See *Energy Savings Calculations* section in the *FIM Descriptions*	It is agreed that the pumps operate 24 hours per day, 365 days per year. 7 hours per day in the "occupied/pool in use" and 17 hours per day in the "unoccupied" mode.

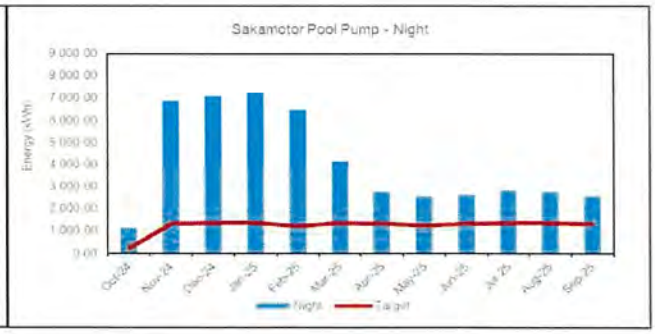
Performance Verification

During Year 1, the implementation of smart pump controls across Maui County aquatic facilities demonstrated measurable progress toward energy savings objectives. Several pools successfully reduced pump speeds during unoccupied periods, aligning with project overall goals. However, optimization remains an area for improvement at few sites. Johnson Controls (JCI) will continue monitoring and fine-tuning pump operations to achieve targeted performance and maximize savings. The savings associated with this measure were verified by confirming equipment power output during the performance period. Observations and actions for each facility are summarized below:

Coach Soichi Sakamoto Pool

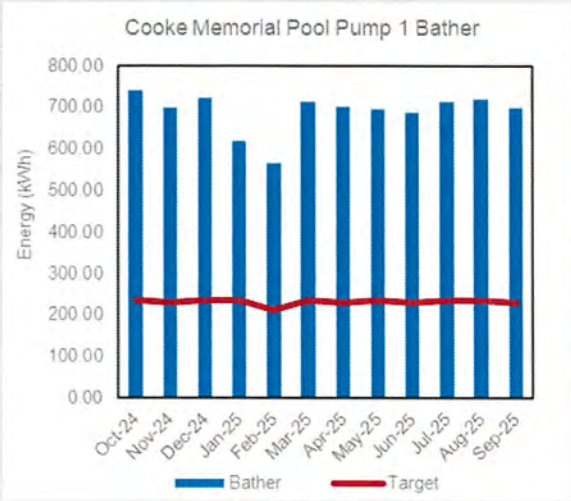
Pump control improvements began in March 2025, with enhanced performance during unoccupied periods as shown in trend data. JCI will continue monitoring to achieve targeted reductions during occupied hours.

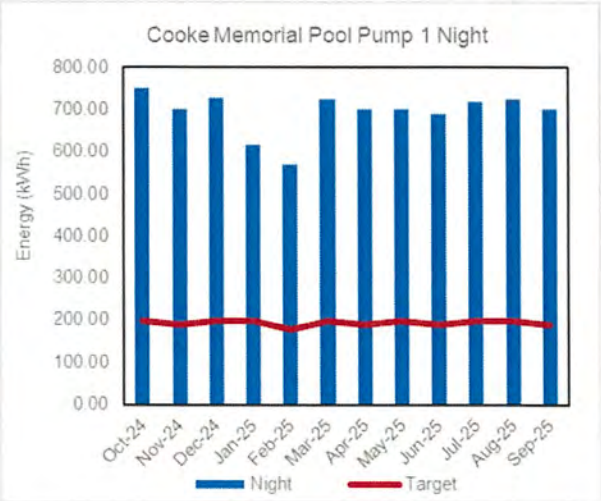


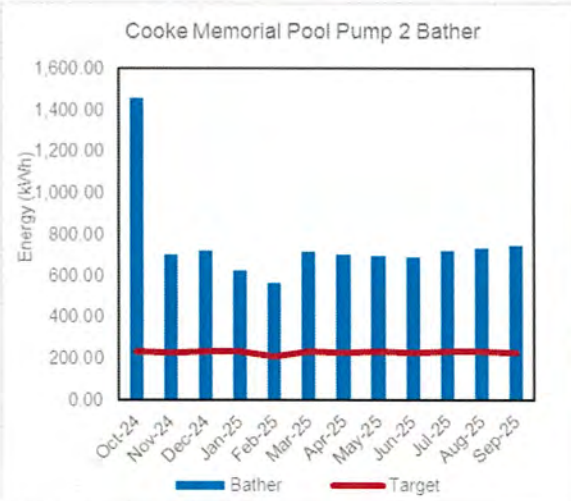


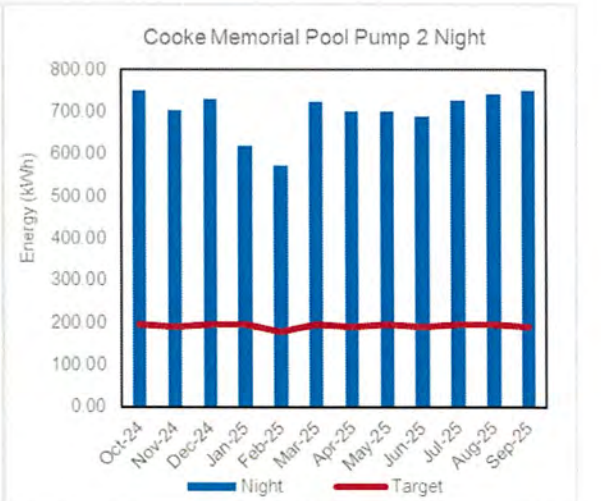
Cooke

Both pumps 1 & 2 are not reducing speeds in unoccupied mode during night operations.



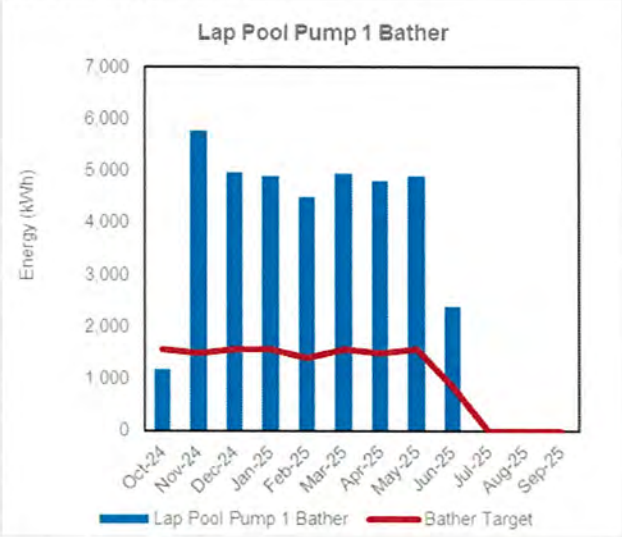


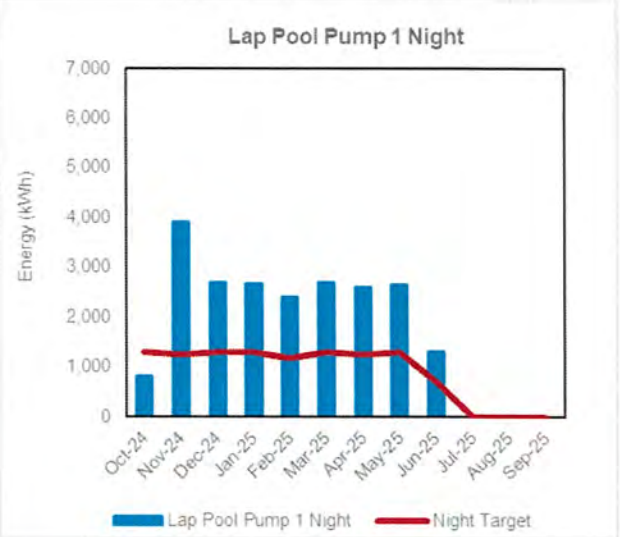


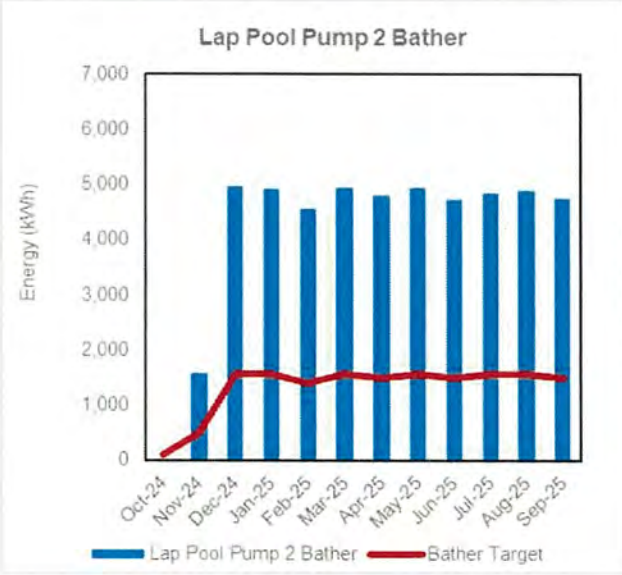


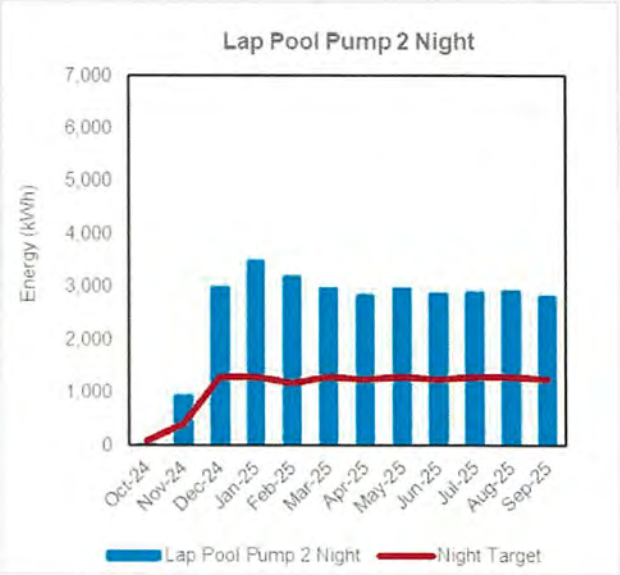
Khei

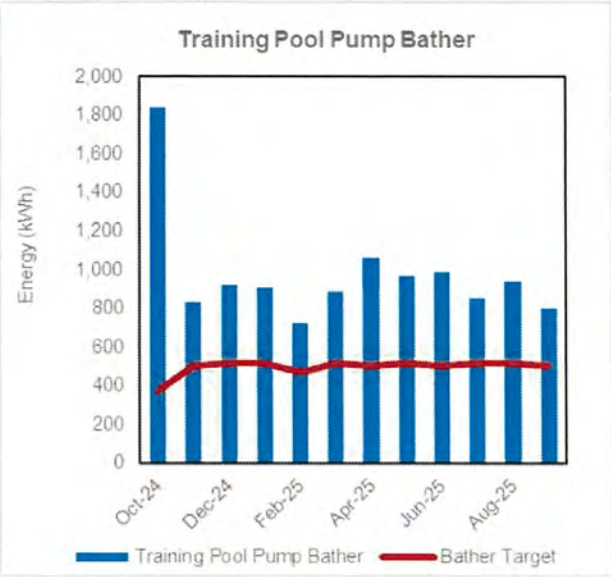
All pumps operated at reduced speeds during unoccupied nighttime periods. JCI will maintain oversight of Lap Pool Pumps 1 and 2 to further optimize speed reductions during occupied hours. According to the Maui Pool Maintenance Manager, Lap Pool Pump 1 at Kihei Pool was out of service due to a failed variable frequency drive (VFD). The VFD was replaced in October, and the pump is now operational. The Eclypse control system will require rewiring to the new VFD to resume trend data collection.

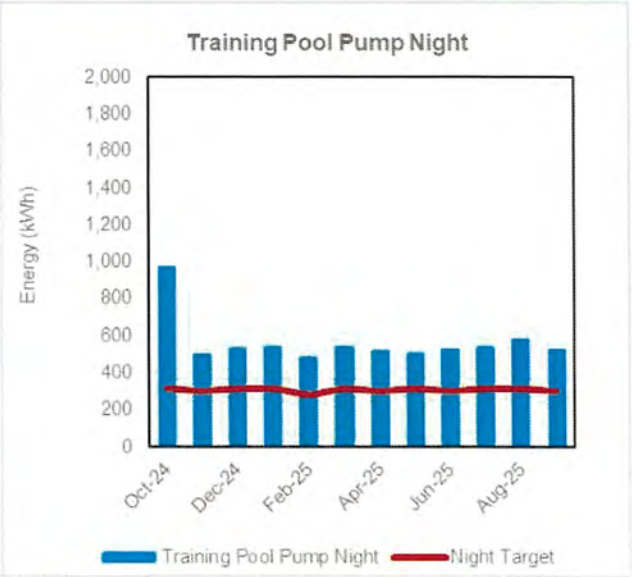


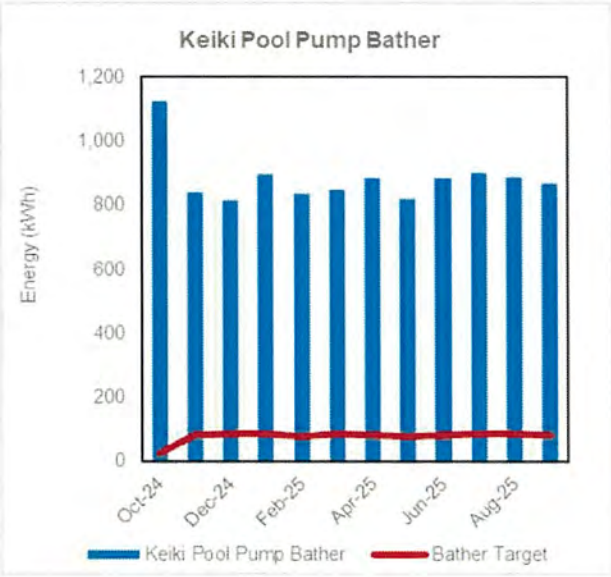


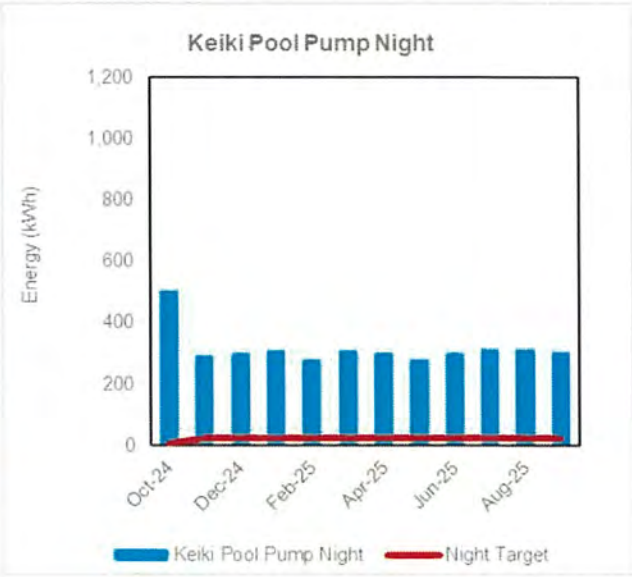






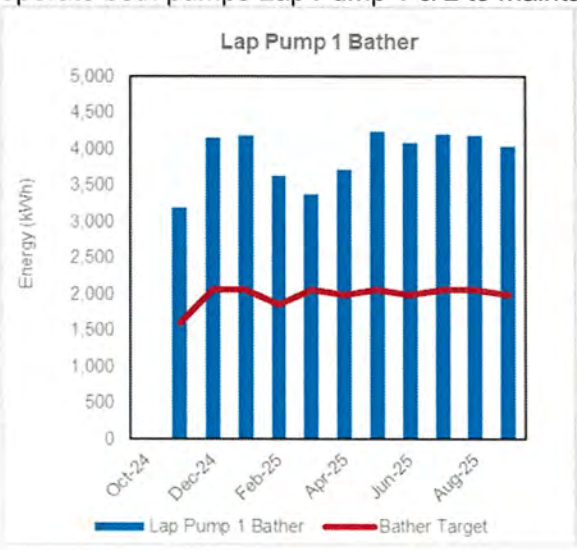


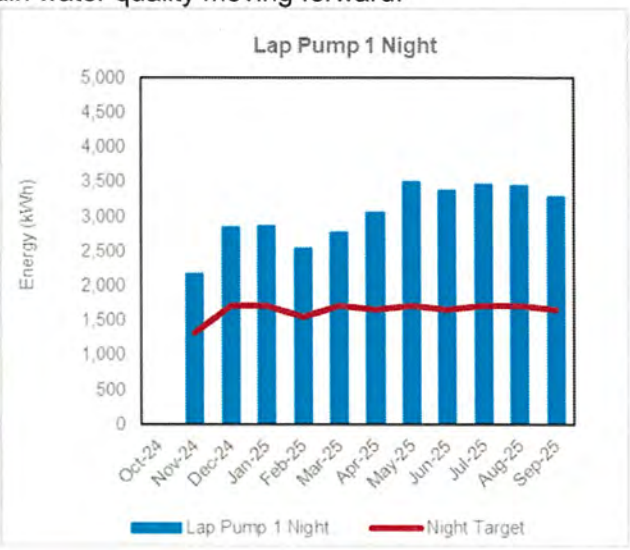


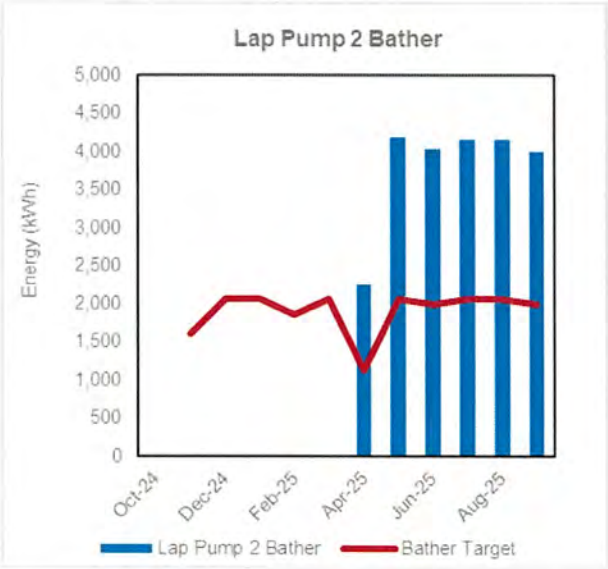


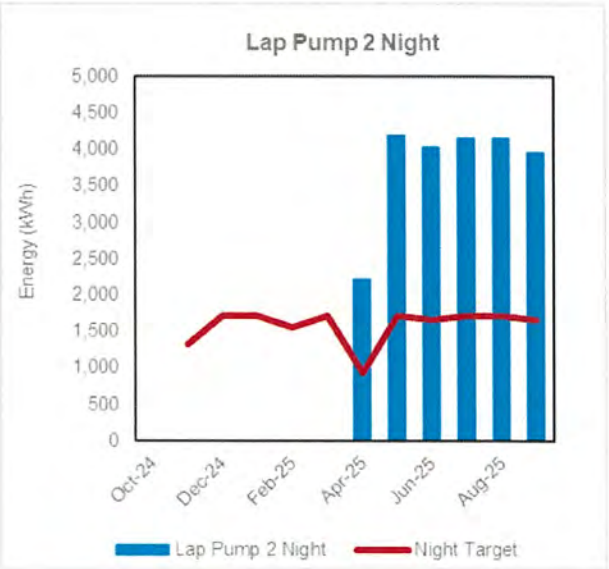
Lahania

Lap pump 1 is operated at lower speeds during night hours. However, there is ongoing work with pump 2 to improve pump control. During Year 1, Maui County and Order of Operations agreed to operate both pumps Lap Pump 1 & 2 to maintain water quality moving forward.



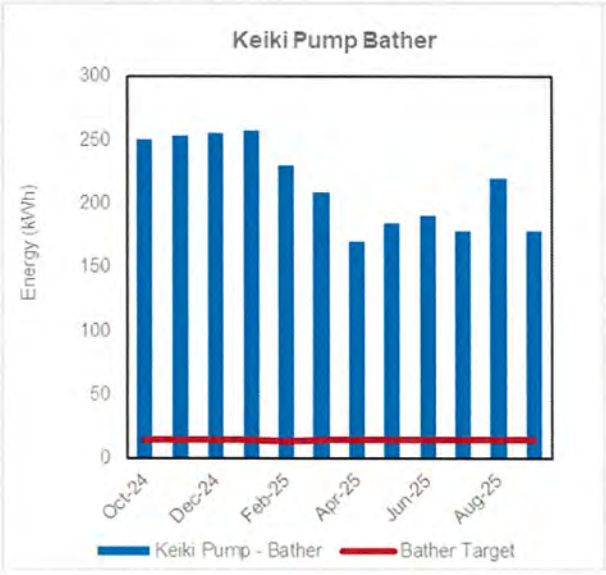


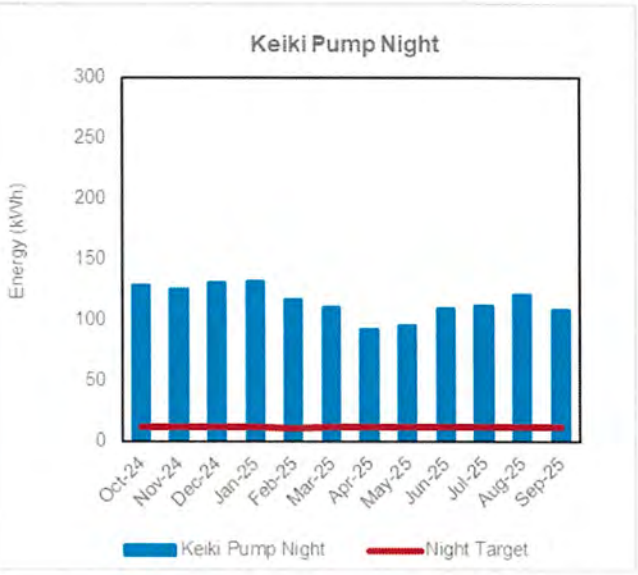


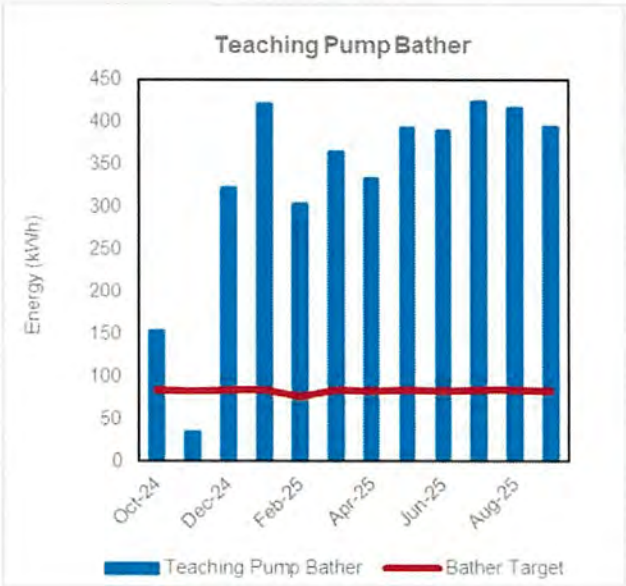


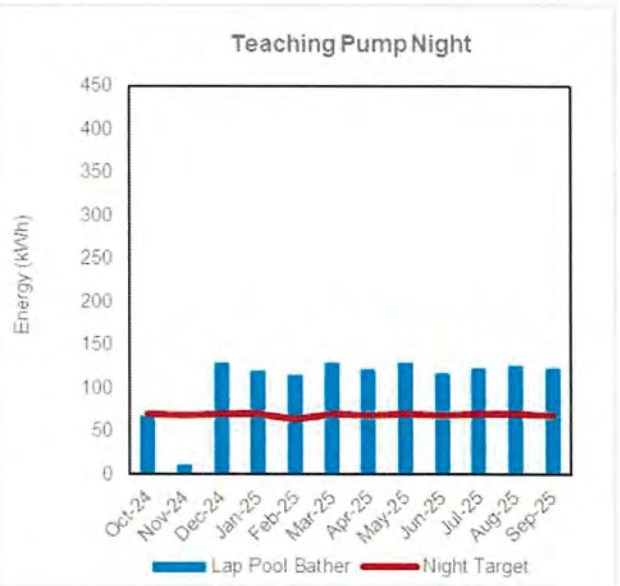
Pukalani

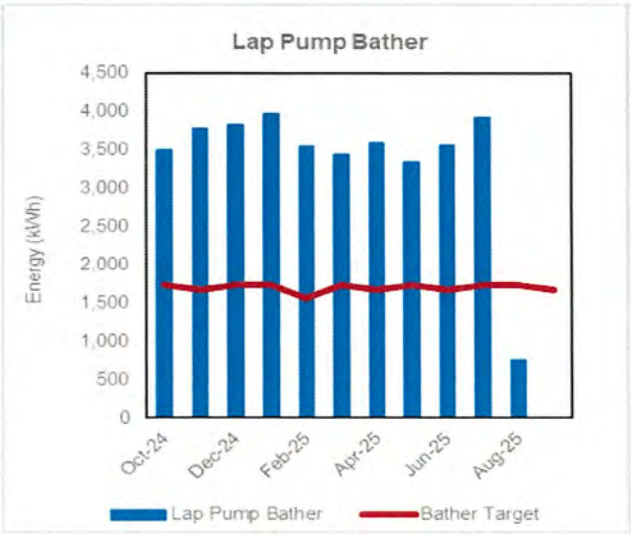
The Keiki and Teaching Pool pumps successfully reduced speeds during unoccupied periods. Work is ongoing to achieve similar reductions for the Lap Pool pump, with JCI actively monitoring progress. In accordance with the agreement with the County of Maui, both Lap Pump 1 and Lap Pump 2 will continue operating under their current schedules in the short term. The long-term strategy is to collaborate with pool maintenance staff to adjust operating schedules to align with projected savings while maintaining water quality standards.

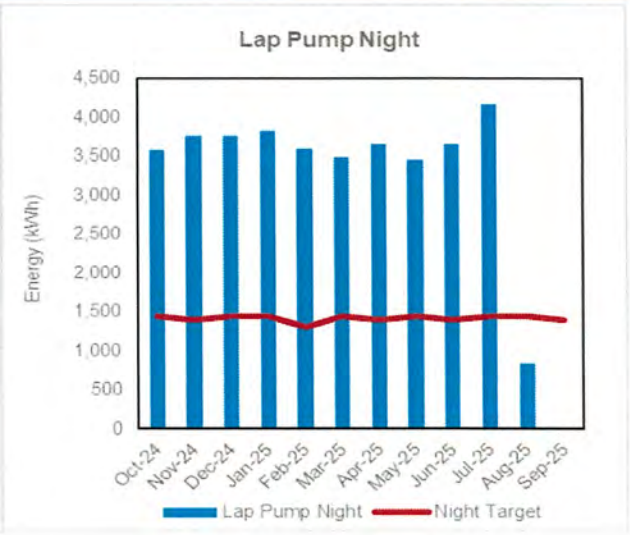






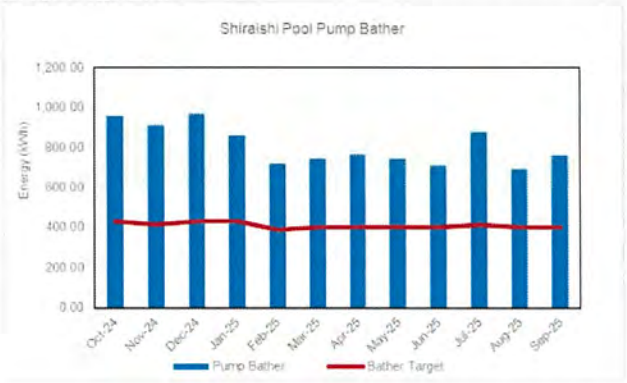


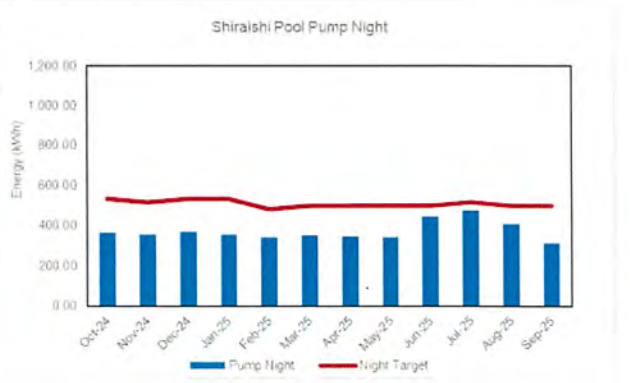




Shiraishi

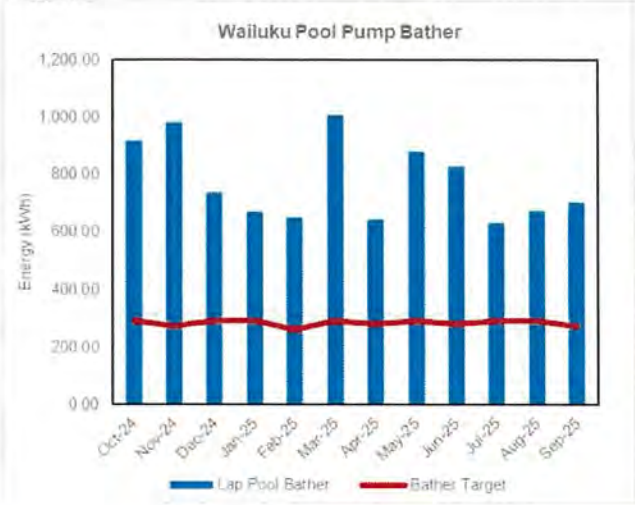
The pump demonstrated effective speed reduction during unoccupied periods, consistent with project goals.

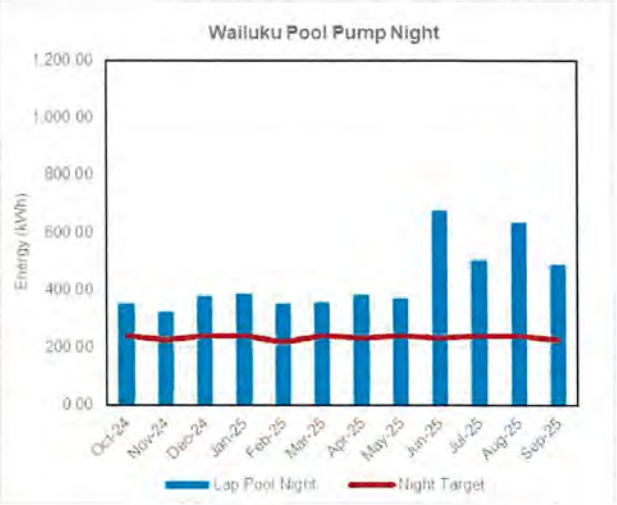




Wailuku

The pump operated at reduced speeds during unoccupied periods, supporting energy conservation targets.





Verified Savings

Energy savings for FIM 8 are expected to be $78,341 less than anticipated $550,856, per to the revised IGA. This is due to corrected assumptions that ultimately impacted the savings calculations. JCI and Maui County are working jointly to improve operations of the pumps. Some pumps are operating under their current schedules in the short term to ensure water quality standards. The long-term strategy is to collaborate with pool maintenance staff and will focus on improving pool efficiency while maintaining water quality and compliance. Key actions include reviewing VFD profiles for both occupied and unoccupied hours, optimizing pump schedules to match actual occupancy and seasonal patterns, and continuously monitoring energy performance. Findings from these efforts will be shared regularly to ensure transparency, drive ongoing improvements, and deliver measurable savings.

Table 8.1: Onsite Hypochlorite & Smart Pool Pumps Savings Summary

	Electric Savings (kWh)	Electric Cost Savings ($)	Water + Sewer Savings (kGal)	Water + Sewer Savings ($)	O&M Savings	Total Proposed Cost Savings ($)
Proposed Original IGA	859,310	$ 289,607	9,680	$ 48,365	$ 246,672	$ 584,644
Revised IGA	713,458	$ 277,105	9,055	$ 44,326	$ 229,425	$ 550,856
Verified Year 1	488,808	$ 212,721	6,204	$ 30,369	$ 229,425	$ 472,514
Variance (Verified Year 1 - Revised IGA)	(224,650)	$ (64,384)	(2,851)	$ (13,957)	$ -	$ (78,341)

FIM 9: Infiltration Reduction

FIM Description

Existing holes in the building envelope had allowed unconditioned outdoor air to enter the building or conditioned air to escape, which represented an additional load on the air-conditioning system. As a result, infiltration caused unwanted air movement.

While buildings are never completely air-tight and ventilation remains necessary for maintaining healthy indoor environments, there were specific areas of leakage that could be addressed and reduced or eliminated to save energy. Johnson Controls conducted audits for several facilities, identified multiple opportunities to reduce infiltration, and measured the area that could be affected through weatherization to estimate energy savings.

Energy Savings Calculations

Cooling savings achieved from reducing infiltration through weatherization is determined through measured air leakage area and a series of calculations using local weather data.

First, the volumetric rate of air allowed to enter the facility is calculated. Leakage airflow [ft³/min] is determined from the air leakage area and the wind pressure factor using the equations below:

$$P_t\,[\text{Pa}] = (½ \times \varrho\,[\text{kg/m}^3] \times (V_t\,[\text{mph}] \times 1{,}609.344\,[\text{m/mi}] / 3600\,[\text{sec/hr}])^2)$$

$$\text{Leakage airflow}\,[\text{lt/sec}] = \sum_t [\,P_t\,[\text{Pa}] \times A\,[\text{m}^2] \times K\,]_t$$

$$\text{Leakage airflow}\,[\text{ft}^3/\text{min}] = \text{Leakage airflow}\,[\text{lt/sec}] \times 2.1188$$

Cooling Energy Savings is calculated as follows:

$$\text{Clg Energy Savings}\,[\text{Btu}] = \sum_t [\,\text{Leakage}\,[\text{ft}^3/\text{min}] \times CDD_t\,[°\text{F-day}] \times \varrho\,[\text{lb/ft}^3] \times Cp\,[\text{Btu/lb/°F}] \times 60\,[\text{min/hr}] \times 24\,[\text{hr/day}] \times \%AC_t\,]_t$$

Cooling Energy Savings is converted to electricity savings using the standard conversion value (Btu/kWh) and the coefficient of performance for the facility cooling equipment.

$$\text{Cooling Savings}\,[\text{kWh}] = \frac{\text{Clg Energy Savings}\,[\text{Btu}]}{COP_{clg} \times 3{,}412\,[\text{Btu/kWh}]}$$

where:

- V_t = Average monthly wind speed, obtained from NOAA 30-yr weather data for Kahului, HI. See weather data in table below for monthly average wind speed values used.
- ϱ = Density of Air for Kahului, HI = 0.0749 lb/ft3, 1.199 kg/M3 at 70 Degrees
- P_t = Monthly wind pressure factor calculated using the monthly wind speed.
- K = Building factor determining building style, ranging from 95-150. Low K is an efficient building envelope with central mass and high K is open space with many wings. See table below for values used in each site.

A = Air leakage area calculated as linear feet being sealed times Gap width. See table below for values used in each site.

Leakage = Leakage airflow because of the pressure differences caused by wind, stack effect, etc.

CDD_t = Monthly Cooling Degree Days. Estimated for Maui, Hawaii with a balance temperature of 72°F.

Cp = Specific heat of air = 0.243 Btu/lb/°F

$\%AC_t$ = % of building that is air conditioned each month. See table below for values used.

COP_{clg} = Average cooling COP = 3.0

The table below provides details by location for values used in the above equations in addition to count of specific scope items (i.e., Item #1, Exterior Doors) at those locations.

Facility Name	Building K	Total Area (sqft)	% Air Conditioned	(Qty) Ext Doors	(Qty) Interior Doors	(Qty) Window AC Units	(Qty) Pipe Penetrations	(LF) Roof/ Wall Joints	(LF) Seal Windows
Kahului Community Center	95	0.43	100%	5		3			
Kokua Pool	95	2.6	50%	1		1			
Kahului Fire Station	120	2.49	80%	11	11	2	2		
Kahului Wastewater Reclamation Facility	100	0.99	100%	3	3			315	
Kihei Community Center	130	1.56	100%	47					
Kihei Aquatic Center	120	4.88	80%	11					
Kihei Fire Station	100	4.9	60%	3	3	12			
Kihei Police Station	95	0.84	95%	21					
Lahaina Civic Center	140	0.51	85%	32					2
Lahaina Police Station	100	0.65	100%	4		2		262	24
Lahaina Fire Station	120	4.3	100%	1	3				8
Eddie Tam Memorial Center	130	0.71	30%	4		3			
Napili Fire Station	100	0.51	60%	4	2	2			
South Maui Community Center & Park	140	2.71	100%	26					
Wailea Fire Station	120	0.94	60%	3	5				
Wailuku Police Station	100	0.75	85%	5					6
West Maui Senior Center	100	1.88	90%	13					
Fire Prevention Bureau	100	0.94	50%	9					
Forensic Facility	100	0.9	100%	6		5			
Central Landfill	120	1.25	90%	5					
Mayor Hannibal Tavares Community Center	100	0.73	50%	4					
Hoolehua Fire Station	120	0.87	50%	3	2	2			7

Facility Name	Building K	Total Area (sqft)	% Air Conditioned	(Qty) Ext Doors	(Qty) Interior Doors	(Qty) Window AC Units	(Qty) Pipe Penetrations	(LF) Roof/ Wall Joints	(LF) Seal Windows
Sewer Maintenance Building	95	1.04	70%	5	3				1
Kalana O Maui Building	95	1.07	100%	10					
Old Courthouse Building	129	0.69	95%	5					42
Kalana Pakui	100	2.81	100%	15					
Kaunakakai Fire Station	130	0.83	75%	8	6	2			
Kaunoa Senior Services	100	1.31	100%	29		21			
Makawao Baseyard	100	0.73	50%	1	1	2			
Kula Fire Station	130	0.16	70%	1	3				1
Lahaina Wastewater Reclamation Facility	120	3.15	95%	5					8
Lahainaluna Water Treatment Plant	120	0.82	50%	4		1			3
Lanai Baseyard	100	0.69	40%	6		3			
Lanai Fire station	120	0.79	50%	2		3			
Lanai Police Station	100	0.66	95%	6					10
Lanai Public Works	130	0.59	30%	2		2			
Lanai Wastewater Reclamation Facility	95	0.33	50%	1		1			
Piiholo Water Treatment Plant	100	0.52	80%	9					
Olinda Water Treatment Plant	110	0.31	50%	1	1	1			
Makawao Fire Station	100	0.32	70%	3	3				
Mitchel Pauole Community Center	100	0.42	70%	17	3	5			
Molokai Baseyard	130	2.29	40%	2		1			
Paia Fire Station	120	0.32	75%	3	2				
Victims Advocate Building	100	0.21	100%	3					
Waiehu Golf Course	110	0.31	50%	2	1				
Hana Fire Station	100	0.68	70%	3	3				2
Hana Police Station	95	1.32	90%	3		3		142	
Kahului Baseyard	120	6.25	100%	6	4	6			10
Mahinahina Water Treatment Plant	110	0.17	50%	4	1				
Iao Water Treatment Plant	130	0.83	40%	4	2				
TOTAL		**65.96**		**381**	**62**	**83**	**2**	**719**	**124**

Calculated savings have been decreased by 20% to account for uncertainties.

The table below provides the monthly weather data for Kahului Airport and some calculated values that are consistent for all facilities affected by this FIM.

	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec
Average Wind (MPH	9.40	10.10	11.20	11.60	11.50	12.60	13.10	12.80	11.20	10.40	10.50	10.10
CDD	527.0	476.0	567.3	588.0	657.2	705.0	768.8	799.8	765.0	750.2	651.0	582.8
Wind (L/S) Calculated	4.20	4.52	5.01	5.19	5.14	5.63	5.86	5.72	5.01	4.65	4.69	4.52
Pd (Pa) Calculated	10.59	12.22	15.03	16.12	15.84	19.02	20.56	19.63	15.03	12.96	13.21	12.22

Measurement and Verification

Operational Verification (OV) Approach:

OV approach provides verification of a system's capability to produce the projected energy savings.

Detailed M&V isn't cost effective for the On-Site Hypochlorite Generation and Infiltration Reduction due to the relatively small amount of energy savings attributed to these FIMs. Post-installation M&V will consist of verifying installation of the FIMs as outlined below.

FIM	Frequency	Task Description
Irrigation System	One Time – Post Installation	*Post Installation* • Visually verify and document via digital photographs the operation of the irrigation controller.
On-Site Hypochlorite Generation	One Time – Post installation	See *Energy Savings Calculations* section in the *FIM Descriptions* *Post Installation* • Onsite chlorine generator (Verify nameplate data). • Visually verify and document salt use to generate chlorine. Review the functional testing documents associated with the installation.
Infiltration Reduction	One Time – Post installation	*Post Installation* • Visually verify and document via digital photographs the areas affected by the envelope improvements. Review the pre and post leakage area (sqft).

Performance Verification

This FIM is part of a one-time assessment carried out during the installation phase; accordingly, measurement and verification activities were not performed during the Year 1 performance period. The appendix contains the counts of doors, windows, and other wall penetrations that were sealed details can be found in Appendix B – FIM 9 – Closeout Document.

Verified Savings

For this FIM 9, the additional savings of $7,087 are attributed to as-found conditions at the project site, at the time of installation. Many of the spots or areas that are to be sealed were found to be slightly longer or larger than what was originally anticipated. As such, with longer or bigger area being sealed, baseline energy usage (energy loss) was adjusted, resulting in decreased post-install energy and increase energy savings.

Table 9.1: Infiltration Reduction Savings Summary

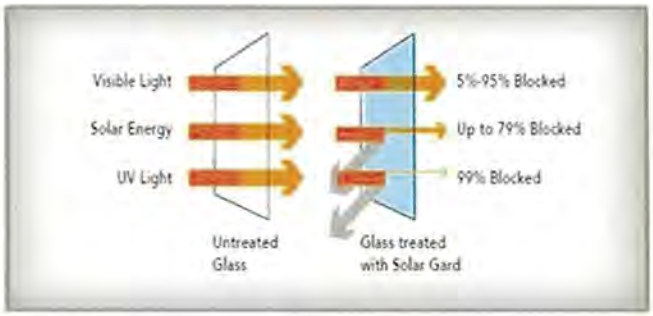
	Electric Savings (kWh)	Electric Cost Savings ($)	Total Proposed Cost Savings ($)
Proposed Original IGA	-	$ -	$ -
Revised IGA	275,883	$ 107,594	$ 107,594
Verified Year 1	293,624	$ 114,681	$ 114,681
Variance (Verified Year 1 - Revised IGA)	17,741	$ 7,087	$ 7,087

FIM 10: Window Film

FIM Description

There are a variety of different films that can be applied to most windows. They vary in reflectivity and visible light transmittance. Typically, the darker the film, the more solar heat gain reduction and the better the savings. Alternatively, some films are quite clear, and they can be applied without altering the look of the windows. Most films are installed on the inside of the window, and do not affect the warranty of the window and avoid weathering issues.

The figure below schematically represents the benefits of window film:



Johnson Controls has experience installing window film for several customers in Hawaii. From that experience, we have seen great results with ceramic-based and hybrid window films, with slight tints to reduce UV and heat gain without darkening the windows any noticeable amount.

The scope of work for this FIM includes materials and labor for the installation of new window film to the interior glass of certain areas and buildings to reject and reflect a portion of the solar radiation and reduce the cooling load of the spaces. These spaces either have window film that has failed or nothing at all.

Energy Savings Calculations

Window Film Retrofit Energy Savings

Electrical savings are generated through a reduction in cooling load due to the reduction in solar heat gain through windows because of the installation of window film. The solar heat gains from windows savings are directly proportional to the glass areas where window film is installed.

Equations for Calculating Window Film Savings

$$kWh_{Savings} = \frac{(1 - Shading\ Coeff) * Window\ Area * Annual\ Insolation * \left(SHGC_{pre} - SHGC_{post}\right) / \frac{ft2}{m2}}{COP}$$

Where:

$kWh_{Savings}$ = Annual power savings from the implementation of window film

$Shading\ Coeff$ = Shading Coefficient for existing glass without window film as published by ASHRAE

$Window\ Area$ = Measured area of window in square feet

$Annual\ Insolation$ = Annual Insolation (kWh/m^2) - sun exposure as determined from NREL TMY3 weather data

$SHGC_{pre}$ = Solar Heat Gain Coefficient for existing window before installation (*pre*)

$SHGC_{post}$ = Solar Heat Gain Coefficient for window with the window film (*post*)

$\frac{ft2}{m2}$ = unit conversion = 10.7584

COP = Coefficient of performance for air conditioning equipment

Annual energy cost savings are determined by multiplying the kWh energy savings by the corresponding facility energy rate ($/kWh).

The table below provides the audited values for input into the savings calculations for the buildings where this FIM is being applied. There is a line-item calculation for each window type, orientation, and varying shading coefficients at the facility.

Building	COP	Glass Type	Direction	Insolation (kwh/m^2)	Window Qty	Window Sq-Ft	Shading Coefficent	SHGC - Pre	SHGC - Post
Totals					204	2,444			
Kihei Community Center	3	Double Pane - Clear	North	515	10	227	0.75	0.76	0.20
Kihei Community Center	3	Double Pane - Clear	North	515	12	178	0.10	0.76	0.20
Kihei Community Center	3	Double Pane - Clear	North	515	10	117	0.75	0.76	0.20
Kihei Community Center	3	Double Pane - Clear	North	515	12	120	0.75	0.76	0.20
Kihei Community Center	3	Double Pane - Clear	North	515	6	79	0.75	0.76	0.20
Kihei Community Center	3	Double Pane - Clear	South	1,339	9	204	0.75	0.76	0.20
Kihei Community Center	3	Double Pane - Clear	South	1,339	12	178	0.10	0.76	0.20
Kihei Community Center	3	Double Pane - Clear	South	1,339	9	105	0.75	0.76	0.20
Kihei Community Center	3	Double Pane - Clear	South	1,339	16	160	0.75	0.76	0.20
Kihei Community Center	3	Double Pane - Clear	South	1,339	8	106	0.75	0.76	0.20
Kihei Community Center	3	Double Pane - Clear	East	1,030	2	63	0.75	0.76	0.20
Kihei Community Center	3	Double Pane - Clear	East	1,030	7	99	0.45	0.76	0.20
Kihei Community Center	3	Double Pane - Clear	East	1,030	4	53	0.45	0.76	0.20
Kihei Community Center	3	Double Pane - Clear	West	1,030	2	14	0.75	0.76	0.20
Kihei Community Center	3	Double Pane - Clear	West	1,030	10	132	0.75	0.76	0.20
Kihei Community Center	3	Double Pane - Clear	West	1,030	7	93	0.75	0.76	0.20
Paia Fire Station	3	Double Pane - Clear	North	515	12	83	0.05	0.76	0.20
Paia Fire Station	3	Double Pane - Clear	East	1,030	16	110	0.05	0.76	0.20
Paia Fire Station	3	Double Pane - Clear	South	1,339	12	83	0.05	0.76	0.20
Kula Fire Station	3	Single Pane - Clear	North	515	4	51	0.05	0.86	0.20
Kula Fire Station	3	Single Pane - Clear	North	515	2	17	0.10	0.86	0.20
Kula Fire Station	3	Single Pane - Clear	North	515	4	16	0.10	0.86	0.20
Kula Fire Station	3	Single Pane - Clear	North	515	2	13	0.10	0.86	0.20
Kula Fire Station	3	Single Pane - Clear	North	515	2	24	0.10	0.86	0.20
Kula Fire Station	3	Single Pane - Clear	North	515	2	25	0.10	0.86	0.20
Kula Fire Station	3	Single Pane - Clear	South	1,339	2	8	0.20	0.86	0.20
Kula Fire Station	3	Single Pane - Clear	West	1,030	4	50	0.10	0.86	0.20
Kula Fire Station	3	Single Pane - Clear	West	1,030	2	18	0.10	0.86	0.20
Kula Fire Station	3	Single Pane - Clear	East	1,030	2	4	0.20	0.86	0.20
Kula Fire Station	3	Double Pane - Clear	East	1,030	1	6	0.55	0.76	0.20
Kula Fire Station	3	Single Pane - Clear	East	1,030	1	11	0.30	0.86	0.20

Measurement and Verification

The savings for this FIM will be verified using IPMVP-2016 Option A, Retrofit Isolation with Key Parameter Measurement. The savings for this FIM are generated through the installation of window film which reduces the cooling load of space; therefore, the measurement boundary is the glass area where the window film is installed.

Key Parameter	Measurement Frequency	Measurement Description
Post Installation Window Area	Short-Term	Actual glass area (sq ft) where window film is installed
Estimated Parameters	**Assumed Value**	**Justification, Source and Description**
Solar Heat Gain	See *Energy Savings Calculations* section in the *FIM Descriptions*	Values obtained from ASHRAE and adjusted for the building hours/days of operation and will not be measured.
SHGCpre	See *Energy Savings Calculations* section in the *FIM Descriptions*	Values obtained from ASHRAE for the existing glass types observed during site surveys and will not be measured.
SHGCpost	See *Energy Savings Calculations* section in the *FIM Descriptions*	Values obtained from window film manufacturer based on the proposed window film for the existing glass types observed during site surveys and will not be measured.
Cooling kW/ton	See *Energy Savings Calculations* section in the *FIM Descriptions*	Values estimated for the type and age of equipment providing the cooling and will not be measured.

Performance Verification

A one-time evaluation confirmed installation of 3,057 square feet of window film across multiple sites. No Year 1 M&V activities were performed. Scope adjustments during construction resulted in a net reduction of 98 square feet. The final installed window film totaled 3,057 square feet after scope adjustments.

Site	North	East	South	West	Total
Kihei Community Center	762	-	953	88	1,803
South Maui District Office	-	66	33	190	289
Satellite Office DMV	40	188	40	167	435
Kuoha Business	-	-	-	-	-
Lanai Baseyard	-	-	-	-	-
Paia Fire Station	114	105	86	43	348
Kula Fire Station	154	-	27	99	280
Total	1,070	359	1,139	587	**3,155**

During construction, scope changes resulted in a net increase of 620 square feet. The breakdown is shown below:

Site	North	East	South	West	Total
Kihei Community Center	41	(215)	200	(150)	(124)
South Maui District Office	-	66	33	190	289
Satellite Office DMV	40	188	40	167	435
Kuoha Business	(10)	-	-	(34)	(43)
Lanai Baseyard	-	(48)	-	-	(48)
Paia Fire Station	31	(5)	3	43	72
Kula Fire Station	9	(20)	19	32	39
Total	112	(35)	295	248	620

Verified Savings

During the installation of FIM 9, Johnson Controls identified additional window surfaces and proceeded to implement Window Film improvements. This resulted in an additional $2,558 in savings with no increase in project costs. The cost savings are calculated according to the rates applicable in Year 1.

Table 10.1: Window Film Savings Summary

	Electric Savings (kWh)	Electric Cost Savings ($)	Total Proposed Cost Savings ($)
Proposed Original IGA	20,469	$ 8,190	$ 8,190
Revised IGA	19,067	$ 7,552	$ 7,552
Verified Year 1	25,321	$ 10,111	$ 10,111
Variance (Verified Year 1 - Revised IGA)	6,254	$ 2,558	$ 2,558

Appendix

A. FIM 4.0 – Transformer Replacements: Power Measurements

B. FIM 9.0 - Infiltration Reduction: Closeout Documents

MEASUREMENT & VERIFICATION SERVICES

JCI will provide the M&V Services set forth below in connection with the Performance Assurance Agreement.

- During the Installation Period, a JCI Performance Assurance Specialist will track Measured Project Benefits. JCI will report the Measured Project Benefits achieved during the Installation Period, as well as any Non-Measured Project Benefits applicable to the Installation Period, to Customer within 60 days of the commencement of the Guarantee Term.

- Within 60 days of each anniversary of the commencement of the Guarantee Term, JCI will provide Customer with an annual report containing:

    - an executive overview of the project's performance and Project Benefits achieved to date;
    - a summary analysis of the Measured Project Benefits accounting; and
    - depending on the M&V Option, a detailed analysis of the Measured Project Benefits calculations.

- During the Guarantee Term, a JCI Performance Assurance Specialist will monitor the on-going performance of the Improvement Measures, as specified in this Agreement, to determine whether anticipated Measured Project Benefits are being achieved. In this regard, on a quarterly basis, the Performance Assurance Specialist will provide observations and recommendations regarding system performance based upon a review of operating parameters, contingent upon Customer providing JCI with remote access to the systems included in this Agreement, with respect to the following activities:

    - review of information furnished by Customer from the facility management system to confirm that control strategies are in place and functioning;
    - advise Customer's designated personnel of any performance deficiencies based on such information;
    - coordinate with Customer's designated personnel to address any performance deficiencies that affect the realization of Measured Project Benefits; and
    - inform Customer of opportunities to further enhance project performance and of opportunities for the implementation of additional Improvement Measures.

- For specified Improvement Measures utilizing an "Option A" M&V protocol, JCI will:

    - conduct post installation measurements required under this Agreement;
    - confirm the building management system employs the control strategies and set points specified in this Agreement; and
    - analyze actual as-built information and adjust the Baseline and/or Measured Project Benefits to conform to actual installation conditions (e.g., final lighting and water benefits calculations will be determined from the as-built information to reflect the actual mix of retrofits encountered during installation).
    - Trend data records maintained in the ordinary course of system operation shall be used and relied upon by Johnson Controls in connection with Project Benefit calculations. Johnson Controls will use commercially reasonable efforts to ensure the integrity of the data collected to calculate the required metrics. In the event data are lost due to equipment failure, power failure or other interruption in data collection, transmission or storage, Johnson Controls will use reasonable engineering methods to estimate the impact of or replace the lost data

- Energy Star
    - Johnson Controls to provide assistance with annual update of Customer Energy Star Portfolio Manager, for buildings over 10,000 square feet which are also an eligible building type to qualify for an Energy Star score.

- Johnson Controls to provide trending software to be used for data collection and reporting purposes.
  - JCI trending software is being furnished with this project as an interface program between the new Building Automation Systems and the ongoing monitoring tasks of JCI's Performance Specialist. This trending package is not specific to JCI Metasys and will work with many other Building Automation Systems.
  - In order to properly implement the system, the Customer will either allow JCI to install GoToAssist remote access software or provide JCI with remote access with administrator rights on the virtual machine. The Customer will also provide administrator rights for SQL to configure the JCI Performance Software database.

COUNTY OF MAUI
Energy Savings Performance Contract (ESPC) – Phase 3

PROJECT OVERVIEW

The proposed Phase 3 scope under Contract C7619 represents a performance-based infrastructure investment designed to modernize County facilities, reduce operating costs, and advance sustainability goals through energy, water, and infrastructure improvements.

The primary objective of the Phase 3 amendment is to utilize energy and water savings to address deferred maintenance needs, specifically the repair and replacement of twelve County facility roofs. Through the use of Hawai'i Revised Statutes (HRS) §36-41 and the existing ESPC Contract C7619, the project is structured to fund these improvements in a budget-neutral manner, without requiring direct capital appropriation or competing for limited capital funds.

1. DELIBERATE SCOPE DEVELOPMENT (JULY 2025 – MAY2026)

The Phase 3 scope was developed through a structured, multi-stage process over time.

- **July 2025:** Early Phase 3 planning initiated, including development of project list, financing strategy validation, and department coordination roadmap
- **September 2025:** Broad preliminary concept package submitted to the Office of the Mayor outlining a wide range of potential improvements
- **October / November:** Multiple review meetings and development discussions involving each involved Department to assess buy-in and participation.
- **2026 (multiple milestones):**
    - Formal technical workshops and scope refinement sessions
    - Measurement & Verification and final scope validation meetings:
        - April – M&V and final scope workshop & final scope alignment session
        -

Outcome: Final scope reflects nearly a year of iterative development, screening, and validation.

2. COUNTY GOVERNANCE & OVERSIGHT

County leadership and key functions were engaged throughout the process.

- **July–October 2025:** Planned engagement included:
    - Chief of Staff / Managing Director coordination
    - Department concurrence (Parks, Water, Public Works, etc.)
    - Finance and legal review checkpoints (including outside council involvement)
- **March 2026:** Formal coordination with Finance leadership (Director of Finance and administration) to review scope, cost, and next steps
- Ongoing legal and financial validation supported development and readiness for advancement

Outcome: Scope reflects cross-departmental coordination with administrative, financial, and legal oversight at key decision points.

3. COMPETITIVE FINANCING PROCESS (DECEMBER 2025 – MAY 2026)

Financing was pursued through a structured, competitive process aligned with market conditions.

- December 2025: Initial coordination with County leadership to begin planning for Phase 3 financing approach
- April 30, 2026: Formal RFP issued to financing institutions for TELP structure
- May 14, 2026: Proposal due date for lender submissions
- May 22, 2026: Receipt of lender bid responses
- Financing structure:
    - Third-party funded
    - Repaid through guaranteed energy and operational savings
    - No upfront County capital required

Outcome: Financing reflects a time-bound, competitive procurement process with multiple market participants.

4. ESTABLISHED ESPC DELIVERY FRAMEWORK

The project is delivered under the County's existing ESPC program:

- Original procurement: RFP issued in 2018, contract development through 2022
- Contract executed: November 2022
- Phase 1 completed and in Guarantee Year 2; Phase 2 underway; Phase 3 developed under same framework

5. FINANCING, CONTRACT AMENDMENT, AND NOTICE TO PROCEED

Finalization of the tax-exempt lease purchase (TELP) financing enables execution of the Phase 3 contract amendment under Contract C7619, followed by issuance of a Notice to Proceed (NTP) targeted for June 2026.

Upon NTP, the project anticipates an approximate 18-month construction period to substantial completion, after which the project transitions into a 20-year performance term with ongoing measurement, verification, and guaranteed results in accordance with the ESPC framework.

EXHIBIT "A"

Johnson Controls

PROJECT DEVELOPMENT AGREEMENT
BETWEEN

County of Maui
Office of the Mayor
Kalana O Maui Building
200 South High St.
Wailuku, Hawai'i 96793

AND

Johnson Controls, Inc.
550 Paiea St., Ste. 210
Honolulu, Hawai'i 96819

The purpose of this Project Development Agreement (PDA) is to confirm the intent of Johnson Controls, Inc. (JCI) and the County of Maui (Customer) named above to develop an additional scope of work as an amendment to the Energy Saving Performance Contract No. C7619. This agreement will provide the basis of the scope of the PDA, the obligations of both parties, and the intended outcomes and timeline.

1. Scope of Services

It is the Parties' mutual understanding this Project Development Agreement will:

JCI Scope:

Provide for the development of Facility Improvement Measures (FIMs) at the sites listed on Attachment 1: that will fund themselves out of energy and/or operational savings (Items a – c below); where possible assist the Customer by providing additional improvements to reduce a Customer's deferred maintenance backlog or desired facility improvement measures not affordable otherwise (Items d and e below).

a. Irrigation Wells at the sites as noted on Attachment 1 titled, "Irrigation Well Sites"
b. Smart Irrigation Controls at the sites as noted on Attachment 1 titled, "Irrigation Control Sites"
c. Window Film at the sites as noted on Attachment 1 titled, "Window Film Sites"
d. Sakamoto Memorial & Kokua Pool Pump Installation and Electrical Upgrades
e. Roof Repair & Replacement at the sites as noted on Attachment 1 titled "Roof Sites"
f. Assist the Customer in arranging project financing.

Customer Responsibilities:

a) Customer shall designate a departmental representative with decision-making authority from each participating department. These representatives shall be available for weekly project management and progress meetings to ensure timely decisions and responses to time-sensitive project matters.

2. Development Schedule

It is the intent and commitment of all parties identified in this Agreement to work diligently, and cause others to work diligently under their direction to achieve the Milestone Schedule identified herein:

Johnson Controls

Milestone*	Completion Date
JCI provides list of Project Priority FIMs desired to be included in PDA	10/17/2025
Scope Verification Workshop	10/23/2025
Mayor re-authorizes Project Development Agreement	~~11/26/2025~~ 12/29/2025
JCI Commences on-site work	12/8/2025
JCI requests pertinent Customer Documents and Data to execute the development	12/12/2025
JCI & Corporation Counsel and Department of Finance meet (separately) to start processes	12/19/2025
JCI and Department of Finance complete financing process	1/30/2026
JCI & Corporation Counsel finalizes Terms and Conditions of contract	2/6/2026
JCI and Customer conduct M&V workshop (County Approves Final Scope)	2/6/2026
Source of financing established for the project	2/18/2026
JCI makes binding offer to Customer	2/20/2026
Mayor, Director of Procurement, & Corp Counsel approves and executes Contract Amendment and Project Financing	3/13/2026

*These milestones may be modified by subsequent work plans mutually agreed upon by both parties.

3. Deliverables

Upon completion of the project development, JCI shall deliver to the Customer:

a. A written description of each FIM proposed to be implemented;
b. A financial pro forma cash flow documenting the proposed project. The pro forma will include applicable annual costs and savings that affect the project outcome such as financing, energy, water, sewer, labor and maintenance;
c. A preliminary schedule for implementation of the project;
d. A summary of the Measurement & Verification plan, including proposed IPMV protocols, such as Option A, B, C, or D that will be used for each FIM;
e. A firm offer by JCI to implement the project

4. Customer Required FIMs

JCI will provide some Facility Improvement Measures (FIMs) that are essential to creating a project that meets the Customer's financial buying criteria. In addition to those FIMs which are essential to creating a project that provides a positive cash flow.

Listed herein is a list of Customer Required FIMs.

a. Irrigation Wells
b. Smart Irrigation Controls
c. Window Film

The Customer Required FIMs (Items a – c) are essential to creating a self-funded project. Their energy and/or operational savings will provide the financial support needed to address deferred maintenance and facility improvements identified in

Item "d" (Sakamoto Memorial & Kokua Pool Pump Installation and Electrical Upgrades) and Item "e" (Roof Repair & Replacement). The inclusion of Items "d" and "e" is contingent on the savings generated by Items a – c.

5. Records and Data

During the project development, the Customer will furnish to JCI upon its request, accurate and complete data concerning current: equipment performance data if available; costs; budgets; facilities requirements; future projected loads; facility operating requirements; collective bargaining agreements; etc.

JCI will provide a separate document with a formal request for the required shortly after touring the Customer facilities. The Customer shall make every effort to provide that information within 5 days of request.

6. Preparation of Contract Amendment

JCI will develop the framework of the subsequent Amendment to the existing Agreement and the Financing Agreement if applicable. The Contract Amendment must include all five FIMs outlined in Items a – e. JCI and Customer shall work diligently during the project development to complete and populate contract documents.

7. Project Development Cost and Payment Terms

Customer agrees to the cost for JCI to provide project development services identified here in is **$150,000.00** including JCI overhead, profit, and taxes and is payable based on the Terms & Conditions of the existing agreement Energy Saving Performance Contract No. C7619 after JCI provides the Deliverables identified herein.

(Reference Attachment 1 "Project Development Agreement Cost Breakdown" for cost breakdown.)

However, Customer will have no obligation to pay this amount if:

a. JCI and the Customer enter into the Contract Amendment (outlined in Paragraph 6) by March 13, 2026. Costs for project development will be transferred to the total cost of the implementation Contract and be subject to the payment terms outlined in the Contract.

8. Terms and Conditions

Per terms of Contract No. C7619, IGA Contract for Energy Savings Performance Contract with Countywide Facilities, dated on or about May 6, 2022, as amended

Johnson Controls

ATTACHMENT 1

Irrigation Wells	
Kehalani Mauka & Wailuku Elementary Well	Department of Parks & Rec
Kaunakakai Ball Park	Department of Parks & Rec
Pahohaku Beach Park	Department of Parks & Rec
Maui Lani Park	Department of Parks & Rec

Smart Irrigation Controls (Department of Parks & Rec)		
Kualapuu Park	Haycraft Park	Paia Park
Kilohana Park (Kihei)	Honolii Park	Paunau Park
Leisure Estates Park	Kamalii Park	Wahikuli Terrace Park
Lahaina Aquatic Center	Keonekai Park	Wahikuli Wayside Park
Lahaina Civic Center	Kealohilani	Waiehu Heights Park
Lanai Park & Tennis Courts	Pomakai Park	Waiehu Terrace Park
Makana Park/Kuau Ball Park	Wailuku Gym	Waiale Park
Wells Park	Kulamalu	Wailuku Elementary Park
Coach Sakamoto Pool	Launiupoko Beach Park	Waiolani Mauka Park
Coach Shiraishi Memorial Pool	Maui Lani Regional Park	
Eddie Tam Memorial Center	Mokuhau Park	

Window Film	
Kalana Pakui	Department of Public Works
Kalana O Maui	Department of Public Works
Old Courthouse	Department of Public Works
Kihei Aquatic Center	Department of Parks & Rec
Kihei Police Station	Police
Lahaina Civic Center	Department of Parks & Rec
Lahaina Fire Station	Fire & Public Safety
Lahaina Police Station	Police
Lanai Senior Center	Department of Housing
Maui County Service Center	Department of Public Works
Mayor Hannibal Tavares Community Center	Department of Parks & Rec
South Maui Community Center & Park	Department of Parks & Rec
Wailuku Police Station	Police
Kaunoa Senior Services	Department of Parks & Rec

Johnson Controls

Roof Sites (Highlighted Cells Indicate Two Solar PV Installations)	
Coach Shiraishi Memorial Pool	Department of Parks & Rec
Duke Maliu Regional Park (Molokai)	Department of Parks & Rec
Haiku Community Center	Department of Parks & Rec
Kahului Base Yard	Department of Water
Kihei Fire Station	Fire & Public Safety
Kualapuu Park & Com. Center (Molokai)	Department of Parks & Rec
Lahaina Aquatic Center	Department of Parks & Rec
Napili Fire Station	Fire & Public Safety
Paia Community Center	Department of Parks & Rec
Victims Advocate Building	Department Prosecuting Attorney
Wailuku Fire Station	Fire & Public Safety
Wailuku Pool	Department of Parks & Rec

Project Development Agreement Cost Breakdown		
Subcontractor(s)	$	12,000.00
Development Engineering	$	79,326.00
Measurement, Verification, Operations Support	$	44,520.00
Administration & Management	$	9,900.00
Expenses	$	4,416.00
Overhead (15%)	$	22,524.00
Profit (10%)	$	17,268.63
GET	$	8,950.66
Contractual Discount	$	(48,905.29)
Total	$	150,000.00

NOTE: PDA Cost is discounted to align with compensation terms of Contract No. C7619 so that Investment Grade Audit Services do not exceed $150,000.00 including overhead, profit, and taxes.

Johnson Controls

JOHNSON CONTROLS, INC. EXECUTION PAGE

JOHNSON CONTROLS, INC.

By: DocuSigned by: Matthew Singleton
MATTHEW D. SINGLETON
General Manager

Date: 12/29/2025

Johnson Controls

COUNTY EXECUTION PAGE

COUNTY OF MAUI:
By:

RICHARD T. BISSEN, JR.
Its Mayor
Date:

APPROVAL RECOMMENDED:

CYNTHIA LALLO
Chief of Staff

APPROVED AS TO FORM
AND LEGALITY:

MIMI DESJARDINS
First Deputy Corporation Counsel

LF2022-0485
2025 12 24 REVISED CoM Ph3 PDA 23DEC2025

RICHARD T. BISSEN, JR.
Mayor

JOSIAH NISHITA
Managing Director

OFFICE OF THE MAYOR
COUNTY OF MAUI
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAI'I 96793
www.mauicounty.gov

December 23, 2024

Honorable Richard T. Bissen, Jr.
Mayor, County of Maui
200 South High Street
Wailuku, Hawaii 96793

APPROVED FOR TRANSMITTAL

12-26-2024
Acting Mayor Date

For Transmittal to:

Honorable Yuki Lei K. Sugimura, Chair
and Members of the Budget, Finance, and Economic Development Committee
200 South High Street
Wailuku, Hawaii 96793

Dear Chair Sugimura:

SUBJECT: **JOHNSON CONTROLS, INC. ENERGY PERFORMANCE CONTRACT** (BFED-21(24))

Pursuant to your correspondence dated December 10, 2024, the following are responses to your questions:

1. Provide a copy of Amendments 4 and 5 and a summary of what each amendment does.

   Please see attached.

   Amendment 4 was intended to remove the Central Maui Landfill site from the proposed list of Solar + Battery Storage systems that were under development for Phase 2. The County of Maui Department of Environmental Management had put out a separate RFP that awarded the rights of this site to a separate contractor under the separate RFP. No two contractors are allowed rights to a site, therefore, JCI relinquished their rights in cooperation with the County's needs.

   Amendment 5 summarizes the overall changes to the scope of work, guaranteed savings, and cashflow of the Phase 1 performance contract. The amendment provides a narrative of the changes that were presented to the County of Maui and either approved or rejected.

1905

2. Confirm the final amount overpaid to JCI and explain why the overpayment occurred.

   The final amount was $838,641.70. They overpayment occurred as the Bank of Hawaii continued to release payments to JCI as required by the contract until it was determined that there would be a significant change in scope and the initial amount of funding would no longer be needed.

3. Confirm the total amount of the overpayment that was remitted to Bank of Hawaii.

   The total amount remitted by JCI to the Bank of Hawaii was $838,641.70.

4. Explain why the Administration chose to have the remaining overpaid funds remitted and provide a list of projects and equipment not pursued or purchased because of the remittance.

   The Administration chose to have the overpayment remitted in order to conclude the contract in a timely manner. The main Facility Improvement Measures (FIMs) which were not pursued were exterior LED lighting retrofits, Irrigation wells, and Onsite Hypochlorite Generation at Kokua Pool.

5. Explain how the remittance affects the County's lease obligation. Did it reduce the entire obligation or was it just applied to the County's first payment to Bank of Hawaii?

   The remittance reduced the County's overall obligation to $25,873,778.

6. Confirm the amount of the first lease payment to Bank of Hawaii.

   The first lease payment to the Bank of Hawaii was $1,708,372.

7. Explain whether the total cost of the lease with Bank of Hawaii has been reduced. If so, provide the new amount and explain why it was reduced.

   The total cost of the lease with the Bank of Hawaii has been reduced. The new amount is $25,873,778 and it was reduced due to the change in project scope.

8. Confirm when JCI's first cost savings report will be submitted to the County and transmit a copy to the BFED Committee upon receipt. Further, explain the process by which the County will conduct an

independent audit of the report and confirm when the County's audit will be completed.

JCI intends to provide a preliminary report outlining the Measured Project Benefits achieved throughout the Installation Period plus any Non-Measured Project benefits applicable to such period by December 20, 2024. When finalized, the report will be transmitted to the Maui County Council or the appropriate committee.

The Measured Savings Report for Year 1, which will establish if JCI has met their contractual obligations to meet or exceed the annual lease payment by $1 every year, will be delivered by the end of October 2025. The Administration currently plans to issue an RFP in the summer of 2025 so that a third-party audit can begin as soon as possible after the Year 1 report is received.

9. As it relates to Phase II of the contract:

    a. Provide a summary of Phase II.

    Phase II will be solely for the installation of Solar PV & Battery systems across 50+ County of Maui Sites which will be funded through a Power Purchase Agreement (PPA). Sites can be added or removed from the list per County's direction and approval.

    b. Explain how Phase II will be financed.

    Phase II will be financed by a Power Purchase Agreement (PPA). The County will purchase the power produced by the Solar PV systems and pay the PPA provider for electric kilo-watt hours (kWh) produced, just like a standard electric bill. The electricity rate of the PPA (~$0.20 cents) per kWh) is less than the rate charged by HECO. The moment a Solar PV system is energized the County will begin to recognize energy and $$ savings.

    c. Provide the estimated total cost of Phase II.

    There are no upfront construction costs to the County. Payments are based on power generated by each Solar PV system.

    d. Identify all of the County's obligations to Phase II, including the amount of time required for it and any costs for which the County will be liable.

The County's obligation is to coordinate and provide site access for the installation of the solar equipment. (For example, roof top installation of solar panels on a County building). Once the installation is complete, the County's obligation will be to purchase the power produced by the solar PV system, and provide site access for maintenance of the solar equipment. The County will also be responsible to perform routine maintenance for trees on County property that it would already plan to do. For example, if a tree branch is growing over a roof, the County would be responsible to trim the branch to prevent shading over the PV panels. All operations and maintenance of the Solar PV equipment is included in the PPA rate (for example, cleaning of the solar panels and replacement of solar equipment if it fails). Also included in the PPA rate is a monitoring system with meters that measure the amount of solar power produced. The internet data access (cellular card) for the remote monitoring of the PV system is also included in the PPA rate.

e. Explain the cost-saving benefits to the County and the estimated amount the County will save as a result of Phase II. Will the cost savings of Phase II impact the overall savings and lease repayment structure of Phase I?

The County will begin recognizing savings when the Solar PV system(s) are energized because the cost of electricity in the PPA is substantially less than the cost of electricity from HECO. If somehow the cost of HECO power were decreased and dropped below the fixed rate for solar PV power, the PPA contains a utility true up clause that would lower the cost of solar power, resulting in a contractual assurance that the cost of solar will be less than MECO rates over the 20-year term. Savings from Phase II Solar PV & battery project could be leveraged to fund future work or additional Phases of the Energy Savings Performance Contract by Johnson Controls.

10. The work that JCI has completed as part of Phase I of the contract.

Please refer to the JCI IGA transmitted in June of 2024 (BFED-21(24), Item 2 in Granicus). Any projects de-scoped from the IGA can be found in the Change Order List, attached.

11. The work remaining to be done in Phase I.

The only work remaining to be done in Phase I is the installation of an electrical switch gear at the War Memorial Football Stadium

which was delayed due to shipping time. Equipment is slated to arrive January 6.

12. Any work intended for Phase I but was abandoned, including an explanation of why the work was abandoned.

Please see attached Change Order List.

13. The work that will be done under Phase II of the contract, including an explanation of whether the Phase II contract has been executed and the cost of the contract.

The County has entered into a Solar Power Purchase Agreement which was transmitted to the BFED Committee earlier in the term (BFED-21(24), Item 1 in Granicus). Please see the responses to Question 9 for the remainder of the information requested.

Sincerely,

Cynthia D. Lallo
Chief of Staff
Office of the Mayor

Attachments

Cc: Managing Director

AMENDMENT TO CONTRACT CERTIFICATION

I, MARCY MARTIN, Acting Director of Finance of the County of Maui, State of Hawaii,
do certify that there is available appropriation or balance of an appropriation over and above all outstanding contracts, sufficient to cover the amount required by the foregoing contract, i.e

Appropriation Index	Title		Amount Required
903119B	RENEWABLE ENERGY PROGRAMS	(6132)	$0.00

Contract No **C 7619** **JOHNSON CONTROLS, INC**

Amendment No. 4 Dated

Dated this 12 day of AUGUST 2024

Extension of Contract to: **No Change**

Original Amount	$	150,000.00
Prior Amends/CO	$	-
This Amendment	$	-
Total	$	150,000.00

MARCY MARTIN
Acting Director of Finance

Investment Grade Audit (IGA) Contract for Energy Saving Performance Contract
with Countywide Facilities
for Office of Mayor - Climate Change, Resiliency, and Sustainability
Job No RFP No 21-22/ESPC
No, Federal funds not being used

FY 2025

scp

RICHARD T. BISSEN, JR.
Mayor

MARCY MARTIN
Director

DEPARTMENT OF FINANCE
COUNTY OF MAUI
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAI'I 96793
www.mauicounty.gov

August 23, 2024

Johnson Controls, Inc.
550 Paiea Street
Honolulu, HI 96819

RE: INVESTMENT GRADE AUDIT (IGA) CONTRACT FOR ENERGY SAVING PERFORMANCE CONTRACT WITH COUNTYWIDE FACILITIES FOR THE OFFICE OF THE MAYOR
CONTRACT NO. C7619 AMENDMENT NO. 4

Dear Johnson Controls, Inc.:

Transmitted is a copy of the fully executed contract amendment for your file.

Sincerely,

for MARCY MARTIN
Director of Finance

MM:dda
Enclosure

xc: Office of the Mayor, Climate Change, Resiliency, and Sustainability

AMENDMENT 4 TO
CONTRACT NO. C7619

Department: Office of the Mayor – Climate Change, Resiliency, and Sustainability

Project Title: Investment Grade Audit (IGA) Contract for Energy Saving Performance Contract with Countywide Facilities

RFP No.: 21-22/ESPC

Additional Certification Requested from County: $0.00

This AMENDMENT NO. 4 TO CONTRACT is made and entered into by and between the COUNTY OF MAUI, a political subdivision of the State of Hawaii, whose business address is 200 South High Street, Wailuku, Maui, Hawaii 96793, hereinafter referred to as the "County", and JOHNSON CONTROLS, INC., a Hawaii corporation, whose mailing address is 550 Paiea Street, Honolulu, Hawaii 96819, hereinafter referred to as the "Contractor". County and Contractor shall hereinafter be referred to collectively as the "Parties".

Source of Funds. The source(s) and availability of the funds for this Contract shall be as set forth in the Contract Certification signed by the Director of Finance of the County of Maui on or before the effective date of this Contract. Contract Certification shall be on file in the office of the Director of Finance of the County of Maui.

RECITALS:

WHEREAS, the County and the Contractor entered into the following Contract and Amendment(s), if any, with certified availability of funds in the amount and time of performance as indicated:

Contract/ Amend	Date	Additional Certified Amount	Total Certified Amount	Time of Performance	Renewal Option(s)
C7619	5/4/2022	Not applicable	$150,000.00	180 calendar days from Notice to Proceed (5/9/2022)	60 additional calendar days
Amend 1	9/29/2022	$0.00	$150,000.00	Notice to Proceed through January 4, 2023	None
Amend 2	11/28/2022	$0.00	$150,000.00	Notice to Proceed through January 4, 2024	None
Amend 3	1/27/2023	$0.00	$150,000.00	Notice to Proceed through November 20, 2027	None

WHEREAS, the Contract and any Amendment(s) thereto listed above shall be hereinafter collectively referred to as the "Contract";

WHEREAS, the Contract is on file with the Director of Finance;

AMENDMENT 4 TO
CONTRACT NO. C7619

WHEREAS, the Parties now desire to amend the Contract; and

NOW, THEREFORE, the Parties mutually agree to amend the Contract as follows:

1. The scope of work as set forth in the Contractor's requests for contract amendment dated February 29, 2024 (Site List Verification Amendment) and any attachments thereto, (the "Amended Proposal") is hereby added to the Scope of Work. A copy of said document is maintained and on file in the office of the Director of Finance of the County of Maui and incorporated herein by reference and hereby made a part of the Contract. Any general, miscellaneous, or other terms, conditions, or provisions that are found in any of the Contractor's proposals for this Contract or in any sub-contractor's proposals attached thereto shall be unenforceable as against the County, unless the subject of such terms, conditions, or provisions is addressed in the County's General Conditions, and such terms, conditions, or provisions are consistent with the County's General Conditions.

2. This Amendment may be executed in two or more counterparts, each of which shall be deemed to be an original, but all of which shall constitute one and the same instrument. The parties agree that they may utilize and shall be bound by their electronic signatures, pursuant to Chapter 489E, Hawaii Revised Statutes.

The entire Contract, as amended herein, shall remain in full force and effect.

IN WITNESS WHEREOF, the Parties execute this Amendment to Contract by their signatures on the dates below, to be effective as of the date of the last signature hereto.

[EXECUTION PAGES TO FOLLOW]

[THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK]

This Amendment Does not Adjust the Total Contract Amount or the Time of Performance set forth in the Contract, as Previously Amended.

JCI

County of Maui

AMENDMENT 4 TO
CONTRACT NO. C7619

CONTRACTOR EXECUTION PAGE

I hereby represent and warrant that I have the legal right and authority to execute this Contract on behalf of the Contractor.

CONTRACTOR:

JOHNSON CONTROLS, INC.

By _____
(Signature)

GARY LINDSAY
(Print Name)

Its DIRECTOR, PROJECT DELIVERY
(Title)

Date 8/8/2024

[THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK]

AMENDMENT 4 TO
CONTRACT NO. C7619

COUNTY EXECUTION PAGE

COUNTY OF MAUI:

By _____
MARCY MARTIN
Its Acting Director of Finance

Date AUG 2 3 2024

APPROVAL RECOMMENDED:

_____
LEO K. CAIRES
Chief of Staff

APPROVED AS TO FORM
AND LEGALITY:

_____
MIMI DESJARDINS
First Deputy Corporation Counsel
LF2022-0485
2024-07-03 C7619 AMD #4.docx

February 29th, 2024

Office of the Mayor
County of Maui
Attn: Mr. Leo Caires, Chief of Staff
Kalana O Maui Bldg, 9th Floor
200 S. High St.
Wailuku, HI 96793
Via electronic mail to: Leo.Caires@co.maui.hi.us

RE: County-Wide ESPC RFP 21/22 and subsequent Contract No. C7619 Primary, as Amended dated January 27, 2023 Implementation of Phase 2 Scope Item: Solar PV: **Site List Clarification Amendment**

Dear Mr. Caires,

This letter is to confirm the sites being **excluded** and **included** in the above referenced contract. For the site Central Maui Landfill located at Puunene Road, subsequent to the above referenced RFP and contract, the County issued a separate RFP for landfill gas to provide utility power directly in a utility power RFP and awarded the Central Maui Landfill site rights to another contractor. JCI did not respond to that RFP and is not involved in that Landfill Gas project, but JCI understands that the contract was awarded to another contractor who did respond to that RFP. However, the Central Maui Landfill located at Puunene Road is currently listed in the Site Licenses issued by the County to JCI and contained the above referenced JCI contract. While JCI would enjoy the opportunity to develop a 20MW energy solution at the Central Maui Landfill Site, JCI understands that the County wanted to remove the Central Maui Landfill from the JCI Contract because the County decided to go in another direction and issue a separate RFP. JCI understands that the County cannot grant a site license to two contractors, for the same site. JCI wishes to cooperate with the County's desires.

The additional clarification in this Amendment Request regards the community solar sites located on the other old, small landfills that are to be included to benefit the county and the community. Community Solar is a service requested by the County and presented in JCI's RFP response to the above referenced County-Wide ESPC RFP 21/22. After award and as part the County and JCI's planning efforts, the Department of Environmental Management (DEM) came up with the idea that these small landfill sites may have potential for Community Solar. As you know, this is an opportunity for the County to use community solar for sites where direct behind the meter solar is not feasible (i.e. Kalana O Maui building or other facilities), while also hosting community solar for low-income individuals. These landfill sites are already listed in one Exhibit (Exhibit A: IGA Phase 2 Scope of Work, where the sites are listed). However, these sites were not clearly listed with full descriptions in the Exhibit D, due to availability of the TMK numbers at time of contract. This Request for Amendment fixes that and lists the TMKs for Exhibit D.

The above referenced contract package included a sixty (60) day period to remove sites. Therefore, JCI obtained written Corporation Counsel approval for a Contract Amendment (via email from Sonya Toma, Deputy Corporation Counsel, dated March 31, 2023), which approved the form of the Amendment. JCI signed that Contract Amendment (attached). However, JCI never received Counter-Signature from the County. Therefore, this is just a clean-up item that needs to be executed by both parties.

Description of Existing Work: Development and installation of Community Based Renewable Energy (CBRE), under the signed Phase 2 Contract.

Hawaii Contractor License Information:

General Contractor: Johnson Controls, Inc (JCI): General Contractor License # CT-2023. General A, General B, C-13 Electrical, C-15 Electrical Contract Systems, C-52 HVAC Contractor, C-60 Solar Power Systems Contractor.

Installation Date: JCI plans to commence further development of this work upon release of the Phase 3 CBRE Applications, at a date to be determined by the PUC and the utility.

Site List & Request for Contract Amendment:

The form of Contract Amendment requested is attached in addition to a *Clarification to Schedule A of Appendix D Financing Submittals* document.

Sincerely,

Kainoa Casco
Climate + Resiliency Executive
Johnson Controls Inc
Sustainable Infrastructure, Hawaii
2065 Main St., Wailuku, HI 96793
Phone: 808-463-6551
Email: Kainoa.Casco@jci.com

CLARIFICATION TO SCHEDULE A OF APPENDIX D FINANCING SUBMITTALS

Clarification:

The parties agree that, due to a separate, potential HECO Landfill Gas Collection and Power Generation project being pursued under a separate procurement related to the Central Maui Landfill located on Puunene Rd, no Community Based Renewable Energy (CBRE or "Community Solar") project or other solar project shall commence at Central Maui Landfill located on Puunene Rd. under this agreement. The County reserves the right to provide a written notice to proceed with a Community Solar project at the Central Maui Landfill on Puunene Rd, under this contract, at a later date.

The parties agree the below list of sites designated for Community Solar in the Amendment No. 3 IGA Scope of Work: Appendix A are also included in Schedule A of the Appendix D site list. The further detailed TMK descriptions are added here for purpose of clarity.

Site Name	Site Address	Island	Site Type
Hana Landfill**	Off Hana Highway on Wiliku'u Road; TMK: 2-1-3-006-012	MAUI	Landfill
Wai Kapu Landfill**	centrally located on Maui; TMK: 2-3-8-007-092	MAUI	Landfill
Olowalu Landfill**	Off Honoapiilani Highway near the town of Olowalu; TMK: 2-4-8-003-039	MAUI	Landfill
Ulupalakua Landfill**	Near Mahoni Road in Makawao/Pukalani area TMK: 2-2-4-001-020)	MAUI	Landfill

AMENDMENT TO CONTRACT CERTIFICATION

I, MARCY MARTIN, Director of Finance of the County of Maui, State of Hawaii,
do certify that there is available appropriation or balance of an appropriation over and above all outstanding contracts, sufficient to cover the amount required by the foregoing contract, i.e.

Appropriation Index	Title		Amount Required
903119B	RENEWABLE ENERGY PROGRAMS	(6132)	$0.00

Contract No **C 7619** **JOHNSON CONTROLS, INC**

Amendment No. 5 Dated

Dated this 14 day of NOVEMBER 2024

Extension of Contract to: **No Change**

Original Amount	$	150,000.00
Prior Amends/CO	$	-
This Amendment	$	-
Total	$	150,000.00

MARCY MARTIN
Director of Finance

Investment Grace Audit (IGA) Contract for Energy Saving Performance Contract Countywide Facilities
for Office of Mayor
Job No. RFP No. 21-22/ESPC
No, Federal funds not being used
ORDINANCE NO. 5657 (FY2025)

FY 2025

scp

U703
11/19/24

RICHARD T. BISSEN, JR.
Mayor

MARCY MARTIN
Director

DEPARTMENT OF FINANCE
COUNTY OF MAUI
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAI'I 96793
www.mauicounty.gov

November 19, 2024

Johnson Controls, Inc.
550 Paiea Street
Honolulu, HI 96819

RE: INVESTMENT GRADE AUDIT (IGA) CONTRACT FOR ENERGY SAVING PERFORMANCE CONTRACT COUNTYWIDE FACILITIES
RFP NO. 21-22/ESPC
CONTRACT NO. C7619 AMENDMENT NO. 5

Dear Johnson Controls, Inc.:

Transmitted is a copy of the fully executed contract amendment for your file.

Sincerely,

Dana D Alden
for MARCY MARTIN
Director of Finance

MM:dda
Enclosure

xc: Office of the Mayor

AMENDMENT NO. 5 TO
CONTRACT NO. C7619

Department: Office of the Mayor

Project Title: Investment Grade Audit (IGA) Contract for Energy Saving Performance Contract Countywide Facilities

RFP No.: 21-22/ESPC

Additional Certification Requested from County: $0.00

This AMENDMENT NO. 5 TO CONTRACT is made and entered into by and between the COUNTY OF MAUI, a political subdivision of the State of Hawaii, whose business address is 200 South High Street, Wailuku, Maui, Hawaii 96793, hereinafter referred to as the "County", and JOHNSON CONTROLS, INC., a Wisconsin corporation, whose mailing address is 550 Paiea Street, Honolulu, Hawaii 96819, hereinafter referred to as the "Contractor". County and Contractor shall hereinafter be referred to collectively as the "Parties".

Source of Funds. The source(s) and availability of the funds for this Contract shall be as set forth in the Contract Certification signed by the Director of Finance of the County of Maui on or before the effective date of this Contract. Contract Certification shall be on file in the office of the Director of Finance of the County of Maui.

RECITALS:

WHEREAS, the County and the Contractor entered into the following Contract and Amendment(s), if any, with certified availability of funds in the amount and time of performance as indicated:

Contract/ Amend	Date	Additional Certified Amount	Total Certified Amount	Time of Performance	Renewal Option(s)
C7619	05/06/2022	Not applicable	$150,000.00	180 calendar days from Notice to Proceed (05/09/2022)	60 additional calendar days
Amend 1	09/29/2022	$0.00	$150,000.00	Notice to Proceed through January 4, 2023	None
Amend 2	11/28/2022	$0.00	$150,000.00	Notice to Proceed through January 4, 2024	None
Amend 3	01/27/2023	$0.00	$150,000.00	Notice to Proceed through November 20, 2024	None
Amend 4	08/23/2024	$0.00	$150,000.00	Same as above	None

WHEREAS, the Contract and any Amendment(s) thereto listed above shall be hereinafter collectively referred to as the "Contract";

AMENDMENT NO. 5 TO
CONTRACT NO. C7619

WHEREAS, the Contract is on file with the Director of Finance;

WHEREAS, the Parties now desire to amend the Contract; and

NOW, THEREFORE, the Parties mutually agree to amend the Contract as follows:

1. The scope of work of the contract is hereby amended pursuant to the Phase I Change Order List (Additions and Deductions) set forth in attachment 1 of Exhibit A. The Performance Guarantee of the contract is hereby amended pursuant to the Phase I Guaranteed Savings and Cashflow set forth in Attachment 2 of Exhibit A. Any general, miscellaneous, or other terms, conditions, or provisions that are found in any of the Contractor's proposals for this Contract or in any sub-contractor's proposals attached thereto shall be unenforceable as against the County, unless the subject of such terms, conditions, or provisions is addressed in the County's General Conditions, and such terms, conditions, or provisions are consistent with the County's General Conditions.

2. This Amendment may be executed in two or more counterparts, each of which shall be deemed to be an original, but all of which shall constitute one and the same instrument. The parties agree that they may utilize and shall be bound by their electronic signatures, pursuant to Chapter 489E, Hawaii Revised Statutes.

Those portions of the entire Contract that are not affected by this amendment, shall remain in full force and effect.

IN WITNESS WHEREOF, the Parties execute this Amendment to Contract by their signatures on the dates below, to be effective as of the date of the last signature hereto.

[EXECUTION PAGES TO FOLLOW]

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AMENDMENT NO. 5 TO
CONTRACT NO. C7619

CONTRACTOR EXECUTION PAGE

I hereby represent and warrant that I have the legal right and authority to execute this Contract on behalf of the Contractor.

CONTRACTOR:

JOHNSON CONTROLS, INC.

By Gary Lindsay
(Signature)

Gary Lindsay
(Print Name)

Its Director, Project Project Delivery
(Title)

Date 10/9/2024

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AMENDMENT NO. 5 TO
CONTRACT NO. C7619

COUNTY EXECUTION PAGE

COUNTY OF MAUI:

By _____
MARCY MARTIN
Its Director of Finance

Date NOV 19 2024

APPROVAL RECOMMENDED:

_____
CYNTHIA LALLO
Chief of Staff

APPROVED AS TO FORM
AND LEGALITY:

/s/ Mimi Desjardins
MIMI DESJARDINS
Deputy Corporation Counsel
LF2022-0485
2024-09-19 C7619 amd 5 DRAFT.docx

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County of Maui Contract No. C7619 - Johnson Controls, Inc.
County-Wide Energy Savings Performance Contract: Summary Scope of Work
Design, Installation & Maintenance included (20 year term), Performance Guarantee: (20 year term)

Prepared for:

Prepared by:

Chuck Collins	Engineering Manager
Lowen Okamoto	Sr. Project Manager: **808-344-8334**
Jose Pecchio, CEM LEED AP	Sr. Development Engineer
Joe Caldwell, CEM CMVP	Principal Development Engineer

Phase 1: **Contract Modification #2** **Date: 9/11/24**

CIP Funds: **$0 CIP Funds**: No CIP funds required.

Performance Guarantee: New guaranteed savings and cashflow as shown on Attachment 2, based on scope selection in Attachment 1.

Investment Grade Audit (IGA): See Phase 1 IGA document for more details.

Attachment 1: Phase 1 Contract Modification #2 Item List (Additions and Deductions), reviewed by:

Name: _____

Title: _____

Department: _____

Signature: _____ Date: _____

This letter is being used as the Notice to Proceed with the outlined changes in Attachment 1. Details of changes in scope, guaranteed savings, M&V, contract value and cashflows will be provided on a final IGA document provided at the end of construction.

County of Maui – JCI Contract No. C7619 Primary Johnson Controls Maui Office
2065 Main St, STE 101
Wailuku, Maui

Johnson Controls

Contract Modification #2

County of Maui PHASE 1 Energy Savings Performance Contract

Customer Contract #	C7619	
Customer Name	County of Maui	
JCI Project #	2PYS-0014	
Base Contract Value	$	28,803,233.00
Net Change Contract Amount	$	(3,718,965.00)
New Contract Value	$	25,084,268.00

Item #	FIM	Description	Site	Department	Approx. Date of Item	Requested By	CIP Funds Contributions	Year 1 Savings Change	Notes	Scope Description	Status	Approver	Date approved
1	FIM 9	Infiltration Reduction	All	All		JCI M&V		$63,669	Correction of errors in contract savings calculation across all sites	Conversion factor corrected in savings calculations	Included	Leo Caires	7/19/24
2	FIM 4	Transformer Replacements	All	All		JCI M&V		($75,976)	Correction of errors in contract demand savings calculation across all sites	Demand savings wrongfully multiplied by 12 twice	Included	Leo Caires	7/19/24
3	FIM 2	Exterior Lighting Retrofits	All	All	10/31/2023	Mayor's Office		($209,020)	Mayor's office met in Oct 2023 and directed JCI to descope the exterior lighting (because it did not comply with Bill 21, which was passed after the contract was signed) and do roofing upgrades instead.	Descope from existing contract	Included	Leo Caires	7/19/24
4	FIM 2	Exterior Lighting Retrofits	All	All	7/12/2024	Mayor's Office		$175,843	Preliminary data on providing Bill 21 compliant replacements of existing non-LED exterior fixtures using amber technology	Replace exterior lighting non-LED fixtures in original contract with new amber LED fixtures compliant with Bill 21			
5	FIM 2	Exterior Lighting Retrofits	All	All	7/12/2024	Mayor's Office		$0	Preliminary data on providing Bill 21 compliant replacements of existing LED exterior fixtures using amber technology	Replace exterior lighting LED fixtures in original contract (those had been excluded in original contract) with new amber LED fixtures compliant with Bill 21			
6	FIM 1	Interior Lighting Retrofits	Fire Prevention Bureau	Fire	2/14/2024	Rylan Yatsuhiro		$0	JCI had excluded these fixtures originally because MFD self-implemented, but 5 of those new LED fixtures have failed and MFD requested JCI to replace them.	Replace (5) non-working highbay LED fixtures in the garage with new LED high bay lights, and provide (2) additional for attic stock			
7	FIM 1	Interior Lighting Retrofits	Various Fire Stations	Fire	2/14/2024	Rylan Yatsuhiro		$0	Fire chief requested to remove Acuity switches from dormitory areas	Remove Acuity switches from various Fire Stations, per approved Memo 1900 from Fire Chief	Included	Leo Caires	7/10/24
8	FIM 5	Domestic Water Fixture Upgrades	All Fire Stations	Fire	7/25/2023	Rylan Yatsuhiro		($44,361)	Fire Fighters do not like low flow showerheads, so Fire Department has requested all low flow shower heads to be descoped in the Fire Stations.	Descope (65) 1.5 GPM shower heads from existing contract	Included	Leo Caires	7/19/24
9	FIM 1	Interior Lighting Retrofits	West Maui Senior Center	Housing	10/1/2023	JCI		($11,561)	Facility was destroyed during the Lahaina fires	Descope from existing contract	Included	Leo Caires	7/19/24
10	FIM 5	Domestic Water Fixture Upgrades	West Maui Senior Center	Housing	10/1/2023	JCI		$0	Facility was destroyed during the Lahaina fires	Descope from existing contract	Included	Leo Caires	7/19/24
11	FIM 1	Interior Lighting Retrofits	Kaunakakai Gym	Parks	8/16/2023	Darin Kimoto		$9,188	Moloka'i gym has (8) old Sylvania Metal Halide 1000W fixtures and make the gym super hot. The community would like to get new LED fixtures	Replace (8) HID Metal Halide lights in the Kaunakakai Gym with (10) new LED high bay lights, and retrofit (25) other existing lighting fixtures of various types and locations with LED technology	Included	Leo Caires	7/10/24
12	FIM 1	Interior Lighting Retrofits	Duke Maliu Park, Mitchel Pauole Annex, Kaunakakai Youth Center, Maunaloa Community Center, One Alii Beach Park, Kaunakakai Police Station	Parks	8/15/2023	Darin Kimoto		$18,748	Darin Kimoto (Molokai District Manager for Parks Dept) indicated he would like to have LED upgrades in this facility since it was not included in the original scope of Ph1	Retrofit (320) existing interior lighting fixtures of various types and locations with LED technology	Included	Leo Caires	7/10/24
13	FIM 10	Window Film	Lanai Baseyard (Lanai Gym)	Parks	2/1/2024	JCI		($448)	Building was mislabled "Baseyard", but it is really the Lanai Gym, which is not owned by the County.	Descope from existing contract	Included	Leo Caires	7/19/24
14	FIM 5	Domestic Water Fixture Upgrades	Harold Rice Park	Parks	8/22/2023	Karla Peters		$50	Parks Department asked to include these facilities for domestic water retrofits. JCI requested water bills	Replace domestic water fixtures to new low flow fixtures, which includes furnishing and installing: (2) 1.0 gpf tank type toilets, (1) 1/8 gpf urinal and flush valve, (1) 0.5 gpm faucet aerator.	Included	Leo Caires	7/10/24
15	FIM 5	Domestic Water Fixture Upgrades	Kulamalu Park	Parks	8/22/2023	Karla Peters		$134	Parks Department asked to include these facilities for domestic water retrofits. JCI requested water bills	Replace domestic water fixtures to new low flow fixtures, which includes furnishing and installing: (3) 1.28 gpf floor mounted toilets and flush valves, (1) 1/8 gpf urinal and flush valve, (2) 0.5 gpm faucet aerators.	Included	Leo Caires	7/10/24
16	FIM 8	Aquatics	Cooke Memorial Pool	Parks	10/15/2023	Darin Kimoto		$0	Surge tank has cracks that cause significan water leaks/loss constantly	Seal with epoxy the cracks in the pool surge tank where currently water leaks. Replace existing defective isolation valves in the tank	Included		
17	FIM 5	Domestic Water Fixture Upgrades	Malu Ulu Olele Park	Parks	10/1/2023	JCI		($101)	Facility was damaged during the Lahaina fires	Descope from existing contract	Included	Leo Caires	7/19/24
18	FIM 5	Domestic Water Fixture Upgrades	Old Lahaina Prison	Parks	10/1/2023	JCI		($1,933)	Facility was damaged during the Lahaina fires	Descope from existing contract	Included	Leo Caires	7/19/24
19	FIM 5	Domestic Water Fixture Upgrades	Lahaina Banyan Court	Parks	10/1/2023	JCI		($9,742)	Facility was damaged during the Lahaina fires	Descope from existing contract	Included	Leo Caires	7/19/24
20	FIM 6	Shower Tower Retrofits	Kamehameha Iki Park	Parks	10/1/2023	JCI		($4,216)	Facility was damaged during the Lahaina fires	Descope from existing contract	Included	Leo Caires	7/19/24
21	FIM 4	Transformer Replacements	War Memorial Complex	Parks	1/26/2024	Pat McCall		$0	JCI is not allowed to install the transformer because another contractor is working on the site, so DPR and contractor agreed on JCI providing the transformer to them, and they will install it on their contract.	JCI will hand over the transformer to contractor working on site and provide a credit to the County for the labor	Included	Leo Caires	7/19/24
22	FIM 1	Interior Lighting Retrofits	Alfred "Flako" Gymnasium	Parks	1/26/2024	Pat McCall		($3,248)	Parks Deparment indicated this building is condemned and will be demolished.	Descope from existing contract	Included	Leo Caires	7/19/24
23	FIM 7	Irrigation Wells	Maui Lani Park	Parks	7/10/2024	JCI		($63,813)	JCI informed the Parks Dept that permitting agency (CWRM) is likely to not approve in a timely manner, so it is better to defer to a future phase.	Descope from existing contract and defer to a future phase with JCI or to be done by County directly	Included	Leo Caires	7/19/24
24	FIM 7	Irrigation Wells	Kehalani Mauka Park	Parks	7/10/2024	JCI		($155,033)	JCI informed the Parks Dept that permitting agency (CWRM) is likely to not approve in a timely manner, so it is better to defer to a future phase.	Descope from existing contract and defer to a future phase with JCI or to be done by County directly	Included	Leo Caires	7/19/24

Contract Modification #2

County of Maui PHASE 1 Energy Savings Performance Contract

Customer Contract #	C7619	
Customer Name	County of Maui	
JCI Project #	2PYS-0014	
Base Contract Value	$	28,803,233.00
Net Change Contract Amount	$	(3,718,965.00)
New Contract Value	$	25,084,268.00

Item #	FIM	Description	Site	Department	Approx. Date of Item	Requested By	CIP Funds Contributions	Year 1 Savings Change	Notes	Scope Description	Status	Approver	Date approved
25	FIM 7	Irrigation Wells	Papohaku Park	Parks	7/10/2024	JCI		($13,133)	JCI informed the Parks Dept that permitting agency (CWRM) is likely to not approve in a timely manner, so it is better to defer to a future phase.	Descope from existing contract and defer to a future phase with JCI or to be done by County directly	Included	Leo Caires	7/19/24
26	FIM 7	Irrigation Wells	Kaunakakai Ball Park	Parks	7/10/2024	JCI		($67,809)	JCI informed the Parks Dept that permitting agency (CWRM) is likely to not approve in a timely manner, so it is better to defer to a future phase.	Descope from existing contract and defer to a future phase with JCI or to be done by County directly	Included	Leo Caires	7/19/24
27	FIM 7	Smart Irrigation Controls	Lahaina Civic Center, Lahaina Aquatic Center, Kualapuu Park, Kilohana Park, Leisure Estates Park, Lanai Park & Tennis, Makana Park, Wells Park	Parks	4/23/2024	Karla Peters / Chris Kenzle		$44,868	Parks Department indicated they want to have smart irrigation controls in lieu of irrigation wells that are stuck on permitting	Install new Rainbird smart irrigation controls on (7) parks selected by DPR (one park for each District), plus Lahaina Aquatic Center	Pending		
28	FIM 7	Smart Irrigation Controls	23 Additional Parks	Parks	6/21/2024	JCI		$164,165	JCI suggests installing smart irrigation controls in more parks to maximize savings for this measure.	Install new Rainbird smart irrigation controls on (23) additional pars. Parks that are currently underwatering, are on R-1 or well water are excluded.	Pending		
29	FIM 6	Shower Tower Retrofits	Kamole I Beach Park	Parks	7/1/2024	JCI		($12,059)	JCI to descope this because it is in a flood zone and SMA is likely to not be approved.	Descope from existing contract and provide labor credit to County	Included	Leo Caires	7/19/24
30	FIM 5	Domestic Water Fixture Upgrades	Various	Parks	3/19/2024	Karla Peters		$0	JCI discovered that various facilities have high pressure (>100 psi) which is a code violation and causes issues with domestic plumbing fixtures. Karla Peters requested JCI to include these corrections in the project.	Waiting to see which parks get included for this, since DPR requested JCI to help with this	Pending		
31	FIM 5	Domestic Water Fixture Upgrades	Waikapu Community Center	Parks	2/1/2024	JCI		($61)	Facility had already installed low flow fixtures	Descope from existing contract and provide labor credit to County	Included	Leo Caires	7/19/24
32	FIM 1	Interior Lighting Retrofits	Launiupoko Beach Park	Parks	5/20/2024	JCI		($137)	Site was mistakenly assumed to have lights on the restrooms during the audit (unable to access then)	Descope from existing contract	Included	Leo Caires	7/19/24
33	FIM 1	Interior Lighting Retrofits	War Memorial Complex	Parks	5/1/2023	JCI		($5,984)	Major renovation on this site by the County prevents JCI from performing the work on a timely fashion	Descope from existing contract	Included	Leo Caires	7/19/24
34	FIM 1	Interior Lighting Retrofits	Lahaina Civic Center	Parks	5/20/2024	Parks		($44,850)	DPR indicated the MIT tournament would take precedence over lighting retrofit work. There was concern about retrofitting the lighiting prior to tournament due to risk of lighting issues that would hinder ESPN camera team. Given the fact this tournament is in November, and the County does not want to extend work beyond October, this will need to be descoped.	Descope (42) gym lights from existing contract and potentially defer to Ph3	Included	Leo Caires	7/19/24
35	FIM 4	Transformer Replacements	Wailuku Police Station	Police	8/24/2023	JCI		$3,355	Additional transformers were identified by Police Department that were not included in original scope	Replace (1) 75 kva, (1) 45 kva xmrs	Included		
36	FIM 5	Domestic Water Fixture Upgrades	Wailuku Police Station	Police	5/28/2024	Jeremy Pallone-DeLaTorre		($1,267)	Jeremy Pallone DeLa Torre indicated that MPD wants to descope the low flow toilets at this location due to issues they had experienced in the past	Descope from existing contract	Included	Leo Caires	7/19/24
37	FIM 5	Domestic Water Fixture Upgrades	All Police Stations	Police	6/3/2024	Jeremy Pallone-DeLaTorre		($520)	Maui Police Department has requested all low flow shower heads to be descoped in the Police Stations.	Descope (44) 1.5 GPM shower heads from existing contract	Included	Leo Caires	7/19/24
38	FIM 1	Interior Lighting Retrofits	Kalana O Maui	Public Works	5/8/2023	JCI		$0	JCI to rewire can lights on the 9th floor to new switch legs so that they can be controlled separately, and rearrange fixtures on 5th floor to match the rest of the fixtures on that floor	Rewire (16) 4' lights to separate switch legs on 9th floor and remove/reinstall (6) 2x2 fixtures to match the rest of the floor on 5th floor	Pending		
39	FIM 1	Interior Lighting Retrofits	Hana Baseyard	Public Works	11/2/2023	Paul Barany		$692	Paul Barany requested the lights at the Hana Baseyard to be replaced.	Replace (18) 4' Wrap Fixture, Fluorescent, (2) 48", T-8 lamps, Instant Start Ballast, w/ 4' Wrap Fixture, 1x4 Wrap - LED Luminaire, with Separate or Integrated Driver Component, 1X4LEDF-WFIXTURE INTEGRATED SENSOR	Included	Leo Caires	7/10/24
40	FIM 1	Interior Lighting Retrofits	Old Courthouse	Public Works		Ervin Pigao		($9,273)	JCI will not be allowed to perform the work until mold removal is completed on this building	Descope from existing contract and defer to a future phase with JCI or to be done by County directly	Included	Leo Caires	7/19/24
41		HVAC	Old Courthouse	Public Works	3/20/2024	Ervin Pigao		$0	Erin Pigao indicated the building is contaminated with mold due to lack of performance of the chilled water system and indicated they would prefer to abandon the chilled water system and install a new VRF system.	Preliminary estimates to abandon chilled water system and install new VRF system	Pending		
42	FIM 5	Domestic Water Fixture Upgrades	Maui County Service Center	Public Works	5/7/2024	Rodrigo "Chico" Rabara		($619)	This site had been added in CO#1, but DPW indicated they don't want low flow fixtures as there had been issues in this building before with low flow fixtures, so they requested this to be descoped from the project.	Descope toilets and urinals from existing contract	Included	Leo Caires	7/19/24
43	0	Roofing Upgrades	Wailuku Police Station, Wailuku Fire Station, Forensic Facility	Various	10/31/2023	Mayor's Office		$0	Mayor's office met in Oct 2023 and directed JCI to descope the exterior lighting (because it did not comply with Bill 21, which was passed after the contract was signed) and do roofing upgrades instead.	Perform roofing upgrades to enable the Solar PV installation on these three buildings	Pending		
44	FIM 4	Transformer Replacements	Piiholo Water Treatment Plant	Water Supply	8/24/2023	JCI		$1,355	Additional transformers were identified by Water Department that were not included in original scope	Replace (1) 15 kva, (1) 10 kva xmrs	Pending		
45	FIM 4	Transformer Replacements	Lahainaluna WTP	Water Supply	10/23/2023	Jason Koskey		$552	Additional transformers were identified by Water Department that were not included in original scope	Replace (1) 45 kva xmrs	Pending		

Contract Modification #2

County of Maui PHASE 1 Energy Savings Performance Contract

Customer Contract #	C7619	
Customer Name	County of Maui	
JCI Project #	2PYS-0014	
Base Contract Value	$	28,803,233.00
Net Change Contract Amount	$	(3,718,965.00)
New Contract Value	$	25,084,268.00

Item #	FIM	Description	Site	Department	Approx. Date of Item	Requested By	CIP Funds Contributions	Year 1 Savings Change	Notes	Scope Description	Status	Approver	Date approved
46	FIM 4	Transformer Replacements	Maui Meadows Pump	Water Supply	3/28/2024	JCI		$612	Additional transformers were identified by Water Department that were not included in original scope	Replace (1) 30 kva xmr			
47	FIM 1	Interior Lighting Retrofits	Maui Meadows Pump	Water Supply	5/20/2024	JCI		$57	The only light on this site was exterior, which was mistakengly included in the interior lighting scope	Descope from existing contract	Included	Leo Caires	7/19/24
48	FIM 1	Interior Lighting Retrofits	Honokowai Booster	Water Supply	9/25/2023	Ryan Nagoshi		($15)	Ryan Nagoshi indicated this site does not have any lights to be retrofitted.	Descope from existing contract	Included	Leo Caires	7/19/24
49	FIM 8	Aquatics	Lahaina Aquatic Center	Parks	5/23/2024	Chris Kenzle		$0	Parks Dept will not allow JCI access until the site is cleaned from ashes and debris that resulted from the Lahaina wild fires	Clean toxic soot and ash to mimic DOH standards from the interior and exterior building surfaces to allow JCI to perform lighting, plumbing and pool work currently under contract to be executed.			
50	FIM 10	Window Film	Kalana Pakui	Public Works	6/25/2024	JCI		$2,655	JCI had developed this scope several months ago for future work	Add window film in (1,139) sqft of glass			
51	FIM 10	Window Film	Kalana O Maui	Public Works	6/25/2024	JCI		$18,511	JCI had developed this scope several months ago for future work	Add window film in (10,371) sqft of glass			
52	FIM 10	Window Film	Old Courthouse	Public Works	6/25/2024	JCI		$2,888	JCI had developed this scope several months ago for future work	Add window film in (1,080) sqft of glass			
53	FIM 10	Window Film	Kihei Aquatic Center	Parks	6/25/2024	JCI		$2,027	JCI had developed this scope several months ago for future work	Add window film in (286) sqft of glass			
54	FIM 10	Window Film	Kihei Police Station	Police	6/25/2024	JCI		$1,239	JCI had developed this scope several months ago for future work	Add window film in (827) sqft of glass			
55	FIM 10	Window Film	Lahaina Civic Center	Parks	6/25/2024	JCI		$482	JCI had developed this scope several months ago for future work	Add window film in (717) sqft of glass			
56	FIM 10	Window Film	Lahaina Fire Station	Fire	6/25/2024	JCI		$293	JCI had developed this scope several months ago for future work	Add window film in (188) sqft of glass			
57	FIM 10	Window Film	Lahaina Police Station	Police	6/25/2024	JCI		$582	JCI had developed this scope several months ago for future work	Add window film in (255) sqft of glass			
58	FIM 10	Window Film	Lanai Senior Center	Housing	6/25/2024	JCI		$1,170	JCI had developed this scope several months ago for future work	Add window film in (441) sqft of glass			
59	FIM 10	Window Film	Maui County Service Center	Public Works	6/25/2024	JCI		$8,483	JCI had developed this scope several months ago for future work	Add window film in (4,662) sqft of glass			
60	FIM 10	Window Film	Mayor Hannibal Tavares Community Center	Parks	6/25/2024	JCI		$2,347	JCI had developed this scope several months ago for future work	Add window film in (798) sqft of glass			
61	FIM 10	Window Film	South Maui Community Center & Park	Parks	6/25/2024	JCI		$2,454	JCI had developed this scope several months ago for future work	Add window film in (1,490) sqft of glass			
62	FIM 10	Window Film	Wailuku Police Station	Police	6/25/2024	JCI		$8,613	JCI had developed this scope several months ago for future work	Add window film in (2,130) sqft of glass			
63	FIM 10	Window Film	Kaunoa Senior Services	Parks	6/25/2024	JCI		$3,164	JCI had developed this scope several months ago for future work	Add window film in (1,902) sqft of glass			
64	FIM 5	Domestic Water Fixture Upgrades	Kalana O Maui	Public Works	6/18/2024	JCI		$0	Council member indicated the water cooler in the 8th floor has been out of service for several months and has not yet been replaced	Replace (1) broken water cooler in 8th floor with new drinking fountain with bottle filler	Included	Leo Caires	7/10/24
65	FIM 9	Infiltration Reduction	Lanai Fire Station	Fire	2/8/2024	Rylan Yatsuhiro		$0	Rylan Yatsushiro requested to replace the old jalousie windows with new double pane windows to better insulate the building and lower infiltration	Replace (23) existing jalousie windows totaling 478 sqft with new double pane windows with vynil frames		0	1/0/00
66	0	HVAC	Lanai Fire Station	Fire	2/8/2024	Rylan Yatsuhiro		$0	Rylan Yatsushiro requested to install (5) mini split units Fire Dept purchased for this station	Install (5) County-provided mini split units	Included	Leo Caires	7/19/24
67	FIM 1	Interior Lighting Retrofits	Kalana O Maui	Public Works	2/26/2024	JCI		$0	There are (6) 2x2 fixtures in the 5th floor that had a different orientation than the rest of the fixtures on the floor, thus creating an aesthetic issue.	Remove and reinstall (6) 2'x2' fixtures in the 5th floor to match the rest of the fixtures on that floor	Included	Leo Caires	7/10/24
68	FIM 1	Interior Lighting Retrofits	Kihei WRF	Env Mgmt	4/9/2024	JCI		$0	Switches did not have boxes in the wall in office spaces, which is not allowed by electrical code.	Add electrical boxes in the wall to comply with the electrical code	Included	Leo Caires	7/10/24
69	FIM 2	Exterior Lighting Retrofits	Kalana O Maui	Public Works	5/30/2024	JCI		$0	Provide a mockup of Bill 21 compliant amber lights in the parking lot of the Kalana O Maui building	Install a mockup of exterior lights in (2) parking lots. The smaller lot includes (2) wall packs and (1) 4-lamp shoebox fixture. The larger lot includes (3) wall packs, (2) 4-lamp shoebox fixtures, and (3) post-top fixtures. Fixtures will be phosphor-coated amber.	Included	Leo Caires	7/10/24
70	FIM 1	Interior Lighting Retrofits	Wailuku Police Station	Police	6/28/2024	JCI		$0	Fixtures (Qty: 18) were found with faulty wiring that will need to be replaced	Replace faulty wiring in (18) fixtures.			
71	FIM 1	Interior Lighting Retrofits	Kahului Baseyard	Public Works	7/2/2024	JCI		$0	Fixtures in the work and tools area were disconnected for safety reasons, but County requested sensors to be recoonected due to area use change.	Reconnect sensors in fixtures located in the work and tools area			
72	0	General Conditions	Various	All	6/27/2024	JCI		$0	Additional General Conditions and Project Management to finish installation of contracted scope of work due to delays outside of JCI's control	3 months of additional General Conditions and Project Management to finish installation of contracted scope of work			
73	FIM 7	Irrigation Wells	Kaunakakai Ball Park, Papohaku Park	Parks	6/14/2024	JCI		$0	CWRM requested on 6/14/24 that a more in-depth Ka Pa'akai analysis from the driller be provided in order to further consider the well permit application	Provide an expedited in-depth Ka Pa'akai analysis as requested by CWRM for the well permit applications			
74	FIM 2	Exterior Lighting Retrofits	All	All	7/12/2024	JCI		$0	Perform a new exterior lighting audit and develop a Bill 21 compliant design	Perform a new exterior lighting audit and develop a Bill 21 compliant design			
75	FIM 2	Exterior Lighting Retrofits	All	Public Works	7/12/2024	JCI		$0	Perform a streetlighting audit and provide the data for the County so they can pursue the design of Bill 21 compliant fixtures	Perform a streetlighting audit and provide the data and existing inventory of streetlights to the County			
76	FIM 7	Smart Irrigation Controls	Lahaina Rec Center	Parks	7/10/2024	Leo Caires		$0	Leo Caires requested this park to be added to the Smart Irrigation Controls scope to help revitalize it	Install new Rainbird smart irrigation controls on (1) additional park.			

Contract Modification #2

County of Maui PHASE 1 Energy Savings Performance Contract

Customer Contract #	C7619	
Customer Name	County of Maui	
JCI Project #	2PYS-0014	
Base Contract Value	$	28,803,233.00
Net Change Contract Amount	$	(3,718,965.00)
New Contract Value	$	25,084,268.00

Item #	FIM	Description	Site	Department	Approx. Date of Item	Requested By	CIP Funds Contributions	Year 1 Savings Change	Notes	Scope Description	Status	Approver	Date approved
77	FIM 11	EV	Various	Various	7/10/2024	Leo Caires		$0	Leo Caires requested to include (12) new EV (Teslas)	Provide (12) new Teslas Model Y to meet the County specifications.	Rejected		
78	FIM 11	EV Charging Station	Kalana O Maui	Public Works	7/10/2024	Leo Caires		$0	Leo Caires requested to add (6) additional EV Charging Stations in a specified location at Kalana O Maui blg	Provide and install (6) new EV Charging Stations, similar to the one already installed	Rejected		
79	FIM 1	Interior Lighting Retrofits	Parks Maintenance Baseyard	Parks	7/18/2024	Chris Kenzle		$0	Chris Kenzle (Parks Dept) indicated they want JCI to do the lighting retrofits in the Kanaloa Parks Maintenance Baseyard	Retrofit (82) existing lighting fixtures of various types and locations in the Maintenance building with LED technology	Rejected		
80	0	Roofing Upgrades	Kula Fire Station	Fire	7/18/2024	Rylan Yatsuhiro		$0	Fire Department indicated the roof in the Kula Fire Station is leaking and is in urgent need to be replaced.	Replace (5,751) sqft of slate tile roofing with new heavy duty architectural shingle roofing to enable the Solar PV installation	Included	Leo Caires	7/19/24
81	0	Roofing Upgrades	Wailuku Police Station	Police	7/18/2024	Jeremy Pallone-DeLaTorre		$0	Police Department indicated the roof in the Wailuku Station is leaking and needs to be repaired.	Provide new coating on (30,109) sqft of flat roof to enable the solar PV installation with a roof warranty	Rejected		
82	0	Roofing Upgrades	Paia Fire Station	Fire	12/8/2023	Rylan Yatsuhiro		$0	Fire Department indicated the roof in the Paia Fire Station is leaking and is in urgent need to be replaced.	Replace (5,010) sqft of shingle roofing with new heavy duty architectural shingle roofing, including new copper gutters and downpouts	Rejected		
83	FIM 8	Aquatics	All pools	Parks	7/18/2024	JCI/County		$0	Service PSA will be descoped to make sure the County can have enough savings to cover loan payments	Descope Pool Service PSA and Parks Department will take over those responsibilities	Included	Leo Caires	7/19/24
84	FIM 1	Interior Lighting Retrofits	All sites	All	7/18/2024	JCI/County		$0	Service PSA will be descoped to make sure the County can have enough savings to cover loan payments	Descope Interior Lighting Service PSA and every Department will take over those responsibilities	Included	Leo Caires	7/19/24
85	FIM 8	Aquatics	All pools	Parks	7/22/2024	JCI/County		$0	DPR does not have the in-house expertise to maintain the pool equipment installed and did not include in their budget to outsource this	Reserve funds for Pool Service PSA for years 1-4 and Parks Department will take over those responsibilities after that.	Rejected		
86	FIM 6	Shower Tower Retrofits	Wahikuli Wayside Park, Kanaha Beach Park, Kalama Park, Hana Bay Beach Park	Parks	8/1/2024	Mayor's Office		($118,632)	County decided not to grant an extension to JCI to deal with permitting delays, thus JCI will provide a labor credit and turn over the material to the Parks Dept for them to install.	Descope (12) shower towers from existing contract, and provide the equipment and a labor credit to County. County will be responsible for installing the JCI provided equipment.	Included	Leo Caires	8/5/24
87	FIM 11	EV	Kalana O Maui	Public Works	8/7/2024	Leo Caires		$0	Leo Caires requested JCI to provide the Ford Lightning truck that had originally been purchased and exchanged for the (2) Model Y Teslas	Provide (1) new Ford Lightning EV truck	Included	Leo Caires	8/7/24
88	FIM 11	EV	Kalana O Maui	Public Works	5/1/2023	Leo Caires		$0	Mayor's office requested an exchange of (1) Ford Lightning truck for (2)Model Y Teslas	Exchange (1) Ford Lightning EV truck for (2) Model Yteslas	Included	Leo Caires	6/1/23
89	FIM 5	Domestic Water Fixture Upgrades	Lahaina Civic Center	Parks	7/14/2024	Angus Peters		($31,542)	District Manager indicated locker rooms are not utilized and showers are out of order due to a floor drain leak	Descope (16) 1.5 GPM shower heads from existing contract and (2) aerators	Included	Leo Caires	8/8/24
90	FIM 5	Domestic Water Fixture Upgrades	Kihei Police Station	Police	5/28/2024	Jeremy Pallone-DeLaTorre		($238)	Jeremy Pallone DeLa Torre indicated that MPD wants to descope the low flow toilets at this location due to issues they had experienced in the past	Descope low flow toilets from existing contract	Included	Leo Caires	8/8/24
91	FIM 5	Domestic Water Fixture Upgrades	Kanaha Beach Park	Parks	8/1/2024	JCI		($1,849)	Existing toilets had already been converted to low flow	Descope (2) low-flow toilets from project	Included	Leo Caires	8/8/24
92	FIM 5	Domestic Water Fixture Upgrades	Napili Fire Station	Fire	8/1/2024	JCI		($128)	Existing toilets had already been converted to low flow	Descope (6) low-flow toilets from existing contract	Included	Leo Caires	8/8/24
93	FIM 5	Domestic Water Fixture Upgrades	Lanai Police Station	Police	8/1/2024	JCI		($42)	Existing toilets had already been converted to low flow	Descope(3) aerators from existing contract	Included	Leo Caires	8/8/24
94	FIM 5	Domestic Water Fixture Upgrades	Kihei Fire Station	Fire	8/1/2024	JCI		($727)	Existing toilets had already been converted to low flow	Descope(3) aerators from existing contract	Included	Leo Caires	8/8/24
95	FIM 5	Domestic Water Fixture Upgrades	Kalana O Maui	Public Works	6/18/2024	JCI		$0	Mayor's office requested to change the remaining water coolers in the building	Replace (6) water coolers in 2nd-7th floors with new drinking fountain with bottle filler	Included	Leo Caires	7/10/24
96	FIM 8	Aquatics	Kokua Pool	Parks	9/6/2024	Mayor's Office		($34,769)	County decided not to grant an extension to JCI to deal with electrical upgrades needed, thus JCI will provide a labor credit and turn over the material to the Parks Dept for them to install.	Descope the OSHG installation from existing contract, and provide the equipment and a labor credit to County. County will be responsible for installing the JCI provided equipment.	Included	Leo Caires	9/6/24
			Change	Included			$0	($827,213)					
			Change	Pending			$0	$0					
			Change	Rejected			$0	$442,303					

Phase 1 Guaranteed Savings and Cashflow

TOTAL FINANCED AMOUNT / CONTRACT VALUE:	$ 25,084,268	A
Years 1-4 Pool Service PSA Value:	$ -	B
Appx. BOH Accrued Interest:	$ 789,510	C
Total TELP:	$ 25,873,778	A+B+C

	Measured Savings	Non-Measured (Agreed Upon) Savings				Annual, In-Advance Lease Payment from BOH	Measurement and Verification	JCI Ongoing Services	Total Costs	Total Annual Benefit			Lease Balance					
	Utility Savings	Utility Savings	Operational Savings	Rebates (Not Guaranteed)	Total Savings						Start Date	End Date	Beginning Lease Balance	Principal Payment	Interest Payment	Total Principal and Interest Payment	Ending Lease Balance	Fixed Rate
Year 1	$ 1,132,246	$ 188,164	$ 250,516	$ 191,353	$ 1,762,279	$ 1,708,372	$ 53,906	$ -	$ 1,762,278	$ 1	30-Sep-2024	30-Sep-2025	$ 25,873,778	$ 1,708,372	$ -	$ 1,708,372	$ 24,165,406	3.83%
Year 2	$ 1,178,977	$ 195,398	$ 297,046	$ -	$ 1,671,421	$ 1,614,818	$ 56,602	$ -	$ 1,671,420	$ 1	30-Sep-2025	30-Sep-2026	$ 24,165,406	$ 689,283	$ 925,535	$ 1,614,818	$ 23,476,123	
Year 3	$ 1,227,945	$ 202,972	$ 329,751	$ -	$ 1,760,668	$ 1,701,235	$ 59,432	$ -	$ 1,760,667	$ 1	30-Sep-2026	30-Sep-2027	$ 23,476,123	$ 802,100	$ 899,136	$ 1,701,235	$ 22,674,023	
Year 4	$ 1,279,262	$ 210,903	$ 355,611	$ -	$ 1,845,775	$ 1,783,371	$ 62,403	$ -	$ 1,845,774	$ 1	30-Sep-2027	30-Sep-2028	$ 22,674,023	$ 912,577	$ 870,794	$ 1,783,371	$ 21,761,446	
Year 5	$ 1,333,043	$ 219,208	$ 378,312	$ -	$ 1,930,564	$ 1,865,039	$ 65,523	$ -	$ 1,930,563	$ 1	30-Sep-2028	30-Sep-2029	$ 21,761,446	$ 1,031,576	$ 833,463	$ 1,865,039	$ 20,729,871	
Year 6	$ 1,389,412	$ 227,906	$ 397,228	$ -	$ 2,014,546	$ 1,945,746	$ 68,800	$ -	$ 2,014,545	$ 1	30-Sep-2029	30-Sep-2030	$ 20,729,871	$ 1,151,792	$ 793,954	$ 1,945,746	$ 19,578,079	
Year 7	$ 1,448,497	$ 237,016	$ 417,089	$ -	$ 2,102,603	$ 2,030,362	$ 72,240	$ -	$ 2,102,602	$ 1	30-Sep-2030	30-Sep-2031	$ 19,578,079	$ 1,280,522	$ 749,840	$ 2,030,362	$ 18,297,558	
Year 8	$ 1,510,432	$ 246,559	$ 437,944	$ -	$ 2,194,935	$ 2,119,082	$ 75,852	$ -	$ 2,194,934	$ 1	30-Sep-2031	30-Sep-2032	$ 18,297,558	$ 1,416,366	$ 702,716	$ 2,119,082	$ 16,881,192	
Year 9	$ 1,575,359	$ 256,556	$ 459,841	$ -	$ 2,291,756	$ 2,212,111	$ 79,644	$ -	$ 2,291,755	$ 1	30-Sep-2032	30-Sep-2033	$ 16,881,192	$ 1,565,561	$ 646,550	$ 2,212,111	$ 15,315,630	
Year 10	$ 1,643,426	$ 267,030	$ 482,833	$ -	$ 2,393,289	$ 2,309,662	$ 83,626	$ -	$ 2,393,288	$ 1	30-Sep-2033	30-Sep-2034	$ 15,315,630	$ 1,723,073	$ 586,589	$ 2,309,662	$ 13,592,557	
Year 11	$ 1,714,789	$ 278,004	$ 506,975	$ -	$ 2,499,768	$ 2,411,959	$ 87,808	$ -	$ 2,499,767	$ 1	30-Sep-2034	30-Sep-2035	$ 13,592,557	$ 1,891,364	$ 520,595	$ 2,411,959	$ 11,701,193	
Year 12	$ 1,789,613	$ 289,502	$ 532,323	$ -	$ 2,611,439	$ 2,519,240	$ 92,198	$ -	$ 2,611,438	$ 1	30-Sep-2035	30-Sep-2036	$ 11,701,193	$ 2,069,856	$ 449,384	$ 2,519,240	$ 9,631,337	
Year 13	$ 1,868,069	$ 301,552	$ 558,940	$ -	$ 2,728,560	$ 2,631,751	$ 96,808	$ -	$ 2,728,559	$ 1	30-Sep-2036	30-Sep-2037	$ 9,631,337	$ 2,262,871	$ 368,880	$ 2,631,751	$ 7,368,466	
Year 14	$ 1,950,337	$ 314,180	$ 586,887	$ -	$ 2,851,403	$ 2,749,754	$ 101,648	$ -	$ 2,851,402	$ 1	30-Sep-2037	30-Sep-2038	$ 7,368,466	$ 2,467,542	$ 282,212	$ 2,749,754	$ 4,900,924	
Year 15	$ 2,036,607	$ 327,414	$ 616,231	$ -	$ 2,980,253	$ 2,873,521	$ 106,731	$ -	$ 2,980,252	$ 1	30-Sep-2038	30-Sep-2039	$ 4,900,924	$ 2,685,816	$ 187,705	$ 2,873,521	$ 2,215,108	
Year 16	$ 2,127,079	$ 341,286	$ 647,042	$ -	$ 3,115,407	$ 2,300,179	$ 112,067	$ -	$ 2,412,246	$ 703,161	30-Sep-2039	30-Sep-2040	$ 2,215,108	$ 2,215,108	$ 85,071	$ 2,300,179	$ 0	
Year 17	$ 2,221,960	$ 355,826	$ 679,395	$ -	$ 3,257,181	$ -	$ 117,671	$ -	$ 117,671	$ 3,139,510	30-Sep-2040	30-Sep-2041						
Year 18	$ 2,321,471	$ 371,068	$ 713,364	$ -	$ 3,405,903		$ 123,554	$ -	$ 123,554	$ 3,282,349	30-Sep-2041	30-Sep-2042						
Year 19	$ 2,425,841	$ 387,047	$ 749,033	$ -	$ 3,561,920		$ 129,732	$ -	$ 129,732	$ 3,432,189	30-Sep-2042	30-Sep-2043						
Year 20	$ 2,535,313	$ 403,799	$ 786,484	$ -	$ 3,725,596		$ 136,218	$ -	$ 136,218	$ 3,589,377	30-Sep-2043	30-Sep-2044						
TOTAL	**$ 38,267,409**	**$ 2,063,658**	**$ 10,182,845**	**$ 191,353**	**$ 50,705,265**	**$ 34,776,202**	**$ 1,782,462**	**$ -**	**$ 36,558,664**	**$ 14,146,601**								

BFED Committee

From: Michelle L. Santos <Michelle.Santos@co.maui.hi.us>
Sent: Thursday, December 26, 2024 2:01 PM
To: BFED Committee
Cc: Cynthia D. Lallo; Cynthia E. Sasada; Josiah K. Nishita; Kelii P. Nahooikaika
Subject: BFED-Johnson Controls Inc. Energy Performance Contract
Attachments: BFED-John son Controls Inc. Energy Performance Contract.pdf

BFED Committee

From: Janina E. Agapay <Janina.E.Agapay@co.maui.hi.us>
Sent: Tuesday, June 2, 2026 9:55 AM
To: BFED Committee
Subject: Johnson Controls, Inc. Energy Performance Contract (BFED-20)(16))
Attachments: (BFED-20)(16)) Response.pdf

Aloha,

Please see attached correspondence.

Mahalo,
Janina Agapay
County of Maui | Budget Office
Phone: (808) 270-7836
Email: Janina.E.Agapay@co.maui.hi.us