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April 22, 2015

FILED

2015 APR 22 P 4: 16

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

PUBLIC UTILITIES
COMMISSION

Dear Commissioners:

Subject: Transmittal No. 15-03 (Decoupling),
Transmittal No. 15-04 (Decoupling), and
Transmittal No. 15-05 (Decoupling)
Hawaiian Electric Companies' Response to PUC-IR-1

Attached is the Hawaiian Electric Companies'¹ response to the Commission's information request PUC-IR-1 submitted on April 7, 2015.

The attached response contains confidential customer-specific information. Such type of information is confidential and has been protected from disclosure in other proceedings, and the disclosure of such information has not been consented to by the customer. Therefore, the Companies are filing the information subject to the terms of Protective Order No. 2015-PO-06 dated January 26, 2015.

If you have any questions on this matter, please contact Dean Matsuura at 543-4622.

Very truly yours,

Joseph P. Viola
Vice President
Regulatory Affairs

Attachment

cc: Division of Consumer Advocacy

¹ The "Hawaiian Electric Companies" or "Companies" are Hawaiian Electric Company, Inc., Hawai'i Electric Light Company, Inc., and Maui Electric Company, Limited.

PUC-IR-1

In its June 27, 2014 filing in Docket No. 2013-0373 – Hawaiian Electric Company, Inc. (“HECO”) 2014 Test Year Rate Case, the Company identifies charges to its accounting practices for Energy Delivery and Power Supply clearing accounts commencing January 1, 2014. In particular pages 96-97 of Attachment 2, the Company explains accounting change that would result in an \$8.4 million reduction in O&M expenses in the 2014 test year.

- a. Have similar accounting changes been implemented for Maui Electric Company, Limited (“MECO”) and Hawaii Electric Light Company, Inc. (“HELCO”)?
- b. Are any of the O&M expenses or expense categories that are affected by the accounting changes included in base rates or surcharges established in the most recent test year rate case? If so, for each company, identify what O&M expenses are affected by the accounting changes, indicating amounts by category and/or account in test year base rates or surcharges.
- c. Are any of the O&M expenses or expense categories that are affected by the accounting changes being transferred or allocated to capital or other accounts eligible for later recovery, in full or part, outside of currently effective base rates? Please explain.
- d. Identify what expenses were transferred or re-allocated for the calendar year 2014 for each company, indicating: (1) total amounts transferred or re-allocated to each category and/or account; (2) what portions of the transferred or re-allocated amounts may be subject to recovery outside of currently effective base rates; (3) the methods of any contemplated recovery of transferred or re-allocated expenses and (4) what portions of the transferred or re-allocated amounts are included in the 12/31/2014 Adjusted Recorded amounts in the calculations of 2015 RAM Rate Base in Schedule D1 of the Decoupling Calculation Workbook Templates filed by each Company on March 31, 2015 RBA/RAM submittals.
- e. Provide workpapers and/or additional expository materials to explain the determination of the \$8.4 million reduction in 2014 test year O&M expense resulting from the accounting changes according to the June 27, 2014 filing. Include an explanation and breakdown of what parts of the \$8.4 million adjustments are for labor expenses incurred in 2014 and what parts of are for prior years.
- f. Explain whether and how the changes in accounting practices are reflected in Submittals No. 15-03, 15-04 and 15-05 and whether and why the treatment given to the changes in accounting practices are appropriate in the context of the “capped” indexed cost recovery treatment of O&M expenses in the Revenue Adjustment Mechanism.

- g. If the Commission ultimately does not approve or disallows the changes to the HECO Companies' accounting practices for Energy Delivery and Power Supply clearing accounts commencing January 1, 2014, what changes, if any, would the Companies request regarding the 2015 RAM Period RBA accounting and RAM Revenue Adjustments?

Hawaiian Electric Companies Response:

- a. Yes. Following Hawaiian Electric's implementation of the change in allocation for its Energy Delivery ("ED") and Power Supply ("PS") clearing charges as of January 2014, both Hawai'i Electric Light and Maui Electric¹ implemented the change as of April 2014.
- b. As explained in its 2014 test year abbreviated rate case filing ("2014 Abbreviated Rate Case Filing"), Docket No. 2013-0373, Attachment 2, page 96, Hawaiian Electric changed the method of allocating the charges to the ED and PS clearing accounts, but did not change the types of charges included in the ED and PS clearing accounts. Beginning in 2014, the Company made two changes to its allocation of charges in both the ED clearing, account no. 184060, and the PS clearing, account no. 184050.
1. The charges in the clearing accounts are separated between vehicles costs and non-vehicle costs, and
 2. The allocation basis for non-vehicle costs was changed to be based on applicable total cost (in dollars) for capital projects, O&M activities and other activities in the respective process area.

The new methodology was developed based on the PA Consulting Group ("PA") study as stated in the 2014 Abbreviated Rate Case Filing, Attachment 2, page 97. The

¹ Maui Electric's implementation effective April 2014 was discussed in the Company's 2015 test year rate case filed December 30, 2014 in Docket No. 2014-0318, Attachment 7, page 3.

study compared the Company's practices for clearing operations-related on-costs (i.e., overhead costs) to a panel of representative U.S. electric utility companies. A copy of the PA study prepared for Hawaiian Electric in December 2013 was provided in HECO-1331 in Docket No. 2013-0373. After surveying 13 utilities across the United States, PA found that with the exception of two utilities, the utilities allocate energy delivery indirect process area costs to projects regardless of whether the work was performed by company or contractor crews. Generally, for other utilities, the allocation of operations area indirect costs is based on total project costs. To better allocate the indirect process area costs to all projects, PA recommended that the Hawaiian Electric ED and PS on-cost process be enhanced to allow certain costs accumulated in the ED and PS indirect cost pool to be allocated based on total project costs rather than internal labor hours.

As stated in the 2014 Abbreviated Rate Case Filing, Attachment 2, page 96, "The driving factor in changing the methodology for allocating the ED and PS clearing charges is that the Company business operation is changing, and there was a need to respond to the changes. The Company is increasing the use of outside contractors. There was a need for consistent application of on-costs to all work in Operations whether the project was completed by internal labor or contract services for consistency in project costs and billing customers." For example, [REDACTED] [REDACTED]. There are significant amounts of construction required by outside contractors to complete [REDACTED]. Hawaiian Electric will be compensated for the cost of [REDACTED] through contributions in aid of construction, which would include allocations of a substantial amount of on-costs resulting from the new methodology.

Without the new methodology, compensation for these on-costs would be lost and would ultimately be absorbed by Hawaiian Electric and its ratepayers. If Hawaiian Electric had continued to allocate the ED and PS clearings based on labor hours instead of total dollars, other projects including customer projects with contributions would have incorrectly borne part of the higher on-costs related to [REDACTED]. This is a fairness issue to more properly allocate the Company's on-costs to all projects including system and customer projects completed by either internal labor or outside services. This is an important change in on-cost allocation that is needed to correctly cost projects including large external customer projects with contributions.

Other costs charged to the ED and PS clearing accounts (namely vehicle costs) should continue to be cleared based on internal labor hours as internal labor hours continues to reflect the underlying cost drivers for these costs. The new allocation method that the Companies implemented in 2014 is in alignment with the PA Study results. In addition, the Hawaiian Electric auditors, PwC, did not find exception to the use of the new allocation process.

For Hawaiian Electric, base electric rates are based on revenue requirements established in its 2011 test year rate case in Docket No. 2010-0080. Hawai'i Electric Light's and Maui Electric's current base rates are based on the revenue requirements approved in the Hawai'i Electric Light 2010 test year rate case (Docket No. 2009-0164) and the Maui Electric 2012 test year rate case (Docket No. 2011-0092). Attachment 1, pages 1-2, provides the ED and PS on-costs included in O&M expense accounts, by NARUC account block, for the Hawaiian Electric 2011 test year rate case. Attachment 1,

pages 3 and 4 provide similar ED and PS on-costs that Hawai'i Electric Light included in test year O&M accounts in its 2010 test year rate case. Attachment 1, pages 5 and 6 provide ED and PS on-costs that Maui Electric included in test year O&M accounts in its 2012 test year rate case.

- c. Yes. One of the results of the change in allocation is that some of the ED and PS on-costs previously charged to O&M expense accounts are allocated to capital projects, cost of removal accounts and other accounts. Attachment 4, pages 1 to 3, illustrate the change in allocation of ED and PS on-costs to different account groups for Hawaiian Electric, Hawaii Electric Light, and Maui Electric. The on-costs are included as part of the capital projects or to cost of removal. Under the current Rate Adjustment Mechanism ("RAM") Provision tariff, the Companies can include major project plant additions in the rate base RAM adjustment if the projects go into service by the end of September of the RAM period and include baseline plant additions in the rate base RAM based on a five-year historical average. The rate base RAM could include on-costs allocated to capital under the new methodology to the extent that it includes major project plant additions that were in progress from January 1, 2014 for Hawaiian Electric and from April 2014 for Hawai'i Electric Light and Maui Electric. On-costs allocated to capital under the current methodology could be included in baseline plant additions that go into the RAM to the extent that the five-year average includes baseline plant additions that were in progress from January 1, 2014 for Hawaiian Electric and from April 2014 for Hawai'i Electric Light and Maui Electric. On-costs allocated to capital under the current methodology could also be reflected in the rate base RAM in subsequent years to the extent that the

beginning of RAM period recorded plant in service includes projects that were affected by the new methodology.

However, Order No. 32735 modified the RAM to be capped at the lesser of the RAM Revenue Adjustment as currently determined (adjusted to eliminate the 90% limitation on the incremental rate base RAM adjustment specified in Decision and Order No. 31908) and a RAM Revenue Adjustment calculated based on the cumulative annual compounded increase in Gross Domestic Product Price Index ("GDPPI") applied to the 2014 annualized target revenues (adjusted for certain items specified in Order No. 32735). If the RAM cap is imposed, the on-costs allocated to capital under the current methodology would be reflected in the RAM adjustment to the extent that they are included in the 2014 adjusted RAM Revenue Adjustment. Order No. 32735 stated that the 2014 adjusted RAM Revenue Adjustment would use recorded 2014 end-of-year actuals for plant in service. On-costs allocated to capital under the current methodology for any particular project would be included in the recorded 2014 end-of-year plant in service if the project was in progress in 2014 and went into service before the end of 2014.

Order No. 32735 also allowed the Companies to apply for recovery of revenues for Major Projects (including related baseline projects grouped together for consideration as Major Projects) through the RAM above the RAM cap or outside of the RAM through the Renewable Energy Infrastructure Program ("REIP") surcharge or other adjustment mechanism. On-costs allocated to capital under the current methodology could be included in these project costs to the extent that these projects were in progress from

January 1, 2014 for Hawaiian Electric and from April 2014 for Hawai'i Electric Light and Maui Electric.

The removal costs are recorded to accumulated depreciation accounts and are included in the rate base RAM mechanism for recovery as incurred. Thus, the on-costs charged to capital projects in a particular year may not be included in the RAM in the year the costs were incurred. The allocation of on-costs included in capital projects placed in service and removal costs in 2014 are provided in the response to part d.

- d. As referenced in the response to part c, Attachment 4, pages 1 to 3, provides the total allocations of ED and PS on-costs calculated under the current allocation method compared to allocations under the old, previously used method by account group for Hawaiian Electric, Hawaii Electric Light, and Maui Electric. ED and PS on-costs are allocated to a number of different accounts including those billed to third parties, which are identified in Attachment 4 as those line items with Indicator codes ("Ind") which begin with the letter "B". ED and PS on-costs that are subject to recovery in future periods through the RAM mechanism include amounts identified in account group G50, with indicator NI, which represent allocations to capital projects, and indicator NR, which represent allocations to removal cost accounts.

For Hawaiian Electric, total gross capital expenditures for 2014 increased by \$12.7 million for ED and PS on-costs as a result of the allocation change, as shown in Attachment 4, pages 1 and 2 (i.e., the sum of \$10,573,488 for ED allocations plus \$2,144,882 for PS allocations). Of this total, only \$10.0 million were included in plant additions in 2014. The difference of \$2.8 million is the portion of 2014 capital

expenditures for projects not placed in service in 2014. The Hawaii Electric Light and Maui Electric impacts in 2014 were smaller. The table below provides a summary of the 2014 impacts of the change in ED and PS on-cost allocations for elements which impact the 2015 RAM calculations.² [Amounts in table presented in \$.]

	Hawaiian Electric Company	Hawaii Electric Light Company	Maui Electric Company
ED:			
Plant Additions	8,523,240	764,027	1,103,364
Removals	(154,299)	(291,981)	144,457
PS:			
Plant Additions	1,446,540	-	186,633
Removals	14,486	-	(3,078)
Total:			
Plant Additions	9,969,780	764,027	1,289,997
Removals	(139,812)	(291,981)	141,379
CIAC	(746,639)	(96,887)	(70,094)
Net	9,083,329	375,159	1,361,282

A portion of these amounts would be subject to recovery through the RAM, subject to the terms of the RAM tariff and the RAM Cap limitations specified in Order No. 32735. See the explanation in subpart c above. As shown in Attachment 3, page 1, line 29, the impacts of the ED and PS on-cost allocation change to the plant additions, net of CIAC and ADIT, included in the 2015 Rate Base RAM in Schedule D1 of the Decoupling Calculation Workbook template filed by each Company on March 31, 2015 are estimated

² The table includes estimated impacts for contributions in aid of construction (CIAC). The change in ED and PS on-cost allocation also impacts the Companies' calculations of the amount of CIAC collected from specific customers. The table does not, however, reflect the estimated impact to accumulated deferred income taxes.

to be \$6.4 million for Hawaiian Electric, \$1.0 million for Maui Electric, and \$.05 million for Hawaii Electric Light.

Other than the RAM, the amounts transferred from expense to capital would be subject to recovery in Major Project applications or REIP applications as specified in Order No. 32735 and in the next rate case of each Company that re-sets rates according to the revenue requirement of the applicable test year.

- e. The requested exhibit comparing for Hawaiian Electric, the 2013 recorded O&M to the 2014 test year is shown in Attachment 2. The table below separates the difference in the PS on-costs (expense element 405) and ED on-costs (expense element 404) between the portion of the clearing charges that are labor related costs and the portion of the clearing charges are non-labor costs. All of the labor and non-labor expenses would have been incurred in 2014 for the O&M expense reduction. The following table shown below includes the labor and non-labor breakdown. [Amounts in table presented in \$000.]

<u>Line</u>	<u>2014 Test Year vs. 2013</u>		
	<u>Recorded</u>	<u>Labor</u>	<u>Non-Labor</u>
<u>Expense Element</u>			
1 Expense Element 404	(4,454)	(817)	(3,637)
2 Expense Element 405	(3,926)	(332)	(3,593)
3 GRAND TOTAL	<u>\$ (8,379)</u>	<u>\$ (1,149)</u>	<u>\$ (7,230)</u>

- f. The Companies' Annual Decoupling Filings, filed on March 31, 2015 under Transmittal Nos. 15-03, 15-04, and 15-05, include plant additions, net of CIAC and ADIT, as stated in subpart d above, in the 12/31/14 plant in service, ADIT, and CIAC balances used as the 2015 beginning RAM year balance to calculate the 2015 Rate Base - Return on Investment RAM. The 2015 RAM year baseline plant and CIAC additions based on five

year historical averages are also based in part on the 2014 plant and CIAC additions due to the change in allocation practice in this average. Additionally, the plant additions and CIAC additions are included in the 12/31/14 plant in service and CIAC balances used to calculate the 2015 Depreciation and Amortization RAM in the 3/31/15 Decoupling Filings.

The Companies filed Amended Annual Decoupling Filings on April 15, 2015 in accordance with Order No. 32735 – also under Transmittal Nos. 15-03, 15-04, and 15-05. The Amended Filings ordered the Companies to determine 2014 adjusted target revenues based on recorded 12/31/14 balances. Therefore, the plant additions, net of CIAC and ADIT, as stated in subpart d above, are included in the 12/31/14 balances used in the 2014 adjusted Rate Base Return on Investment RAM. The Companies also utilized the 12/31/14 plant in service and CIAC balances to calculate the Depreciation and Amortization RAM for 2014 adjusted target revenues. Therefore, the plant and CIAC additions are included in the calculation of the Depreciation and Amortization RAM target revenue base.

The inclusion of these costs in the Rate Base and Depreciation & Amortization RAMs is appropriate because the amounts included in the RAM calculations are based on actual recorded costs based on a methodology that more accurately reflects project costs and the nature of work (O&M versus capital). Subpart b above explains in detail the rationale for the new allocation methodology. The March 31 and April 15, 2015 filings were determined in accordance with the existing RAM provision and Order No. 32735, both of which provide for the use of 12/31/14 actual recorded balances.

The O&M RAM is essentially a “capped” form of cost recovery. And the Companies continue to operate to this cap, despite the significant amount of growth in O&M expenses since each Company’s last rate case, particularly for Hawaii Electric Light, whose last rate case test year that modified rates was 2010, and Hawaiian Electric, whose last rate case test year that modified rates was 2011. Since then, the Companies have incurred significant amounts of expenses that were not included in the test year estimates from their last rate cases, including for Hawaiian Electric \$8.7 million in costs for the Initial Phase of Smart Grid, \$2.3 million in costs to examine the possibility of using liquefied natural gas (“LNG”) as a cleaner and lower cost fuel to replace the petroleum oil used for generation, and \$0.7 million in costs for studies and consultant costs to determine feasibility and solutions to integrate more PV into our systems, and for Hawaii Electric Light \$4 million in vegetation management, and additional costs related to tropical storms.³ Therefore, even though the O&M RAM is mathematically based on escalations of test year O&M expenses, many more initiatives have arisen since each Company’s test year that have required management of costs limited to the O&M RAM.

One of the effects in 2014 of the new allocation methodology was to allocate a greater portion of ED and PS on-costs from expense to capital. This created an opportunity for the Companies to fund some of these necessary expense initiatives and still control and manage their expense spending. On the other hand, the on-costs that

³ For example, in the Tropical Storm Iselle Report filed November 20, 2014, Hawaii Electric Light reported incurring O&M expenses of approximately \$3,950,000 to promptly and safely respond to and restore service in the

were allocated to capital under the new allocation methodology had nominal bill impacts as shown in subpart g below.

Because of this, and the more accurate and rational reflection of costs between O&M and capital that the new allocation methodology provides (as explained in subpart b), the treatment of on-costs resulting from the change in allocation methodology is appropriate. This would be true in the context of the capped indexed cost recovery treatment of O&M expenses and in the context of the RAM under the existing tariffs.

- g. As explained in subpart b above, the new method of allocating charges to clearing is appropriate in light of the changes to the Companies' business operations and the need for consistent application of on-costs to all work in Operations, regardless of whether the project was performed by internal labor or contract services, for consistency in project costs and billing customers. However, if the Commission does not approve the change that commenced on January 1, 2014 for Hawaiian Electric, and in April 2014 for Hawaii Electric Light and Maui Electric, the Companies ask for a prospective change back to the prior method – i.e., not require the Companies to reverse the allocations already made under the new methodology. As discussed in subpart f above, the Companies have incurred significant amounts of O&M in 2014 due to high-priority initiatives and unforeseen circumstances. These additional costs benefit customers, have been supported by the Commission⁴, and were not originally in each Company's last test year O&M. Because the O&M RAM is essentially capped based on indexed increases of test year

aftermath of Tropical Storm Iselle, and that those costs clearly exceeded the level of storm related expenses included in current electric rates.

O&M, these amounts, if combined with changes in on-cost previously classified as O&M, would have significantly exceeded the revenues provided by the O&M RAMs. Additionally, the Companies calculated their 2015 Rate Base RAM adjustments in accordance with the current RAM provisions and recent Commission Order, and therefore, the recorded plant additions amounts used are an accurate reflection of capital and not O&M. Therefore, if the Commission were to disallow the change, the Companies request that no adjustments be made to 2014 activities and the filed 2015 RAMs.

If the Commission were to order a reclassification of the change from capital to O&M and an adjustment to the Rate Base and Depreciation & Amortization RAMs calculated in the Companies' 2015 RAM Filings made on April 15, 2015, the impact is estimated to be a reduction in Rate Base and Depreciation & Amortization RAM revenues for each Company as follows: -\$760k for Hawaiian Electric, - \$90k for Maui Electric, and -\$41k for Hawaiian Electric⁵ (see Attachment 3 for supporting calculations). These amounts would be excluded from target revenues in 2015, and in future years. The Companies request that the O&M expenses due to the Smart Grid Initiatives, costs related to examine the feasibility of LNG, and studies and consultant costs to determine the feasibility of more PV integration at Hawaiian Electric and costs related to storms and vegetation management at Hawaii Electric Light be recoverable through the 2015 RAM Revenue Adjustment outside of the RAM Cap. This could be done as part of the

⁴ See the "Commissions' Inclinations on the Future of Hawaii's Electric Utilities," pages 8-9 and 16-17, filed on April 28, 2014 as part of Docket No. 2012-0036 (Integrated Resource Planning), D&O No. 32052, Exhibit A.

“explicitly stipulated and approved exceptional or other matters” category that the Commission outlines in paragraph 107 on page 94 of its Order. Because recovery of the expenses would be treated outside of the RAM Cap, they would not be part of the annualized target revenue amount carried forward each year and subject to escalation in determining the RAM Cap. Additionally, Maui Electric would request the recalculation of its 2014 year-end Earnings Sharing Credit in determining 2015 target revenues and the 2015 RBA rate adjustment. Should the Commission order a reclassification of the 2014 on-cost changes allocated to capital back to O&M expense, this would result in higher 2014 O&M expense and lower 2014 average rate base. Maui Electric estimates the impact to be a reduction in its Earnings Sharing Revenue Credits (based on 2014 ROE) of approximately \$240 thousand.

If the Commission disallows the change for the year 2014 only, the Companies request that the Commission approve the change going forward for the reasons already stated in this IR response. The Commission has already ordered that future RAM increases are subject to a RAM Cap that does not distinguish between O&M and capital. Therefore, the change in on-cost methodology affecting baseline projects would be subject to the cap. Additionally, clearing costs allocated to major project and other project applications as specified in Order No. 32735 outside of the RAM Cap will be subject to the Commission’s review and approval prior to recovery.

⁵ Results in a monthly bill impact of $-\$0.07$ for Oahu, $-\$0.02$ for Hawaii Island, $-\$0.05$ for Maui, and $-\$0.03$ for Molokai and Lanai.

Hawaiian Electric Company, Inc.
 Energy Delivery, Power Supply, Corporate Planning & System Operation
 2011 TEST YEAR

OPERATION AND MAINTENANCE EXPENSE: EXPENSE ELEMENT 404 & 405
 (\$ Thousands)

<u>Line</u>	(A)
	<u>2011 Test Year</u>
<u>Production Operations</u>	
1 Expense Element 404	\$ 117
2 Expense Element 405	\$ 4,156
3 TOTAL	<u>\$ 4,273</u>
<u>Production Maintenance</u>	
4 Expense Element 404	\$ 123
5 Expense Element 405	\$ 5,311
6 TOTAL	<u>\$ 5,434</u>
<u>Transmission Operation</u>	
7 Expense Element 404	\$ 2,380
8 Expense Element 405	\$ 2
9 TOTAL	<u>\$ 2,382</u>
<u>Transmission Maintenance</u>	
10 Expense Element 404	\$ 2,465
11 Expense Element 405	\$ -
12 TOTAL	<u>\$ 2,465</u>
<u>Distribution Operation</u>	
13 Expense Element 404	\$ 5,222
14 Expense Element 405	\$ -
15 TOTAL	<u>\$ 5,222</u>
<u>Distribution Maintenance</u>	
16 Expense Element 404	\$ 5,504
17 Expense Element 405	\$ -
18 TOTAL	<u>\$ 5,504</u>
<u>Customer Accounts</u>	

Hawaiian Electric Company, Inc.
Energy Delivery, Power Supply, Corporate Planning & System Operation
2011 TEST YEAR

OPERATION AND MAINTENANCE EXPENSE: EXPENSE ELEMENT 404 & 405
(\$ Thousands)

		(A)
		2011
		<u>Test Year</u>
19	Expense Element 404	\$ -
20	Expense Element 405	\$ -
21	TOTAL	<u>\$ -</u>
<u>Customer Services</u>		
22	Expense Element 404	\$ 1
23	Expense Element 405	\$ -
24	TOTAL	<u>\$ 1</u>
<u>A&G Operations & Maintenance</u>		
25	Expense Element 404	\$ 186
26	Expense Element 405	\$ 6
27	TOTAL	<u>\$ 192</u>
28	Expense Element 404 Total	\$ 15,999
29	Expense Element 405 Total	\$ 9,475
30	GRAND TOTAL	<u><u>\$ 25,474</u></u>

Note: Figures may not total exactly due to rounding.

Hawaii Electric Light Company, Inc.
 Energy Delivery and Power Supply On Costs (EE 404 & 405)
 In Operations and Maintenance Expense
 2010 TEST YEAR

(\$ Thousands)

<u>Line</u>		<u>2010 Test Year</u>
	<u>Production Operations</u>	
1	Expense Element 404	\$ -
2	Expense Element 405	\$ -
3	TOTAL	\$ -
	<u>Production Maintenance</u>	
4	Expense Element 404	\$ 33
5	Expense Element 405	\$ -
6	TOTAL	\$ 33
	<u>Transmission Operation</u>	
7	Expense Element 404	\$ 104
8	Expense Element 405	\$ -
9	TOTAL	\$ 104
	<u>Transmission Maintenance</u>	
10	Expense Element 404	\$ 455
11	Expense Element 405	\$ -
12	TOTAL	\$ 455
	<u>Distribution Operation</u>	
13	Expense Element 404	\$ 512
14	Expense Element 405	\$ -
15	TOTAL	\$ 512
	<u>Distribution Maintenance</u>	
16	Expense Element 404	\$ 1,379
17	Expense Element 405	\$ -
18	TOTAL	\$ 1,379
	<u>Customer Accounts</u>	
19	Expense Element 404	\$ 32
20	Expense Element 405	\$ -

Hawaii Electric Light Company, Inc.
Energy Delivery and Power Supply On Costs (EE 404 & 405)
In Operations and Maintenance Expense
2010 TEST YEAR

(\$ Thousands)

<u>Line</u>		<u>2010</u> <u>Test Year</u>
21	TOTAL	\$ 32
	<u>Customer Services</u>	
22	Expense Element 404	\$ -
23	Expense Element 405	\$ -
24	TOTAL	\$ -
	<u>A&G Operations & Maintenance</u>	
25	Expense Element 404	\$ 307
26	Expense Element 405	\$ -
27	TOTAL	\$ 307
28	Expense Element 404 Total	\$ 2,822
29	Expense Element 405 Total	\$ -
30	GRAND TOTAL	<u>\$ 2,822</u>

Note: Figures may not total exactly due to rounding.

Maui Electric Company, Ltd.
 Energy Delivery and Power Supply On Costs (EE 404 & 405)
 In Operations and Maintenance Expense
 2012 TEST YEAR

(\$ Thousands)

<u>Line</u>		<u>2012 Test Year</u>
	<u>Production Operations</u>	
1	Expense Element 404	\$ 41
2	Expense Element 405	\$ 676
3	TOTAL	\$ 717
	<u>Production Maintenance</u>	
4	Expense Element 404	\$ 50
5	Expense Element 405	\$ 475
6	TOTAL	\$ 525
	<u>Transmission Operation</u>	
7	Expense Element 404	\$ 206
8	Expense Element 405	\$ -
9	TOTAL	\$ 206
	<u>Transmission Maintenance</u>	
10	Expense Element 404	\$ 365
11	Expense Element 405	\$ -
12	TOTAL	\$ 365
	<u>Distribution Operation</u>	
13	Expense Element 404	\$ 1,312
14	Expense Element 405	\$ -
15	TOTAL	\$ 1,312
	<u>Distribution Maintenance</u>	
16	Expense Element 404	\$ 1,082
17	Expense Element 405	\$ -
18	TOTAL	\$ 1,082
	<u>Customer Accounts</u>	
19	Expense Element 404	\$ 122
20	Expense Element 405	\$ -
21	TOTAL	\$ 122

Maui Electric Company, Ltd.
Energy Delivery and Power Supply On Costs (EE 404 & 405)
In Operations and Maintenance Expense
2012 TEST YEAR

(\$ Thousands)

<u>Line</u>		<u>2012</u> <u>Test Year</u>
	<u>Customer Services</u>	
22	Expense Element 404	\$ 1
23	Expense Element 405	\$ -
24	TOTAL	<u>\$ 1</u>
	<u>A&G Operations & Maintenance</u>	
25	Expense Element 404	\$ 143
26	Expense Element 405	\$ 1
27	TOTAL	<u>\$ 144</u>
28	Expense Element 404 Total	\$ 3,322
29	Expense Element 405 Total	<u>\$ 1,152</u>
30	GRAND TOTAL	<u><u>\$ 4,474</u></u>

Note: Figures may not total exactly due to rounding.

Hawaiian Electric Company, Inc.
 2014 TEST YEAR

OPERATION AND MAINTENANCE EXPENSE: EXPENSE ELEMENT 404 & 405

Summary Comparison
 (\$ Thousands)

<u>Line</u>	(A)	(B)	(C = B - A)
<u>Expense Element</u>	2013	2014	2014 Test Year vs. 2013
	<u>Recorded</u>	<u>Test Year</u>	<u>Recorded</u>
1 Expense Element 404	\$ 12,794	\$ 8,340	\$ (4,454)
2 Expense Element 405	\$ 11,409	\$ 7,483	\$ (3,926)
3 GRAND TOTAL	<u>\$ 24,203</u>	<u>\$ 15,824</u>	<u>\$ (8,379)</u>

Note: Figures may not total exactly due to rounding.

Hawaiian Electric Company, Inc.
 2014 TEST YEAR

OPERATION AND MAINTENANCE EXPENSE: EXPENSE ELEMENT 404 & 405
 (\$ Thousands)

<u>Line</u>	(A) 2013 <u>Recorded</u>	(B) 2014 <u>Test Year</u>	(C = B - A) 2014 Test Year vs. 2013 <u>Recorded</u>
<u>Production Operations</u>			
1	\$ 394	\$ 154	\$ (240)
2	\$ 5,391	\$ 2,654	\$ (2,738)
3	<u>\$ 5,786</u>	<u>\$ 2,807</u>	<u>\$ (2,978)</u>
<u>Production Maintenance</u>			
4	\$ 141	\$ 37	\$ (104)
5	\$ 5,967	\$ 4,802	\$ (1,165)
6	<u>\$ 6,108</u>	<u>\$ 4,839</u>	<u>\$ (1,269)</u>
<u>Transmission Operation</u>			
7	\$ 1,932	\$ 1,659	\$ (273)
8	\$ 0	\$ -	\$ (0)
9	<u>\$ 1,932</u>	<u>\$ 1,659</u>	<u>\$ (273)</u>
<u>Transmission Maintenance</u>			
10	\$ 1,640	\$ 1,157	\$ (484)
11	\$ 2	\$ 9	\$ 7
12	<u>\$ 1,642</u>	<u>\$ 1,165</u>	<u>\$ (477)</u>
<u>Distribution Operation</u>			
13	\$ 4,295	\$ 2,106	\$ (2,188)
14	\$ 1	\$ -	\$ (1)
15	<u>\$ 4,296</u>	<u>\$ 2,106</u>	<u>\$ (2,189)</u>
<u>Distribution Maintenance</u>			
16	\$ 47	\$ 7	\$ (40)
17	\$ 1	\$ -	\$ (1)
18	<u>\$ 47</u>	<u>\$ 7</u>	<u>\$ (40)</u>
<u>Customer Accounts</u>			
19	\$ 3	\$ 0	\$ (3)

Hawaiian Electric Company, Inc.
2014 TEST YEAR

OPERATION AND MAINTENANCE EXPENSE: EXPENSE ELEMENT 404 & 405
(\$ Thousands)

<u>Line</u>	(A) 2013 <u>Recorded</u>	(B) 2014 <u>Test Year</u>	(C = B - A) 2014 Test Year vs. 2013 <u>Recorded</u>
20 Expense Element 405	\$ -	\$ -	\$ -
21 TOTAL	<u>\$ 3</u>	<u>\$ 0</u>	<u>\$ (3)</u>
<u>Customer Services</u>			
22 Expense Element 404	\$ 306	\$ 113	\$ (193)
23 Expense Element 405	\$ -	\$ -	\$ -
24 TOTAL	<u>\$ 306</u>	<u>\$ 113</u>	<u>\$ (193)</u>
<u>A&G Operations & Maintenance</u>			
25 Expense Element 404	\$ 4,036	\$ 3,107	\$ (929)
26 Expense Element 405	\$ 47	\$ 19	\$ (28)
27 TOTAL	<u>\$ 4,083</u>	<u>\$ 3,126</u>	<u>\$ (957)</u>
28 Expense Element 404 Total	\$ 12,794	\$ 8,340	\$ (4,454)
29 Expense Element 405 Total	\$ 11,409	\$ 7,483	\$ (3,926)
30 GRAND TOTAL	<u><u>\$ 24,203</u></u>	<u><u>\$ 15,824</u></u>	<u><u>\$ (8,379)</u></u>

Note: Figures may not total exactly due to rounding.

Hawaiian Electric Company, Inc.
2014 TEST YEAR

OPERATION AND MAINTENANCE EXPENSE: EXPENSE ELEMENT 404
(\$ Thousands)

Line	(A) 2013 <u>Recorded</u>	(B) 2014 <u>Test Year</u>	(C = B - A) 2014 Test Year vs. 2013 <u>Recorded</u>
<u>Production Operations</u>			
1	\$ 76	\$ 33	\$ (43)
2	\$ -	\$ -	\$ -
2	\$ 318	\$ 121	\$ (197)
3	\$ -	\$ -	\$ -
4	\$ -	\$ -	\$ -
5	<u>\$ 394</u>	<u>\$ 154</u>	<u>\$ (240)</u>
<u>Production Maintenance</u>			
6	\$ -	\$ -	\$ -
7	\$ 0	\$ -	\$ (0)
8	\$ 141	\$ 37	\$ (104)
9	\$ -	\$ -	\$ -
10	\$ -	\$ -	\$ -
11	<u>\$ 141</u>	<u>\$ 37</u>	<u>\$ (104)</u>
<u>Transmission Operation</u>			
12	\$ -	\$ -	\$ -
13	\$ 1,182	\$ 672	\$ (510)
14	\$ 750	\$ 985	\$ 235
15	\$ -	\$ -	\$ -
16	\$ -	\$ 2	\$ 2
17	<u>\$ 1,932</u>	<u>\$ 1,659</u>	<u>\$ (273)</u>
<u>Transmission Maintenance</u>			
18	\$ -	\$ -	\$ -
19	\$ 9	\$ -	\$ (9)
20	\$ 1,631	\$ 1,157	\$ (475)
21	\$ -	\$ -	\$ -
22	\$ -	\$ -	\$ -
23	<u>\$ 1,640</u>	<u>\$ 1,157</u>	<u>\$ (484)</u>

Hawaiian Electric Company, Inc.
 2014 TEST YEAR

OPERATION AND MAINTENANCE EXPENSE: EXPENSE ELEMENT 404
 (\$ Thousands)

<u>Line</u>	(A) 2013 <u>Recorded</u>	(B) 2014 <u>Test Year</u>	(C = B - A) 2014 Test Year vs. 2013 <u>Recorded</u>
<u>Distribution Operation</u>			
24	\$ -	\$ -	\$ -
25	\$ 1,399	\$ 737	\$ (663)
26	\$ 2,895	\$ 1,370	\$ (1,526)
27	\$ -	\$ -	\$ -
28	\$ 0	\$ -	\$ (0)
29	<u>\$ 4,295</u>	<u>\$ 2,106</u>	<u>\$ (2,188)</u>
<u>Distribution Maintenance</u>			
30	\$ -	\$ -	\$ -
31	\$ 6	\$ -	\$ (6)
32	\$ 4,030	\$ 3,107	\$ (924)
33	\$ -	\$ -	\$ -
34	\$ -	\$ -	\$ -
35	<u>\$ 4,036</u>	<u>\$ 3,107</u>	<u>\$ (929)</u>
<u>Customer Accounts</u>			
36	\$ -	\$ -	\$ -
37	\$ -	\$ -	\$ -
38	\$ 47	\$ 7	\$ (40)
39	\$ -	\$ -	\$ -
40	\$ -	\$ -	\$ -
41	<u>\$ 47</u>	<u>\$ 7</u>	<u>\$ (40)</u>
<u>Customer Services</u>			
42	\$ -	\$ -	\$ -
43	\$ -	\$ -	\$ -
44	\$ 3	\$ 0	\$ (3)
45	\$ -	\$ -	\$ -
46	\$ -	\$ -	\$ -
47	<u>\$ 3</u>	<u>\$ 0</u>	<u>\$ (3)</u>
<u>A&G Operations & Maintenance</u>			
48	\$ -	\$ -	\$ -
49	\$ 1	\$ -	\$ (1)
50	\$ 306	\$ 113	\$ (193)
51	\$ -	\$ -	\$ -

Hawaiian Electric Company, Inc.
 2014 TEST YEAR

OPERATION AND MAINTENANCE EXPENSE: EXPENSE ELEMENT 404
 (\$ Thousands)

<u>Line</u>	(A) 2013 <u>Recorded</u>	(B) 2014 <u>Test Year</u>	(C = B - A) 2014 Test Year vs. 2013 <u>Recorded</u>
52 Operations	\$ -	\$ -	\$ -
53 TOTAL	<u>\$ 306</u>	<u>\$ 113</u>	<u>\$ (193)</u>
54 GRAND TOTAL	<u>\$ 12,794</u>	<u>\$ 8,340</u>	<u>\$ (4,454)</u>

Note: Figures may not total exactly due to rounding.

Hawaiian Electric Company, Inc.
 2014 TEST YEAR

OPERATION AND MAINTENANCE EXPENSE: EXPENSE ELEMENT 405
 (\$ Thousands)

Line	(A)	(B)	(C = B - A)
	2013	2014	2014 Test Year vs. 2013
	Recorded	Test Year	Recorded
<u>Production Operations</u>			
1	\$ -	\$ -	\$ -
2	\$ -	\$ -	\$ -
2	\$ (0)	\$ -	\$ 0
3	\$ 5,392	\$ 2,654	\$ (2,738)
4	\$ -	\$ -	\$ -
5	<u>\$ 5,391</u>	<u>\$ 2,654</u>	<u>\$ (2,738)</u>
<u>Production Maintenance</u>			
6	\$ -	\$ -	\$ -
7	\$ -	\$ -	\$ -
8	\$ -	\$ -	\$ -
9	\$ 5,967	\$ 4,802	\$ (1,165)
10	\$ -	\$ -	\$ -
11	<u>\$ 5,967</u>	<u>\$ 4,802</u>	<u>\$ (1,165)</u>
<u>Transmission Operation</u>			
12	\$ -	\$ -	\$ -
13	\$ -	\$ -	\$ -
14	\$ 0	\$ -	\$ (0)
15	\$ -	\$ -	\$ -
16	\$ -	\$ -	\$ -
17	<u>\$ 0</u>	<u>\$ -</u>	<u>\$ (0)</u>
<u>Transmission Maintenance</u>			
18	\$ -	\$ -	\$ -
19	\$ -	\$ -	\$ -
20	\$ -	\$ -	\$ -
21	\$ 2	\$ 9	\$ 7
22	\$ -	\$ -	\$ -
23	<u>\$ 2</u>	<u>\$ 9</u>	<u>\$ 7</u>

Hawaiian Electric Company, Inc.
 2014 TEST YEAR

OPERATION AND MAINTENANCE EXPENSE: EXPENSE ELEMENT 405
 (\$ Thousands)

Line	(A)	(B)	(C = B - A)	
	2013	2014	2014 Test Year vs. 2013	
	Recorded	Test Year	Recorded	
<u>Distribution Operation</u>				
24	Corporate Planning & Business Development	\$ -	\$ -	\$ -
25	System Operation	\$ -	\$ -	\$ -
26	Energy Delivery	\$ -	\$ -	\$ -
27	Power Supply	\$ 1	\$ -	\$ (1)
28	Operations	\$ -	\$ -	\$ -
29	TOTAL	\$ 1	\$ -	\$ (1)
<u>Distribution Maintenance</u>				
30	Corporate Planning & Business Development	\$ -	\$ -	\$ -
31	System Operation	\$ -	\$ -	\$ -
32	Energy Delivery	\$ -	\$ -	\$ -
33	Power Supply	\$ 1	\$ -	\$ (1)
34	Operations	\$ -	\$ -	\$ -
35	TOTAL	\$ 1	\$ -	\$ (1)
<u>Customer Accounts</u>				
36	Corporate Planning & Business Development	\$ -	\$ -	\$ -
37	System Operation	\$ -	\$ -	\$ -
38	Energy Delivery	\$ -	\$ -	\$ -
39	Power Supply	\$ -	\$ -	\$ -
40	Operations	\$ -	\$ -	\$ -
41	TOTAL	\$ -	\$ -	\$ -
<u>Customer Services</u>				
42	Corporate Planning & Business Development	\$ -	\$ -	\$ -
43	System Operation	\$ -	\$ -	\$ -
44	Energy Delivery	\$ -	\$ -	\$ -
45	Power Supply	\$ -	\$ -	\$ -
46	Operations	\$ -	\$ -	\$ -
47	TOTAL	\$ -	\$ -	\$ -
<u>A&G Operations & Maintenance</u>				
48	Corporate Planning & Business Development	\$ -	\$ -	\$ -
49	System Operation	\$ -	\$ -	\$ -
50	Energy Delivery	\$ -	\$ -	\$ -
51	Power Supply	\$ 47	\$ 19	\$ (28)
52	Operations	\$ -	\$ -	\$ -
53	TOTAL	\$ 47	\$ 19	\$ (28)

Hawaiian Electric Company, Inc.
 2014 TEST YEAR

OPERATION AND MAINTENANCE EXPENSE: EXPENSE ELEMENT 405
 (\$ Thousands)

<u>Line</u>	(A)	(B)	(C = B - A)
	2013	2014	2014 Test Year vs. 2013
	<u>Recorded</u>	<u>Test Year</u>	<u>Recorded</u>
54 GRAND TOTAL	<u>\$ 11,409</u>	<u>\$ 7,483</u>	<u>\$ (3,926)</u>

Note: Figures may not total exactly due to rounding.

PUC-IR-1, Support for 1d, 1g
Hawaiian Electric, Maui Electric, Hawaii Electric Light (Trans Nos 15-03, 15-04, 15-05)
Impact to 2015 RAM - RAM Cap and RAM Under Existing Tariff
(amounts in '000s)

Impact to 2015 RAM Cap (HE and ME 4/15/15 Filing)		Reference	HE	ME	HL
1	2014 Plant Additions Impact				
2	Baseline	pg 3	9,437	1,290	710
3	MP	pg 3	533	-	54
4	Removal costs	pg 3	(140)	141	(292)
5	Less: Baseline CIAC	pg 3	(707)	(70)	(97)
6	Less: MP CIAC	pg 3	(40)	-	-
7	Less: ADIT	pg 4, 5, 6	(2,705)	(370)	(327)
8	Net Plant Additions in 12/31/14 Balance	Sum Line 2-7	6,379	991	49
9	2014 Average rate base	Line 8 / 2	3,189	496	24
10	Rate of Return	Schedule D	11.74%	10.66%	11.94%
11	Return on Rate Base, pre-tax	Line 9 x 10	374	53	3
12	Revenue Tax Factor		1.0975	1.0975	1.0975
13	Adjusted 2014 RB RAM-Return on Investment	Line 11 x 12	411	58	3
14	Estimated 2015 Depreciation	Line (2+3) x composite depreciation rate ¹	325	30	27
15	CIAC 2015 Amortization	Line (5+6) x CIAC amortization rate ²	(15)	(1)	(2)
16	Total Depreciation & Amortization	Line 14 + 15	310	29	24
17	Revenue Tax Factor		1.0975	1.0975	1.0975
18	Adjusted 2014 Depreciation & Amortization RAM	Line 16 x 17	340	32	27
19	Adjusted 2014 RB RAM and Depreciation & Amortization RAM	Line 13 + 18	751	90	30
20	Escalate by GDPP1	Decoupling Filing, Schedule C	1.011	1.011	1.011
21	Impact to 2015 RAM Cap	Line 9 x 10	759	91	30
PUC-IR-1g for HE, ME					
Impact to 2015 RAM Under Existing Tariff (HL 3/31/15 Filing)			HE	ME	HL
22	2014 Plant Additions Impact				
23	Baseline	Line 2	9,437	1,290	710
24	MP	Line 3	533	-	54
25	Removal costs		(140)	141	(292)
26	Less: Baseline CIAC	Line 4	(707)	(70)	(97)
27	Less: MP CIAC	Line 5	(40)	-	-
28	Less: ADIT	Line 6	(2,705)	(370)	(327)
29	Net Plant Additions in 12/31/14 Balance	Sum Line 23-28	6,379	991	49
30	2015 RAM Plant Additions Impact				
31	Baseline, net of CIAC	Note 3	1,746	244	123
32	Less: ADIT		(31)	(4)	(2)
33	Net 2015 RAM Plant Additions	Line 31 + 32	1,715	240	121
34	In 2015 Average rate base	Line 29 + Line 33/2	7,236	1,111	109
35	Rate of Return	Schedule D	11.74%	10.66%	11.94%
36	Return on Rate Base, pre-tax	Line 34 x 35	850	118	13
37	Revenue Tax Factor		1.0975	1.0975	1.0975
38	2015 RB RAM-Return on Investment (existing tariff)	Line 36 x 37	932	130	14
40	Estimated 2015 Depreciation	Line 14	325	30	27
41	CIAC 2015 Amortization	Line 15	(15)	(1)	(2)
42	Depreciation & Amortization	Line 40 + 41	310	29	24
43	Revenue Tax Factor		1.0975	1.0975	1.0975
44	2015 Depreciation & Amortization RAM	Line 42 x 43	340	32	27
45	Impact to 2015 RB-RAM and Depreciation & Amortization RAM Under Existing Method	Line 38 + 44	1,273	162	41
PUC-IR-1g for HL					

Notes

- Composite depreciation rates re-calculated per respective company's 2015 Decoupling Filing, Schedule E are as follows:
HECO=3.256%, MECO=2.338% and HELCO=3.504%.
- CIAC is amortized based on the following:
HECO=51 years, MECO=55 years, HELCO=41 years.
- Reflects difference in 2014 baseline additions, net of CIAC due to change in clearing treatment that contributes to 5 year historical average included as 2015 RAM year addition.

PUC IR-1
 Hawaiian Electric, Maui Electric, Hawaii Electric Light (Trans Nos 15-03, 15-04, 15-05)
 Bill Impact of New On-cost Methodology to 2015 RAM

	HE	HL	ME	
	in '000s			
1 Revenue Requirement Impact to 2015 RAM (4/15/15 Filings)				
2 <u>Bill Impact:</u>				
3 GWH Sales Volume Estimate June 2015 - May 2016				
4 RBA Rate Adjustment Impact - cents per kWh				
5 Monthly Bill Impact (@ 600 KWH for Oahu, 500 KWH for Hawaii Island, 600 KWH for Maui, and 400 KWH for Lanai and Molokai)				
	759	41	91	
	6,892.800	1,068.581	1,101.025	
	0.0110	0.0038	0.0082	
	\$ 0.07	\$ 0.02	\$ 0.05	Maui
			\$ 0.03	Molokai, Lanai

2014 Change in Plant Additions, Cost of Removal, CIAC due to Change in On-cost Methodology

Hawaiian Electric

	Baseline	Major	Total
Energy Delivery:			
Plant Additions	8,399,515	123,725	8,523,240
Removals	(147,838)	(6,461)	(154,299)
Power Supply:			
Plant Additions	1,037,483	409,056	1,446,540
Removals	14,486	-	14,486
Total:			
Plant Additions	9,436,998	532,781	9,969,780
Removals	(133,351)	(6,461)	(139,812)
CIAC	(706,739)	(39,900)	(746,639)
Net Additions:	8,596,908	486,420	9,083,328

Maul Electric

	Baseline	Major	Total
Energy Delivery:			
Plant Additions	1,103,364	-	1,103,364
Removals	144,457	-	144,457
CIAC additions	(70,094)	-	-
Power Supply:			
Plant Additions	186,633	-	186,633
Removals	(3,078)	-	(3,078)
Total:			
Plant Additions	1,289,997	-	1,289,997
Removals	141,379	-	141,379
CIAC additions	(70,094)	-	(70,094)
Net Additions:	1,361,282	-	1,361,282

Hawaii Electric Light

	Baseline	Major	Total
Energy Delivery:			
Plant Additions	709,815	54,212	764,027
Removals	(291,981)	-	(291,981)
CIAC additions	(96,887)	-	-
Power Supply:			
Plant Additions	-	-	-
Removals	-	-	-
Total:			
Plant Additions	709,815	54,212	764,027
Removals	(291,981)	-	(291,981)
CIAC additions	(96,887)	-	(96,887)
Net Additions:	320,947	-	375,159

Hawaiian Electric
 Rate Base Impact of New On-cost Methodology
 2014

	Book	Tax	Difference	ADIT - ASSET (LIAB)	
				Federal	State
				0.328947368	0.060150376
Plant additions (Additional Capitalized Clearing) - (A)	9,969,780	9,969,780	-		
AFUDC (B)		(339,011)	(339,011)	(111,517)	(20,392)
	<u>9,969,780</u>	<u>9,630,769</u>	<u>(339,011)</u>		
TCI (C)		230,174	230,174	75,715	13,845
Repairs deduction (D)		(1,783,776)	(1,783,776)	(586,768)	(107,295)
Tax Depreciation (E)		(4,172,117)	(4,172,117)	(1,372,407)	(250,954)
Cost of Removal		(139,812)	(139,812)	(45,991)	(8,410)
CIAC—assumed fully taxable		(746,639)	(746,639)	(245,605)	(44,911)
ADIT on new method incremental changes as of 12/31/14				(2,286,573)	(418,116)

(A) Relates to energy delivery property; no power supply property.

(B) AFUDC Calculation

AFUDC placed in service in 2014	7,365,025
Book Additions in 2014	<u>216,593,863</u>
Ratio - AFUDC/Book Additions	3.40038%
Additional Capitalized Clearing Costs	<u>9,969,780</u>
AFUDC	<u>339,011</u>

(C) Tax Capitalized Interest Calculation

TCI placed in service in 2014	5,000,539
Book Additions in 2014	<u>216,593,863</u>
Ratio - TCI/Book Additions	2.30872%
Additional Capitalized Clearing Costs	<u>9,969,780</u>
TCI	<u>230,174</u>

(D) Repairs Deduction

	Transmission	Distribution	Composite T&D	Generation	Total
Repairs Taken in 2014	1,735,027	28,787,365	30,522,392	7,814,236	38,336,628
Book Additions in 2014	<u>57,834,218</u>	<u>130,851,661</u>	<u>188,685,879</u>	<u>27,907,984</u>	<u>216,593,863</u>
Book Repairs %			16.176%	28.000%	
Plant Additions			<u>8,523,240</u>	<u>1,446,540</u>	<u>9,969,780</u>
Repairs Deduction			<u>1,378,745</u>	<u>405,031</u>	<u>1,783,776</u>

(E) Tax Depreciation

	Energy Delivery	Power Supply	Total
Plant additions (Additional Capitalized Clearing)	8,523,240	1,446,540	9,969,780
AFUDC	(289,822.97)	(49,187.92)	(339,011)
TCI	196,777.48	(1,136)	195,642
Repairs	<u>(1,378,745)</u>	<u>(405,031)</u>	<u>(1,783,776)</u>
	7,051,450	991,185	8,042,635
1st year MACRS (20 year MACRS)+bonus	51.88%	51.88%	51.88%
Tax Depreciation	<u>3,657,940</u>	<u>514,177</u>	<u>4,172,117</u>

CIAC assumed to be fully taxable=>no adjustment required book to tax depreciation.

Maui Electric
 Rate Base Impact of New On-cost Methodology
 2014

	Book	Tax	Difference	ADIT - ASSET (LIAB)	
				Federal 0.328947368	State 0.060150376
Plant additions (Additional Capitalized Clearing) - (A)	1,289,997	1,289,997	-		
AFUDC (B)		(217,337)	(217,337)	(71,492)	(13,073)
	<u>1,289,997</u>	<u>1,072,660</u>	<u>(217,337)</u>		
TCI (C)		147,563	147,563	48,540	8,876
Repairs deduction (D)		(283,609)	(283,609)	(93,292)	(17,059)
Tax Depreciation (E)		(669,186)	(669,186)	(220,127)	(40,252)
Cost of Removal--new method results in decrease		141,379	141,379	46,506	8,504
CIAC--assumed fully taxable		(70,094)	(70,094)	(23,057)	(4,216)
ADIT on new method incremental changes as of 12/31/14				(312,922)	(57,220)

(A) Relates to energy delivery property; no power supply property.

(B) AFUDC Calculation

AFUDC placed in service in 2014	7,365,025
Book Additions in 2014	43,714,894
Ratio - AFUDC/Book Additions	16.84786%
Additional Capitalized Clearing Costs	<u>1,289,997</u>
AFUDC	<u>217,337</u>

(C) TCI Calculation

TCI placed in service in 2014	5,000,539
Book Additions in 2014	43,714,894
Ratio - AFUDC/Book Additions	11.43898%
Additional Capitalized Clearing Costs	<u>1,289,997</u>
AFUDC	<u>147,563</u>

(D) Repairs Deduction

	Transmission	Distribution	Composite T&D	Generation	Total
Repairs Taken in 2014	1,137,714	6,947,634	8,085,348	1,500,000	9,585,348
Book Additions in 2014	2,573,753	33,671,758	36,245,511	7,469,383	43,714,894
Book Repairs %			22.307%	20.082%	
Plant Additions			<u>1,103,364</u>	<u>186,633</u>	<u>1,289,997</u>
Repairs Deduction			<u>246,129</u>	<u>37,480</u>	<u>283,609</u>

(E) Tax Depreciation

	Energy Delivery	Power Supply	Total
Plant additions (Additional Capitalized Clearing)	1,103,364	186,633	1,289,997
AFUDC	(185,893)	(31,444)	(217,337)
TCI	126,214	(3,597)	122,617
Repairs	<u>(246,129)</u>	<u>(37,480)</u>	<u>(283,609)</u>
	797,555	114,113	911,668
1st year MACRS (20 year property)+bonus	<u>51.88%</u>	<u>51.88%</u>	<u>51.88%</u>
Tax Depreciation	<u>572,370</u>	<u>96,816</u>	<u>669,186</u>

CIAC assumed to be fully taxable=>no adjustment required book to tax depreciation.

Hawaii Electric Light
 Rate Base Impact of New On-cost Methodology
 2014

	Book	Tax	Difference	ADIT - ASSET (LIAB)	
				Federal	State
Plant additions (Additional Capitalized Clearing) - (A)	764,027	764,027	-	0.328947368	0.060150376
AFUDC (B)		(9,913)	(9,913)	(3,261)	(596)
	<u>764,027</u>	<u>754,114</u>	<u>(9,913)</u>		
TCI (C)		6,797	6,797	2,236	409
Repairs deduction (D)		(109,160)	(109,160)	(35,908)	(6,566)
Tax Depreciation (E)		(338,096)	(338,096)	(111,216)	(20,337)
Cost of Removal		(291,981)	(291,981)	(96,046)	(17,563)
CIAC--assumed fully taxable		(96,887)	(96,887)	(31,871)	(5,828)
ADIT on new method incremental changes as of 12/31/14				(276,066)	(50,481)

(A) Relates to energy delivery property; no power supply property.

(B) AFUDC Calculation

AFUDC placed in service in 2014	568,935
Book Additions in 2014	43,851,204
Ratio - AFUDC/Book Additions	1.29742%
Additional Capitalized Clearing Costs	764,027
AFUDC	<u>9,913</u>

(C) TCI Calculation

TCI placed in service in 2014	390,114
Book Additions in 2014	43,851,204
Ratio - AFUDC/Book Additions	0.88963%
Additional Capitalized Clearing Costs	764,027
AFUDC	<u>6,797</u>

(D) Repairs Deduction

	Transmission	Distribution	Composite T&D	Generation	Total
Repairs Taken in 2014	1,011,680	4,749,772	5,761,452	563,221	6,324,673
Book Additions in 2014	7,080,888	33,244,317	40,325,205	3,525,999	43,851,204
Book Repairs %			14.287%		
Plant Additions			764,027		
Repairs Deduction			<u>109,160</u>		

(E) Tax Depreciation

Energy Delivery Property	764,027
AFUDC	(9,913)
TCI	6,797
Repairs	(109,160)
	<u>651,751</u>
1st year MACRS (20 year property)+bonus	51.88%
Tax Depreciation	<u>338,096</u>

CIAC assumed to be fully taxable=>no adjustment required book to tax depreciation.

GROUPX	Ind	Ind Description	Current method (loaded on total \$)	Old method (loaded on labor hours)	Difference
G20	NE	Non-billable O&M Expense other than supervision	939.24	2,209.43	(1,270.19)
G20 Total			939.24	2,209.43	(1,270.19)
G30	BE	Billable O&M Expense	231,499.99	141,692.21	89,807.78
	NE	Non-billable O&M Expense other than supervision	8,570,462.65	10,290,763.51	(1,720,300.86)
	NS	Non-billable O&M supervision Expense	205,454.34	375,743.57	(170,289.23)
G30 Total			9,007,416.98	10,808,199.30	(1,800,782.32)
G40	BN	Billable Non-regulated Revenue and Expense	240.25	583.87	(343.62)
	NN	Non-billable Non-regulated Expense	0.00	728.80	(728.80)
G40 Total			240.25	1,312.67	(1,072.42)
G50	BR	Billable Removal	4,924.77	12,261.23	(7,336.46)
	NI	Non-billable Install (Capital)	29,351,216.26	18,777,727.68	10,573,488.58
	NR	Non-billable Removal	3,346,767.35	3,472,323.12	(125,555.77)
G50 Total			32,702,908.38	22,262,312.04	10,440,596.34
G60	BC	Billable Clearing	90,889.48	7,108.92	83,780.56
	BE	Billable O&M Expense	124,802.65	238,432.78	(113,630.13)
	BI	Billable Install	130,769.88	232,430.78	(101,660.90)
	BP	Billable Preliminary Engineering	1,416.11	0.00	1,416.11
	BR	Billable Removal	68,391.03	119,785.15	(51,394.12)
G60 Total			416,269.15	597,757.63	(181,488.48)
G70	BT	Billable Temporary Facilities	144,375.01	213,272.92	(68,897.91)
	ND	Non-billable Deferred	15,125.43	66.73	15,058.70
G70 Total			159,500.44	213,339.65	(53,839.21)
G80	NC	Non-billable Clearing	3,030,009.21	11,426,873.18	(8,396,863.97)
	NP	Non-billable Preliminary Engineering	846,985.59	852,265.35	(5,279.76)
G80 Total			3,876,994.80	12,279,138.53	(8,402,143.73)
Grand Total			46,164,269.24	46,164,269.24	0.00

GROUPX	Ind	Ind Description	Current method (loaded on total \$)	Old method (loaded on labor hours)	Difference
G20	NE	Non-billable O&M Expense other than supervision	1,185,704.04	350,064.19	835,639.85
G20 Total			1,185,704.04	350,064.19	835,639.85
G30	NE	Non-billable O&M Expense other than supervision	5,668,708.14	7,627,964.48	(1,959,256.34)
	NS	Non-billable O&M supervision Expense	3,648.51	7,673.45	(4,024.94)
G30 Total			5,672,356.65	7,635,637.93	(1,963,281.28)
G40	NN	Non-billable Non-regulated Expense	0.00	199.75	(199.75)
G40 Total			0.00	199.75	(199.75)
G50	NI	Non-billable Install (Capital)	3,470,903.16	1,326,020.80	2,144,882.36
	NR	Non-billable Removal	1,263,760.17	584,489.77	679,270.40
G50 Total			4,734,663.33	1,910,510.58	2,824,152.75
G60	BC	Billable Clearing	291.72	752.90	(461.18)
	BE	Billable O&M Expense	46,195.81	93,854.01	(47,658.20)
	BI	Billable Install	920.91	2,181.87	(1,260.96)
	BP	Billable Preliminary Engineering	7,469.70	17,320.51	(9,850.81)
G60 Total			54,878.14	114,109.28	(59,231.14)
G70	ND	Non-billable Deferred	4.92	786.51	(781.59)
G70 Total			4.92	786.51	(781.59)
G80	NC	Non-billable Clearing	(26,791.93)	1,594,881.34	(1,621,673.27)
	NP	Non-billable Preliminary Engineering	37,971.42	52,597.00	(14,625.58)
G80 Total			11,179.49	1,647,478.34	(1,636,298.85)
Grand Total			11,658,786.57	11,658,786.57	(0.00)

GROUPX	Ind	Ind Description	Current method (loaded on total \$)	Old method (loaded on labor hours)	Difference
G30	NE	Non-billable O&M Expense other than supervision	1,726,991.06	2,182,578.87	(455,587.81)
	NS	Non-billable O&M supervision Expense	11,431.29	2,409.14	9,022.15
G30 Total			1,738,422.35	2,184,988.01	(446,565.66)
G50	NI	Non-billable Install (Capital)	4,028,944.84	3,191,054.32	837,890.52
	NR	Non-billable Removal	688,326.24	1,017,298.99	(328,972.75)
G50 Total			4,717,271.08	4,208,353.31	508,917.77
G60	BE	Billable O&M Expense	729.59	0.00	729.59
G60 Total			729.59	0.00	729.59
G70	BE	Billable O&M Expense	36,212.60	26,014.29	10,198.31
	BT	Billable Temporary Facilities	16,240.47	32,514.08	(16,273.61)
G70 Total			52,453.07	58,528.37	(6,075.30)
G80	NC	Non-billable Clearing	106,667.18	165,671.22	(59,004.04)
	NP	Non-billable Preliminary Engineering	23,142.34	21,144.70	1,997.64
G80 Total			129,809.52	186,815.92	(57,006.40)
Grand Total			6,638,685.61	6,638,685.61	(0.00)

GROUPX	Ind	Ind Description	Current method (loaded on total \$)	Old method (loaded on labor hours)	Difference
G10	BE	Billable O&M Expense	6,916.54	8,916.14	(1,999.60)
G10 Total			6,916.54	8,916.14	(1,999.60)
G30	NE	Non-billable O&M Expense other than supervision	1,555,448.99	2,288,564.54	(733,115.55)
G30 Total			1,555,448.99	2,288,564.54	(733,115.55)
G40	NN	Non-billable Non-regulated Expense	51.48	150.64	(99.16)
G40 Total			51.48	150.64	(99.16)
G50	NI	Non-billable Install (Capital)	3,145,040.95	1,882,955.86	1,262,085.09
	NR	Non-billable Removal	688,900.81	539,227.08	149,673.73
G50 Total			3,833,941.76	2,422,182.94	1,411,758.82
G60	BE	Billable O&M Expense	17,847.02	32,690.35	(14,843.33)
	BI	Billable Install	21,163.72	39,920.62	(18,756.90)
	BR	Billable Removal	11,394.55	21,542.21	(10,147.66)
G60 Total			50,405.29	94,153.18	(43,747.89)
G70	BT	Billable Temporary Facilities	5,398.46	9,744.55	(4,346.09)
G70 Total			5,398.46	9,744.55	(4,346.09)
G80	NC	Non-billable Clearing	371,317.35	1,023,237.16	(651,919.81)
	NP	Non-billable Preliminary Engineering	39,550.71	16,081.42	23,469.29
G80 Total			410,868.06	1,039,318.58	(628,450.52)
Grand Total			5,863,030.58	5,863,030.58	(0.00)

GROUPX	Ind	Ind Description	Current method (loaded on total \$)	Old method (loaded on labor hours)	Difference
G20	NE	Non-billable O&M Expense other than supervision	1,044.84	1,109.94	(65.10)
G20 Total			1,044.84	1,109.94	(65.10)
G30	NE	Non-billable O&M Expense other than supervision	934,412.03	1,131,189.41	(196,777.38)
G30 Total			934,412.03	1,131,189.41	(196,777.38)
G40	NN	Non-billable Non-regulated Expense	133.56	706.56	(573.00)
G40 Total			133.56	706.56	(573.00)
G50	NI	Non-billable Install (Capital)	237,000.49	33,700.55	203,299.94
	NR	Non-billable Removal	3,267.87	6,234.23	(2,966.36)
G50 Total			240,268.36	39,934.77	200,333.59
G70	ND	Non-billable Deferred	(49.12)	0.00	(49.12)
G70 Total			(49.12)	0.00	(49.12)
G80	NC	Non-billable Clearing	26,618.22	64,179.71	(37,561.49)
	NP	Non-billable Preliminary Engineering	35,665.70	973.19	34,692.51
G80 Total			62,283.92	65,152.90	(2,868.98)
Grand Total			1,238,093.59	1,238,093.59	0.00