

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAI'I**

In the Matter of the Application of)
)
HAWAI'I ELECTRIC LIGHT COMPANY, INC.)
)
)
For Approval of General Rate Case and)
Revised Rate Schedules and Rules)
_____)

Docket No. 2015-0170

**HAWAI'I ELECTRIC LIGHT COMPANY, INC.
2016 TEST YEAR**

**DIRECT TESTIMONIES
AND EXHIBITS**

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COMMISSION

Book 4

TESTIMONY OF
NATALIE A. EPENESA

MANAGER
CUSTOMER SERVICE DEPARTMENT
HAWAII ELECTRIC LIGHT COMPANY, INC.

Subject: Customer Accounts Expense
Other Operating Revenues
Customer Deposits & Interest on
Customer Deposits
Revenue Collection Lag Days
Customer Service Department Staffing

EXECUTIVE SUMMARY

Customer Service Organization and Staffing, Customer Accounts Expense, Cost Containment,
Other Operating Revenues, Customer Deposits & Interest on Customer Deposits, Revenue
Collection Lag Days

- Hawai'i Electric Light's Customer Service Department is in the beginning of a multi-year journey to lay the foundation that will bring about changes enabling exceptional service. Consistent with and supportive of the Hawaiian Electric Companies' 2015-2020 Strategic Transformation Plan's Quality Customer Experience & Innovative Energy Solutions strategy, the Company has undertaken a number of initiatives to improve customer service, including:
 - Implementing a new customer engagement model;
 - Developing new products and services to provide customers with a suite of options.
 - Aligning customer processes and functions;
 - Strengthening its role as trusted energy partner; and
 - Identifying distinct customer service segments and needs;
- In particular, Customer Service is focusing on the following actions to improve customer satisfaction and address customer expectations, while managing costs and improving efficiencies:
 1. Improving customer access, choice and responsiveness.
 2. Implementing new programs and expanding and enhancing existing programs to meet customer expectations.
 3. Investing in technologies to leverage new functionality on essential customer service tools.

- Customer Service constitutes the primary interaction and connection medium between customers and the Company. It is a critical role that must evolve to meet the ongoing needs of our customers.
- Hawai‘i Electric Light has made significant investments to improve customer service while at the same time balancing these improvement activities with efforts to manage and reduce costs knowing that affordable customer bills are also what customers want the Company to achieve.
 - As a result of the Company’s efforts, customer satisfaction has steadily increased from 2012, Service Levels have substantially improved from 33% in 2010 to 93.5% in 2015, billing accuracy is at peak levels, and the Transaction Satisfaction Survey indicates that overall, customers are satisfied with their interactions with the Company.
 - These improvements were achieved while managing and reducing costs. Customer Service’s 2016 operating costs are significantly lower than its 2013 recorded O&M costs, notwithstanding investments made to provide choices and improve customer satisfaction.
- Hawai‘i Electric Light is proposing certain tariff changes that will affect other operating revenues:
 1. Modify Rule No. 7 – Discontinuance and Restoration of Service by allowing the Company to assess a \$25 charge for same day connection/reconnection service.
 2. Modify Rule No. 8 – Rendering and Payment of Bills by increasing the returned payment charge from the current rate of \$16 to a proposed rate of \$25.

TABLE OF CONTENTS

INTRODUCTION	1
BACKGROUND	2
HAWAI'I ELECTRIC LIGHT'S CUSTOMER SERVICE	4
HAWAI'I ISLAND BASED CUSTOMER SERVICE ORGANIZATION AND STAFFING	29
COST CONTAINMENT, EFFICIENCIES and INCREASED PRODUCTIVITY	34
CUSTOMER SERVICE DEPARTMENTS 2016 O&M TEST YEAR ESTIMATE	39
SUMMARY OF NARUC CUSTOMER ACCOUNTS O&M EXPENSE	45
OTHER OPERATING REVENUES	47
CUSTOMER DEPOSITS AND INTEREST ON CUSTOMER DEPOSITS	54
Customer Deposits	54
Interest on Customer Deposits	56
REVENUE COLLECTION LAG DAYS	57
SUMMARY	58

1 INTRODUCTION

2 Q. Please state your name and business address.

3 A. My name is Natalie A. Epenesa and my business address is 1200 Kilauea Avenue,
4 Hilo, Hawai'i.

5 Q. By whom are you employed and in what capacity?

6 A. I am employed by Hawaiian Electric Company, Inc. ("Hawaiian Electric") as the
7 Manager of the Customer Relations Department in the Customer Service Process
8 Area, and am responsible for managing customer relations at Hawai'i Electric Light
9 Company, Inc. ("Hawai'i Electric Light" or "Company"), Hawaiian Electric and
10 Maui Electric Company, Limited ("Maui Electric").

11 Q. Please describe your educational background and work experience.

12 A. HELCO-900 provides my educational background and professional experience.

13 Q. Please describe the scope of your testimony.

14 A. My testimony will cover the following areas:

- 15 1) A summary of the 2016 test year estimate for the customer accounts expense for
16 Hawai'i Electric Light;
- 17 2) Hawai'i Electric Light's Customer Service 2016 test year operations and
18 maintenance ("O&M") expense estimate, development and adjustments, and
19 organization and staffing;
- 20 3) Customer Service's changes on its multi-year journey to lay the foundation to
21 provide continuing improvements to customer service;
- 22 4) Other operating revenues;

1 Island is among the lowest in the State with approximately 20 customers per square
2 mile. In contrast, Oahu has a customer density of approximately 500 customers per
3 square mile while Maui has a customer density of approximately 87 customers per
4 square mile. (Mr. Miles Nagato discusses similar geographic challenges in HELCO
5 T-8.)

6 This dispersion of the Company's customers exacerbates the cost of
7 providing adequate customer account services compared to the costs on Oahu and
8 Maui. From a cost perspective, the Company's large geographic service territory
9 and low customer density result in a relatively higher level of customer account
10 service expenses per customer. For example, in meter reading and field services, it
11 generally takes Hawai'i Electric Light personnel a much longer time to drive out to
12 customer locations to perform these services, resulting in higher labor and vehicle
13 costs per customer. In addition, because of the rural nature of the Company's
14 service territory, meter reading and field services personnel regularly have to
15 traverse rough road conditions and are faced with customer properties that have
16 locked gates and dogs on premises, further adding to service times. Another
17 example is payment processing. In order to serve all of its customers, Hawai'i
18 Electric Light's payment centers are located in two districts (Hilo and Kona),
19 whereas Maui Electric has just one payment center at its Kahului offices. Because
20 of the dispersion of Hawai'i Electric Light's lower number of customers over a
21 larger service area, it is necessary to provide multiple payment processing centers at

1 Hilo and Kona to serve its customers, which ultimately increases Hawai‘i Electric
2 Light’s cost per customer.

3 HAWAI‘I ELECTRIC LIGHT’S CUSTOMER SERVICE

4 Q. Please describe the role of Customer Service.

5 A. Customer Service constitutes the primary interaction and connection medium between
6 customers and the Company. It is a critical role that must evolve to meet the ongoing
7 needs of Hawai‘i Electric Light’s customers.

8 Q. How has the Company’s customer service initiatives evolved since 2010?

9 A. The Company’s customer service initiatives have adapted in response to ongoing
10 changes in the utility industry. In particular, as noted by the Commission, the nature
11 of the electric utility business in Hawai‘i is evolving rapidly in light of technical,
12 market, and public policy changes that have occurred.²

13 On April 28, 2014, the Commission issued a series of four orders designed to
14 meet the challenges associated with renewable energy. The centerpiece of these orders
15 was a white paper entitled “Commission’s Inclinations on the Future of Hawaii’s
16 Electric Utilities: Aligning the Utility Business Model with Customer Interests and
17 Public Policy Goals.” The Inclinations set forth the Commission’s perspectives on the
18 vision, business strategies, and regulatory policy changes required aligning the
19 Companies’ business model with customers’ changing expectations and State energy
20 policy.

² See In re Public Util. Comm’n, Docket No. 2012-0036, Decision and Order No. 32052, Exhibit A: “Commission’s Inclinations on the Future of Hawaii’s Electric Utilities,” filed April 28, 2014, (the “Inclinations”) at 1.

1 In its Inclinations, the Commission noted as follows:

2 The Commission views the objectives of lower, more stable
3 electric bills and expanding customer energy options, while
4 maintaining reliable energy service in a rapidly changing
5 system operating environment, as essential principles that
6 are the foundation for the future strategic business direction
7 of the HECO Companies.

8
9 Inclinations at 3 (emphasis added).

10 In Order No. 33795 issued on July 15, 2016, in Docket No, 2015-0022
11 (“Order No. 33795”), the Commission reiterated that it:

12 expects the HECO Companies to continue to aggressively
13 pursue the State's renewable energy goals, and to provide
14 reliable and safe, electric service at affordable rates, while
15 transforming themselves into customer focused and
16 performance driven utilities.

17
18 Order No. 33795 at 14 (emphasis added).

19 In alignment with the Commission’s Inclinations, the Companies formulated
20 their 2015-2020 Strategic Transformation Plan (“Strategic Transformation Plan”),
21 which sets forth a new mission for the Companies to provide innovative energy
22 leadership for Hawai‘i and defines the Companies’ Vision as “empowering our
23 customers and communities with affordable, reliable, clean energy.” Accordingly,
24 customers are at the center of the Strategic Transformation Plan, and Hawai‘i Electric
25 Light’s focus is on delivering value, exceeding customer expectations, and doing the
26 right thing for all of its customers.

27 Consistent with the Commission’s observations regarding expanding
28 customer energy options and transformation into a customer focused utility, the

1 Strategic Transformation Plan sets an overarching goal of achieving a customer
2 satisfaction rating in the top 50% of utilities by 2020.

3 In addition, the Company has undertaken a number of initiatives to improve
4 customer service, including:

- 5 ■ Implementing a new customer engagement model;
- 6 ■ Strengthening its role as trusted energy partner;
- 7 ■ Aligning customer processes and functions;
- 8 ■ Identifying distinct customer service segments and needs; and
- 9 ■ Developing new products and services to provide customers with a suite
10 of options.

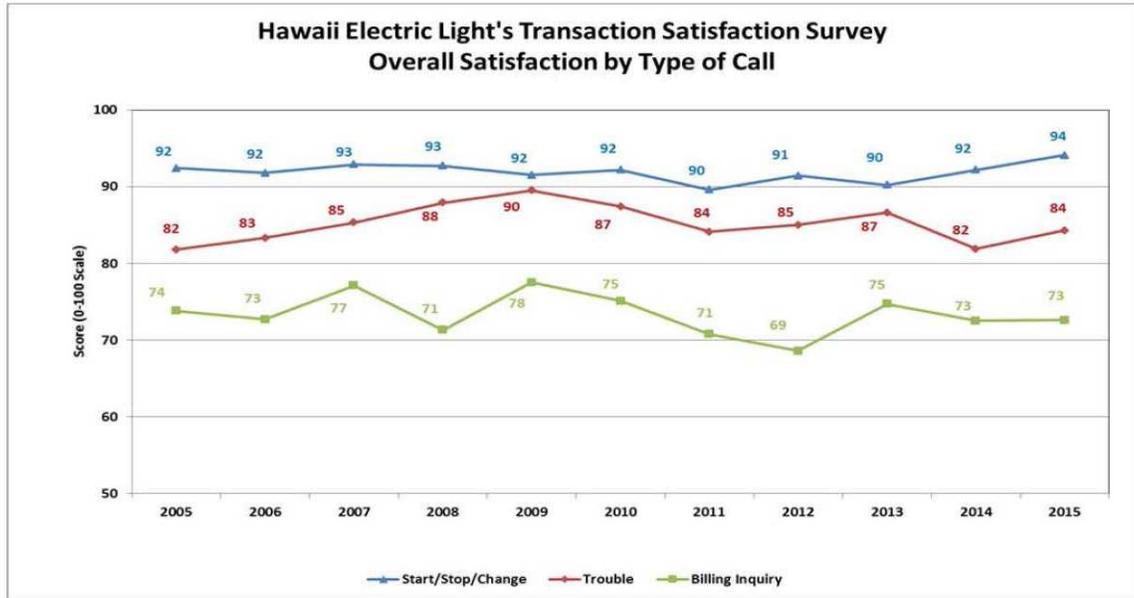
11 Each of the functional areas within Customer Service plays different but
12 important customer-facing roles in helping Hawai'i Electric Light achieve this vision.

13 Q. How will Hawai'i Electric Light's Customer Service Department measure its success
14 in assisting the Company to expand customer energy options and transform into a
15 customer focused utility?

16 A. One key measure is the use of customer transaction survey results that are reviewed
17 on a quarterly basis. The Transactional Satisfaction Survey is used to track
18 customers' satisfaction by measuring the customers' experience for the following
19 transactions: (1) to start, stop, or transfer electric service from one location to
20 another, (2) to initiate a billing field investigation, and (3) to report trouble with their
21 electric service. The results of this survey are used by the Customer Service
22 Department to monitor the quality of service provided and to identify areas for
23 improvement.

24 The overall satisfaction score is based on a 0 to 100 point scale, and measures
25 customers' satisfaction with the way the request was handled in total – that is from the

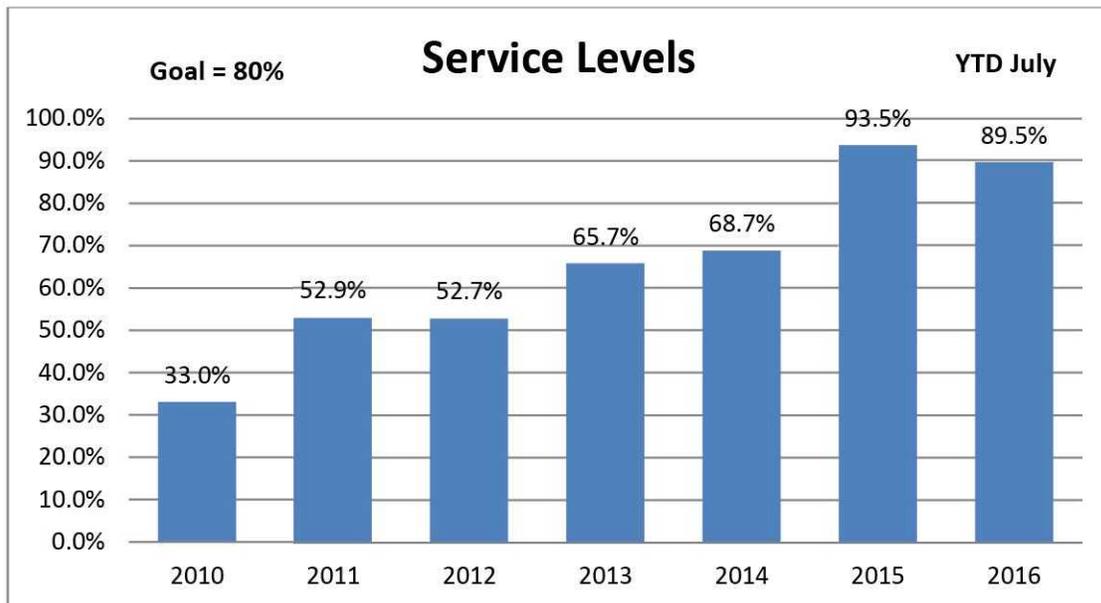
1 time the customer contacted the Company until the service was completed. Please see
2 graph below for annual results.



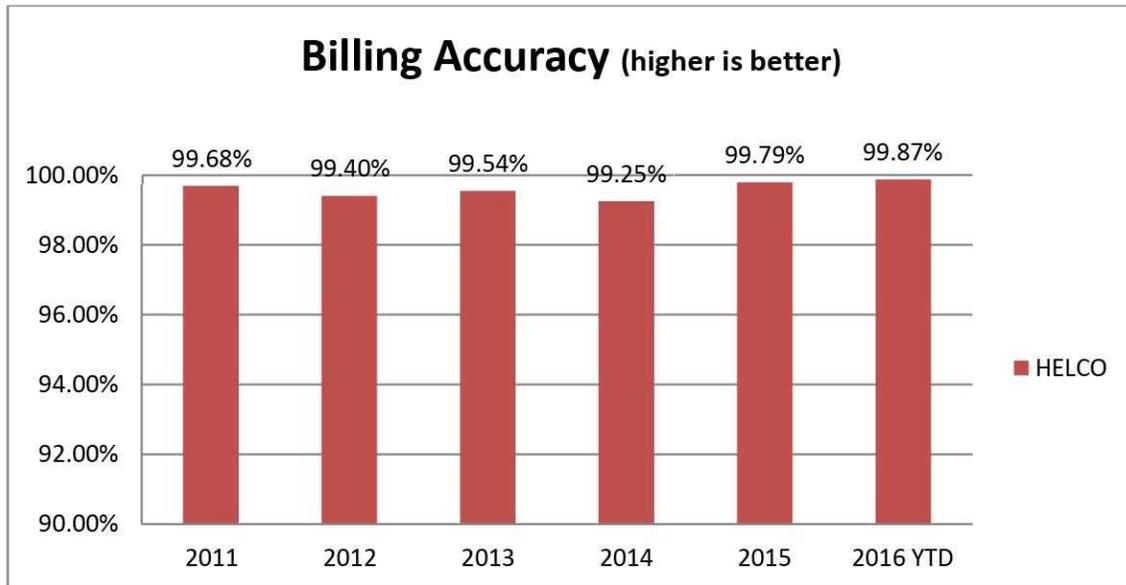
3
4 Q. Does the Customer Service Department have additional metrics that measure progress
5 towards the overarching Strategic Transformation Goal of achieving a customer
6 satisfaction rating in the top 50% of utilities by 2020?

7 A. Yes. Service Levels is a metric defined as the percentage of calls answered within 30
8 seconds that the Customer Service Department uses to measure service performance.
9 Since 2010, the Customer Service Department has substantially increased service
10 levels from 33.0% to 93.5%. This is attributed to the increase of Customer Service
11 Representatives within the Customer Care Center in an effort to be more responsive to
12 customer requests and inquiries as well as the implementation of the Interactive Voice
13 Response (“IVR”) system that was installed for Hawai‘i Electric Light in October
14 2014. The IVR provides expanded automated functionality that gives customers
15 greater flexibility, choice and convenience, and improves customer service in a

1 manner that would not be practical or cost-effective with only customer service
2 representatives (“CSR”). It is a fixed cost investment (technology) that mitigates
3 future variable costs (labor). The higher the adoption rate by the customers, the
4 greater the avoided costs related to the necessity to add future labor. The new IVR
5 system provides the Company with more flexibility to meet customer needs and
6 expectations while maintaining and improving its Service Level metric. Please see the
7 graph below on the Service Level metrics results from 2010 through July 2016.
8 Further details on the service levels goals, impact of the IVR and additional metrics
9 are provided in HELCO-911- Customer Relations.



10
11 Billing Accuracy is a metric used to manage billing performance and measure the average
12 percentage of bills that do not need to be rebilled or reprinted. With the deployment of the
13 new CIS SAP system in 2012, Billing Accuracy dipped slightly as the Company gained
14 proficiency in the new system. Over time, performance has improved, and since 2015,
15 Billing Accuracy has surpassed pre-SAP measures.



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Q. Please describe the actions that the Customer Service Department has initiated to contribute to the overall transformation goals and to support the Company's efforts to expand customer options and transform into a customer focused utility.

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A. Hawai'i Electric Light is striving to improve customer satisfaction and address customer expectations by focusing on increasing service accessibility and improving customer service quality by investing in its employees and in new technologies and new processes.

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The landscape for Customer Service is changing, in lockstep with the challenges and changes the Company as a whole currently faces. As new programs are implemented that enable customers to leverage renewable energy - whether through rooftop solar, solar water heating, electric vehicles, etc. - the complexity of the customer service interaction grows along with those changing needs. What was previously a fairly static relationship is now evolving into a relationship with many facets.

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1 Customers want to have choices when it comes to how they conduct business
2 with the Company; thus, Customer Service must adapt and provide services in the
3 channels that customers use and prefer. Being accessible and available for customers
4 means providing options beyond the traditional channels of service (e.g., walking into
5 a payment center or speaking to a customer service representative over the phone). It
6 means providing service in the channels customers choose to use, whether at home or
7 on the road, and at any time of the day (e.g., providing online and phone self-service
8 options, simplified ways to make payments and the ability to do so at different island
9 locations, and providing paperless notifications and billing options). Being accessible
10 and available also means improving technology options and ensuring that appropriate
11 training is provided to the Customer Service teams to enable excellent service to
12 Hawai'i Electric Light's customers.

13 As mentioned above, Customer Service is in the beginning of a multi-year
14 journey to lay the foundation that will bring about changes to provide exceptional
15 service. Actions that Customer Service is taking, and which I explain further in this
16 testimony, include the following:

- 17 1. Implementing a new customer engagement model.
 - 18 • Improving customer access, choice and responsiveness
 - 19 ○ Customer Experience Initiative (including Customer Promise &
20 Service Standards and Journey Mapping)
 - 21 ○ Ensuring the Company maintains sufficient service levels to be
22 responsive to customer requests and inquiries;

- 1 ○ Expanding self-service options for voice and data transactions
- 2 through the interactive voice response (“IVR”) system and online
- 3 services; and
- 4 ○ Expanding and providing additional flexible payment and billing
- 5 options for customers.
- 6 ● Technology investments to leverage new functionality on essential
- 7 customer service tools, including:
- 8 ○ WattPlan
- 9 ○ Utilities Customer E-Service (“UCES”) Mobility
- 10 ○ Interconnection Improvement Program
- 11 ○ Real-time Credit Card (“RTCC”) Project
- 12 ○ Paperless Billing Project
- 13
- 14 2. Developing new products and services and enhancing existing programs to meet
- 15 customer needs.
- 16 ● Community-Based Renewable Energy Program (“CBRE”)
- 17 ● Low Income Home Energy Assistance Program (“LIHEAP”)
- 18 ● Special Medical Needs Rate Program (“SMNRP”)
- 19 3. Aligning customer processes and functions.
- 20 ● Reorganizing the Customer Service structure across the three companies.
- 21 ● Functionally aligning the reporting structure within Customer Service.
- 22 ● Standardizing processes and procedures to provide a more consistent
- 23 customer experience.

- Laying a foundation to allow for greater cost containment and improved quality, efficiency, and cost effectiveness in the future.

4. Strengthening the Company's role as trusted energy partner.

5. Identifying distinct customer service segments and needs.

- Customer insights – data capabilities.

Q. Please describe the actions the Company is taking to implement a new customer engagement model.

A. The Company is actively engaged in improving customer access, choice, and responsiveness and in making technology investments to leverage new functionality on essential customer service tools. Great customer experience does not happen by accident; it is intentionally designed. The interactions and decisions that affect our customers are made daily by all employees in all departments throughout our organization. The Customer Experience ("CX") engagement initiative is a new program that focuses on aligning these interactions and decisions by ensuring that all employees have a shared vision of the customer experience strategy that aligns with the Companies' overall strategic goals.

In 2016, the team worked on defining the customer experience strategy that describes the intended customer experience for our Companies. The creation of this 'Customer Promise' was shared with each employee to create a system of shared values that focuses employees on delivering excellent customer experiences. In addition, "Service Standards" were created to support the Customer Promise (collectively, the "Customer Promise & Service Standards") and to provide guidance

1 to our employees to deliver on the new Customer Promise. An extensive series of
2 presentations on the Customer Promise & Service Standards roll out and activities to
3 educate employees are underway for 2016.

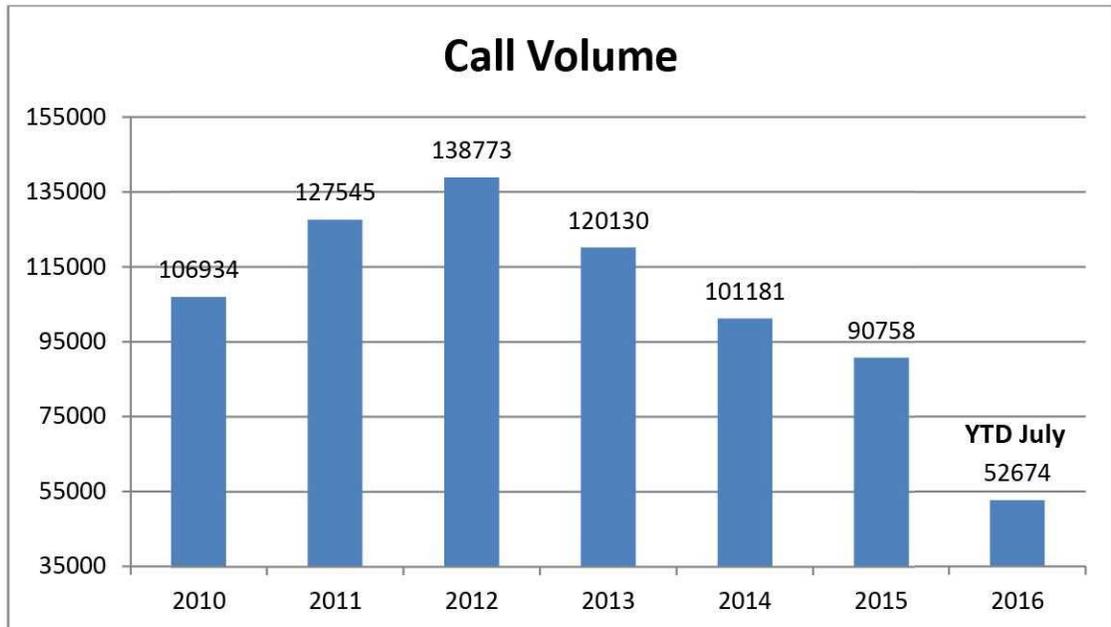
4 As the Companies move in a more customer-centric direction, new tools and
5 processes are needed to improve customer experience. To this end, in 2015, the
6 team also introduced Journey Mapping to the organization. Journey Mapping is
7 used as a visual representation of a customer's journey with our products, services
8 and people. This tool includes identifying touchpoints from the customer point of
9 view versus an internal process view point. In addition, the tool helps identify key
10 moments of truth, pain points, and emotions experienced by our customers
11 throughout their journey with us that will help the Company better design and
12 improve products and services that, in turn, will improve the customer experience.
13 Please refer to HELCO-914 for additional details on this initiative.

14 Q. What other initiatives has the Company undertaken to improve customer access,
15 choice and responsiveness?

16 A As customers' expectations change, improving customer access, choice and
17 responsiveness will be a key component to meet the ever changing needs of Hawai'i
18 Electric Light's customers. One of the basic wants and needs of customers is having
19 trained and knowledgeable CSRs that are readily accessible to service their inquiries.
20 The customer care center is the first impression that customers have of the Company.
21 As a result, managing accessibility and quality of interaction is critical to improving
22 customer satisfaction. The continuous improvement and management of this area

1 benefits customers by improving the level of service provided and ultimately
2 improving their satisfaction. Please refer to HELCO-911 - Customer Relations for
3 additional details on goals and performance metrics to maintain service levels and to
4 ensure responsiveness to customer requests and inquiries.

5 In addition, the Companies are focused on expanding the self-service options
6 within the IVR system and on improving features and capabilities of the online
7 customer portal as an essential part of enhancing the overall customer experience
8 with the Company. These new options, features, and capabilities allow the customer
9 to conduct business at their convenience, allowing them to complete transactions 24
10 hours a day, seven days a week. Importantly, calls made after hours and during the
11 weekend help reduce calls made during business hours, which, in turn, helps the
12 Company better service customers. These increased self-service options have
13 resulted in greater customer flexibility, choice and convenience, while allowing the
14 Customer Care Center to focus on more complex customer requests. As shown in
15 the graph below, the implementation of the IVR System has led to a direct reduction
16 in annual call volume for the Company.



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Q. Please expand on the additional flexible payment and billing options for customers.

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A. Consistent with the Company's transformation goals of expanding options for its

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customers, the Customer Service Department has expanded and provided flexible

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payment and billing options. The Company deployed new practices and

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technologies to encourage more customers to utilize paperless/electronic billing and

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electronic payments. The Real Time Credit Card Project, deployed in 2014 and

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described later in this testimony, provides customers with the ability to pay their bill

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online via the Company's website. In addition, in an effort to lower costs to its

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customers, the Company was able to negotiate the \$4.95 convenience processing fee

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that is charged by Western Union down to \$2.95 in 2014 and to \$1.99 in 2016.

12

Furthermore, as described later in this testimony, the Paperless Billing Project

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allowed customers to easily access and view their bills electronically and pay their

14

bill within the body of the e-mail. To promote these convenient paperless billing

1 and electronic payment options, the Customer Service Department conducted
2 various campaigns in 2015. For additional detail on payment and billing options
3 please see HELCO-913- Revenue Management.

4 Q. What technology investments has the Company invested in to ensure a better
5 customer experience?

6 A. The Company has deployed and continuously looks for innovative ways to improve
7 customer experience. Below is a list of some of the technology investments that
8 have been implemented or are planned to be implemented in the near future.

9 WATTPlan

10 Hawai'i Electric Light aims to meet the state's 100% RPS requirement by 2045. To
11 respond to customers who are looking for options to add rooftop solar to their homes
12 and to improve customer experience, the Company has invested in the WattPlan
13 online tool for PV. The WATTPlan tool gives customers the ability to enter their
14 electric bill information to determine energy consumption and calculate projected
15 annual savings in their electric bill based on system size, the number of solar panels
16 added, and amount of energy produced from the system. The tool incorporates the
17 rate information and general load information for a customer in Hawai'i to calculate
18 the related savings.

19 In addition, the tool gives customers an idea of what the cost would be to
20 lease or finance the purchase of a solar system. It is also able to make adjustments to
21 underlying assumptions to assist the customer in deciding on the best options for
22 her/his circumstances.

1 The Company is always looking for ways to help its customers determine the
2 right solution for their energy needs. WattPlan for PV is a way for customers to do
3 some research before speaking to a contractor and understand the many factors that
4 go into putting a rooftop system on their home. The tool also encourages customers
5 to help the state achieve its 100% renewable energy goal by 2045.

6 UCES Mobility

7 Many customers today utilize their smart phone to manage their expenses and
8 complete business transactions, and, more than ever, it is how customers
9 communicate with companies that they do business with. In 2015, the Companies
10 completed the implementation of a Utilities Customer E-Service (“UCES”)
11 improvements project. The Customer Service Support and Improvement (“CSSI”)
12 Department managed the overall implementation of that project, and for 2016 will
13 again provide the overall program management for the implementation of new
14 capabilities. One of the goals of the 2016 UCES Mobility project is to enhance
15 customer experience and customer utilization via a variety of mobile platforms.
16 Metrics show that more than 30% of customer visits to the Companies’ websites
17 originate from mobile platforms. Customers want the ability to do business with the
18 Companies from their mobile phone, notepad, or tablet. As technology continues to
19 advance, the number of mobile visits is expected to continue to increase. Please see
20 HELCO-914- General for more details.

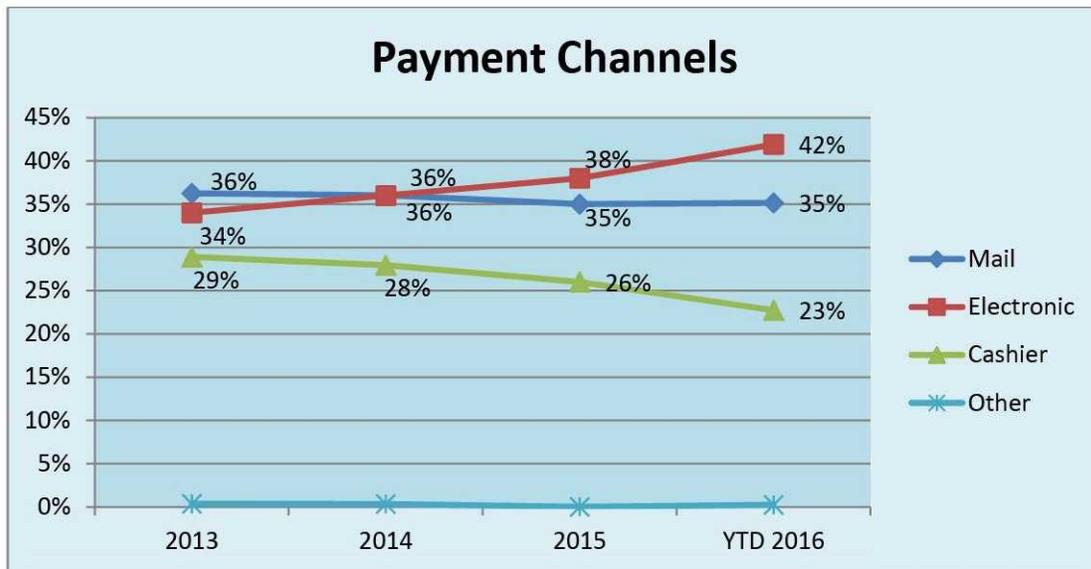
21 Interconnection Improvement Program

1 The Companies are implementing the Interconnection Improvement Program (“IIP”)
2 in response to Order No. 32053, filed April 28, 2014, in Docket No. 2011-0206. The
3 IIP will provide an online automated solution that includes application intake,
4 electronic file submittal, data entry functionality, workflow management, electronic
5 signatures, automated email status communication, and integration with the
6 Companies’ databases and enterprise solutions for distributed energy resource
7 customers. Please see additional details on the IIP’s scope and benefits in
8 HELCO-914 - General.

9 Real-Time Credit Card (“RTCC”) Project

10 By leveraging the Companies’ existing relationship with payment vendor Western
11 Union (“WU”), beginning in 2014, the Company completed several phases of the
12 RTCC project. This is the first step in the Company’s plans to provide a suite of
13 online/mobile self-service options. Prior to implementation of this project, the
14 Companies were not able to send customer information to WU for validation
15 purposes, which resulted in unidentified payments requiring exception processing by
16 various personnel. The Companies also adopted the use of the WU Notes posting
17 capability and its integration to the CIS in 2015. The Notes posting capability
18 allows WU to relay payment information throughout the day, in real-time, directly to
19 the Companies’ CIS, eliminating the need for a call to the customer care center and
20 at the same time, automatically creating a note on the customer’s account to trigger
21 an update in the CIS to avoid a disconnection order or to issue a reconnection
22 request. The new functionalities as a result of the RTCC project in addition to the

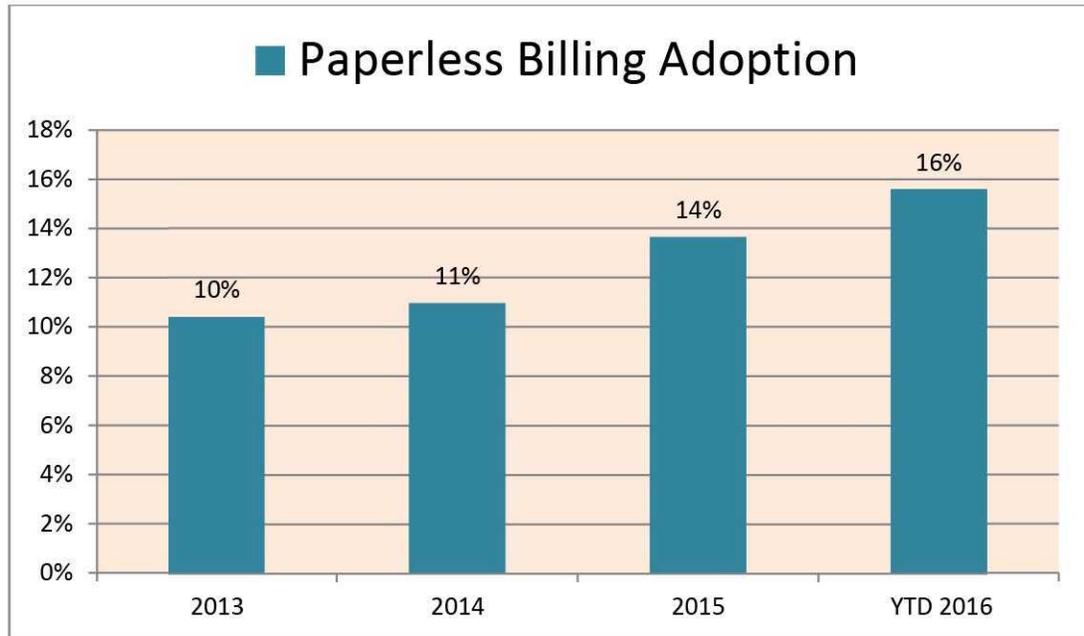
1 reduction of the convenience fee has resulted in an increase in electronic payment as
2 shown in the chart below. As discussed in HELCO-904, the increase in electronic
3 payment adoption has resulted in O&M savings for Hawai'i Electric Light.



4
5 Paperless Billing Project

6 In 2015, the Company successfully completed the Paperless Billing Project which
7 enhanced the existing e-mail notification to customers who are billed electronically.
8 The enhanced e-mail provides customers information on the amount due, due date
9 and the ability to view their e-bill online via a secured link without going to a
10 Company website account portal. The paperless billing project also provides
11 customers the ability to pay their bill directly via another link within the body of a
12 secured e-mail, which has also been formatted for mobile devices. The CIS system
13 was enhanced to allow CSRs to easily enroll customers with a one-click enrollment
14 process. The Paperless Billing project along with ongoing campaigns to promote
15 paperless billing resulted in an increase in adoption. The chart below illustrates the

1 increasing percentage of Hawai'i Electric Light customers that have enrolled in
2 paperless billing.



3
4 As discussed in HELCO-904, the increase in paperless billing also resulted in O&M
5 savings for Hawai'i Electric Light.

6 Q. Please describe how the Company is developing new products and services and
7 enhancing existing programs to meet its customers' needs?

8 A. Hawai'i Electric Light is experiencing the greatest pace of change in its history and
9 is in the midst of a company-wide effort to change the way it does business and
10 delivers value for its customers. Community based renewable energy ("CBRE") is an
11 option that will provide the benefits of renewable energy to those customers who either
12 choose not to or do not have access to install renewable energy on their property. This is
13 an important initial step to provide customers with expanded options to lower their
14 electric bills while contributing to achieving the 100 percent RPS by 2045.

1 On October 1, 2015, the Hawaiian Electric Companies filed Transmittal
2 No. 15-09, which proposed a tariff for a CBRE program and requested deferral of
3 certain costs related to the CBRE Program.³ The CBRE program is intended to
4 expand choices for customers that currently are unable to access the benefits of
5 renewable energy resources. This customer segment includes residential and business
6 renters, occupants of buildings with shaded or improperly oriented roofs, and other
7 groups that are currently unable to access the benefits of onsite renewable energy
8 generation. The CBRE Program is designed to promote broader participation in
9 renewable energy projects by allowing participants to receive the direct benefits of
10 renewable energy resources to offset their monthly energy consumption via a bill credit
11 for that renewable energy on their utility bills, which should help to reduce their utility
12 bills.

13 As explained in their November 30, 2015 filing in Docket No. 2015-0389, the
14 Companies proposed recovery of CBRE Program costs through the Renewable Energy
15 Infrastructure Program (“REIP”) Surcharge mechanism, and tariffed developer fees, and
16 participant fees.⁴ This proceeding is in progress.

17 Q. Are there any changes to the cost estimates that the Companies provided in Docket
18 No. 2015-0389?

³ On November 27, 2015, the Commission issued Order No. 33358 in Docket No. 2015-0389, suspending Transmittal No. 15-09 for investigation. On November 30, 2015, the Companies filed in Docket No. 2015-0389 documents supporting their proposed CBRE Program tariff.

⁴ *For Approval to Establish a Rule to Implement a Community-Based Renewable Energy Program, and Other Related Matters*, filed on November 30, 2015, Docket No. 2015-0389, Section VIII (“Proposed Accounting Treatment and Cost Recovery”), page 18.

1 A. The estimates for CBRE Program costs remain unchanged from the amounts
2 reflected in Attachment 4 of the Companies' November 30, 2015 filing in Docket No.
3 2015-0389. However, an adjustment to reflect updated timing of incurred program costs
4 to commence in 2017 is provided in HELCO-915. This exhibit also provides an
5 estimated breakdown of the REIP Surcharge cost allocation between the Companies,
6 which for Hawai'i Electric Light amounts to \$271,000 (HELCO-915, page 2).⁵ Also, as
7 CBRE Program costs that have been proposed to be recovered through the REIP
8 Surcharge are incurred and/or amortized they will be charged to the Customer
9 Accounts (B36) block of accounts, and, more specifically, NARUC Account 903.

10 Q. Did Hawai'i Electric Light include CBRE Program costs in the 2016 test year
11 revenue requirement?

12 A. No. Since the Companies are proposing recovery of the CBRE Program costs
13 through the REIP Surcharge and through tariffed developer and participant fees,
14 Hawai'i Electric Light has excluded these CBRE Program costs from its 2016 test
15 year revenue requirement. However, if the Commission rejects recovery of CBRE
16 Program costs through the REIP surcharge, the costs that the Company will incur
17 during the period that rates will be in effect will need to be normalized into Hawai'i
18 Electric Light's 2016 test year revenue requirement. Mr. Joseph Viola discusses the
19 recovery of these costs in greater detail in HELCO T-25.

20 Q. Does Hawai'i Electric Light administer any programs that assist low income
21 customers?

⁵ The table in this exhibit is identical to the one included in the Companies' letter filed on November 30, 2015 in Docket No. 2015-0389, page 22.

1 A. Yes. The Low Income Home Energy Assistance Program (“LIHEAP”) is a federally
2 funded program that delivers heating and cooling aid to Hawai‘i’s underserved
3 populations on a short-term basis. The State of Hawai‘i’s Department of Health and
4 Human Services administers the program, coordinates with the Hawai‘i County
5 Economic Opportunity Council who handles the application intake process, and
6 transfers the federal funds to Hawai‘i Electric Light to post LIHEAP payment to
7 customer accounts.

8 To be eligible for the program, an application must be submitted with all
9 individuals (related or unrelated) living at the residence. Verification of Social
10 Security numbers for all household members, identification for all adults (they must
11 be a U.S. citizen or meet permanent residency requirements), and income, and utility
12 bills are submitted when determining eligibility for the program.

13 Hawai‘i Electric Light administers the following three forms of LIHEAP
14 assistance: 1) LIHEAP Lower Rate Tier, which is currently 11.2019 cents/kWh, for
15 all kWhr per month; 2) Energy Credit Program; and 3) Energy Crisis Program.

16 1. LIHEAP Lower Rate Tier for Hawai‘i Electric Light customers of 11.2019
17 cents/kWh (currently) is applied to all LIHEAP recipients starting with their
18 January bill and they receive the rate for 12 months. For 2015, the number of
19 LIHEAP recipients was 7,942. The rate waiver is applied when the LIHEAP
20 customer’s usage exceeds the first tier (300 kWh on Hawai‘i Island).

21 2. Energy Credit Program. The Hawai‘i County Economic Opportunity Council
22 accepts applications through June 30th and customer information is validated

1 from July through October. LIHEAP determines how much each customer will
2 receive. Funding is sent to Hawai'i Electric Light and posted in December.
3 In 2015, 2,688 Hawai'i Island recipients received an average of \$816.53. The
4 total amount received by Hawai'i Island customers in 2015 was \$2,194,840.

5 3. Energy Crisis Program. The Energy Crisis Program provides up to \$350
6 maximum to restore power to the residence of a household whose electricity has
7 been shut off or is about to be terminated. In 2015, 170 Hawai'i Island
8 customers were assisted by this program totaling \$58,109 in benefits paid out to
9 customers.

10 The Hawaiian Electric Companies' staff meets quarterly with the LIHEAP
11 administrator to discuss strategies to increase customer participation and
12 coordination of the application and payment processing.

13 Q Does the Companies have any programs that help customers who are dependent on
14 life support?

15 A The Hawaiian Electric Companies are drafting a tariff proposal to extend the
16 LIHEAP waiver provision to residential customers who are dependent on life
17 support equipment used in their home, as well as those who have increased heating
18 and cooling needs due to their medical condition, including paraplegics and
19 quadriplegics, multiple sclerosis patients, scleroderma patients, and people being
20 treated for a life threatening illness or who have a compromised immune system.
21 The Special Medical Needs Rate Program ("SMNRP") proposes to offer these

1 customers the lowest tier residential electric rate, which for Hawai'i Electric Light is
2 currently 11.2019 cents/kWH for all kWhr in each billing cycle under this program.

3 The program requirements are modeled after California's Medical Baseline Program
4 (Electric Rule No. 19). To be eligible for the program, an application must be
5 submitted and signed by a licensed physician or surgeon to certify the applicant's
6 medical condition. Thereafter, participants will need to self-certify their eligibility
7 every two years to confirm continued residence at the service address.

8 Hawai'i Electric Light currently has 219 customers who have a completed Life
9 Support form on file. A state law⁶ requires utilities to provide special consideration
10 in the handling of termination of service in the case of elderly and handicapped
11 customers. According to the law, the utility must submit a written report and
12 investigation to the Commission five days before electric service is disconnected for
13 non-payment. The Company's Life Support Program is in place to comply with this
14 rule and to give qualified customers special consideration if their electric account
15 becomes delinquent. The Program is also an opportunity for the customer to notify
16 the Company of any special medical needs. Both of these benefits will be continued
17 with the SMNRP. The estimated number of participants will be based on the current
18 life support forms on file; however, it is anticipated that there may be an increase in
19 participation due to the added benefit of a lower rate for higher kWh usage relief
20 needed by these customers. The Hawaiian Electric Companies plan to submit a tariff

⁶ Chapter 60 of Title 6, Administrative Rules, entitled "Standards for Electric and Gas Utility Service in the State of Hawaii," implementing Chapter 269, Hawaii Revised Statutes. Docket No. 3875, Order No. 6680. Effective June 19, 1981

1 filing for this program by October 2016 and pursuant to Commission approval,
2 request to implement an effective date of 90 days after this tariff filing.

3 Q. How do technology improvements and development of new products and services
4 get billed to Hawai'i Electric Light's Customer Service Department?

5 A. Technology improvements and development of new products and services are
6 intercompany billed to Customer Service through the HC4 General RA. This
7 includes project costs allocated to the Company by Hawaiian Electric's CSSI
8 Department. In particular, the Customer Service Department has invested in
9 technologies by working hand in hand with CSSI, which was a department formed in
10 April 2012. The CSSI Department was created to assist the Customer Service
11 Departments for the Hawaiian Electric, Maui Electric and Hawai'i Electric Light to
12 ensure that continuous efforts in technologies are being made to better serve
13 customers. As the utility industry quickly changes, new and improved technologies
14 will be essential to better understand and analyze customer behavior in order to serve
15 their ever changing and increasing expectations. CSSI is further tasked with
16 supporting the Companies' transformation efforts aimed at improving overall
17 customer service and the customer experience. Further details are discussed in
18 HELCO-914 General Narrative.

19 Q. Please describe the actions the Company is taking to align customer processes and
20 functions.

21 A. In an effort to continually evolve to meet the current and future needs of Hawai'i
22 Electric Light's customers and to transform the Company to become a trusted energy

1 partner, the Customer Service Departments at all three Companies went through a
2 restructuring and reorganization starting in 2015. This restructuring is the beginning
3 of a multi-year journey and helps lay the foundation for changes that will allow the
4 Companies to better serve their customers, improve efficiencies, and eventually
5 reduce costs. See HELCO-905B - Reorganization Narrative for more detail.

6 Q. Please discuss the actions the Company is taking to strengthen its role as a trusted
7 energy partner.

8 A. The Commercial Account Managers (“CAM”) service and develop relationships
9 with the large commercial customers to understand their energy and operational
10 needs and facilitate responses from the Company across departments to meet those
11 needs. These commercial customers represent the high energy users with schedule
12 “P” rates. They include commercial businesses and government agencies such as
13 Hilton Waikoloa Village, Parker Ranch, Department of Water Supply in the County
14 of Hawaii, Big Island Country Club and many others. The CAMs meet with the
15 customer regularly to discuss their energy usage, forecast, future expansion or any
16 issues surrounding their account. The CAMs provide additional services as part of
17 the Company’s effort to become their trusted energy partner. Some of these services
18 include delivering industry relevant workshops relating to their electrical
19 systems. For example, the Company partnered with the International Facility
20 Management Association (“IFMA”) to offer educational workshops for the Facilities
21 Professionals who manage all aspects of building operations. Furthermore, a
22 Combined Heat and Power (“CHP”) workshop was offered to customers that are

1 contemplating using this type of energy generation to power their facilities. In
2 September, the Company will be offering a Power Quality Workshop that provides
3 education to our customers on the relationship between their facility equipment and
4 the direct effect on power quality.

5 In addition, the CAMs handle commercial customer inquiries that are not
6 addressed by the customer assistance center. They are the customer's advocate. The
7 CAMs also work with business and community organizations and educational
8 institutions to jointly promote understanding and acceptance of the State's clean
9 energy goals, renewable developments and energy conservation to the public
10 through Hawaii Energy. See HELCO-912 - Field Services for more detail.

11 Q. Please describe the actions the Company is taking to identify distinct customer
12 service segments and needs?

13 A. The development of improved customer research "Data Capabilities" is a subset of
14 the Customer Experience ("CX") Initiative within the larger corporate
15 Transformation Initiative. Developing a better set of practices that provide better
16 information about our customers, their needs and their opinions on energy-related
17 matters is fundamental in creating valued products and services. Improving both the
18 source of information and the analytic capabilities to investigate customer data are
19 important components of this sub-initiative. The resulting confidential and
20 proprietary information will assist the Companies in enhancing customer experience
21 and extending customer options. Please see HELCO 914- HC4 for additional details
22 and scope of the project.

1 HAWAI'I ISLAND BASED CUSTOMER SERVICE ORGANIZATION AND STAFFING

2 Q. How is Customer Service organized?

3 A. Prior to 2015, each of the three Companies maintained a separate Customer Service
4 Department that was relatively self-contained and geographically organized. In
5 2015, the reorganization transformed the reporting structure of all three Customer
6 Service departments from geographically organized entities to ones that are
7 functionally aligned. Three new departments were formed – Customer Relations,
8 Field Services, and Revenue Management.

9 Q. Please describe the Customer Service reorganization that occurred in 2015.

10 A. HELCO-905B provides a more detailed description of the reorganization – the
11 drivers behind the reorganization, the conversion to a Tri-Company Customer
12 Service organization, and some of the mechanics behind the new structure. Hawai'i
13 Electric Light, Hawaiian Electric, and Maui Electric each had its own Customer
14 Service Department with their own Customer Service Manager in charge of the full
15 spectrum of customer service functions including customer relations, field services
16 and revenue management. The Customer Service reorganization created three new
17 departments at Hawaiian Electric – Customer Relations Department, Field Services
18 Department and Revenue Management Department. Each company's Customer
19 Service Manager was converted to a manager heading one of the new departments,
20 and all Hawai'i Electric Light and Maui Electric Customer Service employees were
21 converted to Hawaiian Electric employees to enable a reporting structure across the
22 Companies that would be aligned by function. Each department manager now

1 oversees the functional operations of its respective responsibility area across all three
2 companies. The following exhibits describe each functional department in detail,
3 including roles, responsibilities, and work performed:

4 1) Customer Relations (see HELCO-911);

5 2) Field Services (see HELCO-912); and

6 3) Revenue Management (see HELCO-913)

7 Q. What is the Hawai'i Electric Light Customer Service Department's estimated
8 employee count for the 2016 test year?

9 A. Hawai'i Electric Light has no Customer Service employees estimated in 2016. The
10 reorganization in 2015 converted all Hawai'i Electric Light employees to Hawaiian
11 Electric employees. (See HELCO-905B for details of the reorganization.) The
12 estimate of Hawaiian Electric employees home-based on Hawai'i Island performing
13 customer service functions is 51 for the 2016 test year. The Hawai'i Island based
14 staffing is represented in HELCO-905 and is further discussed in HELCO-905A.
15 Some of the employees home-based on Hawai'i Island perform functions for
16 Hawaiian Electric and Maui Electric, and allocate their costs to those companies
17 accordingly. Similarly, there are some Hawaiian Electric employees home-based on
18 Oahu and Maui islands that perform functions for Hawai'i Electric Light and
19 allocate their costs to Hawai'i Electric Light accordingly.

20 Q. How does Customer Service's Hawai'i Island-based staffing estimate for the 2016
21 test year compare to the actual employee count at the end of 2015?

1 A. As reflected in HELCO-905, the estimated Hawai'i Island-based Hawaiian Electric
2 employee count for the 2016 test year is 51 - three more than the recorded employee
3 count at the end of 2015 of 48 (see HELCO-905A for a discussion on staffing count
4 across functional areas).

5 The increase in the 2016 estimate is primarily due to the Company's plan to
6 staff two meter reader positions as "Company temporary" employees (instead of as
7 agency temporary employees as done in the past). "Company temporary" employees
8 are included in headcount as opposed to "agency temporary" employees which are
9 excluded. In 2015, the "agency temporary" employees labor cost was captured
10 under non - labor outside services. The variance between 2015 and 2016 does not
11 indicate additional meter readers in 2016, but reflects an inclusion in headcount for
12 2016 of two "agency temporary" positions that were converted to "Company
13 temporary" employees positions. The decision to have the meter readers hired as
14 "Company temporary" employees was made in an effort to attract and retain
15 employees as the Company has experienced a very high turnover rate with "agency
16 temporary" employees, leaving vacancies and additional work load for employees to
17 complete this essential work. In addition to the two meter readers that have been
18 included in the headcount for 2016, a Supervisor for the Revenue Management
19 function area was added to ensure proper supervision and daily operational support.

20 Q. What is the reason for adding a Hawai'i Island-based Supervisor for the Revenue
21 Management Department?

1 A. Consistent with and in support of the Companies' increasing effort to improve upon
2 customer experience, it is imperative that Hawaiian Electric employ an on-Island
3 Revenue Manager Supervisor at Hawai'i Electric Light. The Revenue Management
4 Supervisor will play an important role in improving customer satisfaction by
5 effectively managing and directing all customer billing, payment and credit
6 functions and ensuring accurate and timely processing of these transactions. The
7 Supervisor will also assist in developing and deploying innovative solutions to
8 increase customer options while managing and improving efficiencies within the
9 department.

10 Q. Were there any vacancies in 2016 for Customer Service's Hawai'i Island-based
11 staffing?

12 A. Yes. As identified in HELCO-905, as of May 31, 2016, there were six vacant
13 positions. See also HELCO-WP-905.

14 Q. Does Customer Service assume full staffing of 51 Hawai'i Island-based employees
15 at the beginning of the 2016 test year?

16 A. Yes. The test year estimate assumes full staffing of 51 at the beginning of the test
17 year. The Company continues to actively recruit for all vacant positions, and
18 continues to utilize agency temporary supplemental labor as well as overtime pay to
19 compensate for the shortage of resources to fill all positions. To adjust for the
20 impact of double counting meter reader labor costs in the test year estimate, a
21 downward adjustment of \$130,000 budgeted for the two agency temporary positions
22 will be considered for removal at the next opportunity in the proceeding since these

1 labor costs are already captured through Field Services' labor billable. Please see
2 HELCO-912 and HELCO-WP-912B page 15 for more details.

3 Q. Please explain how labor is being identified in this testimony and why the labor
4 workpaper (i.e. HELCO-WP-901) reflects no labor dollars.

5 A. HELCO-905B describes in more detail the reorganization that started within
6 Customer Service in 2015. The Customer Service structure that was in existence
7 previously was geographically-based, with separate customer service departments
8 for Hawai'i Electric Light, Hawaiian Electric, and Maui Electric. In 2015, each
9 Customer Service Department was separated into three functionally-aligned areas –
10 Customer Relations, Field Services, and Revenue Management. These three areas
11 were then converted to stand alone departments. In August 2015, to operate within
12 the confines of our legacy systems' capabilities, and to allow an employee reporting
13 structure that spans across the three companies, all existing Hawai'i Electric Light
14 and Maui Electric customer service employees were converted to become Hawaiian
15 Electric employees. Their work locations did not change, and in most situations,
16 their functions did not dramatically change either, but they are now Hawaiian
17 Electric employees who bill their services back to Hawai'i Electric Light and Maui
18 Electric. Thus, in the latter half of 2015 and in all of 2016, labor costs are zero for
19 Hawai'i Electric Light because the labor is now being supplied by Hawaiian
20 Electric-badged employees and billed to Hawai'i Electric Light.

1 In order to show comparative labor-associated costs, some
2 exhibits/workpapers such as HELCO-WP-901A reflect the portions of billed
3 expenses that represent labor.

4 COST CONTAINMENT, EFFICIENCIES and INCREASED PRODUCTIVITY

5 Q. What measures has Customer Service undertaken to control costs and improve
6 efficiencies to moderate the increases requested in this rate case?

7 A. Customer Service is continuously looking at actions that can manage costs and
8 improve efficiencies, while also focusing on changes to improve service to its
9 customers. Actions being taken or that have been taken to manage costs, lower costs
10 and avoid future cost increases have been quantified in the amount of \$1,237,000
11 and are described in more detail in HELCO-904 and HELCO-904A.

12 The following summarizes many of the actions Customer Service is taking to
13 control or reduce costs and/or improve efficiencies:

- 14 • Competitive bidding of the collection services and walk in-fees.

15 Customer Service continues to perform periodic reviews of its existing
16 service contracts to explore cost reduction opportunities. Competitive
17 bidding of the collection agency vendors and third-party payment
18 vendors resulted in favorable contracts for the Company effective
19 January 1, 2016⁷. The new collection agency contracts position the
20 Company to incur lower fees in subsequent years.

⁷In 2016, the Company will continue to incur collection agency fees from prior agencies for services provided under contracts that have since been discontinued.

- 1 • Implementing the Paperless Billing Project in 2015 enhanced the existing
2 paperless billing e-mail notification to include information on the amount
3 due and due date and the ability to view and pay bills via a secured link
4 without going to the Company website (the service is also mobile device
5 compatible). Utilizing this new technology will reduce mailing, sorting
6 and printing costs of paper bills.
- 7 • Re-channeling walk-in payment options for customers and reducing
8 cashier costs. By providing more payment options for customers (e.g.,
9 using automatic bill payment to deduct payments from customers' bank,
10 savings and loan, or credit union accounts; paying online or over the
11 phone via credit card; and/or at no cost, walk-in payments through the
12 Company's outside payment vendor at various locations), the dependency
13 and volume of customers utilizing the Waimea walk-in payment center
14 decreased significantly, thereby allowing the Company to close that
15 location and move its cashier function to other payment offices as well as
16 to Western Union payment locations throughout Hawai'i Island. The
17 permanent full-time cashier position in Waimea was eliminated and the
18 existing employee transitioned into a vacant meter reader position in
19 Field Services. In addition, the decrease in walk-in payment volume also
20 allowed the company to eliminate the additional cashier temporary
21 agency hire in Kona.
- 22 • Eliminating the mail clerk position. Similar to the cashier position above,

1 the decrease in walk-in payments and mail volume for Hawai'i Electric
2 Light has allowed the Company to eliminate the existing temporary
3 agency hire mail clerk position in Hilo. The use of electronic
4 transmission mediums like email, scanned documents, electronic
5 signatures, has decreased the need for interoffice mail delivery. The
6 cashiers in Hilo absorbed the related mail duties without any additional
7 costs to the Company.

- 8 • Consolidating billing functions. The Customer Service reorganization in
9 2015 resulted in increased efficiencies, including the ability now to share
10 resources across the Companies. As a result, billing work performed by a
11 vacated billing clerk position was absorbed by existing billing clerks at
12 Maui Electric. Related costs are allocated back to Hawai'i Electric Light,
13 but these costs represent an amount less than the cost of backfilling the
14 vacant billing clerk position.
- 15 • The Company's effort in increasing the use of electronic transmission
16 technologies like email, scanned documents, electronic signatures, has
17 also contributed to the decreased volume of paper that is shredded
18 annually, and has resulted in a corresponding decrease in costs.
- 19 • Decrease in Security Guard outside services costs as a direct result of the
20 decreasing volume of walk-in payments at the Hilo office.
- 21 • Decrease in outside services costs for armored cars resulting from the
22 closure of the Waimea office explained above.

- 1 • Implementing real-time credit card validation capabilities in 2015 with its
2 outside payment vendor. This provides the Company with the capability
3 to provide future online/mobile self-service options to customers
- 4 • The Company also partnered with Western Union, its third-party payment
5 vendor, and successfully secured lower fees at 25 locations on Hawaii
6 Island, which allowed the Company to offer walk-in payment services to
7 its customers with no fees charged to the customer. Negotiations also
8 resulted in lower credit fees for Hawai'i Electric Light customers who
9 choose to pay their bills via credit cards, down from \$4.95 to \$2.95 in
10 2014 and \$1.99 as of February 2016.
- 11 • Consolidating the Company's delinquent accounts division's function.
12 One of the primary goals of the Customer Service reorganization is to
13 standardize processes and develop best practices to provide customers a
14 more consistent experience. In 2015, the Credit team at Hawaiian
15 Electric began managing all delinquencies and bad debt recovery for
16 Hawai'i Electric Light. This change resulted in the implementation of
17 best practices across all three Companies and has yielded efficiencies and
18 improved service for customers.
- 19 • Consolidating the Customer Relations Supervisor function. In prior
20 years, Hawai'i Electric Light and Maui Electric employed a Customer
21 Relations Supervisor for their respective companies to lead and support
22 their respective customer care teams. With the reorganization, and

1 through Customer Service's work to streamline processes, plan for
2 virtualization, and develop efficiencies, the Companies were able to
3 employ just one supervisor to oversee both the Hawai'i Island and Maui's
4 contact center teams.

- 5 • Utilizing the Companies' Customer Contact Centers to eliminate the
6 need/reliance on outside services vendors for overflow calls. One of the
7 many advantages of the reorganization is the ability for leadership to
8 focus specifically on each function to understand and define
9 improvements needed within those functions. In Customer Relations, the
10 improvements in service levels and abilities to increase capacity at
11 Hawai'i Island and Maui's Customer Care Centers allowed leadership to
12 develop plans to eliminate the need for an outside service vendor to
13 accept overflow calls from Hawaiian Electric. Starting in 2016, overflow
14 calls from Hawaiian Electric have been rerouted back to Hawai'i
15 Customer Contact Centers and are now being absorbed by the Hawai'i
16 Island and Maui Customer Contact Centers with no additional staffing.
- 17 • Utilizing the IVR system to complete certain customer transactions
18 without the need to speak to an agent. The IVR system plays an integral
19 role in providing customers with self-service options, providing another
20 means to interact with the Company. This not only increases customer
21 convenience, especially after Company business hours when CSRs are
22 not available to assist, but also provides more time for these

1 representatives to assist customers with complex issues. The IVR system
2 provides the capabilities to maintain appropriate service levels, while
3 providing customers greater options to do business with the Company,
4 without the cost of hiring additional agents.

- 5 • Consolidating the Field Services Supervisor function. Similar to
6 discussions above, the 2015 reorganization provided leadership the
7 ability to focus specifically on each function to understand and define
8 improvements needed within those functions. In Field Services, that
9 focus revealed the need to better align operations on Hawai'i Island to
10 better standardize policies and procedures at the three Field Services
11 locations. A benefit of that alignment was the decision to reduce one
12 Field Services Supervisor position.
- 13 • Through the implementation of best practices as well as the
14 standardization of processes and technological improvements, overtime
15 costs have been decreasing.

16 Details of these cost containment actions can be found in HELCO-904A. A
17 summary table, including cost avoidance/reduction estimates can be found in
18 HELCO-904.

19 CUSTOMER SERVICE DEPARTMENTS 2016 O&M TEST YEAR ESTIMATE

- 20 Q. Please summarize Hawai'i Electric Light's Customer Service 2016 test year O&M
21 expense estimate.

1 A. Hawai'i Electric Light's 2016 test year O&M estimate for the Customer Service
2 Department is \$9,689,000. HELCO-902 provides the 2016 test year expense
3 estimates by responsibility area ("RA").

4 Q. What is the basis for the 2016 test year O&M estimates for the Customer Service
5 Department?

6 A. The 2016 test year O&M estimate is based on the Operating Budget for 2016 of
7 \$9,710,000.

8 Q. Did Hawai'i Electric Light make adjustments to the 2016 Operating Budget amounts
9 to derive the 2016 test year estimate?

10 A. Yes. Hawai'i Electric Light included adjustments totaling (\$21,000) to derive the
11 test year estimate. Please see HELCO-WP-903 for the budget, ratemaking, and
12 normalization adjustments that were made to arrive at the 2016 test year estimate for
13 the Customer Service Department.

14 Q. What items are included in Customer Service's O&M expense?

15 A. Customer Service's O&M expense includes non-labor expenses in the following
16 NARUC account blocks:

17 B34 - B35 Distribution Operation & Maintenance Expense

18 B36 Customer Accounts Expense

19 B37 Customer Service Expense

20 B38 Administration & General Operation Expense

21 A mapping of Customer Service 2016 test year O&M expenses to NARUC account
22 blocks is found in HELCO-901.

1 Q. How does the 2016 test year estimate compare to recorded O&M expenses?

2 A. As stated in other sections of this testimony, Customer Service is in the beginning of
3 a multi-year journey to lay the foundation that will bring about changes to provide
4 exceptional service. Besides taking action to improve customer access and choices,
5 implement new programs, and invest in technology, it is also taking actions to
6 control and manage costs. Hawai'i Electric Light's Customer Service Department
7 costs rose in the years prior to 2013 as the Company invested in changes to help
8 provide greater accessibility for customers and in preparation for significant
9 replacements of core systems. (In 2012, the Companies' Customer Information
10 System ("CIS") went into service, and in 2014, the Companies' IVR system was
11 placed into service.)

12 The total O&M expenses peaked in 2013 during the year following the CIS
13 in-service date as resources were necessary to support the conversion during the
14 stabilization period after implementation.⁸ Since 2013, however, through concerted
15 efforts to curb expenses while still driving further customer service improvements,
16 the Company has achieved steady declines in O&M expenses. See HELCO-902.
17 From a peak of \$11,548,000 in 2013, costs dropped to \$10,423,000 in 2014, and
18 even further to \$9,471,000 in 2015. The 2016 test year estimate is slightly higher
19 than its 2015 recorded expenses, but is generally in line with the downward trend of
20 O&M expenses since 2013. Table 1 below summarizes the cost information in
21 HELCO-902.

⁸ CIS was placed into service on May 29, 2012.

Table 1: Customer Service O&M Expenses

O&M Expenses	2010 Recorded ¹	2011 Recorded	2012 Recorded	2013 Recorded	2014 Recorded	2015 Recorded ²	2016 Test Year
Labor-Related	3,981,953	4,143,190	5,269,079	5,694,714	6,091,011	5,788,883	5,816,672
Non-Labor	733,250	2,605,391	5,484,653	5,853,697	4,332,154	3,681,630	3,872,783
Total Customer Service	4,715,204	6,748,580	10,753,732	11,548,411	10,423,165	9,470,514	9,689,455

¹ 2010 included two credits totalling almost (\$1,657,000) in Uncollectible Accounts

² 2015 included the (\$654,000) IVR System Replacement Project credit

In 2015, the Commission issued Decision and Order No. 33082 for the IVR System Replacement project. The IVR System Replacement project costs were being expensed pending an approval to defer the requested project costs. In 2015, a credit of (\$654,000) was reflected at Hawai'i Electric Light to re-class the IVR System Replacement Project costs from expense to a regulatory asset. Without this one-time credit, the decline in annual costs from 2014 to 2015 would have been more gradual, and the 2016 test year estimate would have continued the downward trend, as it would have reflected recorded costs lower than in 2015.

Q. What are the major expense drivers in the 2016 test year estimate?

A. Labor is the largest expense component of Customer Service's 2016 O&M expenses. Of the \$9,689,000 test year estimate, \$5,817,000 are labor-associated costs (billed direct labor dollars, non-productive wages, and labor related on-cost). See HELCO-WP-901A. Further discussion regarding the Customer Service labor expenses can be found in the staffing and organization exhibits of this testimony.

While furthering its mission to drive improvements to customer service, the Customer Service Department has been successful in managing labor costs downward since 2014. HELCO-WP-901A reflects Customer Service's recorded and

1 forecasted labor related expenses over the years.⁹ Since the high point of \$6,091,000
2 in 2014, labor costs declined to \$5,789,000 in 2015, and remain at the same relative
3 level at \$5,817,000 in the 2016 test year estimate. The 2016 labor-associated costs
4 are divided among the three Customer Service functional areas as follows:

5	Customer Relations labor	\$1,403,000
6	Field Services labor	\$3,228,000
7	Revenue Management labor	\$1,186,000

8 Using the same methodology to reflect non-labor recorded costs and the test
9 year estimate, HELCO-WP-902A shows the non-labor cost trend for Customer
10 Service. Similar to labor, Customer Service has been careful to manage costs
11 downward. Non-labor peaked in 2013 at \$5,854,000 (see HELCO-WP-902A
12 showing on-costs removed on lines 14, 17 and 16). It then declined to \$4,332,000 in
13 2014, to \$3,682,000 in 2015, and to \$3,873,000 for the 2016 test year. The 2016
14 non-labor associated costs are divided among the three Customer Service functional
15 areas as follows:

16	Customer Relations non-labor	\$ 181,000
17	Field Services non-labor	\$ 763,000
18	Revenue Management non-labor	\$1,658,000

⁹ The reorganization in 2015 creates challenge when comparing the 2016 test year estimate to prior recorded expenses. Recorded labor expenses prior to the reorganization shown on HELCO-902 page 2 line 14 do not reflect labor related on-costs. (Those on-costs are reflected in the non-labor expenses shown on HELCO-902 page 2 line 28.) Starting in August 2015, the Customer Service costs attributed to Hawai'i Electric Light reflect the labor on-costs embedded in the intercompany billed costs from Hawaiian Electric. HELCO-WP-901A and HELCO-WP-902A lays out recorded costs with and without on-costs for comparison to the 2016 test year estimate. As an example, adding on-cost (on line 16) to the 2015 recorded labor costs of \$4,631,000 result in a more comparative cost of \$5,789,000 compared to the \$5,817,000 of the 2016 test year estimate attributed to labor.

1 There is also a fourth RA, HC4 General, that includes general non-labor costs that
2 are not directly attributed to one specific function. The HC4 non-labor costs for the
3 2016 test year is \$1,270,000. Please see HELCO-WP-902A. Customer Relations,
4 Field Services, Revenue Management and the HC4 General descriptions,
5 responsibilities, projects/programs, and benefits and measures can be found in
6 HELCO-911, HELCO-912, HELCO-913 and HELCO-914, respectively.

7 Q. Are there any estimates in the 2016 test year estimate that arose since the finalization
8 of the numbers that could be considered for adjustment at the next available
9 opportunity?

10 A. Yes, the following list of adjustments are identified in workpapers for consideration
11 at the next available opportunity:

- 12 • Field Services Agency Temps – downward adjustment of (\$130,088)
13 in HELCO-WP-902 line 10, HELCO-WP-912B page 15.
- 14 • Revenue Management Budget Adjustment – downward adjustment of
15 (\$4) in HELCO-WP-902 line 29.
- 16 • Armored Car – downward adjustment of (\$6,226) in HELCO-WP-
17 902 line 29, HELCO-WP-913B page 34.
- 18 • Fileminder – downward adjustment of (\$2,077) in HELCO-WP-902
19 line 29, HELCO-WP-913B page 35.
- 20 • Aloha Security/Main Security – downward adjustment of (\$6,017) in
21 HELCO-WP-902 line 29, HELCO-WP-913B page 36.

- 1 • Collection Agency Fees – downward adjustment of (\$32,000) in
2 HELCO-WP-913B page 39.
- 3 • HECO Finance & Business Planning allocated labor – upward
4 adjustment of \$2,000 in HELCO-WP-902 Line 39, HELCO-WP-
5 914A page 1 (footnote 1) HC4 SVP Labor ISF.

6 Please refer to the workpaper references listed for more detail.

7 SUMMARY OF NARUC CUSTOMER ACCOUNTS O&M EXPENSE

8 Q. What is included in customer accounts O&M expense?

9 A. Customer accounts O&M expense includes the costs incurred for activities the
10 Company provides to serve its customers that relate to: customer billing (including
11 the cost of processing customer requests to commence, modify or terminate service)
12 and mailing; meter reading; collecting and processing payments; handling customer
13 inquiries; maintaining customer records; managing delinquent and uncollectible
14 accounts; and conducting field services and investigations. The National
15 Association of Regulatory Commissioners (“NARUC”) Uniform System of
16 Accounts for Classes A and B Electric Utility’s definition of the customer accounts
17 expense accounts is as follows:

18 (1) Account 901: General direction and supervision of customer accounting and
19 collecting activities.

20 (2) Account 902: Reading customer meters, and determining consumption when
21 performed by employees engaged in meter reading.

1 (3) Account 903: Work on customer applications, contracts, orders, credit
2 investigations, billing and accounting, collections and complaints.

3 (4) Account 904: Losses from uncollectible utility revenues.

4 (5) Account 905: Miscellaneous customer account expenses not provided for in other
5 accounts.

6 Q. Please summarize the Hawai'i Electric Light 2016 test year estimate for the NARUC
7 customer accounts O&M expense.

8 A. Hawai'i Electric Light's 2016 test year O&M estimate for customer accounts is
9 \$8,850,000 as shown in HELCO-903. The expenses the Customer Service
10 Departments contribute to that amount is \$8,572,000 as shown in HELCO-901. The
11 other departments that contribute expenses to the customer accounts O&M expense
12 accounts are Engineering (Mr. Dave Okamura, HELCO T-18), Distribution (Mr.
13 Miles Nagato, HELCO T-8), System Operations (Ms. Lisa Dangelmaier, HELCO T-
14 6), and various GL code entries (*see* HELCO-1101C). Please refer to those
15 respective testimonies for customer account expenses that contribute to the total for
16 customer accounts O&M expenses. Contributing component make-up for the
17 NARUC block of accounts can be found in HELCO-1101.

18 Q. How does the 2016 test year estimate compare to 2015 recorded expenses?

19 A. The 2016 test year expense estimate of \$8,850,000 is \$1,387,000 more than the 2015
20 recorded customer accounts expenses of \$7,463,000. See HELCO-903, columns K
21 and F.

22 Q. Please explain the reasons for the major variances for this increase.

1 A. The main difference between the 2015 and 2016 customer accounts expenses shown
2 in HELCO-903 is due to labor-related on-costs that are now embedded in the billable
3 expenses in Customer Service's customer accounts expenses and are not reclassified
4 out of the block of accounts. Labor expenses shown in HELCO-903 do not include
5 labor-related on-costs for the period prior to the conversion in 2015 of Hawai'i
6 Island based Customer Service employees from Hawai'i Electric Light to Hawaiian
7 Electric. For a discussion on the on-cost reclass process, please see Mr. Paul
8 Franklin's T-11 testimony.

9 OTHER OPERATING REVENUES

10 Q. What is the total 2016 test year estimate of other operating revenues?

11 A. The total 2016 test year estimate of other operating revenues at present rates is
12 \$1,095,000. See HELCO-907, page 1. The total 2016 test year estimate of other
13 operating revenues at proposed rates is \$1,117,000. See HELCO-907, page 1.

14 Q. What is included in the test year estimates of other operating revenues?

15 A. Other operating revenues are the sum of the following items:

- 16 1. Account no. 414 –Gains from disposal of utility property;
- 17 2. Account no. 419 – OCARS Late Payment Charge;
- 18 3. Account no. 450 – Other revenues;
- 19 4. Account no. 451 – Miscellaneous service revenues;
- 20 5. Account no. 454 – Rent from electric property; and
- 21 6. Account no. 456 – Other electric revenues.

1 Detailed descriptions and calculations of these items listed under other operating
2 revenues are further described in HELCO-WP-907, pages 1 through 21.

3 Q. How do other operating revenues affect the test year revenue requirement?

4 A. The other operating revenues are generated and paid for by the customers who
5 request the service or cause and/or benefit from the work being conducted, thereby
6 lowering the amount of 2016 test year revenue requirements that determine base
7 rates for all customers. For example, service establishment fees are assessed to
8 customers for any field call to the service location necessitated by the customer's
9 request to start service, including a request to turn-on or reconnect service due to a
10 change in customer which requires a meter reading at the service location.
11 Similarly, a customer requesting to reconnect service following the disconnection of
12 service due to non-payment is also assessed the corresponding fee to provide the
13 requested service.

14 Hawai'i Electric Light continues to monitor and evaluate the reasonableness
15 of these charges relative to the current estimated costs to perform the requested
16 service. Establishing charges closer to the cost of service (e.g., Hawai'i Electric
17 Light's proposal to increase the returned payment charges and establish a same day
18 start fee), benefits all customers by minimizing or eliminating their subsidization of
19 costs attributable to customers who directly benefit from the service.

20 Q. Is Hawai'i Electric Light proposing rule changes that will impact other operating
21 revenues?

22 A. Yes. Hawai'i Electric Light is proposing the following rule changes:

1 1. The Company is proposing to modify Tariff Rule No. 7, Discontinuance and
2 Restoration of Service, to include language allowing the Company to assess a
3 \$25 charge for same day connection/reconnection service, to be consistent
4 with language in Hawaiian Electric's and Maui Electric's Tariff Rule No. 7.
5 Hawai'i Electric Light's existing Tariff Rule No. 7 allows for assessing a \$25
6 charge only for connection/reconnection service outside of regular business
7 hours and not for same day service. Refer to HELCO-108 for the revised
8 tariff reflecting this change.

9 2. The Company is proposing to modify Tariff Rule No. 8, Rendering and
10 Payment of Bills, by increasing the current Returned Payment charge from
11 \$16 to \$25. Supporting calculations for this change are shown in HELCO-
12 WP-907, pages 12-13. Refer to HELCO-108 for the revised tariff reflecting
13 this change.

14 Q. Why is Hawai'i Electric Light proposing to increase the Returned Payment Charge
15 to \$25?

16 A. With respect to the Returned Payment Charge, banks have increased charges to the
17 Company for processing returned payments, and the returned payment charges to
18 cost causers should likewise be increased. In addition, the proposed fee would be
19 consistent with returned payment fees that financial institutions currently charge
20 their customers. Consistent with the Company's efforts to align and standardize
21 processes with the tri-company reorganization, a uniform returned payment fee
22 across all three Companies would allow the customer service personnel to provide

1 better service and increase overall efficiency by not requiring employees to recall
2 and apply different fees for each company.¹⁰ As such, the returned payment charge
3 should be increased accordingly. It is anticipated that a similar proposal to increase
4 the returned payment fee to \$25 will be included in the next rate case for Hawaiian
5 Electric Company.

6 Q. How was the proposed Returned Payment Charge of \$25.00 per returned payment
7 determined?

8 A. As evidenced in HELCO-WP-907, page 13, the actual costs to process the returned
9 payment exceeds the proposed \$25 fee.¹¹ However, because the proposed \$25 fee
10 already represents a 56% increase from existing levels, the Company has decided not
11 to seek approval to assess its actual processing costs at this time, as this would result
12 in an even larger impact to customers who are assessed the fee.

13 Q. How were the average minutes calculated to arrive at the estimated time it takes to
14 process a returned payment?

15 A. Returned payments are managed and processed by the Company's Cashiers and
16 Credit Analysts. For Cashiers, the work involves identifying the account to apply
17 the returned fee, assessing the corresponding fee, reconciling the corresponding
18 customer's account, and reapplying and resetting the customer account balance to
19 reflect the returned payment. This process was tracked and required an average total
20 of 13 minutes to manage accordingly. For the Credit Analysts responsible for

¹⁰ The returned payment charge is currently \$22.00 for Hawaiian Electric. The returned check charge is \$25.00 for Maui Electric.

¹¹ HELCO-WP-907 p. 13 details estimated return payment fee handling costs of \$28.39 and \$31.45 based on actual wage costs and standard labor rate wage costs, respectively

1 managing the aging balances and delinquencies, all returned payments are reviewed
2 and, depending on each customer's account and reasons for the returned payment,
3 special handling may apply. The Credit Analyst will prepare the appropriate letter,
4 call the customer, or schedule a meeting to discuss the customer's account. The
5 level of effort and time by the Credit Analyst varies, but on average, it requires
6 approximately 10 minutes as calculated in HELCO-WP-907, page 13.

7 Q. Why is Hawai'i Electric Light proposing to assess the Service Establishment Charge
8 for same day connection/reconnection service?

9 A. This proposed change would allow Hawai'i Electric Light, compared to Hawaiian
10 Electric (\$25) and Maui Electric (\$20), to assess a \$25 charge for both same day
11 service and outside of regular business hours. As previously discussed, Hawai'i
12 Electric Light's existing Tariff Rule No. 7 allows for assessing a \$25 charge for only
13 connection/reconnection service outside of regular business hours and not for same
14 day service. Copies of the current Rule 7 for Hawai'i Electric Light, Hawaiian
15 Electric and Maui Electric are shown at HELCO-WP-907, pages 14 - 21.

16 Q. What methodology has Hawai'i Electric Light used to estimate its 2016 test year
17 other operating revenues?

18 A. The Company estimated other operating revenues by calculating the three year
19 (2013-2015) average of recorded revenues for all other operating revenue amounts
20 except for field collection charges and temporary facilities revenues as explained
21 below. Each average was then escalated by the annual customer growth rate, based
22 on the January 2016 Sales & Peak Forecast Average Number of Customers, as

1 shown in HELCO-214, page 1. The methodologies Hawai'i Electric Light used is
2 consistent with the methodology in Maui Electric's 2015 test year rate case in
3 Docket No. 2014-0318.

4 Q. With regards to field collections charges and temporary facilities revenues, how did
5 the Company estimate its test year 2016 other operating revenue?

6 A. In July 2016, Field Services stopped door-to-door collections. The department
7 identified this task as a safety risk – specifically, the risk of potential theft of the
8 cash payments collected by the Field Representatives. In the alternative, the
9 Companies offered additional payment options, including walk-in payment locations
10 at no additional cost to customers.¹² Since the Company has discontinued door-to-
11 door collections,¹³ the estimated revenue for 2016 was normalized over a three year
12 period, as shown in HELCO-WP-907. While periodically, there may be instances
13 where the Company performs field collection services, these will be rare occurrences
14 and were not included in the test year estimate.

15 For temporary facilities revenues, as shown in HELCO-WP-907, page 8, the
16 2016 test year estimate is based on a five-year average to properly account for timing
17 issues on the date temporary facility revenues are collected from customers to the
18 date the work is performed and costs are incurred. Since this resulted in a deficit
19 (i.e., on average there were more expenses incurred then revenues collected) the
20 proposed 2016 test year estimate is \$0, which is consistent with the Maui Electric

¹² Payments are now accepted at payment centers such as Foodland, Walgreen, Kmart, Whalers General Store and other locations. As an added benefit, fees associated with accepting these payments are being waived.

¹³ Representatives may still have to go to the customer's premises to hang door-hangers for communication and/or discontinue the electrical service.

1 2010 Test Year Stipulated Settlement Letter, Exhibit 1, page 15, filed in Docket
2 No. 2009-0163 on June 21, 2010.

3 With respect to energy late payment charge and OCARS late payment
4 charge, the Company proposed in Docket No. 2011-0219 (For Approval to Modify
5 Rule No. 8, Rendering and Payment of Bills), and the Commission approved (in
6 Decision and Order No. 30288 dated March 29, 2012) modification of the
7 methodology to calculate these late payment charges, due to the implementation in
8 late May 2012 of the new CIS.

9 Q. Has Hawai'i Electric Light incorporated the impact of the modification to determine
10 its test year estimates for energy and OCARS late payment revenues?

11 A. No. The current test year estimate is based on the three-year average post new CIS
12 system. As such, it includes the modified methodology to calculate late fees and
13 excludes the estimated revenue amount that would be recorded with the old legacy
14 system. As communicated in the Parties' Stipulated Settlement Letter to the
15 Commission dated March 12, 2012, the impact of the modification on energy and
16 OCARS late payment revenues is not significant and would result in a decrease of
17 energy and OCARS late payment revenues of approximately \$37,600 for all three
18 Companies combined (based on 2010 year data).

19 Q. Why has Hawai'i Electric Light used the methodology for late payment charge
20 described above to estimate its test year 2016 other operating revenues?

1 A. Hawai'i Electric Light used this methodology for all other operating revenue charges
2 to be consistent, to recognize recent recorded results, and to reflect expected
3 increases due to customer growth.

4 CUSTOMER DEPOSITS AND INTEREST ON CUSTOMER DEPOSITS

5 Customer Deposits

6 Q. What is Hawai'i Electric Light's estimate of average customer deposits for the 2016
7 test year?

8 A. Hawai'i Electric Light's estimate of average customer deposits for the 2016 test
9 year, as shown in HELCO-909, column C, is \$3,274,000. Customer deposits at the
10 beginning of the 2016 test year was \$3,224,000 and is estimated at \$3,325,000 at the
11 end of 2016 test year. See HELCO-909, column B.

12 Q. What are customer deposits?

13 A. Customer deposits are amounts the Company collects from customers as security for
14 their electric service. These customers are either new customers who have not
15 established their credit worthiness with the Company, or are past or existing
16 customers who have failed to maintain creditworthiness with the Company.

17 Q. When does Hawai'i Electric Light require a deposit?

18 A. A customer deposit is required in cases where the applicant for service cannot
19 establish credit by any of the other means allowed under Hawai'i Electric Light
20 Tariff Rule No. 5, Establishment and Re-establishment of Credit. The customer
21 deposit is held until the customer has established a record of twelve months of
22 continuous prompt payments, has established credit in accordance with Rule No. 5,

1 has closed the account, or if service has been terminated for nonpayment of the full
2 deposit and/or nonpayment of electric bills (in which case the deposit would be
3 applied to the unpaid bill balance).

4 Q. Are there any changes proposed regarding customer deposits?

5 A. No. In accordance with Rule 4.2.c.1. of General Order No. 7, Hawai'i Electric Light
6 will continue with the current policy, which sets the deposit at an amount equal to
7 the maximum estimated charge for service for two consecutive months in a
8 twelve-month period.

9 Q. How was Hawai'i Electric Light's estimate of customer deposits for the 2016 test
10 year derived?

11 A. The test year estimate of customer deposits was derived first by taking the recorded
12 2015 year-end customer deposit balance of \$3,224,000 and then increasing it by a
13 factor of 1.031 to determine an estimate of the 2016 year-end customer deposit
14 balance. See HELCO-WP-909, page 1. The test year estimate of customer deposits
15 was then derived from a simple average of the recorded year-end 2015 and estimated
16 year-end 2016 customer deposit balances of \$3,224,000 and \$3,325,000, respectively
17 which resulted in balance of \$3,274,000. See HELCO-909, columns B and C.

18 Q. How was the factor of 1.031 derived?

19 A. The factor represents the forecasted annual growth rate in customer deposits for
20 2016 based on the historical three-year average between 2013 and 2015, as shown on
21 HELCO-WP-909, page 1, lines 1 to 4. The above methodology for estimating

1 Hawai‘i Electric Light’s test year average customer deposits was utilized in Maui
2 Electric’s completed rate proceeding in Docket No. 2011-0092.

3 Q. How do customers benefit from customer deposits?

4 A. The customers benefit from the Company’s practice in securing customer deposits
5 by reducing uncollectible balances, thereby decreasing bad debt expense and 2016
6 test year revenue requirements, which translates into a benefit to all customers by
7 lowering their electric bills. Furthermore, customers who are assessed a customer
8 deposit receive interest on their deposit.

9 Interest on Customer Deposits

10 Q. What is Hawai‘i Electric Light’s 2016 test year estimate of interest on customer
11 deposits?

12 A. Hawai‘i Electric Light’s test year estimate of interest on customer deposits is
13 \$196,000. See HELCO-WP-909, page 1, line 8.

14 Q. How was the 2016 test year estimate of interest on customer deposits derived?

15 A. The 2016 test year estimate of interest on customer deposit was derived by
16 multiplying the average customer deposits for the 2016 test year of \$3,274,000 by a
17 6% interest rate to arrive at the \$196,000 test year estimate for interest on customer
18 deposits, as shown on HELCO-WP-909, page 1, line 8, column D. This
19 methodology is consistent with the calculation utilized in Hawai‘i Electric Light’s
20 last rate proceeding in Docket No. 2009-0164.

21 Q. Why is a 6% interest rate used by Hawai‘i Electric Light to pay to its customers for
22 customer deposits?

1 A. Hawai'i Electric Light pays 6% interest on customer deposits, in accordance with
2 Hawai'i Electric Light Tariff Rule No. 6 and Rule 4.2.c.2.a. of General Order No. 7.

3 Q. How do customers benefit from the interest on customer deposits?

4 A. The 6% interest earned on customer deposits is relatively high in comparison to
5 most, if not all, comparable rates offered by financial institutions in the current
6 economic environment.

7 REVENUE COLLECTION LAG DAYS

8 Q. What is Hawai'i Electric Light's estimate of revenue collection lag days for the 2016
9 test year?

10 A. Hawai'i Electric Light's estimate of revenue collection lag days for the 2016 test
11 year (as shown in HELCO-910, page 1, column E) is 39.3 days.

12 Q. What are revenue collection lag days?

13 A. Revenue collection lag days are the number of days between the provision of electric
14 service and the receipt of payment for that service. This lag represents the average
15 period of time over which the Company extends credit to its customers for electric
16 service delivered.

17 Q. How are revenue collection lag days calculated?

18 A. The revenue collection lag days are calculated by adding a fixed number of days
19 (representing the mid-point of the monthly bill) to a variable number that represents
20 the average amount of time it takes to bill a customer and receive payment for the
21 bill.

1 Q. In determining Hawai'i Electric Light's 2016 test year revenue collection lag days,
2 how many fixed and variable lag days were included in the calculation?

3 A. The fixed days for the 2016 test year are 15.5 and the variable days are 23.8. See
4 footnote on HELCO-WP-910, page 2.

5 Q. How does the 2016 test year estimate compare with the revenue collection lag days
6 calculation used in Hawai'i Electric Light's prior 2010 rate case in Docket No. 2009-
7 0164?

8 A. The methodology used to calculate the revenue collection lag days of 39.3 for the
9 2016 test year is consistent with the methodology used to calculate Hawai'i Electric
10 Light's lag days of 39.7 days to which the Consumer Advocate and the Company
11 agreed in the Parties' Stipulated Settlement Letter, filed on September 16, 2010, and
12 which the Commission approved in Decision and Order No. 30168 in Docket
13 No. 2009-0164.

14 Q. How is revenue collection lag days used in determining Hawai'i Electric Light's
15 2016 test year revenue requirements?

16 A. The revenue collection lag days are used in calculating Hawai'i Electric Light's
17 working cash component of rate base, which is used in the determination of Hawai'i
18 Electric Light's 2016 test year revenue requirement as explained by Ms. Teri Kam in
19 HELCO T-19.

20 SUMMARY

21 Q. Please summarize your testimony.

22 A. Customer Accounts Expense

1 Hawai'i Electric Light's 2016 test year O&M estimate for customer accounts is
2 \$9,525,000. These expenses reflect the Company's efforts to deliver affordable
3 energy services to customers on Hawai'i Island in an exceptional manner by
4 improving customer access, choices, and responsiveness; by implementing new
5 programs to meet customer expectations; and investing in technology to leverage
6 new functionality.

7 Other Operating Revenues

8 The 2016 test year estimate for Hawai'i Electric Light's other operating revenues at
9 present and proposed rates are \$1,095,000 and \$1,116,000, respectively.

10 Customer Deposits and Interest on Customer Deposits

11 The 2016 test year estimate for Hawai'i Electric Light's average customer deposits is
12 \$3,274,000. Hawai'i Electric Light's interest on customer deposits for the 2016 test
13 year is \$196,000.

14 Revenue Collection Lag Days

15 Hawai'i Electric Light's revenue collection lag days for the 2016 test year are 39.3
16 days.

17 Customer Service Department Staffing

18 The average employee count for Hawaiian Electric Customer Service employees that
19 are home-based on Hawai'i Island for the 2016 test year is 51.

20 Q. Does this conclude your testimony?

21 A. Yes, it does.

Hawaii Electric Light Company, Inc.

NATALIE EPENESA

EDUCATIONAL BACKGROUND AND EXPERIENCE

Business Address: Hawaii Electric Light Company, Inc.
1200 Kilauea Avenue
Hilo, Hawaii 96720

Current Position: Manager, Customer Relations (Tri- Company)
Hawaiian Electric Companies
(December 2014 - Present)

Previous Positions: Manager, Customer Service Department
Hawaii Electric Light Company
(December 2011 - December 2014)

Hotel Manager
Mauna Lani Bay Hotel & Bunagalows
(January 2009 - December 2011)

Director of Spa & Retail Operations
Mauna Lani Bay Hotel & Bungalows
(April 2006 - January 2009)

Director of Spa, Recreation & Retail Operations
Fairmont Hotels & Resorts
(May 2004 - April 2006)

Director of Revenue Management
Starwood Hotels & Resorts
(January 2000- May 2004)

Education: Brooks College
Fashion Design & Retail Merchandising

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Customer Service Department
Operation and Maintenance Expenses
(\$ Thousands)

NARUC Block	Reference	L/NL	A	B	C	D	E	
			2016 Operating Budget	Budget	(See HELCO-WP-903) Adjustments Normalization Ratemaking		=sum(A to D) 2016 Test Year Estimate	
1	Production	HELCO-901 p.2	L	\$ -	\$ -	\$ -	\$ -	\$ -
2	Production	HELCO-901 p.4	NL	-	-	-	-	-
3			Subtotal					
4	Transmission	HELCO-901 p.2	L	-	-	-	-	-
5	Transmission	HELCO-901 p.4	NL	-	-	-	-	-
6			Subtotal	-	-	-	-	-
7	Distribution	HELCO-901 p.2	L	-	-	-	-	-
8	Distribution	HELCO-901 p.4	NL	322	217	-	-	539
9			Subtotal	322	217	-	-	539
10	Customer Accounts	HELCO-901 p.3	L	-	-	-	-	-
11	Customer Accounts	HELCO-901 p.5	NL	8,653	(743)	67	2	7,979
12			Subtotal	8,653	(743)	67	2	7,979
13	Uncollectible Accounts	HELCO-901 p.5	NL	593	-	-	-	593
14	Total Customer Accounts		L	-	-	-	-	-
15	Total Customer Accounts	line 11+ line 13	NL	9,246	(743)	67	2	8,572
16			Total	9,246	(743)	67	2	8,572
17	Customer Services	HELCO-901 p.3	L	-	-	-	-	-
18	Customer Services	HELCO-901 p.5	NL	77	436	-	-	513
19			Subtotal	77	436	-	-	513
20	A&G	HELCO-901 p.3	L	-	-	-	-	-
21	A&G	HELCO-901 p.5	NL	65	-	-	-	65
22			Subtotal	65				65
23	Total Customer Service Department		L	-	-	-	-	-
24	Total Customer Service Department		NL	9,710	(90)	67	2	9,689
25			Grand Total	\$ 9,710	\$ (90)	\$ 67	\$ 2	\$ 9,689

Notes:

- Totals may not add exactly due to rounding.
- See O&M expense aggregation schedule at HELCO-1101 which incorporates lines 3, 6, 9, 15, and 18 above to arrive at the balances presented in the results of operation in the revenue requirement calculation. Revenue requirement calculation is presented in HELCO-2701.

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Customer Service Department
Labor Operation and Maintenance Expenses
(\$ Thousands)

		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
		2016	(See HELCO-WP-903)		=sum(A to D)	
		Operating	Adjustments		2016	
NARUC Block		Budget	Budget	Normalization	Rate-making	Test Year Estimate
Production Operation (B30)						
1	HC1 Cust Relations	\$ -	\$ -	\$ -	\$ -	\$ -
2	HC2 Field Svcs	-	-	-	-	-
3	HC3 Revenue Mgt	-	-	-	-	-
4	HC4 CS General	-	-	-	-	-
5	Subtotal	-	-	-	-	-
Production Maintenance (B31)						
6	HC1 Cust Relations	-	-	-	-	-
7	HC2 Field Svcs	-	-	-	-	-
8	HC3 Revenue Mgt	-	-	-	-	-
9	HC4 CS General	-	-	-	-	-
10	Subtotal	-	-	-	-	-
Transmission Operation (B32)						
11	HC1 Cust Relations	-	-	-	-	-
12	HC2 Field Svcs	-	-	-	-	-
13	HC3 Revenue Mgt	-	-	-	-	-
14	HC4 CS General	-	-	-	-	-
15	Subtotal	-	-	-	-	-
Transmission Maintenance (B33)						
16	HC1 Cust Relations	-	-	-	-	-
17	HC2 Field Svcs	-	-	-	-	-
18	HC3 Revenue Mgt	-	-	-	-	-
19	HC4 CS General	-	-	-	-	-
20	Subtotal	-	-	-	-	-
Distribution Operation (B34)						
21	HC1 Cust Relations	-	-	-	-	-
22	HC2 Field Svcs	-	-	-	-	-
23	HC3 Revenue Mgt	-	-	-	-	-
24	HC4 CS General	-	-	-	-	-
25	Subtotal	-	-	-	-	-
Distribution Maintenance (B35)						
26	HC1 Cust Relations	-	-	-	-	-
27	HC2 Field Svcs	-	-	-	-	-
28	HC3 Revenue Mgt	-	-	-	-	-
29	HC4 CS General	-	-	-	-	-
30	Subtotal	-	-	-	-	-

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Customer Service Department
Labor Operation and Maintenance Expenses
(\$ Thousands)

		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
		2016		(See HELCO-WP-903)		=sum(A to D)
		Operating	Adjustments		2016	Test Year
NARUC Block		Budget	Budget	Normalization	Rate-making	Estimate
Customer Accounts (B36)						
31	HC1 Cust Relations	-	-	-	-	-
32	HC2 Field Svcs	-	-	-	-	-
33	HC3 Revenue Mgt	-	-	-	-	-
34	HC4 CS General	-	-	-	-	-
35	Subtotal	-	-	-	-	-
Customer Service (B37)						
36	HC1 Cust Relations	-	-	-	-	-
37	HC2 Field Svcs	-	-	-	-	-
38	HC3 Revenue Mgt	-	-	-	-	-
39	HC4 CS General	-	-	-	-	-
40	Subtotal	-	-	-	-	-
A&G (B38, B39)						
41	HC1 Cust Relations	-	-	-	-	-
42	HC2 Field Svcs	-	-	-	-	-
43	HC3 Revenue Mgt	-	-	-	-	-
44	HC4 CS General	-	-	-	-	-
45	Subtotal	-	-	-	-	-
Grand Total						
47	Customer Service Department Labor Expense	\$ -	\$ -	\$ -	\$ -	\$ -

Notes:

- Totals may not add exactly due to rounding.
- Column A: HELCO-WP-101 (HELCO 2016 Rate Case Reports)
- Columns B, C, D: HELCO-WP-903

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Customer Service Department
Non-Labor Operation and Maintenance Expenses
(\$ Thousands)

		<u>A</u>	<u>B</u>	<u>C</u>		<u>D</u>	<u>E</u>
				(See HELCO-WP-903)			=sum(A to D)
		2016		Adjustments			2016
NARUC Block		Operating	Budget	Normalization	Rate-making		Test Year
		Budget					Estimate
Production Operation (B30)							
1	HC1 Cust Relations	\$ -	\$ -	\$ -	\$ -	\$ -	
2	HC2 Field Svcs	-	-	-	-	-	
3	HC3 Revenue Mgt	-	-	-	-	-	
4	HC4 CS General	-	-	-	-	-	
5	Subtotal	-	-	-	-	-	
Production Maintenance (B31)							
6	HC1 Cust Relations	-	-	-	-	-	
7	HC2 Field Svcs	-	-	-	-	-	
8	HC3 Revenue Mgt	-	-	-	-	-	
9	HC4 CS General	-	-	-	-	-	
10	Subtotal	-	-	-	-	-	
Transmission Operation (B32)							
11	HC1 Cust Relations	-	-	-	-	-	
12	HC2 Field Svcs	-	-	-	-	-	
13	HC3 Revenue Mgt	-	-	-	-	-	
14	HC4 CS General	-	-	-	-	-	
15	Subtotal	-	-	-	-	-	
Transmission Maintenance (B33)							
16	HC1 Cust Relations	-	-	-	-	-	
17	HC2 Field Svcs	-	-	-	-	-	
18	HC3 Revenue Mgt	-	-	-	-	-	
19	HC4 CS General	-	-	-	-	-	
20	Subtotal	-	-	-	-	-	
Distribution Operation (B34)							
21	HC1 Cust Relations	-	-	-	-	-	
22	HC2 Field Svcs	322	217	-	-	-	539
23	HC3 Revenue Mgt	-	-	-	-	-	
24	HC4 CS General	-	-	-	-	-	
25	Subtotal	322	217	-	-	-	539
Distribution Maintenance (B35)							
26	HC1 Cust Relations	-	-	-	-	-	
27	HC2 Field Svcs	-	-	-	-	-	
28	HC3 Revenue Mgt	-	-	-	-	-	
29	HC4 CS General	-	-	-	-	-	
30	Subtotal	-	-	-	-	-	

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Customer Service Department
Non-Labor Operation and Maintenance Expenses
(\$ Thousands)

		<u>A</u>	<u>B</u>	<u>C</u> (See HELCO-WP-903)		<u>D</u>	<u>E</u> =sum(A to D)
		2016		Adjustments			2016
NARUC Block		Operating		Normalization	Ratemaking		Test Year
		Budget	Budget				Estimate
Customer Accounts (B36)							
31	HC1 Cust Relations	1,620	(36)	-	-	-	1,584
32	HC2 Field Svcs	3,751	(813)	-	-	-	2,938
33	HC3 Revenue Mgt	2,060	122	4	-	-	2,187
34	HC4 CS General	1,221	(15)	63	2	-	1,270
35	Subtotal	8,653	(743)	67	2	-	7,979
Allowance for Uncollectible Accounts							
36	HC3 Revenue Mgt	593	-	-	-	-	593
37	Total Customer Accounts (B36)	9,246	(743)	67	2	-	8,572
Customer Service (B37)							
38	HC1 Cust Relations	-	-	-	-	-	-
39	HC2 Field Svcs	8	506	-	-	-	513
40	HC3 Revenue Mgt	-	-	-	-	-	-
41	HC4 CS General	70	(70)	-	-	-	-
42	Subtotal	77	436	-	-	-	513
A&G (B38, B39)							
44	HC1 Cust Relations	-	-	-	-	-	-
45	HC2 Field Svcs	-	-	-	-	-	-
46	HC3 Revenue Mgt	65	-	-	-	-	65
47	HC4 CS General	-	-	-	-	-	-
48	Subtotal	65	-	-	-	-	65
Grand Total							
49	Customer Service Department Labor Expense	\$ 9,710	\$ (90)	\$ 67	\$ 2	\$	\$ 9,689

Notes:

- Totals may not add exactly due to rounding.
- Column A: HELCO-WP-101 (HELCO 2016 Rate Case Reports)
- Columns B, C, D: HELCO-WP-903

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Customer Service Department
Total Operation and Maintenance Expenses by Responsibility Area
(\$ Thousands)

RA	Description	A	B	C	D	E	F	G	H	I	J	K	
		2010 Recorded	2011 Recorded	2012 Recorded	2013 Recorded	2014 Recorded	2015 Recorded	2016 Operating Budget	(See HELCO-WP-903)	Adjustments		2016 Test Year Estimate	
									Budget	Normalizati	on	Rate	mak
1	HC1 Cust Relations	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 743	\$ 1,620	\$ (36)	\$ -	\$ -	\$ 1,584	
2	HC2 Field Svcs	-	-	-	-	-	1,225	4,081	(90)	-	-	3,990	
3	HC3 Revenue Mgt	-	-	-	-	-	570	2,718	122	4	-	2,844	
4	HC4 CS General	-	-	-	-	-	103	1,291	(85)	63	2	1,270	
5	HCA Administrative (INACTIVE)	470	402	1,873	796	1,008	(191)	0	-	-	-	0	
6	HCB Customer Service Support (INACTIVE)	-	-	-	-	30	123	-	-	-	-	-	
7	HCC Customer Accounts (INACTIVE)	0	(0)	0	4	0	11	-	-	-	-	-	
8	HCE Educational Services (INACTIVE)	-	1	3	-	-	-	-	-	-	-	-	
9	HCH Revn Acct-Hilo Dist-Cust Serv (INACTIVE)	921	2,647	4,130	5,604	4,046	3,491	0	-	-	-	0	
10	HCK Revn Acct-Kona District (INACTIVE)	1,366	1,553	1,961	1,963	1,980	1,339	0	-	-	-	0	
11	HCR Rev Acct-Hilo Dist-Field Serv (INACTIVE)	1,255	1,393	1,621	1,669	1,556	939	0	-	-	-	0	
12	HCS Commercial Services (INACTIVE)	0	-	-	321	681	430	0	-	-	-	0	
13	HCW Revenue Acct-Waimea District (INACTIVE)	702	752	1,165	1,191	1,123	688	0	-	-	-	0	
14	Grand Total Customer Service Department	\$ 4,715	\$ 6,749	\$ 10,754	\$ 11,548	\$ 10,423	\$ 9,471	\$ 9,710	\$ (90)	\$ 67	\$ 2	\$ 9,689	

Notes:

- Totals may not add exactly due to rounding.
- Columns A - G = HELCO-902, p.2
- Columns A - G: HELCO-WP-101 (HELCO 2016 Rate Case Reports)
- Columns H, I, J: HELCO-WP-903

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Customer Service Department
Labor and Non-Labor Operation and Maintenance Expenses by Responsibility Area
(\$ Thousands)

RA	Description	L/NL	(See HELCO-WP-903)											=sum(G to J) 2016 Test Year Estimate	
			2016							Adjustments					
			2010 Recorded	2011 Recorded	2012 Recorded	2013 Recorded	2014 Recorded	2015 Recorded	Operating Budget	Budget	Normalization	Ratemaking			
1	HC1 Cust Relations	L	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2	HC2 Field Svcs	L	-	-	-	-	-	-	-	-	-	-	-	-	-
3	HC3 Revenue Mgt	L	-	-	-	-	-	-	-	-	-	-	-	-	-
4	HC4 CS General	L	-	-	-	-	-	-	-	-	-	-	-	-	-
5	HCA Administrative (INACTIVE)	L	214	163	167	165	257	158	0	-	-	-	-	-	0
6	HCB Customer Service Support (INACTIVE)	L	-	-	-	-	-	-	-	-	-	-	-	-	-
7	HCC Customer Accounts (INACTIVE)	L	-	-	-	-	-	-	-	-	-	-	-	-	-
8	HCE Educational Services (INACTIVE)	L	-	-	-	-	-	-	-	-	-	-	-	-	-
9	HCH Revn Acct-Hilo Dist-Cust Serv (INACTIV	L	677	691	884	901	987	583	0	-	-	-	-	-	0
10	HCK Revn Acct-Kona District (INACTIVE)	L	761	860	1,081	1,109	1,095	672	0	-	-	-	-	-	0
11	HCR Rev Acct-Hilo Dist-Field Serv (INACTIV]	L	601	651	782	839	767	389	0	-	-	-	-	-	0
12	HCS Commercial Services (INACTIVE)	L	-	-	-	202	426	280	0	-	-	-	-	-	0
13	HCW Revenue Acct-Waimea District (INACTIV	L	426	444	685	625	605	330	0	-	-	-	-	-	0
14	Subtotal Customer Service Department Labor	L	2,680	2,809	3,598	3,841	4,136	2,412	0	-	-	-	-	-	0
15	HC1 Cust Relations	NL	-	-	-	-	-	743	1,620	(36)	-	-	-	-	1,584
16	HC2 Field Svcs	NL	-	-	-	-	-	1,225	4,081	(90)	-	-	-	-	3,990
17	HC3 Revenue Mgt	NL	-	-	-	-	-	570	2,718	122	4	-	-	-	2,844
18	HC4 CS General	NL	-	-	-	-	-	103	1,291	(85)	63	2	-	-	1,270
19	HCA Administrative (INACTIVE)	NL	256	239	1,706	631	751	(349)	0	-	-	-	-	-	0
20	HCB Customer Service Support (INACTIVE)	NL	-	-	-	-	30	123	-	-	-	-	-	-	-
21	HCC Customer Accounts (INACTIVE)	NL	0	(0)	0	4	0	11	-	-	-	-	-	-	-
22	HCE Educational Services (INACTIVE)	NL	-	1	3	-	-	-	-	-	-	-	-	-	-
23	HCH Revn Acct-Hilo Dist-Cust Serv (INACTIV	NL	244	1,956	3,247	4,703	3,059	2,908	0	-	-	-	-	-	0
24	HCK Revn Acct-Kona District (INACTIVE)	NL	605	694	880	855	885	667	0	-	-	-	-	-	0
25	HCR Rev Acct-Hilo Dist-Field Serv (INACTIV]	NL	654	742	839	830	789	550	0	-	-	-	-	-	0
26	HCS Commercial Services (INACTIVE)	NL	0	-	-	119	255	150	0	-	-	-	-	-	0
27	HCW Revenue Acct-Waimea District (INACTIV	NL	276	308	480	565	518	358	0	-	-	-	-	-	0
28	Subtotal Customer Service Department Non-Labc	NL	2,035	3,940	7,156	7,708	6,287	7,058	9,710	(90)	67	2	-	-	9,689
29	Grand Total Customer Service Department		\$ 4,715	\$ 6,749	\$ 10,754	\$ 11,548	\$ 10,423	\$ 9,471	\$ 9,710	\$ (90)	\$ 67	\$ 2	\$ 9,689		

Notes:

- Totals may not add exactly due to rounding.
- Columns A-G: HELCO-WP-101 (HELCO 2016 Rate Case Reports)
- Columns H, I, J: HELCO-WP-903

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Customer Accounts O&M Expense by NARUC Account
Labor and Non-Labor Expenses
(\$ Thousands)

Line	Acct	Account Description	A	B	C	D	E	F	G	H	I	J	K
			Recorded						2016	Adjustments			2016
			2010	2011	2012	2013	2014	2015	Budget	Budget	Normalization	Rate-making	Estimate
(See HELCO-WP-903)													=sum(G to J)
Customer Accounts													
901 SUPERVISION- CUSTOMER ACCOUNTS													
1		Labor	\$ 141	\$ 133	\$ 174	\$ 157	\$ 239	\$ 153	\$ 0	\$ (0)	\$ -	\$ -	\$ 0
2		Non-Labor	34	49	1,441	474	507	(322)	478	(128)	63	-	413
3		Subtotal	175	182	1,615	631	747	(169)	478	(128)	63	-	413
902 METER READING EXPENSES													
4		Labor	627	688	715	744	621	360	12	(1)	-	-	11
5		Non-Labor	340	412	464	411	553	932	3,597	(2,216)	-	-	1,381
6		Subtotal	967	1,100	1,179	1,155	1,174	1,292	3,609	(2,217)	-	-	1,393
903 CUSTOMER RECORDS & COLLECT EXP													
7		Labor	1,615	1,735	2,400	2,192	2,203	1,310	37	(3)	-	-	34
8		Non-Labor	1,458	1,606	2,200	3,651	3,209	3,987	4,808	1,603	4	2	6,417
9		Subtotal	3,073	3,341	4,600	5,844	5,412	5,296	4,844	1,600	4	2	6,451
Total Customer Accounts without Uncollectible Accounts													
10		Labor	2,383	2,555	3,290	3,093	3,063	1,822	49	(4)	-	-	46
11		Non-Labor	1,832	2,068	4,104	4,537	4,269	4,597	8,883	(741)	67	2	8,212
12		Total	\$ 4,214	\$ 4,623	\$ 7,394	\$ 7,629	\$ 7,333	\$ 6,419	\$ 8,932	(744)	67	2	\$ 8,257
904 UNCOLLECTIBLE ACCOUNTS													
13		Labor	-	-	-	-	-	-	-	-	-	-	-
14		Non-Labor	(1,213)	316	944	1,165	(140)	1,044	593	-	-	-	593
15		Subtotal	(1,213)	316	944	1,165	(140)	1,044	593	-	-	-	593
Customer Accounts													
16		Labor	2,383	2,555	3,290	3,093	3,063	1,822	49	(4)	-	-	46
17		Non-Labor	618	2,384	5,048	5,702	4,129	5,641	9,476	(741)	67	2	8,805
18		Grand Total	\$ 3,001	\$ 4,939	\$ 8,338	\$ 8,795	\$ 7,192	\$ 7,463	\$ 9,525	(744)	\$ 67	\$ 2	\$ 8,850

Hawai'i Electric Light 2010 Test Year Rate Case - Final Decision and Order (Present rates)

19	Customer Accounts		
20	Labor		2,346
21	Non-labor		1,386
22	Total		<u>\$ 3,732</u>
23	Allowance for Uncollectible Accounts		<u>\$ 749</u>

Notes:

- Totals may not add exactly due to rounding.
- Columns B - H : HELCO-WP-101 Rate Case Summary Report by NARUC
- Lines 22 and 23: See Exhibit 1A, pages 20, 25, and 30 of Hawai'i Electric Light's Revised Schedules Resulting from Decision and Order No. 30168, filed on February 21, 2012 in Docket No. 2009-0164. As shown on Exhibit 1A, page 20, an austerity adjustment of -\$365,000 was not allocated to the NARUC Block of Accounts. On April 4, 2012, by Order No. 30301, the Commission approved Hawai'i Electric Light's revised results of operations, supporting schedules, and tariffs filed on February 21, 2012.

HAWAII ELECTRIC LIGHT COMPANY, LTD
COST CONTROLS AND EFFICIENCY MEASURES - COMPANY SUMMARY

(A) Item	(B) Timeframe of Implementation	(C) Frequency of Cost Savings	(D) Approximate Cost Savings in 2013	(E) Approximate Cost Savings in 2014	(F) Approximate Cost Savings in 2015	(G) Estimated Cost Savings in 2016 TY	(H) Cost Savings Reflected in 2016 Operating Budget?	(I) Type of Measure	(J) Description	(K) Customer Benefits	(L) Department	(M) Reference
1	2016	Ongoing	N/A	N/A	N/A	\$ 21,000	No	Containment	Contract review of collection services for additional vendor	Reduction in costs related to collection of past due balances	Customer Service - Revenue Management	HELCO-WP-913B, p.63
2	2015	Ongoing	N/A	N/A	N/A	\$ 33,512	Yes	Cost Containment	Push eBill technology	Implement push bill technology which reduces the related cost to sort, print, and mail customer billing	Customer Service - Revenue Management	HELCO-WP-913B, p.11
3	2015	Ongoing	N/A	N/A	\$ 17,333	\$ 120,286	Yes	Cost Containment	Elimination of additional temporary agency cashier in Kona beginning in September 2015 and the elimination of the Cashier position in Waimea starting in May 2016.	Reduction in costs related to processing payments	Customer Service - Revenue Management	HELCO-WP-904, p1-2
4	2016	Ongoing	N/A	N/A	N/A	\$ 52,000	Yes	Cost Containment	Elimination of the Mail Clerk temporary hire in Hilo	Reduction in costs related to processing mail	Customer Service - Revenue Management	Hourly Rate of \$25 times 2080 hours (\$25x2080=\$52,000)
5	2016	Ongoing	N/A	N/A	\$ 10,805	\$ 63,355	Yes	Cost Containment	Implementation of Shared Services for Billing Work	Reduction in costs related to processing bills	Customer Service - Revenue Management	HELCO-WP-904, p3-4
6	2014	Ongoing	N/A	\$ 601	\$ 838	\$ 881	No	Cost Containment	Increasing use of electronic transmission mediums like e-mail, scanned documents resulting in decrease volume of paper that are shredded annually	Reduction in costs related to paper/document shredding	Customer Service - Revenue Management	HELCO-WP-913B, p.35
7	2014	Ongoing	\$ 9,652	\$ 15,941	\$ 19,544	\$ 19,539	No	Cost Containment	Decrease in security guard outside services with decreasing volume of walk-in payment	Reduction in outside costs related to security services	Customer Service - Revenue Management	HELCO-WP-913B, p. 36
8	2014	Ongoing	N/A	N/A	N/A	\$ 2,742	No	Cost Containment	Decrease in armored car services as a result of the closure of the Waimea Payment Office	Reduction in outside costs related to security services	Customer Service - Revenue Management	HELCO-WP-913B, p.34
9	2015	Ongoing	N/A	\$ -	\$ -	\$ 9,084	Yes	Cost Containment	Implementation of Real Time Credit Card payment posting in Customer Information System	Reduction in call volume	Customer Service - Revenue Management	Estimated 1,200 calls deflected x \$7.57 cost/call (1200 x \$7.57 = \$9,084) Please refer to HELCO-WP-904, p 5 for cost/call
10	2015	Ongoing	N/A	N/A	N/A	Savings are included above in item #3	Yes	Efficiency	Implementation of Additional Payment Options	Reduction in costs related to processing payments	Customer Service - Revenue Management	See item #3
11	2016	Ongoing	N/A	N/A	\$ -	\$ 31,000	Yes	Efficiency	Implementation of Shared Services for Credit Related Work	Reduction in costs related to managing delinquent accounts and reducing the company's uncollectible account expense	Customer Service - Revenue Management	2010 TY Bad Debt Expense of \$749k less 2016 TY Proposed Expense of \$593k less Hawaiian Electric Credit ICB costs of \$125k (\$749k-593-125=\$31k)
12	2015	Ongoing	N/A	N/A	N/A	\$ 61,000	Yes	Cost Containment	Shared Services- Customer Care Supervisor (Maui and Hawaii Island)	Reduction in labor cost	Customer Service- Customer Relations	HELCO-904A
13	2016	Ongoing	N/A	N/A	N/A	\$ 158,950	Yes	Cost Containment	Virtual Contact Center -Reduction on FTE billed to call center	Reduction in labor cost	Customer Service- Customer Relations	HELCO-904A
14	2013	Ongoing	N/A	\$ 41,917	\$ 184,421	\$ 91,469	Yes	Cost Avoidance	IVR project results in deflection of calls and increased service level	Reduction in time spent answering customer calls allows for employees to better service customers	Customer Service- Customer Relations	HELCO-WP-904 p. 5

HAWAII ELECTRIC LIGHT COMPANY, LTD
COST CONTROLS AND EFFICIENCY MEASURES - COMPANY SUMMARY

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)
Item	Timeframe of Implementation	Frequency of Cost Savings	Approximate Cost Savings in 2013	Approximate Cost Savings in 2014	Approximate Cost Savings in 2015	Estimated Cost Savings in 2016 TY	Cost Savings Reflected in 2016 Operating Budget?	Type of Measure	Description	Customer Benefits	Department	Reference
15	2016	Ongoing	N/A	N/A	N/A	\$ 31,000	Yes	Cost Containment	Field Supervisor - Align Leadership with one supervisor for Hawaii Island	Reduction in labor cost	Customer Service-Field Services	HELCO-904A
16	2012	Ongoing	\$ 47,541	\$ 97,932	\$ 151,298	\$ 175,789	Yes	Cost Avoidance	Through training and rerouting, Meter Readers are doing more reads	Doing more work with the similar number of Meter Readers	Customer Service-Field Services	HELCO-WP-904 p. 11-12
17	2015	Ongoing	N/A	N/A	\$ 61,000	\$ 365,701	Yes	Efficiency	Through training, implementation of best practices, and shared services	Reduction in labor cost	Customer Service	HELCO-WP-904, p. 13-18
			\$ 57,193	\$ 156,391	\$ 445,239	\$ 1,237,308			Subtotal		Customer Service	

* Non-quantifiable savings or difficult to quantify at this time

Cost Controls and Efficiency Measures

Customer Service continuously strives to help Hawai'i Electric Light customers by finding ways to control costs and improve work processes with efficiencies. While strides for improvements in customer service are being made, the Company is also working to manage O&M costs and finding ways to lower costs and/or avoid future cost increases. Customer Service's cost control efforts impacting the 2016 test year estimate consists of cost controls and efficiency measures as described below, and are also summarized in HELCO-904 Cost Control Summary.

Cost Controls

For purposes of this discussion, "cost controls" refers to sustainable measures that reduce costs. The cost control efforts within Customer Service include measures in the areas of:

- Collection Services;
- Reduction in Paper Billing Costs through Paperless Billing Technology;
- Elimination of the Cashier position in Waimea and temporary agency position in Kona;
- Elimination of the Mail Clerk position in Hilo;
- Implementation of Shared Services for Billing Work;
- Decrease in Annual Shredding;
- Decrease in Security Guard Services;
- Decrease in Armored Car services with the closure of Waimea payment office

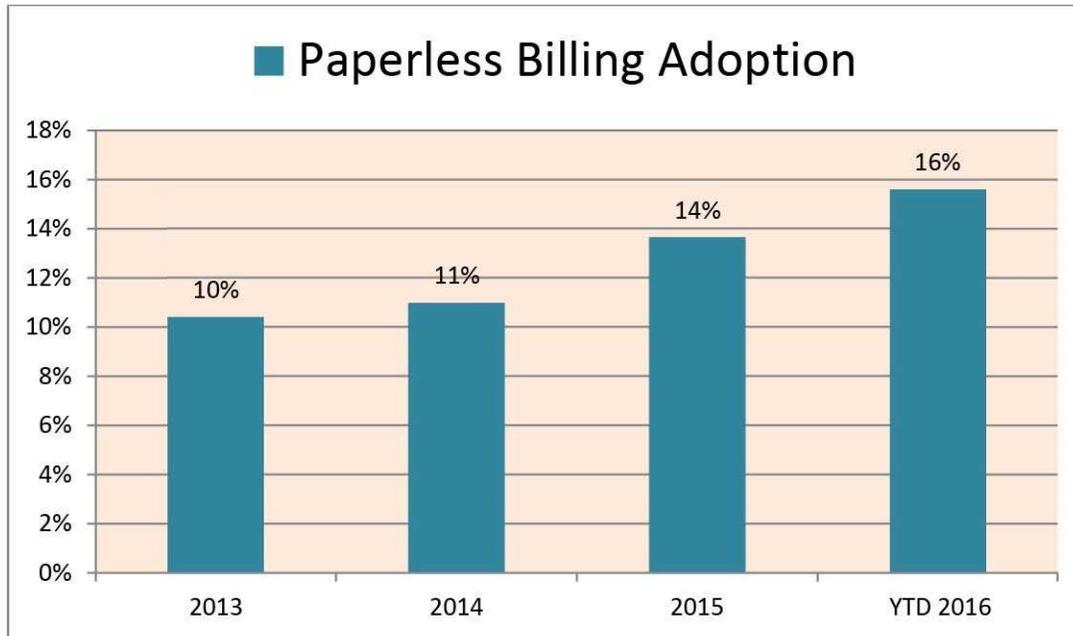
Collection Services

Customer Service continues to perform periodic reviews of existing contracts to explore cost saving opportunities and minimize costs accordingly. Through competitive bidding, as of January 1, 2016, the Company was able engage two collection agency vendors, Aargon and Medcah, and negotiated lower fees. An important benefit resulting from the engagement of these two new collection agencies is that the Company now has access to each agency's internal database. This provides the Company the ability to track and monitor the status of an account and update account information directly, thereby minimizing the need for calls to and from the collection agency. In addition, each agency is able to remit collected payments electronically to the Company. Furthermore, the engagement of multiple collection agencies allows the Company to select the appropriate vendor for a particular collection effort, increasing the potential for collections on delinquent accounts and reducing bad debt expense. For 2016, the Company is anticipating savings of approximately \$21,000 (see HELCO-WP-913B, p.61) and while collection agency fees with prior agencies will continue to incur for prior collection activity, the Company expects to incur lower fees in subsequent years.

Reduction in Paper Billing Costs through Paperless Billing Technology

As explained in Maui Electric's 2015 test year rate case in Docket No. 2014-0318, Company successfully completed the Paperless Billing Project which enhanced the existing e-mail notification to customers who are on paperless bill. The enhanced e-mail provides customers information on the amount due, due date and the ability to view their e-bill online via a secured link without going to a Company website account portal. The paperless billing project also

provides customers the ability to pay their bill directly via another link within the body of secured e-mail and formatted for mobile devices. The CIS system was also enhanced to allow CSR's to easily enroll customers with a one-click enrollment process which encourages customers to sign up for electronic billing and opt-out of receiving a physical bill through the mail. This project is expected to continue to reduce the related cost to mail, sort and print bills, and is estimated to save the Company approximately \$34,000 in the 2016 test year.

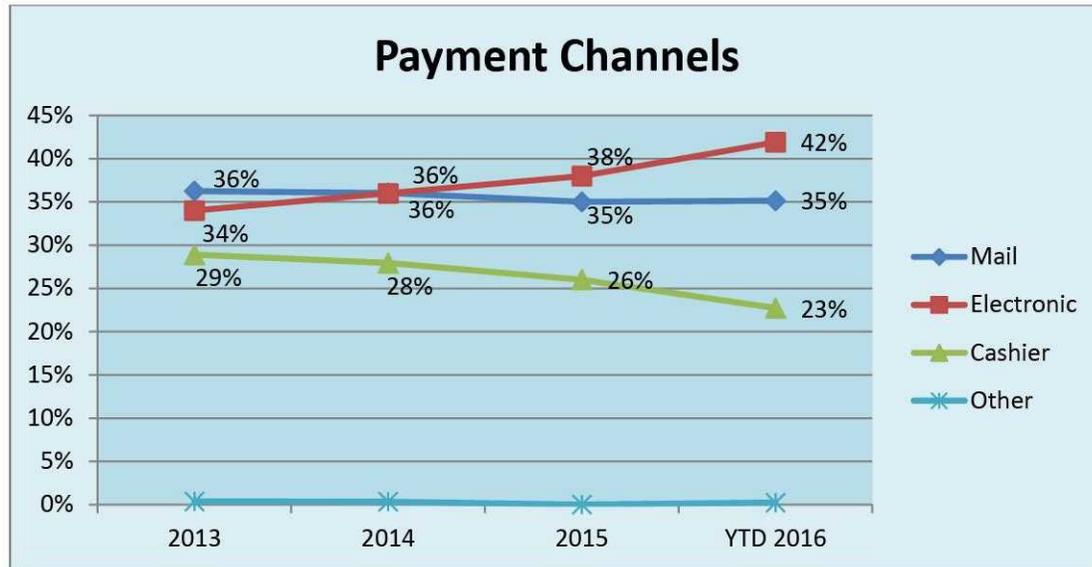


Elimination of the Cashier position in Waimea and Temporary Agency Cashier in Kona

As explained in Docket No. 2014-0318 and noted below, the Companies were actively engaged in leveraging the Companies' existing relationship with payment vendor Western Union ("WU"), and beginning in 2014, the Company completed several phases of the Real-time Credit Card ("RTCC") implementation project. This was the first step in the Company's plans to provide a suite of online/mobile self-service options. Prior to implementation of this project, the Companies were not able to send customer information to WU for validation purposes, which resulted in unidentified payments requiring exception processing by various personnel. The Companies also adopted the use of the WU Notes posting capability and its integration to the CIS in 2015. The Notes posting capability allows WU to relay payment information throughout the day, in real-time, directly to the Companies' CIS, eliminating the need for the call to the customer care center and at the same time, automatically creating a note on the customer's account to trigger an update in the CIS to avoid a disconnection order or to issue a reconnection request.

The implementation of the RTCC project along with the subsequent phases, including various process improvements in the payment processing division, has resulted in a decrease in the volume of walk in payments at various payment locations at Hawai'i Electric Light. As shown in the chart below, electronic payments have been increasing with a corresponding overall

decrease in walk-in payment processed by the Cashiers. As a result, the temporary agency hire cashier in Kona was eliminated in August 2015 and as of May 2, 2016, with the decrease in walk-in volume in Waimea, this payment center was closed. The estimated savings is \$120,000 as noted in HELCO-904.



Elimination of the Mail Clerk Position in Hilo

The decrease in walk-in payments as shown in the chart above, as well as the decrease in interoffice and external mail volume for Hawai'i Electric Light, resulted in the re-evaluation of the need for the temporary agency hire Mail Clerk position in Hilo. Due to, among other things, increased use of electronic mail, scanned document capabilities, and electronic signatures and approvals, interoffice mail as well as external mail volume decreased such that the need for two mail runs during the day was reduced to one mail run. As such, the reduced the number of hours required for mail processing along with the decreased walk-in volume resulted in the elimination of the Mail Clerk Position in Hilo. The existing Cashier absorbed the related mail clerk duties with an estimated savings of \$52,000 in the 2016 test year (See HELCO-904).

Implementation of Shared Services for Billing Work

With the Customer Service Department alignment activities in 2015, processes were reviewed and evaluated. In many areas, new practices were implemented across all three companies resulting in increased efficiency and improved services for our customers. In October 2015, one of the three Billing Clerks moved to another division in the Customer Service Department, leaving a vacant position in Billing for Hawai'i Electric Light. With the Customer Service Department reorganization and ability to share resources across all three companies, the existing work previously performed by the incumbent billing clerk was absorbed by the existing billing clerks at Maui Electric, without incurring additional overtime or cost at Maui Electric. While the related costs are allocated to Hawai'i Electric Light, the allocated costs are less than the cost of the incumbent billing clerk. The implementation of shared services for the related billing work has resulted in an estimated savings of \$63,355 in the 2016 test year as shown in HELCO-WP-904, pages 3-4).

Decrease in Annual Shredding Costs

Due to the Company's effort in increasing the use of electronic transmission mediums like e-mail, scanned documents, electronic signatures, etc., it has contributed to a decrease in the volume of paper that is shredded annually. As shown in HELCO-913B, p. 35, there is a corresponding savings estimate of \$881 for the 2016 test year.

Decrease in Security Guard Services

The decline in walk-in payment volume as shown in the Payment Channels chart above also contributed to the decrease in security guard services. In prior years, with the volume of customers walking into the Hilo payment office (walk-in volume peak in 2012), it necessitated a need for a security guard in the payment office. The corresponding decrease in walk-in payments from 2013, 2014, 2015, and 2016 TY at 29%, 28%, 26%, and 23%, respectively resulted in \$9,652, \$15,941, \$19,544, and \$19,539 in cost savings accordingly due to the reduced need for a security guard.

Decrease in Armored Car services

As previously noted, in line with the company's strategic goal to provide additional options for customers, which includes re-channeling payments to other Western Union payment locations, on-line channels, etc., it has resulted in the decline in walk-in payment volume as shown in the Payment Channels chart above. The resulting decrease sufficiently allowed the company to close its Waimea payment office with related decreased cost for armored car services at approximately \$3,000 in the 2016 test year as shown in HELCO-913B, p. 34.

Efficiency Measures

"Efficiency" measures refer to sustainable efforts that improve operating efficiency. Efficiency efforts within Customer Service include measures related to:

- Implementation of the Real Time Credit Card ("RTCC") project;
- Implementation of Additional Payment Options; and
- Implementation of Shared Service for Credit Related Work
- Change in Role of Supervisor, Customer Relations
- Implementation of Shared Service for CSR's
- Implementation of IVR Self- Service Options
- Change in Role of Supervisor, Field Services
- Reduction in Overtime Labor Costs:

Implementation of Real Time Credit Card Project

As explained in Docket No. 2014-0318, and as discussed in the testimony, by leveraging the Companies' existing relationship with payment vendor WU, beginning in 2014, the Company completed several phases of the ongoing RTCC implementation project. This is the first step in the Hawaiian Electric Companies' plans to provide a suite of online/mobile self-service options, including a future mobile application that includes text capabilities.

The implementation of the RTCC project allows the Company to send customer information to WU for validation purposes and to use WU's Notes Posting capability, including its integration to the CIS. As a result, payment information is relayed throughout the day, in real-time, directly to the Companies' CIS, thereby eliminating the need for the customer to contact the Call Center, which results in an estimated saving of approximately \$9,084 in the 2016 test year as shown in HELCO-904. In addition, use of this payment method automatically triggers a reconnection request if necessary or voids the corresponding disconnection order.

Implementation of Additional Payment Options

As previously noted, Customer Service continues to perform periodic reviews of existing contracts to explore cost saving opportunities. In 2015, through competitive bidding, the Company was able to secure lower fees that have been passed on to customers through existing payment vendor, WU. Effective January 1, 2016, customers who wish to pay their electric bills in-person at any of the 25 participating WU locations throughout Hawai'i Island will be able to do so with no fees to the customer and a reduced \$.71 per transaction for the Company. The additional fees of \$11,307 will be offset by the cost savings noted above with the elimination of the cashiers in Waimea and reduction in staffing in Kona.

In addition, as of February 1, 2016, for those customers who prefer to pay their bills by credit card, the related fees dropped to \$1.99 per transaction for residential customers, down from \$2.95 in 2014 and \$4.95 previously. Payment options were also enhanced to include online payments initiated from the Company's website. This additional payment option offering increased the number of electronic payment adoption by 3% since the end of 2015. The related savings are included in the elimination of the Waimea Cashier and the additional temporary agency hire cashier in Kona.

Implementation of Shared Services for Credit Related Work

The Customer Service Department alignment activities in 2015 also provided opportunities to align credit related processes. For Maui Electric and Hawai'i Electric Light, credit related work was performed by various personnel. Starting in late 2015, all credit related work transitioned to Hawaiian Electric's credit division. While Hawai'i Electric Light is now allocated intercompany billings accordingly, overall, the Companies have not incurred any additional costs to manage both Hawai'i Electric Light and Maui Electric credit work as a result of process improvement efforts at Hawaiian Electric. This change resulted in the implementation of best practices across all three Companies and yielded increased efficiencies and improved services for our customers.

The consolidated goal of the Companies is to reduce overall bad debt expense, and, in fact, through the credit division's efforts since 2015, the Companies have reduced their bad debt expense from \$749,000 to \$593,000, which is an estimated savings of \$156,000. This savings is offset by higher intercompany billing of \$125,000, resulting in total net estimated savings of \$31,000.

Change in Role of Supervisor, Customer Relations

As part of the Company's overall goal to improve overall customer satisfaction and to become a trusted energy partner, the Customer Service Department began its reorganization in January 2015. Part of the reorganization included changing the role of the Customer Relations Supervisor to be responsible for the following:

- Building and sustaining positive customer interactions by defining and explaining the overall Customer Service Department vision and strategy as it relates to customer satisfaction;
- Developing processes and procedures that consider different ways to satisfy customers and their changing needs;
- Developing and executing processes that ensure compliance with Company tariffs and government regulations, such as the Fair and Accurate Credit Transactions Act;
- Coaching and working with Customer Service Representative ("CSR") to deliver positive customer interactions.

In previous years the Companies employed a supervisor for each island to lead and support the customer care teams. As the Companies worked on streamlining their processes, planning for virtualization and developing efficiencies, they decided to employ one supervisor for both Hawai'i Island and Maui. This change was made to increase productivity and lower costs while also providing consistent leadership and direction and improved customer experience. To ensure that the Supervisor was supported in this new role, the Companies utilized existing Customer Assistance Representative positions and repurposed existing CSR positions to Lead Customer Service Representative ("Lead CSR") positions in both Hawai'i Island and Maui. Since the reorganization and the new role of the Customer Relations Supervisor, the Companies have substantially increased their service levels, improved efficiencies and saved in labor cost of approximately \$61,000.

Reduction in Customer Service Representatives

One of the many advantages of the reorganization was the ability for leadership to focus on improving each process area. With the Supervisor and Lead CSRs in place, the focus was solely on servicing the customer calls. As the Companies improved their service levels, they were able to increase capacity at Hawai'i Island and Maui customer care centers. The increased capacity allowed for the Companies to start phase one of the virtualization project. To start this process, the call center agents were trained to receive and service the payment arrangement calls that Hawaiian Electric had previously transferred to an outside vendor, Donnelly Service (ProCore). The Companies slowly transitioned the calls starting mid-February. Starting April 1st, 2016 all customer service calls was rerouted back to Hawaii customer care centers. Hawaii Electric Light together with Maui Electric assisted in taking payment arrangement calls that were previously outsourced. These additional calls were rerouted to existing staff at no additional cost. This transition of calls translated into a saving of \$159,000 for Hawai'i Island by decreasing the allocated cost to Hawai'i Island from 12 CSR's to 10 in the 2016 test year.

Interactive Voice Response (“IVR”) Self- Service Options

In July 2014, a new IVR system was installed at Hawaii Electric Light in October 2014. As part of the company’s overall strategy to improve customer satisfaction, the IVR plays an integral role by providing customers with more efficient and self-service options. By adding the IVR system, customers were able to complete certain transactions solely through this system without the need to speak to an agent. This not only increased customer convenience, but also allowed CSR’s more time to assist customers with more complex issues. The IVR allows customers to access their accounts before and after business hours and on weekends and holidays. The result has saved the Company \$317,807, which corresponds to the cost of calls that otherwise would have required CSR’s to answer these calls. Please see HELCO-WP-904 pg. 5

Change in Role of Supervisor, Field Services Role

Prior to 2016, two Field Service Supervisors were stationed Hilo and Kona. The Kona Supervisor was responsible for operations in Kona and Waimea. In February of 2016, a Supervisor was hired to oversee Field Service operations in Hilo, Waimea and Kona. This reorganization was done strategically to help align operations in all three locations. The alignment of operations will simplify future system changes and upgrades, and make the change process more efficient. As a side benefit, one less Supervisor will be required in the Field Service operations. However, an Administrative Assistant will be needed as the new Supervisor will be aligning the policies and procedures in the three locations. Furthermore, the new Supervisor will be commuting to each of the locations weekly, requiring administrative support. Total savings, less the cost for the Administrative Assistant, is approximately \$31,000.

Increased Meter Reader Productivity

Despite an estimated 5% increase in the number of reads of registers per year since 2012, there were no increases to Meter Reader staffing for these additional reads. The increase in volume was attributable to the number of meters outstanding, which increased by about 0.7% year over year. Additionally, many meters now require multiple readings. For example, the Net Energy Meter (NEM) requires three reads for a bill to be generated. A Time-Of-Use (TOU) with NEM requires twelve reads. The increased number of reads complicates the job, particularly since the reads appear sequentially and continually cycles through. If the Meter Reader misses the desired read or register, they will have to wait for it to re-appear, adding time to the process. To facilitate increased productivity, the Supervisor has modified the routes to better balance the volume of readings. Furthermore, through training and higher expectations, the Meter Readers have improved their efficiency eliminating the need to increase staffing to manage the additional work. As of August 7, 2016, the department avoided hiring 1.73 additional Meter Readers with a cost savings of \$175,789 (See HELCO-WP-904 p 11-12 – Meter Reading Volume Savings).

Reduction in Overtime Labor Costs

The implementation of best practices, standardization of processes, technological improvements, and implementation of shared services have resulted in a \$366,000 reduction in overtime labor costs for the 2016 test year and is discussed in detail below.

Reduction in Revenue Management Overtime Labor Costs

Through the implementation of best practices as well as the standardization of processes, technological improvements, and implementation of shared services, overall overtime costs for the Revenue Management bargaining unit employees are decreasing. As an example, for the Cashiers, work hours have been staggered to reduce overtime hours without decreasing service for customers. Small technological improvements were also implemented such as the purchase of an upgraded currency counter and the use of Excel spreadsheets to account for payments received at the end of the day. These technological improvements not only increased efficiency, but improved payment processing accuracy. For our Customer Billing Representatives (“CBR”), through training and implementation of best practices such as the use of macros in Excel, it allows the CBR’s to process large number of transactions with a minimal number of key strokes and a corresponding reduction in labor hours. The annualized estimated savings for 2016 is approximately \$148,000 as shown in HELCO-WP-904, p. 13-18.

Reduction in Customer Relations Overtime Labor Costs

Similarly, for Customer Relations through the implementation of best practices, standardization, and technology improvements the Customer Relations bargaining unit employees managed to decrease overtime cost. As an example, the CSR’s also staggered work hours to reduce overtime without negatively affecting service levels. The implementation of the IVR reduced call volume by offering various self-service options that would have been otherwise handled by an agent. The improved billing accuracy also attributed to the reduction of time spent on research required by the CSR’s for billing inquires. The annualized estimated savings for 2016 is approximately \$145,000 as shown in HELCO-WP-904, p. 13-18 for the Customer Relations Department.

Reduction in Field Services Overtime Labor Costs

For Field Services, the department also implemented best practices as well as the standardization of processes across the three districts, which led to decreased overtime cost. For example, a Meter Reader in Waimea was reassigned to supplement the Meter Readers in Hilo whenever the route was too long for one individual. The annualized estimated savings for 2016 is approximately \$73,000 as shown in HELCO-WP-904, p. 13-18 for the Field Services Department.

Hawai'i Electric Light Company, Inc.
 2016 Test Year Rate Case
 Customer Service Department
 Hawaii Island Based Staffing as of May 31, 2016

	A	B	C	D	E	F	G	H	I	J
			=B-A		=D-B			=F+G	=H-B	=H-A
	12/31/15 Recorded Headcount	5/31/16 Recorded Headcount	Difference	5/31/16 Budgeted Headcount	Vacancies as of 5/31/16	12/31/16 Budgeted Headcount	Adjustments to 12/31/16 Budgeted Headcount	12/31/16 Adjusted Headcount	Positions to be filled between 5/31/16- 12/31/16	Total Positions filled in 2016
HECO RA										
1 PCC	2	2	0	2	0	2	0	2	0	0
2 PCH	13	12	-1	13	1	13	0	13	1	0
3 PCE	4	4	0	4	0	4	0	4	0	0
4 PCG	12	12	0	12	0	12	0	12	0	0
5 PCM	9	8	-1	11	3	11	0	11	3	2
6 PCB	2	2	0	2	0	2	0	2	0	0
7 PCP	5	4	-1	5	1	5	0	5	1	0
8 PCR	0	0	0	1	1	1	0	1	1	1
PIW	1	1	0	1	0	1	0	1	0	0
TOTAL	48	45	-3	51	6	51	0	51	6	3

Notes:

- PCC: CR Administration (1 CR Manager, 1 Sr. Cust Exp Bus Analyst)
- PCH: Contact Center (12 BUOC; 1 Supervisor Vacancy)
- PCE: Cust Bus Mgt Svc (4 Comm Acct Mgrs)
- PCG: Field Svc & Collect (1 Supv; 11 Field Reps) no vacancies
- PCM: Meter Reading (8 Meter Readers and 2 Meter Reader vacancies; 1 Admin. Assist. vacancy)
- PCB: Billing (2 Clerks) no vacancies
- PCP: Payment Processing (4 Cashiers; 1 Clerk vacancy)
- PCR: RM Administration (1 Supervisor vacancy)
- PIW: SVP Customer Service (1 Financial Administrator)

Hawai'i Electric Light Company, Inc.
 2016 Test Year Rate Case
 Customer Service Department
 Hawaii Island Based Staffing as of May 31, 2016
 CUSTOMER RELATIONS Hawaii Island Based Staff

	A	B	C	D	E	F	G	H	I	J
			=B-A		=D-B			=F+G	=H-B	=H-A
	12/31/15 Recorded Headcount	5/31/16 Recorded Headcount	Difference	5/31/16 Budgeted Headcount	Vacancies as of 5/31/16	12/31/16 Budgeted Headcount	Adjustments to 12/31/16 Budgeted Headcount	12/31/16 Adjusted Headcount	Positions to be filled between 5/31/16- 12/31/16	Total Positions filled in 2016
1	PCC 2	2	0	2	0	2	0	2	0	0
2	PCH 13	12	-1	13	1	13	0	13	1	0
3										
4										
5										
6	TOTAL	14	-1	15	1	15	0	15	1	0

Notes:

- PCC: CR Administration (1 CR Manager; 1 Sr. Cust Exp Bus Analyst)
- PCH: Contact Center (12 BUOC; 1 Supervisor Vacancy). Previous supervisor transferred to Fld Svc as a supervisor

Hawai'i Electric Light Company, Inc.
 2016 Test Year Rate Case
 Customer Service Department
 Hawaii Island Based Staffing as of May 31, 2016
 FIELD SERVICE Hawaii Island Based Staff

	A	B	C	D	E	F	G	H	I	J
			=B-A		=D-B			=F+G	=H-B	=H-A
	12/31/15 Recorded Headcount	5/31/16 Recorded Headcount	Difference	5/31/16 Budgeted Headcount	Vacancies as of 5/31/16	12/31/16 Budgeted Headcount	Adjustments to 12/31/16 Budgeted Headcount	12/31/16 Adjusted Headcount	Positions to be filled between 5/31/16- 12/31/16	Total Positions filled in 2016
1	PCE 4	4	0	4	0	4	0	4	0	0
2	PCG 12	12	0	12	0	12	0	12	0	0
3	PCM 9	8	-1	11	3	11	0	11	3	2
4										
5										
6	TOTAL	24	-1	27	3	27	0	27	3	2

Notes:

- PCE: Cust Bus Mgt Svc **Budget 4** no vacancies (4 Comm Acct Mgrs)
- PCG: Fld Svc **Budget 12 Fld Reprs; 1 Supv.** No vacancies
- PCM: Meter Reading, **Budget 10 Meter Readers 1 Adm Asst.** (2) Meter Reader vacancies; (1) Adm. Assist (Implementer) vacancy

Hawai'i Electric Light Company, Inc.
 2016 Test Year Rate Case
 Customer Service Department
 Hawaii Island Based Staffing as of May 31, 2016
 REVENUE MANAGEMENT Hawaii Island Based Staff

	A	B	C	D	E	F	G	H	I	J
			=B-A		=D-B			=F+G	=H-B	=H-A
	12/31/15 Recorded Headcount	5/31/16 Recorded Headcount	Difference	5/31/16 Budgeted Headcount	Vacancies as of 5/31/16	12/31/16 Budgeted Headcount	Adjustments to 12/31/16 Budgeted Headcount	12/31/16 Adjusted Headcount	Positions to be filled between 5/31/16- 12/31/16	Total Positions filled in 2016
1	PCB 2	2	0	2	0	2	0	2	0	0
2	PCP 5	4	-1	5	1	5	0	5	1	0
3	PCR 0	0	0	1	1	1	0	1	1	1
4										
5										
6	TOTAL	6	-1	8	2	8	0	8	2	1

Notes:

- PCB: Billing - Budget 2 Clerks, no vacancies
- PCP: Payment Processing - Budget 5 (4 Cashiers; 1 Acct Svcs Clerk vacancy)
- PCR: RM Admin. (1 Supervisor vacancy). Temporarily filled by employee from Maui Island

HAWAI'I ELECTRIC LIGHT CUSTOMER SERVICE
ORGANIZATION AND STAFFING

Prior to 2015, each of the three Companies maintained a separate Customer Service department that was relatively self-contained and geographically organized. In 2015, reorganization took place that transformed the reporting structure of all three Customer Service departments from geographically organized entities to a functionally aligned reporting structure across the Companies. Three new departments were formed – Customer Relations, Field Services, and Revenue Management. See HELCO-905B for details on the reorganization that began in 2015.

Hawaiian Electric Customer Service employees based on Hawai'i Island are placed in one of the nine following Hawaiian Electric responsibility areas (“RA”):

- Customer Relations
 - PCC (Customer Relations Administration RA)
 - PCH (Customer Contact Center RA)
- Field Services
 - PCE (Customer Business Management Services RA)
 - PCG (Field Services RA)
 - PCM (Meter Reading RA)
- Revenue Management
 - PCB (Billing RA)
 - PCP (Payment Processing RA)
 - PCR (Revenue Management Administration RA)
- Office of the Sr. Vice President
 - PIW (Sr. Vice President RA)

Customer service functions are provided to Hawai'i Electric Light through four RAs. HC1 RA aligns with the Customer Relations functional area, HC2 RA aligns with the Field Services functional area, HC3 RA aligns with the Revenue Management functional area, and HC4 contains general customer service costs that are attributed to multiple functional areas.

There were ten (10) additional positions to the Customer Service organization since the 2010 test year rate case of 41; five (5) of which were transferred from other departments within the organization and a net total of (5) added positions. Please see below details:

- HC1 RA- Customer Relations: An increase of six (6) Customer Service Representatives was added to ensure timely response to customer inquiries in effort to improve service levels. Three (3) were added in 2011, and an additional three (3) added in 2012 to prepare for the Customer Information System (“CIS”) conversion mid-year.

- HC2 RA- Field Services: In 2013, four (4) Commercial Account Managers were transferred from the Energy Services Department to the Customer Service Department.
- HC3 RA- Revenue Management: In 2015, one (1) Mail Room Clerk was eliminated resulting in a reduction of (1) position.
- HC4 RA- General Customer Service: In 2015 one (1) fiscal administrator was moved from the accounting department to Customer Service Department as a result of the reorganization in 2015
- In August 2015, all Hawai'i Electric Light Customer Service employees were converted to become Hawaiian Electric badged employees. See HELCO-905B for details on the reorganization. As a result of the reorganization, all Hawai'i Island based Customer Service employees report to the Hawaiian Electric Customer Service Process Area, which is headed by the Sr. Vice President of Customer Service, and consists of 7 departments:
 - (1) Customer Relations Department¹;
 - (2) Field Service Department²;
 - (3) Revenue Management Department³;
 - (4) Customer Service Support and Improvement Department ("CSSI");
 - (5) Customer Solutions Department ("CUSOL");
 - (6) Customer Installations Department ("CID"); and
 - (7) Office of the Sr. Vice President.

Customer Relations, Field Services and Revenue Management Staffing

12/31/2015 to 5/31/2016. As shown in HELCO-905, the staffing level for Customer Relations' PCC and PCH RAs decreased by one position due to a vacancy. That vacant position is described in HELCO-WP-905. Field Services' PCE, PCG and PCM RAs decreased by one position – the supervisor position in PCM is being eliminated. In addition, there existed in the 12/31/2015 count one vacancy that has not yet been filled. Revenue Management's staffing levels decreased by one position due to the closing of the Waimea bill payment office in May 2016. However, work is in progress to replace the temporary agency hire in Kona and fill it with a permanent hire as an Accounts Services Clerk.

¹ Tri-company functional department that provides services to Hawai'i Electric Light, Hawaiian Electric, and Maui Electric.

² *ibid.*

³ *ibid.*

	12/31/2015	5/31/2016	
	<u>Recorded</u>	<u>Recorded</u>	<u>Difference</u>
Customer Relations (PCC, PCH)	15	14	-1
Field Services (PCE, PCG, PCM)	25	24	-1
Revenue Management (PCB, PCP, PCR)	7	6	-1
Office of the Sr. Vice President (P1W)	1	1	0
TOTAL	48	45	-3

5/31/2016 to 12/31/2016. As of May 31, 2016, Customer Service had 6 vacancies based on a recorded headcount of 45 compared to the budgeted 5/31/16 headcount of 51 as shown in the table below. Those vacancies will be described in HELCO-WP-905.

	5/31/2016	5/31/2016	
	<u>Recorded</u>	<u>Estimate</u>	<u>Difference</u>
Customer Relations (PCC, PCH)	14	15	1
Field Services (PCE, PCG, PCM)	24	27	3
Revenue Management (PCB, PCP, PCR)	6	8	2
Office of the Sr. Vice President (P1W)	1	1	0
TOTAL	45	51	6

Customer Service forecasts its staffing level to increase by 0 positions in the 2016 test year beyond existing vacancies in the 5/31/16 recorded count.

	5/31/2016	12/31/2016	
	<u>Estimate</u>	<u>Estimate</u>	<u>Difference</u>
Customer Relations (PCC, PCH)	15	15	0
Field Services (PCE, PCG, PCM)	27	27	0
Revenue Management (PCB, PCP, PCR)	8	8	0
Office of the Sr. Vice President (P1W)	1	1	0
TOTAL	51	51	0

HECO-WP-905 contains a summary of position vacancies as of May 31, 2016 that plan to be filled by December 31, 2016. Those summaries describe the:

- Responsibilities of the vacant positions
- Reason the vacant positions are required
- Status of hiring
- Cost category allocation for vacant positions

Department Exhibits

For department and organizational descriptions, details on the work each department performs, anticipated new work, and a discussion of how each department manages its work, please see the following exhibits:

- HELCO-911 for Customer Relations;
- HELCO-912 for Field Services; and
- HELCO-913 for Revenue Management.

Supplementing Vacancies

The Hawai'i Island based Customer Service has not been able to fill all the positions it needs. To supplement its existing Hawai'i Island serving workforce; Customer Service has utilized contract labor such as agency temporary employees. Customer Service has also employed the use of overtime to offset the shortfall in staffed positions.

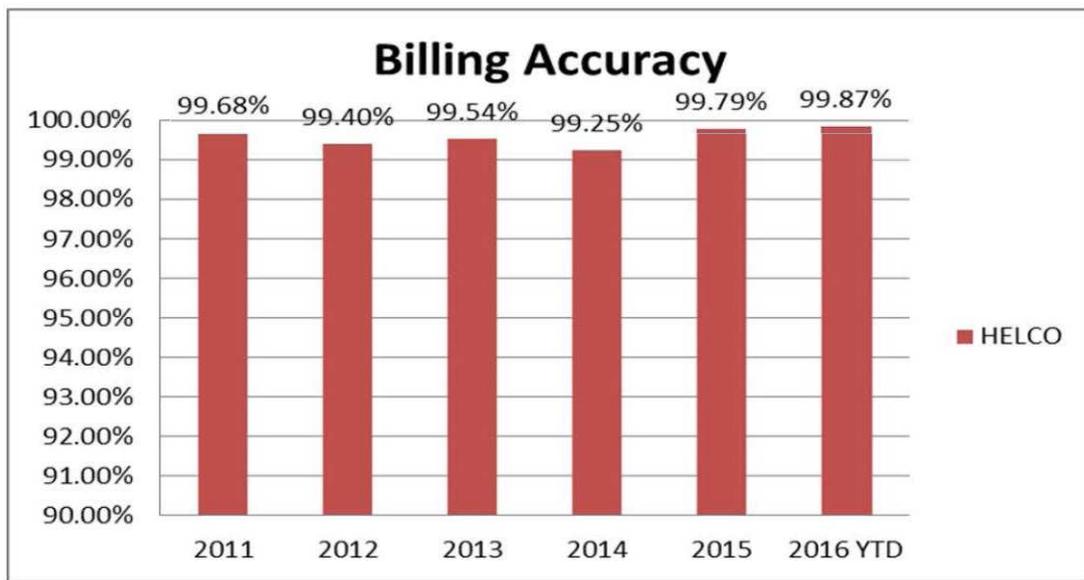
CUSTOMER SERVICE REORGANIZATION

Why Reorganize Customer Service

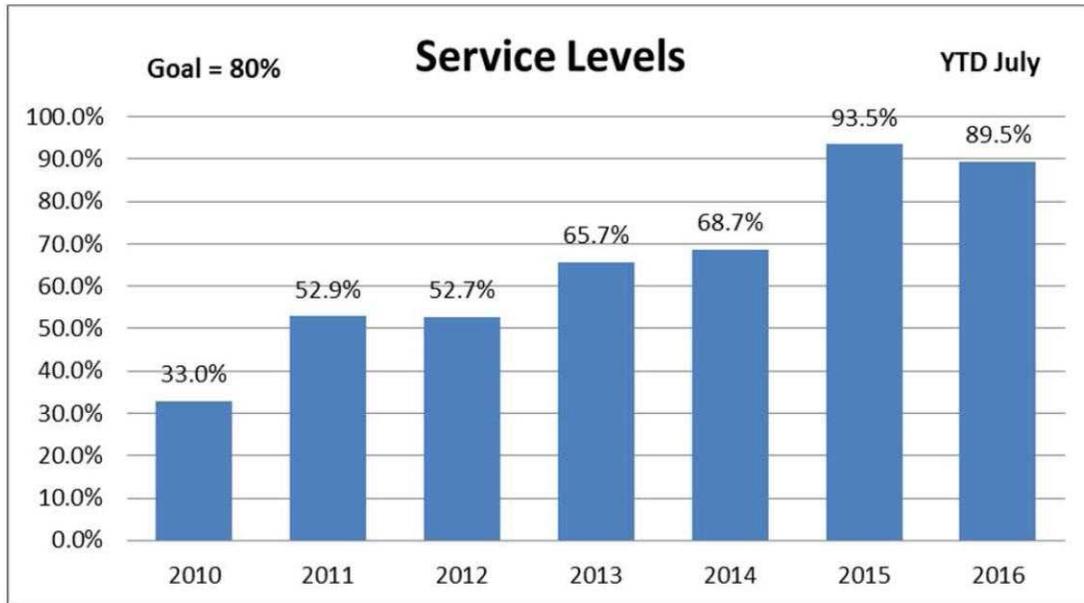
In an effort to continually evolve to meet the current and future needs of our customers and to transform our company to become a trusted energy partner, the Customer Service Departments at all three Companies went through a restructuring and reorganization starting in 2015. This restructuring is the beginning of a multi-year journey and helps lay the foundation for changes that will allow the Companies to better serve our customers, improve efficiencies, and eventually reduce costs. See HELCO 904A. In particular, the reorganization will allow the Companies to establish more shared services models enabling the Companies to streamline operations and eventually reduce costs while improving service.

The shared service framework will allow each functional area to concentrate on its specific functional activities while also focusing on shared goals. The new organizational structure is creating opportunities within each functional area for the Companies to approach business processes more consistently, adjust policies to become more standardized, and drive performance of each functional area to a higher level.

As an example, and as noted in HELCO-904, for Revenue Management, in October 2015, one of the three Billing Clerks moved to Customer Relations. With the reorganization and ability to share functional resources across Companies, the existing work previously performed by the incumbent Hawai'i Electric Light Billing Clerk was absorbed by the existing Billing Clerks at Maui Electric without incurring any additional costs. In addition, through the implementation of best practices, the overall overtime costs for the same billing group decreased over the prior year; at the same time, the Billing Accuracy improved and surpassed the Billing Accuracy metrics prior to the CIS SAP deployment in May 2012, as shown below.



Similarly and also noted in HELCO-904A, for Customer Relations, with the implementation of a dedicated Supervisor and Lead Customer Service Representative focused on servicing customer calls, calls managed by a third party call center (Procore) were slowly transitioned back to Hawai'i contact centers. As a result, reduction in allocated Customer Service Representatives were also reduced from 12 to 10 and Service Levels improved as exhibited in the graph below.



In addition, as Customer Services resources adjust to the new structure, and as processes become more standardized, it will also provide the benefit of centralizing work where it is appropriate. The reorganization will also eventually reduce work that might otherwise be performed by duplicative resources on each island, thereby reducing redundancy and increasing efficiencies. The new structure will also enable the Companies to better leverage the principle of economy of scales as we monitor how the new structure accommodates the workloads.

For Revenue Management, the consolidation of all credit related work for all three companies is an example of centralizing work and leveraging economies of scale. Prior to the reorganization, the related credit work was managed by several employees in the Customer Service Department across all three companies, including call center agents, field service personnel, and other administrative personnel. With increasing government regulation relative to the Fair and Accurate Credit Transaction Act (FACTA) and the Office of Foreign Assets Control, as well as the need to ensure compliance with other regulatory and accounting requirements such as SOX, centralizing the related credit work with a team that is dedicated and trained to focus on these requirements was appropriate. In addition to compliance benefits, also noted in HELCO-904A, the centralization of the credit work to manage the company's delinquency has also resulted in cost savings to customers.

Conversion to Tri-Company Customer Service

Previously, Customer Service was organized geographically, being divided by company into three separate departments. Specifically, Hawai'i Electric Light, Hawaiian Electric, and Maui Electric each had its own Customer Service department, with each, in turn, having its own Customer Service Manager in charge of the full spectrum of customer service functions, including customer relations, field services, and revenue management.

In January 2015, the first phase of the reorganization process commenced. This first phase began the process of restructuring Customer Service from a geographically-based organization to a functionally-based organization. In particular, the first phase separated each Company's Customer Service department into three virtual, functionally-centric groups corresponding to the customer relations, field services, and revenue management functions. The leadership structure was also restructured, with each of the three virtual functional groups now being separately headed by a manager that would focus primarily on that functional area. As part of this change, the existing Hawai'i Electric Light, Hawaiian Electric, and Maui Electric Customer Service department managers were converted to a Customer Relations Manager, a Field Services Manager, and a Revenue Management Manager, respectively. Because the three managers were physically home-based on separate islands, this allowed them to perform company-centric responsibilities as needed during this first phase.

Also during this first phase, the managers developed their plans for how a tri-company organization would look within their functional group and engaged in detailed planning for the full conversion from virtual functional groups to actual functional departments. By honing in on their particular function across all three companies, the managers had better visibility as to what was working and what might be improved, and were able to focus on consistency and standardization of processes, best practices, and procedures in anticipation of the conversion.

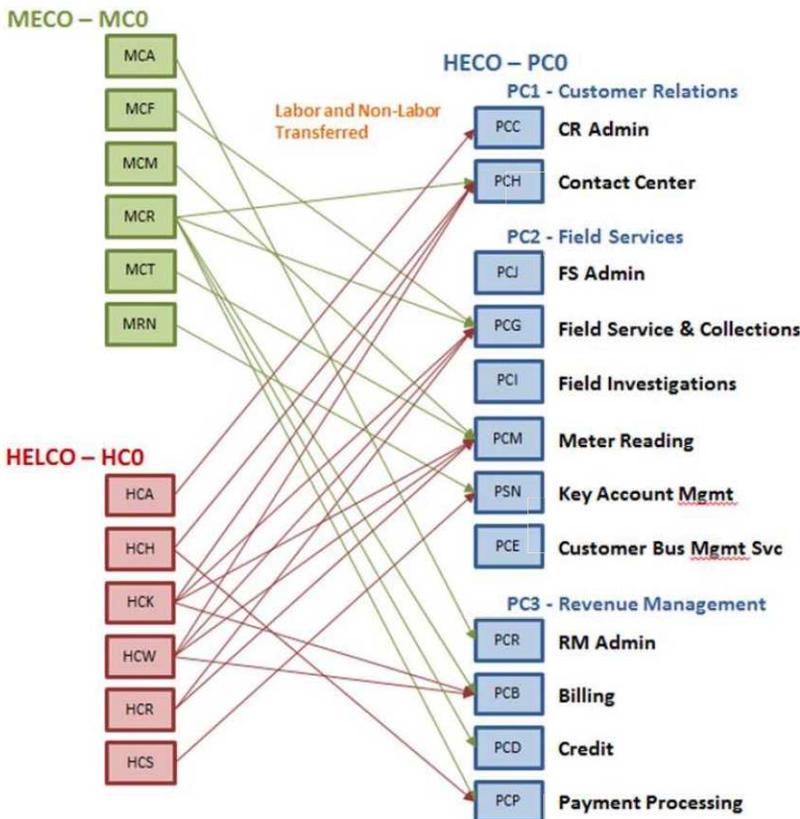
In August 2015, the second phase of the reorganization commenced. As part of this phase, in order to allow the Companies to leverage existing processes, including accounting and administrative processes, while operating within the Companies' legacy enterprise resource planning systems' capabilities, all existing Hawai'i Electric Light and Maui Electric Customer Service employees were converted to Hawaiian Electric-badged employees. The work locations of these employees did not change, and in most situations their functions did not dramatically change, but their Hawaiian Electric status allowed new functionally-oriented reporting structures to be created that crossed the geographic boundaries of the three companies. As an example, the reorganization provided the ability to review and approve invoices through the Companies' accounting software, approve personnel changes, implement shared services and bill the respective company accordingly, without the need to create new processes, or additional access for each respective company.

In this second phase, the virtual functional groups evaluated in the first reorganization phase were formalized into three new departments at Hawaiian Electric:

- Customer Relations Department
- Field Service Department
- Revenue Management Department

As noted above, since the conversion to a Tri-Company Customer Service structure, these three Hawaiian Electric departments appropriately allocate and bill labor to Hawai‘i Electric Light and Maui Electric. Figure 1, below, maps how existing Hawai‘i Electric Light and Maui Electric responsibility areas (“RAs”) were transitioned to Hawaiian Electric RAs.

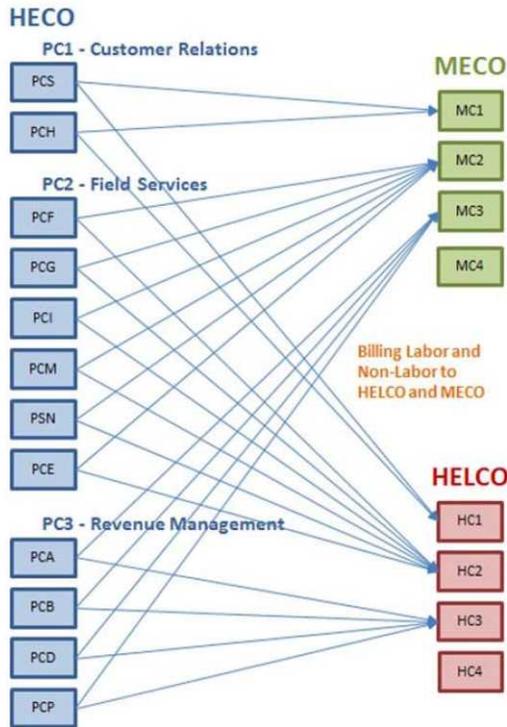
Figure 1 – Transitioning Hawai‘i Electric Light and Maui Electric resources to Hawaiian Electric RAs



Also as part of the second phase, Hawai‘i Electric Light and Maui Electric each established four new Customer Service RAs for cost accounting purposes. In particular, Hawai‘i Electric Light established the following new RAs under its Customer Service department RA, HC0: HC1 (Customer Relations), HC2 (Field Services), HC3 (Revenue Management) and HC4 (General). These new RAs replaced prior Hawai‘i Electric Light RAs (HCA, HCH, HCK, HCR, HCS, and HCW) and are more closely aligned with the new functional Hawaiian Electric

departments. Similarly, MECO established the following new RAs under its Customer Service department RA, MC0: MC1 (Customer Relations), MC2 (Field Services), MC3 (Revenue Management) and MC4 (General). These new RAs replace the RAs MECO Customer Service previously utilized: MCA, HCF, MCM, MCR, MCT, and MRN. Figure 2, below, illustrates how billable costs for the Hawaiian Electric Customer Service RAs are billed back to the Hawai‘i Electric Light and Maui Electric Customer Service RAs.

Figure 2 – Hawaiian Electric billable expenses to Hawai‘i Electric Light and Maui Electric RAs



Customer Service Resources Are Now Billed to Hawai‘i Electric Light

Before the reorganization, Hawai‘i Electric Light labor and non-labor costs were budgeted in the Hawai‘i Electric Light HC0 department within one of the original six RAs. Hawai‘i Electric Light also received some allocated billable costs from Hawaiian Electric (e.g., Customer Service Support & Improvement (“CSSI”) project allocated costs and Information & Technology Services (“ITS”) allocated costs) that were also accounted for in one of the original six RAs.

After the restructuring, as discussed above, all Customer Service labor resources are now Hawaiian Electric resources. Some of these labor resources are home-based on Hawai‘i Island and charge all of their costs to Hawai‘i Electric Light. Other labor resources are home-based on Hawai‘i Island but allocate only a portion of their costs to Hawai‘i Electric Light. Still other labor resources are home-based on other islands (like Oahu) and allocate a portion of their costs to Hawai‘i Electric Light. Those labor costs are billed to Hawai‘i Electric Light through the

intercompany billing (“ICB”) process in the form of non-labor billed expenses, along with other non-labor billed expenses.

Accordingly, as a result of the reorganization, in 2016, there will be no labor expenses budgeted for Hawai‘i Electric Light Customer Service. Rather, as discussed above, what was formerly budgeted as labor expenses, will now be charged to Hawai‘i Electric Light in the form of non-labor billable ICB expenses. These expenses will be combined with other non-labor expenses billed to Hawai‘i Electric Light through the ICB process.

HAWAI'I ELECTRIC LIGHT COMPANY, INC.
2016 TEST YEAR ESTIMATE

CUSTOMER SERVICE O&M BUDGET DETAIL

Distribution Operation Expense Estimate (B34)

Distribution operation expense includes labor and non-labor costs to support activities such as trouble dispatching and distribution switching operations, distribution substation inspections and operations, distribution line, pole and structure inspections, connecting, disconnecting and locking meters, investigating customer complaints and testing and treating of wood distribution poles.

The Customer Service Departments' 2016 test year estimate for its share distribution operation expense is \$539,000 as shown on HELCO-901, page 1, line 9. It is comprised mostly of labor activities (\$534,000) charged to NARUC 586 Meter Expenses. This account includes the cost of labor, materials used and expenses incurred in the operation of customer meters and associated equipment. The work performed by the Field Services workforces on Hawai'i island to perform the disconnection and reconnection, removal and reinstallation, sealing and unsealing meters and other metering equipment in connection with initiating or terminating services are included. See HELCO-WP-902, line 18.

Customer Accounts Expense (B36)

Customer accounts includes labor and non-labor costs incurred for activities the Company provides to serve its customers that relate to: customer billing (including the cost of processing customer requests to commence, modify or terminate service) and mailing; meter reading; collecting and processing payments; handling customer inquiries; maintaining customer records; managing delinquent and uncollectible accounts; and conducting field services and investigations. The customer accounts expenses are described and discussed in this testimony, HECO T-9, and represents the core NARUC block of accounts for Customer Service Department's activities. Most Customer Relations, Field Services, Revenue Management, and HC4 General labor and non-labor activities fall within this block of accounts.

The Customer Service Departments' 2016 test year estimate for its share of customer accounts expense is \$8,572,000 as shown on HELCO-901, page 1, line 12. Of that, \$4,785,000 is comprised of labor activities billed to Hawaii Electric Light, and \$3,787,000 is comprised of non-labor related activities. The labor activity components can be found on HELCO-WP-902 lines 1, 4, 13, 17, 19, 21, 24, 25, 26, 27, 32, and 33. The remaining \$3,787,000 is attributed to non-labor estimates billed to Hawaii Electric Light. Major non-labor items include:

- ITS Billable charges incurred by Customer Service \$728,000
- Vehicle expenses \$507,000
- Bad Debt expense \$593,000

- CIS Amortization \$213,000
- IVR Amortization \$ 55,000
- CSSI Billable charges incurred by Customer Service \$159,000
- Customer Billing related expenses \$620,000
(Postage, Bill Printing, Envelopes, Bill Forms)
- Collection Service Vendor expenses \$128,000¹
- Field Services Agency Temp expenses \$130,000²

These and the rest of the non-labor expenses can be found on HELCO-WP-902.

Customer Service Expense (B37)

Customer service expense includes labor and non-labor costs incurred for activities the Company provides to promote safe, efficient and economical use of the utility's service. The work performed on Hawai'i island by the Field Services commercial account manager workforce is mainly captured in this account. See HELCO-WP-902, lines 9, 20, 22, and 23.

The Customer Service Departments' 2016 test year estimate for its share of customer service expense is \$513,000 as shown on HELCO-901, page 1, line 15. The expenses are mostly related to labor activities totaling \$498,000. See HELCO-WP-902 line 20.

Administrative and General Expense (B38-B39)

Administrative and general expenses are generally discussed in in Mr. Paul Franklin's testimony, HELCO T-11. The Customer Service's costs in the test year estimate relate to NARUC 924 Property Insurance and identified as the OCARS uncollectible line item 38 in HELCO-WP-902.

The Customer Service Departments' 2016 test year estimate for its share of administrative and general expense is \$65,000 as shown on HELCO-901, page 1, line 18.

¹ An adjustment could be considered at the next available opportunity to reduce this estimate by \$32,000. See HELCO-WP-913B page 39.

² An adjustment could be considered at the next available opportunity to remove this cost from the test year estimate. See HELCO-WP-912B page 15 for details.

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Other Operating Revenues
@ Present and Proposed Rates
(\$ Thousands)

<u>Line</u>		<u>A</u>	<u>B</u>
		Test Year 2016 (\$000)	
		Present <u>Rates</u>	Proposed <u>Rates</u>
<u>Acct. No.</u>	<u>Description</u>	(1)	(2)
450	Other Revenues		
1	Field Collection Charge	\$ 1	\$ 1
2	Returned Payment Charge	\$ 38	\$ 59
3	Late Payment Charge (Energy)	\$ 693	\$ 693
4	Subtotal Other Revenues	\$ 732	\$ 753
451	Miscellaneous Service Revenues		
5	Svce. Establishment Charge	\$ 281	\$ 281
6	Reconnect Charge	\$ 14	\$ 16
7	Misc. Service Rev-Other	\$ 4	\$ 4
8	Temporary Facilities	\$ -	\$ -
9	Other	\$ -	\$ -
10	Subtotal Misc. Service Revenues	\$ 299	\$ 300
11	454 Rent from Electric Property	\$ 54	\$ 54
12	456 Other Electric Revenues		
13	Metering	\$ 4	\$ 4
14	FIT	\$ -	\$ -
16	Subtotal Other Electric Revenues	\$ 4	\$ 4
17	414 Gains From Disposal of Util Prop	\$ -	\$ -
18	419 OCARS Late Payment Charge	\$ 5	\$ 5
19	TOTAL OTHER OPERATING REVENUES	\$ 1,094	\$ 1,116

Notes:

(1) HELCO-WP-907, page 1, column D

(2) HELCO-WP-907, page 1, column E

Totals may not add exactly and references may not tie exactly due to rounding

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Uncollectible Accounts (Account 904)
(\$ Thousands)

<u>Line</u>	<u>Year</u>	<u>Net Write-offs less Exclusions</u>	<u>A</u> <u>Total</u>
1	2013		\$742
2	2014		\$465
3	2015		\$570
<hr/>			
4	2013-2015 3-Year Average:		\$593
<hr/>			
5	2016 Test Year Estimate:		\$593
<hr/>			

Notes:

Lines 1-5, See HELCO-WP-908

Totals may not add exactly and references may not tie exactly due to rounding

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Customer Deposits On Hand and Interest
December 31
(\$ Thousands)

<u>Line</u>	<u>A</u>	<u>B</u>	<u>C</u>
	<u>Customer Deposits</u>		<u>12-month</u>
	Year	December 31	Average
1	2013	\$ 3,909.6	\$ 3,591.5
2	2014	\$ 3,442.1	\$ 3,675.9
3	2015	\$ 3,224.0	\$ 3,333.0
4	2016 Test Year Estimate	\$ 3,324.9	\$ 3,274.4

Interest Calculation

	Interest Percentag e	2016 Average Deposit Balance	Interest
5	6%	\$ 3,274.4	\$ 196.5
6	2016 Test Year Estimate		\$ 196.5

Notes:

Lines 1-6: See HELCO-WP-909

Totals may not add exactly and references may not tie exactly due to rounding

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Revenue Collection Lag Days*
2013-2015, 3-Year Average and 2016 Test Year Forecast

<u>Line</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
				3-year	2016
	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>Average</u>	<u>Test Year</u>
1 Year-end Average	40.7	38.4	38.9	39.3	39.3

* Represents the mid-point of the monthly bill.
Consistent with Hawaiian Electric

Notes:

Line 1: See HELCO-WP-910

Totals may not add up exactly or tie to refereces exactly due to rounding

Customer Relations Department

The primary function of the Customer Relations Department is to effectively manage the company's interaction with its customers. The department provides efficient service to customer inquiries while analyzing data about customers' needs in order to better improve business relationships with customers. The Customer Relations Department accomplishes its functions through the Customer Care Center (PCH) responsibility area ("RA"). The Manager of the Customer Relations Department is a part of the Administrative RA (PCC), and provides overall management and support for the Customer Contact Center RAs for Hawai'i Electric Light, as well as Hawaiian Electric and Maui Electric.

A. Customer Care Center RA (PCH)

The Customer Care Center RA's primary responsibility is to handle customer inquiries regarding service requirements, billing, payments, security deposits, credit requirements, and various customer requests. The Company accomplishes this task with its Customer Service Representatives ("CSR"), CSR Leads, and a supervisor based in Hawai'i Electric Light's Customer Care Center. The Hawai'i Electric Light supervisor also oversees the Customer Care Center at Maui Electric.

CSRs respond to various inquiries received through customer calls, emails, and online requests, as well as inquiries received through other customer channels (e.g., facsimiles, postal mail, and social media). CSRs also analyze delinquent accounts and ensure that proper notification procedures are followed; work with customers to create payment arrangements; and correspond with customers regarding any complaints they may have. The CSR Leads, in addition to the above-described CSR duties, provide guidance on handling complex calls; ensure that CSRs are following the proper procedures; manage the distribution of the customer contact workload (all inquiries that come through the customer channels noted above, excluding calls); and field inquiries that come in through other areas of the Company.

The majority of the calls and contacts handled by the CSRs and CSR Leads are related to billing inquiries, start/stop/move requests, and payment arrangements. Each call requires CSRs to spend time explaining the various processes to customers, and may also require them to research the issues and work to resolve them while the customer is on the call.

The Customer Care Center RA supervisor is responsible for building and sustaining positive customer interactions by:

- Defining and explaining the overall departments vision and strategy as it relates to customer satisfaction;
- Developing processes and procedures that consider various approaches to satisfy customers and their changing needs;

- Developing and executing processes that ensure compliance with Company tariffs and government regulations, such as the Fair and Accurate Credit Transactions Act; and
- Coaching and working with CSRs to deliver positive customer interactions.

B. Customer Relations Administrative RA (PCC)

The Customer Relations Administrative RA provides administration and managerial support for the Customer Contact Center RA and consists of the Customer Relations Department Manager and administrative support staff.

The primary role of the Customer Relations Department Manager is to provide the following:

- Respond to the business needs of the department, such as setting the Customer Relations' strategies and goals;
- Manage the staffing aspect of the Customer Relations Department with regard to workforce management, training and development, productivity, quality, customer satisfaction, and employee engagement;
- Manage the implementation of Company-wide policies within the Department by:
 - Ensuring that the implementation of plans, projects, and the day-to-day performance of employees is done in a timely, efficient, and effective manner;
 - Sets goals and expectations for the Department that aligns with Company goals; and
 - Identifies and executes innovative practices as solutions to improve the customer experience, and overall performance.

The Manager works very closely with the various Customer Service Department functional areas to drive continuous process improvements that ensure fiscal responsibility to our customers while improving their overall experience. In addition, the Customer Relations Administrative RA is responsible for managing and responding to customer complaints for the Companies that are submitted through the PUC, Better Business Bureau and Executive Offices.

Other Customer Relations Administrative RA employees assist the Manager in implementing plans and projects for the Customer Relations Department, and assist in identifying opportunities for improvement in customer experience that will ultimately increase customer satisfaction for Hawai'i Electric Light, Hawaiian Electric and Maui Electric. The Customer Relations Administrative support consists of three Senior Customer Experience Analysts that are shared between Hawai'i Electric Light, Maui Electric and Hawaiian Electric.

The Senior Customer Experience Analysts provides strategic leadership to ensure the following:

- Development and subsequent implementation of Customer Service Department's business standards;

- Administers end-to-end processes and procedures to support tri-company improvement initiatives;
- Identifies, coordinates, and actively participates in customer experience improvement initiatives to establish standards, enhances customer experience and increase operational excellence across the Companies.
- Leads tri-company cross-functional teams to develop customer experience solutions while keeping abreast of technical, social, political, economic, and regulatory developments.

C. Goals and Benefits

Today's customers want and expect companies to provide various methods and means for contacting, communicating, and transacting business with them. The Customer Relations Department meets its customers' needs by providing a variety of services through (1) the Customer Care Center and (2) new technologies and programs that increase services, accessibility, and communication through self-service options (including the Online Customer Service Center and the Interactive Voice Response (IVR) system). The Customer Relations Department further strives to improve the quality and efficiency of customer-related services through tracking efficiencies and the utilization of performance metrics.

1. Customer Care Center

The Company's CSRs, CSR Leads, and supervisors are at the forefront of the Company's interactions with its customers, and continue to be a critical component of the Customer Care Center. Although automated programs have been implemented to improve the overall customer service experience by offering convenient, self-service options for certain types of calls and contacts, the CSRs are essential in providing exceptional customer service - in particular:

- (1) for callers who do not wish to use automated technology;
- (2) to handle complex calls and requests;
- (3) for high bill questions/disputes;
- (4) to address requests that come in by email and other methods of contact; and
- (5) to handle certain types of payment arrangements (establishing payment arrangements when customers have difficulty making their monthly electric payments).

For the 2016 Test Year, the total number of CSRs (including CSR Leads) is anticipated to decrease by 2 positions (from 12 positions, as of December 31, 2015, to 10 positions by December 31, 2016). The decrease in CSRs was due to the reorganization efforts and initial efforts to virtualize services across all islands (see HELCO-905B – Reorganization and HELCO-904A Cost Containment narratives for details). A virtual care center is one where the organization's representatives are geographically dispersed, rather than being situated in a single location, and where representatives have the ability to answer all calls regardless of the island which the call originated. For example, if a customer calls from Hawai'i Island, the call will be

routed their first; if the agents on Hawai‘i Island are not available the call will automatically be routed to the next available agent regardless of location. As such, the headcount for the CSR’s that are based on Hawai‘i Island are 12 (HELCO 905A – Staffing), but the allocated number of Hawai‘i Island CSR’s that are billed back to Hawai‘i Electric Light is 10. The allocation of 10 CSR’s are calculated by taking the total calls offered to Hawai‘i Island divided by the total number of calls offered tri- Company. This percentage is then applied to the total CSR’s tri-company. Using this approach ensures each island is being allocated appropriately for the calls that each island receives from their respective customers. Please see below chart for additional illustration.

CSR Allocation Methodology

Total Call Volume - Tri- Company			CSR's Tri-Company		Allocation based on %	
HECO	387,054	71%	HECO	41	HECO	45
HELCO	90,785	17%	HELCO	12	HELCO	10
MECO	69,279	13%	MECO	10	MECO	8
Total Calls	547,118	100%	Total	63	Total	63

This allows for the Company to increase productivity by utilizing resources across the islands and improves customer experience by reducing hold times. The reorganization of the Customer Service Department in 2015, allowed each functional area to concentrate on its specific functional activities while also focusing on shared goals. The structure has enabled each area to create business processes more consistently, adjust policies to become more standardized, and improve satisfaction while reducing cost.

2. Self-Service Options

The Customer Relations Department uses new technologies and programs that increase services, accessibility, and communication through self-service options in order to better serve the Company’s customers. Details of the more significant programs (Online Customer Service Center, the IVR system) are discussed below.

i. Online Customer Service Center

The Online Customer Service Center is critical in supporting the CSRs in providing timely, efficient, and accessible customer service. The Online Customer Service Center provides numerous self-service options for customers who wish to utilize the internet to communicate and transact business with the Company, including the ability to

- (1) access and update account information (to obtain recent payment history, bill history, electricity consumption history, and update customer information);
- (2) submit service order requests (for duplicate bills, to enroll in automatic bill payment, start/stop/move, certain portions of payment arrangements, and enroll in electronic billing);
- (3) obtain general information (such as payment locations, office hours, and mailing address);
- (4) use links to related websites (e.g., Checkfree for online bill payment and Experian for online credit checks for new customers);
- (5) submit comments and questions, and
- (6) review frequently asked questions, the Consumer Lines newsletter, and information on renewable energy, energy efficiency and usage, emergency preparedness, and energy safety.

Customer utilization of the Online Customer Service Center reduces overall call volume, and its service options (which have become standard among many large utilities) provide customers with a convenient way of interacting with the Company based on their own schedules.

ii. IVR System

The IVR has provided the Companies new tools to improve customer service and makes it possible for the Companies to deliver a consistent customer experience. In particular, the IVR provides customers (1) general account information features (such as balance due, last payment date, last payment amount, and current balance), (2) self-service options including payment arrangements, requesting auto bill pay forms, and initiating a request to stop service, and (3) general business information such as payment mailing address and business locations and hours. These new features allow the customer to conduct their business on their own time making it more convenient for them to complete select transactions, 24 hours a day, 7 days a week. The calls made after hours and during the weekend help reduce calls made during business hours, which, in turn, helps the Company better service customers and decreases the need for additional agents to maintain service levels. As shown in HELCO-911, Attachment 1, customers have made significant use of the IVR System, and have completed 20,979 customer service actions in 2015 and 12,079 actions through July 2016. This provides customers more flexibility and greater service options, while allowing the Customer Care Center to focus on more complex customer requests.

In addition, the IVR contains functionality that allows the Companies to administer and track customer satisfaction survey results, as discussed in more detail below. The customer

satisfaction surveys help to identify strengths and weaknesses in the customer experience so that encouragement may be given for the positive experiences and improvements designed where customer expectation has not been met. This data expands the Companies' ability to monitor performance across all service territories.

IVR Survey

The IVR offers a customer satisfaction survey that specifically focuses on obtaining feedback on customer calls. Customers that participate in the IVR survey are asked five questions about (1) the timeliness in which the CSR handled the call, (2) how courteous the CSR was on the call, (3) how promptly the customer was able to speak to a CSR, (4) how knowledgeable the CSR was, and (5) how concerned the CSR was with the customer's needs. The data collected from this feedback is used to identify opportunities and develop ways to improve call center service.

The IVR survey data has been captured from August 2014 to July 2016. A total 749 surveys have been accepted with an average score of 4.56 (where 5 are the highest on a scale of 1 – 5). The average overall customer satisfaction score has increased from 4.32 in 2014 to 4.67 in 2015 and 4.68 through July 2016, reflecting that customers are satisfied with the level of service provided by the Company (please see HELCO-911, Attachment 2). The Companies also use the IVR to capture certain performance metrics for call center locations for all three companies. The IVR offers the ability to monitor real-time performance and make timely adjustments to better serve customers. It also provides team data to improve efficiency and customer experience. The Companies continue to monitor those metrics to track progress in customer satisfaction. This includes the Average Speed of Answer, which is the average amount of time a call (customer) sits waiting in queue before the call is answered. Other metrics that measure our accessibility to customers include Service Level, Abandon Percentage Rate, Average speed of Answer, Average Handle Call Time and Call Count Offered. Efficiency metrics such as Average Call Handle Time are an indicator of how efficiently our CSRs are on their calls. Combined, these five metrics complement each other to provide a detailed view of how quickly customers are getting served.

The IVR system provides expanded automated functionality that gives customers greater flexibility, choice and convenience, and improves customer service in a manner that would not be practical or cost-effective with only CSRs. It is a fixed cost investment (technology) that mitigates future variable costs (labor). The higher the adoption rate by the customers, the greater the avoided costs related to the necessity to add future labor. The new IVR system provides the Company with more flexibility to meet customer needs and expectations while maintaining and improving its Service Level metric (as defined below).

3. Tracking Efficiencies and Performance Metrics

In order to determine how well the Customer Care Center is doing in meeting the Company's customers' needs, the Customer Relations Department uses the following performance metrics to measure the level of customer service provided by the Customer Care Center RA:

- (1) Service Level (the percentage of incoming calls that are answered within 30 seconds of being placed in the representative queue);
- (2) Abandoned Percentage Rate (the percentage of total calls abandoned, i.e., when a caller hangs up in the representative queue before being connected to a CSR);
- (3) Average Speed of Answer (the average wait time once a call is in the representative queue awaiting the next available CSR);
- (4) Average Call Handle Time (the average time a CSR spends on the phone with a customer, plus the work time after a call to complete the transaction in the system);
- (5) Call Count Offered (all customer calls that are placed into the representative queue for handling by a CSR (this *does not* include calls handled solely by the IVR, or calls that are forced busy).

The above five performance metrics are standard metrics commonly used by contact centers across the nation. The Service Level, Abandoned Percentage Rate, Average Speed of Answer and Average Call Handle Time are key (benchmark) metrics (i.e., the Customer Care Center RA strives to meet a certain level or number), while the Call Count Offered metrics are statistic metrics that are recorded to measure the benchmark metrics. Service Level is the central key measure for customer contact centers (the electric utility industry measures the percentage of incoming calls to a contact center that are answered within *30 seconds* from the time a call is placed into a representative queue). Generally speaking, a utility's Service Level is not achievable unless the other performance metrics are also achieved at adequate levels. The Customer Relations Department examines the performance metrics on a daily basis to determine if operational adjustments to the Customer Care Center RA need to be made.

The Customer Care Center RA performance metrics from 2010 through the 2016 are provided in HELCO-911, Attachment 3. As discussed therein, the Company's Service Level has dramatically improved since 2010, with the Company attaining a Service Level of 93.5% for 2015 (compared to 33% for 2010).

For 2016, Hawaii Electric Lights Service Level goal is 80%. The 80% Service Level was selected based on industry standard for similar customer care centers. The last recorded year-to-date Service Level for 2016 (January 2016 through July 2016) is 89.5%.

In addition to the Service Level, improvements in the Abandoned Percentage Rate and Average Speed of Answer metrics have also been made. The Abandoned Percentage Rate (lower is better), which measures the total calls abandoned in the representative queue before the caller speaks with a CSR, has decreased from 15% for 2010, to 6% for 2013, and down to 1% for 2015. The year-to-date Abandoned Percentage Rate for January through May 2016 is 1%. The current goal is less than 3%. The Average Speed of Answer (lower is better), had year-to-date (year-end) performances of 13 seconds, as compared to 2 minutes and 55 seconds in 2010.

In addition to the above-described performance metrics, as discussed above, a transactional satisfaction survey is also used to track customers' satisfaction with their call experience, by measuring three different transactions. The transactions include customer calls to (1) start, stop, or transfer electric service from one location to another, (2) initiate a billing field investigation, and (3) report trouble with their electric service. As shown in HELCO-911, Attachment 4, overall, customers are satisfied with their interactions with Hawai'i Electric Light's CSRs. The Customer Relations Department uses the results to determine where additional possible training/education is needed.

One of the ways that the Customer Relations Department has been working to improve call quality in an effort to meet overall customer satisfaction goals is by utilizing CSR training to help standardize CSR interactions with customers. In 2015, the CSRs completed formal soft skill training and were introduced to different call types with their supervisor monitoring their performance and providing feedback along the way. Training and continual coaching is helping to improve efficiency by increasing successful first call resolution, lessening call times, and providing a better experience for customers through more knowledgeable and efficient CSRs. To assist in identifying potential weaknesses in the customer's call experience, the "VOC" (Voice of the Customer) Survey was implemented, which allows the Customer Relations Department to monitor call experience and use this feedback to improve its call quality. See below for further discussion on the VOC Survey.

Quality Assurance

The "Voice of the Customer" (VOC) Survey was implemented in January 2016 soon after soft skills training was completed for the Customer Care Center. This survey is provided within 24-48 hours of a call that was made to the Customer Care Center. The survey is conducted to determine 1) overall satisfaction with the call; 2) performance rating of the agents; and 3) characteristics of the call. Similar to the IVR survey, the customers are asked 12 questions regarding the experience they had with the agents that assisted them. The goal and benefits of the "VOC" survey is that it empowers the customer service representative by giving them access to meaningful insights and benchmarks, and, most importantly, the survey improves

agents' ability to provide excellent service by enhancing consistency in service to all customers using this channel.

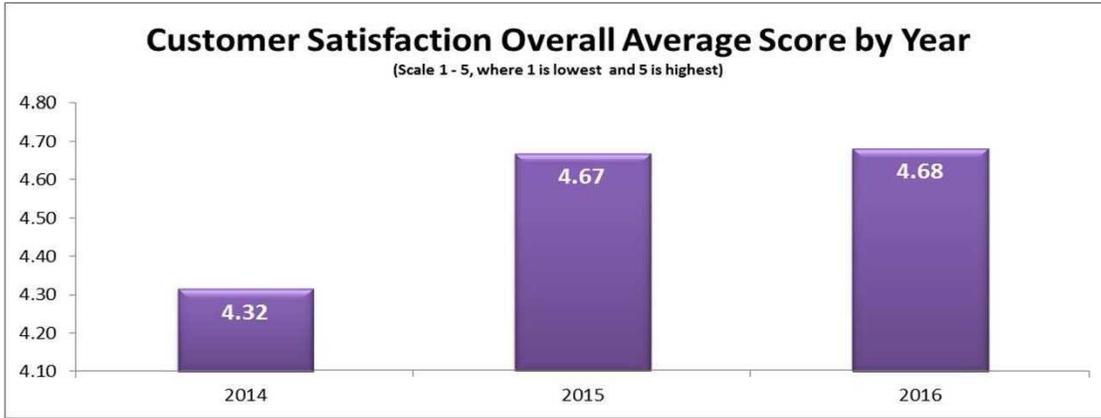
In addition to providing tools for the agent to better service our customers, the VOC survey allows the team to set quotas by location or representative, provides analytical reports that provides trending of scores, verbatim comments from customers, ranking by location or representative, areas of improvement, and provides individual scores and surveys to each agent. It also provides recent examples that help the supervisor when coaching and developing the representatives. Another feature the survey provides is an action alert for all dissatisfied customer that allows for timely follow up and resolution.

D. Customer Relations 2016 Test Year Expense Estimate

The Customer Relations function's 2016 Test Year O&M expense estimate is \$1,584,000 (*see* HELCO-902, page 1, line 1). The expense estimate consists of labor-related and non-labor-related expenses billed from Hawaiian Electric to Hawai'i Electric Light. The Customer Relations estimate's portion attributed to labor-related billed expenses is \$1,403,000; (*see* HELCO-WP-911A, line 6). Please see below for the breakdown of labor-related billed expense.

1. Admin PCC RA \$152,283 (See HELCO-WP-911A)
2. Customer Care Center PCH RA \$1,250,536 (See HELCO-WP-911A)

The remaining \$181,000 of Customer Relation's estimate is attributed to non-labor expenses (*see* HELCO-WP-902A, line 1). The major non-labor cost for 2016 is the IVR maintenance Fee of \$34,479 and the IVR Amortization of \$54,504. The test year estimate is derived from the Customer Relations RA's 2016 operating budget as adjusted by budget adjustments (*see* HELCO-WP-903)



<u>YEAR</u>	<u>% OF OVERALL AVERAGE SCORE BY YEAR</u>	<u># OF SURVEYS</u>
2014	4.32%	84
2015	4.67%	352
2016	4.68%	313
		749

Notes

- ¹ Scale of 1 - 5, where 1 is the lowest and 5 is the highest
- ² Question1 On a scale of 1-5, where 1 is lowest and 5 is highest, how would you rate the representative on handling your problem or question in a timely manner?
- ³ Question2 Thanks. On a scale of 1-5, where 1 is lowest and 5 is highest, how courteous was your representative?
- ⁴ Question3 On a scale of 1-5, how promptly were you able to speak to a representative?
- ⁵ Question4 On a scale of 1-5, how knowledgeable was your representative?
- ⁶ Question5 Finally, how would you rate the representative's concern for your needs?



N.1

2010							
Period	Total Calls	Handled Calls	Abandoned calls	% of Abandoned	ASA	Handling Time	Svs Lvl.
Goals	n/a	n/a	n/a	Less 5%	Less 30 Secs	3:00	80%
Average	8,911	7,565	1,347	15.1%	2:10	2:17	33%

N.1 Monthly statistics for 2010 not available due to implementation of new Mitel System starting December 20th, 2012. 2010 average was determined using the following table:

January 1 - November 22, 2010							
District	Total	Handled	Abandoned *	% Abandoned *	ASA *	Handling Time *	Svs level *
Waimea	12,585	10,443	2,142	17.0%	0:02:07	0:02:12	33%
Kona	28,764	24,596	4,168	14.5%	0:01:54	0:02:22	33%
Hilo	54,288	46,712	7,576	14.0%	0:02:16	0:02:17	33%
Total	95,637	81,751	13,886	15.2%	0:02:06	0:02:17	33%
Mitel System							
Dec 20-31	3,387	2,309	1,078	32.0%	0:04:02	0:02:31	27%
Sub Total ^A	99,024	84,060	14,964				
Annualized Total	106,934	90,775	16,159				
2010 Average	8,911	7,565	1,347				

* For Abandoned, % Abandoned, ASA, Handling Time and Svs Level averages, a weighted average calculation was used to determined 2010 averages.
A. 99,024 / 338 days (1/1/10 - 11/22/10 and 12/20/10 - 12/31/10) = 293 calls per day

2011							
Period	Total Calls	Handled Calls	Abandoned calls	% of Abandoned	ASA	Handling Time	Svs Lvl.
Goals	n/a	n/a	n/a	Less 5%	Less 30 Secs	3:00	80%
Jan-11	10,175	8,517	1,658	16.3%	2:07	2:18	62.4
Feb-11	8,803	7,444	1,359	15.4%	2:24	2:21	58.5
Mar-11	10,998	8,499	2,499	22.7%	2:46	2:38	53.3
Apr-11	10,538	8,003	2,535	24.1%	2:52	2:25	50.2
May-11	10,656	8,722	1,934	18.1%	3:02	2:27	50.6
Jun-11	12,067	8,979	3,088	25.6%	4:00	2:22	40.5
Jul-11	10,650	8,583	2,067	19.4%	2:52	2:20	53.5
Aug-11	12,072	9,105	2,967	24.6%	2:48	2:30	53.6
Sep-11	10,542	8,823	1,719	16.3%	2:38	2:21	54.8
Oct-11	9,880	8,093	1,787	18.1%	3:04	2:22	54.1
Nov-11	11,510	8,136	3,374	29.3%	4:10	2:18	43.9
Dec-11	9,654	8,237	1,417	14.7%	2:27	2:15	59.4
Total	127,545	101,141	26,404				
Average	10,629	8,428	2,200	20%	2:55	2:23	52.9

N.2

N.3

2012							
Period	Total Calls	Handled Calls	Abandoned calls	% of Abandoned	ASA	Handling Time	Svs Lvl.
Goals	n/a	n/a	n/a	Less 5%	Less 30 Secs	3:00	80%
Jan-12	10,062	9,241	821	8.2%	1:55	2:23	72.9
Feb-12	8,996	8,332	664	7.4%	1:09	3:46	81.5
Mar-12	9,315	8,756	559	6.0%	1:03	3:13	83.4
Apr-12	9,313	8,567	747	8.0%	1:16	3:10	79.1
May-12	10,488	9,138	1,346	12.8%	2:00	3:49	65.5
Jun-12	13,329	9,511	3,817	28.6%	5:05	4:37	34.5
Jul-12	11,006	9,261	1,743	15.8%	3:15	5:00	42.4
Aug-12	17,551	10,098	7,447	42.4%	13:01	5:20	16.3
Sep-12	12,711	9,495	3,216	25.3%	5:21	3:32	18.1
Oct-12	12,140	10,960	1,180	9.7%	1:53	3:24	49.9
Nov-12	12,463	11,112	1,351	10.8%	1:47	3:04	45.8
Dec-12	11,399	10,176	1,223	10.7%	1:54	3:04	43.3
Total	138,773	114,647	24,114				
Average	11,564	9,554	2,010	15%	3:18	3:49	52.7

¹ Abandoned calls call count is "abandoned calls - long" only; does not include "short"; Procore includes both.

N.2 The totals includes ProCore Statistics. ProCore started to assist with phone calls starting from February 23, 2012 through August 22, 2012.
N.3 New CIS System deployed May 29, 2012.

2013							
Period	Total Calls	Handled Calls	Abandoned calls	% of Abandoned	ASA	Handling Time	Svs Lvl.
Goals	n/a	n/a	n/a	Less 5%	Less 30 Secs	3:00	80%
Jan-13	12,267	10,801	1,466	12.0%	2:06	3:13	41.3
Feb-13	9,365	8,529	836	8.9%	1:18	3:16	56.0
Mar-13	9,458	8,403	1,055	11.2%	1:48	3:16	52.1
Apr-13	10,101	9,490	611	6.0%	1:04	3:08	65.7
May-13	9,986	9,702	284	2.8%	0:32	2:56	78.4
Jun-13	9,554	9,341	213	2.2%	0:27	2:57	79.5
Jul-13	11,094	10,428	666	6.0%	1:00	3:01	61.0
Aug-13	11,080	10,077	1,003	9.1%	1:06	2:58	58.5
Sep-13	9,994	9,610	384	3.8%	0:33	2:44	76.9



Oct-13	9,917	9,678	239	2.4%	0:25	2:47	78.4
Nov-13	8,442	8,082	360	4.3%	0:42	2:31	75.4
Dec-13	8,872	8,432	440	5.0%	0:57	2:35	65.0
Total	120,130	112,573	7,557				
Average	10,011	9,381	630	6%	0:59	3:01	65.7

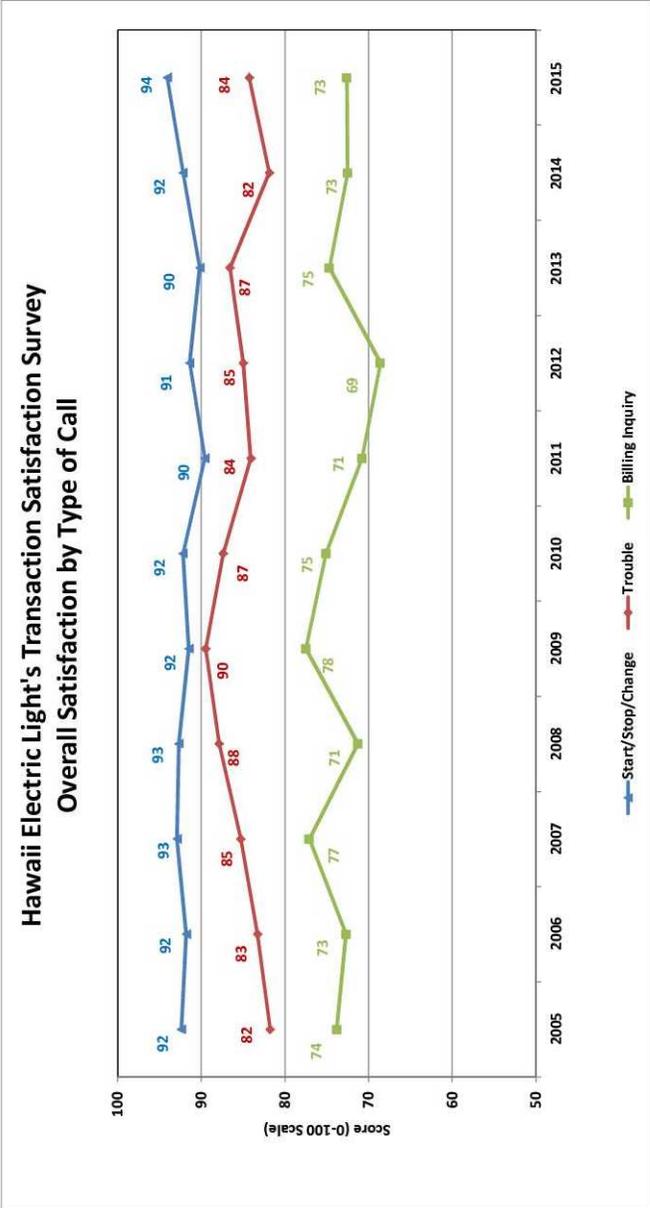
2014							
Period	Total Calls	Handled Calls	Abandoned calls	% of Abandoned	ASA	Handling Time	Svs Lvl.
Goals	n/a	n/a	n/a	Less 3%	Less 30 Secs	3:00	80%
Jan-14	9,315	8,845	470	5.0%	0:58	2:50	62.0
Feb-14	7,438	7,176	262	3.5%	0:45	3:03	73.2
Mar-14	7,733	7,294	439	5.7%	0:59	2:48	64.1
Apr-14	7,851	7,549	302	3.8%	0:48	2:49	67.9
May-14	7,974	7,639	335	4.2%	0:52	2:50	65.2
Jun-14	8,742	8,220	522	6.0%	1:09	2:49	61.6
Jul-14	9,068	8,733	335	3.7%	0:45	2:49	70.3
Aug-14	7,570	7,355	215	2.5%	0:30	3:00	78.9
Sep-14	10,300	9,672	628	6.1%	1:04	3:00	57.1
Oct-14	8,959	8,722	237	2.7%	0:27	5:44	78.8
Nov-14	7,269	7,103	166	2.3%	0:31	5:38	75.6
Dec-14	8,962	8,718	244	2.7%	0:33	5:39	69.9
Total	101,181	97,026	4,155				
Average	8,432	8,086	346	4%	0:46	3:10	68.7

Hurricane Iselle.

2015							
Period	Total Calls	Handled Calls	Abandoned calls	% of Abandoned	ASA	Handling Time	Svs Lvl.
Goals	n/a	n/a	n/a	Less 3%	Less 30 Secs	3:00	80%
Jan-15	8,795	8,521	274	3.1%	0:36	4:11	81.4
Feb-15	7,207	7,172	35	0.5%	0:10	3:47	94.1
Mar-15	7,629	7,596	33	0.4%	0:11	3:51	93.7
Apr-15	7,244	7,216	28	0.4%	0:09	3:58	94.9
May-15	6,871	6,860	11	0.2%	0:09	4:06	95.5
Jun-15	7,765	7,740	25	0.3%	0:09	3:34	95.6
Jul-15	7,490	7,458	32	0.4%	0:13	3:38	92.2
Aug-15	7,437	7,381	56	0.8%	0:12	3:24	91.7
Sep-15	7,656	7,640	16	0.2%	0:06	3:39	97.5
Oct-15	7,669	7,665	4	0.1%	0:07	3:32	96.3
Nov-15	7,025	6,992	33	0.5%	0:08	3:27	95.1
Dec-15	7,970	7,940	30	0.4%	0:09	3:46	94.2
Total	90,758	90,181	577				
Average	7,563	7,515	48	1%	0:11	3:44	93.5

2016								
Period	Total Calls	HECO Rerouted	Handled Calls	Abandoned calls	% of Abandoned	ASA	Handling Time	Svs Lvl.
Goals	n/a	n/a	n/a	n/a	Less 3%	Less 30 Secs	3:00	80%
Jan-16	7,162	0	7,092	70	1.0%	0:15	3:32	90.4
Feb-16	6,962	238	6,689	35	0.5%	0:11	3:39	93.8
Mar-16	8,819	1389	7,371	59	0.7%	0:11	3:34	93.2
Apr-16	9,102	1535	7,502	65	0.7%	0:10	3:17	93.5
May-16	9,747	2226	7,412	109	1.1%	0:14	3:13	88.5
Jun-16	11,132	2780	8,167	185	1.7%	0:19	3:34	82.3
Jul-16	10,740	2822	7,724	194	1.8%	0:16	3:26	85.0
Aug-16			0					
Sep-16			0					
Oct-16			0					
Nov-16			0					
Dec-16			0					
Total	63,664	10990	51,957	717				
Average	9,095		4,330	102	1%	0:13	3:27	89.5

Hawaii Electric Light Transaction Satisfaction Survey - Overall Satisfaction by Type of Call				
Year	Start/Stop/Change	Trouble	Billing Inquiry	Overall
2005	92	82	74	89
2006	92	83	73	89
2007	93	85	77	91
2008	93	88	71	90
2009	92	90	78	91
2010	92	87	75	91
2011	90	84	71	87
2012	91	85	69	89
2013	90	87	75	89
2014	92	82	73	88
2015	94	84	73	91



I. Field Services Department

The primary function of the Field Services Department is to manage and carry-out activities that require Company personnel to be dispatched to a commercial or residential customer's premise or meter location. These activities involve reading meters, connecting and disconnecting services, collecting payments, investigating and resolving billing issues, and investigating the unauthorized use of electricity. This Department includes the Customer Field Services RA, the Meter Reading RA, the Field Services & Collections RA, and the Field Services Administrative RA. The Commercial Account Managers are also in the Field Services Department organization. The Account Managers work to develop a relationship with the Company's large commercial accounts as part of an effort to become their trusted energy partner. The Manager of the Field Services Department is part of the Field Services Administrative RA, and directs and coordinates all customer service field operational activities, including the alignment and standardization of policies and procedures; oversight, orchestration, and implementation of projects and programs; management of the labor resource levels of all RAs within the department; and collaboration for the development and monitoring of the financial budget for the Department.

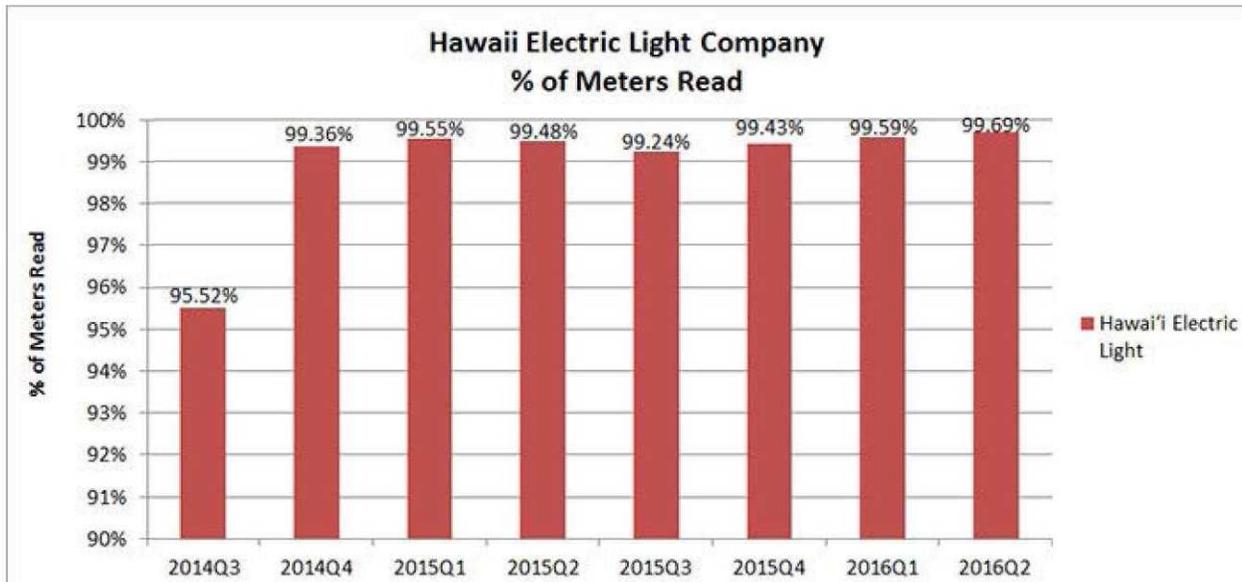
A. Field Services Administrative RA (PCJ)

The Field Services Administrative RA provides administration support for all RAs in the Field Services Department. The Field Services Administrative RA staff reports directly to the Manager of the Field Services Department. The staff provides administrative, analytical, research, and technical support needed to develop, maintain and monitor work practices and procedures; collects and compiles data and prepares statistical reports; identifies, strategizes, and implements business process improvement opportunities; monitors field and meter reading work assignments; and performs general clerical duties.

B. Meter Reading RA (PCM)

The Meter Reading RA reads approximately 86,000 meters residential and commercial metered accounts on a monthly cycle, with essentially all meters on Hawai'i Island being read within 32 working days. Some of these meters require more than one read each. For example, the Net Energy Meter has three registers that capture the kilowatt-hours produced by the Company for the customer's use, the excess kilowatt-hours produced by the homeowner, and the difference between the two. Also, the Company has some Time-of-Use meters that have twelve registers. In 2015, the Meter Readers read approximately 112,000 registers. Approximately 10,000 meters are read on a less frequent cycle due to the difficulty in accessing these meters, as they are installed in remote locations, such as on mountaintops. The Meter Reading RA strives to correctly read and report meter usage data in a timely manner to ensure that prompt and accurate bills are provided to customers, and to prevent fluctuations in the Company's monthly revenue forecasts.

The following is a graph showing the percentage of meters read. This metric measures the percentage of bills produced that use actual meter reads as opposed to estimated reads, during a given time period. The difference between the total number of bills produced and the number of bills produced from estimated meter reads is the number of bills produced from actual meter reads during a given period. Although we strive to read 100% of the meters, it is sometimes difficult due to a variety of circumstances that prevent access (e.g. homeowner or tenant may lock their gates or not secure their dog, etc.). As of the 2nd Quarter of 2016, the Company was able to read 99.69% of the meters.



The Meter Reading RA is comprised primarily of meter readers who read residential and commercial meters (including Demand meters used by large electricity users) in the field; record and report readings; observe and report unsafe or unusual and irregular conditions with the Company's meter and electrical equipment; and interact and work with customers regarding their meter and billing period related questions.

Beginning in November of 2014, as vacancies for existing Meter Reader positions occurred, they were backfilled with temporary Meter Reader hires in anticipation of the Smart Grid project. The Smart Grid project will provide automation to the meter reads that are done manually today, reducing the need for these positions in the future. The hiring of temporary employees ensures the work gets done today, while not filling regular positions that are not needed in the future. The temporary Meter Readers were advised during the hiring process that this position would be temporary until the Smart Grid project is completed and stabilized. Unfortunately, retention of these temporary employees has been a challenge. To address this shortcoming, the Division continues to hire agency temporary meter readers to help with the work in the interim until a temporary Company employee is hired. The Field Services Supervisor directs and coordinates all meter reading activities and staff to ensure that meters are read correctly and at the proper time to achieve prompt and accurate customer billing. The supervisor also manages the performance of their employees; promote a safe environment by

conducting field observations to monitor employees for safe practices; work with customers to resolve complaints; and work with other RAs within and outside of the Field Service Department on projects and programs. An Administrative Assistant provides clerical support for the Meter Reading RA.

C. Field Services & Collections RA (PCG)

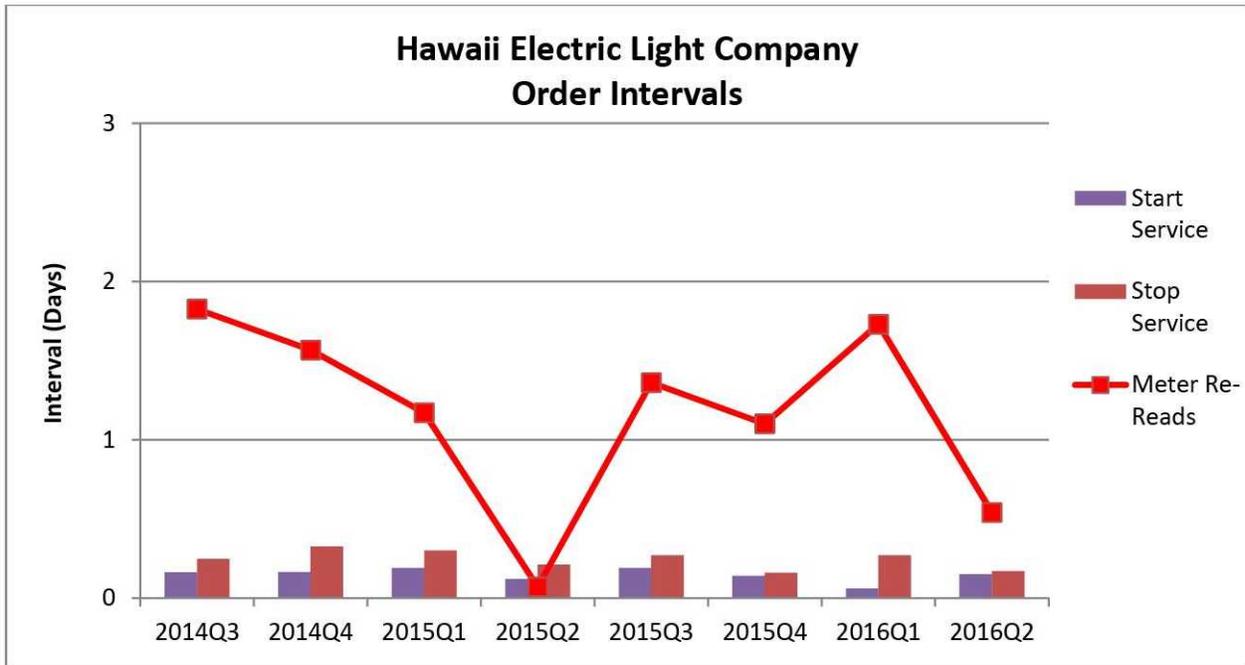
The Field Services & Collections RA is comprised of Field Representatives, Field Credit Representatives, and Senior Customer Service Representatives located in Hilo, Waimea and Kona. The Field Representatives and Field Credit Representatives conduct field services and field investigations. They are responsible for starting electrical service, stopping electrical service, restarting electrical service after payment, disconnecting service for nonpayment, reading meters to verify previous readings, checking addresses, and miscellaneous other field activities.

The below graph shows the interval for start service orders, stop service orders, and meter re-read orders. For start and stop service orders, the interval is defined as the average number of days between the date a customer requests electricity service to start or stop (“commitment date”) and the actual date the Companies’ field personnel start or stop (“service fulfillment date”) service to the customer. Lower order interval values are better than higher values.

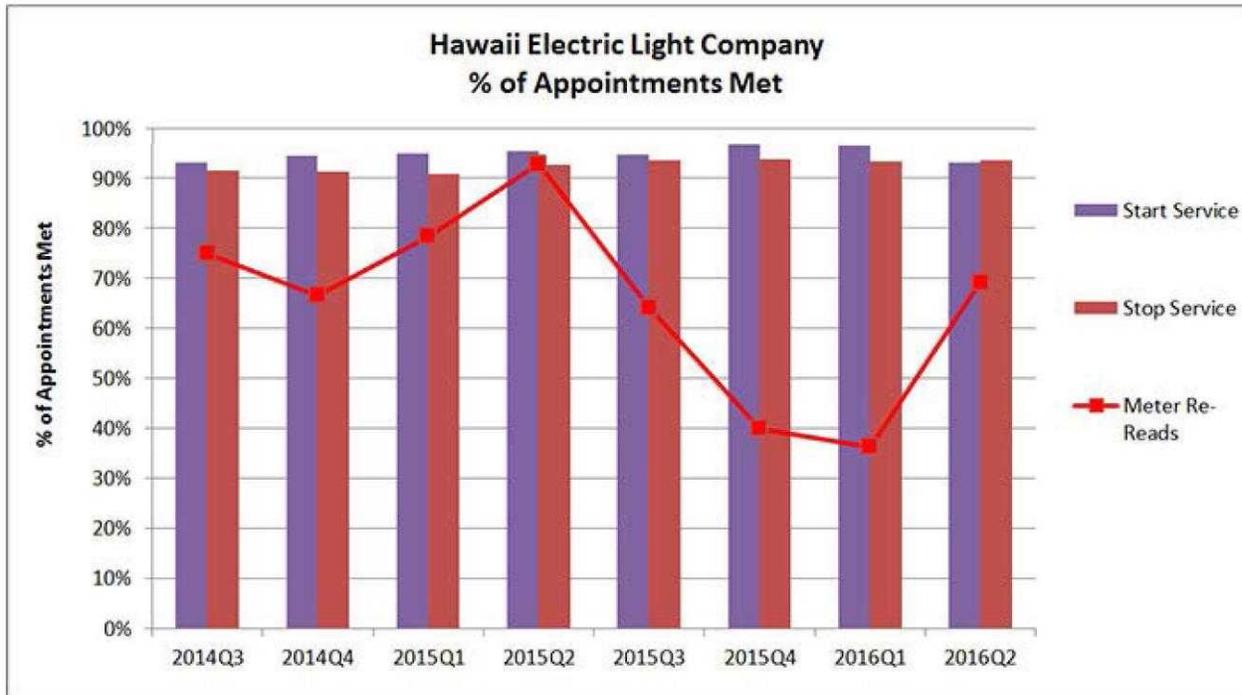
For start service intervals, the metric measures start service requests for locations that already have electrical service facilities (meter, service line, meter socket) and just require the dispatch of company field personnel to turn on the meter and take a reading. For stop service intervals, the metric measures “stop” service requests that involve Company field personnel performing a final meter read and in some cases turning off the meter.

For meter re-reading orders, the Companies measure the interval from the time a customer submits a re-read request (request date) to the actual date the Companies’ field personnel re-reads the meter (fulfillment date).

From 2014Q3 through 2016Q2, the Company’s start and stop service order intervals were both less than one day and its meter re-read intervals were under two days (most recently less than one day for 2016Q2). Please refer to Attachment 1, page 1 for details as well as the annual results.



The department measures the Percentage of Appointments Met as the percentage of requests for start, stop, and meter re-read services as defined above that have commitment dates that match the service fulfillment date. Although this metric is called an “appointment”, the customer does not need to be present for the Company to complete its work. As of the 2nd Quarter of 2016, the Company was able meet 93.15% of their start appointments, 93.69% of their stop appointments and 69.23% of their Meter Read requests. Please refer to Attachment 1, page 2 for details as well as the annual results.



In many of these cases, the representative may require multiple visits to the customer homes to complete the inquiry. The Field Credit Representative also does field collections by working with the customer. In certain situations, the Representative will call the customer to give them an advance notice.

On July 1st of 2016, the Field Credit Representative stopped collecting cash or check from customers at their premises. In the alternative, customers are now able to pay for their electric bill at their nearest Western Union participating payment center such as Walgreens, Foodland, and Safeway free of charge. The Company was one of the last utilities to make door-to-door collections. This change also makes it safer for employees because they will no longer have to carry cash with them, which made them vulnerable to theft. The Field Credit Representative will still need to visit these customers to hang door-hangers or to disconnect service for nonpayment.

The Senior Customer Service Representative contacts customers to investigate high or low bills, investigates and stops service if the meter is in unsafe condition, checks the bill rate schedules, investigates potential swapped meters (i.e., if two (2) or more customers are being billed for the wrong meters), and recovers loss revenue associated with irregularities such as meter tampering, improper wiring, and the diversion of electricity. The Senior Customer Service Representative also plans and schedules daily work activities. (see Attachment 2 – Field Service Notifications in 2015 for volume breakdown)

The Field Services Supervisor directs field and clerical work to ensure that field work orders and investigations are completed accurately, courteously, and efficiently. The supervisor

manages the performance of his employees; promotes a safe environment by conducting field observations to monitor employees for safe practices; work with customers to resolve complaints; and work with other RAs within and outside of the Field Services Department on projects and programs. The Supervisor aligns the policies and processes among the Hilo, Waimea and Kona operations and is also responsible for change management. An Administrative Assistant also provides administrative support to this RA.

D. Commercial Account Management RA (PCE)

The Commercial Account Management RA consists of four Commercial Account Managers (“CAMs”) who report directly to the Customer Field Services Manager. Hawai‘i Electric Light’s CAMs focus on servicing the wants and needs of the commercial and governmental sectors. The Company assigns CAMs to serve as a single point of contact to large power customers, corresponding to the Company’s approximately 95 Schedule P accounts, for their energy needs. These accounts include such commercial businesses and government agencies such as Hilton Waikoloa Village, Parker Ranch, Department of Water Supply in the County of Hawaii, Big Island Country Club and many others.

The CAMs work to develop relationships with their customer contacts to understand their energy and operations needs and facilitate responses from the Company across departments to meet those needs. The CAMs provide this customer segment with additional services as part of the Company’s effort to become their trusted energy partner. As part of this effort, the Company is committed to delivering industry relevant workshops relating to their electrical systems for our customers. For example, the Company partnered with the International Facility Management Association (“IFMA”) to offer educational workshops for the Facilities Professional. Furthermore, a Combined Heat and Power (“CHP”) workshop was offered to customers that are contemplating using this technology. In September, the Company will be offering a Power Quality Workshop.

In addition, the CAMs handle commercial customer inquiries that are not addressed by the customer assistance center. They are the customer’s advocate. The CAMs also work with business and community organizations and educational institutions to jointly promote understanding and acceptance of the State’s clean energy goals, renewable developments and energy conservation to the public through Hawaii Energy.

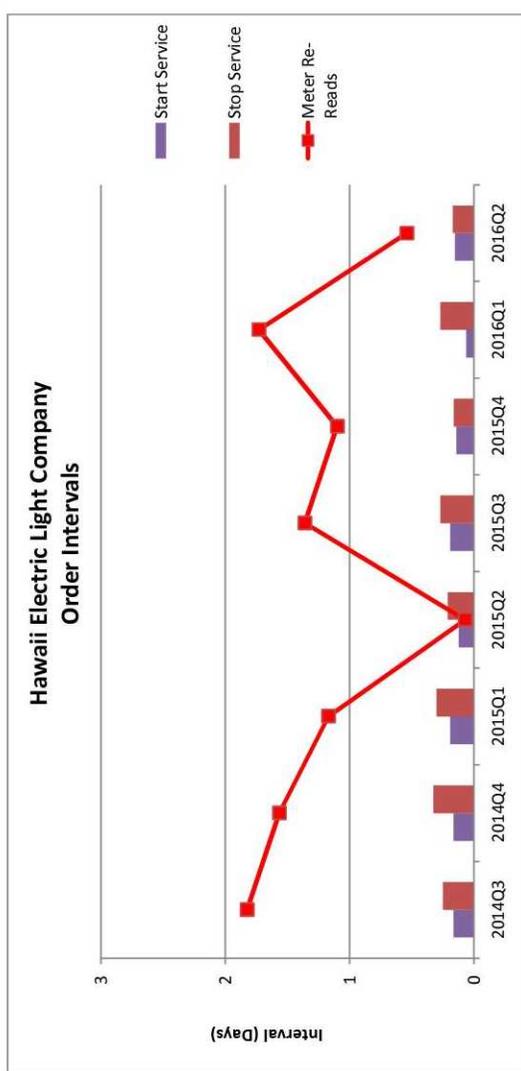
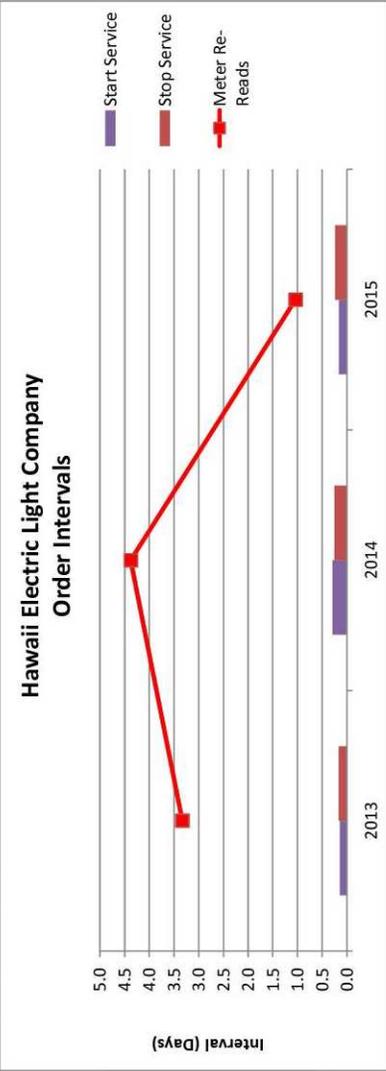
E. Field Services 2016 Test Year Expense Estimate

The Field Services function's 2016 Test Year O&M expense estimate is \$3,990,000 (*see* HELCO-902, page 1, line 2). The expense estimate consists of labor-related and non-labor-related expenses billed from Hawaiian Electric to Hawai'i Electric Light. The Field Services estimate's portion attributed to labor-related billed expenses is \$3,228,000 (*see* HELCO-WP-901A, line 2). The remaining \$763,000 of Field Services' estimate is attributed to non-labor expenses (*see* HELCO-WP-902A, line 2). The test year estimate is derived from the Field Services RA's 2016 operating budget as adjusted by budget adjustments (*see* HELCO-WP-903).

The major non-labor expenses are for hiring Agency Temporary personnel, leasing Carina Collars and expensing for the vehicle cost. The estimated cost of \$130,000 for Agency Temporary Meter Readers could be considered for adjustment and removed from the 2016 test year estimate at the next available opportunity, since the dollars related to this work are captured through the labor billable for these vacant, but necessary positions.

The lease for Carina Collars is estimated at about \$50,000. The Carina Collars are used to help disconnect residential services when the customer is delinquent in paying their electric bill. These collars are only installed for those customers that habitually do not meet their payment obligations. Once the customer fulfills their payment obligation, the Carina Collar is used to restart the electric service. Having this technology has helped the Company maintain the current level of Meter Reader staffing even though the number of registers or reads have increased, since a truck roll is not necessary to address these accounts. The vehicle expense is estimated at about \$507,000. The vehicles are used by the Field Service personnel to commute to the various customer premises for Field Service and Meter Reading work. The cost represents labor and overhead, depreciation and vehicle maintenance.

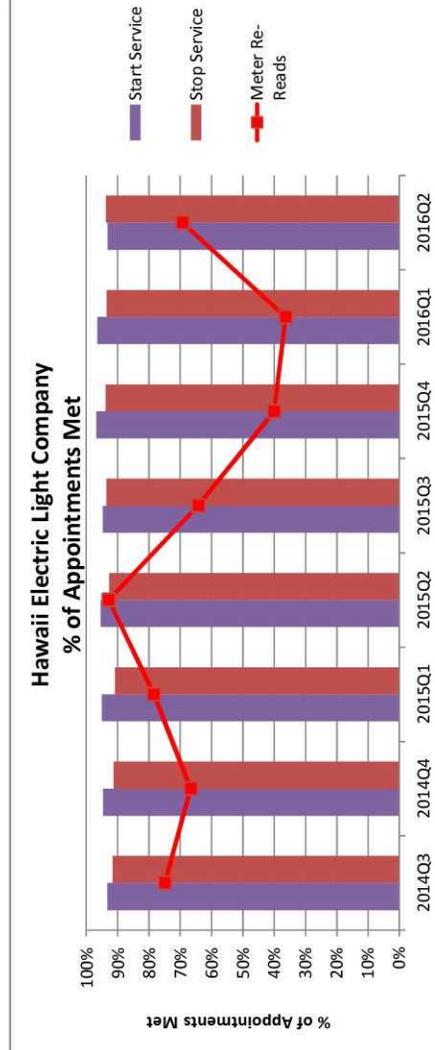
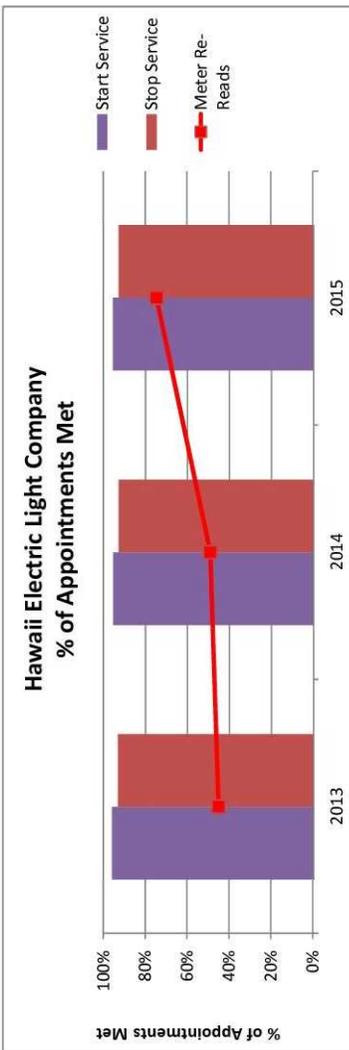
**Hawaii Electric Light
 Order Intervals**



	Annual Intervals (Days)		
	Start Service	Stop Service	Meter Re-Reads
<u>2013</u>	0.14	0.17	3.33
<u>2014</u>	0.29	0.25	4.38
<u>2015</u>	0.16	0.24	1.04

	Quarterly Intervals (Days)		
	Start Service	Stop Service	Meter Re-Reads
<u>2014Q3</u>	0.16	0.25	1.83
<u>2014Q4</u>	0.16	0.33	1.57
<u>2015Q1</u>	0.19	0.30	1.17
<u>2015Q2</u>	0.12	0.21	0.07
<u>2015Q3</u>	0.19	0.27	1.36
<u>2015Q4</u>	0.14	0.16	1.10
<u>2016Q1</u>	0.06	0.27	1.73
<u>2016Q2</u>	0.15	0.17	0.54

**Hawaii Electric Light
 Percentage of Appointments Met**



	Annual Percentage of Appointments Met		
	Start Service	Stop Service	Meter Re-Reads
2013	95.44%	92.75%	74.76%
2014	95.30%	92.68%	49.10%
2015	95.88%	93.01%	45.17%

	Quarterly Percentage of Appointments Met		
	Start Service	Stop Service	Meter Re-Reads
2014Q3	95.07%	90.85%	78.46%
2014Q4	94.61%	91.30%	66.67%
2015Q1	93.26%	91.52%	75.00%
2015Q2	95.45%	92.72%	92.86%
2015Q3	94.70%	93.62%	64.29%
2015Q4	96.75%	93.81%	40.00%
2016Q1	96.48%	93.46%	36.36%
2016Q2	93.15%	93.69%	69.23%

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Field Services Department
Field Services Notifications in 2015

A

B

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

Notification Type	Number of Notifications Created
Field Representative and Field Credit Representative	
1A-Start Electrical Service	3,313
1B-Stop Electrical Service (Disconnect, Read and Disconnect, Read Only)	910
2A-Restart Electrical Service After Payment	12,277
2B-Disconnect for Nonpayment (Special)	194
2C-Disconnect for Nonpayment	30,748
3A-Read meters to verify previous readings	1,775
4F-Check the Address	586
7A-Misc-Field Services (LOSO Retry, Install/Remove Seals, Reset Demand, etc.)	1,071
Senior Customer Service Representative	
4A-Investigate High Bill	704
4B-Investigate and Stops Service in Unsafe Meter Condition	4
4C-Checks the Bill Rate	1
4D-Investigate Potential Swap Meter	456
4H-Investigate Potential Energy Theft Situations	25
TOTAL	52,064

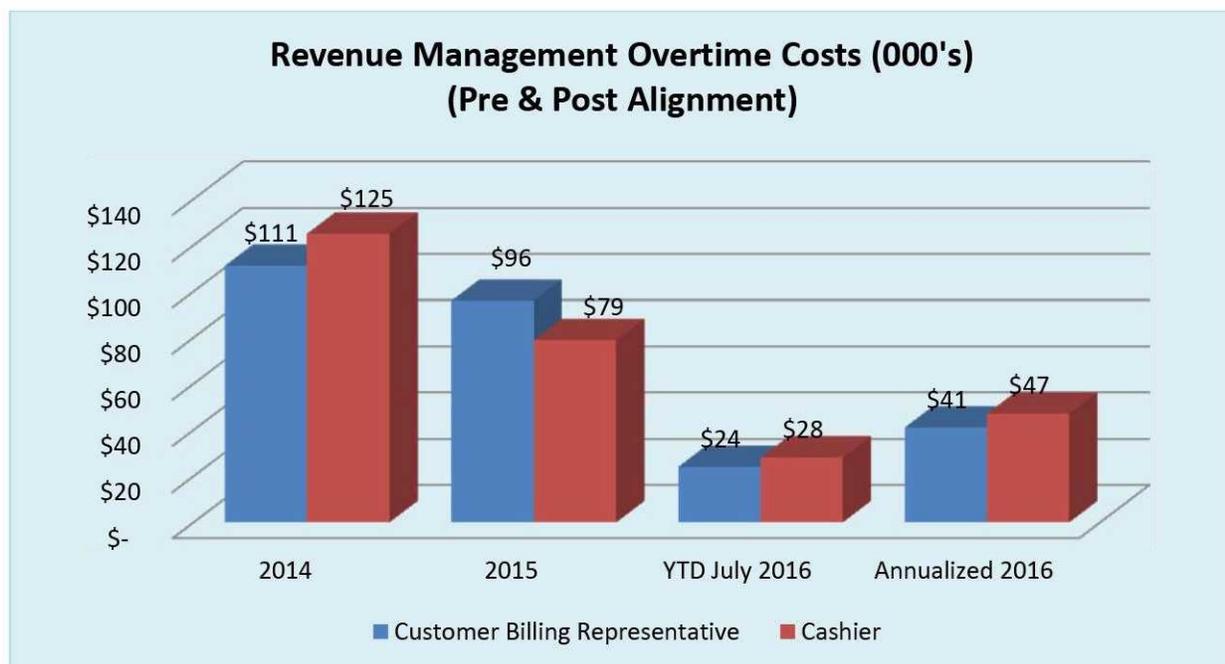
Notes:

- Query from SAP Customer Information System

I. Revenue Management Department

The primary functions of the Revenue Management Department is to ensure that accurate bills are provided to customers, to receive and process payments, and to work with customers who are delinquent with their payments (manage delinquent accounts). This Department includes four (4) RAs: the Billing RA; the Payment Processing RA; the Credit RA; the Revenue Management Administrative RA. The Manager of the Revenue Management Department is part of the Revenue Management Administrative RA, and provides overall management of the Billing, Payment Processing, and Credit RAs for Hawaii Electric Light, as well Hawaiian Electric and Maui Electric. The Manager works with each RA at all three companies to ensure a high level of accuracy and timeliness for customer billing and payment processing, and to ensure the prompt collection of accounts receivable, in an effort to minimize revenue losses for the Companies.

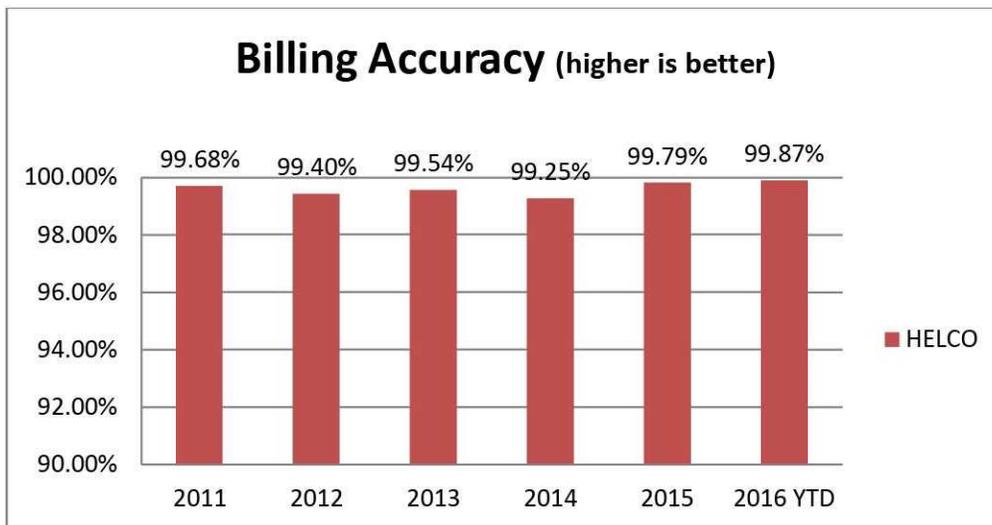
Consistent with the Companies’ strategic goal to provide additional options for customers and reduce costs, the Manager and the administrative staff deployed new practices and technologies to encourage more customers to utilize paperless/electronic billing and electronic payments, such as making improvements to the Company’s online system and encouraging the use of online payment via hawaiielectriclight.com. The Companies also promoted various campaigns such as the paperless billings and automatic bill payment “ABP” sweepstakes, and tracks the adoption rates for electronic/paperless billing and electronic payments accordingly. The Companies continue to look for innovative ways to promote customer options and engage all customers while at the same time, managing costs and improving efficiencies. As shown below, for the revenue management team at Hawai’i Island, overtime labor costs for the bargaining unit employees has dramatically decreased which resulted in cost savings (See HELCO-904).



A. Billing RA (PCB)

As a result of the tri-company Customer Service Department reorganization, as discussed further in HELCO-905B, the Hawaiian Electric Billing RA manages the monthly billings that are sent out to all customers, including the verification and confirmation of bills. As such, all costs incurred for the processing of Hawai‘i Electric Light’s customer bills are inter-company billed, and are included in the department’s 2016 Test Year expenses.

The Billing RA is comprised primarily of customer billing representatives (“CBRs”) who review, evaluate, and process all billing exceptions. As of the last quarter of 2015, billing is managed by two dedicated CBR’s who reside on Hawai‘i Island and the remaining billing work is managed by a pool of shared services billing representatives who reside on Maui. As noted in HELCO-904, the implementation of shared services resulted in labor savings for the Company. In addition to the cost savings, as shown below, over time, the level of performance has improved and surpassed pre-SAP CIS deployment in terms of our billing accuracy metrics which measures the average percentage of bills that do not need to be rebilled or reprinted.



Billing exceptions are accounts with unusual/irregular usage or activity that are withheld from the Customer Information System’s (“CIS”) automatic bill calculation and invoicing. Over fifty (50) possible reasons (the most common reason being implausible reads (e.g., the current usage pattern does not match the previous month’s usage pattern)) can cause a billing exception, and each needs to be individually handled and examined by CBRs. In handling the billing exceptions, the respective billing personnel assess and analyze the accuracy of customer billings and reviews against prior consumption patterns; process bill corrections and adjustments; and initiate field investigations (when necessary) to test meters and verify the accuracy of meter readings and/or verify billing rates.

In addition to the CBRs, other Billing RA employees such as the Customer Information System Administrator, the Billing Functional Administrator, etc., provide the following support:

- Business analysis and system support for the billing function in the CIS (ensures that the proper policies and procedures are being followed for the billing function in the CIS);
- Technical support to CBRs and other system users throughout the Company; review billing rate changes that are entered into the CIS; and
- Administer and coordinate the Translation System, which is a Meter Data Management system that handles billing data for select major commercial customers and billing for Independent Power Producers.

The Hawai‘i Electric Light billing team on Hawai‘i Island is currently managed by the Revenue Management Supervisor on Maui with plans to hire a dedicated Revenue Management Supervisor on Hawai‘i Island. The Revenue Management Supervisor directs the activities of the CBRs and coordinates with the other billing personnel to ensure the proper and timely billing and reconciliation of accounts; tests, provides a final review of, and approves billing rate changes and updates in the CIS; and formulates and implements billing policies, procedures and ensures compliance with Sarbanes-Oxley (“SOX”) controls. The Revenue Management Supervisor is also responsible for managing the other responsibilities in the Department including payment processing, and provides support in managing the company’s delinquencies.

B. Payment Processing RA (PCP)

Similarly, as a result of the tri-company Customer Service Department reorganization, the payment processing functions for Hawai‘i Electric Light are handled by the Payment Processing RA at Hawaiian Electric. All costs incurred for the processing of Hawai‘i Electric Light’s customer payments are inter-company billed, and are included in the department’s 2016 Test Year expenses. Included in the inter-company billing, there are five dedicated cashiers on Hawai‘i Island.

The Payment Processing RA is responsible for the processing of all customer payments received from various sources, including mail, payment vendors, automatic bill payment through the Company, and “walk-in” bill payment offices. Hawai‘i Electric Light averages approximately 75,000 payments per month. Approximately 42% of this payment volume comes from miscellaneous sources, including payments sent via bank wire, ABP and CheckFree, Western Union (“WU”) payments, and payments from the Low Income Heat & Energy Assistance Program (“LIHEAP”).

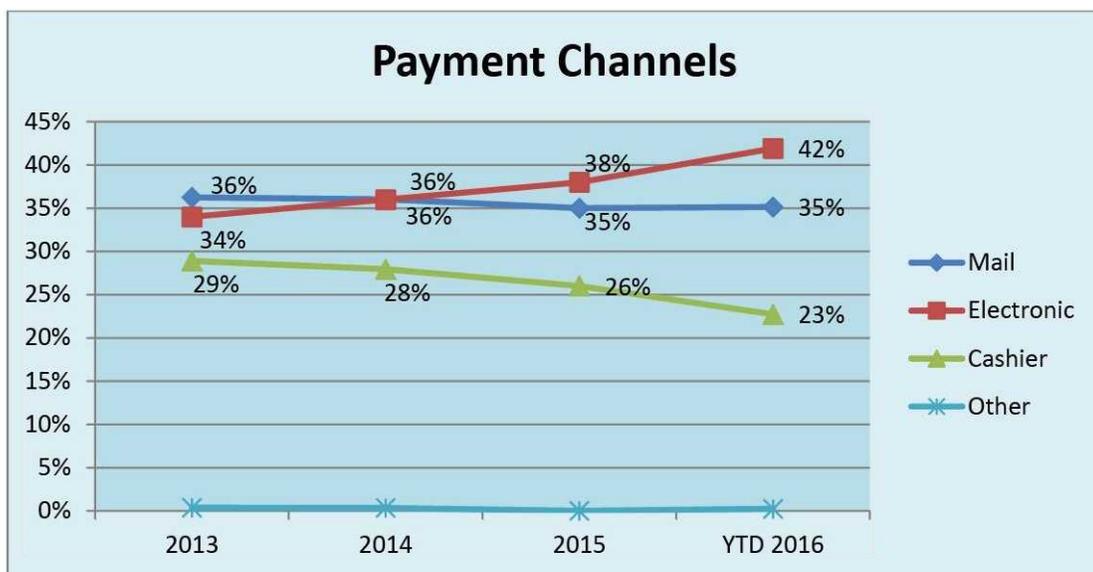
In line with the Companies’ strategic goal to increase payment options and provide additional offerings for customers, it was actively engaged in leveraging its existing vendor relationship with Western Union (“WU”), as noted in HELCO-904 and explained in Docket No. 2014-0318. Beginning in 2014, the Company completed several phases of the ongoing Real-time Credit Card (“RTCC”) implementation project, which was the first step in the Hawaiian Electric Companies’ plans to provide a suite of online/mobile self-service options, including a future mobile application that includes text capabilities.

The implementation of this project along with the subsequent phases that followed, including various process improvements in the payment processing division, has resulted in a decrease in the volume of walk-in payments at various payment locations at Hawai'i Electric Light. As a result, the temporary agency hire cashier in Kona was eliminated in August 2015 and, as of May 2, 2016, with the decrease in walk-in volume in Waimea, this payment center was closed. The existing cashier in Waimea filled an existing Meter Reader vacant position in Waimea.

In addition, as noted in HELCO-904, Customer Service continues to perform periodic reviews of existing contracts to explore cost saving opportunities and minimize costs accordingly. As mentioned above, in 2015, through a competitive bidding, the Company was able to secure lower fees for both the Company and our customers through our existing payment vendor, WU. Effective January 1, 2016, customers who wish to pay their electric bills in-person at any of the 25 participating WU locations throughout Hawai'i Island will be able to do so with no fees to the customer and a reduced \$.71 per transaction for the Company. The related fees of \$11,307 will be offset by the cost savings noted above with the elimination of the cashiers in Waimea and the reduction in staffing in Kona.

The Company also successfully secured a reduction in credit card processing fees. As of February 1, 2016, for those customers who prefer to pay their bills by credit card, the related fees dropped to \$1.99 per transaction for residential customers, down from \$2.95 in 2014 and \$4.95 previously.

Payment options were also enhanced to include online payments initiated from the Company's website. This additional payment option offering increased electronic payment adoption by 4% since the end of 2015 as depicted below.



Given all of the above-referenced initiatives, as of July 2016, mail volume has decreased and averages approximately 26,000 payments per month (35% of the total payment volume).

The mailed-in payments reach the Company via an in-house lock box system that uses technology to open mail, image, encode and endorse check payments, create a posting file to update customer accounts, and prepare checks for bank deposit. Payment Processing RA employees report bank deposits to the Company's Treasury personnel daily to ensure cash management operations have access to funds as soon as possible, and strive to meet same day processing deadlines to ensure that all mailed-in check payments are posted and deposited the same day they are received. The same technology used to process the mailed-in check payments is also used to image payments that must be manually processed, as well as payments that are processed through the bill payment offices. The captured images are used to perform research when it is necessary to resolve misapplied payments or bank reconciliation issues.

Payments processed through various payment vendors average approximately 15,000 per month (20% of payment volume). The payment options offered by the vendors and agents include the ability to make payments in neighborhood supermarkets, via credit/debit card by telephone, via the internet and various online banking services (not including the Company's automatic bill payment), as well as an automated payment option for the Federal Government and other large corporations. Payment Processing RA employees manage payment interfaces (where payments and payment information are transferred from the payment vendors and their agents to the Company) by monitoring the daily interface files and resolving errors and issues to ensure the timely posting of payment information.

Automatic bill payment (handled through the Company) accounts for approximately 16,500 payments per month (22% of payment volume). Automatic bill payment is processed through the Company's CIS, with enrollment managed by Payment Processing RA employees, who also manage and monitor the daily automatic bill payment interface with the Company's processing bank. As previously noted, the Companies have embarked on various campaigns to promote the additional payment options available for our customers including the Automatic Bill Payment sweepstakes at the end of 2015, as well as additional campaigns that are planned for 2016 and beyond.

Two "walk-in" bill payment offices on Hawai'i Island are also available to customers, with the offices averaging approximately 17,500 total payments per month (23% of payment volume). The Payment Processing RA employees at the bill payment offices also process non-routine bill payments and field collection payments. As previously explained, due to the decreasing volume of walk-in payments, the Waimea bill payment office was closed in May 2016, resulting in savings as noted in HELCO-904A.

In addition to the above duties, Payment Processing RA employees also initiate and approve approximately 250 credit refunds per month on active and final billed accounts; process approximately 170 returned payments per month; coordinate and maintain corporate cash receipt records; resolve reconciling items for bank accounts; monitor and resolve error reports relating to customer accounts; resolve unidentified payments; support the implementation and optimization of policies and procedures for commodity and non-commodity payments, refunds, and related financial transactions through the CIS; and perform general clerical duties.

The Revenue Management Supervisor directs and coordinates the daily work activities of the Payment Processing RA center; develops and coordinates training for employees; negotiates with payment vendors to maintain service levels; initiates and manages projects to improve payment options for customers; is responsible for the incoming cash flow and daily payment updates to Customer Accounts Receivable through the CIS; and is responsible for ensuring that daily cash deposit totals are recorded accurately and timely.

C. Credit RA (PCD)

The Credit functions for Hawai'i Electric Light are handled by the Credit RA at Hawaiian Electric.

The Credit RA manages active and inactive commodity (electric) and non-commodity (non-electric) delinquent accounts and is responsible for establishing and maintaining credit policies and procedures that support the Company's management of bad debt and revenue lag, while ensuring compliance with applicable State and Federal governmental regulations. The Credit RA oversees the Company's efforts to collect on delinquent accounts, and utilizes different collection processes for residential, commercial, government, and critical care (elderly, life support, and handicap) commodity and non-commodity accounts. All accounts are monitored in the CIS in risk classifications. Once the total arrears on an account meets the "threshold" dollar amount established for the specific risk class (low, medium, high, or very high) and account type, a specified collection action is taken when the amount of days in arrears elapses.

Active delinquent accounts are handled through "dunning," which is an automated process in the CIS that consists of various steps taken to collect on delinquent accounts. The automated actions occur after a certain number of days following the date a bill is due, and may include a reminder notice, disconnection notice, automated courtesy call (for residential only), and finally a field disconnection, depending on the customer's risk category.

In addition to the automated collection steps triggered by the CIS, manual collection steps performed by Credit Analysts (analyst) in the Credit RA are also interjected into higher risk or more sensitive collection processes such as commercial accounts with over \$500 in arrears, critical care, government, and non-commodity. The manual collection process for government accounts is completed on a case-by-case basis, and involves analysts working with the government agencies to resolve the delinquency issues. Examples of the manual collection steps for these accounts include:

- In addition to dunning, commercial accounts that are more than \$500 in arrears are assigned to the analysts who manually review, monitor and, in many instances, contact customers individually. Assignments to the senior analysts are made seven (7) days after the delinquent account's meter is read.

- If a critical care delinquent account meets certain criteria (e.g., over 60 days in arrears, payment frequency, payment arrangements, severity of life support device) Credit RA analysts are assigned to manage the delinquent account by creating electronic disconnection notifications for a customer field representative, with first visit instructions to collect on the account, make reasonable payment arrangements or leave a notice on the customer's door. This is followed by a second visit to either collect on the account, or possibly disconnect service.
- Non-Commodity accounts are also manually reviewed and monitored by the analysts who often contact customers directly.

A final bill will be generated if (1) a customer does not respond within seven (7) days of service disconnection or (2) a customer has moved out. At this point, an "Inactive (Final Collections)" process begins. The process starts with dunning, and includes a reminder notice, an automated courtesy call (for residential customers only), and a final notice. After 45 days, the inactive accounts are assigned to the analysts who perform "skip-tracing" (attempting to locate and contact the former customers through research, sending demand letters and making phone calls, and transferring unpaid balances to active accounts). At 90 days, if the skip-tracing efforts are not successful, and no recent payments or payment arrangements were made, the CIS automatically marks the account as "doubtful" and financially writes-off the account. Analysts will then select accounts to be assigned to an agency or will mark the accounts for further internal collections. Accounts selected for external collections are electronically transmitted to a collection agency. Amounts that are not recovered after six (6) years are fully written-off automatically by the CIS.

In addition to the above-described duties, the Credit RA analysts and senior analysts:

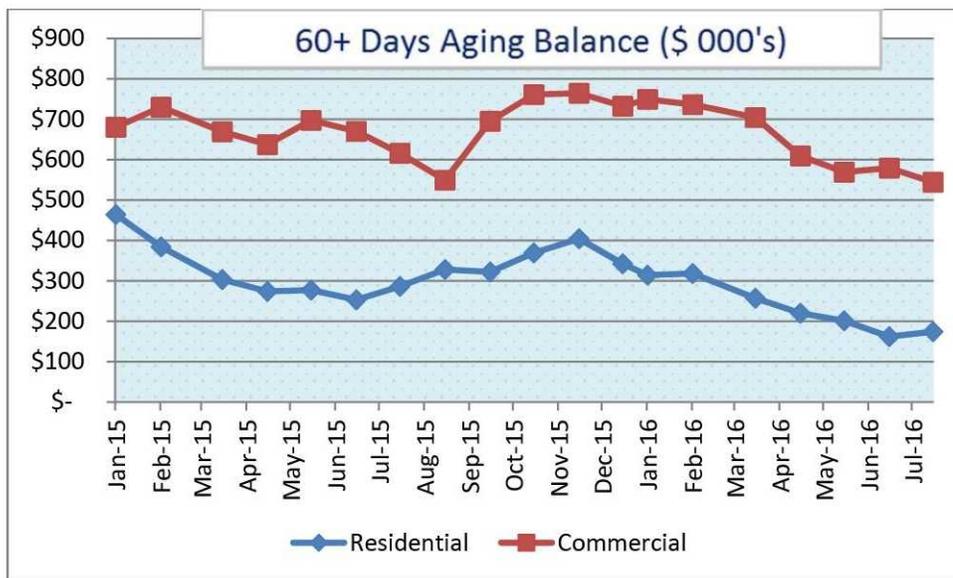
- Handle extensions of credit and collections for commercial, critical care, and government customers; monitor for appropriate levels of security deposits;
- Review returned payments; provide support and monitoring regarding compliance with SOX controls, the Office of Foreign Assets Control, and the Fair and Accurate Credit Transactions Act;
- Manage assignments to, and the performance of, outside parties (e.g., collection agencies);
- Develop, implement and coordinate policy in the Company credit program;
- Review, research and analyze customer account information, among other general duties.

The Credit RA supervisor performs the following functionalities:

- Plans, develops, manages, and recommends credit and collections policies, procedures, initiatives, and programs to support minimizing the Company's bad debt expense;
- Reports on and implements action to comply with new government regulations;
- Directs and coordinates the training and work activities of the Credit RA employees.

Also in line with the company’s effort to increase efficiency and manage costs, as noted in HELCO-904, through competitive bidding, the Company was able engage two collection agency vendors, Aargon and Medcah, and negotiate lower fees. An important benefit resulting from the engagement of these two new collection agencies is that the Company now has access to each agency’s internal database. This provides the Company the ability to track and monitor the status of an account and update account information directly, thereby minimizing the need for calls to and from the collection agency. In addition, each agency is able to remit collected payments electronically to the Company. Furthermore, the engagement of multiple collection agencies allows the Company to select the appropriate vendor for a particular collection effort, increasing the potential for collections on delinquent accounts and reducing bad debt expense.

Lastly, in alignment with the Company’s goal to leverage economies of scale, as described in HELCO-904, it transitioned all credit-related work to Hawaiian Electric’s credit division. As noted above, this change streamlined existing processes and ensured not only compliance with credit related requirements, but also yielded increased efficiencies and improved services for our customers. The Company’s dedicated team is able to assist customers with managing account balances while also minimizing Company losses, as illustrated below.



D. Revenue Management 2016 Test Year Expense Estimate

The Revenue Management function’s 2016 Test Year O&M expense estimate is \$2,844,000 (see HELCO-902, page 1, line 3). The expense estimate consists of labor-related and non-labor-related expenses billed from Hawaiian Electric to Hawaii Electric Light. The test year estimate is derived from the Revenue Management’s RA’s 2016 operating budget as adjusted by budget and normalization adjustments (see HELCO-WP-903). The Revenue Management’s estimate’s portion attributed to labor-related billed expenses is \$1,186,000 see HELCO-WP-901A, line 3). Please see below for the breakdown of labor-related billed expense.

1. Admin PCR RA	\$251,459 (See HELCO-WP-913A)
2. Billing PCB RA	\$207,786 (See HELCO-WP-913A)
3. Payment Processing PCP RA	\$602,306 (See HELCO-WP-913A)
4. Credit PCD RA	\$124,589 (See HELCO-WP-913A)

The remaining \$1,658,000 of Revenue Managements estimate is attributed to non-labor expenses (*see* HELCO-WP-902A, line 3). The primary drivers for the non-labor expenses are summarized below.

1. Bad Debt Expense	\$593,000 (See HELCO-WP-902)
2. Postage	\$385,998 (See HELCO-WP-902)
3. Collection Service*	\$128,000 (See HELCO-WP-902)
4. Bill Printing ITS Labor	\$124,728 (See HELCO-WP-902)
5. Billing Envelopes	\$83,825 (See HELCO-WP-902)
6. OCARS Reserve	\$64,868 (See HELCO-WP-902)

Customer Service General Responsibility Area – HC4

I. Background

The 2015 reorganization of the Hawaiian Electric Companies' Customer Service Division included the responsibility area ("RA") structures for all three companies, including Hawai'i Electric Light. Prior to the reorganization, the Hawai'i Electric Light RAs were geographically aligned. In 2015, the RAs were reorganized to be functionally aligned. HC1 was created to house Customer Relations costs, HC2 to house Field Services costs, HC3 to capture Revenue Management costs, and HC4 was created for general costs that were not directly attributed to just one specific function.

The major costs that are included in HC4 are:

- Hawaiian Electric Customer Service Support & Improvement ("CSSI") Department project costs that are allocated to Hawai'i Electric Light,
- Hawaiian Electric Information Technology Services ("ITS") Department costs that are allocated to Hawai'i Electric Light,
- Hawaiian Electric Customer Service financial administrative support costs that are allocated to Hawai'i Electric Light, and
- Customer Information System ("CIS") Amortization costs that are allocated to Hawai'i Electric Light. (See HELCO-WP-902 page 1, line 43).

II. Customer Service Support & Improvement Department

The CSSI department was formed in April 2012 to enhance the service that Hawaiian Electric, Hawai'i Electric Light, and Maui Electric (collectively known as the "Tri-Companies") provide to their customers. Until June 2014, CSSI was responsible for (1) the operation, maintenance, and support of the new SAP CIS that was placed in-service on May 29, 2012; (2) "work requests" consisting of service requests or system defect resolutions mostly associated with the CIS end-user community, and small improvement projects submitted by Tri-Companies personnel; (3) and Customer Service Process Area improvement projects (providing project management and functional¹ support for the implementation of these improvement projects). In essence, from April 2012 until June 2014, CSSI was responsible for ensuring that the CIS produces accurate and timely customer bills, while continuing to integrate other systems into the CIS, and providing additional capabilities that offer new features and functionality to the Tri-Companies customers.

¹ "Functional" refers to understanding of the business and customer needs, knowing the functionality and capability of the CIS product, and having the ability to configure the product (and conduct limited programming) to utilize, leverage and configure the SAP solution to meet those needs.

In June 2014, responsibility was transferred to the Tri-Companies Information Technology Services Department for (1) CIS operation, maintenance and support and (2) “work requests” consisting of service requests or system defect resolutions mostly associated with the CIS end-user community. CSSI continues to have the responsibility for Customer Service Process Area improvement projects and other customer-impacting improvement projects.

In 2015, CSSI was tasked with further supporting the Tri-Companies Transformation efforts aimed at improving overall customer service and customer experience. Those efforts were aggregated to form the Customer Experience (“CX”) Improvement initiatives. Like the support of Customer Service Process Area projects, the support of cross functional CX projects involve providing project/program management services, organizational change, change management and business process improvement support. Added CX initiative responsibilities include the operationalization of new products and services and technology implementations to better support Tri-Companies Transformation initiatives, while also leveraging and being attentive to “Voice of the Customer”² input.

CSSI supports the Tri-Companies’ customers with projects and initiatives. These projects at times serve all of the Tri-Companies (with expenses typically allocated between the Tri-Companies), or can be limited to an individual company. The expenses identified for CSSI throughout this testimony represent only Hawai‘i Electric Light’s portion of the CSSI costs.

a. CSSI Projects in 2016 allocated to Hawai‘i Electric Light

For the 2016 test year, CSSI is leading the management and implementation of four projects that have O&M costs allocated to Hawai‘i Electric Light:

- a. Customer Service Process Area Projects
 - i. UCES Mobility
- b. Customer Experience Transformation Initiative Projects
 - ii. Customer Insights - Develop Data Capabilities
 - iii. Engagement Model and Customer Experience Redesign
 - a. Customer Promise & Standards
 - iv. Interconnection Improvement Program (IIP)

The four projects are described in detail below. The allocation of costs for the above projects are as follows: Hawaiian Electric is allocated 70%, Hawai‘i Electric Light is allocated 15%, and Maui Electric is allocated 15%. With the exception of IIP, which is billed to Hawai‘i Electric Light’s Engineering Department, the intercompany billed costs allocated to HC4 RA are identified in HELCO-WP-902 page 1, lines 40 and 44.

² “Voice of the Customer” refers to incorporating customer views into improvement activities typically conducted in conjunction with the Customer Research division of the Communications department. Customer input is developed through surveys, focus groups, or other data collection processes, as well as the inclusion of the results of customer complaints and other feedback loops.

UCES Mobility

In 2015, the Tri-Companies completed the implementation of a Utilities Customer E-Service (UCES) Improvements project. The project's goal was to enhance customer utilization of the Tri-Companies' Online Customer Service Center, and to provide a better customer experience. CSSI managed the overall implementation of that project, and for 2016 will again provide the overall program management for the additional implementation of new capabilities. One of the goals of the 2016 UCES Mobility project is to enhance customer experience and customer utilization via a variety of mobile platforms. Metrics show that more than 35% of customer visits to the Tri-Companies website originate from mobile platforms. Customers want the ability to do business with the Tri-Companies from their mobile phone, notepad, or tablet. As technology continues to advance, the number of mobile visits is expected to continue to increase.

The UCES Mobility project will also focus on updating all current UCES screen designs to be more mobile friendly. In order to keep maintenance costs low for support of UCES content, all pages will be mobile responsive and conform to users' varying mobile phone formats and tablet configurations when viewing Company pages.

Scope of Work:

The UCES module is the Tri-Companies' SAP Online Customer Service Center portal. The UCES Mobility project includes the implementation of functional updates by CSSI to enhance customers' ability to navigate and accomplish key tasks when using the Online Customer Service Center from mobile platforms. For example, the content of each page will be analyzed so that the order of importance of presentation will make sense for the customer. In addition on the login page, the Login Box will be presented first and not require scrolling or searching within the page. By updating and improving the navigation, look and feel, options, and usability of the Online Customer Service Center, customers will be more inclined to utilize the website and have even more options through which to contact the Tri-Companies. The major customer benefits arising out of the new UCES module features and functions include the following:

Benefits:

- The 'Inquiry Box' will be automatically updated so customers will always have the latest status and required information on their cases.
- Customer Billing History will be easy-to-find within a new drop down menu.
- The system will provide auto propagation of date/user fields on edits.
- Several improvements to the Personal Info screen will be provided along with the inclusion of all history for each field.
- Standardized user experience for Move / Start / Stop services.
- Tri-Companies customer care representatives can check for balance due before starting service and move any balances to the new service account.
- Several fixes were added to standardize past due and bankruptcy account handling.

- More mobile-friendly login screen.
- Use of the online-industry-standard “hamburger” navigation menu.
- Added social media links.
- Showing only partial account numbers adds security improvements to e-mails.

CSSI will ensure the following additional customer benefits are achieved for all mobile access platforms through mobility improvements to the UCES Online Customer Service Center: (1) customers will be able to perform every action available via both mobile and fixed platform browser access, (2) navigation and content presentation will be platform responsive and recognize individual platform differences, and (3) mobile platform presentation will preserve all content when rendering each site and webpage.

The Tri-Companies’ over-arching goal is to continue to make improvements to enhance the overall online customer service experience. Further, by encouraging the use of the Online Customer Service Center, the Tri-Companies anticipate a reduction in phone calls made to the Customer Contact Center for all common transactions

The Tri-Companies completed the preliminary requirements analysis, estimated the development and total project effort, and determined that there was a need to outsource the development effort. Accordingly, the UCES Mobility project is being overseen by CSSI, with development provided by an external vendor. As the result of a competitive procurement, the selected vendor began the implementation process for the UCES Mobility project in January 2016, with completion in July 2016.

Customer Insights - Data Capabilities

The development of improved customer research Data Capabilities is a CX sub-initiative within the larger corporate Transformation Initiative. Developing better information on our customers, their needs, and their opinions on energy-related matters is key to creating products and services valued by our customers. Improving both the sources of information and the analytic capabilities to investigate customer data are important components of this sub-initiative. The resulting confidential and proprietary information will assist the Tri-Companies in enhancing customer experience and extending customer options.

Scope of Work:

In 2015, as part of an effort to further develop both residential and commercial customer information, the Tri-Companies acquired commercially available information regarding their customers’ characteristics (demographics, psychographic, behaviors) to allow the Tri-Companies to better understand and service their customers. In 2016, the acquired data was linked to internal Company data and cluster analyses were performed on the combined residential customer information to produce segmentation groupings useful in identifying the distribution and variations in customer characteristics. Ongoing work is in progress to a) leverage the residential segmentation groupings in order to better understand residential customer needs and

to enable planning for improved services and b) to equally explore acquired data regarding the commercial customer market in Hawai‘i.

Continuing efforts include:

- Development of improved data capabilities in order to facilitate customer research oriented toward better understanding customer wants and needs.
- Use of customer segmentation profiles on a recurring basis with other research to better define, understand and track both residential and commercial customer groupings, which will allow the Tri-Companies to identify focus group candidates to better understand customer needs.
- Definition of processes to manage data, further segment customer groupings and develop additional customer data as needed to support customer research activities.
- Development of processes to better aid each of the Tri-Companies in appropriately leveraging customer research data and/or profiles to support customer facing improvements.

Benefits:

Residential segment profiles have been helpful in understanding the distribution of customers participating in existing programs. Analyses are underway to better examine potential program applicability to other areas such as CBRE and Electric Vehicle Adoption.

Engagement Model and Customer Experience Redesign

The Engagement Model and Customer Experience Redesign project is a sub-initiative within the overall corporate Transformation Initiative. In addition to the direct work performed as a part of this sub-initiative, two component projects were noted as key examples of process design improvements. The two component projects are:

- a. Customer Promise and Service Standards
- b. Journey Mapping

Scope of work:

In 2016, the project team worked with an industry leading consultant to shape a customer engagement model that leverages (a) the creation of a ‘Customer Promise’ to be adopted by each employee and (b) the setting of customer interaction standards associated with the Customer Promise (collectively, the “Promise & Standards”). An extensive series of roll out and adoption activities are underway for 2016 that will assist each workgroup with the intended internalization of the Promise & Standards and development of specific behavior goals to help each area better operationalize actions to implement the Promise & Standards.

As the Tri-Companies move in a more customer-centric direction, tools and processes are needed to delve more deeply into improvement opportunities related to customer experience. In 2015, the team examined Journey Mapping processes³ and related tools as a means of developing skill sets for better investigating and documenting processes in need of improvement. A journey mapping tool along with some initial consulting assistance was selected for adoption by the Tri-Companies.

Practical implementation efforts associated with the Journey Mapping results in 2016 are underway and include:

- Incorporation of customer touch point improvements in the planning and delivery of an online application process (submittals by either customers or contractors) for various renewable energy programs. The touch points and pain points being addressed were highlighted in the output from the Journey Mapping sessions. (See the Tri-Company Interconnection Improvement Program (IIP) discussed below. A beta release of the IIP program is expected for Q1 of 2017.)

An effort to further train additional internal staff in the facilitation of Journey Mapping sessions is also underway so that the processes can be more fully shared throughout more areas of the Tri-Companies.

To better drive the focus for Customer Experience improvements and help with prioritizations for additional Journey Mapping, the CX Initiative team has set out a governance plan that includes the establishment of the Customer Experience Council (CXC). The CXC consists of cross functional representatives providing Tri-Company priority assessments regarding Customer Experience initiative efforts.

Additional similar Journey Mapping and improvement efforts are expected to extend into 2017 based on Tri-Company prioritization input from the CXC and adoption of the Journey Mapping process on a more wide spread basis.

Benefits:

The adoption of a Journey Mapping process is more than an adoption of a tool. The entire premise of journey mapping is to look at organizational processes through the lens of the customer. At each step of a journey review, where the team considers the next step to be taken by the customer, the team is challenged with looking at the issue from the point of view of the customer. The constant challenge to look at issues from this perspective can be very eye opening and of great value to process designers or staff looking for opportunities to improve. The CX team believes this to be of great benefit and that this change of process design has facilitated improvements beyond what would have been achieved through more traditional process design work.

³ The customer-focused Journey Mapping process was adopted as a means of identifying and analyzing customer touch points, pain points and opportunities for improvement.

The establishment of the CXC will also better assure that CX focus and Journey Mapping activities are directed toward areas selected by a broader consensus.

Interconnection Improvement Program

The IIP is being implemented in response to Hawai‘i Public Utilities Commission Order No. 32053, filed April 28, 2014, in Docket No. 2011-0206. The first deliverable was to deploy an online Integrated Interconnection Queue which was deployed in early 2015. The second deliverable that the Tri-Companies are working to provide is an online automated solution that includes application intake, electronic file submittal, data entry functionality, workflow management, electronic signatures, automated email status communication, and integration with the Tri-Companies’ databases and enterprise solutions for distributed energy resource customers. The primary goals of this project are to enable greater data transparency, establish Tri-Companies standardization and improvements, and provide proactive communication regarding the interconnection status to improve the customer experience. The 2016 IIP costs for CSSI is estimated at \$1,500,000⁴. In 2017, the IIP costs for both the IIP and New Electric Service Online Application Tool (described in the 2017 section below) is also estimated at \$1,500,000. The costs allocated and billed to Hawai‘i Electric Light, will be incurred in Hawai‘i Electric Light’s Engineering Department and accounted for in Mr. Dave Okamura’s testimony in HELCO T-18. (See also HELCO-WP-914C.)

Tri-Companies		TY2016 Outside Service and Software	2017 Outside Service and Software
Hawai‘i Electric Light	15%	\$225,000	\$225,000
Maui Electric	15%	\$225,000	\$225,000
Hawaiian Electric	70%	\$1,050,000	\$1,050,000
Total	100%	\$1,500,000	\$1,500,000

Scope of the Work:

In 2015 the Tri-Companies conducted workshops to gather formal requirements for the proposed online solution, research on the available vendors for such an online solution, and vendor demonstrations. In 2016, the Tri-Companies completed the vendor selection process and contracted with Qado Energy Incorporated on June 17, 2016, to deploy an online solution for customers applying to integrate their grid supply and self-supply PV systems to the grid. The project was initiated on July 5, 2016, and a Beta Release is scheduled for deployment in late January 2017 to allow a few PV vendors to test the solution, with a public release of the solution

⁴ Of the \$1,500,000 estimated by CSSI to the IIP project, 15% or \$225,000 is apportioned to Hawai‘i Electric Light. That amount is then normalized and explained in HELCO T-18 to result in \$150,000 in the 2016 test year estimate.

scheduled for late April 2017. The Tri-Companies will request the PV industry, Commission and Consumer Advocate representatives to provide input to the project and assist with the testing of the solution.

Benefits:

The IIP will provide an improved experience for customers applying to integrate their grid-supply and self-supply PV systems to the grid. The customers will be able to submit their application online, including electronic file submittal, data entry functionality, workflow management, electronic signatures, and automated email status communication. In addition, the project will provide the following benefits:

- Consistency across the customer grid-supply and customer self-supply programs to consolidate and standardize procurement processes.
- Greater transparency, guidance, and interconnection education.
- An enterprise-wide end-to-end tool for use both internally and externally.
- Improved frequency of status updates and expanded reporting.
- Streamlined online functionality and process efficiencies.
- Limited integration and automation for application processing and technical assessments.
- Improved data management for value-added metrics, reporting, and planning.

Ongoing Support Labor and Non-Labor:

A full time Tri-company IIP System Administrator is also required to effectively manage and administer the IIP solution, and has the following responsibilities:

- IIP subject matter expert
- Helpdesk management and support
 - Support internal user questions & requests
 - Support external customer questions & requests
- Maintain internal user and external customer access permissions
- Maintain existing and create new forms, screens, reports, workflows, drop down lists, customer communications templates (e.g. emails)
- Support the integration with the internal and external systems
- Support the reconfiguration and implementation of new distributed energy programs

An internal resource to fulfill the IIP System Administrator position was chosen to be more cost effective than an equivalent external consultant. The annual labor cost is approximately \$122,000. For 2016 though, only 7 months of labor was estimated at approximately \$70,000 to account for when the position would be filled.

In addition, there is the annual software and hardware subscription costs from the IIP vendor that was budgeted for at \$245,000 plus tax. Thus, the total amount estimated in 2016 was \$327,026⁵. These costs are also borne by the Engineering Department at Hawai‘i Electric Light and included in T-18’s test year estimate.

In succeeding years, the internal labor plus the annual software and hardware subscription is estimated to incur:

Tri-Companies		TY2016 Support Labor & Non-Labor	2017 Support Labor & Non-Labor	2018 Support Labor & Non-Labor
Hawai‘i Electric Light	15%	\$49,054	\$56,895	\$59,045
Maui Electric	15%	\$49,054	\$56,895	\$59,045
Hawaiian Electric	70%	\$228,918	\$265,509	\$275,545
Total	100%	\$327,026	\$379,299	\$393,635

b. CSSI Projects in 2017 allocated to Hawai‘i Electric Light

The level of allocated project costs from CSSI to Hawai‘i Electric Light in 2016 is not typical of what is anticipated to be billed in succeeding years. In 2016, CSSI efforts were focused on more Hawaiian Electric-centric projects, thus, allocated costs were less than the levels expected to be allocated in 2017 and 2018. In those succeeding years, costs are expected to be more in line with those of 2015. Therefore, the Company included a normalization adjustment for CSSI costs into the test year estimate (see HELCO-WP-914B p 1).

At this time, CSSI expects to continue work on the Customer Experience Transformation Initiative projects that it worked on in 2016. Those projects include:

- i. Data Capabilities
- ii. Engagement Model and Customer Experience Redesign
 - a. Customer Promise & Standards
- iii. Interconnection Improvement Program (IIP)
- iv. New Electric Service Online Application Tool
- v. Outage Maps (Hawaii Electric Light and Maui Electric - Quasi Manual/Auto Interim solution until OMS deployed)

⁵ Of the \$327,026 estimate for the system administrator and annual software and hardware subscription costs, 15% or \$49,054 is being billed to Hawai‘i Electric Light in the test year.

The allocation of costs for the above projects in 2017 is as follows: Hawaiian Electric is allocated 70%, Hawai'i Electric Light is allocated 15%, and Maui Electric is allocated 15%. (The IIP and the New Service Online Application Tool are intercompany billed to Hawai'i Electric Light's Engineering Department, so those costs are not incurred in Customer Service Department's test year estimate.) A brief description of each project follows:

Data Capabilities

Updates to previously purchased, commercially available data for both residential and commercial customers are planned for 2017. The application of residential segmentations to more situations will be pursued as well as more robust explorations of the commercial data. In 2016, the purchased residential data aggregated by household matched closely with the structure of internal customer information and the resulting cluster segments were found to be very useful. More applications of that basic segmentation structure to other situations will be performed in 2017.

Engagement Model and Customer Experience Redesign

In 2017, the project team will continue to reinforce the "Customer Promise" and "Service Standards" to be fully adopted by each employee. Supervisors and managers will be provided training through a new class that will be created to support this initiative called "Creating a Service Culture." The class will help supervisors and managers understand how to support their team and reinforcing the behaviors necessary to deliver on the Customer Promise. In 2017, the Customer Promise and Service Standards will be rolled out to external customers.

Interconnection Improvement Program

As previously noted in the above 2016 project section, the project was initiated on July 5, 2016, and a Beta Release is scheduled for deployment in late January 2017 to allow a few PV vendors to test the solution, with a public release of the solution scheduled for late April 2017. The Tri-Companies have requested the PV industry, Commission and Consumer Advocate representatives to provide input to the project and assist with the testing of the solution.

New Electric Service Online Application Tool

The New Electric Service Online Application tool is being implemented for the Tri-Companies' customers to provide an online automated solution that includes application intake, electronic file submittal, data entry functionality, workflow management, electronic signatures, automated email status communication, and integration with the Tri-Companies' databases and enterprise solutions for distributed energy resource customers. The primary goals of this project are to enable greater data transparency, establish Tri-Companies standardization and improvements, and provide proactive communication regarding the interconnection status of new electric services or the upgrade of existing electric services to improve the customer experience.

Utilizing and leveraging the Qado Energy GridUnity platform that the Tri-Companies has used for the IIP project to service DER customers, the Tri-Companies plan to similarly deploy an online solution for customers applying for new electric services or upgrade to existing electrical services to receive electrical service from the Tri-Companies.

Outage Maps (Hawai'i Electric Light and Maui Electric - Quasi Manual/Auto Interim solution until OMS deployed)

Currently, the Tri-Companies' customers are unable to view outage information online and must call the IVR system to report or learn about outages in their area. An online outage map will allow customers to determine whether their service impact is already known to the Tri-Companies and determine the current status thus alleviating phone calls and/or questions to the Customer Contact Center and provide an improved customer experience. The goal is to present an outage map online (with mobile platform accessibility and mobile platform specific rendering) allowing customers the ability to view where an outage is occurring, how many customers are affected, and its present repair status. Additionally, the Tri-Companies will display information on estimated time to restore for an outage, as available, with any additional outage notification updates. Finally, the Tri-Companies will provide customers the option to report outages through an online form and process.

c. CSSI Projects in 2018 allocated to Hawai'i Electric Light

For 2018, the projects CSSI plans to pursue include:

Customer Service Process Area Projects

- i. Fixed Due Date
- ii. Level Billing
- iii. UCES Preference Center
- iv. Chat Capability for Customer Communications / IVR Enhancements
- v. CIS Enhancements

Customer Experience Transformation Initiative Projects

- i. Customer Insights - Data Capabilities
- ii. Engagement Model and Customer Experience Redesign

The allocation of costs for the projects listed above is as follows: Hawaiian Electric is allocated 70%, Hawai'i Electric Light is allocated 15%, and Maui Electric is allocated 15%. (The IIP and the New Service Online Application Tool are intercompany billed to Hawai'i Electric Light's Engineering Department, so those costs are not incurred in Customer Service.) A brief description of the projects not previously described follows:

Fixed Due Date

Customers want to receive their bill on a fixed date each month, irrespective of when their meter is read. The Companies' meter reading cycles are geographically based and can be affected by a variety of circumstances. Offering a Fixed Due Date for a utility bill could make financial planning easier for many customers on fixed incomes, where such income is also associated with a fixed date.

Level Billing

Similar to the request for a Fixed Due Date, customers want a predictable amount of billing each month, irrespective of when their meter is read and irrespective of actual usage for that month. Offering a Fixed and Level Payment for a utility bill could make financial planning easier for many customers especially those on fixed incomes. This capability would average the Customer's monthly bills for the previous 12-months (or fewer if a new customer at a given location). The Level Billing amount would be set at that average bill amount. The fixed bill amount would be used for the next 11 months with an annual true-up performed for the 12th bill in each annual cycle. After the true-up, a new Level Bill amount is calculated for use for the next 12 month, with an annual true-up performed again for the 12th month's bill.

UCES Preference Center

In 2015, the Tri-Companies completed the implementation of a Utilities Customer E-Service (UCES) Improvements project. In 2016, UCES Mobility project was implemented to enhance the Online Customer Service Center further. In an effort to continue to support the growing needs of online customers, a preference center has been identified as a key component of the Online Customer Service Center. The Preference Center will focus on being able to help customers manage their preferences in terms of types of communication with various communication methods that may include text, email and phone.

Chat Capability for Customer Communications / IVR Enhancements

The Companies' Interactive Voice Response (IVR) system integrates directly with the Companies' CIS and provides an interaction record that tracks and documents actions performed by, with, and for our customers. There are a variety of channels of communication available to our customers and the Tri-Companies wish to add an additional channel – Chat – which has become very popular with the general population in interactions on the internet and across smart phone networks. Adding Chat as a methodology by which our customers can reach and interact with our Customer Care Representatives should increase responsive and customer satisfaction.

In addition, the IVR system has other features and functionality that, as IVR usage has become more common among our customer base, become more and more useful. For example, there are different ways to present IVR contact options than by forcing a caller to listen to a long list of numbers to press, and there are different ways to present the various menus of options themselves.

III. Information Technology Services Charges

Hawaiian Electric's ITS Department allocates costs to the Customer Service Department of Hawai'i Electric Light. Those intercompany billed costs are reflected within the HC4 RA and identified in HELCO-WP-902 page 1, lines 42, 45, 46, and 47.

IV. Customer Service Financial Administrative Support Charges

With the Customer Service reorganization in 2015, the Hawai'i Electric Light financial administrator assigned to the Customer Service department was converted to a Hawaiian Electric employee within the Customer Service process area's Senior Vice President department. That financial administrator joined several other financial administrators that support all of the Hawaiian Electric Customer Service departments within the process area.

In the reorganized structure, the financial administration duties are now shared by multiple administrators as the goal is to more functionally align even the budgeting support. The financial administrators provide the budgeting and cost accounting support for the four RAs that comprise the Hawai'i Electric Light Customer Service Department. They also support the rate case efforts for all three companies' rate cases now that Customer Service is a tri-company process area. Consolidated and separate budget reporting is performed by the group, as well as presentations and corporate level coordination among the Customer Service departments.

In 2016, and earlier in 2015, there is/was a significant effort expended on understanding, preparing for and then implementing the changes needed to support a new functionally aligned, tri-company organizational structure. Similar to the functional department efforts to standardize processes and create consistent approaches, the work the financial administrators provide also needed to align. Customer Service reorganized in 2015. At that time, it was understood that it would probably take the rest of 2015 and all of 2016 to fully understand how this tri-company structure would operate. 2016 is still a transition year, with time still needed to enable the budgeting and accounting aspects to reach steady state.

Financial and budget administrative support costs allocated to Hawai'i Electric Light are intercompany billed and reflected within the HC4 RA and identified in HELCO-WP-902 page 1, line 39.

V. CIS Amortization Costs

The 2016 test year non-labor expense estimate of \$213,466 is comprised of the sum of the 2016 operating budget estimate of \$211,333 for the CIS project amortization and a \$2,133 rate-making adjustment that reflects the difference between the GAAP calculation of amortization and the rate-making calculation CIS for CIS project amortization. See HELCO-WP-914B page 8 and 9.

VI. Customer Service's HC4 General Costs RA 2016 Test Year Expense Estimate

The HC4 RA General Costs' 2016 Test Year O&M expense estimate is \$1,270,000 (*see* HELCO-902, page 1, line 4). The expense estimate was categorized as all non-labor expenses billed from Hawaiian Electric to Hawai'i Electric Light. The test year estimate is derived from the HC4 RA's 2016 operating budget as adjusted by budget, normalization, and ratemaking adjustments (*see* HELCO-WP-903).

Estimate of CBRE Program Costs for the Hawaiian Electric Companies (Docket No. 2015-0389):

Upfront Costs

	2017	2018	2019	2020	Total Upfront Costs
SAP IT Billing System Investment	\$2,473,000				\$2,473,000
Bill Credit Processing Software	\$625,000				\$625,000
Enrollment Software	\$262,500	\$344,250	\$1,066,410	\$949,781	\$2,622,941
Total	\$3,360,500	\$344,250	\$1,066,410	\$949,781	\$5,720,941

Total \$3,098,000 requested to be recovered via the REIP surcharge.

Ongoing Costs

	2017	2018	2019	2020	2021	2022	2023
Bill Credit Processing Software		\$16,065	\$37,454	\$103,468	\$172,107	\$175,549	\$179,060
Enrollment Software		\$13,388	\$31,212	\$86,223	\$136,386	\$139,114	\$141,896
CBRE PPA Administration		\$134,000	\$136,680	\$139,414	\$142,202	\$145,046	\$147,947
Total	\$0	\$163,453	\$205,346	\$329,105	\$450,695	\$459,709	\$468,903

	2024	2025	2026	2027	2028	2029	2030
Bill Credit Processing Software	\$182,641	\$186,294	\$190,020	\$193,820	\$197,697	\$201,650	\$205,683
Enrollment Software	\$144,734	\$147,629	\$150,582	\$153,593	\$156,665	\$159,798	\$162,994
CBRE PPA Administration	\$150,906	\$153,924	\$157,002	\$160,142	\$163,345	\$166,612	\$169,944
Total	\$478,281	\$487,847	\$497,604	\$507,556	\$517,707	\$528,061	\$538,622

	2031	2032	2033	2034	2035	2036	2037
Bill Credit Processing Software	\$209,797	\$213,993	\$218,273	\$222,638	\$227,091	\$231,633	\$236,266
Enrollment Software	\$166,254	\$169,579	\$172,971	\$176,430	\$179,959	\$183,558	\$187,229
CBRE PPA Administration	\$173,343	\$176,810	\$180,346	\$183,953	\$187,632	\$191,385	\$195,213
Total	\$549,395	\$560,383	\$571,590	\$583,022	\$594,683	\$606,576	\$618,708

	2038	2039	2040
Bill Credit Processing Software	\$217,119	\$190,155	\$96,979
Enrollment Software	\$175,059	\$157,690	\$80,816
CBRE PPA Administration	\$199,117	\$203,099	\$207,161
Total	\$591,296	\$550,945	\$384,957

NOTE: The above estimates for CBRE Program costs remain unchanged as reflected in Attachment 4 of the Companies' November 30, 2015 filing in Docket No. 2015-0389. However, an adjustment to reflect updated timing of incurred program costs to commence in 2017 is reflected in this revised cost estimate. Upfront costs for SAP IT Billing System investment and Bill Credit Processing Software have been proposed to be recovered via the REIP surcharge; see page 2 of this exhibit for a breakdown of cost allocation between the Companies. Ongoing costs for Enrollment Software and all ongoing costs would be recovered via the Developer Enrollment Fees, Program Cost Reimbursement Fees, and Participant Administration Fees as explained on pages 22-24 of that filing.

CBRE Estimated REIP Surcharge Costs Recovery (Docket No. 2015-0389):

Island	CBRE capacity available for subscription (MW)	CBRE Cost Allocation (%)	Total Costs Recovered through REIP Surcharge	Costs Including Revenue Tax	Estimated 2016 kWh Sales	Avg kWh/month	Typical Bill Impact (\$/month)
Oahu	21.25	83%	\$2,556,602	\$2,805,907	6,554,700,000	500	\$0.2140
Hawaii Island	2.25	9%	\$270,699	\$297,096	1,019,059,000	500	\$0.1458
Maui	2.25	9%	\$270,699	\$297,096	792,464,000	500	\$0.1875
Molokai	0.375	0%	\$0	\$0	38,413,000	400	\$0.0000
Lanai	0.375	0%	\$0	\$0	26,681,000	400	\$0.0000
Total	26.5	100%	\$3,098,000	\$3,400,099	\$8,431,317,000		

NOTE: The table above was provided in the Hawaiian Electric Companies' letter filed on November 30, 2015 in Docket No. 2015-0389 ("Letter"), at 22. The Companies requested that any difference between the deferred cost and the actual recovery through Developer Enrollment Fees, Program Cost Reimbursement Fees, and Participant Administration Fees would be reconciled through the REIP Surcharge at the end of the expected enrollment period, which would be additive to the estimated \$3,098,000 requested to be recovered through the REIP Surcharge detailed above. See Letter at 24.

TESTIMONY OF
THOMAS W. CUMMINS

MANAGER
SUPPORT SERVICES DEPARTMENT
HAWAI'I ELECTRIC LIGHT COMPANY, INC.

Subject: Support Services:
Functions: Administration, Fleet, Land, Survey,
Safety, Information Technologies
O&M Expense
Cost Drivers
Cost Control Measures

EXECUTIVE SUMMARY

- The Support Services Department of Hawai‘i Electric Light Company, Inc. (“Hawai‘i Electric Light” or “Company”) is an integral part of all Hawai‘i Electric Light departments and has a key role in helping to provide safe, reliable, and affordable service to customers.
- The Support Services Department provides support and coordination in six key areas (Administration, Fleet, Land, Survey, Safety and Information Technologies (IT)). The Support Services Department’s mission and vision are: To provide superior, innovative support to customers and to endeavor to meet customer needs with timely, novel solutions.
- The Support Services Department was created in November 2010 to provide a “One Stop Shop” for the various support functions of the Company. By centralizing the support functions within one department, improved services are provided to external customers and across the Company, as well as achieving efficiency gains and cost savings.
- In 2013, the Safety Division was moved to Support Services from the Administration Department. In 2015, the IT Division was moved from the Support Services Department and now reports to the IT Department of the Company’s parent company, Hawaiian Electric Company, Inc.
- The Support Services Department has implemented numerous cost control measures and efficiency improvements with savings that benefit customers, and the Safety Program has successfully implemented initiatives to reduce the number of safety incidents, improving productivity and reducing costs to the Company.

TABLE OF CONTENTS

INTRODUCTION	1
SUPPORT SERVICES O&M EXPENSE SUMMARY	2
SUPPORT SERVICES PLANT ADDITIONS SUMMARY	5
SUPPORT SERVICES DEPARTMENT	6
1. Support Services Formation and Background, Staffing and Budgets.....	6
2. Support Services Divisions and Test Year Cost Drivers	9
3. Information Technologies (IT)	17
COST CONTROL MEASURES OF THE SUPPORT SERVICES DEPARTMENT.....	20
1. Facilities Cost Control Measures	20
2. Fleet Cost Control Measures.....	22
3. Land Cost Control Measures	24
4. Survey Cost Control Measures	24
5. Safety Cost Control Measures	25
6. Information Technologies Cost Control Measures.....	26
SUMMARY	27

1 INTRODUCTION

2 Q. Please state your name and business address.

3 A. My name is Thomas W. Cummins and my business address is 54 Halekauila Street,
4 Hilo, HI 96720.

5 Q. By whom are you employed and in what capacity?

6 A. I am employed by Hawai'i Electric Light Company, Inc. ("Hawai'i Electric Light"
7 or "the Company") as the Manager of the Support Services Department ("Support
8 Services" or "Department"). Exhibit HELCO-1000 provides my educational
9 background and work experience.

10 Q. What will your testimony cover?

11 A. My testimony will cover the following topics for Support Services:

- 12 1. Department Operations and Maintenance ("O&M") expense summary
- 13 2. Plant Additions
- 14 3. Department background
- 15 4. Divisions of Support Services, and Test Year cost drivers
- 16 5. Efficiency and cost control measures

17 Q. What efficiency and cost savings measures have been implemented by Support
18 Services?

19 A. Multiple efficiency and cost savings measures have been implemented by Support
20 Services and are described in the testimony below. Highlights include: consolidating
21 custodial services and implementing multi-year contracts; utilizing utility tire
22 purchases programs; digitizing land documents to improve productivity; utilizing

1 Global Positioning System (GPS) to improve fleet dispatching, and field surveying;
2 and consolidating and standardizing IT systems and support. Additionally, the
3 safety program's reduction in incidents will improve workforce availability, and
4 save costs.

5 SUPPORT SERVICES O&M EXPENSE SUMMARY

6 Q. What items are included in Support Services O&M expense?

7 A. Support Services O&M expense includes labor and non-labor expenses incurred in
8 the operation and maintenance of Hawai'i Electric Light's facilities and support
9 activities. These expenses are recorded in the following accounts as defined in the
10 National Association of Regulatory Commissioners ("NARUC") Uniform System of
11 Accounts for Classes A and B Electric Utilities¹:

12 B32 - Transmission Operation Expense

13 B34-B35 - Distribution Operation & Maintenance Expense

14 B38-B39 – A&G Expense

15 Q. What are Hawai'i Electric Light's estimates for Support Services O&M expense for
16 the 2016 Test Year?

17 A. Table 10-1 below summarizes the 2016 Test Year estimates for the Support Services
18 O&M expense:²

19 Table 10-1
20 Support Services O&M Expense

¹ See Exhibit HELCO-1001, O&M Expenses by NARUC Account.

² See Exhibit HELCO-1002, O&M Expenses by Responsibility Area.

Support Services Division/Function	2016 Test Year Estimate (\$000's)
Administration	\$ 1,538
Fleet	\$ 21
Land	\$ 508
Survey	\$ 76
Safety	\$ 1,114
Information Technologies (IT)	\$ 1,037
Total Support Services Department	\$ 4,294

1

2 Q. What was the basis for the 2016 Test Year estimate for Support Services O&M
3 expenses?

4 A. The 2016 Test Year estimate is based on the Operating Budget for 2016.

5 Q. Did Hawai'i Electric Light make adjustments to the 2016 Operating Budget amounts
6 in arriving at the 2016 Test Year estimate?

7 A. Yes. A reduction of \$283,000 to the 2016 budget was made to arrive at the 2016
8 Test Year estimate. The reduction consists of two components for the Enterprise
9 Geospatial Information System (EGIS): 1) an overall lower projection of the project
10 costs allocated to the Company of \$77,000, and 2) an additional reduction of
11 \$206,000, reflecting the normalization of project expenses for 2016 -2018.³

12 Q. How does the 2016 Support Services O&M Test Year estimate compare to the 2015
13 recorded expense?

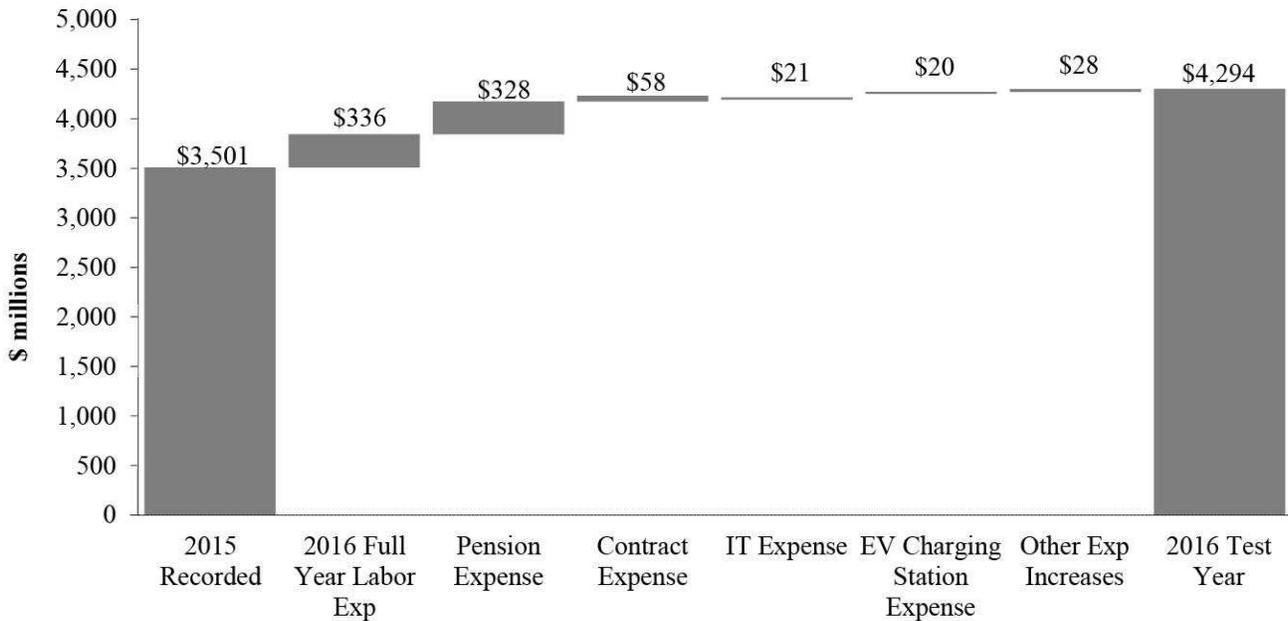
³ See Workpaper HELCO-WP-1003, O&M Expenses Variance by Expense Element.

1 A. The 2016 Test Year estimate of \$4,294,000 is \$794,000 higher than the 2015
2 recorded Support Services O&M expenses of \$3,501,000.⁴

3 Q. What are the primary reasons for the increase of \$794,000 of O&M expense?

4 A. The following figure (10-1) illustrates the Support Services' 2015 recorded to the
5 2016 Test Year O&M Expense estimate by expense driver.

6 Figure 10-1
7 Support Services 2015 to 2016 Test Year by O&M Expense Driver
8 (\$millions)



9
10 By department, the primary reasons for expense variances include:

- 11 • Administration Division increase of \$404,000 due to a full year's labor expense
12 in 2016 for positions filled during 2015; increased pension-related expenses;
13 increased intercompany billed (ICB) IT expenses (which are partially offset by

⁴ See Exhibit HELCO-1002, O&M Expenses by Responsibility Area.

1 the IT Division decrease in direct costs billed to the Company discussed below);
2 and increased contract costs more representative of historic contract costs since
3 contract costs in 2015 were abnormally low.

- 4 • Fleet Division increase of \$21,000 due to new Electric Vehicle (EV) charging
5 station customer support expenses.
- 6 • Land Division increase of \$182,000 due to increasing processing of easements;
7 and increased pension-related expenses.
- 8 • Survey Division increase of \$26,000 due to increased labor costs; and increased
9 pension-related expenses.
- 10 • Safety Division increase of \$236,000 due to a full year's labor expense in 2016
11 for positions filled during 2015; and increased pension-related expenses.
- 12 • IT (Information Technologies) Division decrease of \$75,000 due changes in IT
13 expenses (discussed further in the Support Services Department Information
14 Technologies (IT) section) and rate case normalization adjustments.

15 SUPPORT SERVICES PLANT ADDITIONS SUMMARY

16 Q. What items are included in Support Services 2016 Plant Additions?

17 A. The total estimated 2016 Plant Additions for Support Services is \$1.471 million
18 (provided in HELCO-WP-1808). Plant Additions include structures and land
19 (\$292,000), tools, office equipment and furniture (\$344,000), avian protection
20 (\$73,000), substation security (\$150,000), Fleet Equipment (\$206,000) and electric
21 vehicle (EV) fast charging stations (\$344,000).

1 facility maintenance could lead to failed/unavailable equipment, which in turn could
2 lead to increased costs due to emergency repairs and reduced productivity. The
3 centralization of the budget in Support Services eliminated the multiple department
4 budgets, and facilitated a consistent approach to facility maintenance. The budget
5 process includes the identification of work by the departments and subsequent
6 development of the costs, prioritization, and budgeting of the work by Support
7 Services.

8 Q. What then existing positions were affected by the creation of the Support Services
9 Department in 2010?

10 A. In 2010, four existing divisions from two departments (Administration and
11 Engineering Departments) were transferred to the newly created Support Services
12 Department and a new manager position was established. These divisions included
13 the Fleet and Land Divisions that were previously under the Administration
14 Department; and the Information Services and Survey Divisions that were previously
15 under the Engineering Department. A total of nineteen positions were transferred
16 from the four then existing divisions and included:

- 17 1. Fleet Division: Fleet Administrator and Fleet Coordinator – two positions;
- 18 2. Land Division: Land Administrator and two Land Agents – three positions;
- 19 3. Survey Division: Senior Land Surveyor, Land Surveyor, Survey Technician,
20 and Survey Aide – four positions; and
- 21 4. Information Technologies (IT) Division: Information Services Supervisor,
22 two Computer Specialists, Mapper, Senior Mapper, CADD Administrator,

1 Administrative Aide, Network Specialist, GIS Systems Analyst, and Desktop
2 Specialist – ten positions.

3 Q. Have there been any changes to Support Services since it was created in 2010?

4 A. There have been several changes to the Support Services Department since its
5 formation. First, in 2012, custodial work and cleaning of all facilities became part of
6 Support Services. Then, in July 2013, the Safety Division was moved from the
7 Administration Department to the Support Services Department. Lastly, in February
8 2015, the IT Division was moved to the Hawaiian Electric Company IT Department.

9 Q. Were the associated budgets also transferred for these changes?

10 A. The budgets (capital, labor and O&M) for the custodial work and cleaning were
11 transferred from the other seven Departments and the Safety Division's budget was
12 transferred from the Administration Department to Support Services. The Support
13 Services IT O&M budget was transferred to the Hawaiian Electric Company's IT
14 Department, while the capital budget was retained in Support Services. Though the
15 budget for IT O&M expense was transferred, the actual expense is charged back to
16 Support Services from the Hawaiian Electric Company's IT Department and is
17 recorded in Support Services.

18 Q. How is the Support Services Department currently organized and staffed?

19 A. The Support Services Department is currently made up of five divisions, consisting
20 of seventeen positions:⁵

⁵ See Exhibit HELCO-1006, Department Organization Chart.

- 1 1. Administration Division – four positions: Department Manager; Lead
2 Functional Administrator; Administrator, Facilities; Facilities Coordinator.
- 3 2. Fleet Division – two positions: Administrator, Fleet; Fleet Coordinator.
- 4 3. Land Division –three positions: Supervising Land Agent; two Land Agents.
- 5 4. Survey Division – three positions: Land Surveyor; Survey Technician;
6 Survey Aide.
- 7 5. Safety Division – five positions: Director, Safety; Safety, Health and Security
8 Administrator; three Administrators, Safety.

9 Q. Are the functions and budgets for the Support Services Department Divisions
10 aligned with the Goals and Objectives of the Company’s Strategic Plan?

11 A. Yes, the functions and budgets are aligned with the Company’s Strategic Plan and its
12 Goals and Objectives. The Mission and Vision Statement for the Support Services
13 Department are to:

14 Provide superior, innovative support to our customers and

15 Endeavor to meet customer needs with timely, novel solutions.

16 2. Support Services Divisions and Test Year Cost Drivers

17 Q. What are the functions of the Support Services Divisions and what are the Test Year
18 estimates and cost drivers?

19 A. The principal functions and Test Year forecasts and cost drivers are described as
20 follows:

1 a. Administration Division (including Facilities)

2 The Administration Division's 2016 Test Year estimate is \$1,538,000, an increase of
3 \$404,000 over 2015 recorded.⁶ This Division includes three key support units:
4 Administrative, Enterprise Resource Planning (ERP) and Facilities.

5 Administrative and Enterprise Resource Planning Units

6 The Administrative unit includes the Support Services Manager and provides
7 the oversight, goals/direction, budgeting, staffing, and administrative support for
8 Support Services. The ERP unit includes the Lead Functional Administrator (LFA)
9 who supports the ERP functions and the current ERP program, Ellipse. The LFA
10 provides all ERP and Ellipse training for the Company, assists other employees in
11 the use of Ellipse and other ERP programs to maximize their use and gain
12 efficiencies, and provides general ERP assistance. As the point person for ERP and
13 Ellipse at the Company, the LFA acts as the liaison with the other two companies
14 (Maui Electric Company, Limited ("Maui Electric") and Hawaiian Electric
15 Company, Inc. ("Hawaiian Electric")).

16 Facilities Unit

17 As previously mentioned, the Facilities unit was created to better manage and extend
18 the useful life of the Company's aging support facilities, and consists of two
19 positions, the Administrator, Facilities and the Facilities Coordinator, which are both
20 full-time facility professionals. Facilities is responsible for maintaining, repairing,
21 updating and planning for the Company's aging buildings, base-yards and work area

⁶ Exhibit HELCO-1002, O&M Expenses by Responsibility Area.

1 infrastructure.⁷ The Facilities unit's responsibilities range from the day-to-day
2 response for facility issues (including custodial work and cleaning) to developing the
3 overall Master Plan for Company facilities. Key work processes include identifying
4 facility reliability concerns (including potential age-related issues that could lead to
5 unplanned facility failures), and developing plans to address concerns. The unit also
6 provides project management for Facilities projects, including developing budgets,
7 obtaining approvals, seeking contractor/vendor bids when appropriate, creating
8 contracts, providing project oversight, reviewing invoices, and closing the projects.

9 Since its creation, the Facilities unit has completed several major projects.
10 These projects included: The Kona Customer Service expansion (\$1.73M in 2013),
11 and the new Kanoelehua Engineering Lobby (\$169K in 2015) which enhance the
12 customers' experience by making interactions with the Company simpler and more
13 pleasurable. The new Kona Baseyard warehouse (\$1.49M in 2013) which improves
14 the efficiency and productivity of the material handling and storage. The new Data
15 Center (\$2.46M in 2015) which provides security, functionality and efficiency to the
16 Company's IT processes.

17 As part of the work process, the Facilities unit uses green technologies
18 (energy efficient products) whenever possible, as part of the facility maintenance,
19 repair and construction processes to reduce the Company's environmental footprint.
20 As an example, in 2011, the Facilities unit implemented a recycling program for all
21 work areas, thereby reducing the amount of waste sent to the land fill through 2015

⁷ See Exhibit HELCO-1007, Facilities Maintained.

1 by 120,000 pounds (60 tons).⁸ In 2013, to keep wayward seabirds from being
2 attracted to night lights from the Company's base-yards and other facilities, the
3 Facilities unit installed ground-facing zero horizon LED lights, improving avian
4 protection and greatly reducing power consumption. During the re-roofing of the
5 Kona and Hilo warehouses, translucent panels were added to let the sunlight into the
6 buildings reducing the use of lighting during daylight hours, which in turn lowers
7 electrical use. Most recently, the Facilities unit completed construction of two
8 Electric Vehicle (EV) Fast Charging stations⁹, one in Hilo and one in Kona. These
9 public charging stations are part of the Pilot Program approved by the Commission
10 in Decision and Order No. 31338 and benefit the island's EV community and
11 support the decreased use of fossil fuels.

12 Administration Division Cost Drivers

13 The primary cost drivers for the Test Year increase of \$404,000 include the
14 following:¹⁰ \$133,000 due to a full year's labor expenses in 2016 for positions filled
15 during 2015 and wage escalation; \$125,000 for increased pension-related expenses¹¹;
16 \$97,000 for increased IT expenses (partially offset by reductions in IT described
17 later in this testimony); \$58,000 due to increased contract expenses for 2016, since
18 2015 recorded amounts were lower than historic spending in this category; and some
19 other cost increases.

⁸ See Workpaper HELCO-WP-1007, Office Waste Recycling Program 2011-2015.

⁹ Included in Workpaper HELCO-WP-1808, 2016 Plant Additions.

¹⁰ See Workpaper HELCO-WP-1003, O&M Expenses Variance by Expense Element.

¹¹ Pension expenses are explained in HELCO T-12, Benefits, and HELCO T-13, Pension.

1 b. Fleet Division

2 The Fleet Division's 2016 Test Year O&M estimate is \$21,000 an increase of
3 \$21,000 over 2015 recorded.¹² Together with this the Division has a Clearing and
4 Capital Budget shown on HELCO-WP-1006.

5 Fleet Division performs the maintenance, repairs, specifications and
6 purchasing of Fleet equipment to safely and environmentally responsibly meet the
7 business needs of the Company and its employees. The Fleet Division uses new
8 technologies, safety enhancements, employee feedback, and information from
9 industry leaders to make continuous improvements. The Administrator, Fleet works
10 with industry peers to design the fleet technologies for the future. The Fleet
11 Division is one of the leaders in the country on the use of green technologies and
12 fuels including the use of bio-diesel in all our diesel vehicles. The Fleet Division has
13 been recognized in 2013 and 2014 as one of the top 50 green fleets in the United
14 States by Heavy Duty Trucking.¹³

15 The primary cost driver for the \$21,000 Test Year increase is for expenses to
16 provide customer support for the Company's two new EV stations.

¹² See Exhibit HELCO-1002, O&M Expenses by Responsibility Area.

¹³ References include:

HDT's Top 50 Green Fleets (n.d.). Retrieved from <http://www.truckinginfo.com/article/story/2013/11/top-50-green-fleets/page/4.aspx>;

HDT Announces Top 50 Green Fleets of 2014 - TopNews - Fleet Management (n.d.). Retrieved from <http://www.truckinginfo.com/channel/fleet-management/news/story/2014/10/top-50-green-fleets-of-2015-announced.aspx>

1 c. Land Division

2 The Land Division's 2016 Test Year estimate is \$508,000 an increase of \$182,000
3 over 2015 recorded.¹⁴

4 The Land Division's primary activities include: acquiring land, easements
5 and land leases; governmental permitting; managing rental contracts, billings, and
6 rights of entry; answering land information requests; and, maintaining the
7 Company's real property records, including the preparation of property tax
8 exemptions. The Land Division is the key liaison with developers, governmental
9 officials, attorneys, and land owners on Company land matters. More recently,
10 increased time is being spent on dealing with Company facilities located on large
11 tracks of land which had previously been under the control of single owners.
12 Increasingly, these land parcels are being subdivided, or changing ownership. This
13 shift from single owners to multiple owners, combined with the increasing number
14 of new residents on Hawai'i Island has increased the number of land information
15 requests, un-documented easement work and the number of legal challenges of the
16 location of Company facilities. Assistance for this work is provided by the Hawaiian
17 Electric Co. Legal Department and Land Group which is housed in this Department.

18 The primary cost drivers for the \$182,000 Test Year increase include:
19 \$92,000 to support increased processing of easements, and wage escalation; \$72,000
20 for increased pension-related expenses¹⁵; and some other cost increases.

¹⁴ See Exhibit HELCO-1002, O&M Expenses by Responsibility Area.

¹⁵ Pension expenses are explained in HELCO T-12, Benefits, and HELCO T-13, Pension.

1 d. Survey Division

2 The Survey Division's 2016 Test Year estimate is \$76,000, an increase of \$26,000
3 over 2015 recorded.¹⁶

4 The Survey Division's primary activities include: performing field surveys to
5 locate and map geographic features; stake-out land boundaries, easements, and
6 utility facilities; and, perform topographic surveys and mapping for construction
7 projects. Additionally, the Survey Division is responsible for the Global Positioning
8 System (GPS) mapping and controls for transmission and distribution facilities and
9 substations. This Survey Division also maintains relationships with external
10 surveyors, engineers, government officials, and Company stake holders.

11 The primary cost drivers for the \$26,000 Test Year increase include: \$16,000
12 due to increased labor costs and wage escalation; \$12,000 for increased pension-
13 related expenses¹⁷; and some other cost decreases.

14 e. Safety Division

15 The Safety Division's 2016 Test Year estimate is \$1,114,000, an increase of
16 \$236,000 over 2015 recorded.¹⁸

17 The Safety Division's activities are focused on maintaining and improving
18 the safety and security of the Company's customers, employees and facilities, by
19 developing programs to promote safety and health.¹⁹ The Safety Division works
20 closely with Hawaiian Electric Company and Maui Electric Company to coordinate

¹⁶ See Exhibit HELCO-1002, O&M Expenses by Responsibility Area.

¹⁷ Pension expenses are explained in HELCO T-12, Benefits, and HELCO T-13, Pension.

¹⁸ See Exhibit HELCO-1002, O&M Expenses by Responsibility Area.

¹⁹ See Exhibit HELCO-1008, Company Safety Program Description.

1 and standardize safety and security programs, including the Safety Alert Program
2 which sends safety or security incident notifications to employees of all three
3 Companies.²⁰ The Safety Division provides employee safety and security training,
4 and develops the safety and security, and the emergency response plans, issues
5 Company IDs for employees, maintains facility access controls and retains the
6 Company's records for safety and security. The Division also is involved with the
7 safety of contract workers by providing safety training and orientations, performing
8 background checks, issuing Company IDs, and maintaining facility access controls
9 for these workers as well as tracking the qualifications and safety records for these
10 workers. Members of the Safety Division also respond to accident and security
11 incidents involving employees and/or Company facilities and handle security
12 responsibilities for the Company. This team also makes spot checks at the various
13 work sites around the island to observe the work being done and ensuring safety
14 procedures are being followed.

15 The primary cost drivers for the \$236,000 Test Year increase include:
16 \$95,000 due to a full year's labor expenses in 2016 for positions filled during 2015
17 and wage escalation; \$119,000 for increased pension-related expenses²¹; and some
18 other increases.

²⁰ "Companies" refers collectively to: Hawai'i Electric Light Company, Inc., Hawaiian Electric Company, Inc., and Maui Electric Company, Inc.

²¹ Pension expenses are explained in HELCO T-12, Benefits, and HELCO T-13, Pension.

1 3. Information Technologies (IT)

2 The Test Year O&M estimate for direct costs IT billed to Hawai'i Electric Light
3 1.037 million²², a decrease of \$75,000. The IT Division (and the associated O&M
4 budget) is a part of Hawaiian Electric's IT Department. Expenses for IT work for
5 Hawai'i Electric Light are charged through inter-Company billing (ICB) and
6 recorded in the Support Services Department.

7 Q. How have IT services been managed and delivered to Hawai'i Electric Light?

8 A. Historically, IT services have been provided to Hawai'i Electric Light in two ways,
9 centrally by Hawaiian Electric's IT Department and locally by Hawai'i Electric
10 Light's Support Services Department. Centrally provided services included
11 Enterprise Information Systems (Ellipse, HRMS, and CIS)²³ and internet services.
12 Locally provided services included most end-user computing (PCs/Laptops), local
13 area network and select workgroup information system services. Communications,
14 specifically land line and cell phones are also handled by the IT group. Since 2010,
15 the need for IT security has been heightened with the need to defend against
16 numerous threats including fraud, mischievous hacking and other potential system
17 attacks. Costs for new IT network designs, software and hardware have been added
18 to protect the Companies IT infrastructure.

19 The Geographic Information System (GIS) group provides information and
20 data to the Company as a whole; the system is especially important to the

²² See Exhibit HELCO-1002, O&M Expenses by Responsibility Area. Intercompany costs for IT billed via ICB are included in the Administration Division's O&M expenses.

²³ Ellipse: Enterprise Resource Planning (ERP) program; HRMS: human resource management system; CIS: customer information system

1 Engineering, Distribution, Customer Service and Support Services Departments, the
2 President's Office and the ICS. The information is critical to operations and adds
3 quality and efficiency to processes. In addition, the GIS group continually develops
4 applications to allow users to retrieve specific data, a necessity for efficient daily
5 work. During 2014, the GIS group was particularly critical to the emergency
6 responses for Tropical Storm Iselle and the Pahoia lava flow, helping the ICS and
7 responders perform tasks safely and efficiently and helping to provide information to
8 customers and the general public.

9 Q. What efforts have been made to increase efficiencies?

10 A. In February 2015, the IT organizations at the three Companies were consolidated
11 under the Information Technology and Services (ITS) Department at Hawaiian
12 Electric. This change represented a significant step in a multi-year effort to
13 standardize IT programs, policies, process, and projects across the three Companies,
14 particularly in the areas of end-user computing and local IT infrastructure.

15 The consolidation of disparate Geospatial Information Systems (GIS) into a
16 single centralized enterprise GIS system is an example of IT efforts to increase
17 efficiencies.²⁴ The benefits of a centralized GIS include:

- 18 • A consistent electrical connectivity model to support the Operations
19 Management System (OMS) and other advanced operational applications,
20 including the Smart Grid solutions.

²⁴ 2016 Enterprise Information System Roadmap Update Filing May 20, 2016. The eGIS project centralizes the multiple GIS applications.

- 1 • A single point, and as a result, streamlined integration of enterprise
- 2 applications (e.g., ERP/EAM, CIS, AMI)²⁵.
- 3 • A standardized set of GIS-enabled applications to support standardized
- 4 business processes, minimizing custom integration and redundancy.
- 5 • Increased IT support for the GIS system by consolidating IT resources.

6 Q. What are the principal cost drivers of IT?

7 A. Between 2015 and the Test Year, there were three changes in the costs distributed to
8 Hawai'i Electric Light.²⁶

- 9 1. Direct expense shifted to billable expense for IT labor costs, and as a result,
- 10 direct labor expense went from 796 hours in 2015 to zero in 2016.
- 11 2. Shared cost for implementation of a consolidated GIS.²⁷
- 12 3. Adjustment of allocated IT services expenses to include all expenses
- 13 provided centrally by Hawaiian Electric. Hawai'i Electric Light's allocation
- 14 of expenses is a percentage, based on the on the number of PC desktops and
- 15 other allocation methodologies which is reviewed and updated at least
- 16 annually.

17 The primary cost drivers for the \$75,000 Test Year decrease include changes in IT
18 cost allocations, some cost reductions, and the normalization of costs over 2016 to
19 2018 for the eGIS project.²⁸

²⁵ ERP: Enterprise Resource Planning; EAM: Enterprise Asset Management; CIS: Customer Information System; AMI: Automated Metering Infrastructure

²⁶ See Exhibit HELCO-1009, Centralized IT Services.

²⁷ 2016 Enterprise Information System Roadmap Update Filing May 20, 2016.

²⁸ See Workpaper HELCO-WP-1003B, Test Year Adjustments eGIS Project.

1 COST CONTROL MEASURES OF THE SUPPORT SERVICES DEPARTMENT

2 Q. How has the Support Services Department implemented cost control measures to
3 benefit customers?

4 A. The Support Services Department continues to improve processes and programs to
5 increase efficiency, productivity, and benefit Hawai'i Electric Light's customers.

6 Examples of these improvements are described below for each division and IT:

7 1. Facilities Cost Control Measures

8 Consolidating facilities work (maintenance, construction, custodial, repairs) under
9 one department within Hawai'i Electric Light eliminated multiple budgets, and
10 provided single oversight for facility maintenance, repair, and construction projects
11 and reduced overall facilities costs.²⁹ Proactive facilities planning allows for the
12 bidding of work, and a reduction in the reactive emergency repairs of aging
13 infrastructure. Three facilities cost control measures are provided as examples:
14 competitive bidding, Value Engineering, and energy efficiency.

15 The process of competitive bidding was improved and new multi-year
16 contracts for consolidated work have reduced costs and emergency repairs. In 2014,
17 a request for proposal (RFP) for custodial services was issued, and in 2015 a new
18 three-year contract was awarded, which included additional services such as floor-
19 waxing, vacuuming and call-outs. Prior to this, the work was being done on a month
20 to month basis with the vendor making price adjustments annually if necessary.

21 Table 10-2 provides the historic costs for custodial services, demonstrating the

²⁹ See Exhibit HELCO-1010, Facilities Spending.

1 decrease in costs as the new contract was implemented with 2015 costs falling below
2 2010 costs.

3 Table 10-2
4 Custodial Services Costs

Year	Custodial Services Costs	Year-to-Year Change
2010	\$145,042	--
2011	\$148,144	\$3,102
2012	\$150,699	\$2,555
2013	\$153,298	\$2,599
2014	\$138,960	(\$14,338)
2015	\$142,515	\$3,555

5
6 This new contract will serve as a baseline for future custodial contract bids.
7 The Company plans to again issue another multi-year contract in 2018, with the
8 expiration of the current custodial services contract.

9 Another improvement implemented was the process of Value Engineering,
10 where winning bids are scrutinized line-by-line with the contractor and design
11 professionals, and alternatives that will further reduce the cost of the bid are
12 identified. Using this process on larger projects has proven to be very successful in
13 eliminating waste from projects and reducing bids. Though the Company has not
14 tracked all the changes to the bids as a result of this process, there have been
15 multiple instances of changes and improvements.

1 Another process improvement area is the implementation of energy
2 efficiency opportunities for facilities. This includes lower cost energy efficient
3 lighting, automated air-conditioning controls to regulate cooling, and the
4 replacement of inefficient air-conditioning systems. External LED lighting has been
5 installed at most plants and base-yards. The estimated 200 LED lights installed use
6 approximately 61 percent less electricity for a total savings of about 51,000 kilowatt-
7 hours per year, or \$16,500 at current rates.³⁰

8 2. Fleet Cost Control Measures

9 The Fleet Division has implemented multiple programs to increase efficiency and
10 cost savings. Increasing the consolidated fleet miles per gallon, increasing the
11 average vehicle availability, and decreasing the number of fleet vehicles are key
12 elements in Fleet Division's efforts to reduce costs and be more efficient. Five Fleet
13 cost control efforts are provided as examples: the tire purchase program, fleet
14 availability, GPS for vehicles, fleet service contracts, and EV implementation.

15 The Fleet Division uses the National Utility Tire Program which provides
16 discounts on premium tires. This program offers special pricing on Michelin and BF
17 Goodrich tires to Electric Utilities in the United States In 2015; Fleet Division saved
18 approximately \$25,000.00 on tire purchases through this program.³¹

19 One of the Fleet Division's goals is to maintain greater than 95% availability
20 (up-time rate) for vehicles. Whether for a normal work day or emergency, fleet
21 availability is critical, and will allow quicker response to customers, and reduce non-

³⁰ See Workpaper HELCO-WP-1008, LED Lighting.

³¹ See Workpaper HELCO-WP-1009, Tire Purchases.

1 productive crew time. One primary way to keep fleet availability high is to work
2 with vendors to plan and perform maintenance work at night, or when crews are off,
3 to maximize fleet availability. The Company's fleet availability was 96 percent in
4 2015.³²

5 GPS was initially installed in vehicles to improve the safety for crews
6 working in emergency conditions in field locations. However, the use of GPS also
7 allows improved dispatch management, adherence to posted speed limits, reduces
8 unnecessary trips for repetitive operations, and provides equipment status and
9 locations during times of emergency when the Incident Command System is
10 activated. GPS also provides advanced safety tools, including Two-Way Telematics
11 communication and a Lone Worker Panic Button system. Improved driving as a
12 result of the use of GPS has resulted in improving fuel efficiency by 6 percent.³³

13 Beginning in 2010, the Fleet Division implemented three-year service
14 contracts for service and repair of sedans, trucks, and large trucks (26,000 gross
15 vehicle weight and higher). This has saved costs as vendors perform all vehicle
16 maintenance and repairs: supply and parts inventories need not be maintained;
17 hazardous materials (such as oil, batteries, grease, tires and solvents) need not be
18 stored on site and are disposed of by the vendors; and no special facilities or shop
19 space is required eliminating maintenance costs, safety and environmental risks
20 associated with these types of facilities.

³² See Exhibit HELCO-1011, Fleet Statistics.

³³ Ibid

1 To further reduce fuel costs, and to reduce the use of fossil fuels by
2 electrification, the Company has increased the purchase of EV's and Hybrid
3 Vehicles. Currently, 47 percent of the fleet utilizes alternate fuels.

4 3. Land Cost Control Measures

5 The Land Division implemented a new process in 2014 to digitize and store land
6 documents on a local server. This process has resulted in productivity and efficiency
7 gains for the Land Division as well as for other departments in three key areas. First,
8 physical storage space has been reduced. Second, the filing and research time for
9 Land Agents is reduced, allowing the Land Agents to perform additional duties.
10 Third, other department employees can directly access information, maps and deeds,
11 improving their productivity, as well as allowing Land Division personnel to work
12 on other projects.

13 A very important process of the Land Division is the preparation of real
14 property tax exemption claims and maintenance of the records and related
15 documentation. The effective management of this process saves the Company
16 almost \$6 Million (\$5,970,790.00) in taxes per year.³⁴

17 4. Survey Cost Control Measures

18 The Survey Division has used GPS equipment in its work since the late 1990's,
19 reducing the amount of time needed in the field to get work done by having more
20 accurate location information. Over time, the technology and equipment have
21 continued to improve. In 2014, updated GPS equipment was purchased by the

³⁴ Workpaper HELCO-WP-1010, Real Property Tax Exemptions.

1 Company, greatly improving survey crew productivity. As an example, a survey
2 crew estimated that using the new GPS saved roughly 60 crew-days on a pole line
3 project, allowing the crew to work on other requests. This example results in a
4 savings of over \$56,000 (using an estimated cost of \$940 per crew-day).³⁵ This
5 added functionality and productivity allowed Support Services to eliminate a vacant
6 budgeted Survey Division position to create a much-needed Facilities Coordinator
7 position to manage the maintenance and custodial backlogs.

8 5. Safety Cost Control Measures

9 Since 2010, the Safety Division has introduced several safety programs to reduce
10 the number and frequency of accidents and injuries. With the exception of 2015,
11 the number of incidents has steadily declined.³⁶ This reduction in accidents and
12 injuries increases productivity, reduces Workers Compensation claims, and results
13 in avoided costs as shown in Table 10-3 below.

14 Table 10-3
15 Reduction in Injuries and Workers Compensation Claims*
16

HELCO	2010	2011	2012	2013	2014	2015	2016 YTD
Number of Injuries	13	12	14	7	5	14	0
Total Claim Costs	\$91,424	\$224,407	\$44,974	\$19,833	\$5,905	\$119,530	\$0

*Data as of 5/31/16

³⁵ See Workpaper HELCO-WP-1011, GPS Cost Savings Example.

³⁶ See Exhibit HELCO-1008, Company Safety Program, and Exhibit HELCO-1012, Safety Statistics.

1 Most importantly, the improvement in safety performance improves public safety
2 and service to customers with the increased availability of employees. The Safety
3 Division also performs security duties for Hawai'i Electric Light, saving the cost of
4 staffing a separate Security Division, additional facilities and maintenance costs.
5 This is accomplished by having dedicated employees who sacrifice their free time
6 in order to respond to incidents.

7 6. Information Technologies Cost Control Measures

8 There are two primary areas that have improved the efficiency and cost effectiveness
9 of IT services standardization and improved IT resource utilization.

10 The ongoing standardization of IT infrastructure and service delivery, along
11 with increased automation: (a) reduces implementation risks and costs for IT
12 projects and initiatives (e.g., implementation of one integration and test scenario
13 instead of three for the three Companies), and (b) increases IT operational efficiency
14 (e.g., reduced manual/field IT work through centralized automation).

15 IT standardization and automation results in improved IT resource utilization,
16 increasing service levels and coverage for the three Companies. The 2015
17 centralization of IT services has resulted in a consolidated IT incident and service
18 request process, a going-forward standardized IT hardware procurement and
19 configuration, centralized deployment of software updates (previously performed
20 manually), and a centralized document collaboration platform. The resulting
21 efficiencies have reduced one headcount in the local IT service delivery group at

1 Hawai'i Electric Light shared support, have produced an estimated savings of
2 approximately \$75,000 included in the Test Year estimate for IT services.³⁷

3 SUMMARY

4 Q. Please summarize your testimony.

5 A. The Support Services Department is an integral part of all Hawai'i Electric Light
6 departments and has a key role in helping to provide safe, reliable, and affordable
7 service to customers. Each of the Department's divisions utilizes process
8 improvement and new technologies to continually improve efficiency and operating
9 results, and to reduce costs.

10 For example the Facilities unit supports the buildings and work-yards to
11 support operations, while implementing new programs to extend the life of aging
12 buildings and infrastructure to keep costs as low as possible. The unit integrates
13 emerging issues and new technologies, new operations and functional requirements
14 within existing budgets.

15 The Fleet Division is building the fleet of the future by implementing new
16 technologies, requirements, and new work operations, while keeping costs as low as
17 possible. Fleet continues to support industry-leading changes, by increasing the use
18 of Hybrid and EV's (and increasing alternate fuel usage) and working with industry
19 peers to design the next generation of fuel efficient vehicles.

20 The Survey and Land Divisions are an integral part, and directly affect, the
21 efficiency and productivity of operations. The implementation of technology to

³⁷ See Workpaper HELCO-WP-1003A, IT Variances.

1 improve the work processes for both real property information and field survey work
2 improves not only the productivity of both divisions, but also for the other operating
3 groups as well by providing quicker more accurate solutions to their requests.

4 The Safety Division provides the guidance and programs to strengthen the
5 Company's culture of safety. The various safety programs discussed in Exhibit
6 HELCO-1012 have reinforced safety as the primary responsibility of each employee
7 and improved the Company's safety results.

8 In summary, the Support Services Department has realized tangible
9 efficiency and productivity gains through the programs and processes implemented,
10 and will continue to identify new opportunities to provide the most responsive and
11 cost effective support for the Company's operations.

12 Q. Does this conclude your testimony?

13 A. Yes it does.

HAWAI'I ELECTRIC LIGHT COMPANY, INC.

THOMAS W. CUMMINS

EDUCATIONAL BACKGROUND AND EXPERIENCE

BUSINESS ADDRESS: Hawai'i Electric Light Company, Inc.
54 Halekauila Street, Hilo, HI 96720

POSITION: Manager, Support Services
Department Hawaii Electric Light
Company, Inc. (November 2010 to
present)

YEARS OF SERVICE: 24 Years

EDUCATION: Saint Louis High School
(1969-1973)

PREVIOUS POSITIONS: Manager, Engineering Department
Hawaii Electric Light Company, Inc.
(March 2008 to November 2010)

 Lead Functional Administrator
Hawaii Electric Light Company, Inc.
(May 2001 to March 2008)

 Civil Engineer
Hawaii Electric Light Company, Inc.
(April 1992 to May 2001)

 Branch Office Manager
Austin, Tsutsumi & Associates, Inc.
Civil Engineers &, Surveyors
(1988 to 1992)

 Surveyor
Austin, Tsutsumi & Associates, Inc.
Civil Engineers &, Surveyors
(1973 to 1988)

OTHER QUALIFICATIONS: Registered Professional Land Surveyor, Hawaii
(1988)

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Support Services Department
Operation and Maintenance Expenses
(\$ Thousands)

NARUC Block	Reference	L/NL	(See HELCO-WP-1003B)				E =sum(A to D) 2016 Test Year Estimate	
			A 2016 Operating Budget	B Budget	C Adjustments Normalization	D Ratemaking		
1	Production	HELCO-1001 p.2	L	\$ -	\$ -	\$ -	\$ -	\$ -
2	Production	HELCO-1001 p.4	NL	-	-	-	-	-
3		Subtotal		-	-	-	-	-
4	Transmission	HELCO-1001 p.2	L	-	-	-	-	-
5	Transmission	HELCO-1001 p.4	NL	10	-	-	-	10
6		Subtotal		10	-	-	-	10
7	Distribution	HELCO-1001 p.2-3	L	65	-	-	-	65
8	Distribution	HELCO-1001 p.4-5	NL	78	-	-	-	78
9		Subtotal		143	-	-	-	143
10	Customer Accounts	HELCO-1001 p.3	L	-	-	-	-	-
11	Customer Accounts	HELCO-1001 p.5	NL	-	-	-	-	-
12		Subtotal		-	-	-	-	-
13	Customer Services	HELCO-1001 p.3	L	-	-	-	-	-
14	Customer Services	HELCO-1001 p.5	NL	-	-	-	-	-
15		Subtotal		-	-	-	-	-
16	A&G	HELCO-1001 p.3	L	1,148	-	-	-	1,148
17	A&G	HELCO-1001 p.5	NL	3,275	(77)	(206)	-	2,993
18		Subtotal		4,423	(77)	(206)	-	4,141
19	Total Support Services Department		L	1,214	-	-	-	1,214
20	Total Support Services Department		NL	3,363	(77)	(206)	-	3,081
21		Grand Total		\$ 4,577	\$ (77)	\$ (206)	\$ -	\$ 4,294

Notes:

- Totals may not add exactly due to rounding.
- See O&M expense aggregation schedule at HELCO-1101 which incorporates lines 3, 6, 9, 15, and 18 above to arrive at the balances presented in the results of operation in the revenue requirement calculation. Revenue requirement calculation is presented in HELCO-2701.

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Support Services Department
Labor Operation and Maintenance Expenses
(\$ Thousands)

			<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
			2016	(See HELCO-WP-1003B)			=sum(A to D)
			Operating	Adjustments		2016	Test Year
NARUC Block			Budget	Budget	Normalization	Ratemaking	Estimate
Production Operation (B30)							
1	HSA	Admin-Support Svc	\$ -	\$ -	\$ -	\$ -	\$ -
2	HSF	Fleet Division-SS	-	-	-	-	-
3	HSI	Info Svcs Division-SS	-	-	-	-	-
4	HSL	Land Division-SS	-	-	-	-	-
5	HSS	Surveying Division-SS	-	-	-	-	-
6	HST	Safety & Security Division	-	-	-	-	-
7	Subtotal		-	-	-	-	-
Production Maintenance (B31)							
8	HSA	Admin-Support Svc	-	-	-	-	-
9	HSF	Fleet Division-SS	-	-	-	-	-
10	HSI	Info Svcs Division-SS	-	-	-	-	-
11	HSL	Land Division-SS	-	-	-	-	-
12	HSS	Surveying Division-SS	-	-	-	-	-
13	HST	Safety & Security Division	-	-	-	-	-
14	Subtotal		-	-	-	-	-
Transmission Operation (B32)							
15	HSA	Admin-Support Svc	-	-	-	-	-
16	HSF	Fleet Division-SS	-	-	-	-	-
17	HSI	Info Svcs Division-SS	-	-	-	-	-
18	HSL	Land Division-SS	-	-	-	-	-
19	HSS	Surveying Division-SS	-	-	-	-	-
20	HST	Safety & Security Division	-	-	-	-	-
21	Subtotal		-	-	-	-	-
Transmission Maintenance (B33)							
22	HSA	Admin-Support Svc	-	-	-	-	-
23	HSF	Fleet Division-SS	-	-	-	-	-
24	HSI	Info Svcs Division-SS	-	-	-	-	-
25	HSL	Land Division-SS	-	-	-	-	-
26	HSS	Surveying Division-SS	-	-	-	-	-
27	HST	Safety & Security Division	-	-	-	-	-
28	Subtotal		-	-	-	-	-
Distribution Operation (B34)							
29	HSA	Admin-Support Svc	3	-	-	-	3
30	HSF	Fleet Division-SS	-	-	-	-	-
31	HSI	Info Svcs Division-SS	-	-	-	-	-
32	HSL	Land Division-SS	9	-	-	-	9
33	HSS	Surveying Division-SS	38	-	-	-	38
34	HST	Safety & Security Division	15	-	-	-	15
35	Subtotal		65	-	-	-	65

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Support Services Department
Labor Operation and Maintenance Expenses
(\$ Thousands)

			<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
			2016	(See HELCO-WP-1003B)			=sum(A to D)
			Operating	Adjustments		Test Year	2016
NARUC Block			Budget	Budget	Normalization	Ratemaking	Estimate
Distribution Maintenance (B35)							
36	HSA	Admin-Support Svc	-	-	-	-	-
37	HSF	Fleet Division-SS	-	-	-	-	-
38	HSI	Info Svcs Division-SS	-	-	-	-	-
39	HSL	Land Division-SS	-	-	-	-	-
40	HSS	Surveying Division-SS	-	-	-	-	-
41	HST	Safety & Security Division	-	-	-	-	-
42	Subtotal		-	-	-	-	-
Customer Accounts (B36)							
43	HSA	Admin-Support Svc	-	-	-	-	-
44	HSF	Fleet Division-SS	-	-	-	-	-
45	HSI	Info Svcs Division-SS	-	-	-	-	-
46	HSL	Land Division-SS	-	-	-	-	-
47	HSS	Surveying Division-SS	-	-	-	-	-
48	HST	Safety & Security Division	-	-	-	-	-
49	Subtotal		-	-	-	-	-
Customer Service (B37)							
50	HSA	Admin-Support Svc	-	-	-	-	-
51	HSF	Fleet Division-SS	-	-	-	-	-
52	HSI	Info Svcs Division-SS	-	-	-	-	-
53	HSL	Land Division-SS	-	-	-	-	-
54	HSS	Surveying Division-SS	-	-	-	-	-
55	HST	Safety & Security Division	-	-	-	-	-
56	Subtotal		-	-	-	-	-
A&G (B38, B39)							
57	HSA	Admin-Support Svc	415	-	-	-	415
58	HSF	Fleet Division-SS	-	-	-	-	-
59	HSI	Info Svcs Division-SS	-	-	-	-	-
60	HSL	Land Division-SS	275	-	-	-	275
61	HSS	Surveying Division-SS	0	-	-	-	0
62	HST	Safety & Security Division	458	-	-	-	458
63	Subtotal		1,148	-	-	-	1,148
Grand Total							
64	Support Services Department Labor Expense		\$ 1,214	\$ -	\$ -	\$ -	\$ 1,214

Notes:

- Totals may not add exactly due to rounding.
- Column A: HELCO-WP-101 (HELCO 2016 Rate Case Reports)
- Columns B, C, D: HELCO-WP-1003B

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Support Services Department
Non-Labor Operation and Maintenance Expenses
(\$ Thousands)

				<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
				2016	(See HELCO-WP-1003B)			=sum(A to D)
				Operating	Adjustments			2016
NARUC Block				Budget	Budget	Normalization	Ratemaking	Test Year Estimate
Production Operation (B30)								
1	HSA	Admin-Support Svc		\$ -	\$ -	\$ -	\$ -	\$ -
2	HSF	Fleet Division-SS		-	-	-	-	-
3	HSI	Info Svcs Division-SS		-	-	-	-	-
4	HSL	Land Division-SS		-	-	-	-	-
5	HSS	Surveying Division-SS		-	-	-	-	-
6	HST	Safety & Security Division		-	-	-	-	-
7	Subtotal			-	-	-	-	-
Production Maintenance (B31)								
8	HSA	Admin-Support Svc		-	-	-	-	-
9	HSF	Fleet Division-SS		-	-	-	-	-
10	HSI	Info Svcs Division-SS		-	-	-	-	-
11	HSL	Land Division-SS		-	-	-	-	-
12	HSS	Surveying Division-SS		-	-	-	-	-
13	HST	Safety & Security Division		-	-	-	-	-
14	Subtotal			-	-	-	-	-
Transmission Operation (B32)								
15	HSA	Admin-Support Svc		-	-	-	-	-
16	HSF	Fleet Division-SS		-	-	-	-	-
17	HSI	Info Svcs Division-SS		-	-	-	-	-
18	HSL	Land Division-SS		10	-	-	-	10
19	HSS	Surveying Division-SS		-	-	-	-	-
20	HST	Safety & Security Division		-	-	-	-	-
21	Subtotal			10	-	-	-	10
Transmission Maintenance (B33)								
22	HSA	Admin-Support Svc		-	-	-	-	-
23	HSF	Fleet Division-SS		-	-	-	-	-
24	HSI	Info Svcs Division-SS		-	-	-	-	-
25	HSL	Land Division-SS		-	-	-	-	-
26	HSS	Surveying Division-SS		-	-	-	-	-
27	HST	Safety & Security Division		-	-	-	-	-
28	Subtotal			-	-	-	-	-
Distribution Operation (B34)								
29	HSA	Admin-Support Svc		22	-	-	-	22
30	HSF	Fleet Division-SS		-	-	-	-	-
31	HSI	Info Svcs Division-SS		-	-	-	-	-
32	HSL	Land Division-SS		6	-	-	-	6
33	HSS	Surveying Division-SS		33	-	-	-	33
34	HST	Safety & Security Division		15	-	-	-	15
35	Subtotal			77	-	-	-	77

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Support Services Department
Non-Labor Operation and Maintenance Expenses
(\$ Thousands)

			<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
			2016	(See HELCO-WP-1003B)			=sum(A to D)
			Operating	Adjustments		2016	Test Year
NARUC Block			Budget	Budget	Normalization	Ratemaking	Estimate
Distribution Maintenance (B35)							
36	HSA	Admin-Support Svc	-	-	-	-	-
37	HSF	Fleet Division-SS	-	-	-	-	-
38	HSI	Info Svcs Division-SS	-	-	-	-	-
39	HSL	Land Division-SS	-	-	-	-	-
40	HSS	Surveying Division-SS	1	-	-	-	1
41	HST	Safety & Security Division	-	-	-	-	-
42	Subtotal		1	-	-	-	1
Customer Accounts (B36)							
43	HSA	Admin-Support Svc	-	-	-	-	-
44	HSF	Fleet Division-SS	-	-	-	-	-
45	HSI	Info Svcs Division-SS	-	-	-	-	-
46	HSL	Land Division-SS	-	-	-	-	-
47	HSS	Surveying Division-SS	-	-	-	-	-
48	HST	Safety & Security Division	-	-	-	-	-
49	Subtotal		-	-	-	-	-
Customer Service (B37)							
50	HSA	Admin-Support Svc	-	-	-	-	-
51	HSF	Fleet Division-SS	-	-	-	-	-
52	HSI	Info Svcs Division-SS	-	-	-	-	-
53	HSL	Land Division-SS	-	-	-	-	-
54	HSS	Surveying Division-SS	-	-	-	-	-
55	HST	Safety & Security Division	-	-	-	-	-
56	Subtotal		-	-	-	-	-
A&G (B38, B39)							
57	HSA	Admin-Support Svc	1,097	-	-	-	1,097
58	HSF	Fleet Division-SS	21	-	-	-	21
59	HSI	Info Svcs Division-SS	1,320	(77)	(206)	-	1,037
60	HSL	Land Division-SS	208	-	-	-	208
61	HSS	Surveying Division-SS	3	-	-	-	3
62	HST	Safety & Security Division	626	-	-	-	626
63	Subtotal		3,275	(77)	(206)	-	2,993
Grand Total							
64	Support Services Department Labor Expense		\$ 3,363	\$ (77)	\$ (206)	\$ -	\$ 3,081

Notes:

- Totals may not add exactly due to rounding.
- Column A: HELCO-WP-101 (HELCO 2016 Rate Case Reports)
- Columns B, C, D: HELCO-WP-1003B

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Support Services Department
Total Operation and Maintenance Expenses by Responsibility Area
(\$ Thousands)

RA	Description	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>G</u>
		2015 Recorded	2016 Operating Budget	(See HELCO-WP-1003B) Budget	Adjustments Normalization Ratemaking		=sum(B to E) 2016 Test Year Estimate	= F - A Increase (Decrease) over 2015 Recorded
1	HSA Admin-Support Svc	\$ 1,134	\$ 1,538	\$ -	\$ -	\$ -	\$ 1,538	\$ 404
2	HSF Fleet Division-SS	1	21	-	-	-	21	\$ 20
3	HSI Info Svcs Division-SS	1,112	1,320	(77)	(206)	-	1,037	\$ (75)
4	HSL Land Division-SS	326	508	-	-	-	508	\$ 182
5	HSS Surveying Division-SS	50	76	-	-	-	76	\$ 26
6	HST Safety & Security Division	879	1,114	-	-	-	1,114	\$ 236
7	Grand Total Support Services Department	\$ 3,501	\$ 4,577	\$ (77)	\$ (206)	\$ -	\$ 4,294	\$ 793

Notes:

- Totals may not add exactly due to rounding.
- Columns A-E = HELCO-1002, p.2
- Columns A, B: HELCO-WP-101 (HELCO 2016 Rate Case Reports)
- Columns C, D, E: HELCO-WP-1003B

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Support Services Department
Labor and Non-Labor Operation and Maintenance Expenses by Responsibility Area
(\$ Thousands)

RA	Description	L/NL	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>G</u>
			2015 Recorded	2016 Operating Budget	Budget	Adjustments (See HELCO-WP-1003B)		2016 Test Year Estimate	= F - A increase (Decrease) over 2015 Recorded
1	HSA Admin-Support Svc	L	\$ 291	\$ 418	\$ -	\$ -	\$ -	\$ 418	\$ 127
2	HSF Fleet Division-SS	L	0	-	-	-	-	-	\$ (0)
3	HSI Info Svcs Division-SS	L	32	-	-	-	-	-	\$ (32)
4	HSL Land Division-SS	L	197	285	-	-	-	285	\$ 87
5	HSS Surveying Division-SS	L	23	38	-	-	-	38	\$ 15
6	HST Safety & Security Division	L	381	473	-	-	-	473	\$ 92
7	Subtotal Support Services Department Labor	L	924	1,214	-	-	-	1,214	\$ 289
8	HSA Admin-Support Svc	NL	843	1,120	-	-	-	1,120	\$ 276
9	HSF Fleet Division-SS	NL	0	21	-	-	-	21	\$ 21
10	HSI Info Svcs Division-SS	NL	1,080	1,320	(77)	(206)	-	1,037	\$ (43)
11	HSL Land Division-SS	NL	129	224	-	-	-	224	\$ 95
12	HSS Surveying Division-SS	NL	27	37	-	-	-	37	\$ 11
13	HST Safety & Security Division	NL	498	642	-	-	-	642	\$ 144
14	Subtotal Support Services Department Non-Labor	NL	2,577	3,363	(77)	(206)	-	3,081	\$ 504
15	Grand Total Support Services Department		\$ 3,501	\$ 4,577	\$ (77)	\$ (206)	\$ -	\$ 4,294	\$ 793

Notes:

- Totals may not add exactly due to rounding.
- Columns A, B: HELCO-WP-101 (HELCO 2016 Rate Case Reports)
- Columns C, D, E: HELCO-WP-1003B

Not Used

Not Used

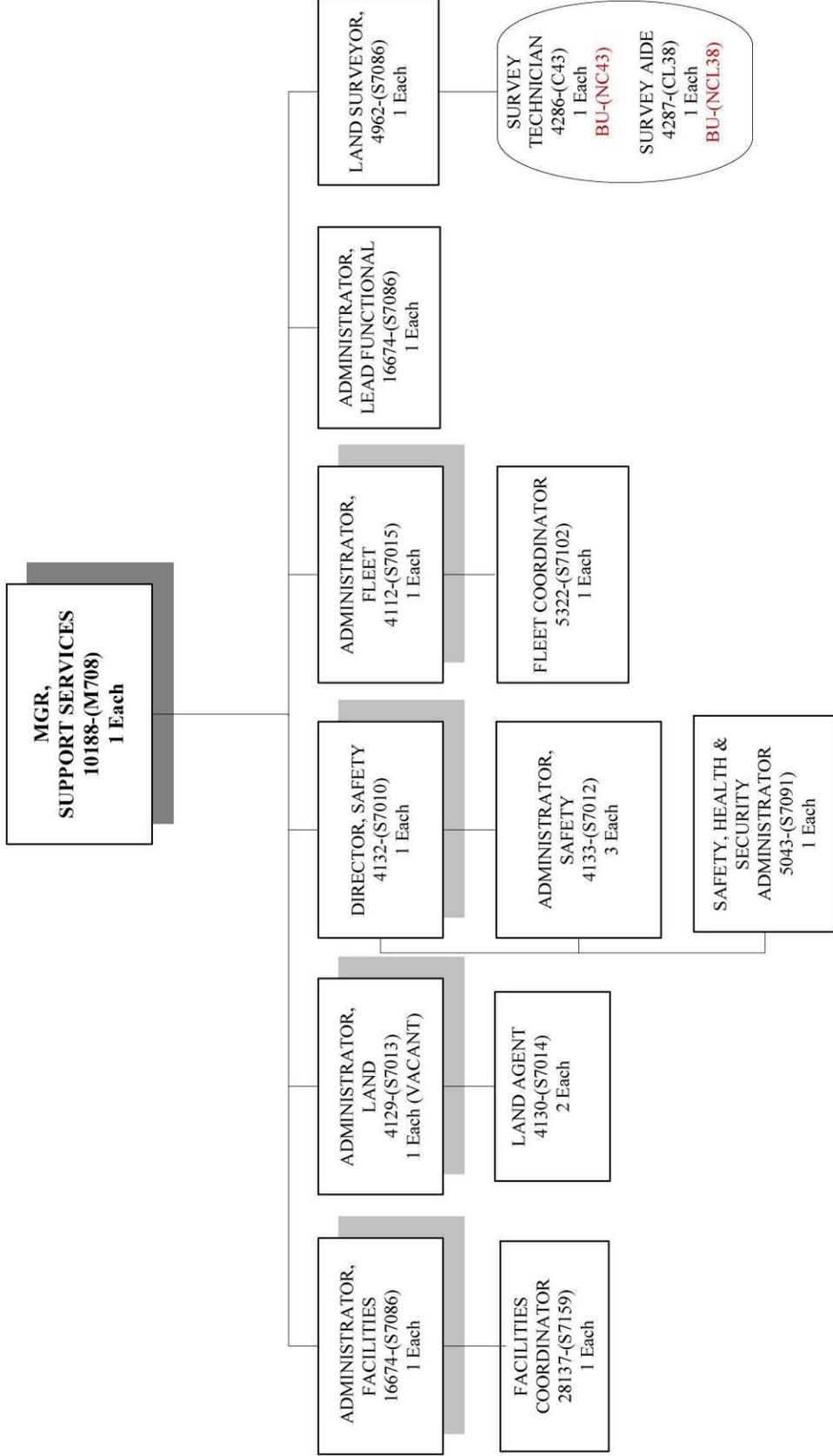
Hawai'i Electric Light Company, Inc.
 2016 Test Year Rate Case
 Support Services Department
 Staffing as of May 31, 2016

	A	B	C	D	E	F	G	H	I	J
			=B-A		=D-B		Adjustments to 12/31/16 Budgeted Headcount	=F+G	=H-B	=H-A
	12/31/15 Recorded Headcount	5/31/16 Recorded Headcount	Difference	5/31/16 Budgeted Headcount	Vacancies as of 5/31/16	12/31/16 Budgeted Headcount	12/31/16 Budgeted Headcount	12/31/16 Adjusted Headcount	Positions to be filled between 5/31/16-12/31/16	Total Positions filled in 2016
1	HSA	4	0	4	0	4	0	4	0	0
2	HSF	2	0	2	0	2	0	2	0	0
3	HSL	3	-1	3	1	3	0	3	1	0
4	HSS	3	0	3	0	3	0	3	0	0
5	HST	3	2	5	0	5	0	5	0	2
6	TOTAL	15	1	17	1	17	0	17	1	2

Notes:

- HSA - Administration Division
- HSF - Fleet Division
- HSL - Land Division
- HSS - Survey Division
- HST - Safety Division

SUPPORT SERVICES



Department Position Count = 17

COMPANY CONFIDENTIAL (for Internal Use Only)

Hawaii Electric Light Company, Inc.
2016 Test Year Rate Case
Support Services Department
Main Facilities as of May 31, 2016

<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>G</u>	<u>H</u>	<u>I</u>	<u>J</u>	<u>K</u>	<u>L</u>
FACILITY	FACILITY TYPE	LOCATION	ADDRESS	NO OF BUILDINGS	YEAR	AGE YEARS	OFFICE SIZE (SQ. FT.)	LAND AREA (ACRES)	PAVEMENT (SQ. FT.)	ROOF (SQ. FT.)	FENCING (LINEAL FT.)
Main Office	Office	Hilo	1200 Kilanea Ave	1	1954	62	7,237 Sq. Ft.	1.120	9,000	7,000	660
Kanoiehna Baseyard	Baseyard/Office	Hilo	54 Halekaniia St.	14	1960	56	7,344 Sq. Ft.	14.524	348,000	77,000	5,078
Waimea Baseyard	Baseyard/Office	Waimea		7	1954	62	2,920 Sq. Ft.	3.000	35,000	9,120	2,176
Kona Baseyard	Baseyard/Office	Kona		5	1969	47	5,944 Sq. Ft.	6.086	125,000	35,000	2,405
Shipman plant	Power Plant	Hilo	20 Banyan Dr.	1	1943	73	N/A	1.200			1,495
Pu'ueo Plant	Hydro Plant	Hilo		3	1918	98	N/A	1.450			1,120
Waiau Plant	Hydro Plant	Hilo		1	1921	95	N/A	9.520	0		811
Puna Plant	Power Plant	Keau		11	1988*	28*	N/A	10.500	20,000	47,000	3,310
Keahole Plant	Power Plant	Keahole		5	1974	42	N/A	15.000	100,000	35,000	3,685
Totals				48				62.400	637,000	210,120	20,740

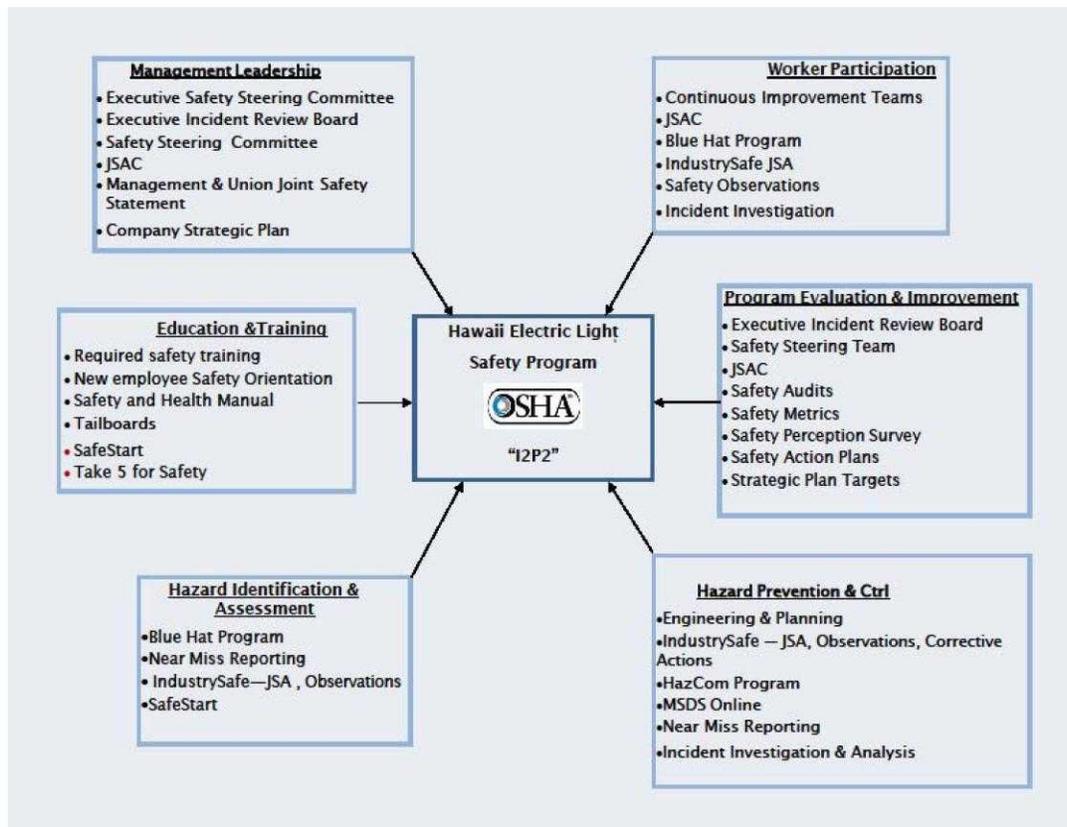
Notes: * Hawaii Electric Light took over the Power Plant

Company Safety Program

Elements of the Company's Safety Program

Hawai'i Electric's safety program complies with the Hawai'i Occupational Safety and Health Administration (OSHA) safety program requirements and the recommended Federal OSHA Injury and Illness Prevention Program ("I2P2") design. HELCO's safety program includes these six elements in its comprehensive and forward-thinking safety program.

The six elements of an effective I2P2 are: 1) management leadership; 2) worker participation; 3) hazard identification and assessment; 4) hazard prevention and control; 5) education and training; and 6) program evaluation and improvement.



Benefits of a Robust Safety Program

In addition to the legal requirements for maintaining a comprehensive safety program, it is prudent for the well-being and protection of employees and the public. Benefits of a comprehensive safety program include:

1. Reduced frequency of injury and illness among employees;
2. Reduced workers' compensation costs;
3. Improved productivity and reduction of rework and work stoppage due to accidents and hazards;
4. Elimination of fines and citations from regulating agencies due to unsafe work conditions;
5. Reduced potential for litigation-related expenses due to accidents and other hazards in public areas and visitors to Hawai'i Electric Light HELCO facilities; and
6. Increased worker participation and morale.

Potential Fines and Citations due to Unsafe Work Conditions

The Hawaii OSHA Division has the responsibility to enforce work safety rules on the Company. Violations of these safety rules can result in single fines of up to \$12,471 for each violation and can be multiplied up to 10 times for willful violations. Additional penalties may be imposed if a willful violation results in the death of an employee and includes both monetary fines up to \$500,000 and/or imprisonment if there is a criminal conviction related to the death. The detailed information may be found at the OSHA website, and it is anticipated that effective August 1st, 2016 OSHA will adjust penalty fines up to an increase of 78%.¹

In the last five years, HELCO has not had a single citation or fine for a safety violation. This record is attributed to its robust safety program.

¹ See OSHA Website for citations <https://www.osha.gov/Publications/osha2098.html>

Safety training included in the 2016 Test Year estimate

Safety is the number one priority at Hawai'i Electric Light. The Company's safety training includes a diverse program focused on:

1. Reducing the potential for injury through the use of body mechanics such as back care, ergonomics, and avoiding slips, trips, and falls;
2. Compliance with regulations dealing with commercial driver training, forklift operation, hazardous waste operations and emergency response (HAZWOPER), cardiopulmonary resuscitation ("CPR")/automated external defibrillators (AED)/first aid, blood borne pathogens, confined and enclosed spaces, asbestos and lead poisoning awareness;
3. Safety issues in a utility environment including electrical safety, hot work, bucket rescue, lock out/tag out, pole top rescue, safety issue communication (Take 5 for Safety), contractor orientation; and
4. Preventing accidents through the use of personal protective equipment and other measures including preventing dog bites, office safety, work zone safety, hearing conservation, safety observation, zero-incident performance safety culture, hazard identification and documentation, and driving skills.

Safety programs implemented include:

- 2010: Safety Alert Program- a procedure to alert all employees of recordable and near miss accidents. This procedure was adopted by Hawai'i Electric Light, Maui Electric, and Hawaiian Electric. Notices are sent out via e-mail and then also posted on bulletin boards in the work place. These notices provide a description of the incident and injuries, if any. They also provide recommendations and precautions to avoid similar incidents from happening as well as contact information.
- 2011: SafeStart a program that teaches situational awareness and how employees can recognize unsafe situations.

- 2012: IndustrySafe a software program that stores, tracks and sends notifications on safety/security incidents, observations, corrective actions and their status. It records employee observations and safety/security incidents/concerns as well as tracking status updates. E-mails are automatically sent to the responsible parties to perform corrective actions. Safe/Secure observations are also recorded to provide a record of positive feedback as well.
- 2012: Based on the Kaizen principles of a Caterpillar Company program, the Safety Observation program pilot was implemented at the Keahole Power Plant. In 2013, the program was implemented Company-wide. The program allows all employees to record observations of safe or unsafe, and secure or unsecure events that happen in the workplace, home, or elsewhere. These observations are placed in IndustrySafe and can be reviewed by supervisors, managers, and others. This program teaches employees that safety and security are everyone's responsibility -- as individuals, co-workers, family and the public. If the situation does not look right, an employee can stop the unsafe act, or acknowledge someone for being safe, and using the proper methods and safety gear.
- 2012: Job Safety Analysis (JSA) was implemented to document how to perform tasks safely.
- 2013: The online Material Safety Data Sheet (MSDS) program was implemented, which also updates MSDS sheets automatically. As required by OSHA, the MSDS provides information to users on the hazards of materials. Information includes the properties of each chemical; the physical, health, and environmental health hazards; protective measures; and safety precautions for handling, storing, and transporting the chemical.
- 2015: Mission Possible program was developed in-house and implemented. The program sends monthly e-mails on a safety topic with a link to a safety video. Scratch cards are sent to employees with questions about the video, and correctly answered scratch cards are entered into a drawing for prizes.
- 2015: In conjunction with Hawaiian Electric and Maui Electric, the Incident Investigation (Root Cause Analysis) program was developed and implemented by the managers and supervisors at Hawai'i Electric Light. The department in which an incident occurs leads

a team to discuss all contributing factors and develop a report describing their findings, which will be reviewed by the Safety Division, Managers and President.

Measuring success of its safety program

In 2010, the Company recognized that its safety metrics were not improving. During this same year, the Company changed its safety metric from Lost Time Severity Rate, (LTSR) to Total Case Incident Rate (TCIR), which is described below. LTSR is a measurement of how many work hours were lost to work related injuries and illnesses per 100 employees. The Company determined TCIR to be a better measure of safety performance since a company could have a low LTSR but still record many injuries and illnesses. Hawai'i Electric Light's safety metrics, since 2010, are shown in the chart below:

Year	TCIR
2010	3.04
2011	1.91
2012	2.82
2013	1.51
2014	0.77
2015	4.18
YTD May 31, 2016	0.00

The Company tracks TCIR to benchmark safety performance with other utility companies in the nation. TCIR is calculated by multiplying the number of recordable work-related injuries and illnesses, as defined by OSHA, by 200,000 and then dividing this product by the Company's productive hours. The TCIR is a measurement of how many recordable injuries and illnesses there are per 100 employees. For instance, in a company of 300 employees with a TCIR of 5.0, and where each employee worked 2,000 hours during the year, there would have been about 15

recordable injuries and illnesses. As productive hours increase beyond the standard assumption of 2,000 hours per employee per year, the TCIR is reduced.

OSHA defines a recordable injury or illness if the work related incident results in death, days away from work, restricted work or transfer to another job, medical treatment beyond first aid, or loss of consciousness.

Annually, the Company establishes a TCIR target that is based on the first quartile of similarly sized electric utility companies in the nation. In 2014, the Company's TCIR target was 1.44 and in 2015, the Company's TCIR target was 1.16. The Company recorded a TCIR of 0.77 in 2014 and 3.08 in 2015. In 2015, the increase in the TCIR was due to employees' complacency with the work. Injuries, for the most part, occurred as part of normal everyday job duties. Injured employees themselves identified the main causes of the incidents, as inattention to the work (mind and eyes not on task), rushing to complete tasks, and other lack of situational awareness items. The Safety Team, in their incident investigations, thought that the prior year's highly success level of safety performance made employees less vigilant about safety. Another contributing factor may have been that the Safety Team was short-handed in the last quarter of the year due to retirements and unable to complete all the safety training planned.

In 2010, feedback from employees indicated multiple concerns including recognition for performance, supervisor training, inspections, safety climate, and involvement of employees as drivers impacting the safety culture in the workplace. Beginning in July 2010, and continuing on into 2012, the Company began reshaping its safety program to focus on changing the safety culture to one that embraces and strives toward zero-incident performance safety.

New programs and training were introduced in 2010, but did not have an immediate impact. In 2011, additional training and new safety programs were added, and the focus from lagging safety indicators, such as measuring how many accidents occurred was switched to a focus on leading safety indicators, such as how many safety inspections were performed and how many employees attended required safety training. About 2/3 of the Company's employees attended a safety excellence workshop in the fourth quarter of 2011. The Company also sponsored an

employee-led action team to redesign its safety inspection process. These changes resulted in improved safety awareness and a noticeable reduction in employee accidents.

Continuous safety improvement needs a robust Company safety program. TCIR and Preventable Vehicle Accidents (PVA) statistics are tracked by the company as shown in WP HELCO-1016.

Centralized IT Services provided by Hawaiian Electric, Cost Allocation, Clearing Costs

Centralized IT Services

IT services that are provisioned centrally from Hawaiian Electric include:

- Online communications support: All internet and intranet development and support
- Support and maintenance of information security and privacy policies and managing vulnerability and information security risks
- Support and maintenance of the Infrastructure – LAN services: Represents all centralized datacenter labor and non-labor needed to support the Companies datacenters that are used to house our Enterprise Information Systems, Peripheral Enterprise Information Systems, and Workgroup applications, as well as core DC-based IT services and infrastructure (Active Directory, Internet and email connectivity and security measures)
- Desktop administration, configuration, and management: Centralized design of workstation configurations, application installations, application delivery, patch management, etc.
- IT Project Management: Centralized project management for IT projects that benefit all areas and customers
- IT Budgeting: Administrative services for planning, financial management, contract management, etc.
- IT architecture: Overall maintenance of the IT technical standards for the IT ecosystems and the ongoing design and review work of new IT systems that need to be incorporated into our environment
- Training: Training for IT personnel needed to ensure effective and efficient IT operations

Cost Allocation - Distribution of Costs

Information Technologies and Services (“ITS”) and Information Assurance (“IA”) department¹ expenses are subdivided between core functions and non-core functions. Core functional labor and non-labor costs from the ITS and IA departments are charged into an ITS clearing account (intermediate NARUC account 184120) and allocated to various functional areas of Hawaiian Electric, Maui Electric, and Hawai‘i Electric Light, that benefit from these services.

The ITS costing system and charges distributed through the clearing account to various functional areas within the Companies is described below. As described in HECO T-13, page 38, Docket No. 2010-0080 (Hawaiian Electric’s 2011 test year rate case), the ITS costing system has been in use since 2001.

ITS and IA costs incurred on behalf of the internal customers are allocated to the various areas of benefit through two methods:

A. Direct intercompany billable charges

Charges are directly billed to Hawai‘i Electric Light and Maui Electric via the Intercompany Service Form and charged to work orders provided by each company. These are costs incurred at Hawaiian Electric to take advantage of items such as, but not limited to, price and/or volume discounts. Hawai‘i Electric Light’s share is calculated and charged back.

B. Clearing account charges

Charges that are tagged with the indicator “NC” are allocated via the IT costing system. Based on the type of expense and the allocation assigned to it, costs are allocated to the areas of benefit. For Hawai‘i Electric Light, these charges are either posted directly to

¹ The Information Assurance (“IA”) Department implements a risk management approach to information security by identifying, analyzing, evaluating, and mitigating security risks to information and systems. This approach allows various entities within the company to balance the operational and economic costs of information security measures with the need to protect the information and systems that support their operational functions.

their codeblocks or tagged with the RA “PEZ” and indicator code “BE” to be charged back to Hawai‘i Electric Light.

Clearing Account Calculation Methodology

Hawaiian Electric’s core ITS and IA department costs are allocated to functional areas through the IT costing system. Billable charges out of the ITS clearing account are coded to indicator “BE” and expense element “451”. Intercompany charges received on Hawai‘i Electric Light’s records are reflected as expense element “550”. Different allocation methodologies are applied to distribute expenses to each company based on the type of expense and may be based on PC counts, system user counts, application user counts, and/or headcount.

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Support Services Department
Facilities Costs by Department, Year

	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>G</u>	<u>H</u>	<u>I</u>	<u>L</u>
	2008	2009	2010	2011	2012	2013	2014	2015	Totals	
Accounting	22,129	20,639	27,861	22,044	8,608	7,615	6,501	5,940	121,336	
Administration	129,836	119,910	141,538	139,421	135,874	109,867	515	155	777,115	
Customer Service	2,510	9,181	8,163	7,069	21,049	13,320	3,494	3,535	68,321	
Distribution	215,504	211,227	300,058	183,055	175,537	255,526	202,327	221,928	1,745,163	
Engineering	48,756	47,531	42,166	29,595	809	0	7,476	0	176,111	
President's Office	0	0	0	1,562	385	0	0	897	2,644	
Production	328,323	381,700	389,650	439,541	433,462	253,033	195,433	119,856	2,540,998	
Support Services	0	0	4,626	220,727	627,500	620,215	675,216	721,915	2,870,199	
Totals	747,038	789,987	914,061	1,042,814	1,403,224	1,239,575	1,090,962	1,074,226	8,301,886	

Notes: Support Services Department created in 2010

Safety Division moved from Administration Department to Support Services Department in 2013

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Support Services Department
Fleet Division Statistics

	A	B	C	D	E	F	G
	2010	2011	2012	2013	2014	2015	A+B+C+D+E+F
Total Gas in Gal.	72,330	74,935	67,446	64,749	70,899	66,554	416,913
Avg. Gas \$/Gal. Excl. Taxes	\$2.54	\$3.18	\$3.19	\$3.08	\$2.96	\$2.16	
Gas Total Excl. Taxes	\$181,676.00	\$237,242.23	\$215,518.02	\$199,017.78	\$211,980.46	\$131,267.35	\$1,176,701.84
Avg. Gas \$/Gal. Incl. Taxes	\$3.09	\$3.81	\$3.79	\$3.68	\$3.55	\$2.72	
Gas Total Incl. Taxes	\$222,418.17	\$282,237.83	\$255,939.81	\$236,859.77	\$258,694.88	\$167,761.90	\$1,423,912.36

	A+B+C+D+E+F						
Total Biodiesel in Gal.	90,924	102,807	100,254	108,999	109,787	112,925	625,696
Avg. \$/Gal. Excl. Taxes	\$ 3.19	\$ 3.82	\$ 3.57	\$ 3.41	\$ 3.37	\$ 2.53	
Biodiesel Total Excl. Taxes	\$ 286,794.17	\$ 389,370.58	\$ 357,851.34	\$ 374,005.14	\$ 371,334.16	\$ 273,445.89	\$ 2,052,801.28
Avg. \$/Gal. Incl. Taxes	\$ 3.63	\$ 4.32	\$ 4.03	\$ 3.97	\$ 3.93	\$ 2.99	
Biodiesel Total Incl. Taxes	\$ 325,923.63	\$ 437,815.99	\$ 403,914.49	\$ 420,585.33	\$ 425,976.68	\$ 324,192.76	\$ 2,338,408.88

	A+B+C+D+E+F						
Total Fuel Purchase (gas & diesel) Gal.	90,927	102,810	100,257	109,002	109,790	112,927	625,713
Oil	\$ 943.79	\$ 961.23	\$ 1,092.13	\$ 634.62	\$ 837.22	\$ 1,182.20	\$ 5,651.19
Automatic Transmission Fluid*	\$ -	\$ -	\$ -	\$ 282.24	\$ -	\$ -	\$ 282.24
Miles Driven	1,654,472	1,756,787	1,810,401	1,799,102	1,893,552	1,826,678	10,740,992
Miles per Gal. of Fuel	18.2	17.1	18.1	16.5	17.2	16.2	17.2
Improvement from 2014 to 2015 Miles per Gal. of Fuel						6%	

Number of Vehicles only	221	217	212	206	207	207	
Number of Equipment (vehicles included)	292	282	277	273	280	282	
Vehicle Availability Rate (Up-Time)	96%	96%	96%	97%	97%	96%	

Notes: Fleet Division became part of the Support Services Department in 2010

* Purchased by the case when inventory depleted

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Support Services Department
Company Safety Statistics

	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>G</u>
	2010	2011	2012	2013	2014	2015	2016
TCIR	3.04	1.91	2.82	1.51	0.77	4.18	0.00
Recordable Incidents	9	7	10	6	3	12	0
Prevntable Vehicle Accidents	45	24	14	11	11	17	5

Notes: Statistics as of May 31, 2016

TESTIMONY OF
PAUL C. FRANKLIN

FINANCIAL GENERAL MANAGER
HAWAI'I ELECTRIC LIGHT COMPANY, INC.

Subject: Aggregation of O&M and Budget Process,
Non-Operating Departments,
A&G Operations & Maintenance,
Proposed Accounting Policy Changes
Other Accounting Matters,
Compliance Matters

EXECUTIVE SUMMARY

- Hawai'i Electric Light Company, Inc. ("Hawai'i Electric Light" or "Company") presents its test year estimates for operation and maintenance ("O&M") expense by department to better align with its current organizational structure. HELCO T-11 provides a cross-reference between test year estimates for department O&M expenses and test year O&M expenses by NARUC block of accounts.
- The President's Office and the Accounting Department of Hawai'i Electric Light play an integral role in delivering leadership and support to the Company's efforts to provide safe, reliable, and affordable service to customers. The President's Office's and the Accounting Department's O&M expense primarily represent costs to provide such leadership, general management and accounting / financial support.
- Hawai'i Electric Light proposes changes in accounting policy and the methods of calculation in three areas: Administrative expense transfers to construction; implementation of a Power Supply Clearing; and O&M expenses associated with capital projects ("OMAC"). These changes will: (1) reduce the 2016 test year revenue requirement for O&M expense by extending the recovery period for these cost; (2) promote inter-generational equity by capitalizing appropriate costs; and (3) improve efficiency by standardizing the practices for accounting for clearing accounts amongst Hawaiian Electric Company Inc. and its subsidiaries.
- Hawai'i Electric Light also supports the continued use of the pension and post-employment benefits other than pensions ("OPEB") tracking mechanisms, which reduce the volatility of test year revenue requirements caused by year-to-year changes in actuarial net periodic pension and benefit costs, ensures the utility's recovery of the actual pension and OPEB costs

incurred, and prevents customer over-payment.

- In this test year rate case, the Company includes in rate base, not only the deferred software development costs but also other deferred costs associated with the Geothermal request for proposals and Power Supply Improvement Plan.

TABLE OF CONTENTS

INTRODUCTION	1
AGGREGATION OF O&M EXPENSES AND BUDGET PROCESS	3
Presentation of 2016 Test Year O&M Expenses and Plant Additions	3
Aggregation of O&M Expenses	4
2016 O&M Budget Process	5
Derivation of 2016 O&M Test Year Estimates	8
O&M Expense Variance Explanations	10
Capital Expenditure Budget Process	11
NON-OPERATING DEPARTMENTS	14
Cost Reduction	14
Accounting Department O&M Expenses and Staffing	14
President’s Office O&M Expense	18
General Ledger Code Entries and Miscellaneous O&M Expense	19
ADMINISTRATIVE AND GENERAL EXPENSE	19
Account No. 922 – Administrative Expenses Transferred - Credit	21
Account No. 926.020 – Employee Benefits Transferred - Credit	23
PROPOSED ACCOUNTING POLICY CHANGES	26
A&G Transfers to Construction	26
Accounting for Production Related Overhead Costs and Implementation of a Power Supply Clearing Account	31
Energy Delivery and Power Supply Clearing Account Allocation	34
Accounting For Costs For O&M Expenses Associated With Capital Projects	38
OTHER ACCOUNTING MATTERS	40
Accounting For Pension and OPEB Plans	40
Contributions in Excess of NPPC	48
Continuation of Pension and OPEB Tracking Mechanisms	49
Abandoned Capital Project Costs And Preliminary Engineering Costs	51
Deferred System Development Costs and Other Costs	57
Standard Labor Rates	65
General Wage Increase	68
On-Costs	68
General Inflation Factor	70
Vacancy Rate Adjustment	72
COMPLIANCE MATTERS	74
O&M Labor Costs	74
SUMMARY	75

- 1 (c) President’s Office O&M expense
- 2 (d) General Ledger Code Entries (“GL Code Entries”) and Miscellaneous
- 3 O&M expense
- 4 (3) Administrative and General (“A&G”) Expense
- 5 (a) Account No. 922 – Administrative expenses transferred - credit
- 6 (b) Account No. 926.020 – Employee benefits transferred - credit
- 7 (4) Proposed Accounting Policy Changes
- 8 (a) A&G transfers to construction
- 9 (b) Accounting for production related overhead costs and implementation
- 10 of a power supply clearing account
- 11 (c) Energy delivery and power supply clearing account allocation
- 12 (d) Accounting for Costs for O&M Expenses Associated with Capital
- 13 Projects (“OMAC”)
- 14 (5) Other Accounting Matters
- 15 (a) Accounting for pension and post-employment benefits other than
- 16 pensions (“OPEB”) plans
- 17 (b) Contributions in excess of net periodic pension cost (“NPPC”)
- 18 (c) Continuation of pension and OPEB tracking mechanisms
- 19 (d) Abandoned capital project costs and preliminary engineering costs
- 20 (e) Computer software development costs and other costs
- 21 (f) Standard labor rates
- 22 (g) General wage increase

1 (h) On-costs

2 (i) General inflation factor

3 (j) Vacancy rate adjustment

4 (6) Compliance Matters: O&M labor costs

5 AGGREGATION OF O&M EXPENSES AND BUDGET PROCESS

6 Presentation of 2016 Test Year O&M Expenses and Plant Additions

7 Q. How are the 2016 test year O&M expense and plant addition estimates presented and
8 discussed in this rate case?

9 A. Discussions of the O&M expense and plant addition estimates in this rate case are
10 presented differently from the Company's presentation in past rate cases. The
11 witness for each Hawai'i Electric Light department presents its O&M expense
12 estimates for the 2016 test year in its exhibits summarizing the department expenses
13 categorized by National Association of Regulatory Utility Commissioners
14 ("NARUC") Uniform System of Accounts ("USOA") accounts or block of
15 accounts.¹ The witnesses also discuss the plant addition amounts associated with
16 their respective departments. Please see Mr. Dave Okamura's testimony in T-18 for
17 the references relating to the department plant addition amounts.

18 Q. Please provide references for where O&M expenses by Hawai'i Electric Light
19 department are presented in this rate case.

¹ The Commission directed the Company to follow the NARUC Uniform System of Accounts. The Company will follow the Federal Energy Regulatory Commission's ("FERC") USOA upon implementation of a new Enterprise Resource Planning system, as approved in Decision and Order No. 31757 issued December 19, 2013 in Docket No. 2013-0007.

1 A. The Hawai'i Electric Light departments, their narrative discussions on the O&M
2 expenses, and their respective exhibits containing the O&M expenses summarized
3 by NARUC block of accounts are as follows:

4 Table 1: Department O&M Expense Presentation

Department	Testimony Section	Departmental O&M Expense Presentation	
		Amounts	Narrative
Accounting	T-11	HELCO-1101A	HELCO-1106
Administration	T-15	HELCO-1501	HELCO-1506
Customer Service	T-9	HELCO-901	HELCO-906
Engineering	T-18	HELCO-1801	HELCO-1806
President's Office	T-11	HELCO-1101B	HELCO-1106
Production Department	T-7	HELCO-701	See testimony
Transmission and Distribution	T-8	HELCO-801	HELCO-806
Support Services	T-10	HELCO-1001	HELCO-1006
System Operations	T-6	HELCO-601	HELCO-606
GL Code Entries and Miscellaneous	T-11	HELCO-1101C	HELCO-1106

5 Aggregation of O&M Expenses

6 Q. Please provide references for the Company's aggregated O&M expenses.

7 A. HELCO-1101 page 1 provides the aggregated O&M expenses for Hawai'i Electric
8 Light, presented by NARUC account block with adjustments made to the 2016
9 operating budget to arrive at the 2016 test year estimate. HELCO-1101 page 2
10 provides the mapping of the 2016 test year aggregated O&M expense estimates by
11 NARUC block of accounts and the department O&M expense estimates presented in
12 the respective exhibits referenced in Table 1 above².

² The O&M expenses for each department shown in HELCO-1101, p. 2 columns A through K, include on-costs (overheads) for A&G expenses, employee benefits expense, and payroll taxes, identified as expense elements ("EE") 406, 422, and 423, respectively. These on-costs are reclassified to Administrative and

1 Q. How are department O&M expenses presented in this rate case?

2 A. Discussion of each department's O&M expenses by work activity and major cost
3 driver is provided in the respective testimony sections identified above.

4 Q. Does the Company also provide discussion of O&M expenses for each department
5 by NARUC account block?

6 A. Yes. Narrative exhibits are also provided which discuss O&M expenses for each
7 department by NARUC account block.

8 2016 O&M Budget Process

9 Q. How were the budget estimates for O&M expenses in this rate case developed?

10 A. The budget estimates for O&M expenses in this rate case were initially developed in
11 2015 as part of the Company's annual budgeting process for the 2016 budget year.

12 Q. How did the budget process begin?

13 A. The process began with responsible parties ("users" or "budget preparers")
14 throughout the Company preparing detailed estimates of O&M expenses.

15 Q. How did the Company derive the budget estimates?

16 A. Each department consists of responsibility areas ("RA") which are responsible for
17 setting up their respective budgets for the business activities and responsibilities they
18 are assigned by the Company. The RA budget administrator derives the estimates by
19 considering existing expenses, planned and scheduled work, general wage increases
20 (e.g., collectively bargained for bargaining unit employees), inflation, cost trends,

General or payroll taxes accounts with credit adjustments to general ledger code accounts ("GL codes"), which are shown in HELCO-1101, column H.

1 known and measureable changes in cost levels, including impacts from the
2 implementation of efficiency and cost saving measures, and other factors. The
3 detailed estimates were then summarized to produce the 2016 O&M expense budget.

4 Q. Please describe the review process for the Company's operating budget?

5 A. Hawai'i Electric Light departments reviewed their operating budgets with Hawai'i
6 Electric Light's President in August 2015. During these meetings, the departments
7 presented budgets focused on work activities and their alignment with the
8 Company's strategic plan and strategic objectives. In September 2015, Hawai'i
9 Electric Light presented its 2016 O&M expense budget to the Hawaiian Electric
10 Chief Executive Officer, Senior Vice President of Finance, and other Hawaiian
11 Electric and Maui Electric executives. Ultimately, the consolidated Hawaiian
12 Electric Companies³ calculated 2016 earnings estimates, which incorporated the
13 O&M expense budget, and then presented to the Companies' officers, Hawaiian
14 Electric Industries, Inc. ("HEI"), and the Boards of Directors of the Company and
15 HEI.

16 Q. Did the Company update its 2016 O&M expense budget?

17 A. Yes. From March through April 2016, the Company updated its 2016 O&M
18 expense budget to incorporate new information or changes since the time it prepared
19 its 2016 budget in the fall of 2015.

³ The "Hawaiian Electric Companies" (or "Companies") are Hawaiian Electric Company, Inc. ("Hawaiian Electric"), Hawai'i Electric Light and Maui Electric Company, Limited ("Maui Electric").

1 Q. Does the updated 2016 O&M expense budget fully reflect the costs needed to
2 execute the Company's Power Supply Improve Plan ("PSIP") Update?

3 A. The updated financial projections and proposed budget for 2016 incorporates costs
4 for new or expanded work to transform the electric systems to meet customer needs,
5 implement the State of Hawai'i's policy goals, and secure a clean and affordable
6 energy future, as identified in or resulting from the updated PSIP filed April 1, 2016
7 in Docket No. 2014-0183 to the extent that the costs could be estimated at the time
8 the budget was prepared. Because the Company updated its 2016 budget while the
9 PSIP update was being prepared for filing with the Commission, the updated rate
10 case 2016 budget may not yet fully reflect all of the transformational costs needed to
11 execute the plan.

12 Q. Was the Company's budget prepared in a manner consistent with previous rate
13 cases?

14 A. Yes. The Company's budget was prepared in a manner consistent with previous rate
15 cases with respect to how it records costs and the use of standard labor costing, on-
16 costs and a general inflation factor.⁴

17 Q. Please provide examples of how the budget preparation was consistent with previous
18 rate cases.

19 A. Examples include: in developing the non-labor O&M expense estimates for the 2016
20 budget, Hawai'i Electric Light used a general inflation factor of 1.8%, when specific

⁴ In Hawai'i Electric Light's 2010 rate case (Docket No. 2009-0164), the Company described in HELCO T-10, pages 82 to 87, its use of standard labor rates, on-costs, and a general inflation factor in developing the 2010 Operating Budget.

1 known cost indices for non-labor costs were not available. The 2016 rate case
2 budget included a general wage increase for bargaining unit and management
3 employees of 3.25%. A budget adjustment was made to include a -\$1,952,000
4 employee vacancy rate adjustment as an overall proxy for positions that are not filled
5 for a given time, due to the lag in hiring.⁵

6 Derivation of 2016 O&M Test Year Estimates

7 Q. Did the Company make adjustments to its 2016 O&M expense budget in arriving at
8 2016 test year estimates?

9 A. Yes. As in the previous rate cases filed by the Hawaiian Electric Companies,
10 Hawai'i Electric Light made three types of adjustments to the 2016 O&M expense
11 budget amounts to determine the test year estimates: (1) budget adjustments, (2)
12 normalization adjustments, and (3) ratemaking adjustments. HELCO-WP-1103
13 presents the nature of these three types of adjustments, as well as the summary
14 adjustment amounts from the respective departments.

15 Q. What are some examples of ratemaking adjustments incorporated in the 2016 O&M
16 expense test year estimates?

17 A. The ratemaking adjustments which remove certain expenses from the 2016 test year
18 estimates (i.e., items for which Hawai'i Electric Light is not seeking cost recovery in
19 this proceeding) are listed in the table below. Hawai'i Electric Light excluded these
20 items from the test year estimates for issue simplification purposes. However, the

⁵ A vacancy rate adjustment was introduced in the 2010 rate case at HELCO T-12, Att.1, Final Settlement, Docket No. 2009-0164.

1 Company continues to hold the position that these expenses are appropriate costs of
2 doing business as a regulated utility, and must be recovered through rates if Hawai‘i
3 Electric Light is to be afforded the full opportunity to earn a fair return. Therefore,
4 Hawai‘i Electric Light does not waive its right to seek recovery of these costs in
5 future rate cases.

6 Table 2: List of Ratemaking Adjustments

<u>Description</u>	<u>Reference</u>	<u>Adjustment Amounts</u>
Certain executive benefit costs ⁶	HELCO-WP-1503	(\$ 45,000)
HEI executive compensation ⁷	HELCO-WP-1503	(120,000)
Non-research portion of EEI dues	HELCO-WP-1103A	(14,000)
Incentive compensation programs	HELCO-WP-1103B	(478,000)
Adjustment to CIS amortization	HELCO-WP-903	<u>2,000</u>
		<u>(\$654,000)</u>

7 Q. Has the Company provided detailed workpapers in support of the 2016 Operating
8 Budget (Revised April 2016) provided in HELCO-WP-101?

9 A. Yes. Each O&M expense witness provides detailed budget workpapers for labor and
10 non-labor line items in support of the 2016 Operating Budget (Revised April 2016)
11 provided in HELCO-WP-101. The detailed direct labor input sheets for the
12 Accounting Department and President’s Office are shown on HELCO-WP-1101A
13 and HELCO-WP-1101B, respectively. The detailed direct non-labor listings for the
14 Accounting Department and President’s Office are shown in HELCO-WP-1102A

⁶ Proposed adjustment is being made in accordance with Order No. 33342, *Granting Hawaii Electric Light Company, Inc.’s Motion to Extend Date to File Rate Case and For Approval of Test Period Waive and Dissent of Randall Y. Iwase, Commission Chair*, issued on November 19, 2015, in Docket No. 2015-0170, which imposed among other conditions “HELCO shall remove all HEI non-incentive executive compensation that is currently included in HELCO’s base rates, consistent with the regulatory treatment in HECO’s and MECO’s last rate cases”.

⁷ Ibid.

1 and HELCO-WP-1102B, respectively. The listings include workpapers and/or
2 references to all of the non-labor workpapers for these departments.

3 Q. Why is the 2016 Operating Budget (Revised April 2016) reasonable to use as the
4 basis for Hawai'i Electric Light's test year rate 2016 rate case application?

5 A. The 2016 Operating Budget (Revised April 2016) is reasonable to use as the basis
6 for Hawai'i Electric Light's test year 2016 rate case application because it is based
7 on the same budget approved by the Hawaiian Electric Company Board of Directors
8 in December 2015, as updated with the most current information available at the
9 time that the budget was revised in April 2016.

10 O&M Expense Variance Explanations

11 Q. What information is provided to explain the differences between the 2016 Operating
12 Budget amounts and the 2015 recorded amounts?

13 A. For their respective departments, the various witnesses provide detailed explanations
14 of the code block variances between 2015 recorded and 2016 budget (before
15 adjustment) amounts greater than or equal to plus or minus 10% and \$75,000. The
16 identification of code block items meeting this threshold and the explanations are
17 presented in the locations shown in Table 3 below.

18 Table 3: Variance Analysis

Department	Testimony	Analysis
Accounting	T-11 Mr. Paul Franklin	HELCO-WP-1106
Administration	T-15 Ms. Rhea Lee-Moku	HELCO-WP-1506
Customer Service	T-9 Ms. Natalie Epenesa	HELCO-WP-906
Engineering	T-18 Mr. Dave Okamura	HELCO-WP-1806
President's Office	T-11 Mr. Paul Franklin	HELCO-WP-1106
Production Department	T-7 Mr. Norman Uchida	HELCO-WP-706
Transmission and Distribution	T-8 Mr. Miles Nagato	HELCO-WP-806
Support Services	T-10 Mr. Thomas Cummins	HELCO-WP-1006

Department	Testimony	Analysis
System Operations	T-6 Ms. Lisa Dangelmaier	HELCO-WP-806
General Ledger Code Entries and Miscellaneous	T-11 Mr. Paul Franklin	HELCO-WP-1106

1
2 Q. Why are the variance explanations provided by the respective witnesses in Table 3
3 above?

4 A. The variance explanations are provided because, as in past rate case proceedings,
5 including for Hawaiian Electric and Maui Electric, Hawai'i Electric Light has made
6 a commitment to the Division of Consumer Advocacy of the Department of
7 Commerce and Consumer Affairs ("Consumer Advocate") to provide such variance
8 explanations in order to facilitate this proceeding.

9 Capital Expenditure Budget Process

10 Q. Please describe the Company's process for development of its capital expenditure
11 budget.

12 A. Development of the Company's capital expenditures estimate generally involves the
13 following process:

- 14 1. All areas of the Company assess their respective strategic and operating
15 priorities. Individual projects are identified and their scope, schedules, and cost
16 estimates are developed.
- 17 2. Managers and staff from each department meet to review and prioritize, to the
18 extent possible, their proposed projects to determine which projects should move
19 forward in the budget process.
- 20 3. Certain large projects are presented to the Project Review Committee ("PRC"),
21 which consists of Hawaiian Electric executives (i.e., Senior Vice Presidents of

1 Finance, Customer Service, General Counsel, Information Technology and Vice
2 Presidents from the operating process areas), the President of Maui Electric, and
3 the President of Hawai'i Electric Light. Specifically, new projects greater than
4 \$2 million (proposed for inclusion in the budget and the status for which is
5 referred to as "initialization") and projects greater than \$2 million (for which
6 approval to spend on the project is requested on a planned progressive basis and
7 the status for which is referred to as "authorization") are presented to the PRC.

8 4. During the detailed budgeting process, the Company's departments assess
9 workload demands and resource requirements. Resource leveling reports are
10 generated at several key points in the process to allow those providing resources
11 an opportunity to review the demands (i.e., labor hours) being placed on their
12 resources. If necessary, adjustments are made such that the difference between
13 supply and demand for a resource class for a responsibility area is reasonable.

14 5. For large projects presented to the PRC, the project manager or budget preparer
15 adjusts the detailed budget estimate as appropriate based on feedback from the
16 PRC.

17 6. The forecasts of proposed projects are incorporated into pro forma income,
18 balance sheet, and sources and uses of funds statements.

19 7. The Hawaiian Electric President and Senior Vice President of Finance review the
20 pro forma financial statements and proposed projects from a consolidated
21 Company-wide perspective and determine the upcoming capital budget.

22 8. To ensure the completeness of the Company's final capital budget, consideration

1 is given to adding any projects that were postponed or created between the time
2 of the review by process area and when the detailed budget is developed or
3 refined.

4 9. The proposed capital budget for the upcoming five years is reviewed by the
5 Hawaiian Electric Senior Vice President of Finance and the Chief Executive
6 Officer.

7 10. The five-year capital budget is presented to the Company's Board of Directors
8 for review and approval for the upcoming year.

9 11. Throughout the year, generally monthly, Hawai'i Electric Light's management
10 reviews total company capital expenditures and plant additions compared to
11 budget. Project managers update their respective project and program forecasts
12 throughout the year. Departments discuss capital expenditure variances from
13 budget in monthly financial meetings with Hawai'i Electric Light's President.

14 Q. Does the Company periodically review its capital expenditure requirements?

15 A. The capital expenditure budget process is an on-going cycle. The assessment of
16 capital expenditure requirements is continuous, and monthly Hawai'i Electric Light
17 financial meetings and Hawaiian Electric PRC meetings are held to review projects
18 and proposed capital expenditures.

19 Q. Does the updated 2016 capital budget fully reflect the costs needed to execute the
20 Company's PSIP Update?

21 A. Similar to the preparation of the O&M expense budget (see discussion above on
22 page 7), the capital budget for the 2016-2020 timeframe was developed in the

1 summer and fall of 2015. As the Companies' transformation efforts move forward,
2 there may be new or expanded work identified that are not yet reflected in these
3 budgets. Because the Company updated its 2016 budget while the PSIP update was
4 being prepared for filing with the Commission on April 1, 2016, the updated rate
5 case 2016 budget may not yet fully reflect all of the transformational costs needed to
6 execute the plan.

7 Q. Were the operating and capital expenditure budgets for 2016 reviewed by the
8 Hawaiian Electric Board of Directors?

9 A. Yes. The operating and capital expenditure budgets for 2016 were reviewed with
10 Hawaiian Electric's Board of Directors in November and December 2015.

11 NON-OPERATING DEPARTMENTS

12 Cost Reduction

13 Q. Please describe the efforts of the Accounting Department and the President's Office
14 to manage the rising cost of business and achieve operating efficiencies?

15 A. The Accounting Department and President's Office continuously strive to identify
16 measures to manage costs, increase efficiency, and productivity for the benefit of
17 Hawai'i Electric Light customers. HELCO-1104 provides a summary of the
18 measures implemented by these departments.

19 Accounting Department O&M Expenses and Staffing

20 Q. Please summarize the Accounting Department's 2016 test year estimate for O&M
21 expense.

1 A. The Accounting Department's test year O&M expense estimate is \$9,007,000 as
2 presented in HELCO-1102A. The estimate is based on the 2016 O&M expense
3 budget of \$8,198,000, then adjusted for budget, ratemaking, and normalization
4 adjustments totaling \$809,000 as shown in HELCO-1102A and further detailed in
5 HELCO-WP-1103A.

6 Q. What types of expenses are included in the Accounting Department's 2016 test year
7 estimates?

8 A. The Accounting Department is a supporting function and plays a key role in the
9 Company's efforts to provide safe, reliable, and affordable service to customers.
10 The 2016 test year estimate includes labor and non-labor costs for accounting and
11 financial activities as well as certain Company costs. These costs are presented at
12 HELCO-1102A, page 3 and summarized as follows:

13 Table 4: Summary of Accounting Department O&M Test Year Estimate

Major Cost or Activity	2016 Test Year Estimate
Labor	\$ 983,000
Non-Labor On-Cost	591,000
Non-Labor by Category:	
Manage accounting and finance	2,561,000
Manage and control risk (insurance)	1,561,000
Regulatory commission expense	1,104,000
Hawaiian Electric Industries charges	655,000
Manage IT	611,000
Compliance	388,000
Company general and administrative	226,000
EPRI dues	219,000
EEI dues	71,000
Budgeting and forecasting	37,000
Total	\$9,007,000

1 Q. How does the 2016 test year Accounting Department O&M expense compare to
2 actual 2015 recorded O&M expense?

3 A. The 2016 test year estimate is \$1,889,000 higher than the 2015 recorded O&M
4 expense of \$7,118,000. Detailed variance explanations are provided in
5 HELCO-WP-1106 for the Accounting Department with differences between the
6 2015 recorded and 2016 Operating Budget (before adjustments) amounts greater
7 than or equal to 10% and \$75,000 identified. In addition, HELCO-1106 provides a
8 discussion on the 2016 test year Accounting Department O&M expense, including
9 cost drivers and related variances from 2015 recorded results.

10 Q. Please summarize the Accounting Department's 2016 test year estimate for capital
11 plant additions.

12 A. The Accounting Department's estimate for plant additions for the 2016 test year is
13 \$8,000 and is related to office furniture and equipment. Please see
14 HELCO-WP-1808 for details on plant additions.

15 Q. What is the Accounting Department total employee count for the 2016 test year?

16 A. The Accounting Department employee count for the 2016 test year is based on nine
17 full time positions situated in two divisions or RAs: HAA - Administration and
18 HAM - Management Accounting

19 Q. How does the Accounting Department 2016 test year employee count compare to the
20 actual employee count as of December 31, 2015?

21 A. The 2016 test year employee count of nine for the Accounting Department is two
22 positions higher than the December 31, 2015 employee count of 7 positions. The

1 difference is due to the addition of the General Manager, Finance position which
2 previously resided on Maui with Maui Electric and a vacancy at December 31, 2015
3 for a Fiscal Administrator position. The Fiscal Administrator position plays a vital
4 role in facilitating the development of operating and capital budgets for business
5 units and has since been filled. HELCO-1105 and HELO-1105A provides more
6 details on the Accounting Department employee count.

7 Q. Have there been changes to the Accounting Department since the 2010 test year rate
8 case?

9 A. Yes, one of the major drivers for the change in the Accounting Department
10 employee count includes the Finance Reorganization. In 2013, the Hawaiian
11 Electric Companies began a process to re-align the Finance organization by function
12 versus geographic location. The purpose of the re-alignment was to standardize
13 processes among similar functions across the three utilities, reducing redundancies
14 and providing specialized support resulting in increased service quality. As a result
15 of the Finance Reorganization, several functions/positions were transferred from
16 Hawai'i Electric Light to become Hawaiian Electric employees. The outcome was
17 that the Accounting Department decreased from five divisions in the 2010 test year
18 to two divisions in the 2016 test year with a corresponding decrease in employee
19 count from 18 full time positions in the 2010 test year to nine full time positions in
20 the 2016 test year. Please refer to HELCO-1105A and HELCO-1105B for further
21 discussion and details.

1 President's Office O&M Expense

2 Q. Please summarize the President's Office 2016 test year estimate for O&M expense.

3 A. The President's Office test year O&M expense is \$1,234,000 as presented in
4 HELCO-1101B. The estimate is based on the 2016 O&M expense budget of
5 \$1,711,000, then adjusted for budget, ratemaking, and normalization adjustments
6 totaling (\$478,000) as shown in HELCO-1101B and further detailed in
7 HELCO-WP-1103B.

8 Q. What items are included in President's Office O&M expense?

9 A. The President's Office test year estimate includes O&M labor and non-labor
10 expenses associated with the general management, administration and executive
11 leadership of the Company power production expense (B30-B31) and A&G expense
12 (B38-B39) NARUC account blocks. A detailed description of the expenses included
13 in these NARUC accounts is provided in HELCO-1106.

14 Q. How does the 2016 test year estimate compare to recorded 2015 O&M expense?

15 A. The 2016 test year estimate is \$678,000 lower than the 2015 recorded O&M expense
16 of \$1,912,000. Detailed variance explanations are provided in HELCO-WP-1106
17 for the President's Office with differences between the 2015 recorded and 2016
18 Operating Budget (before adjustments) amounts greater than or equal to plus or
19 minus 10% and \$75,000. In addition, HELCO-1106 provides a discussion on the
20 2016 test year President's Office O&M expense, including cost drivers and related
21 variances from 2015 recorded results.

1 General Ledger Code Entries and Miscellaneous O&M Expense

2 Q. What is the total 2016 test year O&M expense estimate for GL Code Entries?

3 A. The GL Code Entries for the 2016 test year O&M expense is (\$22,651,000) and is
4 presented in HELCO-1101C. The estimate is based on the 2016 O&M expense
5 budget of (\$19,217,000), then adjusted for budget adjustments totaling (\$3,433,000),
6 as shown in HELCO-1101C.

7 Q. What items are included in the GL Code Entries for the 2016 test year O&M
8 expense?

9 A. The GL Code Entries include transactions recorded to accounts not associated with a
10 specific department or RA code. It consists primarily of accounting reclassification
11 credit adjustments for (1) on-cost charges made to various NARUC accounts, (2)
12 administrative expense transfer, and (3) employee benefits transfer⁸. A description
13 of the expenses included in these NARUC accounts is provided in HELCO-1106.

14 ADMINISTRATIVE AND GENERAL EXPENSE

15 Q. What is the Company's estimate of total A&G expenses for the 2016 test year?

16 A. The Company's estimate of total A&G expenses for the 2016 test year is
17 \$20,692,000, representing the total combined test year estimates for account nos.
18 920 through 932, as summarized in Table 5 below. The estimate is based on the
19 2016 O&M expense budget of \$24,977,000, then adjusted for budget, ratemaking,
20 and normalization adjustments totaling (\$4,284,000) as shown in HELCO-1103.

⁸ See HELCO-1113 for summary of NARUC 922 administrative expenses transferred and HELCO-1133 for summary of NARUC 926020 employee benefits transferred.

1 Table 5: Summary of A&G Expense Test Year 2016

Primary Account No.	Primary Account Title	Test Year 2016 Estimate (\$ 000)
<u>Administrative</u>		
920	A&G Salaries	\$ 2,729
921	Office Supplies & Expenses	2,166
922	Admin. Expenses-Transferred	<u>(3,480)</u>
	Total Administrative	1,415
<u>Outside Services</u>		
923	Outside Services	6,592
<u>Insurance</u>		
924	Property Insurance	900
925	Injuries & Damages	<u>1,722</u>
	Total Insurance	2,622
<u>Employee Benefits</u>		
926	Employee Benefits	8,216
<u>Miscellaneous</u>		
928	Regulatory Commission Expenses	1,104
930	Miscellaneous	326
932	Maintenance of General Plant	<u>417</u>
	Total Miscellaneous	1,847
	Total A&G Expenses	<u>\$20,692</u>

Note: Totals may not add exactly due to rounding.

- 2 Q. How are the 2016 test year A&G O&M expenses discussed in this rate case?
- 3 A. As mentioned earlier in my testimony, discussions of the O&M expenses in this rate
- 4 case are presented differently from the Company’s presentation in past rate cases.
- 5 This applies to A&G expense as well. The witness for each Hawai‘i Electric Light
- 6 department presents its O&M expense estimates for the 2016 test year in its exhibits
- 7 summarizing the department expenses categorized by NARUC USOA accounts or
- 8 block of accounts. HELCO-1101, page 2 provides the mapping to breakdown the
- 9 A&G expense block of accounts in the department view. However, this testimony
- 10 will address two NARUC accounts to which entries are posted primarily through GL
- 11 entries, and not through departmental entries. They are account no. 922

1 administrative expenses transferred - credit and account no. 926.020 employee
2 benefits transferred – credit.

3 Account No. 922 – Administrative Expenses Transferred - Credit

4 Q. What is the Company’s test year 2016 estimate for account no. 922 administrative
5 expenses transferred-credit?

6 A. The test year 2016 estimate for account no. 922 administrative expenses transferred
7 credit is (\$3,480,000) as shown in HELCO-1113, page 1.

8 Q. What does account no. 922 administrative expenses transferred – credit represent?

9 A. The estimated amount transferred represents the portion of the total costs charged to
10 account nos. 920 administrative and general salaries and 921 office supplies and
11 expenses, and other A&G accounts that relates to plant construction and to other
12 charges such as billings to outside third parties for services rendered (e.g., pole
13 damage repairs), as shown in HELCO-1113.

14 Q. How does the Company account for administrative expenses related to non-capital,
15 non-billable work, i.e. administrative expenses in support of O&M expense work?

16 A. As discussed in HELCO-1106, under the NARUC USOA, the O&M expense related
17 portion of administrative expenses must be classified as A&G expense. As a result,
18 the O&M expense related portion of administrative expense on-costs applied to
19 various O&M expense accounts by the Companies’ ELLIPSE system is “reversed”
20 and added back to A&G expenses.

21 Q. How was the 2016 test year estimate for Account No. 922 – Administrative
22 Expenses Transferred determined?

1 A. The amount to transfer was derived using the methodology recommended by PA
2 Consulting Group (“PA”) in its corporate administrative charge study completed in
3 April 13, 2012 which is provided at HELCO-WP-1113A. The change in
4 methodology used to derive the transfer amount is discussed in more detail later in
5 this testimony under accounting policy changes.

6 Q. How does the test year estimate credit amount of (\$3,480,000) compare with
7 amounts for earlier years?

8 A. As shown in HELCO-1103, the amounts transferred out of administrative expenses
9 recorded between 2010 and 2015 fluctuate from year to year, varying from the
10 lowest balance recorded in 2011 of (\$918,000) to the highest in 2015 of
11 (\$1,250,000).

12 Q. What are the significant factors driving the administrative cost transferred-credit to
13 vary from year-to-year prior to 2016?

14 A. In years prior to 2016, the year-to-year differences are driven by the individual
15 factors comprising the calculation of the transfer amount, as noted in the KPMG
16 study in Docket No. 99-0207. The most significant factor is the amount of costs
17 charged to account nos. 920 and 921 and the proportions of capital work to total
18 work, including non-billable tasks. As Hawai‘i Electric Light’s charges in account
19 nos. 920 and 921 change and as the ratio of Hawai‘i Electric Light’s capital work to
20 total work changes, the amount of administrative costs transferred to capital will
21 change accordingly.

1 Q. Why is the 2016 test year estimate for the administrative cost transferred-credit
2 higher than the administrative cost transferred-credit recorded for prior years?

3 A. The 2016 test year estimate for the administrative cost transferred-credit is higher
4 than the administrative cost transferred-credit recorded for years prior to 2016
5 because the 2016 test year estimate for the administrative cost transferred-credit was
6 calculated using the methodology proposed in the PA study, which is addressed in
7 more detail later in this testimony.

8 Account No. 926.020 – Employee Benefits Transferred - Credit

9 Q. What is the Company's 2016 estimate for account no. 926.020 – employee benefits
10 transferred – credit?

11 A. The Company's 2016 test year estimate for account no. 926.020 – employee benefits
12 transferred – credit is (\$6,775,000) as shown in HELCO-1133.

13 Q. What does the 2016 test year estimate for employee benefits transfer represent?

14 A. The estimated transfer amount of (\$6,775,000) represents that portion of total
15 employee benefits expenses, which are initially recorded in account nos. 926.000,
16 which is transferred as an on-cost rate (formerly overhead rate) to the costs of
17 construction and to outside third parties for services rendered (i.e., billables).

18 Q. How does the Company account for employee benefits costs related to O&M
19 expense related work?

20 A. Similar to administrative expenses, the employee benefits costs related to O&M
21 expense is discussed in HELCO-1106. Under the NARUC USOA, the O&M
22 expense related portion of employee benefits costs must be classified as A&G

1 expense. As a result, the O&M expense related portion of employee benefits on-
2 costs applied to various O&M expense accounts by ELLIPSE is “reversed” and
3 added back to A&G expenses.

4 Q. How is the test year 2016 transfer (credit) estimate determined?

5 A. HELCO-1133 presents the calculation of the 2016 test year credit estimate of
6 (\$6,775,000).

7 Q. How does the 2016 test year estimate compare with previous year amounts?

8 A. As shown on HELCO-1103, the recorded credit amount in 2010 through 2015 varied
9 from the lowest in 2010 of (\$2,370,000) to the highest in 2015 of (\$3,337,000).

10 Q. What are the significant factors driving the employee benefits cost transferred to
11 fluctuate from year to year?

12 A. The individual factors included in the calculation of the transfer credit amount all
13 affect the outcome of the calculation. The most significant factor is the amount of
14 costs charged to account no. 926.000. There have been large swings in recorded
15 benefit costs in past years, prior to the implementation of pension and OPEB
16 tracking mechanisms following the interim decision and order in HELCO’s 2006 test
17 year rate case in Docket No. 05-0315, due to significant volatility in the stock market
18 which impacted the trust fund’s return on assets. The other significant factor
19 affecting the transfer credit amount is the transfer rate, or the amount of capital
20 and/or billable work relative to total work (including O&M, capital and billable
21 work). The transfer rate for 2016 is 43.3% compared to historical transfer rates over

1 the last five years of 22.5%, 26.5%, 28.6%, 30.2%, 32.6% and 35.2%, for 2010,
2 2011, 2012, 2013, 2014, and 2015, respectively.

3 Q. What causes the increase in the employee benefits transferred credit for test year
4 2016, compared to the 2015 recorded credit?

5 A. The most significant factors affecting the transfer credit for test year 2016 are the
6 transfer rate and the amount of costs charged to account no. 926.000 – employee
7 pensions and benefits and account no. 926.010 – employee benefits-flex credits.
8 First, as discussed above, the transfer rate for 2016 is 43.3% which is higher than the
9 35.2% transfer rate recorded for 2015. Second, the 2016 test year estimate for
10 account no. 926.000 – employee pensions and benefits and account no. 926.010 –
11 employee benefits-flex credits of \$15,632,000 is \$6,156,000, or 65%, more than the
12 2015 recorded costs of \$9,476,000. Mr. Faagai discusses the changes in account
13 nos. 926.000 and 926.010 costs in HELCO T-12. Consistent with the increase in
14 employee benefit costs, the test year 2016 credit estimate of (\$6,775,000) is
15 (\$3,438,000) more than the recorded 2015 balance of (\$3,337,000). See
16 HELCO-1201, page 1.

17 Q. Please explain the basis of allocating employee benefits expenses transferred to
18 construction and other accounts.

19 A. The amount of employee benefits transferred in account no. 962.020 was determined
20 utilizing an allocation based on productive labor hours rather than labor dollars. The
21 allocation based on labor hours is consistent with the approach used by the Company
22 in its previous rate cases, including 2010 and 2006.

1 A. Hawai'i Electric Light is proposing to change its approach for determining the level
2 of A&G costs to transfer to capital projects in account no. 922 administrative
3 expenses transferred.

4 Q. How does Hawai'i Electric Light currently determine the amount of A&G costs to
5 transfer to capital projects?

6 A. Hawai'i Electric Light currently determines the amount of A&G costs to transfer to
7 capital projects using the methodology recommended by KPMG LLP in its
8 administrative transfer study completed in December 1996. A copy of this study
9 was provided in Docket No. 99-0207, HELCO-WP-905.

10 Q. Has the Commission approved Hawai'i Electric Light's use of the KPMG approach
11 in prior rate case proceedings?

12 A. Yes. The Commission has approved electric rates calculated using the KPMG
13 approach to calculating A&G expense transfers to construction in rate cases since
14 1996 including most recently in the Company's 2010 and 2006 rate cases in Docket
15 Nos. 2009-0164 and 05-0315, respectively.

16 Q. Has Hawai'i Electric Light prepared a more recent review of its practice for
17 transferring A&G expenses to capital projects?

18 A. Yes. PA Consulting Group ("PA") completed a review of Hawaiian Electric's
19 approach for transferring A&G expenses to capital, and Hawaiian Electric
20 introduced the PA review in its 2011 test year rate case in Docket No. 2010-0080.
21 The A&G transferred amounts used in the revenue requirements approved in the
22 Hawaiian Electric 2011 test year rate case was based on the PA methodology. Maui

1 Electric introduced the PA methodology in its 2012 test year rate case in Docket
2 No. 2011-0092. The revenue requirements established as a result of the Maui
3 Electric 2012 test year rate case was based on the PA methodology. Hawai'i
4 Electric Light requested that PA undertake a study to update Hawai'i Electric Light's
5 approach to transferring A&G expenses to capital in a manner similar to Hawaiian
6 Electric and Maui Electric. A copy of the PA study prepared for Hawai'i Electric
7 Light in April 2012 is provided in HELCO-WP-1113A.

8 Q. What do the results of the PA study indicate?

9 A. PA used 2011 budget data to determine the impact of the new approach on the
10 Company. The results of the PA study for Hawai'i Electric Light for the 2011
11 budget indicate that approximately \$2.4 million of A&G costs would have been
12 transferred to capital through the corporate administration charge. This compares to
13 \$600,000 to be transferred for the 2011 budget under the existing KPMG approach.

14 Q. How does the approach for transferring A&G costs to capital recommended by the
15 PA study compare to the approach recommended by the KPMG study?

16 A. Both the KPMG study and the PA study recommend the transfer of a proportion of
17 A&G costs which are considered construction related to capital projects. The
18 primary difference in approach between the PA study and the KPMG study is in how
19 each study defines "construction related."

20 Q. How does KPMG define construction related?

21 A. The KPMG study defines an activity to be construction related if it meets both of the
22 following requirements: (1) the employee's position satisfies the incremental cost

1 principle; and (2) the tasks performed by the employee have an initial, definite, and
2 direct relationship to the physical construction of the plant facilities.

3 For A&G labor costs, only costs associated with employees whose positions
4 are necessitated by the construction program are includible in the allocation to
5 construction process. If the position is considered to be necessary regardless of the
6 construction program, then the position would not be considered “incremental” and
7 the costs related to that position would not be includible in the allocation. Once a
8 position is deemed to be construction related, the construction related tasks for that
9 respective position are defined to include only those tasks that have a definite and
10 direct relationship to the physical construction of plant facilities. These tasks must
11 also have an “initial and direct relationship” to the physical construction.

12 Q. What did the PA study conclude with respect to KPMG’s definition of construction
13 related activity?

14 A. The PA study concluded that the KPMG study defined construction related activities
15 too narrowly. PA reviewed regulatory guidance provided by the NARUC Uniform
16 System of Accounts and discussed the matter with other electric utilities and found
17 that the definition of construction activities used by KPMG based on its definition of
18 “incremental” is unnecessarily restrictive. Also, PA could find no regulatory
19 guidance to support the use of “initial” in defining A&G work related to construction
20 activities. Using a definition of construction activities consistent with industry
21 practices and broader than the definition of construction activities bounded by
22 “initial” and “incremental” as used in the KPMG study, the PA study results confirm

1 that the current approach understates the amount of construction related activity for
2 those positions whose costs are recorded in account no. 920 A&G labor.

3 Q. How do Hawai'i Electric Light's customers benefit from this change?

4 A. The Company's customers benefit from the proposed change in two ways because
5 the amount of costs transferred to construction is higher under the proposed
6 approach as compared to the existing KPMG approach. First, the higher transfers to
7 construction under the proposed approach result in lower revenue requirements in
8 this rate case proceeding. Second, the proposed change promotes inter-generational
9 equity by allocating over time an appropriate amount of A&G costs attributable to
10 the Company's capital program.

11 Q. How are A&G transfers to construction presented in the Company's direct testimony
12 in this rate case?

13 A. Hawai'i Electric Light's 2016 test year estimate for revenue requirements was
14 calculated using 2016 O&M expense and 2016 plant additions which include A&G
15 transfers to construction based on the PA study approach. The 2016 test year
16 estimate for O&M expense includes administrative transfers to construction credit in
17 account no. 922 in the amount of \$3,480,000, which was calculated using the PA
18 study approach as shown in HELCO-1113, page 1 and implemented in the test year
19 estimate as of January 1, 2016. The 2016 test year estimate for administrative
20 transfers to construction credit in account no. 922 would have been \$613,000, or
21 \$2,867,000 lower than the PA study approach if the KPMG study approach had been

1 used, as shown in HELCO-1113, page 1. The impact of the proposed change on test
2 year plant additions is estimated at \$2,379,000, as shown in HELCO-1113, page 2.

3 Q. How does Hawai'i Electric Light propose to implement the proposed change for
4 financial reporting?

5 A. Hawai'i Electric Light proposes to implement the change in its accounting for A&G
6 transfers to construction at the same time that electric rates which are calculated
7 using the PA study recommended approach go into effect with either an interim or
8 final decision and order in this rate case.

9 Accounting for Production Related Overhead Costs and
10 Implementation of a Power Supply Clearing Account

11 Q. How does Hawai'i Electric Light currently account for production related costs?

12 A. Hawai'i Electric Light's current practice is to account for production related costs by
13 charging to specific capital projects, O&M expense accounts, or other accounts (i.e.
14 billables). For necessary, reasonable production related costs that are generally
15 related to some combination of O&M, capital and other work activities, and for
16 which the specific work order/project/account is unknown, the Company's practice
17 is to expense these costs as they are incurred.

18 Q. What is the Company proposing in this rate case?

19 A. The Company is proposing to establish a Power Supply ("PS") clearing account, to
20 more appropriately allocate costs that are related to a combination of O&M, capital
21 and other work activities.

1 Q. Explain the PS clearing and the types of costs it would account for, when
2 implemented?

3 A. The PS clearing is an account on the Company's balance sheet that is used to track
4 certain necessary, reasonable utility costs that are related to a combination of O&M,
5 capital, and other work activities for which the specific work order/project/account is
6 unknown at the time the costs are incurred. These types of costs can be generally
7 characterized as overhead costs associated with the utility's production functional
8 activities. These charges are accumulated in the clearing account and then allocated
9 (cleared) to applicable capital projects, O&M and other activities of the power
10 supply/production functional areas.

11 Q. Is the PS clearing account utilized by the other Hawaiian Electric Companies?

12 A. Yes. Both Hawaiian Electric and Maui Electric have used a PS clearing account for
13 many years.

14 Q. How does the Company propose to allocate costs charged to the PS clearing
15 account?

16 A. By establishing a PS clearing account, production related overheads costs that were
17 previously expensed will be allocated to various capital projects, O&M expense
18 accounts, and other accounts proportionally based on relative total spending to these
19 activities by the power supply functional areas. This method of allocation is
20 consistent with the Energy Delivery ("ED") clearing account's allocation
21 methodology which was revised by the Company in 2014 and discussed further in
22 this testimony. The activities to which the costs are allocated will more

1 appropriately reflect both the direct costs and associated overhead costs incurred.

2 The amount of allocation to a specific capital project, O&M expense account, and
3 other work activities can vary from period to period and will depend on its
4 proportion of spending to total spending in the power supply functional area.

5 Q. What are the impacts to test year revenue requirements of the proposed change?

6 A. HELCO-1114 provides a summary of the impact to 2016 test year estimates
7 expected to result from establishing a PS clearing account and allocating production
8 related overhead costs to different capital projects, O&M expense accounts and other
9 accounts as of January 1, 2016. As shown in HELCO-1114, the impact to the 2016
10 test year estimate for O&M expense is a reduction of -\$681,000, and the impact to
11 the 2016 test year estimate for plant additions is \$674,000.

12 Q. How do Hawai'i Electric Light's customers benefit from the change in accounting
13 proposed by the Company for the Power PS clearing?

14 A. The Company's customers benefit from the proposed change in at least two ways.
15 First, allocating production related overhead costs to capital projects under the
16 proposed approach results in lower revenue requirements in this rate case
17 proceeding. Second, the proposed change promotes inter-generational equity by
18 allocating over time an appropriate amount of production related overhead costs
19 attributable to the Company's production capital projects.

20 Q. What are other ways that the Company's customers benefit from this proposed
21 change?

1 A. The cost to implement and administer the proposed change is minimal. Establishing
2 a PS clearing account and allocating production related overhead costs will improve
3 efficiency in the Company's finance and accounting processes by standardizing the
4 practices for accounting for clearing accounts and production related overhead costs
5 across the three Hawaiian Electric Companies.

6 Energy Delivery and Power Supply Clearing Account Allocation

7 Q. What is the ED clearing?

8 A. Similar to the PS clearing, the ED clearing is an account on the Company's balance
9 sheet that is used to track certain necessary, reasonable utility costs that are related to
10 a combination of O&M, capital, and other work activities for which the specific
11 work order/project/account is unknown at the time the costs are incurred. These
12 types of costs can be generally characterized as overhead costs associated with the
13 utility's transmission and distribution functional activities. These charges are
14 accumulated in the clearing account and then allocated (cleared) to applicable capital
15 projects, O&M and other activities of the transmission and distribution functional
16 areas.

17 Q. What changes has the Company made to the ED clearing since the last rate case?

18 A. Beginning in 2014, the Company made two changes to its allocation of charges in
19 the ED clearing account.

20 Q. Please describe the two changes.

21 A. First, the Company separated the charges to the ED clearing account between
22 vehicle costs and non-vehicle costs. Second, the allocation basis for non-vehicle

1 costs was changed to be allocated to capital projects, O&M expense accounts and
2 other accounts proportionally based on the relative amount of total transmission and
3 distribution spending on these capital projects, O&M expenses accounts and other
4 accounts.

5 Q. Do the changes implemented in 2014, apply to other clearing accounts?

6 A. When the changes were first implemented in 2014, Hawaiian Electric and Maui
7 Electric applied the change to both the ED and PS clearing accounts. Because
8 Hawai'i Electric Light did not have a PS clearing account established at the time, the
9 change only applied to the ED clearing account. However, the allocation
10 methodology associated with the PS clearing account being proposed in this rate
11 case is consistent with the changes implemented for the ED clearing account in
12 2014.

13 Q. Why did the Company make the change in the allocation methodology?

14 A. Hawai'i Electric Light and Maui Electric followed the change that was made at
15 Hawaiian Electric to standardize the allocation method among the three companies.
16 Prior to 2014, the clearing charges were allocated as an overhead to capital projects,
17 O&M, and other work activities based on internal labor hours. This method was
18 developed during the implementation of ELLIPSE back in 1999. At the time, the
19 use of labor hours was determined to be a reasonable basis to allocate the clearing
20 charges to capital, O&M activities and other activities as work in the respective
21 process areas were performed in large part by the internal work force. However,
22 with the increasing use of outside contractors, there was a need for a consistent

1 application of overheads to all work, regardless of whether the project was
2 completed by internal labor or by contractors.

3 Q. Is the allocation methodology implemented in 2014 consistent with industry
4 practices?

5 A. The revised methodology was based on a study completed by PA Consulting. The
6 study was included in Hawaiian Electric's 2014 test year rate case, in Docket
7 No. 2013-0373 in HECO-1331. After surveying 13 utilities across the United States,
8 the PA Consulting Study indicated that, with the exception of two utilities, the
9 utilities allocate energy delivery indirect process area costs to projects regardless of
10 whether the work was performed by company or contractor crews. Generally, the
11 allocation of operations area indirect costs is based on total project costs.

12 Q. Was the Companies' change in allocation methodology for ED and PS clearing
13 account costs based on the relative amount of ED and PS spending on capital
14 projects, O&M expense accounts and other accounts discussed in a previous
15 proceeding?

16 A. Yes. In Order No. 32866 issued May 28, 2015, in the Companies' 2015 Decoupling
17 Tariff Transmittal Filings, the Commission addressed changes made by the
18 Hawaiian Electric Companies to their accounting practices for the allocation of
19 expenses in the Companies' ED and PS clearing accounts. The Commission
20 indicated a general rate case would be the ordinary venue for considering and
21 approving the application of changes in accounting practices for ratemaking
22 purposes. The Commission reviewed the proposed application of the accounting

1 changes in relation to the RAM tariffs. As a result, the Companies were required to
2 adjust the 2015 RAM revenue adjustment to reflect the O&M reduction impacts
3 associated with the accounting change. By doing this, it had essentially the same
4 effect as making the accounting change with a general rate case.

5 Q. How does the Company reflect the allocation of ED and PS clearing costs in 2016
6 test year revenue requirements?

7 A. Hawai'i Electric Light's 2016 test year revenue requirements reflect the allocation of
8 ED and PS clearing account charges based on the relative dollars of ED and PS
9 spending on capital projects, O&M expense accounts and other accounts, in a
10 manner consistent with the allocation method change that it implemented for its ED
11 clearing account in April 2014. This method of allocation provides a consistent
12 application of overheads to all work, regardless of whether the project was
13 completed by internal labor or by contractors. Based on the operations of the
14 Company, the Company respectfully submits that it is a reasonable basis and the
15 method implemented in 2014 should continue.

16 Q. How does Hawai'i Electric Light propose to implement the proposed change for
17 financial reporting?

18 A. Hawai'i Electric Light proposes to implement the change to establish a PS clearing
19 account and allocate the charges based on the relative dollars of PS spending on
20 capital projects, O&M expense accounts and other accounts, at the same time that
21 electric rates which are calculated using the PS clearing account go into effect from
22 either an interim or final decision and order in this rate case.

1 Accounting for Costs for O&M Expenses Associated With Capital Projects

2 Q. What change in accounting for OMAC did Hawaiian Electric propose in Docket
3 No. 2010-0080, its 2011 test year rate case?

4 A. In its response to CA-IR-63 in Docket No. 2010-0080, Hawaiian Electric stated:

5 The issue under review is what is the most appropriate way for
6 Hawaiian Electric to account for costs of new distribution and
7 transmission facilities whose principal purpose is to replace similar
8 assets that have reached the end of their serviceable life. The review
9 has focused on the replacement of poles, pole-mount distribution
10 transformers and transmission structures that are scheduled to be
11 retired from service. At this time, Hawaiian Electric proposes to
12 change its recording of the changeover costs for these assets from
13 O&M expense to capital.

14 For many T&D assets, the full cost of constructing replacements at
15 the end of their serviceable lives is capitalized, and the removal costs
16 are charged to removal. However, the labor costs have historically
17 been allocated between capital and O&M expense. For example, the
18 installation of the conductors from the old pole and the attachment of
19 the conductors to the new pole are charged to O&M expense. This
20 practice is based on Hawaiian Electric's interpretation of NARUC
21 and has resulted in approximately 17% to 28% of the total cost of a
22 pole replacement project being charged to O&M expense. These
23 O&M costs are described as O&M Associated with Capital
24 ("OMAC"). As Hawaiian Electric is significantly increasing the
25 quantity of poles, pole-mount and pad-mount distribution
26 transformers, and transmission structures to be retired and installed as
27 part of its expanding asset management program, it is timely to
28 reconsider the treatment of OMAC.

29 The OMAC costs under consideration are necessary and directly
30 attributable to ensure safe and efficient construction and installation
31 of the new asset. Given that these costs are incurred with the
32 replacement of such assets that are capitalized, these costs can be
33 capitalized, rather than expensed. As a result, Hawaiian Electric is
34 requesting Commission approval in the instant proceeding to change
35 its current accounting practice to capitalize OMAC costs beginning
36 when rates based on the Interim Decision & Order ("ID&O") issued
37 in the instant proceeding become effective.

1 Q. Did the Commission approve Hawaiian Electric's requested change in accounting
2 for OMAC?

3 A. Yes. The Commission approved Hawaiian Electric's proposed change in accounting
4 for OMAC in the *Interim Decision and Order* (at 52) issued on July 22, 2011 in
5 Hawaiian Electric's 2011 test year rate case.

6 Q. How do Hawaiian Electric's customers benefit from the change in accounting for
7 OMAC approved in Docket No. 2010-0080?

8 A. Hawaiian Electric customers benefit from the accounting change for OMAC because
9 the change reduced electric rates as a result of extending the recovery period for
10 these costs. It also increased work flow productivity as the accounting treatment was
11 simplified with less work orders created.

12 Q. How does Maui Electric account for OMAC?

13 A. As discussed in its 2012 test year rate case in Docket No. 2011-0092, Maui
14 Electric's practice has been to capitalize the labor costs associated with line
15 changeovers because the magnitude of the OMAC costs is small relative to the
16 administrative burden associated with the need to establish and record additional
17 work orders which would be required if Maui Electric were to charge OMAC to
18 O&M expense accounts instead of capitalizing them with the rest of the installation
19 costs for a project.⁹

20 Q. How does Hawai'i Electric Light currently account for OMAC?

⁹ MECO T-11, page 62, line 26, Docket No. 2011-0092, Maui Electric's 2012 test year rate case.

1 A. Hawai'i Electric Light's practice has been to expense the labor costs associated with
2 line changeovers.

3 Q. How does the Company propose to implement the proposed change for financial
4 reporting?

5 A. Hawai'i Electric Light proposes to change its accounting for OMAC to be consistent
6 with Hawaiian Electric and Maui Electric. The Company has reflected in its 2016
7 test year estimate the change in accounting for OMAC to capital projects as of
8 January 1, 2016.

9 Q. What is the impact of the Company's proposed change in accounting for OMAC on
10 2016 test year revenue requirements?

11 A. As shown in HELCO-1115, the impact of the proposed change in accounting for
12 OMAC is to reduce 2016 O&M expense by \$436,000, and to increase test year plant
13 additions by \$436,000.

14 Q. When does the Company request to implement the proposed change in accounting
15 for OMAC?

16 A. Hawai'i Electric Light proposes to implement the change in accounting for OMAC
17 at the same time that electric rates which are calculated using the revised approach
18 go into effect from either an interim or final decision and order in this rate case.

19 OTHER ACCOUNTING MATTERS

20 Accounting For Pension and OPEB Plans

21 Q. Please provide a description of the qualified pension and postretirement benefits
22 which are available to the Company's employees.

1 A. As described by Mr. Faagai in HELCO T-12, the Company provides pension
2 benefits to its employees by participating in the Retirement Plan for Employees of
3 Hawaiian Electric Industries, Inc. and Participating Subsidiaries, a qualified defined
4 benefit pension plan. Hawai'i Electric Light provides post-employment benefits
5 other than pensions ("OPEB") through participation in the Postretirement Welfare
6 Benefits Plan for Employees of Hawaiian Electric Company, Inc. and Participating
7 Employers.

8 Q. Please provide a description of the accounting and reporting requirements for
9 pensions and OPEB under generally accepted accounting principles.

10 A. A description of the Company's accounting and reporting requirements with respect
11 to its pension and OPEB plans is provided in HELCO-1126. HELCO-1126 entitled
12 *Accounting for Pension and Postretirement Benefits Other than Pensions* describes
13 the accounting and ratemaking treatment for pension and OPEB plans and how the
14 pension and OPEB tracking mechanisms were established for the Company. In
15 brief, Consumer Advocate first introduced the concept of pension and OPEB
16 tracking mechanisms in its testimony in the Hawai'i Electric Light 2006 test year
17 rate case. In the Hawaiian Electric 2007 test year rate case, the Consumer Advocate,
18 Hawaiian Electric and the Department of Defense agreed on the establishment of the
19 pension and OPEB tracking mechanisms, which the Commission approved in its
20 final decision and order in that proceeding. The Commission also approved the
21 implementation of the pension and OPEB tracking mechanisms for Maui Electric

1 and Hawai'i Electric Light, and the three Companies have used these tracking
2 mechanisms since that time.

3 Q. What is the objective of the pension tracking mechanism?

4 A. The objective of the pension tracking mechanism is that, over time, the Company
5 will recover through rates the NPPC, including amortization of any unrecognized
6 amounts. Consistent with the Commission's orders approving its use, the pension
7 tracking mechanism has the intended effect of balancing NPPC in rates with actual
8 NPPC over time, but also protects customers from having rates set at a level of
9 NPPC materially higher or lower than the actual NPPC. The customers remain
10 neutral as a result of the NPPC determined for a test year. If the actual NPPC in a
11 future year is less than what was included in rates, the difference is accumulated and
12 returned to the customers through an amortization over five years in the next rate
13 case. If the actual NPPC in a future year is greater than what was included in rates,
14 the difference is accumulated and an amortization over five years is included in the
15 utility's expenses in determining rates in the next rate case. In addition, an amount
16 equal to the actual NPPC and recoverable through rates would be contributed to the
17 pension trust funds.

18 Q. What are the benefits associated with the pension tracking mechanism?

19 A. The benefits of the pension tracking mechanism are that it:

20 (1) specifies agreement on the ratemaking treatment of pension costs and

21 pension fund contributions, thus reducing disputable items in rate cases,

22 (2) demonstrates rate support for recovery of the Companies' pension costs, and

1 (3) results in leveling pension costs reported on the utility’s financial statements

2 Q. What is the objective of the OPEB tracking mechanism?

3 A. Similar to the pension tracking mechanism, the OPEB tracking mechanism is
4 designed to provide for the recovery of OPEB costs over time. By preventing the
5 over- or under- recovery of OPEB costs, the tracker fairly and equitably balances the
6 interests of customers with those of the Company and its investors.

7 Q. What are the benefits of the OPEB tracking mechanism?

8 A. The OPEB tracking mechanism specifies the ratemaking treatment that allows
9 financial statement treatment of benefit costs to be smoothed based on the amount of
10 the net periodic benefit cost (“NPBC”) established in a rate case, and addresses
11 potential situations in the future where contributions to OPEB trusts are not equal to
12 the NPBC recognized.

13 Q. What are the pension and OPEB estimates reflected in the test year?

14 A. Table 6 below summarizes the pension and OPEB estimates for the 2016 test year.
15

16 Table 6: Pension and OPEB Balances

<u>Description</u>	<u>Test Year Expense/ Rate Base</u>	<u>Exhibit Reference</u>
<u>Pension</u>		
Estimated NPPC	\$6,903,000	HELCO-1201, p.1
Prepaid Pension Amortization	\$(99,000)	HELCO-1111, p.1
Pension Tracking Regulatory Asset Amortization	\$4,582,000	HELCO-1111, p.2
Pension Contribution in Excess of NPPC Regulatory Asset Amortization	<u>\$609,000</u>	HELCO-1111, p.3
Total Pension Expense	<u>\$11,995,000</u>	HELCO-1201, p.1
Pension Tracking Regulatory Asset	\$20,620,000	HELCO-1111, p.2
Contributions in Excess of NPPC	\$2,743,000	HELCO-1111, p.3
Regulatory Liability – Prepaid Pension	\$(446,000)	HELCO-1111, p.1

<u>Description</u>	Test Year Expense/ Rate Base	<u>Exhibit Reference</u>
<u>OPEB:</u>		
Estimated NPBC	\$0	HELCO-1201, p.1
SFAS 106 Regulatory Asset Amortization	\$0	HELCO-1112, p.2
OPEB Tracking Regulatory Liability Amortization	<u>\$(309,000)</u>	HELCO-1112, p.4
Total OPEB Expense	<u>\$(309,000)</u>	HELCO-1201, p.1
<u>OPEB Tracking Regulatory Liability</u>	<u>\$(1,393,000)</u>	<u>HELCO-1112, p.4</u>

1 Q. How are the pension and OPEB estimates reflected in the 2016 test year?
2 A. As required by the pension tracking mechanism, Hawai‘i Electric Light has
3 included: (a) in its results of operations, a pension expense based on (i) the estimated
4 Financial Accounting Standards Board (“FASB”) Accounting Standard Codification
5 (“ASC”) 715 based NPPC for 2016 plus the amortization of (ii) regulatory liability -
6 prepaid pension, (iii) the pension tracking mechanism regulatory asset and (iv) the
7 contributions in excess of NPPC regulatory asset; and (b) in rate base (i) the
8 regulatory liability - prepaid pension, (ii) the unamortized pension tracking
9 mechanism regulatory asset, and (iii) the unamortized contributions in excess of
10 NPPC regulatory asset. It has also reported (a) in its results of operations an OPEB
11 expense based on (i) the estimated FASB ASC 715 based NPBC for 2016 less (ii)
12 the executive life portion that has been disallowed by the Commission and (iii) the
13 amortization of the OPEB tracking mechanism regulatory liability, and (b) in rate
14 base the unamortized OPEB tracking mechanism regulatory liability.

15 Mr. Faagai addresses the pension and OPEB expenses included in employee
16 benefits expense in his testimony in HELCO T-12 and Ms. Teri Kam discusses the
17 inclusion of the pension and OPEB tracking mechanism regulatory asset and

1 liability, as well as prepaid pension and contributions in excess of NPPC in rate base,
2 in her testimony in HELCO T-19.

3 Q. How does Hawai'i Electric Light's approach to calculate the 2016 test year estimates
4 for the amortization of the pension tracking mechanism and OPEB tracking
5 mechanism regulatory assets included in operating expense and in rate base compare
6 to the approach used in Hawai'i Electric Light's 2010 test year rate case?

7 A. As previously noted, Hawai'i Electric Light's 2016 test year estimate for employee
8 benefits expense includes amortization for the estimated pension tracking
9 mechanism and OPEB tracking mechanism regulatory asset balances as of January
10 1, 2016. The end of test year balances for the pension tracking and OPEB tracking
11 regulatory assets were calculated using 12 months of amortization of the estimated
12 January 1, 2016 regulatory asset balances.

13 Q. What is the regulatory liability relating to prepaid pension?

14 A. Upon adoption of the pension tracking mechanism, as approved by the Commission
15 in its Decision and Order issued on October 28, 2010, in Docket No. 05-0315,¹⁰ the
16 Company was allowed to include in rate base a prepaid pension asset which
17 represented the cumulative amounts of contributions to the pension trust in excess of
18 cumulative pension costs (NPPC accrual). In addition to the pension asset's
19 inclusion in rate base, the revenue requirements included amortization of the pension
20 asset's ending balance which was to be amortized over a five year period.

¹⁰ Further detail regarding the prepaid pension asset is provided in HELCO T-10, pages 101 to 102 in Hawai'i Electric Light's 2010 test year rate case in Docket No. 2009-0164.

1 Following the five year amortization period, the pension regulatory asset
2 became fully amortized in 2015. In other words, the balance became “zero” (i.e. \$0).
3 However, the amortization of the pension regulatory asset continued despite the asset
4 becoming fully amortized, because the pension regulatory asset and related
5 amortization are part of the pension tracking mechanism and are included in rates
6 established in the Company’s 2010 test year rate case. The amortization included in
7 rates was not reset in the 2013 test year rate case due to the withdrawal of the
8 Application by the Company.¹¹ This resulted in the pension regulatory asset
9 becoming negative, and now represents a regulatory liability.

10 Q. How is Hawai‘i Electric Light proposing to treat this regulatory liability relating to
11 prepaid pension?

12 A. The Company is proposing to include the regulatory liability in rate base (a
13 reduction in rate base), and amortize the balance (a credit to expense) over five
14 years. As shown in Table 6 above and in HELCO-1111, page 1, the Company
15 includes the 2016 estimated average regulatory liability – prepaid pension of
16 \$(446,000) in rate base and the related amortization amount of \$(99,000) in the
17 employee benefits expense (HELCO-1201).

18 Q. Why is the 2016 test year estimate for NPBC expense zero?

¹¹ The Company filed its *Withdrawal of Application* on March 22, 2013, in conjunction with the Commission approval in Order No. 31126 on March 19, 2013, of the *Stipulated Settlement Agreement between the Hawaiian Electric Companies and the Division of Consumer Advocacy regarding Certain Regulatory Matter* filed on January 28, 2013 in Docket No. 2008-0083 (“Stipulated Settlement”). Stipulated Settlement, called for, among other things, Hawai‘i Electric Light to withdraw its 2013 test year rate case.

1 A. As shown at HELCO-1302, the FASB ASC 715 based NPBC estimate for 2016 is
2 negative at (\$544,000). The OPEB tracking mechanism addresses the situation when
3 the NPBC becomes negative at Procedure Item 5 and specifies: “If NPBC is
4 negative at the time of the next rate case, the amount included in rates will be “zero”
5 (i.e. \$0).¹² As such, the 2016 test year estimate for NPBC is zero. Also, in
6 accordance with this subject procedure, the Company has established a regulatory
7 liability to offset the OPEB asset created by the negative NPBC.

8 Q. Is 2016 the only year that the NPBC expense is negative?
9

10 A. No, the NPBC expense has been negative in 2013, 2014 and 2015. Consistent with
11 the 2016 treatment, regulatory liabilities were set up to offset the OPEB assets
12 created by the negative NPBC in each of these years. HELCO-1112, page 3
13 provides a roll-forward of the related regulatory liability balances. In addition, the
14 OPEB tracking mechanism regulatory liability was increased for those years and was
15 calculated as the difference between the level of FASB ASC 715 based NPBC in
16 rates and zero. This is consistent with Procedure Item 4 of the OPEB tracking
17 mechanism. HELCO-1112, page 4 provides a roll-forward of the related OPEB
18 tracking mechanism regulatory liability.

19 Q. How is Hawai‘i Electric Light proposing to treat the negative NPBC expense?

20 A. The Company is proposing to treat the negative NPBC expense consistent with the
21 requirements of the OPEB tracking mechanism Procedure Items 4 and 5¹³ which

¹² See Procedure Item 5 of the OPEB tracking mechanism shown at HELCO-1112A.

¹³ Refer to the OPEB tracking mechanism provided at HELCO-1112A.

1 address this situation. Specifically, the 2016 NPBC test year estimate included with
2 revenue requirements is zero. In addition, the Company has established a regulatory
3 liability related to the negative NPBC in actual years 2013-2015 and estimated for
4 2016. Consistent with the tracking mechanism, this regulatory liability is excluded
5 from rate base and not subject to amortization. Lastly, the Company increased the
6 OPEB tracking mechanism regulatory liability in 2013-2015 by the difference
7 between the level of FASB ASC 715 based NPBC in rates and zero. The balance of
8 the unamortized OPEB tracking mechanism regulatory liability is included in rate
9 base and the amortization of the balance is included in the results of operations.

10 Contributions in Excess of NPPC

11 Q. How much will Hawai'i Electric Light contribute to the pension trust in 2016?

12 A. In 2016, Hawai'i Electric Light will be required to contribute \$6,903,000 to the
13 pension trust. As discussed by Mr. Faagai in HELCO T-12, the pension tracking
14 mechanism requires the Company to make annual fund contributions to the pension
15 trust in an amount equal to the actual NPPC unless limited by the Internal Revenue
16 Code maximum contributions or Employee Retirement Income Security Act of 1974
17 minimum contributions. The pension tracking mechanism also identifies situations
18 in which the Company would be allowed to make contributions in excess of NPPC.
19 A more detailed description of these elements of the pension tracking mechanism is
20 provided in HELCO-1111A.

21 Q. In situations where there are differences between the annual contribution amounts
22 and the NPPC, how does Hawai'i Electric Light account for them?

1 A. In accordance with the pension tracking mechanism, the Company records the
2 difference between the contribution amount and NPPC as an addition to the
3 contributions in excess of NPPC regulatory asset. In 2011, the Company was
4 required to contribute \$8,897,000 to the pension trust while the NPPC was
5 \$5,850,000. The excess contribution amounting to \$3,047,000 was recorded as an
6 addition to contributions in excess of NPPC regulatory asset. HELCO-1111, page 3
7 provides the roll-forward balances of this regulatory asset account. For test year
8 revenue requirements, the regulatory asset is included in rate base, as shown in
9 HELCO-1901. The regulatory asset balance at the beginning of the rate case test
10 year is amortized over five years, and the amortization amount is included in
11 employee benefit expense as shown in HELCO-1201.

12 Continuation of Pension and OPEB Tracking Mechanisms

13 Q. Should the use of the pension and OPEB tracking mechanisms continue?

14 A. Yes. The tracking mechanisms should continue as they are meeting the objective of
15 the tracking mechanisms and providing the benefits described previously in this
16 testimony.

17 Q. Are there concerns if the pension and OPEB tracking mechanisms are eliminated?

18 A. Yes. The Company has four primary concerns with eliminating the pension and
19 OPEB tracking mechanisms.

20 First, from a cost recovery perspective, they are inherently fair and
21 reasonable because they adjust rates over time to reflect actual costs. If pension
22 costs are decreasing over time and there is no mechanism to incorporate these lower

1 costs into rates between rate cases, customers will be paying more than they should
2 and the Company would reap a windfall. Conversely, if pension costs are increasing
3 over time, without a mechanism to incorporate these higher costs into rates, the
4 Company would suffer a shortfall. Both results are unfair and are avoided with the
5 tracking mechanisms.

6 Second, pension and OPEB costs are extremely volatile and unpredictable
7 from year to year because they depend to a large extent on market returns and
8 interest rates. This makes them particularly difficult for traditional test year
9 ratemaking. In fact, the Consumer Advocate first proposed a pension tracking
10 mechanism in Hawai'i Electric Light's 2006 test year rate case as a result of the
11 volatility and unpredictability of pension costs between rate cases.¹⁴ There is still a
12 fair degree of volatility and unpredictability with respect to pension costs.
13 Moreover, the Hawaiian Electric Companies are now following a three-year rate
14 case cycle, which makes it more important to track pension costs between rate cases
15 then it was when the companies could file rate cases as often as needed.

16 Third, tracking mechanisms address the need to recover pension and OPEB
17 costs over time. By making such recovery more certain, the tracking mechanisms
18 reduce Company earnings volatility and enhance investors' perceptions of the
19 Company's business risk, credit ratings, and cost of debt. They substantially reduce
20 the likelihood of another downgrade of the Company's credit rating, which would
21 place it in the non-investment grade category.

¹⁴ Docket No. 05-0315, Direct Testimony of Steven Carver, CA-T-3, pages 13 to 49.

1 Finally, under U.S. generally accepted accounting principles, ASC 715
2 requires the Companies to recognize on their balance sheets the funded status of
3 defined benefit pension and OPEB plans with an offset to accumulated other
4 comprehensive income (“AOCI”) in stockholders’ equity using the projected benefit
5 obligation (“PBO”) for pension plans and the accumulated postretirement benefit
6 obligation (“APBO”) for OPEB plans. The tracking mechanisms allow the
7 Company to establish separate regulatory asset/liability accounts to offset any
8 charges or credits to equity (i.e. AOCI) that would be required under ASC 715
9 (excluding amounts for executive life and nonqualified pension plans). If the
10 tracking mechanisms are eliminated, the Company will have to record such amounts
11 that are in the separate regulatory asset related to AOCI to AOCI, which will reduce
12 its equity. In order to maintain its equity ratios, additional equity would be required.
13 The tracking mechanism assists in maintaining the Company’s equity ratio and
14 ensures that it would not have to issue additional equity.

15 Q. Please summarize your position regarding the pension and OPEB tracking
16 mechanisms

17 A. Pension and OPEB costs should be reflected for ratemaking purposes based on the
18 pension and OPEB tracking mechanisms that have been approved by the
19 Commission. The test year estimates reflect the pension and OPEB tracking
20 mechanisms approved by the Commission and these mechanisms should continue.

21 Abandoned Capital Project Costs and Preliminary Engineering Costs

22 Q. What is an abandoned capital project?

1 A. An abandoned capital project is one in which a “no go” decision is made during the
2 time the project costs are classified as Construction Work in Progress, i.e., a “no go”
3 decision is made sometime during the detailed engineering through construction
4 completion stages of the project’s life cycle. A project is also considered to be
5 abandoned if the project is significantly delayed generally for more than two years.

6 Q. How are abandoned project costs treated?

7 A. Under normal circumstances, the costs of abandoned capital projects are charged to
8 the appropriate O&M expense account(s), unless the costs result in items that have
9 future value. If any of the costs represent items that have future value (e.g., assets
10 that are usable on another capital project), the related costs are transferred to the
11 other project or to other accounts (e.g., inventory in the case of stock material) as
12 appropriate.

13 Q. What happens if a project is abandoned under unusual circumstances?

14 A. If a capital project is abandoned and unusual circumstances exist, the Company may
15 seek Commission approval for special accounting and ratemaking treatment as
16 appropriate under the circumstances.

17 Q. Is there a more detailed description of how the Company accounts for capital project
18 costs?

19 A. Yes. The Company’s policy is provided at HELCO-1125.

20 Q. What is the Company’s 2016 test year estimate for abandoned project costs?

21 A. Hawai‘i Electric Light’s 2016 test year estimate for abandoned project costs is
22 \$283,000, as shown on HELCO-1123.

1 Q. How was the Company's \$283,000 test year estimate determined?

2 A. As shown in HELCO-1123, the 2016 test year estimate represents the three-year
3 average of actual abandoned capital project cost write-offs from 2013 to 2015.

4 Hawai'i Electric Light increased the 2016 operating budget by \$243,000 to reflect
5 the 2016 test year estimate based on the most up-to-date three-year average.

6 Q. Why is an adjustment for abandoned capital project costs necessary?

7 A. The Company expects that capital projects will be abandoned from time to time, and
8 that the related costs incurred will be written off to expense. However, the
9 Company's Operating Budget does not normally include O&M expense estimates
10 for specific abandoned project costs since forecasters do not generally contemplate
11 that projects will be abandoned. Therefore, an adjustment to the Company's 2016
12 Operating Budget is necessary to include in revenue requirements a reasonable
13 amount for abandoned project costs since such costs have and are expected to
14 continue to be incurred.

15 Q. How are abandoned project costs amounts presented in the Company's 2016 test
16 year estimates?

17 A. The 2016 test year estimate for abandoned project cost amounts, totaling
18 approximately \$283,000, were provided to Mr. Okamura (HELCO T-18) for
19 inclusion in test year estimates, and derived based on the historical account numbers
20 that were charged with the write-offs. In other words, the Company assumes that it
21 will write off future abandoned project costs to the various NARUC expense
22 accounts in amounts equal to the averages of amounts recorded from 2013 to 2015.

1 Q. Has the Commission allowed these types of expenses in past rate cases?

2 A. Yes. The Commission allowed these types of expenses for ratemaking purposes in
3 past Hawai'i Electric Light rate cases including its 2010 and 2006 test year rate
4 cases.

5 Q. Please describe the accounting for preliminary engineering costs related to capital
6 projects?

7 A. As described in the Accounting for Capital Project Costs included in HELCO-1125,
8 preliminary engineering costs are charged for work associated with potential projects
9 prior to formal approval by management. Some of the potential projects are
10 eventually constructed, while others do not materialize. Preliminary engineering
11 costs (costs incurred under steps 2-4 of the process described in HELCO-1125) are
12 identified with the related potential project, and are temporarily held in a clearing
13 account. If the project is approved for construction, the preliminary engineering
14 costs are transferred to construction work in progress. However, if the related
15 potential project does not materialize, the costs are allocated as an on-cost (either a
16 power supply on-cost or energy delivery on-cost, depending on the nature of the
17 project). The on-costs become part of O&M expenses, capital costs or other costs
18 (billable and deferred costs).

19 Q. Historically, what amounts of preliminary engineering costs for potential projects
20 that do not materialize, have been charged as an on-cost (either a power supply on-
21 cost or energy delivery on-cost)?

1 A. The amount of preliminary engineering costs that have not proceeded to a capital
2 project and thus were charged as an on-cost from 2013 to 2015, are shown in
3 HELCO-1124.

4 Q. Why is an adjustment for preliminary engineering costs for potential projects that
5 will not materialize necessary?

6 A. Similar to abandoned projects, from time to time, projects with preliminary
7 engineering costs will not go forward, and the related costs are cleared through the
8 on-cost clearing process. However, the Company's 2016 budgeting does not include
9 estimates for preliminary engineering costs for projects that will not go forward,
10 since forecasts do not generally contemplate that projects will not materialize.
11 Therefore an adjustment should be made to the 2016 O&M expense budget for a
12 reasonable amount of preliminary engineering charges that would be expensed as a
13 part of the on-cost process.

14 Q. How were the adjustments for preliminary engineering costs determined?

15 A. The adjustment amounts represent the three-year average of actual preliminary
16 engineering charges that were cleared to O&M expenses as part of the on-cost
17 process. As shown in HELCO-1124, page 2, the 2016 test year estimate for
18 preliminary engineering costs is \$128,000.

19 Q. How are the adjustments for preliminary engineering costs presented in the
20 Company's test year 2016 estimates?

21 A. The adjustment amounts for preliminary engineering were provided to the
22 Production Department O&M expense witness, Mr. Uchida, HELCO T-7, for

1 inclusion in the 2016 test year estimates, based on the historical block of accounts
2 that were charged with the on-costs for the preliminary engineering costs that were
3 cleared through the on-cost process as documented at HELCO-1124. In other words,
4 the Company assumes that future preliminary engineering costs will clear through
5 the on-cost process to various NARUC expense accounts (block of accounts) in the
6 same proportion that were recorded from 2013 through 2015.

7 Q. Was this adjustment included in prior test year estimates?

8 A. This adjustment was not included in prior test year estimates in Hawai'i Electric
9 Light's rate cases. However, Hawaiian Electric introduced a similar adjustment in
10 its 2011 test year rate case, and the O&M expense approved in the final decision and
11 order included the estimated preliminary engineering costs. In addition, Maui
12 Electric also proposed an adjustment for preliminary engineering costs in its 2012
13 test year rate case, which was included in the O&M expense approved in the final
14 decision and order for that case¹⁵.

15 The Company is operating in a rapidly changing environment. Pursuing
16 clean energy initiatives requires more preliminary engineering for potential projects
17 to determine whether the Company should proceed with the defined projects as there
18 is not a lot of precedent for undertaking many of the potential clean energy
19 initiatives. In addition, new analyses and more assessments and periodic reviews
20 will be considered before a decision to move forward is made. As a reasonable cost

¹⁵ While the Consumer Advocate proposed to remove the entire adjustment amount in its direct testimony, the Consumer Advocate and Maui Electric came to an agreed-upon amount in the settlement agreement. See *Parties' Stipulated Settlement Agreement*, filed April 20, 2012, in Docket No. 2011-0092, pages 11 and 12.

1 of doing business, the Company has incorporated the preliminary engineering
2 estimate in its revenue requirements in this instant case. Please refer to Mr. Uchida,
3 HELCO T-7, for Production Department O&M expenses, with regard to inclusion of
4 the preliminary engineering estimate in the 2016 test year.

5 Deferred System Development Costs and Other Costs

6 Q. How is the Company currently recording the costs of computer software
7 development projects?

8 A. The Company policy for Accounting for the Costs of Computer Software Developed
9 or Obtained for Internal Use is in HELCO-WP-1122A. In accordance with the
10 Commission's ruling in Docket No. 99-0207, the Company is expensing as incurred,
11 for ratemaking purposes, all computer software development project costs, unless
12 prior Commission approval is obtained to defer and amortize certain project costs.

13 Q. What amounts are included in 2016 test year revenue requirements for computer
14 software development costs?

15 A. The amounts included in 2016 test year revenue requirements for computer software
16 development costs are as follows:

17 Table 7: Deferred System Development Costs

Description	2016 Test Year Estimate
Average Rate Base	\$3,405,000
Amortization	\$434,000

18 A summary of the deferred system development and other costs by project is
19 provided in HELCO-1122, which includes the Human Resource Management

1 System, the Budget System Replacement, the Customer Information Services, and
2 Interactive Voice Response System projects.

3 Q. Have all system development projects mentioned above been completed?

4 A. Yes. Deferral treatment of the software development costs for the system
5 development projects mentioned above have been approved by the Commission and
6 the systems have been placed in service. See HELCO-1122 for the respective docket
7 numbers, decision and order numbers, and the in-service dates.

8 Q. What are “other costs” included in deferred system development and other costs?

9 A. Other costs are costs incurred for certain projects that Hawai‘i Electric Light has
10 requested approval for deferral treatment.

11 Q. What amounts are included in 2016 test year revenue requirements for these
12 projects?

13 A. Hawai‘i Electric Light’s 2016 test year estimates for revenue requirements include
14 the following costs:

15 Table 8: Other Deferred Costs

Description	Test Year 2016 Estimate	
	Average Rate Base	Amortization
Geothermal Firm Dispatchable Capacity Request for Proposal (“Geothermal RFP”) Docket No. 2012-0164	\$1,980,000	\$440,000
Power Supply Improvement Plan (“PSIP”) Deferred Consultant Costs, Docket No. 2016-0156	391,000	270,000

16 Q. Has the deferral treatment been approved for these projects?

17 A. The Commission has approved the deferral treatment of certain costs incurred for the
18 Geothermal RFP in Decision and Order No. 33313. Further information on the
19 Geothermal RFP and the related cost deferral is discussed by Ms. Dangelmaier at

1 HELCO-611. With respect to the PSIP cost deferral, the Company filed an
2 application for approval to defer consultant costs on June 20, 2016, in Docket
3 No. 2016-0156. Ms. Dangelmaier also provides background information on the
4 PSIP consultant costs in HELCO-610.

5 Q. Which witness includes the average rate base-unamortized deferred system
6 development and other costs in rate base?

7 A. The average unamortized system development and other costs included in rate base
8 are addressed by Ms. Kam in HELCO T-19.

9 Q. Please describe the enterprise resource planning and enterprise asset management
10 system project.

11 A. On July 23, 2014, the Companies filed an application for approval of an enterprise
12 resource planning and enterprise asset management system (“ERP/EAM System”)
13 implementation project (“ERP/EAM Project” or “Project”) and related accounting
14 treatment in Docket No. 2014-0170.¹⁶

15 The ERP/EAM System will replace the Companies’ existing core business
16 software system, ELLIPSE,¹⁷ which was implemented in 1999. The Companies use
17 ELLIPSE to generate, manage and close work orders primarily for the Energy
18 Delivery and Power Supply process areas; procure, manage and distribute materials
19 as needed; and close the general ledger, and create internal and external financial
20 statements and reports.

¹⁶ By Decision and Order No. 31757 (“D&O 31757”), filed December 18, 2013 in Docket No. 2013-0007, the Commission denied (without prejudice) the Companies’ prior application for approval of the Project.

¹⁷ ELLIPSE was formerly referred to as the Mincom Information Management System, or MIMS, which was purchased from Mincom Inc., an Australia-based company.

1 ELLIPSE needs to be replaced in order to address rapidly increasing levels of
2 operating risk due to the technical obsolescence of the application software and the
3 system software and hardware on which it is dependent. Simply stated, the
4 Companies' existing ELLIPSE enterprise resource planning system is obsolete and
5 unsupported and the Companies are concerned with the risk that this system could
6 fail and cause severe consequences to the Companies and their customers.

7 The ERP/EAM Project involves the implementation of a new system solution
8 and the retirement and removal of existing legacy systems. The primary objective of
9 the Project is to successfully execute the transition of the Companies from the
10 existing ELLIPSE system and processes to the new system and processes in a
11 manner that appropriately addresses key challenges associated with ERP/EAM
12 system implementations. Replacing ELLIPSE with a modern ERP/EAM software
13 platform is expected to result in significant benefits to the Companies and their
14 customers.

15 Q. What is an enterprise resource planning system (“ERP system”)?

16 A. Generally, ERP systems automate the integration of internal and external business
17 information across an entire organization (including finance/accounting,
18 procurement, payroll, leave management, time and attendance, sales, work
19 management and supply chain) through the use of an integrated software application.
20 The purpose of an ERP system is to facilitate the flow of information between all
21 business functions inside the boundaries of the organization and manage the
22 connections to certain outside stakeholders.

1 Q. What is an enterprise asset management system (“EAM system”)?

2 A. Generally, EAM systems facilitate the management of the physical assets of an
3 organization, in order to increase value. Similar to ERP systems, EAM systems
4 automate this activity with an integrated software application that covers such
5 activities as the design, construction, commissioning, scheduling, operations,
6 maintenance and decommissioning/replacement of plant, equipment and facilities.
7 An EAM system enables "enterprise" assets to be managed across process areas,
8 departments, locations and facilities. By managing assets on an enterprise-wide
9 level, organizations can realize cost savings through improved productivity,
10 efficiency, utilization and performance.

11 In the context of the electric utility industry, a key focus of EAM systems is
12 to keep generating facilities and equipment, linear assets (e.g., pipes and wires) and
13 telecommunications and IT systems at a high degree of availability (i.e., with
14 minimal downtime) at the lowest reasonable cost.

15 Q. What is the current status of the ERP/EAM Project?

16 A. By Decision and Order No. 33861, filed August 11, 2016 (“D&O 33861”) in Docket
17 No. 2014-0170, the Commission approved, subject to certain conditions, the
18 Companies’ underlying request to commence with the ERP/EAM Project. As a
19 result, the Companies are moving forward with the replacement of the obsolete
20 ELLIPSE enterprise resource planning system as part of this urgently needed
21 Project. Given the passage of time since the execution of the Technology Master
22 Services Agreement, Work Authorization, and Statement of Work with system

1 integrator Sparta Consulting, Inc. dba KPIT (“KPIT”) in 2013, certain matters need
2 to be addressed before starting the implementation of the Project, which is currently
3 anticipated for early January 2017. The scheduled in-service date of the Project is
4 October 1, 2018.

5 As mentioned previously, the Commission’s approval of the implementation
6 of the ERP/EAM Project is subject to certain conditions, including the following:

- 7 • Upon completion of the blueprinting phase of the Project, the Companies
8 shall undertake, complete, and file with the Commission a Bottom-Up Low-
9 Level Benefits Analysis that will identify the specifics of how benefits will
10 be obtained in the new ERP/EAM business process design.
- 11 • The Companies shall pass onto ratepayers a minimum of \$244 million
12 (nominal value) in savings over the twelve-year service life of the ERP/EAM
13 System (subject to upward adjustment by the Commission following the
14 Commission and Consumer Advocate’s review of the Companies’ Bottom-
15 Up Low-Level Benefits Analysis).
- 16 • The total cost of the ERP/EAM Project implementation phase that is subject
17 to recovery from ratepayers is capped at the maximum amount of up to
18 \$77,619,000.
- 19 • Until the blueprinting phase has been completed and the Bottom-Up Low
20 Level Benefits Analysis has been filed with and reviewed by the
21 Commission, the Commission also imposes an interim cost cap of
22 \$34.6 million that may be recovered from ratepayers.

1 • By November 7, 2016, the Companies shall file their proposed methods of
2 passing onto ratepayers the estimated monetary savings attributable to the
3 ERP/EAM Project.

4 • The Companies shall file performance metrics and a tracking mechanism for
5 the ERP/EAM System.

6 D&O 33861 also approved the following:

7 • The Companies' request to commit funds for the ERP/EAM Project's
8 hardware costs, in the amount of \$2,590,000.

9 • The Companies' request to accrue an allowance for funds used during
10 construction ("AFUDC") on the non-expense items. The Commission
11 limited AFUDC to the 1.75% short-term debt rate adopted in Hawaiian
12 Electric's 2011 test year rate case in Docket No. 2010-0080.

13 • The Companies' request to amortize the total deferred costs, including any
14 accrued AFUDC, over a twelve-year period, beginning upon Go-Live, with
15 the inclusion of the unamortized amounts, including AFUDC, in rate base.

16 • The Companies' request to amortize the cost of the Companies' Human
17 Resources Suite System following the system's retirement upon Go-Live
18 through the twelve-year amortization period approved by the Commission in
19 Docket No. 2006-0003.

20 Q. What was the Commission's decision on the Companies' request to defer all
21 software development costs for the Implementation Project phase of the ERP/EAM
22 Project?

1 A. In Decision and Order No. 33233 (“D&O 33233”) in Docket No. 2014-0170, the
2 Commission denied the request and ordered that the Companies’ existing accounting
3 policy for software project costs will apply to the Implementation Project phase.
4 Thus, the Companies must expense certain costs as incurred, as specified in that
5 policy. The decision and order referenced the abbreviated rate cases filed by
6 Hawaiian Electric (Docket No. 2013-0373) and Maui Electric (Docket No. 2014-
7 0318) in which the Companies chose to forego the opportunity to increase their rates
8 in recognition that their customers were in a challenging high bill environment.
9 D&O 33233 stated the following:

10 The above-noted developments, initiated at the Companies’ own
11 volition, do not support or lend credence to their overall contention
12 that the Companies’ Existing Accounting Policy do not enable them
13 to recover all prudently incurred costs during the development of the
14 software when they incur such costs outside of rate case test years.
15 Instead, subject to the commission's approval in Dockets Nos. 2013-
16 0373, 2014-0318, and 2015-0170, the Companies have ultimately
17 chosen to forego or delay the recovery of certain expenses through
18 their respective base rates, including expenses incurred between rate
19 cases (i.e., costs incurred “outside of rate case test years”).

20 D&O 33233, pp. 89-90.

21 It is apparent that the Commission’s view is that the software development
22 costs that the Companies must expense pursuant to their existing software
23 accounting policy should be recovered through base rates approved in a rate case.
24 Given the approvals in D&O 33861, the Companies are moving forward with the
25 ERP/EAM Project. As part of that effort, the Companies have identified and
26 quantified the costs in the Implementation Project phase that must be expensed and

1 determined the timing of the incurrence of those costs. The Implementation Project
2 phase will be 24 months starting in January 2017.

3 Q. Did Hawai'i Electric Light include ERP/EAM Project costs in the 2016 test year
4 revenue requirement?

5 A. Yes. Hawai'i Electric Light has incorporated normalized expenses amounting to
6 \$1,198,000 of O&M expense and \$6,000 of payroll tax expense associated with the
7 Implementation Project phase of the ERP/EAM Project into its 2016 test year
8 revenue requirement so that these estimates are reflected in the base rates of this
9 instant rate case. See HELCO-WP-1122B for the preliminary data obtained from
10 the ERP/EAM Project team and the normalization adjustment proposed. Subsequent
11 to the time the Project team provided the expense budget data for the 2016 to 2018
12 timeframe and the Company incorporated the normalized expense amount into its
13 2016 test year revenue requirement, changes were made to the project timeline,
14 which has affected the amount the Companies anticipate incurring during the 2016 to
15 2018 timeframe. Accordingly, Hawai'i Electric Light will reflect the revised
16 normalized expense amount in the 2016 test year estimate at the next available
17 opportunity.

18 Standard Labor Rates

19 Q. What is the general concept behind standard labor rates?

20 A. The general concept is to distribute labor costs (amounts paid to employees) using
21 the same rate per hour regardless of the type of "pay" hour involved (e.g., straight
22 time, time and one-half, or double time pay).

1 Q. Why is Hawai'i Electric Light using standard labor rates?

2 A. One key reason is that ELLIPSE requires the use of standard labor rates in
3 distributing labor costs.

4 Q. How is the Company accounting for the difference between the amounts paid
5 employees for hours worked and the amount of labor costs distributed using standard
6 labor rates?

7 A. The difference between labor amounts paid and the amounts distributed is "trued up"
8 in that the difference is used to adjust the amounts distributed so that, in total, the
9 amounts distributed equal the amounts paid for each employee.

10 Q. How are the standard labor rates calculated?

11 A. The basic calculation is to divide actual amounts paid by total labor hours, for
12 example, straight time, time and one-half and double time hours. Separate standard
13 labor rates are calculated based on employees grouped with similar roles or
14 positions. These employee groupings are called labor classes. The calculated hourly
15 rate is then adjusted to reflect any general pay increases expected during the year in
16 which the standard labor rates will be in effect. The standard labor rates are re-
17 evaluated at least once a year, and adjusted as appropriate.

18 Q. What is the basis for the standard labor rates used for the 2016 test year?

19 A. Recorded 2015 labor hour information was used to develop the standard labor rates
20 for the 2016 test year labor estimates. The 2015 labor hour information was adjusted
21 for management overtime hours that were not compensated to determine the base

1 standard labor rate for 2016. For the bargaining unit labor classes, 2015 labor hours
2 were adjusted to reflect the overtime levels anticipated in 2016.

3 Q. Is this consistent with the method used in Hawai'i Electric Light's standard labor
4 rate calculations in the most recent rate case?

5 A. Yes. The process to adjust the base information (2015 actual labor hours for the
6 overtime levels anticipated in the test year) to determine the 2016 Budget standard
7 labor rates is consistent with the method used in the 2013, 2010 and 2006 test year
8 rate cases.

9 Q. How is the true-up calculated?

10 A. The true-up is based on the proportionate share of labor dollars charged to each
11 activity, work order, etc. to the total amount of labor dollars charged during the
12 applicable period. For each employee, the true-up is calculated and applied at the
13 time of each paycheck run and the processing of each month-end payroll accrual.
14 The payroll accrual records labor costs from the end of the last pay-period in the
15 month to the end of the month.

16 Q. Can you illustrate the "true-up" process?

17 A. Yes. The "true-up" process is illustrated in HELCO-WP-1121, p. 4. The left side of
18 the workpaper illustrates how an employee's pay is calculated, and how the pay
19 would be distributed if the employee's actual pay rate was used. The right side of
20 the workpaper illustrates how the standard labor rate is calculated and how the
21 employee's labor costs are initially distributed and then trued-up to the employee's
22 total actual pay. For simplicity, the illustration is based on an assumed actual

1 straight time pay rate of \$10.00 per hour, and an assumed equivalent calculated
2 standard labor rate of \$10.00 per hour.

3 Q. What is the impact of using standard labor rates instead of actual employee pay rates
4 in calculating the 2016 test year labor estimates?

5 A. The impact has not been quantified, and the calculation would be very difficult to
6 perform. However, a sense of the possible difference can be obtained from
7 reviewing the size of the net true-up adjustment in prior years. The annual net true-
8 up adjustment for 2011 through 2015, by block of NARUC account numbers, is
9 provided in HELCO-WP-1121. Based on the historical true up data, it is evident that
10 the use of standard labor rates has not resulted in large true-up amounts in the
11 historical years and that the use of standard labor rates in arriving at the Company's
12 2016 test year estimate for labor costs is reasonable.

13 General Wage Increase

14 Q. What is the impact of general wage increases?

15 A. General wage rates for test year 2016 are expected to be, on average, 3.1% higher
16 than wages rates recorded one year earlier in 2015 for bargaining unit employees and
17 3.9% higher for management (formerly referred to as merit) employees (see
18 HELCO-1130). The assumptions used in determining the bargaining unit and
19 management salary increases that are included in the 2016 Operating Budget are
20 discussed by Mr. Faagai in HELCO T-12.

21 On-Costs

22 Q. What does the term "on-costs" refer to?

1 A. "On-costs" is the MIMS terminology for overhead. Overhead (on-costs) is a well-
2 recognized and accepted accounting concept applied when costs cannot reasonably
3 or practically be charged to the appropriate "end destination point" at the time the
4 cost is incurred. For example, the costs associated with receiving the storeroom
5 stock material (e.g., conductors) that could later be issued and used on either a
6 capital project or O&M project cannot reasonably or practically be charged to the
7 proper project or end account number at the time the receiving costs are incurred. In
8 these types of situations, the costs are typically charged to an overhead account at
9 the time incurred and then allocated to the appropriate projects and accounts using a
10 systematic and rational procedure. In this stores material example, the material
11 receiving costs (and other costs to operate the storeroom) can be allocated (cleared)
12 as a percentage of the material cost (the clearing base) as the material is issued to the
13 various capital and O&M projects.

14 Q. What types of costs are being distributed through the on-cost process, and how are
15 the costs being distributed?

16 A. The major cost items included in each on-cost and the basis over which each on-cost
17 is allocated are shown in HELCO-1121, p. 3. The specific on-cost is shown under
18 the first column of the exhibit, the major cost items are shown under the second
19 column, and the allocation base for each on-cost is shown under the third column.
20 For example, the costs allocated through the non-productive wages on-cost (see third
21 item under the first column) include vacation, holiday and sick pay, as well as the
22 costs of other excused absences such as absences for a death in the family or for jury

1 duty (see second column). Non-productive wages are allocated by applying an on-
2 cost dollar amount to productive labor hours (see third column).

3 Q. Was the subject of on-costs discussed in a prior Hawai'i Electric Light rate case?

4 A. Hawai'i Electric Light included discussions on the subject of on-costs in its 2013,
5 2010 and 2006 test year rate cases. The Commission accepted Hawai'i Electric
6 Light's on-cost calculations in both the Hawai'i Electric Light 2010 and 2006 test
7 year rate cases.¹⁸

8 General Inflation Factor

9 Q. Was a general inflation factor utilized in Hawai'i Electric Light's budgeting process?

10 A. Yes. In developing the non-labor O&M estimates for the 2016 Operating Budget,
11 Hawai'i Electric Light used a general inflation factor when specific known cost
12 indices for non-labor costs were not available. Budgeters were instructed to reflect
13 in their 2016 budget specific inflation rates or cost indices that were applicable to the
14 cost items being estimated. For example, the inflation rate or cost index used to
15 budget the costs of various chemicals consumed in overhauling a generating unit
16 may be quite different from the appropriate inflation rate or cost index used in
17 estimating the cost of postage for Company mailings. When specific known cost
18 indices for non-labor costs were not available, a general inflation factor was used.

19 Q. What general inflation factor was used in developing the 2016 Operating Budget?

¹⁸ The Company withdrew its 2013 rate case. See footnote 11 on page 46.

1 A. Hawai'i Electric Light used a general inflation factor of 1.8% for 2016 in preparing
2 the 2016 Operating Budget.

3 Q. How did Hawai'i Electric Light determine the 1.8% general inflation factor used in
4 preparing the 2016 Operating Budget?

5 A. Hawai'i Electric Light used an inflation rate that appeared to be reasonable and
6 conservative, considering the information available at the time the budgets were
7 prepared. The Blue Chip Economic Indicators reported in its October 10, 2015
8 issue that the Gross Domestic Product Price Index ("GDPPI") for 2016 was
9 forecasted to be 1.8%, as shown on HELCO-WP-1141A, page 5, and Hawai'i
10 Electric Light used this rate for the preparation of its 2016 Operating Budget.

11 Q. Has the Commission allowed the use of inflation factors in determining projected
12 expenses in previous rate case decisions?

13 A. Yes. The Commission allowed the use of an inflation adjustment based on an
14 inflation factor in previous decisions, including Hawai'i Electric Light's 2010 test
15 year rate case.

16 Q. In previous rate cases, has Hawai'i Electric Light used forecasted changes in the
17 GDPPI index in developing its general inflation factor?

18 A. Yes. In Hawai'i Electric Light's 2010 test year rate case, the Company used the
19 GDPPI in developing its general inflation factor.

20 Q. Why is it reasonable that Hawai'i Electric Light use the GDPPI instead of other
21 indices in developing its general inflation factor for use in preparing the 2016
22 Operating Budget?

1 A. Hawai‘i Electric Light’s use of the GDPPI instead of other price indices in
2 developing its general inflation factor for use in preparing the 2016 Operating
3 Budget is reasonable because the GDPPI was identified as the non-labor cost
4 escalation rate to be used in determining the non-labor O&M revenue adjustment
5 mechanism in the decoupling mechanism approved by *Final Decision and Order*
6 *and Dissenting Opinion of Leslie H. Kondo, Commissioner*, filed August 31, 2010 in
7 Docket No. 2008-0274.

8 Q. Explain how the inflation factor gets applied in the budgeting system to derive the
9 2016 Operating Budget.

10 A. The UI Planner budgeting system allows the budget user to select a data field
11 indicating the use of an “escalator” (general inflation factor). By selecting this
12 escalator data field, the budgeting system will automatically escalate the amount
13 budgeted by the escalation factor that has been set up in the budgeting system. The
14 information on HELCO-1141 was developed by sorting the UI Planner budget data
15 by selecting all budget data that used the escalation data field.

16 Vacancy Rate Adjustment

17 Q. Do the 2016 test year O&M estimates reflect a vacancy rate adjustment?

18 A. Yes, the 2016 test year O&M estimates reflect a vacancy rate adjustment based on a
19 vacancy rate of 7.24%, as described by Ms. Lee-Moku at T-15.

20 Q. How was the vacancy rate adjustment quantified?

21 A. The adjustment is shown at HELCO-1142 and follows the framework and
22 methodology used in the 2013 test year rate case at HELCO-1311. The adjustment

1 impacts three areas including: (1) labor cost, (2) employee benefits and (3) payroll
2 tax expense.

3 Labor Cost Adjustment

4 Q. What is the impact of labor cost adjustment?

5 A. The labor cost adjustment decreases the 2016 test year O&M labor by (\$1,224,000)
6 as shown at HELCO-1142.

7 Q. Where is the labor cost adjustment reflected in 2016 test year estimates?

8 A. The labor cost adjustment was applied to all O&M NARUC accounts and is
9 reflected as a budget adjustment to GL Code Entries at HELCO-WP-1103C.

10 Employee Benefits Adjustment

11 Q. What is the impact of the employee benefits adjustment?

12 A. The employee benefits adjustment decreases the 2016 test year O&M non-labor by
13 (\$641,000) as shown at HELCO-1142.

14 Q. Where is the employee benefits adjustment reflected in test year estimates?

15 A. The employee benefits adjustment is reflected as a budget adjustment to GL Code
16 Entries at HELCO-WP-1103C.

17 Payroll Tax Adjustment

18 Q. What is the impact of the payroll tax adjustment?

19 A. The payroll tax adjustment decreases the 2016 test year expense estimates by
20 (\$87,000) as shown at HELCO-1142.

21 Q. Where is the payroll tax adjustment reflected in 2016 test year estimates?

1 A. The payroll tax adjustment is reflected as a budget adjustment to payroll tax expense
2 at HELCO-WP-1701.

3 COMPLIANCE MATTERS

4 O&M Labor Costs

5 Q. Is summary information provided for the 2016 test year O&M labor costs?

6 A. Yes. Summary information for the 2016 test year O&M labor costs is provided in
7 two places for different purposes.

8 Q. Please describe the first source of 2016 O&M labor costs summary information.

9 A. First, the 2016 test year estimate for O&M labor costs by account group is provided
10 in HELCO-WP-1140A. This information is used by Ms. Kam in HELCO T-19 in
11 the calculation of the working cash component of test year average rate base.

12 Q. Please describe the second source of 2016 O&M labor costs summary information.

13 A. Second, the 2016 test year estimate for O&M labor costs broken down between
14 bargaining unit labor costs and non-bargaining unit labor costs are provided in
15 HELCO-1140.

16 Q. How will the labor cost information provided in HELCO-1140 broken down
17 between bargaining unit and non-bargaining unit labor cost be used?

18 A. This information will be used in the calculation of the labor component of the O&M
19 revenue adjustment mechanism calculations for years following this test year in the
20 decoupling mechanism approved by the *Final Decision and Order and Dissenting*
21 *Opinion of Leslie H. Kondo, Commissioner*, filed August 31, 2010 in Docket
22 No. 2008-0274.

SUMMARY

Q. Please summarize your testimony.

A. The test year 2016 normalized amounts which the Company has demonstrated to be fair and reasonable in this docket are summarized in Table 9 below:

Table 9: Summary of A&G Test Year Estimates

Description	Test Year Expense/ Rate Base Average	Exhibit
O&M Expenses:		
Accounting Department	\$9,007,000	HELCO-1102A, p. 3
President's Office	\$1,234,000	HELCO-1101B
GL Code Entries and Miscellaneous	(\$22,651,000)	HELCO-1101C
Abandoned Capital Project Costs	\$283,000	HELCO-1123
Preliminary Engineering	\$128,000	HELCO-1124
Rate Base Components:		
Deferred System Development Costs		
Unamortized Test Year Average	\$3,405,000	HELCO-1122
Amortization Expense for 2016	\$434,000	HELCO-1122
Other Deferred Costs		
Unamortized Test Year Average	\$2,371,000	HELCO-1122
Amortization Expense for 2016	\$710,000	HELCO-1122
Pension and OPEB Plans		
<u>Pension:</u>		
Estimated NPPC	\$6,903,000	HELCO-1201, p.1
Amortization:		
Prepaid Pension	(\$99,000)	HELCO-1111 p.1
Pension Tracking Regulatory Asset	\$4,582,000	HELCO-1111, p.2
Pension Contribution in Excess of NPPC		
Regulatory Asset	<u>\$609,000</u>	HELCO-1111, p.3
Total Pension Expense	<u>\$11,995,000</u>	HELCO-1201, p.1
Pension Tracking Regulatory Asset	\$20,620,000	HELCO-1111, p.2
Contributions in Excess of NPPC	\$2,743,000	HELCO-1111, p.3
Regulatory Liability – Prepaid Pension	(\$446,000)	HELCO-1111, p.1
<u>OPEB:</u>		
Estimated NPBC	\$0	HELCO-1201, p.1
Amortization:		
SFAS 106 Regulatory Asset	\$0	HELCO-1112, p.2
OPEB Tracking Regulatory Liability	<u>(\$309,000)</u>	HELCO-1112, p.4
Total OPEB Expense	<u>(\$309,000)</u>	HELCO-1201, p.1
OPEB Tracking Regulatory Liability	<u>\$(1,393,000)</u>	HELCO-1112, p.4

1 With respect to the pension and OPEB plans, Hawai'i Electric Light
2 respectfully submits that for the reasons discussed above, the Commission approves
3 the continued use of the pension and OPEB tracking mechanisms approved in both
4 the HELCO 2010 and HELCO 2006 Decision and Orders. This results in the
5 inclusion of prepaid pension liability, pension tracking regulatory asset, pension
6 contributions in excess of NPPC regulatory asset and OPEB regulatory liability in
7 rate base and the inclusion of the related amortizations in O&M expenses, as they
8 are consistent with the pension and OPEB tracking mechanism.

9 Hawai'i Electric Light also requests Commission approval of the three
10 proposed changes to its accounting methodology: (1) A&G transfers to construction,
11 (2) implementation of a Power Supply clearing account, and (3) OMAC.

12 Q. Does this conclude your testimony?

13 A. Yes, it does.

Hawai'i Electric Light Company, Inc.

PAUL C. FRANKLIN

EDUCATIONAL BACKGROUND AND EXPERIENCE

Business Address: Hawaii Electric Light Company, Inc.
1200 Kilauea Avenue.
Hilo, HI 96720

Current Position: Financial General Manager, Hawaii Electric Light Company,
Inc. and Maui Electric Company, Limited.

Previous Positions: Director, Budgets and Business Support
Management Accounting Administrator

Years of Service: 9 years

Other Experience: Tax Senior Associate – Deloitte Tax, LLP

Education: Bachelor of Science – Accounting
University of Southern California

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Summary
Operation and Maintenance Expenses - HEP IPP-Owned
(\$ Thousands)

NARUC Block	Reference	L/NL	A	B	C		D	E
			2016 Operating Budget	Budget	Adjustments Normalization Ratemaking		2016 Test Year Estimate	
1	Production	HELCO-1101 p.3	L	\$ 9,423	\$ (1,774)	\$ -	\$ -	\$ 7,649
2	Production	HELCO-1101 p.6	NL	12,225	(836)	1,448	-	12,837
3		Subtotal		21,647	(2,610)	1,448	-	20,485
4	Transmission	HELCO-1101 p.3	L	1,733	(225)	-	-	1,509
5	Transmission	HELCO-1101 p.6	NL	3,456	(78)	(371)	-	3,007
6		Subtotal		5,189	(303)	(371)	-	4,515
7	Distribution	HELCO-1101 p.4	L	3,390	(423)	10	-	2,978
8	Distribution	HELCO-1101 p.7	NL	10,260	530	(1,106)	-	9,684
9		Subtotal		13,650	107	(1,095)	-	12,661
10	Customer Accounts	HELCO-1101 p.4	L	49	(4)	-	-	46
11	Customer Accounts	HELCO-1101 p.7	NL	8,883	(741)	67	2	8,212
12		Subtotal		8,932	(744)	67	2	8,257
13	Uncollectible Accounts	HELCO-1101 p.7	NL	593	-	-	-	593
13	Customer Services	HELCO-1101 p.4	L	409	(30)	-	-	380
14	Customer Services	HELCO-1101 p.8	NL	444	411	-	-	855
15		Subtotal		854	382	-	-	1,235
16	A&G	HELCO-1101 p.5	L	3,886	(753)	78	-	3,211
17	A&G	HELCO-1101 p.8	NL	21,091	(5,010)	2,057	(656)	17,482
18		Subtotal		24,977	(5,763)	2,135	(656)	20,692
19	Total Summary	HELCO-1101 p.5	L	18,891	(3,208)	89	-	15,771
20	Total Summary	HELCO-1101 p.8	NL	56,952	(5,724)	2,095	(654)	52,669
21		Grand Total		\$ 75,843	\$ (8,932)	\$ 2,184	\$ (654)	\$ 68,440

Notes:

- Totals may not add exactly due to rounding.
HEP IPP-Owned: pages 1 through 8
- See pages 3 through 5 for the aggregation of O&M labor expenses of all the departments and GL code entries and pages 6 through 8 for the aggregation of O&M non-labor expenses of all the departments and GL code entries.
- See page 2 for the mapping of the test year estimates by NARUC block of accounts to all the departments and GL code entries.
HEP Utility-Owned:
- The aggregation of O&M expenses in the HEP Utility-Owned scenario is presented on pages 9 through 13.

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
All Departments
Operation and Maintenance Expense Test Year Estimates - Departmental Mapping
HEP IPP-Owned
(\$ Thousands)

NARUC Block	L/NL	A	B	C	D	E	F	G	H	I	J	K
		HELCO-601 System Operations	HELCO-701 Production	HELCO-801 Distribution	HELCO-901 Customer Service	HELCO-1001 Support Services	HELCO-1101A Accounting	HELCO-1101B President	HELCO-1101C GL Code Entres	HELCO-1501 Administration	HELCO-1801 Engineering	=sum(G to J) Total
1	Production	L	188	8,005	52	-	-	-	(597)	-	-	7,649
2	Production	NL	2,359	15,453	51	-	-	27	50	(5,174)	71	12,837
3	Subtotal		2,547	23,458	103	-	-	27	50	(5,771)	71	20,485
4	Transmission	L	598	0	1,016	-	-	-	(118)	-	12	1,509
5	Transmission	NL	593	74	3,132	-	10	16	(1,167)	-	349	3,007
6	Subtotal		1,190	74	4,149	-	10	16	(1,285)	-	361	4,515
7	Distribution	L	512	0	2,579	-	65	23	(221)	-	20	2,978
8	Distribution	NL	317	0	10,831	539	78	105	(2,544)	-	357	9,684
9	Subtotal		829	0	13,410	539	143	128	(2,765)	-	377	12,661
10	Customer Accounts	L	12	-	37	0	-	-	(4)	-	-	46
11	Customer Accounts	NL	9	-	34	7,979	-	-	(47)	-	236	8,212
12	Subtotal		21	-	71	7,979	-	-	(50)	-	236	8,257
13	Uncollectible Accounts	NL	-	-	-	593	-	-	-	-	-	593
13	Customer Services	L	-	-	-	0	-	-	(30)	196	214	380
14	Customer Services	NL	-	22	-	513	-	-	(281)	449	152	855
15	Subtotal		-	22	-	513	-	-	(310)	644	366	1,235
16	A&G	L	-	0	7	-	1,148	960	(166)	792	8	3,211
17	A&G	NL	-	11	51	65	2,992	7,877	(12,302)	17,642	423	17,482
18	Subtotal		-	11	58	65	4,141	8,836	(12,469)	18,434	431	20,692
19	Total	L	1,310	8,005	3,692	0	1,214	983	(1,135)	987	254	15,771
20	Total	NL	3,278	15,560	14,099	9,689	3,081	8,024	(21,515)	18,091	1,589	52,669
21	Grand Total		4,588	23,565	17,791	9,689	4,294	9,007	(22,651)	19,078	1,843	68,440

Notes:

- Totals may not add exactly due to rounding.
- The schedule above maps the O&M expense by NARUC block of accounts to the source departmental exhibits indicated in the column header.

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Labor Operation and Maintenance Expenses
(\$ Thousands)

NARUC Block	Department	Reference	A	B	C		D	E
			2016 Operating Budget	Budget	(See HELCO-WP-1103) Adjustments Normalization		Ratemaking	=sum(A to D) 2016 Test Year Estimate
Production Operation (B30)								
1	System Operations	HELCO-601	\$ 439	\$ (251)	\$ -	\$ -	\$ 188	
2	Generation	HELCO-701	5,348	(922)	-	-	4,427	
3	Distribution	HELCO-801	23	-	-	-	23	
4	Customer Service	HELCO-901	-	-	-	-	-	
5	Support Services	HELCO-1001	-	-	-	-	-	
6	Accounting	HELCO-1101A	-	-	-	-	-	
7	President	HELCO-1101B	-	-	-	-	-	
8	GL Code Entries	HELCO-1101C	-	(336)	-	-	(336)	
9	Administration	HELCO-1501	-	-	-	-	-	
10	Engineering	HELCO-1801	-	-	-	-	-	
11	Subtotal		5,810	(1,508)	-	-	4,302	
Production Maintenance (B31)								
12	System Operations	HELCO-601	-	-	-	-	-	
13	Generation	HELCO-701	3,583	(5)	-	-	3,579	
14	Distribution	HELCO-801	30	-	-	-	30	
15	Customer Service	HELCO-901	-	-	-	-	-	
16	Support Services	HELCO-1001	-	-	-	-	-	
17	Accounting	HELCO-1101A	-	-	-	-	-	
18	President	HELCO-1101B	-	-	-	-	-	
19	GL Code Entries	HELCO-1101C	-	(261)	-	-	(261)	
20	Administration	HELCO-1501	-	-	-	-	-	
21	Engineering	HELCO-1801	-	-	-	-	-	
22	Subtotal		3,613	(266)	-	-	3,347	
23	Total Production		9,423	(1,774)	-	-	7,649	
Transmission Operation (B32)								
24	System Operations	HELCO-601	597	(56)	-	-	540	
25	Generation	HELCO-701	0	-	-	-	0	
26	Distribution	HELCO-801	299	-	-	-	299	
27	Customer Service	HELCO-901	-	-	-	-	-	
28	Support Services	HELCO-1001	-	-	-	-	-	
29	Accounting	HELCO-1101A	-	-	-	-	-	
30	President	HELCO-1101B	-	-	-	-	-	
31	GL Code Entries	HELCO-1101C	-	(61)	-	-	(61)	
32	Administration	HELCO-1501	-	-	-	-	-	
33	Engineering	HELCO-1801	-	-	-	-	-	
34	Subtotal		895	(117)	-	-	778	
Transmission Maintenance (B33)								
35	System Operations	HELCO-601	57	-	-	-	57	
36	Generation	HELCO-701	-	-	-	-	-	
37	Distribution	HELCO-801	768	(51)	-	-	718	
38	Customer Service	HELCO-901	-	-	-	-	-	
39	Support Services	HELCO-1001	-	-	-	-	-	
40	Accounting	HELCO-1101A	-	-	-	-	-	
41	President	HELCO-1101B	-	-	-	-	-	
42	GL Code Entries	HELCO-1101C	-	(57)	-	-	(57)	
43	Administration	HELCO-1501	-	-	-	-	-	
44	Engineering	HELCO-1801	12	-	-	-	12	
45	Subtotal		838	(108)	-	-	730	
46	Total Transmission		1,733	(225)	-	-	1,509	

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Labor Operation and Maintenance Expenses
(\$ Thousands)

NARUC Block	Department	Reference	A	B	C	D	E
			2016 Operating Budget	Budget	(See HELCO-WP-1103) Adjustments Normalization	Ratemaking	=sum(A to D) 2016 Test Year Estimate
Distribution Operation (B34)							
47	System Operations	HELCO-601	512	-	-	-	512
48	Generation	HELCO-701	0	-	-	-	0
49	Distribution	HELCO-801	704	(8)	-	-	696
50	Customer Service	HELCO-901	-	-	-	-	-
51	Support Services	HELCO-1001	65	-	-	-	65
52	Accounting	HELCO-1101A	23	-	-	-	23
53	President	HELCO-1101B	-	-	-	-	-
54	GL Code Entries	HELCO-1101C	-	(94)	10	-	(84)
55	Administration	HELCO-1501	-	-	-	-	-
56	Engineering	HELCO-1801	5	-	-	-	5
57	Subtotal		1,310	(103)	10	-	1,217
Distribution Maintenance (B35)							
58	System Operations	HELCO-601	-	-	-	-	-
59	Generation	HELCO-701	0	-	-	-	0
60	Distribution	HELCO-801	2,066	(183)	-	-	1,883
61	Customer Service	HELCO-901	-	-	-	-	-
62	Support Services	HELCO-1001	-	-	-	-	-
63	Accounting	HELCO-1101A	-	-	-	-	-
64	President	HELCO-1101B	-	-	-	-	-
65	GL Code Entries	HELCO-1101C	-	(137)	-	-	(137)
66	Administration	HELCO-1501	-	-	-	-	-
67	Engineering	HELCO-1801	15	-	-	-	15
68	Subtotal		2,081	(320)	-	-	1,760
69	Total Distribution		3,390	(423)	10	-	2,978
Customer Accounts (B36)							
70	System Operations	HELCO-601	12	-	-	-	12
71	Generation	HELCO-701	-	-	-	-	-
72	Distribution	HELCO-801	37	-	-	-	37
73	Customer Service	HELCO-901	0	-	-	-	0
74	Support Services	HELCO-1001	-	-	-	-	-
75	Accounting	HELCO-1101A	-	-	-	-	-
76	President	HELCO-1101B	-	-	-	-	-
77	GL Code Entries	HELCO-1101C	-	(4)	-	-	(4)
78	Administration	HELCO-1501	-	-	-	-	-
79	Engineering	HELCO-1801	-	-	-	-	-
80	Total Customer Accounts		49	(4)	-	-	46
Customer Service (B37)							
81	System Operations	HELCO-601	-	-	-	-	-
82	Generation	HELCO-701	-	-	-	-	-
83	Distribution	HELCO-801	-	-	-	-	-
84	Customer Service	HELCO-901	0	-	-	-	0
85	Support Services	HELCO-1001	-	-	-	-	-
86	Accounting	HELCO-1101A	-	-	-	-	-
87	President	HELCO-1101B	-	-	-	-	-
88	GL Code Entries	HELCO-1101C	-	(30)	-	-	(30)
89	Administration	HELCO-1501	196	-	-	-	196
90	Engineering	HELCO-1801	214	-	-	-	214
91	Total Customer Service		409	(30)	-	-	380

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Labor Operation and Maintenance Expenses
(\$ Thousands)

NARUC Block	Department	Reference	A	B	C (See HELCO-WP-1103)		D	E =sum(A to D)
			2016 Operating Budget	2016 Adjustments Budget	2016 Normalization	2016 Ratemaking	2016 Test Year Estimate	
92	A&G (B38, B39)							
93	System Operations	HELCO-601	6	(6)	-	-	-	-
94	Generation	HELCO-701	55	(55)	-	-	-	0
95	Distribution	HELCO-801	461	(454)	-	-	-	7
96	Customer Service	HELCO-901	-	-	-	-	-	-
97	Support Services	HELCO-1001	1,148	-	-	-	-	1,148
98	Accounting	HELCO-1101A	954	6	-	-	-	960
99	President	HELCO-1101B	462	-	-	-	-	462
100	GL Code Entries	HELCO-1101C	-	(244)	78	-	-	(166)
101	Administration	HELCO-1501	792	-	-	-	-	792
102	Engineering	HELCO-1801	8	-	-	-	-	8
103	Total A&G		3,886	(753)	78	-	-	3,211
Grand Total								
104	All Departments Labor Expense		\$ 18,891	\$ (3,208)	\$ 89	\$ -	\$ -	\$ 15,771

Summary of Adjustments (used in HELCO-1140):

105	Production - Departments			(1,177)	c=a-b
106	Production - GL Code Entries	lines 8+19		(597)	b
107	Total Production	lines 11+22		(1,774)	a
105	Transmission - Departments			(107)	f=d-e
108	Transmission - GL Code	lines 8+19		(118)	e
109	Total Transmission	lines 30,41,53,64		(225)	d
108	Distribution - Departments			(191)	f=d-e
110	Distribution - GL Code	lines +		(232)	e
111	Total Distribution	lines 34,45,57,68		(423)	d
112	Customer Accounts - Departments			-	i=g-h
113	Customer Accounts - GL Code	lines 14+26		(4)	h
114	Total Customer Accounts	lines 36,48,59,71		(4)	g
115	Customer Service - Departments			-	l=j-k
116	Customer Service - GL Code	lines 18+30		(30)	k
117	Total Customer Service	lines 40,52,63,75		(30)	j
118	A&G - Departments			(509)	o=m-n
119	A&G - GL Code	lines 22+34		(244)	n
120	Total A&G	lines 44,56,67,79		(753)	m

Notes:

- Pages 3 to 8 - Column A: HELCO-WP-101 (HELCO 2016 Rate Case Reports)
- Pages 3 to 8 - Columns B, C, D: HELCO-WP-1103
- There are no changes to O&M labor expenses in HEP Utility-Owned scenario compared to O&M labor expenses in HEP IPP-owned scenario. Accordingly, the O&M labor expenses are used in the aggregation of O&M expenses in both HEP IPP-Owned scenario on page 1 and HEP Utility-Owned scenario on page 9.

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Non-Labor Operation and Maintenance Expenses - HEP IPP-Owned
(\$ Thousands)

NARUC Block		A	B	C	D	E	
		(See HELCO-WP-1103)				=sum(A to D)	
		2016	Adjustments			2016	
Department	Reference	Operating Budget	Budget	Normalization	Ratemaking	Test Year Estimate	
Production Operation (B30)							
1	System Operations	HELCO-601	\$ 3,147	\$ (1,959)	\$ 1,171	\$ -	\$ 2,359
2	Generation	HELCO-701	5,569	78	-	-	5,647
3	Distribution	HELCO-801	21	0	-	-	22
4	Customer Service	HELCO-901	-	-	-	-	-
5	Support Services	HELCO-1001	-	-	-	-	-
6	Accounting	HELCO-1101A	11	-	-	-	11
7	President	HELCO-1101B	14	35	-	-	50
8	GL Code Entries	HELCO-1101C	(3,139)	-	-	-	(3,139)
9	Administration	HELCO-1501	-	-	-	-	-
10	Engineering	HELCO-1801	69	-	-	-	69
11	Subtotal		5,692	(1,845)	1,171	-	5,019
Production Maintenance (B31)							
12	System Operations	HELCO-601	-	-	-	-	-
13	Generation	HELCO-701	8,524	1,006	277	-	9,806
14	Distribution	HELCO-801	29	1	-	-	29
15	Customer Service	HELCO-901	-	-	-	-	-
16	Support Services	HELCO-1001	-	-	-	-	-
17	Accounting	HELCO-1101A	16	-	-	-	16
18	President	HELCO-1101B	-	-	-	-	-
19	GL Code Entries	HELCO-1101C	(2,035)	-	-	-	(2,035)
20	Administration	HELCO-1501	-	-	-	-	-
21	Engineering	HELCO-1801	-	3	-	-	3
22	Subtotal		6,532	1,009	277	-	7,818
23	Total Production		12,225	(836)	1,448	-	12,837
Transmission Operation (B32)							
24	System Operations	HELCO-601	512	39	-	-	551
25	Generation	HELCO-701	73	0	-	-	74
26	Distribution	HELCO-801	307	7	-	-	314
27	Customer Service	HELCO-901	-	-	-	-	-
28	Support Services	HELCO-1001	10	-	-	-	10
29	Accounting	HELCO-1101A	12	-	-	-	12
30	President	HELCO-1101B	-	-	-	-	-
31	GL Code Entries	HELCO-1101C	(514)	-	-	-	(514)
32	Administration	HELCO-1501	-	-	-	-	-
33	Engineering	HELCO-1801	61	-	(0)	-	61
34	Subtotal		463	46	(0)	-	509
Transmission Maintenance (B33)							
35	System Operations	HELCO-601	36	5	-	-	41
36	Generation	HELCO-701	-	-	-	-	-
37	Distribution	HELCO-801	3,298	(245)	(234)	-	2,818
38	Customer Service	HELCO-901	-	-	-	-	-
39	Support Services	HELCO-1001	-	-	-	-	-
40	Accounting	HELCO-1101A	3	-	-	-	3
41	President	HELCO-1101B	-	-	-	-	-
42	GL Code Entries	HELCO-1101C	(653)	-	-	-	(653)
43	Administration	HELCO-1501	-	-	-	-	-
44	Engineering	HELCO-1801	309	116	(137)	-	288
45	Subtotal		2,993	(124)	(371)	-	2,498
46	Total Transmission		3,456	(78)	(371)	-	3,007

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Non-Labor Operation and Maintenance Expenses - HEP IPP-Owned
(\$ Thousands)

NARUC Block		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	
		2016 Operating Budget	Budget	Normalization	Rate-making	2016 Test Year Estimate	
(See HELCO-WP-1103)							
		Adjustments				=sum(A to D)	
Department	Reference	Budget	Budget	Normalization	Rate-making	Estimate	
Distribution Operation (B34)							
47	System Operations	HELCO-601	270	48	-	-	317
48	Generation	HELCO-701	0	-	-	-	0
49	Distribution	HELCO-801	912	12	-	-	924
50	Customer Service	HELCO-901	322	217	-	-	539
51	Support Services	HELCO-1001	77	-	-	-	77
52	Accounting	HELCO-1101A	66	-	-	-	66
53	President	HELCO-1101B	-	-	-	-	-
54	GL Code Entries	HELCO-1101C	(794)	-	6	-	(787)
55	Administration	HELCO-1501	-	-	-	-	-
56	Engineering	HELCO-1801	103	78	(28)	-	153
57	Subtotal		955	354	(22)	-	1,288
Distribution Maintenance (B35)							
58	System Operations	HELCO-601	-	-	-	-	-
59	Generation	HELCO-701	0	-	-	-	0
60	Distribution	HELCO-801	10,965	27	(1,084)	-	9,908
61	Customer Service	HELCO-901	-	-	-	-	-
62	Support Services	HELCO-1001	1	-	-	-	1
63	Accounting	HELCO-1101A	39	-	-	-	39
64	President	HELCO-1101B	-	-	-	-	-
65	GL Code Entries	HELCO-1101C	(1,757)	-	-	-	(1,757)
66	Administration	HELCO-1501	-	-	-	-	-
67	Engineering	HELCO-1801	56	148	-	-	204
68	Subtotal		9,305	175	(1,084)	-	8,396
69	Total Distribution		10,260	530	(1,106)	-	9,684
Customer Accounts (B36)							
70	System Operations	HELCO-601	8	1	-	-	9
71	Generation	HELCO-701	-	-	-	-	-
72	Distribution	HELCO-801	33	1	-	-	34
73	Customer Service	HELCO-901	8,653	(743)	67	2	7,979
74	Support Services	HELCO-1001	-	-	-	-	-
75	Accounting	HELCO-1101A	-	-	-	-	-
76	President	HELCO-1101B	-	-	-	-	-
77	GL Code Entries	HELCO-1101C	(47)	-	-	-	(47)
78	Administration	HELCO-1501	-	-	-	-	-
79	Engineering	HELCO-1801	236	0	-	-	236
80	Total Customer Accounts		8,883	(741)	67	2	8,212
Uncollectible Accounts							
81	Customer Service	HELCO-901	593	-	-	-	593

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Non-Labor Operation and Maintenance Expenses - HEP IPP-Owned
(\$ Thousands)

		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	
		(See HELCO-WP-1103)				=sum(A to D)	
		2016	Adjustments			2016	
NARUC Block		Operating				Test Year	
Department	Reference	Budget	Budget	Normalization	Ratemaking	Estimate	
Customer Service (B37)							
82	System Operations	HELCO-601	-	-	-	-	
83	Generation	HELCO-701	20	2	-	22	
84	Distribution	HELCO-801	-	-	-	-	
85	Customer Service	HELCO-901	77	436	-	513	
86	Support Services	HELCO-1001	-	-	-	-	
87	Accounting	HELCO-1101A	-	-	-	-	
88	President	HELCO-1101B	-	-	-	-	
89	GL Code Entries	HELCO-1101C	(281)	-	-	(281)	
90	Administration	HELCO-1501	475	(27)	-	449	
91	Engineering	HELCO-1801	152	-	-	152	
92	Total Customer Service		444	411	-	855	
A&G (B38, B39)							
94	System Operations	HELCO-601	3	(3)	-	-	
95	Generation	HELCO-701	62	(51)	-	11	
96	Distribution	HELCO-801	483	(432)	-	51	
97	Customer Service	HELCO-901	65	-	-	65	
98	Support Services	HELCO-1001	3,275	(77)	(206)	2,992	
99	Accounting	HELCO-1101A	7,073	(167)	1,104	7,877	
100	President	HELCO-1101B	1,235	(35)	-	723	
101	GL Code Entries	HELCO-1101C	(9,998)	(3,407)	1,103	(12,302)	
102	Administration	HELCO-1501	18,185	(695)	197	17,642	
103	Engineering	HELCO-1801	707	(143)	(141)	423	
104	Total A&G		21,091	(5,010)	2,057	17,482	
Grand Total							
105	All Departments Non-Labor Expense		\$ 56,952	\$ (5,724)	\$ 2,095	\$ (654)	\$ 52,669

Notes:

- Totals may not add exactly due to rounding.
- Pages 3 to 8 - Column A: HELCO-WP-101 (HELCO 2016 Rate Case Reports)
- Pages 3 to 8 - Columns B, C, D: HELCO-WP-1103

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Summary
Operation and Maintenance Expenses - HEP Utility-Owned
(\$ Thousands)

NARUC Block	Reference	L/NL	A	B	C		D	E
			2016 Operating Budget	Budget	(See HELCO-WP-1103) Adjustments Normalization Ratemaking		2016 Test Year Estimate	
1	Production	HELCO-1101 p.3	L	\$ 9,423	\$ (1,774)	\$ -	\$ -	\$ 7,649
2	Production	HELCO-1101 p.11	NL	12,225	3,615	782	-	16,621
3		Subtotal		21,647	1,841	782	-	24,270
4	Transmission	HELCO-1101 p.3	L	1,733	(225)	-	-	1,509
5	Transmission	HELCO-1101 p.11	NL	3,456	(78)	(371)	-	3,007
6		Subtotal		5,189	(303)	(371)	-	4,515
7	Distribution	HELCO-1101 p.4	L	3,390	(423)	10	-	2,978
8	Distribution	HELCO-1101 p.12	NL	10,260	530	(1,106)	-	9,684
9		Subtotal		13,650	107	(1,095)	-	12,661
10	Customer Accounts	HELCO-1101 p.4	L	49	(4)	-	-	46
11	Customer Accounts	HELCO-1101 p.12	NL	8,883	(741)	67	2	8,212
12		Subtotal		8,932	(744)	67	2	8,257
13	Uncollectible Accounts	HELCO-1101 p.12	NL	593	-	-	-	593
13	Customer Services	HELCO-1101 p.4	L	409	(30)	-	-	380
14	Customer Services	HELCO-1101 p.13	NL	444	411	-	-	855
15		Subtotal		854	382	-	-	1,235
16	A&G	HELCO-1101 p.5	L	3,886	(753)	78	-	3,211
17	A&G	HELCO-1101 p.13	NL	21,091	(5,010)	2,057	(656)	17,482
18		Subtotal		24,977	(5,763)	2,135	(656)	20,692
19	Total Summary	HELCO-1101 p.5	L	18,891	(3,208)	89	-	15,771
20	Total Summary	HELCO-1101 p.13	NL	56,952	(1,273)	1,428	(654)	56,453
21		Grand Total		\$ 75,843	\$ (4,481)	\$ 1,517	\$ (654)	\$ 72,224

Notes:

- Totals may not add exactly due to rounding.
- HEP IPP-Owned**
- See pages 6 through 8 for the aggregation of O&M non-labor expense in the HEP IPP-Owned scenario.
- HEP Utility-Owned: pages 9 through 13**
- There are no changes to O&M labor expenses in HEP Utility-Owned scenario compared to O&M labor expenses in HEP IPP-owned scenario. Accordingly, the O&M labor expenses are from pages 3 through 5.
- See pages 11 through 13 for the aggregation of O&M non-labor expenses of all the departments and GL code entries.
- See page 10 for the mapping of the test year estimates by NARUC block of accounts to all the departments and GL code entries.

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
All Departments
Operation and Maintenance Expense Test Year Estimates - Departmental Mapping
HEP Utility-Owned
(\$ Thousands)

NARUC Block	L/NL	A	B	C	D	E	F	G	H	I	J	K	
		HELCO-601 System Operations	HELCO-701 Production	HELCO-801 Distribution	HELCO-901 Customer Service	HELCO-1001 Support Services	HELCO-1101A Accounting	HELCO-1101B President	HELCO-1101C GL Code Entres	HELCO-1501 Adminstration	HELCO-1801 Engineering	=sum(G to J)	Total
1	Production	L	188	8,005	52	-	-	-	(597)	-	-	7,649	
2	Production	NL	2,359	19,237	51	-	-	27	50	(5,174)	71	16,621	
3		Subtotal	2,547	27,243	103	-	-	27	50	(5,771)	71	24,270	
4	Transmission	L	598	0	1,016	-	-	-	(118)	-	12	1,509	
5	Transmission	NL	593	74	3,132	-	10	16	(1,167)	-	349	3,007	
6		Subtotal	1,190	74	4,149	-	10	16	(1,285)	-	361	4,515	
7	Distribution	L	512	0	2,579	-	65	23	(221)	-	20	2,978	
8	Distribution	NL	317	0	10,831	539	78	105	(2,544)	-	357	9,684	
9		Subtotal	829	0	13,410	539	143	128	(2,765)	-	377	12,661	
10	Customer Accounts	L	12	-	37	0	-	-	(4)	-	-	46	
11	Customer Accounts	NL	9	-	34	7,979	-	-	(47)	-	236	8,212	
12		Subtotal	21	-	71	7,979	-	-	(50)	-	236	8,257	
13	Uncollectible Accounts	NL	-	-	-	593	-	-	-	-	-	593	
13	Customer Services	L	-	-	-	0	-	-	(30)	196	214	380	
14	Customer Services	NL	-	22	-	513	-	-	(281)	449	152	855	
15		Subtotal	-	22	-	513	-	-	(310)	644	366	1,235	
16	A&G	L	-	0	7	-	1,148	960	462	(166)	792	8	3,211
17	A&G	NL	-	11	51	65	2,992	7,877	723	(12,302)	17,642	423	17,482
18		Subtotal	-	11	58	65	4,141	8,836	1,184	(12,469)	18,434	431	20,692
19	Total	L	1,310	8,005	3,692	0	1,214	983	462	(1,135)	987	254	15,771
20	Total	NL	3,278	19,344	14,099	9,689	3,081	8,024	772	(21,515)	18,091	1,589	56,453
21		Grand Total	4,588	27,350	17,791	9,689	4,294	9,007	1,234	(22,651)	19,078	1,843	72,224

Notes:

- Totals may not add exactly due to rounding.
- The schedule above maps the O&M expense by NARUC block of accounts to the source departmental exhibits indicated in the column header.

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Non-Labor Operation and Maintenance Expenses - HEP Utility-Owned
(\$ Thousands)

NARUC Block		Reference	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
			(See HELCO-WP-1103)				=sum(A to D)
Department			2016 Operating Budget	Budget	Adj HEP*		2016 Test Year Estimate
					Normalization	Ratemaking	
Production Operation (B30)							
1	System Operations	HELCO-601	\$ 3,147	\$ (1,959)	\$ 1,171	\$ -	\$ 2,359
2	Generation	HELCO-701	5,569	2,725	-	-	8,294
3	Distribution	HELCO-801	21	0	-	-	22
4	Customer Service	HELCO-901	-	-	-	-	-
5	Support Services	HELCO-1001	-	-	-	-	-
6	Accounting	HELCO-1101A	11	-	-	-	11
7	President	HELCO-1101B	14	35	-	-	50
8	GL Code Entries	HELCO-1101C	(3,139)	-	-	-	(3,139)
9	Administration	HELCO-1501	-	-	-	-	-
10	Engineering	HELCO-1801	69	-	-	-	69
11	Subtotal		5,692	802	1,171	-	7,665
Production Maintenance (B31)							
12	System Operations	HELCO-601	-	-	-	-	-
13	Generation	HELCO-701	8,524	2,810	(390)	-	10,944
14	Distribution	HELCO-801	29	1	-	-	29
15	Customer Service	HELCO-901	-	-	-	-	-
16	Support Services	HELCO-1001	-	-	-	-	-
17	Accounting	HELCO-1101A	16	-	-	-	16
18	President	HELCO-1101B	-	-	-	-	-
19	GL Code Entries	HELCO-1101C	(2,035)	-	-	-	(2,035)
20	Administration	HELCO-1501	-	-	-	-	-
21	Engineering	HELCO-1801	-	3	-	-	3
22	Subtotal		6,532	2,813	(390)	-	8,956
23	Total Production		12,225	3	-	-	71
Transmission Operation (B32)							
24	System Operations	HELCO-601	512	39	-	-	551
25	Generation	HELCO-701	73	0	-	-	74
26	Distribution	HELCO-801	307	7	-	-	314
27	Customer Service	HELCO-901	-	-	-	-	-
28	Support Services	HELCO-1001	10	-	-	-	10
29	Accounting	HELCO-1101A	12	-	-	-	12
30	President	HELCO-1101B	-	-	-	-	-
31	GL Code Entries	HELCO-1101C	(514)	-	-	-	(514)
32	Administration	HELCO-1501	-	-	-	-	-
33	Engineering	HELCO-1801	61	-	(0)	-	61
34	Subtotal		463	46	(0)	-	509
Transmission Maintenance (B33)							
35	System Operations	HELCO-601	36	5	-	-	41
36	Generation	HELCO-701	-	-	-	-	-
37	Distribution	HELCO-801	3,298	(245)	(234)	-	2,818
38	Customer Service	HELCO-901	-	-	-	-	-
39	Support Services	HELCO-1001	-	-	-	-	-
40	Accounting	HELCO-1101A	3	-	-	-	3
41	President	HELCO-1101B	-	-	-	-	-
42	GL Code Entries	HELCO-1101C	(653)	-	-	-	(653)
43	Administration	HELCO-1501	-	-	-	-	-
44	Engineering	HELCO-1801	309	116	(137)	-	288
45	Subtotal		2,993	(124)	(371)	-	2,498
46	Total Transmission		3,456	116	(137)	-	349

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Non-Labor Operation and Maintenance Expenses - HEP Utility-Owned
(\$ Thousands)

NARUC Block		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	
		2016 Operating Budget	Budget	Adj HEP' Normalization Ratemaking		2016 Test Year Estimate	
Department	Reference	(See HELCO-WP-1103)				=sum(A to D)	
Distribution Operation (B34)							
47	System Operations	HELCO-601	270	48	-	-	317
48	Generation	HELCO-701	0	-	-	-	0
49	Distribution	HELCO-801	912	12	-	-	924
50	Customer Service	HELCO-901	322	217	-	-	539
51	Support Services	HELCO-1001	77	-	-	-	77
52	Accounting	HELCO-1101A	66	-	-	-	66
53	President	HELCO-1101B	-	-	-	-	-
54	GL Code Entries	HELCO-1101C	(794)	-	6	-	(787)
55	Administration	HELCO-1501	-	-	-	-	-
56	Engineering	HELCO-1801	103	78	(28)	-	153
57	Subtotal		955	354	(22)	-	1,288
Distribution Maintenance (B35)							
58	System Operations	HELCO-601	-	-	-	-	-
59	Generation	HELCO-701	0	-	-	-	0
60	Distribution	HELCO-801	10,965	27	(1,084)	-	9,908
61	Customer Service	HELCO-901	-	-	-	-	-
62	Support Services	HELCO-1001	1	-	-	-	1
63	Accounting	HELCO-1101A	39	-	-	-	39
64	President	HELCO-1101B	-	-	-	-	-
65	GL Code Entries	HELCO-1101C	(1,757)	-	-	-	(1,757)
66	Administration	HELCO-1501	-	-	-	-	-
67	Engineering	HELCO-1801	56	148	-	-	204
68	Subtotal		9,305	175	(1,084)	-	8,396
69	Total Distribution		10,260	530	(1,106)	-	9,684
Customer Accounts (B36)							
70	System Operations	HELCO-601	8	1	-	-	9
71	Generation	HELCO-701	-	-	-	-	-
72	Distribution	HELCO-801	33	1	-	-	34
73	Customer Service	HELCO-901	8,653	(743)	67	2	7,979
74	Support Services	HELCO-1001	-	-	-	-	-
75	Accounting	HELCO-1101A	-	-	-	-	-
76	President	HELCO-1101B	-	-	-	-	-
77	GL Code Entries	HELCO-1101C	(47)	-	-	-	(47)
78	Administration	HELCO-1501	-	-	-	-	-
79	Engineering	HELCO-1801	236	0	-	-	236
80	Subtotal		8,883	(741)	67	2	8,212
Uncollectible Accounts							
81	Customer Service	HELCO-901	593	-	-	-	593

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Non-Labor Operation and Maintenance Expenses - HEP Utility-Owned
(\$ Thousands)

NARUC Block		Reference	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
			(See HELCO-WP-1103)				=sum(A to D)
Department			2016 Operating Budget	Adj HEP'		2016 Test Year Estimate	
			Budget	Budget	Normalization	Ratemaking	Estimate
Customer Service (B37)							
82	System Operations	HELCO-601	-	-	-	-	-
83	Generation	HELCO-701	20	2	-	-	22
84	Distribution	HELCO-801	-	-	-	-	-
85	Customer Service	HELCO-901	77	436	-	-	513
86	Support Services	HELCO-1001	-	-	-	-	-
87	Accounting	HELCO-1101A	-	-	-	-	-
88	President	HELCO-1101B	-	-	-	-	-
89	GL Code Entries	HELCO-1101C	(281)	-	-	-	(281)
90	Administration	HELCO-1501	475	(27)	-	-	449
91	Engineering	HELCO-1801	152	-	-	-	152
92	Subtotal		444	411	-	-	855
A&G (B38, B39)							
94	System Operations	HELCO-601	3	(3)	-	-	-
95	Generation	HELCO-701	62	(51)	-	-	11
96	Distribution	HELCO-801	483	(432)	-	-	51
97	Customer Service	HELCO-901	65	-	-	-	65
98	Support Services	HELCO-1001	3,275	(77)	(206)	-	2,992
99	Accounting	HELCO-1101A	7,073	(167)	1,104	(134)	7,877
100	President	HELCO-1101B	1,235	(35)	-	(478)	723
101	GL Code Entries	HELCO-1101C	(9,998)	(3,407)	1,103	-	(12,302)
102	Administration	HELCO-1501	18,185	(695)	197	(45)	17,642
103	Engineering	HELCO-1801	707	(143)	(141)	-	423
104	Subtotal		21,091	(5,010)	2,057	(656)	17,482
Grand Total							
105	All Departments Non-Labor Expense		\$ 56,952	\$ (1,273)	\$ 1,428	\$ (654)	\$ 56,453

Notes:

- Totals may not add exactly due to rounding.
- Pages 11 to 13 - Column A: HELCO-WP-101 (HELCO 2016 Rate Case Reports)
- Pages 11 to 13 - Columns B, C, D: HELCO-WP-1103

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Accounting Department
Operation and Maintenance Expenses
(\$ Thousands)

NARUC Block	Reference	L/NL	(See HELCO-WP-1103A)				E =sum(A to D) 2016 Test Year Estimate
			A 2016 Operating Budget	B Budget	C Adjustments Normalization	D Ratemaking	
1	Production	L	\$ -	\$ -	\$ -	\$ -	\$ -
2	Production	NL	27	-	-	-	27
3		Subtotal	27				27
4	Transmission	L	-	-	-	-	-
5	Transmission	NL	16	-	-	-	16
6		Subtotal	16	-	-	-	16
7	Distribution	L	23	-	-	-	23
8	Distribution	NL	105	-	-	-	105
9		Subtotal	128	-	-	-	128
10	Customer Accounts	L	-	-	-	-	-
11	Customer Accounts	NL	-	-	-	-	-
12		Subtotal	-	-	-	-	-
13	Customer Services	L	-	-	-	-	-
14	Customer Services	NL	-	-	-	-	-
15		Subtotal	-	-	-	-	-
16	A&G	L	954	6	-	-	960
17	A&G	NL	7,073	(167)	1,104	(134)	7,877
18		Subtotal	8,028	(162)	1,104	(134)	8,836
19	Total Accounting Department	L	977	6	-	-	983
20	Total Accounting Department	NL	7,221	(167)	1,104	(134)	8,024
21		Grand Total	\$ 8,198	\$ (162)	\$ 1,104	\$ (134)	\$ 9,007

Notes:

- Totals may not add exactly due to rounding.
- See O&M expense aggregation schedule at HELCO-1101 which incorporates lines 3, 6, 9, 15, and 18 above to derive the balances presented in the results of operation in the revenue requirement calculation. Revenue requirement calculation is presented in HELCO-2701.

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Accounting Department
Labor Operation and Maintenance Expenses
(\$ Thousands)

			<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
			2016	(See HELCO-WP-1103A)			=sum(A to D) 2016
NARUC Block			Operating	Adjustments			Test Year
			Budget	Budget	Normalization	Ratemaking	Estimate
Distribution Operation (B34)							
1	HAA	Admin-Accounting	6	-	-	-	6
2	HAB	Purchasing (Buyers)	-	-	-	-	-
3	HAC	Corporate Accounting	-	-	-	-	-
4	HAK	Revenue Acctg-Kona	-	-	-	-	-
5	HAM	Management Accounting	17	-	-	-	17
6	HAP	Income Tax & Plt Acctg	-	-	-	-	-
7	HAR	Rev Acctg-Hilo Fld Svcs	-	-	-	-	-
8	HAW	Rev Acctg-Waimea	-	-	-	-	-
9	Subtotal		23	-	-	-	23
A&G (B38, B39)							
19	HAA	Admin-Accounting	152	88	-	-	240
20	HAB	Purchasing (Buyers)	-	-	-	-	-
21	HAC	Corporate Accounting	0	-	-	-	0
22	HAK	Revenue Acctg-Kona	-	-	-	-	-
23	HAM	Management Accounting	802	(82)	-	-	720
24	HAP	Income Tax & Plt Acctg	-	-	-	-	-
25	HAR	Rev Acctg-Hilo Fld Svcs	-	-	-	-	-
26	HAW	Rev Acctg-Waimea	-	-	-	-	-
27	Subtotal		954	6	-	-	960
Grand Total							
29	Accounting Department Labor Expense		\$ 977	\$ 6	\$ -	\$ -	\$ 983

Notes:

- Totals may not add exactly due to rounding.
- Column A: HELCO-WP-101 (HELCO 2016 Rate Case Reports); see also HELCO-WP-1101A for details of the budgeted amounts.
- Columns B, C, D: HELCO-WP-1103A

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Accounting Department
Non-Labor Operation and Maintenance Expenses
(\$ Thousands)

		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
		(See HELCO-WP-1103A)				=sum(A to D)
		2016	Adjustments			2016
		Operating				Test Year
NARUC Block		Budget	Budget	Normalization	Ratemaking	Estimate
Production Operation (B30)						
1	HAA Admin-Accounting	\$ 11	\$ -	\$ -	\$ -	\$ 11
2	HAC Corporate Accounting	-	-	-	-	-
3	HAM Management Accounting	-	-	-	-	-
4	HAP Income Tax & Plt Acctg	-	-	-	-	-
5	Subtotal	11	-	-	-	11
Production Maintenance (B31)						
6	HAA Admin-Accounting	16	-	-	-	16
7	HAC Corporate Accounting	-	-	-	-	-
8	HAM Management Accounting	-	-	-	-	-
9	HAP Income Tax & Plt Acctg	-	-	-	-	-
10	Subtotal	16	-	-	-	16
Transmission Operation (B32)						
11	HAA Admin-Accounting	12	-	-	-	12
12	HAC Corporate Accounting	-	-	-	-	-
13	HAM Management Accounting	-	-	-	-	-
14	HAP Income Tax & Plt Acctg	-	-	-	-	-
15	Subtotal	12	-	-	-	12
Transmission Maintenance (B33)						
16	HAA Admin-Accounting	3	-	-	-	3
17	HAC Corporate Accounting	-	-	-	-	-
18	HAM Management Accounting	-	-	-	-	-
19	HAP Income Tax & Plt Acctg	-	-	-	-	-
20	Subtotal	3	-	-	-	3
Distribution Operation (B34)						
21	HAA Admin-Accounting	56	-	-	-	56
22	HAC Corporate Accounting	-	-	-	-	-
23	HAM Management Accounting	10	-	-	-	10
24	HAP Income Tax & Plt Acctg	-	-	-	-	-
25	Subtotal	66	-	-	-	66
Distribution Maintenance (B35)						
26	HAA Admin-Accounting	39	-	-	-	39
27	HAC Corporate Accounting	-	-	-	-	-
28	HAM Management Accounting	-	-	-	-	-
29	HAP Income Tax & Plt Acctg	-	-	-	-	-
30	Subtotal	39	-	-	-	39
A&G (B38, B39)						
44	HAA Admin-Accounting	4,984	(167)	1,104	(134)	5,787
45	HAC Corporate Accounting	1,562	-	-	-	1,562
46	HAM Management Accounting	508	-	-	-	508
47	HAP Income Tax & Plt Acctg	19	-	-	-	19
48	Subtotal	7,073	(167)	1,104	(134)	7,877
Grand Total						
49	Accounting Department Non-Labor Expense	\$ 7,221	\$ (167)	\$ 1,104	\$ (134)	\$ 8,024

Notes:

- Totals may not add exactly due to rounding.
- Column A: HELCO-WP-101 (HELCO 2016 Rate Case Reports); see also HELCO-WP-1102A for details of the budgeted items.
- Columns B, C, D: HELCO-WP-1103A

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
President's Office
Operation and Maintenance Expenses
(\$ Thousands)

NARUC Block	Reference	L/NL	(See HELCO-WP-1103B)				E =sum(A to D) 2016 Test Year Estimate
			A 2016 Operating Budget	B Budget	C Adjustments Normalization	D Ratemaking	
1	Production	HELCO-1101B p. 2	L	\$ -	\$ -	\$ -	\$ -
2	Production	HELCO-1101B p. 2	NL	14	35	-	-
3			Subtotal	14	35		50
4	Transmission	HELCO-1101B p. 2	L	-	-	-	-
5	Transmission	HELCO-1101B p. 2	NL	-	-	-	-
6			Subtotal	-	-	-	-
7	Distribution	HELCO-1101B p. 2	L	-	-	-	-
8	Distribution	HELCO-1101B p. 2	NL	-	-	-	-
9			Subtotal	-	-	-	-
10	Customer Accounts	HELCO-1101B p. 2	L	-	-	-	-
11	Customer Accounts	HELCO-1101B p. 2	NL	-	-	-	-
12			Subtotal	-	-	-	-
13	Customer Services	HELCO-1101B p. 2	L	-	-	-	-
14	Customer Services	HELCO-1101B p. 2	NL	-	-	-	-
15			Subtotal	-	-	-	-
16	A&G	HELCO-1101B p. 2	L	462	-	-	462
17	A&G	HELCO-1101B p. 2	NL	1,235	(35)	-	(478)
18			Subtotal	1,697	(35)		(478)
19	Total President's Office		L	462	-	-	-
20	Total President's Office		NL	1,250	0	-	(478)
21			Grand Total	\$ 1,711	\$ 0	\$ -	\$ (478)
							\$ 1,234

Notes:

- Totals may not add exactly due to rounding.
- See O&M expense aggregation schedule at HELCO-1101 which incorporates lines 3, 6, 9, 15, and 18 above to arrive at the balances presented in the results of operation in the revenue requirement calculation. Revenue requirement calculation is presented in HELCO-2701.

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
President's Office
Labor and Non-Labor Operation and Maintenance Expenses
(\$ Thousands)

	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
	(See HELCO-WP-1103B)				=sum(A to D)
	2016				2016
NARUC Block	Operating	Adjustments		Rate	Test Year
	Budget	Budget	Normalization	Making	Estimate
<u>Labor Operation and Maintenance Expense</u>					
1 A&G (B38, B39)					
2 H9P President's Office	462	-	-	-	462
3 H9R Rate Case Manager - President's Ofc	-	-	-	-	-
4 Subtotal	462	-	-	-	462
Grand Total					
5 President's Office Labor Expense	\$ 462	\$ -	\$ -	\$ -	\$ 462
<u>Non-Labor Operation and Maintenance Expense</u>					
Production Operation (B30)					
6 H9P President's Office	\$ 14	35	-	-	\$ 50
7 H9R Rate Case Manager - President's Ofc	-	-	-	-	-
8 Subtotal	14	35	-	-	50
9 A&G (B38, B39)					
10 H9P President's Office	1,235	(35)	-	(478)	723
11 H9R Rate Case Manager - President's Ofc	-	-	-	-	-
12 Subtotal	1,235	(35)	-	(478)	723
Grand Total					
13 President's Office Non-Labor Expense	\$ 1,250	\$ 0	\$ -	\$ (478)	\$ 772

Notes:

- Totals may not add exactly due to rounding.
- Column A: HELCO-WP-101 (HELCO 2016 Rate Case Reports)
- Columns B, C, D: HELCO-WP-1103B

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
GL Code Entries and Miscellaneous
Operation and Maintenance Expenses
(\$ Thousands)

NARUC Block	Reference	L/NL	(See HELCO-WP-1103C)				E =sum(A to D) 2016 Test Year Estimate	
			A 2016 Operating Budget	B Budget	C Adjustments Normalization	D Ratemaking		
1	Production	HELCO-1101C p.2	L	\$ -	\$ (597)	\$ -	\$ -	\$ (597)
2	Production	HELCO-1101C p.3	NL	(5,174)	-	-	-	(5,174)
3			Subtotal	(5,174)	(597)			(5,771)
4	Transmission	HELCO-1101C p.2	L	-	(118)	-	-	(118)
5	Transmission	HELCO-1101C p.3	NL	(1,167)	-	-	-	(1,167)
6			Subtotal	(1,167)	(118)	-	-	(1,285)
7	Distribution	HELCO-1101C p.2	L	-	(232)	10	-	(221)
8	Distribution	HELCO-1101C p.3	NL	(2,550)	-	6	-	(2,544)
9			Subtotal	(2,550)	(232)	17	-	(2,765)
10	Customer Accounts	HELCO-1101C p.2	L	-	(4)	-	-	(4)
11	Customer Accounts	HELCO-1101C p.3	NL	(47)	-	-	-	(47)
12			Subtotal	(47)	(4)	-	-	(50)
13	Customer Services	HELCO-1101C p.2	L	-	(30)	-	-	(30)
14	Customer Services	HELCO-1101C p.3	NL	(281)	-	-	-	(281)
15			Subtotal	(281)	(30)	-	-	(310)
16	A&G	HELCO-1101C p.2	L	-	(244)	78	-	(166)
17	A&G	HELCO-1101C p.3	NL	(9,998)	(3,407)	1,103	-	(12,302)
18			Subtotal	(9,998)	(3,652)	1,181		(12,469)
19	Total GL Code Entries and Miscellaneous		L	-	(1,224)	89	-	(1,135)
20	Total GL Code Entries and Miscellaneous		NL	(19,217)	(3,407)	1,109	-	(21,515)
21			Grand Total	\$ (19,217)	\$ (4,631)	\$ 1,198	\$ -	\$ (22,651)

Notes:

- Totals may not add exactly due to rounding.
- See O&M expense aggregation schedule at HELCO-1101 which incorporates lines 3, 6, 9, 15, 12, and 18 above to arrive at the balances presented in the results of operation in the revenue requirement calculation. Revenue requirement calculation is presented in HELCO-2701.

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
GL Code Entries and Miscellaneous
Labor Operation and Maintenance Expenses
(\$ Thousands)

			<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
			2016	(See HELCO-WP-1103C)			=sum(A to D) 2016
NARUC Block			Operating	Adjustments			Test Year
			Budget	Budget	Normalization	Rate-making	Estimate
Production Operation (B30)							
1	H8M	Miscellaneous	\$ -	\$ -	\$ -	\$ -	\$ -
2	GL	GL Code Entries	-	(336)	-	-	(336)
3	Subtotal		-	(336)	-	-	(336)
Production Maintenance (B31)							
4	H8M	Miscellaneous	-	-	-	-	-
5	GL	GL Code Entries	-	(261)	-	-	(261)
6	Subtotal		-	(261)	-	-	(261)
Transmission Operation (B32)							
7	H8M	Miscellaneous	-	-	-	-	-
8	GL	GL Code Entries	-	(61)	-	-	(61)
9	Subtotal		-	(61)	-	-	(61)
Transmission Maintenance (B33)							
10	H8M	Miscellaneous	-	-	-	-	-
11	GL	GL Code Entries	-	(57)	-	-	(57)
12	Subtotal		-	(57)	-	-	(57)
Distribution Operation (B34)							
13	H8M	Miscellaneous	-	-	-	-	-
14	GL	GL Code Entries	-	(94)	10	-	(84)
15	Subtotal		-	(94)	10	-	(84)
Distribution Maintenance (B35)							
16	H8M	Miscellaneous	-	-	-	-	-
17	GL	GL Code Entries	-	(137)	-	-	(137)
18	Subtotal		-	(137)	-	-	(137)
Customer Accounts (B36)							
19	H8M	Miscellaneous	-	-	-	-	-
20	GL	GL Code Entries	-	(4)	-	-	(4)
21	Subtotal		-	(4)	-	-	(4)
Customer Service (B37)							
22	H8M	Miscellaneous	-	-	-	-	-
23	GL	GL Code Entries	-	(30)	-	-	(30)
24	Subtotal		-	(30)	-	-	(30)
25	A&G (B38, B39)						
26	H8M	Miscellaneous	-	-	-	-	-
27	GL	GL Code Entries	-	(244)	78	-	(166)
28	Subtotal		-	(244)	78	-	(166)
29	Grand Total						
29	Miscellaneous Department Labor Expense		\$ -	\$ (1,224)	\$ 89	\$ -	\$ (1,135)

Notes:

- Totals may not add exactly due to rounding.
- Column A: HELCO-WP-101 (HELCO 2016 Rate Case Reports)
- Columns B, C, D: HELCO-WP-1103C

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
GL Code Entries and Miscellaneous
Non-Labor Operation and Maintenance Expenses
(\$ Thousands)

		A	B	C	D	E
		2016	(See HELCO-WP-1103C)			⇒sum(A to D)
		Operating	Adjustments		2016	Test Year
NARUC Block		Budget	Budget	Normalization	Rate-making	Estimate
Production Operation (B30)						
1	H8M Miscellaneous	\$ -	\$ -	\$ -	\$ -	\$ -
2	GL GL Code Entries	(3,139)	-	-	-	(3,139)
3	Subtotal	(3,139)	-	-	-	(3,139)
Production Maintenance (B31)						
4	H8M Miscellaneous	-	-	-	-	-
5	GL GL Code Entries	(2,035)	-	-	-	(2,035)
6	Subtotal	(2,035)	-	-	-	(2,035)
Transmission Operation (B32)						
7	H8M Miscellaneous	-	-	-	-	-
8	GL GL Code Entries	(514)	-	-	-	(514)
9	Subtotal	(514)	-	-	-	(514)
Transmission Maintenance (B33)						
10	H8M Miscellaneous	-	-	-	-	-
11	GL GL Code Entries	(653)	-	-	-	(653)
12	Subtotal	(653)	-	-	-	(653)
Distribution Operation (B34)						
13	H8M Miscellaneous	-	-	-	-	-
14	GL GL Code Entries	(794)	-	6	-	(787)
15	Subtotal	(794)	-	6	-	(787)
Distribution Maintenance (B35)						
16	H8M Miscellaneous	-	-	-	-	-
17	GL GL Code Entries	(1,757)	-	-	-	(1,757)
18	Subtotal	(1,757)	-	-	-	(1,757)
Customer Accounts (B36)						
19	H8M Miscellaneous	-	-	-	-	-
20	GL GL Code Entries	(47)	-	-	-	(47)
21	Subtotal	(47)	-	-	-	(47)
Customer Service (B37)						
22	H8M Miscellaneous	-	-	-	-	-
23	GL GL Code Entries	(281)	-	-	-	(281)
24	Subtotal	(281)	-	-	-	(281)
A&G (B38, B39)						
25	H8M Miscellaneous	-	-	-	-	-
26	GL GL Code Entries	(9,998)	(3,407)	1,103	-	(12,302)
27	Subtotal	(9,998)	(3,407)	1,103	-	(12,302)
28	Subtotal	(9,998)	(3,407)	1,103	-	(12,302)
Grand Total						
29	Miscellaneous Department Labor Expense	\$ (19,217)	\$ (3,407)	\$ 1,109	\$ -	\$ (21,515)

Notes:

- Totals may not add exactly due to rounding.
- Column A: HELCO-WP-101 (HELCO 2016 Rate Case Reports)
- Columns B, C, D: HELCO-WP-1103C

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Total Operation and Maintenance Expenses by Department
HEP IPP-Owned
(\$ Thousands)

Department	Reference	A	B	C	D	E	F	
							=sum(B to E)	
		2015	2016	Adjustments			2016	
		Recorded	Operating Budget	Budget	Normalization	Ratemaking	Test Year Estimate	
1	System Operation	HELCO-602 p.1	\$ 198	\$ 5,599	\$ (2,182)	\$ 1,171	\$ -	\$ 4,588
2	Production	HELCO-702 p.1	20,646	23,234	55	277	-	23,565
3	Distribution	HELCO-802 p.1	18,504	20,434	(1,326)	(1,318)	-	17,791
4	Customer Service	HELCO-902 p.1	9,471	9,710	(90)	67	2	9,689
5	Support Services	HELCO-1002 p.1	3,501	4,577	(77)	(206)	-	4,294
6	Accounting	HELCO-1102A p.1	7,118	8,198	(162)	1,104	(134)	9,007
7	President's Office	HELCO-1102B p.1	1,912	1,711	0	-	(478)	1,234
8	GL Code Entries	HELCO-1102C p.1	(13,460)	(19,217)	(4,631)	1,198	-	(22,651)
7	Administration	HELCO-1502 p.1	12,454	19,648	(722)	197	(45)	19,078
9	Engineering	HELCO-1802 p.1	1,903	1,948	202	(306)	-	1,843
10	Grand Total O&M Expense		\$ 62,246	\$ 75,843	\$ (8,932)	\$ 2,184	\$ (654)	\$ 68,440

Notes:

- Totals may not add exactly due to rounding.

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Labor and Non-Labor Operation and Maintenance Expenses by Department
HEP IPP-Owned
(\$ Thousands)

Department	Reference	L/ NL	2015 Recorded	2016 Operating Budget	Adjustments			2016 Test Year Estimate
					Budget	Normalization	Ratemaking	
					=sum(B to E)			
1	System Operation	HELCO-602 p.2 L	\$ -	\$ 1,623	\$ (313)	\$ -	\$ -	\$ 1,310
2	Production	HELCO-702 p.2 L	9,591	8,986	(981)	-	-	8,005
3	Distribution	HELCO-802 p.2 L	4,030	4,387	(696)	-	-	3,692
4	Customer Service	HELCO-902 p.2 L	2,412	0	-	-	-	0
5	Support Services	HELCO-1002 p.2 L	924	1,214	-	-	-	1,214
6	Accounting	HELCO-1102A p.2 L	670	977	6	-	-	983
7	President's Office	HELCO-1102B p.2 L	307	462	-	-	-	462
8	GL Code Entries	HELCO-1102C p.2 L	-	-	(1,224)	89	-	(1,135)
9	Administration	HELCO-1502 p.2 L	861	987	-	-	-	987
10	Engineering	HELCO-1802 p.2 L	351	254	-	-	-	254
11	Total Labor Expenses		19,146	18,891	(3,208)	89	-	15,771
12	System Operation	HELCO-602 p.2 NL	198	3,976	(1,869)	1,171	-	3,278
13	Production	HELCO-702 p.2 NL	11,056	14,248	1,036	277	-	15,560
14	Distribution	HELCO-802 p.2 NL	14,474	16,047	(630)	(1,318)	-	14,099
15	Customer Service	HELCO-902 p.2 NL	7,058	9,710	(90)	67	2	9,689
16	Support Services	HELCO-1002 p.2 NL	2,577	3,363	(77)	(206)	-	3,081
17	Accounting	HELCO-1102A p.2 NL	6,448	7,221	(167)	1,104	(134)	8,024
18	President's Office	HELCO-1102B p.2 NL	1,605	1,250	0	-	(478)	772
19	GL Code Entries	HELCO-1102C p.2 NL	(13,460)	(19,217)	(3,407)	1,109	-	(21,515)
20	Administration	HELCO-1502 p.2 NL	11,593	18,661	(722)	197	(45)	18,091
21	Engineering	HELCO-1802 p.2 NL	1,552	1,694	202	(306)	-	1,589
22	Total Non-Labor Expenses		43,100	56,952	(5,724)	2,095	(654)	52,669
23	Grand Total O&M Expense		\$ 62,246	\$ 75,843	\$ (8,932)	\$ 2,184	\$ (654)	\$ 68,440

Notes:

- Totals may not add exactly due to rounding.

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Total Operation and Maintenance Expenses by Department
HEP Utility-Owned
(\$ Thousands)

Department	Reference	A	B	C	D	E	F	
							=sum(B to E)	
		2015	2016	Adjustments			2016	
		Recorded	Operating Budget	Budget	Normalization	Ratemaking	Test Year Estimate	
1	System Operation	HELCO-602 p.1	\$ 198	\$ 5,599	\$ (2,182)	\$ 1,171	\$ -	\$ 4,588
2	Production	HELCO-702 p.1	20,646	23,234	4,506	(390)	-	27,350
3	Distribution	HELCO-802 p.1	18,504	20,434	(1,326)	(1,318)	-	17,791
4	Customer Service	HELCO-902 p.1	9,471	9,710	(90)	67	2	9,689
5	Support Services	HELCO-1002 p.1	3,501	4,577	(77)	(206)	-	4,294
6	Accounting	HELCO-1102A p.1	7,118	8,198	(162)	1,104	(134)	9,007
7	President's Office	HELCO-1102B p.1	1,912	1,711	0	-	(478)	1,234
8	GL Code Entries	HELCO-1102C p.1	(13,460)	(19,217)	(4,631)	1,198	-	(22,651)
7	Administration	HELCO-1502 p.1	12,454	19,648	(722)	197	(45)	19,078
9	Engineering	HELCO-1802 p.1	1,903	1,948	202	(306)	-	1,843
10	Grand Total O&M Expense		\$ 62,246	\$ 75,843	\$ (4,481)	\$ 1,517	\$ (654)	\$ 72,224

Notes:

- Totals may not add exactly due to rounding.

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Labor and Non-Labor Operation and Maintenance Expenses by Department
HEP Utility-Owned
(\$ Thousands)

Department	Reference	L/ NL	2015 Recorded	2016 Operating Budget	Adjustments			2016 Test Year Estimate			
					A	B	C		D	E	F
					Budget	Normalization	Rate-making		=sum(B to E)		
1	System Operation	HELCO-602 p.2 L	\$ -	\$ 1,623	\$ (313)	\$ -	\$ -	\$ 1,310			
2	Production	HELCO-702 p.2 L	9,591	8,986	(981)	-	-	8,005			
3	Distribution	HELCO-802 p.2 L	4,030	4,387	(696)	-	-	3,692			
4	Customer Service	HELCO-902 p.2 L	2,412	0	-	-	-	0			
5	Support Services	HELCO-1002 p.2 L	924	1,214	-	-	-	1,214			
6	Accounting	HELCO-1102A p.2 L	670	977	6	-	-	983			
7	President's Office	HELCO-1102B p.2 L	307	462	-	-	-	462			
8	GL Code Entries	HELCO-1102C p.2 L	-	-	(1,224)	89	-	(1,135)			
9	Administration	HELCO-1502 p.2 L	861	987	-	-	-	987			
10	Engineering	HELCO-1802 p.2 L	351	254	-	-	-	254			
11	Total Labor Expenses		19,146	18,891	(3,208)	89	-	15,771			
12	System Operation	HELCO-602 p.2 NL	198	3,976	(1,869)	1,171	-	3,278			
13	Production	HELCO-702 p.2 NL	11,056	14,248	5,487	(390)	-	19,344			
14	Distribution	HELCO-802 p.2 NL	14,474	16,047	(630)	(1,318)	-	14,099			
15	Customer Service	HELCO-902 p.2 NL	7,058	9,710	(90)	67	2	9,689			
16	Support Services	HELCO-1002 p.2 NL	2,577	3,363	(77)	(206)	-	3,081			
17	Accounting	HELCO-1102A p.2 NL	6,448	7,221	(167)	1,104	(134)	8,024			
18	President's Office	HELCO-1102B p.2 NL	1,605	1,250	0	-	(478)	772			
19	GL Code Entries	HELCO-1102C p.2 NL	(13,460)	(19,217)	(3,407)	1,109	-	(21,515)			
20	Administration	HELCO-1502 p.2 NL	11,593	18,661	(722)	197	(45)	18,091			
21	Engineering	HELCO-1802 p.2 NL	1,552	1,694	202	(306)	-	1,589			
22	Total Non-Labor Expenses		43,100	56,952	(1,273)	1,428	(654)	56,453			
23	Grand Total O&M Expense		\$ 62,246	\$ 75,843	\$ (4,481)	\$ 1,517	\$ (654)	\$ 72,224			

Notes:

- Totals may not add exactly due to rounding.

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Accounting Department
Total Operation and Maintenance Expenses by Responsibility Area
(\$ Thousands)

RA	Description	Reference	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>
			2015 Recorded	2016 Operating Budget	(See HELCO-WP-1103A)			2016 Test Year Estimate
					Adjustments			
					Budget	Normalization	Rate	Making
1	HAA Admin-Accounting	p.2, line 1 + line 10	\$ 4,710	\$ 5,280	\$ (80)	\$ 1,104	\$ (134)	\$ 6,171
2	HAB Purchasing (Buyers)		-	-	-	-	-	-
3	HAC Corporate Accounting	p.2, line 3 + line 12	1,582	1,562	-	-	-	1,562
4	HAK Revenue Acctg-Kona	p.2, line 4 + line 13	4	-	-	-	-	-
5	HAM Management Accounting	p.2, line 5 + line 14	783	1,337	(82)	-	-	1,255
6	HAP Income Tax & Plt Acctg	p.2, line 6 + line 15	30	19	-	-	-	19
7	HAR Rev Acctg-Hilo Fld Svcs	p.2, line 7 + line 16	7	-	-	-	-	-
8	HAW Rev Acctg-Waimea	p.2, line 8 + line 17	1	-	-	-	-	-
9 Grand Total Accounting Department			\$ 7,118	\$ 8,198	\$ (162)	\$ 1,104	\$ (134)	\$ 9,007

Notes:

- Totals may not add exactly due to rounding.
- Columns A-E = HELCO-1102A, p.2

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Accounting Department
Labor and Non-Labor Operation and Maintenance Expenses by Responsibility Area
(\$ Thousands)

RA	Description	L/NL	A	B	C		D	E	F
			2015 Recorded	2016 Operating Budget	Budget	Adjustments		2016 Test Year Estimate	
					(See HELCO-WP-1103A)				=sum(B to E)
1	HAA Admin-Accounting	L	\$ 115	\$ 158	\$ 88	\$ -	\$ -	\$ 246	
2	HAB Purchasing (Buyers)	L	-	-	-	-	-	-	
3	HAC Corporate Accounting	L	37	0	-	-	-	0	
4	HAK Revenue Acctg-Kona	L	-	-	-	-	-	-	
5	HAM Management Accounting	L	518	819	(82)	-	-	737	
6	HAP Income Tax & Plt Acctg	L	-	-	-	-	-	-	
7	HAR Rev Acctg-Hilo Fld Svcs	L	-	-	-	-	-	-	
8	HAW Rev Acctg-Waimea	L	-	-	-	-	-	-	
9	Subtotal Accounting Department Labor	L	670	977	6	-	-	983	
10	HAA Admin-Accounting	NL	4,595	5,122	(167)	1,104	(134)	5,925	
11	HAB Purchasing (Buyers)	NL	-	-	-	-	-	-	
12	HAC Corporate Accounting	NL	1,545	1,562	-	-	-	1,562	
13	HAK Revenue Acctg-Kona	NL	4	-	-	-	-	-	
14	HAM Management Accounting	NL	265	518	-	-	-	518	
15	HAP Income Tax & Plt Acctg	NL	30	19	-	-	-	19	
16	HAR Rev Acctg-Hilo Fld Svcs	NL	7	-	-	-	-	-	
17	HAW Rev Acctg-Waimea	NL	1	-	-	-	-	-	
18	Subtot Line 1 - HELCO-WP-1101A, p. 1	NL	6,448	7,221	(167)	1,104	(134)	8,024	
19	Granc Lines 4-13 - HELCO-WP-1102A, p. 3.		\$ 7,118	\$ 8,198	\$ (162)	\$ 1,104	\$ (134)	\$ 9,007	

Notes:

- Totals may not add exactly due to rounding.
- Columns A, B: HELCO-WP-101 (HELCO 2016 Rate Case Reports)
- Columns C, D, E: HELCO-WP-1103A

Hawai‘i Electric Light Company, Inc.
2016 Test Year Rate Case
Accounting Department
Labor and Non-Labor Operation and Maintenance Expenses by Major Cost or Activity
(\$ Thousands)

Major Cost or Activity	L/NL	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
		(See HELCO-WP-1103A)				=sum(A to D)
		2016 Operating Budget	Budget	Adjustments		2016 Test Year Estimate
			Normalization	Rate-making		
1 Labor	L	\$ 977	\$ 6	\$ -	\$ -	\$ 983
2 Non-Labor On-Cost	NL	591	-	-	-	591
3 Non-Labor by Category:		-	-	-	-	-
4 Manage accounting and finance	NL	2,651	(90)	-	-	2,561
5 Manage and control risk (insurance)	NL	1,561	-	-	-	1,561
6 Regulatory commission expense	NL	-	-	1,104	-	1,104
7 Hawaiian Electric Industries charges	NL	775	-	-	(120)	655
8 Manage IT	NL	611	-	-	-	611
9 Compliance	NL	388	-	-	-	388
10 Company general and administrative	NL	228	(2)	-	-	226
11 EPRI dues	NL	219	-	-	-	219
12 EEI dues	NL	84	-	-	(14)	71
13 Budgeting and forecasting	NL	112	(75)	-	-	37
14 Grand Total Accounting Department		\$ 8,198	\$ (162)	\$ 1,104	\$ (134)	\$ 9,007

Notes:

- Totals may not add exactly due to rounding.
- Column A
Line 1 - HELCO-WP-1101A, p. 1
Line 2 - rate case data file at HELCO-WP-101, expense elements 401, 404 thru 407, 422 and 423.
Lines 4-13 - HELCO-WP-1102A, p. 3.
- Columns B, C, D,: HELCO-WP-1103A.

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
President Department
Total Operation and Maintenance Expenses by Responsibility Area
(\$ Thousands)

RA	Description	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>
		2015 Recorded	2016 Operating Budget	(See HELCO-WP-1103B) Adjustments			=sum(B to E) 2016 Test Year Estimate
				Budget	Normalizator	Rate-making	
1	H9P President's Office	\$ 1,913	\$ 1,711	\$ 0	\$ -	\$ (478)	\$ 1,234
2	H9R Rate Case Manager - President's Ofc	(1)	-	-	-	-	-
3	Grand Total President Department	\$ 1,912	\$ 1,711	\$ 0	\$ -	\$ (478)	\$ 1,234

Notes:

- Totals may not add exactly due to rounding.
- Columns A-E = HELCO-1102B, p.2

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
President Department
Labor and Non-Labor Operation and Maintenance Expenses by Responsibility Area
(\$ Thousands)

RA	Description	L/NL	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>
			2015 Recorded	2016 Operating Budget	(See HELCO-WP-1103B) Adjustments			2016 Test Year Estimate
					Budget	Normalizati	Rate	
						on	making	
1	H9P President's Office	L	\$ 307	\$ 462	\$ -	\$ -	\$ -	\$ 462
2	H9R Rate Case Manager - President's Ofc	L	(1)	-	-	-	-	-
3	Subtotal President Department Labor	L	307	462	-	-	-	462
4	H9P President's Office	NL	1,605	1,250	0	-	(478)	772
5	H9R Rate Case Manager - President's Ofc	NL	(0)	-	-	-	-	-
6	Subtotal President Department Non-Labor	NL	1,605	1,250	0	-	(478)	772
7	Grand Total President Department		\$ 1,912	\$ 1,711	\$ 0	\$ -	\$ (478)	\$ 1,234

Notes:

- Totals may not add exactly due to rounding.
- Columns A, B: HELCO-WP-101 (HELCO 2016 Rate Case Reports)
- Columns C, D, E: HELCO-WP-1103B

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
GL Code Entries and Miscellaneous
Total Operation and Maintenance Expenses by Responsibility Area
(\$ Thousands)

RA	Description	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>
		2015 Recorded	2016 Operating Budget	(See HELCO-WP-1103C) Adjustments		2016 Test Year Estimate	=sum(B to E)
				Budget	Normalization	Ratemaking	
1	H8M Miscellaneous	\$ 376	\$ -	\$ -	\$ -	\$ -	\$ -
2	GL GL Code Entries	(13,837)	(19,217)	(4,631)	1,198	-	(22,651)
3	Grand Total Miscellaneous Department	\$ (13,460)	\$ (19,217)	\$ (4,631)	\$ 1,198	\$ -	\$ (22,651)

Notes:

- Totals may not add exactly due to rounding.
- Columns A-E = HELCO-1102C, p.2

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
GL Code Entries and Miscellaneous
Labor and Non-Labor Operation and Maintenance Expenses by Responsibility Area
(\$ Thousands)

RA	Description	L/NL	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>
			2015 Recorded	2016 Operating Budget	(See HELCO-WP-1103C) Adjustments		2016 Test Year Estimate	
					Budget	Normalizati	Rate	mak
1	H8M Miscellaneous	L	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2	GL GL Code Entries	L	-	-	(1,224)	89	-	(1,135)
3	Subtotal Miscellaneous Department Labor	L	-	-	(1,224)	89	-	(1,135)
4	H8M Miscellaneous	NL	376	-	-	-	-	-
5	GL GL Code Entries	NL	(13,837)	(19,217)	(3,407)	1,109	-	(21,515)
6	Subtotal Miscellaneous Department Non-Labor	NL	(13,460)	(19,217)	(3,407)	1,109	-	(21,515)
7	Grand Total Miscellaneous Department		\$ (13,460)	\$ (19,217)	\$ (4,631)	\$ 1,198	\$ -	\$ (22,651)

Notes:

- Totals may not add exactly due to rounding.
- Columns A, B: HELCO-WP-101 (HELCO 2016 Rate Case Reports)
- Columns C, D, E: HELCO-WP-1103C

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Administrative and General O&M Expense by NARUC Account
Labor and Non-Labor Expenses
(\$ Thousands)

Acct	Account Description	A	B	C	D	E	F	G	H	I	J	K
		2010	2011	2012	2013	2014	2015	2016 Operating Budget	(See HELCO-WP-1103) Adjustments Budget Normalization		Ratemaking Test Year Estimate	
Administrative and General Operation												
1	920 ADMIN & GENL EXP - LABR											
2	Labor	\$ 2,325	\$ 2,558	\$ 2,860	\$ 3,049	\$ 2,741	\$ 2,178	\$ 2,772	\$ (201)	\$ 78	\$ -	\$ 2,649
3	Non-Labor	357	378	351	380	658	503	512	(3)	38	(467)	79
4	Subtotal	2,683	2,936	3,211	3,428	3,399	2,681	3,284	(204)	116	(467)	2,729
5	921 ADMIN & GENL EXP - NLABR											
6	Labor	-	-	-	-	1	10	8	(1)	-	-	7
7	Non-Labor	1,138	1,764	2,226	1,932	2,161	3,072	2,099	7	53	-	2,158
8	Subtotal	1,138	1,764	2,226	1,932	2,162	3,082	2,107	6	53	-	2,166
9	922 ADMIN EXPENSES TRANSFERRED											
10	Labor	-	-	-	-	-	-	-	-	-	-	-
11	Non-Labor	(1,074)	(918)	(1,077)	(1,066)	(1,209)	(1,250)	(613)	(2,867)	-	-	(3,480)
12	Subtotal	(1,074)	(918)	(1,077)	(1,066)	(1,209)	(1,250)	(613)	(2,867)	-	-	(3,480)
13	923010 OUTSIDE SERVICES- LEGAL											
14	Labor	-	-	-	-	-	-	-	-	-	-	-
15	Non-Labor	520	149	43	35	56	(54)	25	-	-	-	25
16	Subtotal	520	149	43	35	56	(54)	25	-	-	-	25
17	923020 OUTSIDE SERVICES- OTHER											
18	Labor	-	-	-	-	-	-	-	-	-	-	-
19	Non-Labor	339	170	158	148	23	38	0	-	-	-	0
20	Subtotal	339	170	158	148	23	38	0	-	-	-	0
21	923030 OUTSIDE SERVICES - ASSOC CO											
22	Labor	-	-	-	-	-	-	-	-	-	-	-
23	Non-Labor	2,830	2,307	2,188	2,926	3,648	5,545	6,670	(637)	665	(131)	6,567
24	Subtotal	2,830	2,307	2,188	2,926	3,648	5,545	6,670	(637)	665	(131)	6,567
25	924 PROPERTY INSURANCE											
26	Labor	-	-	-	-	-	-	-	-	-	-	-
27	Non-Labor	797	1,075	996	1,004	1,040	955	900	-	-	-	900
28	Subtotal	797	1,075	996	1,004	1,040	955	900	-	-	-	900
29	925 INJURIES & DAMAGES											
30	Labor	635	743	664	757	670	667	741	(317)	-	-	423
31	Non-Labor	1,159	1,410	1,380	1,384	1,152	1,420	1,577	(279)	-	-	1,298
32	Subtotal	1,794	2,152	2,044	2,141	1,823	2,087	2,317	(596)	-	-	1,722
33	926000 EMPLOYEE PENSIONS AND BENEFITS											
34	Labor	219	307	262	427	275	284	268	(228)	-	-	41
35	Non-Labor	7,172	6,251	6,232	6,170	6,032	5,657	12,822	(917)	29	(45)	11,889
36	Subtotal	7,391	6,557	6,494	6,597	6,306	5,941	13,090	(1,145)	29	(45)	11,930
37	926010 EMPL BENEFITS - FLEX CREDITS											
38	Labor	-	-	-	-	-	-	-	-	-	-	-
39	Non-Labor	3,138	3,124	3,202	3,411	3,571	3,535	3,529	5	168	-	3,702
40	Subtotal	3,138	3,124	3,202	3,411	3,571	3,535	3,529	5	168	-	3,702
41	926020 EMPLOYEE BENEFITS TRANSFER											
42	Labor	-	-	-	-	-	-	-	-	-	-	-
43	Non-Labor	(2,370)	(2,561)	(2,774)	(3,023)	(3,220)	(3,337)	(7,058)	(358)	-	-	(7,416)
44	Subtotal	(2,370)	(2,561)	(2,774)	(3,023)	(3,220)	(3,337)	(7,058)	(358)	-	-	(7,416)

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Administrative and General O&M Expense by NARUC Account
Labor and Non-Labor Expenses
(\$ Thousands)

Acct	Account Description	A	B	C	D	E	F	G	H	I	J	K
		2010	2011	2012	2013	2014	2015	2016 Operating Budget	(See HELCO-WP-1103) Budget	Adjustments Normalization	Ratemaking	2016 Test Year Estimate
928	REGULATORY COMMISSION EXPENSES											
35	Labor	-	-	-	-	-	-	-	-	-	-	-
36	Non-Labor	199	192	783	253	0	-	-	-	1,104	-	1,104
37	Subtotal	199	192	783	253	0	-	-	-	1,104	-	1,104
9302	MISCELLANEOUS GENERAL EXPENSES											
38	Labor	79	45	35	32	22	8	0	(0)	-	-	0
39	Non-Labor	339	245	310	373	301	280	301	38	0	(14)	326
40	Subtotal	418	290	344	405	323	288	301	38	0	(14)	326
931	RENTS EXPENSE - A&G											
41	Labor	-	-	-	-	-	-	-	-	-	-	-
42	Non-Labor	-	-	3	24	15	(2)	-	-	-	-	-
43	Subtotal	-	-	3	24	15	(2)	-	-	-	-	-
	Administrative and General Operation											
44	Total Labor	3,258	3,652	3,821	4,265	3,709	3,147	3,789	(746)	78	-	3,121
45	Total Non-Labor	14,546	13,586	14,020	13,951	14,229	16,364	20,765	(5,010)	2,057	(656)	17,155
46	Total Administrative and General Operation	17,804	17,238	17,840	18,215	17,938	19,511	24,554	(5,756)	2,135	(656)	20,276
	Administrative and General Maintenance											
47	932 ADMIN AND GENL MAINTENANCE											
48	Labor	38	63	80	67	61	74	97	\$ (7)	\$ -	\$ -	\$ 90
49	Non-Labor	130	241	381	338	328	273	326	0	-	-	327
50	Subtotal	168	304	462	405	389	347	424	(7)	-	-	417
51	Administrative and General Maintenance											
52	Total Labor	38	63	80	67	61	74	97	(7)	-	-	90
53	Total Non-Labor	130	241	381	338	328	273	326	0	-	-	327
54	Total Administrative and General Maintenance	168	304	462	405	389	347	424	(7)	-	-	417
55	Administrative and General Expense											
56	Total Labor	3,296	3,715	3,901	4,332	3,770	3,221	3,886	(753)	78	-	3,211
57	Total Non-Labor	14,676	13,828	14,401	14,289	14,557	16,637	21,091	(5,010)	2,057	(656)	17,482
58	Total Administrative and General Expense	\$17,972	\$17,542	\$18,302	\$18,621	\$18,327	\$19,858	\$24,977	\$ (5,763)	\$ 2,135	\$ (656)	\$20,692
59	Hawai'i Electric Light 2010 Test Year Rate Case - Final Decision and Order (Present rates)											
60	Administrative and General Expense											
61	Labor	3,599										
62	Non-labor	12,378										
63	Final Decision and Order (Present Rates)	\$15,977										

Notes:

- Totals may not add exactly due to rounding.
- Columns B - H : HELCO-WP-101Rate Case Report
- Columns H - J: HELCO-WP-1103
- Line 63: See Exhibit 1A, pages 20, 25, and 30 of Hawai'i Electric Light's Revised Schedules Resulting from Decision and Order No. 30168, filed on February 21, 2012 in Docket No. 2009-0164. As shown on Exhibit 1A, page 20, an austerity adjustment of -\$365,000 was not allocated to the NARUC Block of Accounts. On April 4, 2012, by Order No. 30301, the Commission approved Hawai'i Electric Light's revised results of operations, supporting schedules, and tariffs filed on February 21, 2012.

COST CONTROLS AND EFFICIENCY MEASURES
PRESIDENT'S OFFICE AND ACCOUNTING DEPARTMENT

Cost savings measures identified and implemented by Hawai'i Electric Light's Accounting Department and President's Office are described below. To ensure consistency with other Hawai'i Electric Light departments, the following definitions were used to categorize measures:

1. Cost containment – sustainable measures that reduces cost
2. Efficiency – sustainable efforts that improve operating efficiency
3. Austerity – controls costs but become unsustainable

A summary of all cost savings measures identified by Hawai'i Electric Light witnesses, including those for the Accounting Department and President's Office, is provided at T-1.

Cost Containment Measures

1. Loss Control Program

Loss control is important in managing risks as it mitigates the probability that the Company will incur a loss and/or reduces the severity of losses that do occur. The Company's Loss Control Program includes the engagement of two loss control consultants, Associated Electric and Gas Insurance Services Limited (AEGIS) and XL Global Asset Protection Services (XL GAPS), to perform periodic risk assessments to help identify potential problem areas to reduce loss exposure and improve the safety of employees and the public. As a result of risk assessments, the Company received a \$20,000 rebate on its insurance program which reduced the 2016 test year estimate by the same amount.

In addition, the Hawaiian Electric Companies maintain a Sub-process Quality Steering Team consisting of employees from all three utilities. This team is tasked to review, implement and monitor recommendations from the loss control consultants and meets annually with the consultants to review results and outstanding issues.

2. Property Appraisals

The cost of reproduction, or insurable value, of the Company's properties is the one of the main components used by insurance underwriters to calculate the Property insurance premium. Hawaiian Electric Risk Management division contracted an appraiser to conduct certified appraisals of select Company properties to determine their cost of reproduction value. The appraisals resulted in decreased insurable values for the subject properties and the results were then extrapolated to other Company properties with similar generating equipment. This resulted in a total reduction of property insurance premiums by \$10,000. This savings has been reflected in the 2016 test year estimates.

3. ePayment Program

In 2011, the Hawaiian Electric Companies implemented an initiative which provided vendors the option of receiving payment via a single-use virtual credit card. Under this method, the payment terms are net 15 days term plus vendor-paid fees instead of the existing payment method of paper check on a net 30 days term. The Companies have successfully signed up both local and mainland vendors in this ePayment program and have realized savings in the form of a rebate

from Wells Fargo. The amount of the rebate is determined annually based on qualifying purchases and rebates are accounted for as a credit to O&M expense. The Company has included in its 2016 test year estimate for O&M a credit of \$105,000 for ePayment rebates, as shown in HELCO-WP-1102A, page 2, line 73.

In addition to the rebate, there may be labor savings associated with the ePayment program, but any labor savings are difficult to quantify. For example, payments made electronically reduce the potential amount of work associated with the Companies' monitoring, tracking and reporting for unclaimed or abandoned property (i.e., its escheatment process). The time and effort required for the Companies' internal purchasing and payment processes are not significantly different between processing payments by check compared to processing with electronic payment.

4. Unpaid Management Overtime

The Accounting Department has utilized unpaid overtime worked by its existing management staff to complete work requirements in place of hiring temporary or additional permanent employees. The Company included 3,233 hours of unpaid overtime to be worked by Hawai'i Electric Light Accounting personnel in its 2016 test year estimate of O&M expense, which is estimated to save approximately \$150,000.

5. Travel Costs

While some travel is necessary and not avoidable, the Company, including the President's Office and Accounting Department, has reduced its travel costs through the use of technologies such as video and telephone conferencing and instant messaging. The exact amount of savings is difficult to quantify.

6. Bidding / Procurement Policies

In 2010, the Purchasing division implemented formal bidding and procurement policies for Hawaiian Electric, Hawai'i Electric Light and Maui Electric. These policies ensure corporate governance of the purchasing function and provide consistency in procedural and documentation requirements. With more formal bidding and procurement policies, the Company has been able to achieve cost savings or cost avoidance.

Cost savings are identified based on comparing the current price to the previous price for the same product/service, prior to the Purchasing bidding and procurement initiatives. Based on the purchase orders issued for Hawai'i Electric Light in 2015, \$1,357,000 in cost savings for purchases was identified. These cost savings relate to procurement for both capital projects as well as O&M initiatives.

Cost avoidance is identified based on comparing the price difference between the negotiated / agreed upon price and the next highest price, for a new product or service (product or service not procured prior to Purchasing initiative). Based on the purchase orders issued for Hawai'i Electric Light in 2015, \$619,000 in cost avoidance was identified. This cost avoidance relates to procurement for both capital projects as well as O&M initiatives.

Efficiency Measures

7. Accounting Department Staffing Changes

As discussed in the Accounting Department Staffing section, the Company took steps to improve efficiency through (a) the Hawaiian Electric Companies' Finance Reorganization, which resulted in the non-backfill of certain Accounting Department positions and the transfer of other positions to Hawaiian Electric; and (b) the elimination of one position by combining the duties of the Management Accounting Assistant Administrator with existing positions. The position eliminated through the combination of duties of the Management Accounting Assistant Administrator with existing positions results in a savings of approximately \$82,000 that is reflected in the 2016 test year estimate for O&M expenses.

8. Intercompany Billing

In fall 2012, the Hawaiian Electric Companies changed its process for allocating intercompany charges from Hawaiian Electric to Hawai'i Electric Light and Maui Electric. Previously Hawai'i Electric Light and Maui Electric treated Hawaiian Electric as an outside vendor such that the process for allocating intercompany charges required the use of purchase requisitions, purchase orders, invoices, and payments. With the 2012 change, the Companies moved to an accounting journal entry based process. The process change reduced labor costs by eliminating or reducing purchasing and accounting work associated with the prior process, but the effects are unquantifiable at this time.

Hawai'i Electric Light Company, Inc.
 2016 Test Year Rate Case
 Accounting Department
 Staffing as of May 31, 2016

	A	B	C =B-A	D	E =D-B	F	G	H =F+G	I =H-B	J =H-A
	12/31/15 Recorded Headcount	5/31/16 Recorded Headcount	Difference	5/31/16 Budgeted Headcount	Vacancies as of 5/31/16	12/31/16 Budgeted Headcount	Adjustments to 12/31/16 Budgeted Headcount	12/31/16 Adjusted Headcount	Positions to be filled between 5/31/16- 12/31/16	Total Positions Filled in 2016
1	HAA 1	1	0	1	0	1	1	2	1	1
2	HAM 6	6	0	8	2	8	-1	7	1	1
3	TOTAL 7	7	0	9	2	9	0	9	2	2

Notes:

- HAA- Administration
- HAM- Management Accounting

ACCOUNTING DEPARTMENT ORGANIZATION AND STAFFING

The 2016 test year estimate for employee count for Hawai'i Electric Light Company, Inc.'s ("Hawai'i Electric Light's") Accounting Department is nine full time positions situated in two divisions or responsibility areas ("RA"):

- HAA- Administration
- HAM- Management Accounting

Prior to 2013, the Hawaiian Electric Companies¹ finance functions were geographically organized with centralized support provided by Hawaiian Electric. Hawaii Electric Light's Accounting department consisted of five divisions including:

- HAA – Administration
- HAB – Purchasing (Buyers)
- HAC – Corporate Accounting
- HAM – Management Accounting
- HAP – Plant Accounting

In 2013, and as discussed in HELCO-1105B, the three Companies began a process to reorganize its finance functions with the purpose of standardizing processes among similar functions across the three utilities, reducing redundancies and providing specialized support resulting in increased service quality through the delivery of consistent services that leverage technical expertise. As part of this Finance Reorganization, organizations were re-aligned by function versus geographic location. For Hawaii Electric Light, this resulted in the Regulatory Accounting, Purchasing, Corporate Accounting, and Plant Accounting functions / positions transferring to become Hawaiian Electric employees. The Management Accounting / Budgeting group remained as employees of Hawaii Electric Light, and were aligned with Maui Electric's Budgets group under the management of one general manager for both subsidiaries. With these changes, the Hawaii Electric Light Accounting Department now consists of two divisions: HAA- Administration, and HAM- Management Accounting.

The major changes to the Accounting Department organization since the 2010 test year rate case include:

- In 2012, the addition of one Regulatory Accountant (HAA) to support increased workload with regulatory matters;²
- In 2012, an increase of one position for the addition of the Financial Compliance Assistant Administrator (HAC).

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

² See HELCO T-11, page 97, in Docket No. 2012-0099.

- Non-backfill of the Accounting Manager (HAA), Buyer (HAB) and Payroll Accountant (HAC) positions in 2013 due to the positions becoming vacant and Finance Reorganization considerations;
- In 2013, an increase in one position for the addition of the Director, Budgets & Business Support (HAA) to provide on-site leadership / support for planning, budgeting and reporting;
- In 2014, the non-backfill of the Corporate Accounting Clerk position due to position vacancy and Finance Reorganization considerations;
- By September 2014, the reallocation of seven positions in Regulatory Accounting (HAA), Corporate Accounting (HAC), Plant Accounting (HAP) to Hawaiian Electric finance functions and the reallocation of one Tax Administrator position to Hawaiian Electric Industries (HAP);
- The transfer of one position from corporate accounting (HAC) to management accounting (HAM) in 2014;
- In 2015, the creation of the Accounts Clerk position in management accounting (HAM) and elimination of the Accounting Clerk III position in corporate accounting (HAC);
- The transfer of one Fiscal Administrator position to the Customer Service department in 2015 associated with the Customer Service department reorganization;³
- In 2016, the non-backfill of the Management Accountant Assistant Administrator position through an efficiency measure to combine the duties with an existing position.
- The addition of the General Manager, Finance Maui Electric/Hawai‘i Electric Light) in 2016 due to the position being vacated and previously residing on Maui with Maui Electric.

Accounting Department Staffing

As shown in HELCO-1105, the staffing level for the Accounting Department has remained at 7 from December 31, 2015 to May 31, 2016. The position changes within the Accounting Department were distributed as shown in the Table 1 below.

Table 1: Accounting Department Position Changes

	<u>12/31/2015</u> <u>Recorded</u>	<u>5/31/2016</u> <u>Recorded</u>	<u>Difference</u>
HAA- Administration	1	1	0
HAM- Management Accounting	6	6	0
TOTAL	7	7	0

The reasons for the Accounting Department’s staffing level remaining the same between 12/31/2015 to 5/31/2016 are summarized in the table below.

³ See HELCO-905A, page 2.

Table 2: Staffing Changes Between 12/31/2015 and 5/31/2016

Reason for Increased/Decreased Staffing	Number of position changes from 12/31/2015 to 5/31/2016
HAM- Management Accounting – Increase of one due to filling the Capital Budget Administrator position which was vacant in 2015.	1
HAM- Management Accounting - Decrease of one position due to the retirement of the Management Accounting Assistant Administrator. The position was re-evaluated in 2016, resulting in the position not being back-filled and the duties being combined with an existing position as a measure of efficiency.	-1
HAA- Administration – Decrease of one position due to the vacancy of the position Director, Budgets & Business Support as the incumbent was promoted to General Manager, Finance Maui Electric /Hawai'i Electric Light.	-1
HAA- Administration – Increase of one position for the General Manager, Finance Maui Electric/Hawai'i Light. The position previously resided on Maui with Maui Electric, prior to the incumbent's retirement.	1
Net Total	0

As of May 31, 2016, the Accounting Department has two vacancies based on a 2016 year end estimated employee count of 9 as shown in the table below.

Table 3: Vacancies as of 5/31/2016

	<u>5/31/2016</u> <u>Recorded</u>	<u>12/31/2016</u> <u>Estimate</u>	<u>Difference</u>
HAA- Administration	1	2	1
HAM- Management Accounting	6	7	1
TOTAL	7	9	1

Included in HELCO-WP-1105 is the following additional information:

Position expected to be filled before December 31, 2016

- Responsibilities of the vacant position
- Reason the vacant position is required
- Manner in which the duties are being accomplished (prior to filling the position)
- Status of hiring
- Expected date the vacant position will be filled
- Cost category allocation for vacant position

The reason for the increase to the Accounting Department's staffing level by two positions is summarized in the table below.

Table 4: Change from 5/31/2016 to 12/31/2016

Reason for Increased Staffing	Number of position changes from 5/31/2016 to 12/31/2016
HAM- Management Accounting – Increase of one position to fill the vacant Fiscal Administrator position.	1
HAA- Administration – Increase of one position to fill the vacant Director, Budgets & Business Support position (see above).	1
Total	2

Finance Re-organization and Cost Allocation

In an effort to standardize the finance function across the three Hawaiian Electric Companies¹, and to better meet the current and future needs of our customers, the Finance area, other than Budgets, embarked on a restructuring and reorganization in 2013. The restructuring and reorganization was to lay the foundation and bring about changes to reposition the finance area to standardize and streamline processes, strengthen customer relationships, improve efficiencies with cost avoidance, and reduce overall finance area costs over time. The reorganization provided the opportunity to consolidate similar activities across the three companies and to establish a shared services model. Under the shared services model, an organization would perform for the most part, the function for all three companies, and the costs for the function would be shared (generally allocated based on an appropriate allocator for the area) among the three companies. The reorganization/restructuring effort was not to displace existing people or to have existing people relocate to a different island. The reorganization/restructuring allowed for functions to be consolidated, and in some cases, while operating on a separate island. Through attrition, functions could be more centralized. To reduce the burden of intercompany charges among the companies (as there would be employees doing tasks for different companies), all employees in the reorganized functions were moved to Hawaiian Electric (if not already part of Hawaiian Electric), and charges allocated from Hawaiian Electric.

The areas included in the Finance Reorganization included Corporate Accounting, Property Accounting, Financial Reporting Compliance (FRC), Cost Accounting, Purchasing, Regulatory Accounting, Treasury, Risk Management, ERP Administration, Securities, and Cash Management. All employees for these areas became Hawaiian Electric employees by the end of September 2014. Some of areas, including Treasury, Risk Management, ERP Administration, Securities, Cash Management, and Cost Accounting were for the most part operating as a consolidated function prior to the Finance Reorganization in 2013. In addition, the Tax function was also consolidated as part of the Finance Reorganization, and tax functions are performed by Hawaiian Electric Industries, Inc.'s ("HEI's") Corporate Taxes, and billed to Hawaii Electric Light as part of HEI charges.

Prior to April 1, 2015, total costs under the Finance Reorganization were paid from Hawaiian Electric. However, costs related to Hawaii Electric Light and Maui Electric were charged for the work related to each company, based on employees charging various billable work orders. The process of tracking time related to each company for different tasks was tedious. Effective April 1, 2015, the Companies implemented a process to distribute more efficiently the shared service costs among the three companies. The process allows for the aggregation of all shared service costs for an organization in one cost pool, and the costs would then be allocated to each company for their respective share of those costs. Charges for the shared services are billed monthly to Hawaii Electric Light and Maui Electric on a set cost

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

allocation percentage that is reviewed annually (or more frequently if necessary) to ensure the basis for the allocation remains valid.

The cost allocation percentage to be used by the shared service organization is determined by the organization based on activities that the organization supports. The determination of the cost allocation percentage is based on analysis of the underlying metrics representing their work activities.

The costs allocated to Hawaii Electric Light for the Finance areas under the shared service model, are reflected as expense element 550 starting in September 2014. Beginning in April 2015, the amounts are reflected as expense 550 under one workorder per NARUC account for each organization from Hawaiian Electric.

HAWAII ELECTRIC LIGHT COMPANY
2016 TEST YEAR ESTIMATE

DEPARTMENTAL O&M BUDGET DETAIL

This narrative includes discussions on the departmental operation and maintenance (“O&M”) budget and 2016 test year estimates for the Accounting Department and the President’s Office, as well as the amounts included in the O&M budget and the 2016 test year estimates as “G/L Code Entries”.

ACCOUNTING DEPARTMENT O&M BUDGET AND TEST YEAR ESTIMATE

The Accounting Department’s O&M expense for labor was prepared based on staffing levels needed to meet the work demands for the 2016 test year; and non-labor was prepared using a variety of methods, including historical averaging, historical trending, and management experience. The supporting documentations for the operating budget and adjustments to arrive at the 2016 test year estimates are provided in HELCO T-11 workpapers accompanying this testimony and its exhibits.

As shown in HELCO-1101A, the Accounting Department’s 2016 test year estimates are as follows:

Production	\$ 27,000
Transmission	16,000
Distribution	128,000
Administrative and General	<u>8,836,000</u>
Total	<u>\$9,007,000</u>

Production Operation (B30) and Production Maintenance (B31)

The Accounting Department’s 2016 test year estimate for its share of production operation and maintenance expense is \$27,000 as shown in HELCO-1101A, consisting of non-labor expenses in the Accounting Administration (HAA) responsibility area. The amounts represent Information Technology (“IT”) maintenance charges from Hawaiian Electric Company, Inc. (“Hawaiian Electric”) for various activities relating to production operation and maintenance. See HELCO-WP-1102A for details of these charges.

Transmission Operation (B32) and Transmission Maintenance (B33)

The Accounting Department’s 2016 test year estimate for its share of transmission operation and maintenance expense is \$16,000 as shown in HELCO-1101A, consisting of non-labor expenses in the Accounting Administration (HAA) responsibility area. The amounts represent IT maintenance charges from Hawaiian Electric for various activities relating to transmission operation and maintenance. See HELCO-WP-1102A for details of these charges.

Distribution Operation (B34) and Distribution Maintenance (B35)

The Accounting Department’s 2016 test year estimate for its share of distribution operation and maintenance expense is \$128,000 as shown in HELCO-1101A, consisting of \$23,000 in labor expenses and \$105,000 in non-labor expenses in the Accounting Administration (HAA) and Management Accounting (HAM) responsibility areas as follows:

	<u>HAA</u>	<u>HAM</u>	<u>Total</u>
Distribution Operation			
Labor	\$ 6,000	\$17,000	\$ 23,000
Non-Labor	<u>56,000</u>	<u>10,000</u>	<u>66,000</u>
Total Distribution Operation	62,000	27,000	89,000
Distribution Maintenance			
Non-Labor	<u>39,000</u>	-	<u>39,000</u>
Total Distribution O&M	<u>\$101,000</u>	<u>27,000</u>	<u>\$128,000</u>

The labor expense amounts represent the labor involved in participating in emergency response (i.e., storm response). The non-labor expense amounts represent IT maintenance charges from Hawaiian Electric for various activities relating to distribution operation and maintenance including the materials and equipment orders. See HELCO-WP-1102A for details of these charges.

Administrative and General (B38 and B39)

The Accounting Department’s 2016 test year estimate for its share of administrative and general expense is \$8,836,000, as shown on HELCO-1101A. The amount consists of \$960,000 in labor expenses and \$7,877,000 in non-labor expenses in Administration (HAA), Corporate Accounting (HAC), Management Accounting (HAM), and Income Tax and Plant Accounting (HAP) responsibility areas as follows:

	<u>HAA</u>	<u>HAC</u>	<u>HAM</u>	<u>HAP</u>	<u>Total</u>
A&G Labor Expense	\$ 240,000	\$ -	\$ 720,000	\$ -	\$ 960,000
A&G Non-Labor Expense	<u>5,787,000</u>	<u>1,562,000</u>	<u>508,000</u>	<u>19,000</u>	<u>7,876,000</u>
Total A&G Expense	<u>\$6,027,000</u>	<u>\$1,562,000</u>	<u>\$1,228,000</u>	<u>\$19,000</u>	<u>\$8,836,000</u>

Note: Totals may not add exactly due to rounding.

The staffing for the Accounting Department to which the labor expense most relate (except for the activities charged to distribution operation discussed above) is discussed in HELCO-1105. The non-labor charges to this block of accounts and the others identified above are discussed in more detail in the ensuing narrative of the Accounting Department’s test year O&M by major cost/activity.

Accounting Department O&M by Major Cost/Activity

To supplement the discussion above on the Accounting Department O&M expense by block of account, the following provides a summary of the department’s O&M expense by major cost/activity. The 2016 test year estimate for Hawai‘i Electric Light’s Accounting Department O&M is \$9,007,000. Accounting Department test year O&M expense includes costs for accounting and financial activities, as well as certain Company costs and are presented in HELCO-1102A, page 3, and summarized as follows:

Major Cost or Activity	2016 Test Year Estimate
Labor	\$983,000
Non-Labor On-Cost	591,000 ¹
Non-Labor by Category:	
Manage accounting and finance	2,561,000
Manage and control risk (insurance)	1,561,000
Regulatory commission expense	1,104,000
Hawaiian Electric Industries (“HEI”) charges	655,000
Manage IT	611,000
Compliance	388,000
Company general and administrative	226,000
EPRI dues	219,000
EEI dues	71,000
Budgeting and forecasting	37,000
Total	\$9,007,000

Labor expense:

The 2016 test year estimate for labor expense of \$983,000 is based on a department employee count of nine employees, which is discussed in more detail in HELCO-1105 and the detail of the direct labor charges is provided in HELCO-WP-1101A.

Accounting and Finance:

The 2016 test year estimate for accounting and finance O&M expense activities is \$2,561,000 and consists of the following:

Description	2016 Test Year Estimate
Financial reporting and accounting	\$716,000
Purchasing	547,000
Treasury and cash management	535,000
Property accounting	466,000

¹On-costs identified by Expense Elements 406, 422, and 423 are excluded from the O&M expenses discussed in order to focus on the direct costs of the Department’s O&M work activities and major costs.

Description	2016 Test Year Estimate
Accounts payable	150,000
Payroll processing	147,000
Total	\$2,561,000

The costs in this category are for core financial functional work supporting the activities identified in the table. These work activities are functions that are essential to the proper management of the business organization. The costs primarily reflect Hawaiian Electric shared services charges and incorporate changes made in connection with the Finance Reorganization that is addressed at HELCO-1105B. The Finance Reorganization included the transfer of Hawai'i Electric Light Accounting employees to the Hawaiian Electric Finance Process Area. Prior to their transfer, the costs for the work performed by these employees would have been captured in the work activities identified above but would have recorded as Hawai'i Electric Light labor expense.

The 2016 test year estimate of \$2,561,000 for the accounting and finance category is \$361,000 higher than the \$2,200,000 recorded for 2015. The primary reasons for the increase by work activity are as follows:

1. Financial reporting and accounting +\$124,000
2. Accounts payable +\$88,000
3. Treasury and cash management +\$75,000

The \$124,000 increase in financial reporting and accounting is due primarily to additional consultant costs for accounting, tax and Sarbanes-Oxley Act Section 404 ("SOX") matters (+\$67,000), and additional labor and overheads for controller and general accounting support due to a full year of the shared services model cost allocation in 2016 versus a partial year in 2015 (+\$52,000). The Finance Reorganization and shared services model is addressed at HELCO-1105B.

The \$88,000 increase in accounts payable is primarily due to a lower rebate from the Wells Fargo ePayment Program due to anticipated lower spending. This program is discussed in more detail at HELCO-1104.

The \$75,000 increase in treasury and cash management is primarily due to additional labor and overheads due to a full year of the shared services model cost allocation in 2016 versus a partial year in 2015 (+\$38,000) and additional trustee and paying agent fees associated with Hawai'i Electric Light's revenue bonds (+\$12,000).

Manage and Control Risk (Insurance):

The 2016 test year estimate for insurance expenses is \$1,561,000 and consists of \$1,494,000 in insurance premiums and related expenses and \$67,000 for a workers' compensation reserve.

The 2016 test year estimate for insurance premium costs is shown at HELCO-1132, page 2. The Company's policy with respect to insurance coverage, how insurance requirements are determined, and the items included in the Company's NARUC accounts no. 924 (property insurance) and 925 (injuries and damages) is consistent with its past practices.² The Company strives to achieve the optimal balance between the premiums paid to purchase insurance coverage and the amount of absorbed losses (that portion of losses not reimbursed by insurance, or deductibles and self-insured retention) in order to minimize risks and insurance and damage costs.

Costs for this category are decreasing by \$169,000 from \$1,730,000 for 2015 to \$1,561,000 for the 2016 test year. The decrease is due to 1) lower property insurance premiums due to a favorable market price for insurance, as well as a Company effort to re-appraise property values which resulted in reduced replacement values reported to insurers (-\$96,000) and 2) a lower estimate for workers' compensation reserve which was based on a three-year average as shown at HELCO-WP-1102A (-\$73,000). See also the downward trend in insurance premiums and related expenses presented in HELCO-1132.

Regulatory Commission Expense:

The \$1,104,000 test year estimate for non-labor regulatory commission expenses is shown at HELCO-1134.

The test year estimate represents the amortization of the total estimated third-party and Hawaiian Electric non-labor costs that Hawai'i Electric Light will incur for this 2016 rate case, amortized over a two year period. The amortization period is based on the anticipated period that electric rates from this rate case are expected to be in effect.

The test year estimate includes non-labor costs for outside legal services, outside expert witness fees, and other expenses (such as transcript fees, witness training costs, supplies and travel costs) for this rate case proceeding only and do not include the recovery of regulatory commission costs for prior rate cases.

There are no costs associated with Hawaiian Electric or HEI included in the test year estimate other than non-labor costs incurred by Hawaiian Electric on behalf of Hawai'i Electric Light, such as transcript fees, witness training costs, supplies and travel costs. Consistent with the Commission's ruling in Decision and Order No. 13429 in Docket No. 7000, Hawai'i Electric Light has excluded the labor costs associated with Hawaiian Electric's and HEI's assistance with this 2016 rate case. While such costs should be includable in the Company's test year estimate as they represent the lowest cost service available for planning and coordinating Hawai'i Electric Light's rate case and obtaining specialized witness services, the Company has excluded such costs from its test year estimate in order to reduce the number of issues in this proceeding. The

² Hawai'i Electric Light's 2013 test year rate case (Docket No. 2012-0099) and Hawai'i Electric Light's 2010 test year rate case (Docket No. 2009-0164).

Company does not waive its right, however, to seek recovery of these costs in future rate cases. As directed by the Commission in Decision and Order No. 10993 in Docket No. 6432, the test year estimate for regulatory commission expenses also does not include Hawai‘i Electric Light internal costs. Employees involved with rate case work charge their labor and related non-labor costs to the various functional accounts they normally charge.

Hawaiian Electric Industries (“HEI”) Charges:

The \$655,000 test year estimate for HEI charges broken down by activity is shown at HELCO-1131, page 5. The Company included a ratemaking adjustment of -\$120,000 to the 2016 operating budget in arriving at the 2016 test year estimate for HEI charges (see HELCO-1131, page 5). The ratemaking adjustment removed costs for incentive compensation programs, HEIRs administration and compensation for HEI executives. Hawai‘i Electric Light’s position continues to be that these items are reasonable business expenses that should be recoverable from customers, however, the Company excluded these costs from the 2016 test year estimates in order to reduce the number of issues in this proceeding. Therefore, Hawai‘i Electric Light does not waive its right to seek recovery of these costs in future rate cases.

Manage Information Technology (“IT”):

The 2016 test year estimate for costs associated with IT management is \$611,000 and consists of the following:

<u>Description</u>	<u>2016 Test Year Estimate</u>
IT maintenance charges from Hawaiian Electric	\$377,000 ³
IT Costing	96,000 ⁴
Ellipse system administration	58,000 ⁵
Ellipse maintenance support fees	53,000 ⁶
Others	27,000 ⁷
Total	\$611,000

The costs in this category are primarily allocations of Hawaiian Electric charges, incurred on behalf of Hawai‘i Electric Light, for centrally provided services associated with Enterprise Information Systems (Ellipse, Human Resource Management System (“HRMS”), Customer Information System (“CIS”)), internet services, and locally provided services for end-user computing (PCs, Laptops), local area network, and communications (land line and cell phones).

³ HELCO-WP-1102A, page 8 (EE 501)

⁴ HELCO-WP-1102A, page 6 (EE 451)

⁵ HELCO-WP-1102A, page 14(EE 550), line 38-39

⁶ HELCO-WP-1102A, page 16 (EE 901)

⁷ HELCO-WP-1102A, page 14 (EE 550)line 40

The 2016 test year estimate of \$611,000 is \$156,000 higher than the \$455,000 recorded in 2015. The increase is primarily due to a higher allocation of costs in IT maintenance charges from Hawaiian Electric and IT costing categories shown above. The increase is largely the result of two changes impacting the allocations to Hawai‘i Electric Light: 1) IT reorganization in February 2015 to unify the IT service organizations to one central IT organization managed at Hawaiian Electric (further discussed at HELCO T-10) and 2) a correction of the distribution of costs relating to IT services provided for Hawai‘i Electric Light. These services include: the support and maintenance of IT security, network and data center administration and desktop configuration and management.

Compliance:

The Compliance category of costs totals \$388,000 for the 2016 test year and represents costs for external and internal audit filings, regulatory filings with the Commission other than rate case filings and regulatory accounting shared services, which is summarized as follows:

Description	2016 Test Year Estimate
Regulatory filings (non-rate case)	\$163,000 ⁸
Regulatory accounting	120,000 ⁹
Internal audit costs	81,000 ¹⁰
Others	25,000
Total	\$388,000

Note: Totals may not add exactly due to rounding.

The regulatory filings (non-rate case) estimate consists primarily of Hawaiian Electric charges for matters such as capital budget filings, fuel (energy cost adjustment) and power purchase adjustment tariff filings, and support for the latest depreciation study.

The regulatory accounting costs are primarily Hawaiian Electric labor, associated on-costs and incidental non-labor costs. The costs in this category include support for the Company’s annual decoupling filing and the on-going accounting associated with the Revenue Balancing Account (“RBA”) and Rate Adjustment Mechanism (“RAM”).

Internal audit costs are primarily Hawaiian Electric labor, associated on-costs and incidental non-labor costs. These costs include charges for testing for compliance in connection with the annual SOX audit, as well as for non-SOX internal audits.

The \$388,000 test year estimate is \$100,000 higher than the \$288,000 recorded for 2015. The increase is due to: 1) lower internal audit charges in 2015 due to less time charged than expected

⁸ HELCO-WP-1102A, page 14 (EE 550), line 16-21

⁹ HELCO-WP-1102A, page 14 (EE 550), line 15

¹⁰ HELCO-WP-1102A, page 14 (EE 550), line 23

for several audits, as well as a smaller engagement and 2) 2016 costs to support a depreciation study filing that were not incurred in 2015.

Company General and Administrative Costs:

The \$226,000 2016 test year estimate for Company general and administrative costs primarily consist of Hawaiian Electric charges as shown below:

<u>Description</u>	<u>2016 Test Year Estimate</u>
Hawaiian Electric charges	\$161,000
Materials and Procard	10,000
Vehicle charges	20,000
Outside services	16,000
Travel	19,000
<u>Total</u>	<u>\$226,000</u>

This category represents general management and administrative costs and includes Hawaiian Electric charges for support from the President's office, as well as treasury related administrative costs.

Electric Power Research Institute ("EPRI") Dues:

The 2016 test year estimate for EPRI dues expense is \$219,000, as shown in HELCO-1135. The test year estimate represents Hawai'i Electric Light's 10% allocable share of the annual membership fees that are based on a multi-year membership agreement between the Hawaiian Electric Companies and EPRI executed in July 2011.¹¹

In general, the primary benefit of EPRI membership for both Hawai'i Electric Light and its customers results from the Company's access to information, whether through reports, computer software, presentations by EPRI personnel and technical experts, webcasts, electronic mail or telephone inquiries. EPRI spends millions of dollars each year on research that would otherwise be far beyond the capability of any one utility to finance and administer. Hawai'i Electric Light is able to leverage local research and development funds with EPRI funds to conduct research, development and demonstration projects and studies related to Hawai'i Electric Light projects, and thus address the Company's specific needs. EPRI produces hundreds of reports, technical papers and other products (software, etc.) each year. Typically the results of EPRI research can cost non-EPRI members anywhere from a thousand to tens of thousands of dollars per report or software license. An EPRI member company pays no additional fee for EPRI reports or rights to software. In addition, the EPRI funds for Hawai'i Electric Light related projects have directly benefited the Company by increasing its knowledge base and experience in advanced technologies.

¹¹ See HELCO-WP-1135A for a copy of the agreement.

Edison Electric Institute (“EEI”) Dues:

The 2016 test year estimate for EEI dues is \$71,000, as shown in HELCO-1135. The test year estimate represents Hawai‘i Electric Light’s allocable share of the Hawaiian Electric Companies’ annual cost of membership, estimated based on the Companies’ 2016 dues invoice and adjusted for the removal of the portion of dues for government lobbying, political activities, and charitable contributions. EEI membership provides benefits to Hawai‘i Electric Light and its customers including:

1. An on-going forum through which company personnel share information with their counterparts at other electric utility companies, which, among other things, helps Hawai‘i Electric Light find better overall solutions to the operational and technical issues it encounters at lower costs than would otherwise be the case;
2. Information which helps member companies save costs, such as reports on electrical system and equipment failures which alert companies to potential problems with particular equipment;
3. A liaison between the industry and the federal government, which allows the Company to indirectly voice its opinion on matters it would probably not otherwise have a chance to address.

Budgeting and Forecasting:

The \$37,000 2016 test year estimate for budgeting and forecasting costs consists of the following:

Description	2016 Test Year Estimate
UI Planner budget system cost amortization	\$31,000 ¹²
Hawaiian Electric charges	6,000
Total	\$37,000

This category represents costs for the Company’s budgeting and forecasting activities. The Hawaiian Electric charges include costs for budget system maintenance fees.

The Company included a budget adjustment of -\$75,000 to remove the costs budgeted for the support of the General Manager, Finance. The position provides support and oversight for both Hawai‘i Electric Light and Maui Electric and the costs associated with the position were budgeted to be allocated between the two companies in the 2016 operating budget. The position moved from presiding with Maui Electric to Hawaii Electric Light in 2016 so a budget adjustment was made to remove the applicable non-labor costs and add labor costs associated with the movement of the position. The related staffing discussion is included in HELCO-1105.

¹² HELCO-WP-1102A, page 16 (EE 901)

PRESIDENT’S OFFICE DEPARTMENT
O&M BUDGET AND TEST YEAR ESTIMATE

The President’s Office Department’s operation and maintenance (“O&M”) expense is \$1,234,000, as shown at HELCO-1101B. Costs for this department consist of labor and associated overheads, and non-labor costs for the general management, administration and executive leadership of the Company. The supporting documentations for the operating budget and adjustments to arrive at the 2016 test year estimates are provided in HELCO T-11 workpapers accompanying this testimony and its exhibits.

As shown in HELCO-1101B, the President’s Office Department’s 2016 test year estimates are as follows:

Production	\$ 50,000
Administrative and General	<u>1,184,000</u>
Total	<u>\$1,234,000</u>

Production Operation (B30) and Production Maintenance (B31)

The President’s Office Department’s 2016 test year estimate for its share of production operation and maintenance expense is \$50,000 as shown in HELCO-1101B, consisting of non-labor expenses. The amounts primarily represent Hawaiian Electric charges for purchase power agreement and renewable acquisition support. See HELCO-WP-1102B for details of these charges.

Administrative and General (B38 and B39)

The President’s Office Department’s 2016 test year estimate for its share of administrative and general expense is \$1,184,000, as shown on HELCO-1101B. The amount consists of \$462,000 in labor expenses and \$723,000 in non-labor expenses and is summarized as follows:

<u>Major Cost or Activity</u>	<u>2016 Test Year Estimate</u>
Labor	\$462,000
Non-Labor On-Cost	213,000 ¹³
Non-Labor by Category:	
Outside services	214,000
Hawaiian Electric charges	208,000
Travel related charges	41,000
Others	46,000
Total	<u>\$1,184,000</u>

¹³ On-costs identified by Expense Elements 406, 422, and 423 are excluded from the O&M expenses discussed in order to focus on the direct costs of the Department’s O&M work activities and major costs.

Labor expense:

The 2016 test year estimate for labor expense of \$462,000 is based on a department employee count of three employees. Subsequent to the calculation of revenue requirements for this test year, the General Manager, Hawai'i Island position was vacated as of July 11, 2016 and this position is not planned to be filled.¹⁴ Hawai'i Electric Light will incorporate this change in revenue requirements at the next opportunity.

Outside Services:

The \$214,000 test year estimate for outside services consists of \$211,000 for legal services and \$3,000 for general outside services.

The 2016 test year estimate for legal services of \$211,000 is presented at HELCO-WP-1102B. The test year estimate is primarily based on historical averaging. Collectively, the 2016 test year estimate for outside legal services included in the administrative and general block of accounts, as well as those included in production operation and maintenance, which totals \$212,000, is \$209,000 higher than the \$3,000 recorded for 2015. The increase is due to a reclassification of O&M expenses to deferred accounts in the amount of \$212,000 in 2015 following the Commission's approval of deferred accounting treatment for Geothermal request for proposal ("RFP") costs in Decision and Order No. 33313 in Docket No. 2012-0164.

The work performed by outside attorneys in the legal services costs is for a variety of activities as identified at HELCO-WP-1102B. The work serves, among other things, to ensure Hawai'i Electric Light is in compliance with existing laws and regulations, including PUC procedural requirements, and minimizes risks associated with operating as an electric utility.

The 2016 test year estimate for outside services of \$3,000 is \$985,000 lower than the 2015 recorded cost of \$988,000. The decrease is primarily due to a non-recurring settlement expense recorded in 2015, which was offset by a reclassification of O&M expenses to deferred accounts associated with the Geothermal RFP Decision and Order described above. The test year estimate includes a budget adjustment of -\$46,000 to move the costs associated with pension and OPEB administration to the responsible department, the Administration Department.

Hawaiian Electric Charges:

The test year estimate of \$208,000 for Hawaiian Electric charges is presented at HELCO-WP-1102B.

The costs included in this category are primarily Hawaiian Electric labor and non-labor charges associated with general management, administration, strategic planning and purchase power agreement support.

¹⁴ HELCO-1505A presents the details of the staffing in the President's Office.

The 2016 test year estimate of \$208,000 for Hawaiian Electric charges in the administrative and general block of accounts, together with the \$49,000 test year estimate for Hawaiian Electric charges in the production operation and maintenance block of accounts total \$257,000, which is \$191,000 higher than the \$66,000 recorded in 2015 for Hawaiian Electric charges to these block of accounts. The increase is primarily due to a reclassification of O&M expenses to deferred accounts associated with the Geothermal RFP Decision and Order described above in 2015, and offset by consultant outside service costs billed to Hawai'i Electric Light for the Company's Power Supply Improvement Plan ("PSIP"), which now resides with and is incurred by the System Operations and Planning Department.

Travel Related and Other Costs:

The details associated with the travel related charges of \$41,000 and other costs of \$46,000 can be found at HELCO-WP-1102B. The costs included in these categories include interisland and mainland travel, purchasing card charges, vehicle expenses and company memberships.

Performance Incentive Compensation ("PIC"):

The 2016 test year estimates include a ratemaking adjustment of -\$478,000 to remove costs associated with the Company's performance incentive compensation ("PIC") programs as shown at HELCO-WP-1103B. The adjustment was made to reduce the number of issues and simplify this rate case proceeding. PIC includes an Executive Incentive Compensation Plan ("EICP"), a Long-term Incentive Plan ("LTIP"), Manager Award Program ("MAP"), and Annual Team Incentive ("ATI"). Hawai'i Electric Light's position continues to be that PIC costs are necessary and appropriate business expenses, and reserves the right to seek recovery of these costs in future rate cases.

GENERAL LEDGER CODE ENTRIES ("GL CODE ENTRIES") & MISCELLANEOUS O&M
BUDGET AND TEST YEAR ESTIMATE

This category is for accounting entries for transactions recorded to accounts not associated with a specific department or RA code. The 2016 operating budget for GL Code Entries, amounting to a credit balance of \$19,217,000,¹⁵ consists primarily of accounting reclassification credit adjustments for: 1) on-cost charges made to various NARUC accounts, 2) administrative expense transfer¹⁶, and 3) employee benefits transfer¹⁷.

The 2016 test year estimate for GL Code Entries also includes budget and normalization adjustments made to the 2016 operating budget as shown in HELCO-WP-1103C and summarized as follows:

¹⁵ HELCO-1101C

¹⁶ See HELCO-1113 for summary of NARUC 922 administrative expenses transferred.

¹⁷ See HELCO-1133 for summary of NARUC 926020 employee benefits transferred.

Description	Amount
Administrative expenses transferred to construction	-\$2,867,000
Vacancy adjustment	-1,224,000
Employee benefits adjustment associated with vacancy adjustment	-641,000
Employee benefits transfer adjustment	283,000
ERP budget adjustment	-182,000
ERP normalization adjustment	1,198,000
Total	-\$3,434,000

As a result of D&O No. 33233 in the ERP/EAM project docket (Docket No. 2014-0170) issued on October 2, 2015, the Hawaiian Electric Companies identified various items to be expensed in 2016 through 2019. The Company proposes to incorporate the normalized O&M expenses relating to the ERP/EAM project budgeted in 2016 through 2018. See T-11, pages 59 to 65 for discussion on the ERP/EAM project as well as HELCO-WP-1122B for the calculation of the normalization adjustment. Although Hawai'i Electric Light's portion of the O&M expense project budget is allocated to the Distribution and Support Services Departments, due to the timing of information received, the Company decided to incorporate all of the ERP/EAM related adjustments in the GL Code Entries & Miscellaneous category, rather than preparing and incorporating separate entries in Distribution's and Supporting Services' O&M expense summaries. The amounts will be properly reclassified into the respective departments' O&M expense summary exhibits that they pertain to at the next available opportunity.

On-Cost Reclassification Credits

The on-cost reclassification credits are necessary in order to comply with the NARUC Uniform System of Accounts ("USOA") and properly classify the O&M expense portion of administrative and employee benefits expenses in A&G accounts and payroll taxes in non-O&M expense accounts.

ELLIPSE, the Company's Core Business Software System, generally applies on-costs to the designated clearing base regardless of the NARUC account number being charged. As a result, ELLIPSE applies administrative, employee benefits and payroll expense on-costs to the various O&M expense accounts (e.g., production, transmission and distribution O&M expense accounts). In order to comply with the NARUC USOA, the O&M expense related portion of the on-costs applied by ELLIPSE to the various O&M expense accounts are "reversed" and added back to the proper account. For example, the O&M expense related portion of administrative and employee benefits on-costs applied to various O&M expense accounts is reversed and added back to A&G expenses. In addition, the O&M expense portion of the on-cost for payroll taxes (e.g. FICA, FUTA and SUTA) must be classified as taxes other than income taxes. Therefore, the payroll taxes on-costs applied by ELLIPSE to O&M accounts are reversed and added back to taxes other than income taxes.

The reversed amounts can generally be identified in the detailed UI Planner Test Year 2016 O&M Expense Budget reports, as presented in HELCO-WP-101(B) series of workpapers. On these workpapers, the line items with no department names include the reversal amounts. With respect to the 2016 budget amounts, the amounts presented on this no department name line will equal the reversed amounts. With respect to recorded amounts, the amounts presented on the no department name line will not necessarily equal the reversed amounts since it will include other types of accounting entries required to complete the financial closing process.

HELCO-WP-1121A, page 1 presents an illustration, utilizing a filtered version of the non-labor data file, to illustrate how to identify the reversed amounts. HELCO-WP-1121A page 1 shows that a total of (\$24,473) (i.e., the balance of the line items with no department name) was reversed out of account no. 911 and added back to A&G expenses and taxes other than income taxes through expense elements 406 (corporate admin expense), 422 (employee benefits), and 423 (payroll taxes). Note that the total on-costs for account no. 911 net to zero, as can be expected as the on-cost amounts initially charged to the account were reversed.

While the amounts with no department name for test year 2016 will always equal the total on-cost amount reversed for an account, the total on-cost amount for the account will not necessarily net to zero for the following two reasons:

- 1) Not all of the on-costs applied to an account are subject to being reversed. For example, the on-cost amounts for Energy Delivery are not reversed, except for a small portion as explained in item (2) below.
- 2) A portion of some on-cost amounts that are mostly not reversed represents other on-costs that are reversed. For example, a portion of the Energy Delivery on-cost amounts represent corporate administration expense, employee benefits and payroll taxes on-cost amounts, which are reversed. While such reversed amounts are included in the amounts with no department name, the amounts are not specifically identified on the work papers as corporate administration expense, employee benefits and payroll taxes, but rather, are included as part of the Energy Delivery on-cost amount.

HELCO-WP-1121A, page 2, provides an illustration of the situation where the total on-costs for an account do not net to zero. As shown on the workpaper, the balance of line items with no department name of (\$18,742) represents the total on-cost amount reversed. The on-cost amounts reversed include a portion of the Energy Delivery on-cost amounts totaling \$11,557. The remaining balance on the account does not net to zero.

Not Used

Not Used

Not Used

Not Used

Hawai'i Electric Light Company, Inc.
Prepaid Pension Asset / Liability Balances and Amortization
Pension Tracking Mechanism adopted 04/2007
1987-2013
(\$ Thousands)

	A	B	C	D	E	F
	= Prev Yr F					=A+B-C-D+E
Year	Beginning Pension Asset Balance	Contributions to Trust	NPPC Accrual	Amortization	Adjustment	Ending Pension Asset / (Liability) Balance
1987	\$ -	\$ 1,790	\$ 1,790	\$ -	\$ -	\$ -
1988	-	1,788	1,788	-	-	-
1989	-	1,832	1,832	-	-	-
1990	-	1,981	1,981	-	-	-
1991	-	2,109	2,109	-	-	-
1992	-	2,207	2,207	-	-	-
1993	-	2,227	2,227	-	-	-
1994	-	2,571	2,571	-	-	-
1995	-	1,827	1,827	-	-	-
1996	-	2,531	2,531	-	-	-
1997	-	2,222	2,222	-	-	-
1998	-	1,482	1,102	-	-	380
1999	380	-	468	-	-	(88)
2000	(88)	-	(3,107)	-	-	3,019
2001	3,019	-	(3,399)	-	-	6,418
2002	6,418	-	(2,557)	-	-	8,975
2003	8,975	3,621	1,498	-	-	11,098
2004	11,098	4,868	76	-	-	15,890
2005	15,890	500	875	-	-	15,515
2006	15,515	-	2,744	-	-	12,771 G
2007	12,771	-	-	1,916	(859) H	9,996
ADJ	9,996	-	-	-	721 H	10,717
2008	10,717	-	-	2,554	-	8,163
2009	8,163	-	-	2,554	859 I	6,468
2009 per GL	6,468	-	-	-	(721) I	5,747
ADJ	5,747	-	-	-	(859) J	4,888
ADJ	4,888	-	-	-	721 J	5,609
2009 ADJ	5,609	-	-	-	(721) K	4,888
2010	4,888	-	-	2,554	-	2,334
2011	2,334	-	-	622	-	1,712
2012	1,712	-	-	552	-	1,160
2013	1,160	-	-	552	-	608
2014	608	-	-	552	-	56
2015 per GL	56	-	-	56	-	(0)
2015 ADJ	(0)	-	-	496 L	-	(496) M
2016	(496)	-	-	(99) O	-	(397) N
Total		\$ 33,556	\$ 20,785	\$ 11,912	\$ (859)	
Average 2016 Test Year Balance				(M+N)/2		\$ (446)

Notes:

- Totals may not add exactly and references made may not tie exactly due to rounding.

Columns A through F

Amounts presented are recorded balances, except those for 2016. 2009 reflects recorded plus prior year adjustments. See notes H through K below.

- G** The pension tracking mechanism, approved in Decision and Order filed on October 28, 2010, specifies the balance as of 12/31/2006 to be included in rate base as pension asset, subject to subject to amortization over 5 years.

Prior Year Adjustments Reflected in 2009:

- H** The net amount of (\$138K) recorded in 2007 was made up of two entries which included the 2007 pension tracker \$721K and the January-March 2007 non-funded pension, (\$859K). The pension tracker amount of \$721K was recorded to the wrong account.
- I** In September 2009, a journal entry was made to reclass net amount of \$138K from the SFAS 158 regulatory asset account to the prepaid pension asset account. The reclass journal entry was incorrectly recorded.
- J** In February 2010, a journal entry was made to reverse the previous entry made in part [B].
- K** In February 2010, a journal entry was made to correct (\$721K) from the previous entry in [A] to the proper pension tracker account, as shown on page 2.

Prior Year Adjustments Reflected in 2015:

- L**
- In March 2016, a journal entry was made to reflect a full year's worth of amortization expense for 2015. The prepaid pension balance expired in February 2015 and amortization was stopped. The 2016 entry tried up the amortization to correct for the stoppage.
- | | |
|-------------------------------------|-------|
| Amortization recorded thru Feb 2015 | \$ 56 |
| True up entry in Mar 2016 | \$496 |
| Total Amortization for 2015 | \$552 |
- O** (\$496) ÷ 5 years = (\$99).

Hawai'i Electric Light Company, Inc.
Regulatory Asset - NPPC vs. NPPC in Rates
(\$ Thousands)

	<u>Total</u>	
Balance, 12/31/06	\$ -	A
2007		
NPPC in rates (\$2,058) vs. NPPC for 2007(\$2,779) for 9 months	<u>721</u>	B
Balance, 12/31/07	721	C =A+B
2008		
NPPC in rates (\$2,744) vs. NPPC for 2008 (\$2,932)	<u>188</u>	D
Balance, 12/31/08 recorded	909	E =C+D
2009		
NPPC in rates (\$2,744) vs NPPC for 2009 (\$5,991)	<u>3,247</u>	F
Balance, 12/31/09 recorded	4,156	G =E+F
2010		
NPPC in rates (\$2,744) vs NPPC for 2010 (\$3,860)	<u>1,116</u>	H
Balance, 12/31/10 recorded	5,272	I =G+H
2011		
Amortization of 10/31/10 balance \$5,086 (11.58/60, for 1/14/11 - 12/31/11)	(982)	J
NPPC in rates (\$2,744) vs NPPC for 2011 (\$5,850) for 1/1/11 - 1/13/11	109	K
NPPC in rates (\$3,860) vs NPPC for 2011 (\$5,850) for 1/14/11 - 12/31/11	<u>1,920</u>	L
Balance, 12/31/11 recorded	6,319	M =sum(I:L)
2012		
Amortization of 10/31/10 balance \$5,086 (12/60)	(1,017)	N
NPPC in rates (\$3,860) vs NPPC for 2012 (\$7,975)	4,115	O
Rounding	<u>1</u>	P
Balance, 12/31/12 recorded	9,418	Q =sum(M:P)
2013		
Amortization of 10/31/10 balance \$5,086 (12/60)	(1,017)	R
NPPC in rates (\$3,860) vs NPPC for 2013 (\$10,775)	<u>6,915</u>	S
Balance, 12/31/13 recorded	15,316	T =sum(Q:S)
2014		
Amortization of 10/31/10 balance \$5,086 (12/60)	(1,017)	U
NPPC in rates (\$3,860) vs NPPC for 2014 (\$7,156)	3,297	V
Rounding	<u>(1)</u>	W
Balance, 12/31/14 recorded	17,595	X =sum(T:W)
2015		
Amortization of 10/31/10 balance \$5,086 (12/60)	(1,017)	Y
NPPC in rates (\$3,860) vs NPPC for 2015 (\$10,192)	<u>6,333</u>	Z
Balance, 12/31/15 recorded	22,911	A1 =sum(X:Z)
2016		
Amortization of 12/31/15 balance \$22,911 (12/60)	(4,582)	B1
NPPC in rates (\$6,903) vs NPPC for 2016 (\$6,903)	<u>-</u>	C1
Balance, 12/31/16 estimate	18,329	D1 =sum(A1:C1)
Average	<u>\$ 20,620</u>	E1 =(A1+D1) / 2

Notes:

- Totals may not add exactly and references made may not tie exactly due to rounding.

A Tracking mechanism implemented in Apr. 2007 with interim D&O No. 23342 in Docket No. 2006-0387. NPPC in rates equaled SFAS 87 NPPC.

D, F, H, and K

NPPC in rates of \$2,744,000 per Docket No. 2006-0387

L, O, S, V, and Z

NPPC in rates of \$3,860,000 per Docket No. 2009-0164

c1 2016 NPPC estimate. See HELCO-1301.

Hawai'i Electric Light Company, Inc.
Contributions in Excess of NPPC
(\$ Thousands)

	A	B	C	D	E
					Prior A+B-C-D
					Balance Contributions above NPPC Regulatory Asset
<u>Year</u>	<u>Beginning Balance</u>	<u>Contributions to Trust</u>	<u>NPPC Accrual</u>	<u>Amortization</u>	
2010				-	-
2011	-	8,897	5,850	-	3,047
2012	3,047	7,975	7,975	-	3,047
2013	3,047	10,775	10,775	-	3,047
2014	3,047	7,156	7,156		3,047
2015	3,047	10,193	10,193		3,047 G
2016 Est.	3,047	6,903	6,903	609 F	2,438 H
Total		<u>\$ 51,899</u>	<u>\$ 48,852</u>		
Average 2016 Test Year Balance				(G + H)/2	<u>\$ 2,743</u>

Notes:

- Totals may not add exactly and references made may not tie exactly due to rounding.

Columns A through E

Amounts presented are recorded balances, except for 2012 and 2013.

F \$3,047 / 5 years = \$609.

**CONSUMER ADVOCATE
PROPOSED PENSION TRACKING MECHANISM**

Purpose: The proposed pension tracking mechanism is designed to achieve the following objectives:

- A. Ensure that the pension costs recovered through rates are based on the FAS87 NPPC, as reported for financial reporting purposes;
- B. Ensure that all amounts contributed to the pension trust funds (subject to the exceptions in Item 3 below) are in an amount equal to actual NPPC and are recoverable through rates; and
- C. Clarify the future treatment of any charges that would otherwise be recorded to equity (e.g., increases/decreases to other comprehensive income) as required by FAS87, FAS158 or any other FASB statement or procedure relative to the recognition of pension costs and/or liabilities.

Procedure:

1. The amount of FAS87 NPPC included in rates shall be equal to the amount recognized for financial reporting purposes.
2. Except when limited by the ERISA minimum contributions requirements or the maximum contribution imposed by the IRC, or the contribution exceeds the NPPC for a reason provided in Item 3, the annual contribution to the pension trust fund will be equal to the amount of FAS87 NPPC.
3. The utility will be allowed to recover through rates the amount of any contributions to the pension trust in excess of the FAS87 NPPC that were made for the following reasons¹:

¹ The Company or the Consumer Advocate (jointly, the "Parties") may initiate discussions with the Parties and the Hawaii Public Utilities Commission to modify these provisions between rate cases (with Commission approval) if there are future changes in accounting standards, federal tax law or federal tax regulations that materially impact the costs otherwise recoverable through this tracking mechanism.

- the minimum required contribution is greater than the FAS 87 NPPC,
- the increased contribution was made to avoid a significant increase in Pension Benefit Guaranty Corporation (PBGC) variable premiums,
- the increased contribution was made to avoid a charge to other comprehensive income, or
- the increased contribution was made to avoid: (i) higher minimum contribution requirements under the Pension Protection Act,² or (ii) other adverse funding requirements under federal pension regulations (provided funding does not exceed 100% of the PBO as a result). The recoverability of any discretionary contributions (as described under this bullet item) shall be subject to review in the Company's next rate case.

Any such "excess" contributions shall be recorded in a separate regulatory asset account, which will be included in rate base.

4. A regulatory asset (or liability) will be established on the Company's books to track the difference between the level of actual FAS87 NPPC during the rate effective period and the level of FAS87 NPPC included in rates during that same period.
 - The unamortized cumulative net ratepayer benefit of approximately \$12.8 million, as of December 2006, shall be included in rate base and amortized over a five year period.
 - if the actual FAS 87-determined NPPC recorded during a given rate-effective period is greater than the FAS87 NPPC included in rates during the immediately preceding rate case, the Company will establish a separate regulatory asset account to accumulate such difference, but only to the extent that such amount is not used to reduce a regulatory liability recorded pursuant to Item 5.
 - If the actual FAS87-determined NPPC recorded during the rate-effective period, adjusted for any amount of such expense used to reduce a

² Transitional relief applies under the Pension Protection Act if the plan's target liability funded level meets the prescribed phase-in percentages for 2008 through 2011. The Parties recognize that such transitional relief or related requirements may be subject to change or revision in future years.

regulatory liability maintained pursuant to Item 5, is less than the expense built into rates, the Company will establish a separate regulatory liability account to accumulate such difference.

- If the actual FAS 87 NPPC becomes negative, the regulatory liability will be increased by the difference between the level of FAS87 NPPC included in rates for that period and “zero” (i.e., \$0).
 - Since this is considered to be a cash item under the tracking mechanism, the regulatory asset or liability will be included in rate base and amortized over a five (5) year period at the time of the next following rate case.
5. If the FAS87 NPPC becomes negative, the Company will set up a regulatory liability to offset the prepaid pension asset created by the negative amount. This regulatory liability will increase by the amount of any negative NPPC, or decrease by the amount of positive NPPC, in each subsequent year. Positive NPPC in each subsequent year will be used to reduce the regulatory liability before being used to establish a regulatory asset pursuant to Item 4.
- If NPPC is negative at the time of the next rate case, the amount included in rates will be “zero” (i.e., \$0).
 - if NPPC is positive at the time of the next rate case, the positive expense will not be included in rates and the Company will not be required to make contributions to the trust until any regulatory liability created under this Item 5 has been reduced to “zero” (i.e., \$0).
 - Since this regulatory liability is considered to be a non-cash item under the tracking mechanism, it is not subjected to amortization and should not be recognized in determining rate base in future years.
6. The objective of this tracking mechanism is that, over time, the Company will recover through rates FAS87-based NPPC, including the amortization of unrecognized amounts as set forth above.
- The Company will establish a separate regulatory asset/liability account to offset any charge, or credit, that would otherwise be recorded against equity (e.g., decreases to other comprehensive income) caused by applying

the provisions of FAS87, FAS158 or any other FASB statement or procedure that requires accounting adjustments due to the funded status or other attributes of the Company's pension plan.

- This regulatory asset/liability will not be amortized into rates or included in rate base, because any such charges are expected to be recovered in rates through the valuation of FAS87 NPPC in future accounting periods, which will be subject to the true-up process described herein. In other words, this regulatory asset/liability will automatically be reversed through the mechanics of FAS87 and, pursuant to other provisions of this proposal, all FAS87-determined NPPC will over time ultimately be recovered from ratepayers.
 - The regulatory asset/liability will increase or decrease each year by the same amount that the equity charge increases or decreases.
7. Recognizing that rate cases do not typically occur on a five-year cycle, the Company will continue to record any amortizations allowed herein throughout the effective term that the approved rates remain in effect, regardless of whether the term is longer or shorter than five years.
- If the rate effective period is less than five years, the Company will be allowed to recover any unamortized and unrecovered amounts in the next following rate case over a five year period and any unamortized balance shall be included in rate base.
 - If the rate effective period is greater than five years, the Company will be required to establish a separate regulatory asset or liability to accumulate any excess amortization, which shall be included in rate base and amortized over a five year period in the next following rate case.
8. Any prepaid pension asset or accrued liability recorded pursuant to the terms and conditions of FAS87 (as opposed to regulatory assets arising from the provisions of this proposed tracking mechanism) will not be included in Rate Base in any future rate case, except for the unamortized portion of the \$12.8 million of cumulative net ratepayer benefits previously identified. The regulatory assets/liabilities discussed herein specifically identify all rate base includable amounts for pension differences.

**Comments & Clarifications
Regarding the Consumer Advocate's
Proposed Pension Tracking Mechanism**

1. The proposed tracking mechanism refers to "NPPC" in explaining how the mechanism operates, which is intended to represent actuarially determined total FAS87 net periodic costs.
2. "NPPC" intentionally encompasses total actuarially determined amounts without regard to any expense allocation or capitalization accounting the Company may recognize on its books and records.
3. Unless limited by IRC maximum contributions or ERISA minimum contributions, the proposed tracking mechanism requires the Company to make annual fund contributions in an amount equal to the total FAS87 net periodic costs determined for each calendar year.
4. The proposed tracking mechanism requires the Company to establish a regulatory asset or liability for the difference between the total FAS87 net periodic costs determined for a given year and the amount of such costs included in then-existing utility rates.
5. The provisions of FAS87 may require a company to record a prepaid pension asset in the normal course of business, without regard to any regulatory agreements or orders adopting a tracking mechanism:
 - a. The proposed tracking mechanism would exclude from rate base for ratemaking purposes any future prepaid pension asset resulting from an actuarial study that resulted in "negative" net periodic costs.
 - b. The proposed tracking mechanism would exclude, or not recognize, any "negative" net periodic costs for ratemaking purposes, instead setting the amount equal to "zero" (i.e., \$0).
6. If the utility is allocated a portion of the FAS87 net periodic costs from an affiliated entity in the normal course of business and the tracking mechanism is approved by the Commission, the Company would be required to commit to

funding 100% of the FAS87 net periodic costs for both HELCO and the affiliate or to maintain segregated pension trust fund accounting for each entity in order to avoid any funding conflicts or issues that might arise in the future.

7. Any commitment by HELCO to fund 100% of its FAS87 net periodic costs (as limited under item 3) will not be contingent on implementing a substantially similar tracking mechanism for each HELCO affiliate. However, in future rate proceedings, the Consumer Advocate will propose that a substantially similar pension tracking mechanism be implemented by HELCO's affiliates.
8. When an order is issued by the Commission which: 1) adopts the tracking mechanism and 2) establishes new rates that explicitly incorporate the provisions of the mechanism in the new rates, HELCO will fund the NPPC for the calendar year of the date of the order based on a monthly proration of the annual NPPC.

Hawai'i Electric Light Company, Inc.
OPEB Balances
2009-2016
(\$ Thousands)

	A = Prior Year D	B	C	D	E	F	G = D+E+F
Year	Beginning OPEB Liability Balance	Contributions to Trust	FAS 106 Accrual	Ending OPEB Liability Balance	Ending SFAS 106 Regulatory Asset	Reg Liability - Negative FAS 106	Ending OPEB Balance
2009	(1,056)	1,802	(1,538)	(792)	792	-	0
2010	(792)	1,121	(857)	(528)	528	-	0
2011	(528)	255	(101)	(373)	335	-	(38)
2012	(373)	393	(202)	(182)	144	-	(38)
2013	(182)	2	253	73	-	(108)	(35)
2014	73	0	627	700	-	(735)	(35)
2015	700	0	254	954	-	(989)	(35)
2016	954	0	544	1,498	-	(1,533)	(35)

Total

Notes:

- Totals may not add exactly due to rounding
- Recorded balances, except as noted in notes B and C below.

B&C Contribution and FAS 106 accrual amounts per instructions from HEI

Hawai'i Electric Light Company, Inc.
Unamortized SFAS 106 OPEB Regulatory Asset
(\$ Thousands)

RECORDED BALANCE - 12/31/07	1,320	
Amortization - 2008	<u>264</u>	
RECORDED BALANCE - 12/31/08	1,056	
Amortization - 2009	<u>264</u>	
RECORDED BALANCE - 12/31/09	792	
Amortization - 2010	<u>264</u>	
RECORDED BALANCE - 12/31/10	528	
Amortization - 2011	<u>193</u>	
RECORDED BALANCE - 12/31/11	335	
Amortization - 2012	<u>191</u>	
RECORDED BALANCE - 12/31/12	144	A
Amortization - 2013	<u>144</u>	
RECORDED BALANCE - 12/31/13	<u>\$ 0</u>	C

Notes:

- Totals may not add exactly and references made may not tie exactly due to rounding.

Hawai'i Electric Light Company, Inc.
Regulatory Liability - Negative NPBC
(\$ Thousands)

RECORDED BALANCE - 12/31/12	\$ -
Negative NPBC - 2013	<u>(108)</u>
RECORDED BALANCE - 12/31/13	(108)
Negative NPBC - 2014	<u>(627)</u>
RECORDED BALANCE - 12/31/14	(735)
Negative NPBC - 2015	<u>(254)</u>
RECORDED BALANCE - 12/31/15	(989)
Negative NPBC - 2016	<u>(544) a</u>
RECORDED BALANCE - 12/31/16	<u><u>\$ (1,533)</u></u>

Notes:

- Totals may not add exactly and references made may not tie exactly due to rounding.
- a See HELCO-1302 for estimated NPBC amount for 2016.

Hawai'i Electric Light Company, Inc.
OPEB
Regulatory Liability - NPBC vs. NPBC in Rates
(\$ Thousands)

Balance, 12/31/06	-	A	
2007 (reflects 9 months for April 2007 Interim D&O)			
NPBC in rates (\$1,530) vs NPBC for 2007 (\$1,384) for 9 months	(110)	B	
Adjustment	(77)	C	
Balance, 12/31/07 recorded	<u>(187)</u>	D	=A+B+C
2008			
NPBC in rates (\$1,530) vs NPBC for 2008 (\$1,268)	(262)	E	
Balance, 12/31/08 recorded	<u>(449)</u>	F	=D+E
2009			
NPBC in rates (\$1,530) vs. NPBC for 2009 (\$1,802)	272	G	
Adjustment	77	H	
Balance, 12/31/09 recorded	<u>(100)</u>	I	=F+G+H
2010			
NPBC in rates (\$1,530) vs. NPBC for 2010 (\$1,122)	(409)	J	See note BB
Balance, 12/31/10 recorded	<u>(509)</u>	K	=I+J
2011			
Amortization (11.58/60 of 10/31/10 balance)= (\$331,356)	64	L	
NPBC in rates (\$1,530) vs. NPBC for 2011 (\$294) for Jan 1 - 13th	(43)	M	See note CC
NPBC in rates (\$403) vs. NPBC for 2011 (\$294) Jan 14th - Dec 31st	(105)	N	See notes AA and CC
rounding	(1)	O	
Balance, 12/31/11 recorded	<u>(594)</u>	P	=K+L+M+N+O
2012			
Amortization (12/60 of 10/31/10 balance)= (\$331,356)	66	Q	
NPBC in rates (\$403) vs. NPBC for 2012 (\$393)	(10)	R	See notes AA and DD
Balance, 12/31/12 recorded	<u>(538)</u>	S	=P+Q+R
2013			
Amortization (12/60 of 10/31/10 balance)= (\$331,356)	66	T	
NPBC in rates (\$403) vs. NPBC for 2013 (\$0)	(403)	U	See notes AA and EE
Balance, 12/31/13 recorded	<u>(874)</u>	V	=S+T+U
2014			
Amortization (12/60 of 10/31/10 balance)= (\$331,356)	66	W	
NPBC in rates (\$403) vs. NPBC for 2014 (\$0)	(403)	X	See notes AA and FF
Balance, 12/31/14 recorded	<u>(1,211)</u>	Y	=V+W+X
2015			
Amortization (12/60 of 10/31/10 balance)= (\$331,356)	66	Z	
NPBC in rates (\$403) vs. NPBC for 2015 (\$0)	(403)	A1	See notes AA and GG
Balance, 12/31/15 recorded	<u>(1,547)</u>	B1	=Y+Z+A1
2016			
Amortization (12/60 of 12/31/15 balance)= (\$1,547,390)	309	C1	
NPBC in rates (\$0) vs. NPBC for 2015 (\$0)	-	D1	See notes AA and HH
Balance, 12/31/16 estimated	<u>(1,238)</u>	E1	=B1+C1+D1
2016 Test Year Average	<u>\$ (1,393)</u>	F1	=(B1+E1)/2

Note: See Notes on page 6.

Hawai'i Electric Light Company, Inc.
OPEB
Regulatory Liability - NPBC vs. NPBC in Rates, Continued
(\$ Thousands)

Note:		<u>In Rates</u>	<u>Expense</u>	
AA	2010 TY			
	NPBC	1,087		
	Amortization of 106 Regulatory Asset	191		
	Executive Life	(97)		
	Electric Discount	(778)		
	OPEB in Rates	<u>403</u>		Per Docket No. 2009-0164
BB	2010 OPEB			
	NPBC	955		Per Watson Wyatt
	Amortization of 106 Regulatory Asset	264		Per page 2
	Executive Life	(97)		Per Watson Wyatt
	OPEB Expense	<u>1,122</u>		
CC	2011 OPEB			
	NPBC	201		Per Watson Wyatt
	Amortization of 106 Regulatory Asset	193		Per page 2
	Executive Life	(100)		Per Watson Wyatt
	OPEB Expense	<u>294</u>		
DD	2012 OPEB			
	NPBC	301		Per Watson Wyatt
	Amortization of 106 Regulatory Asset	191		Per page 2
	Executive Life	(98)		Per Watson Wyatt
	OPEB Expense	<u>393</u>		
EE	2013 OPEB			
	NPBC	(199)		Per Watson Wyatt
	Amortization of 106 Regulatory Asset	144		Per page 2
	Executive Life	(53)		Per Watson Wyatt
	OPEB Expense	(108)		
	Negative NPBC Regulatory Liability	108		
	OPEB Expense	<u>0</u>		
FF	2014 OPEB			
	NPBC	(569)		Per Watson Wyatt
	Amortization of 106 Regulatory Asset	0		Per page 2
	Executive Life	(58)		Per Watson Wyatt
	OPEB Expense	(627)		Per page 3
	Negative NPBC Regulatory Liability	627		
	OPEB Expense	<u>0</u>		
GG	2015 OPEB			
	NPBC	(213)		Per Watson Wyatt
	Amortization of 106 Regulatory Asset	0		Per page 2
	Executive Life	(41)		Per Watson Wyatt
	OPEB Expense	(254)		Per page 3
	Negative NPBC Regulatory Liability	254		
	OPEB Expense	<u>0</u>		

Hawai'i Electric Light Company, Inc.
OPEB
Regulatory Liability - NPBC vs. NPBC in Rates, Continued
(\$ Thousands)

	<u>In Rates</u>	<u>Expense</u>	
HH 2016 OPEB			
NPBC		(495)	Per Watson Wyatt
Amortization of 106 Regulatory Asset		0	Per page 2
Executive Life		(49)	Per Watson Wyatt
OPEB Expense		<u>(544)</u>	Per page 3
Negative NPBC Regulatory Liability		<u>544</u>	
OPEB Expense		<u><u>0</u></u>	

Notes:

- Totals may not add exactly and references made may not tie exactly due to rounding.

A Tracking mechanism implemented in April 2007 with interim D&O in Docket No. 05-0315.

C&H The (\$77K) recorded in 2007 was not correctly deducted for the Executive Life portion from the OPEB in rates. A correction was recorded in September 2009 as a prior period adjustment.

A through P

Recorded amounts presented for 2006 through 2011 are the same as those presented in HELCO-1122, in Docket No. 2012-0099 in HELCO's 2013 test year rate case. Please refer to the sources of the amounts presented therein.

EE through HH

Per procedure 5 of the tracking mechanism, a regulatory liability is in place to offset the negative NPBC. In addition, since the NPBC is negative for the rate case estimate, the amount being included in rates is "zero" (i.e. \$0). For the purpose of calculating the difference between actual NPBC vs. NPBC in rates for years 2013-2015, the regulatory liability was increased by the level of NPBC in rates and "zero" (i.e. \$0).

PROPOSED OPEB TRACKING MECHANISM

Purpose: The proposed OPEB tracking mechanism is designed to achieve the following objectives:

- A. Ensure that the OPEB costs recovered through rates are based on the FAS106 NPBC, as reported for financial reporting purposes;
- B. Ensure that all amounts contributed to the OPEB trust funds (subject to the exception in Item 3 below) are in an amount equal to actual NPBC and are recoverable through rates; and
- C. Clarify the future treatment of any charges that would otherwise be recorded to equity (e.g., increases/decreases to other comprehensive income) as required by FAS106, FAS 158 or any other FASB statement or procedure relative to the recognition of OPEB costs and/or liabilities.

Procedure:

1. The amount of FAS 106 NPBC included in rates shall be equal to the amount recognized for financial reporting purposes.
2. Except when limited by material, adverse consequences imposed by federal regulations, the annual contribution to the OPEB trust funds will be equal to the amount of FAS106 NPBC. The utility will use tax advantaged funding vehicles, whenever possible, as specified in D&O 13659, dated November 29, 1994, in Dockets 7243 and 7233 (Consolidated).
3. The utility will be allowed to recover through rates the amount of any contributions to the OPEB trusts in excess of the FAS106 NPBC that were made for the following reason¹:

¹ The Company or the Consumer Advocate (jointly, the "Parties") may initiate discussions with the Parties and the Hawaii Public Utilities Commission to modify these provisions between rate cases (with Commission approval) if there are future changes in accounting standards, federal tax law or federal tax regulations that materially impact the costs otherwise recoverable through this tracking mechanism.

- the increased contribution was made to avoid a charge to other comprehensive income.

Any such “excess” contributions shall be recorded in a separate regulatory asset account, which will be included in rate base.

4. A regulatory asset (or liability) will be established on the Company’s books to track the difference between the level of actual FAS106 NPBC during the rate effective period and the level of FAS106 NPBC included in rates during that same period.
 - If the actual FAS 106-determined NPBC recorded during a given rate-effective period is greater than the FAS106 NPBC included in rates during the immediately preceding rate case, the Company will establish a separate regulatory asset account to accumulate such difference, but only to the extent that such amount is not used to reduce a regulatory liability recorded pursuant to Item 5.
 - If the actual FAS106-determined NPBC recorded during the rate-effective period, adjusted for any amount of such expense used to reduce a regulatory liability maintained pursuant to Item 5, is less than the expense built into rates, the Company will establish a separate regulatory liability account to accumulate such difference.
 - If the actual FAS 106 NPBC becomes negative, the regulatory liability will be increased by the difference between the level of FAS106 NPBC included in rates for that period and “zero” (i.e., \$0).
 - Since this is considered to be a cash item under the tracking mechanism, the regulatory asset or liability will be included in rate base and amortized over a five (5) year period at the time of the next following rate case.
5. If the FAS106 NPBC becomes negative, the Company will set up a regulatory liability to offset the OPEB asset created by the negative amount. This regulatory liability will increase by the amount of any negative NPBC, or decrease by the amount of positive NPBC, in each subsequent year. Positive NPBC in each subsequent year will be used to reduce the regulatory liability before being used to establish a regulatory asset pursuant to Item 4.
 - If NPBC is negative at the time of the next rate case, the amount included in rates

will be “zero” (i.e., \$0).

- If NPBC is positive at the time of the next rate case, the positive expense will not be included in rates and the Company will not be required to make contributions to the trust until any regulatory liability created under this Item 5 has been reduced to “zero” (i.e., \$0).
 - Since this regulatory liability is considered to be a non-cash item under the tracking mechanism, it is not subjected to amortization and should not be recognized in determining rate base in future years.
6. The objective of this tracking mechanism is that, over time, the Company will recover through rates FAS106-based NPBC, including the amortization of unrecognized amounts as set forth above.
- The Company will establish a separate regulatory asset/liability account to offset any charge, or credit, that would otherwise be recorded against equity (e.g., increases/decreases to other comprehensive income) caused by applying the provisions of FAS106, FAS158 or any other FASB statement or procedure that requires accounting adjustments due to the funded status or other attributes of the Company’s OPEB plans.
 - This regulatory asset/liability will not be amortized into rates or included in rate base, because any such charges are expected to be recovered in rates through the valuation of FAS106 NPBC in future accounting periods, which will be subject to the true-up process described herein. In other words, this regulatory asset/liability will automatically be reversed through the mechanics of FAS106 and, pursuant to other provisions of this proposal, all FAS106-determined NPBC will over time ultimately be recovered from ratepayers.
 - The regulatory asset/liability will increase or decrease each year by the same amount that the equity charge increases or decreases.
7. Recognizing that rate cases do not typically occur on a five-year cycle, the Company will continue to record any amortizations allowed herein throughout the effective term that the approved rates remain in effect, regardless whether the term is longer or shorter than five years.

- If the rate effective period is less than five years, the Company will be allowed to recover any unamortized and unrecovered amounts in the next following rate case over a five year period and any unamortized balance shall be included in rate base.
 - If the rate effective period is greater than five years, the Company will be required to establish a separate regulatory asset or liability to accumulate any excess amortization, which shall be included in rate base and amortized over a five year period in the next following rate case.
8. Any OPEB asset or accrued liability recorded pursuant to the terms and conditions of FAS106 (as opposed to regulatory assets arising from the provisions of this proposed tracking mechanism) will not be included in Rate Base in any future rate case. The regulatory assets/liabilities discussed herein specifically identify all rate base includable amounts for OPEB differences.

**Comments & Clarifications
Regarding the Proposed OPEB Tracking Mechanism**

1. The proposed tracking mechanism refers to “NPBC” in explaining how the mechanism operates, which is intended to represent actuarially determined total FAS106 net periodic costs.
2. “NPBC” intentionally encompasses total actuarially determined amounts without regard to any expense allocation or capitalization accounting the Company may recognize on its books and records.
3. Unless limited by adverse consequences under federal regulations, the proposed tracking mechanism requires the Company to make annual fund contributions in an amount equal to the total FAS106 net periodic costs determined for each calendar year.
4. The proposed tracking mechanism requires the Company to establish a regulatory asset or liability for the difference between the total FAS106 net periodic costs determined for a given year and the amount of such costs included in then-existing utility rates.
5. The provisions of FAS106 may require a company to record an OPEB asset in the normal course of business, without regard to any regulatory agreements or orders adopting a tracking mechanism:
 - a. The proposed tracking mechanism would exclude from rate base for ratemaking purposes any future OPEB asset resulting from an actuarial study that resulted in “negative” net periodic costs.
 - b. The proposed tracking mechanism would exclude, or not recognize, any “negative” net periodic costs for ratemaking purposes, instead setting the amount equal to “zero” (i.e., \$0).
6. If the utility is allocated a portion of the FAS106 net periodic costs from an affiliated entity in the normal course of business and the tracking mechanism is approved by the Commission, the Company would be required to commit to funding 100% of the FAS106 net periodic costs for both HELCO and the

affiliate or to maintain segregated OPEB trust fund accounting for each entity in order to avoid any funding conflicts or issues that might arise In the future.

7. Any commitment by HELCO to fund 100% of its FAS106 net periodic costs (as limited under item 3) will not be contingent on implementing a substantially similar tracking mechanism for each HELCO affiliate. However, in future rate proceedings, a substantially similar OPEB tracking mechanism will be proposed for HELCO's affiliates.

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Administrative Expenses Transferred To Construction
Comparison - PA Consulting Study Approach vs. KPMG Study Approach
(\$ Thousands)

	PA	HELCO-WP-1113 Source	KPMG	HELCO-WP-1113 Source
1 Cost Pool	3,686	p.2 item o	619	p.5 item C
Cost Base:				
2 Capital Labor Hours	187	p.2 item p	187	p.2 item p
3 Hours Cleared to Capital	110	p.2 item q	110	p.2 item q
4	<u>297</u>		<u>297</u>	
5 Corporate Admin rate per hour	\$ 12.40	line 1 /line 4	\$ 2.08	line 1 /line 4
6 Total Productive hours	<u>679</u>		<u>679</u>	
7 Administrative Expenses Transferred	8,417	line 5 * line 6	1,414	line 5 * line 6
8 Reversal of Corp. Admin on-cost charged to O&M	<u>(4,767)</u>	p.3 item I	<u>(801)</u>	p.3 item A
9 Net Administrative Expenses Transferred	3,650		613	
10 Effect of Test Year Adjustments	<u>(170)</u>	p.4 line 19	<u>-</u>	p.5 item I
11 Net Administrative Expenses Transferred (Adjusted)	<u>3,480</u>		<u>613</u>	
	x		y	
12 Difference			<u>\$2,867</u>	z = x - y

Note:

- Totals and products may not come out exactly and references made may not tie exactly due to rounding.
line 12

The operating budget of NARUC account 922 reflects \$613,000, the amount calculated based on the KPMG approach. The Company proposes an adjustment to reflect the net transfer amount to construction of \$3,480,000, calculated based on the PA Consulting approach. The difference of \$2,867,000 is included in the list of adjustment at HELCO-WP-1103C.

Hawai'i Electric Light Company, Inc.
Administrative Expenses Transferred To Construction
Comparison of Proposed Methodology vs. Existing Methodology
Full Year
(\$ Thousands)

	A	B	C = A - B	
	Proposed New (PA)	Existing (KPMG)	Difference	Ref
Administrative Expenses Transferred - NARUC 922	<u>(3,480)</u>	<u>(613)</u>	<u>(2,867)</u>	HELCO-1113, p.1
Administrative Expenses Transferred to Construction	3,516	619	2,897	See below
Ratio of Capital Expenditures/ Plant Additions	<u>82.1%</u>	<u>82.1%</u>	<u>82.1%</u>	See below
Estimated impact on plant additions	<u>2,887</u>	<u>508</u>	<u>2,379</u>	

Administrative Expenses Transferred to Construction is calculated as follows:

Annual cost pool	3,686	619		HELCO-1113, p.1
Adjustments to cost pool	<u>(170)</u>	<u>(0)</u>		HELCO-1113, p.1
Adjusted cost pool	3,516	619		

The ratio of capital expenditures / plant additions is calculated as follows:

FY16 Expenditures	52,098	D		HELCO-WP-1808
FY16 Adj	<u>131</u>	E		HELCO-WP-1808
Subtotal FY16 capital expenditures	52,229	F		=D + E
2016 Ending CWIP Related to 2016 Expenditures	<u>3,368</u>	G		HELCO-WP-1113, p.9
2016 Plant Additions Related to 2016 Expenditures	48,861	H		=F - G
Less: plant addition corporate placeholder	<u>(5,977)</u>	I		HELCO-WP-1808
2016 Plant Additions Related to 2016 Expenditures	42,884	J		=H + I
Capital Expenditures / Plant Additions	82.1%	K		=J / F

Notes:

HELCO prepared its 2016 test year revenue requirements using corporate administration on-costs calculated based on the new approach recommended in the PA Consulting ("PA") study shown at HELCO-WP-1113A. This exhibit provides a summary illustration of the impact of the proposed new approach on O&M expense account no. 922, and on the 2016 test year estimate for plant additions.

Hawaii Electric Light Company, Inc.
Power Supply Clearing Account
Expense Element 405

	<u>2016 Operating Budget</u>	
<u>Impact to Account Groups</u>		
1 Remove Pool from O&M	(2,456,167)	HELCO-WP-1114 p. 1
Allocation of Pool by Account Group		
2 O&M	1,775,540	HELCO-WP-1114 p. 1
3 Capital	673,656	HELCO-WP-1114 p. 1
4 Removal	6,970	HELCO-WP-1114 p. 1
5 Total	<u>(0)</u>	Sum Line 1: Line 4
6 Total Impact to O&M	<u>(680,627)</u>	Line 1 + Line 2
7 Impact to Plant Additions	<u>674,000</u>	Line 3, rounded to 1000s

Notes:

- Totals may not add or tie exactly due to rounding.

line 7

The amount is incorporated into the 2016 plant additions. See HELCO-WP-1808, p.4.

Hawaii Electric Light Co., Inc.
2016 Test Year Rate Case
O&M Expenses Associated with Capital Projects ("OMAC")

	<u>(\$000s)</u>	<u>Reference</u>
¹ Impact to O&M - remove O&M and reclass to capital	(436)	HELCO-WP-803
² Impact to Plant Additions	436	HELCO-WP-1808

Note:

- Impact to plant additions - the projects for which the OMAC costs correspond with are all projected to complete in 2016 per HELCO-WP-1808. Therefore, the full amount of O&M expenses reclassified to capital were plant added.

Not Used

Not Used

Not Used

Not Used

Not Used

Hawai'i Electric Light Company, Inc.
Listing of Standard Labor Rates
Test Year 2016

<u>Labor Class</u>	<u>2016 Standard Labor Rate</u>
BUOC	33.17
BUTC	51.15
CP	39.24
CREW	56.04
DP	41.33
ELEAC	49.86
INSPE	51.29
JCP	33.50
MECHN	50.73
PA	27.13
POLICE	35.45
RH	35.28
SCD	44.33
SCP	46.56
TECREW	51.30
TT	42.24
WAREH	36.38
CD	42.71
E	57.15
ENG	44.95
EXEC	93.70
FS	51.05
I	27.38
TC	38.40
TCS	51.15

Hawai'i Electric Light Company, Inc.
Listing of On-Cost Rates

On-Cost Description		2016 Operating Budget
Payroll Taxes		7.998%
Employee Benefits	\$	23.98
Non-Productive Wages	\$	6.12
Corporate Administration - PA Consulting	\$	12.40
Corporate Administration - KPMG	\$	2.08
Customer Installation / Engineering	\$	123.82
Energy Delivery (Dollar)		17.90%
Energy Delivery (Hourly)	\$	13.70
Stores		28.519%
Power Supply		10.42%
Vehicles		
Heavy Trucks	\$	21.20
Medium & Light Trucks, & Sedans	\$	9.92

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
On-Cost Pool & Base

<u>On-Cost Description</u>	<u>Major Cost Pool Items</u>	<u>Cost Base</u>
Payroll Taxes	FICA, FUTA, SUTA	Productive labor dollars Note A
Employee Benefits	Pensions, OPEB, Medical, Dental, Grp Life, Vision, LTD, Admin costs	Productive labor hours Note A
Non-Productive Wages	Vacation, holiday, sick pay Other excused absences	Productive labor hours
Corporate Administration	Costs charged to the Administration & General block of accounts that are construction related and consistent with the PA Consulting Corporate Administrative Charge Study.	Capital labor hours Note A
Customer Engineering	Non-project specific capital related work: combo capital / O&M related work if the alloc between capital / O&M is unknown	Productive labor hours of selected employees in the Engineering Department.
Energy Delivery (dollar)	Energy Delivery non-project specific capital related work: combo capital / O&M related work if the alloc between capital / O&M is unknown (excluding vehicle charges)	Total costs (in dollars) for capital projects, O&M activities and other activities for selected Energy Delivery RAs.
Energy Delivery (hourly)	Energy Delivery vehicle charges.	Productive labor hours of selected employees in the Distribution and Engineering Departments.
Stores	Material / tool handling costs, exempt material costs, freight charges less than \$15,000 per invoice item, postage & bulk mail costs excluding those related to customer billings.	All amounts for material purchases except for procurement card purchases.
Vehicles	Costs related to the operation & maintenance of vehicles and special equipment, including vehicle related materials and tools.	Vehicle hours.
Power Supply (dollar)	Power Supply non-project specific capital related work: combo capital / O&M related work if the alloc between capital / O&M is unknown (excluding vehicle charges)	Total costs (in dollars) for capital projects, O&M activities and other activities for selected Power Supply RAs.
Power Supply (hourly)	Power Supply vehicle charges.	Productive labor hours of selected employees in the Power Supply RAs.

Note:

- A Ellipse, the Company's core business software system, applies on-costs to all labor hours (and therefore to all NARUC accounts) charged by the labor classes selected to receive the on-costs, whereas NARUC requires that certain on-costs be applied to only selected NARUC accounts. To resolve this issue, fairly comprehensive "reversing" entries need to be made to the general ledger each month to maintain compliance with NARUC requirements.

Hawaii Electric Light Company, Inc.
Deferred System Development & Other Costs
Summary by Project
(\$ Thousands)

	A	B	C	D	E	F	G	H	I	J	K	
	Deferred System Development Costs					=sum(A to E)	Other Deferred Costs			=sum(G to I)	=F + J	
Dkt No.	2006-0003	2010-0339	04-0268	2012-0331	2014-0170		2012-0164	2015-0074	2016-0156			
In-service Date	12/15/09	2/1/12	5/29/12	9/9/14	n/a		n/a	n/a	n/a			
Decision & Order	No. 23413	Issued 11/3/11	No. 21798	No. 33082	No. 33861		No. 33313	n/a	n/a			
	HR Suites	Budget System	CIS	IVR	EPR/ EAM	Sub- Total	thermal RFP	(See note) Lava Flow	PSIP O/S	Sub- Total	Grand Total	
Deferred Cost Balances:												
1	Recorded Balance - 12/31/15	777	249	2,010	586	-	3,622	2,200	-	-	2,200	5,822
2	Changes in 2016											
3	Deferred Project Cost	-	-	-	-	-	-	-	1,052	1,052	1,052	
4	Amortization (see line 11)	(135)	(31)	(213)	(55)	-	(434)	(440)	-	(270)	(710)	(1,144)
5	Estimated Balance 12/31/16	641	219	1,797	531	-	3,188	1,760	-	782	2,542	5,730
6	Average 2016 Balances	709	234	1,903	559	-	3,405	1,980	-	391	2,371	5,776
Annual Amortization Calculation:												
7	Total Deferred Costs	1,621	370	2,562	654	-	2,200	-	1,350			
8	Amortization Period (months)	144	144	144	144	-	60	-	60			
9	Monthly Amortization	11	3	18	5		37	-	23		line 7/line 8	
10	Months to Amortize in 2016	12	12	12	12		12	-	12			
11	Amortization in 2016	135	31	213	55	-	440	-	270		line 9*line 10	

Notes:

- A The deferred costs of Human Resources System ("HR Suite") was included in rate base in Hawaii Electric Light's 2010 test year rate case. No changes to the deferred cost or the amortization have been made.
- B The Commission approved the deferral treatment of system development cost relating to the Budget System Replacement and its inclusion in rate base in Decision and Order issued on November 2, 2011.
- C On January 28, 2013, the Hawaiian Electric Companies and the Consumer Advocate ("Parties") filed a letter documenting their agreements on certain regulatory matters ("Stipulated Settlement"). The agreement included a write-off of recorded capitalized costs in lieu of conducting regulatory audits for Hawaiian Electric's Campbell Industrial Park Combustion Turbine Unit 1 and the Customer Information System ("CIS") projects ordered in the *Order Approving Consumer Advocate's Recommendations Regarding Focused Regulatory Audits*, issued on May 2, 2011 in Docket No. 2008-0083 (Hawaiian Electric's 2009 test year rate case). For purposes of accounting for the settlement, the Parties agreed that the entire write-off would be applied to adjust the CIS project, \$29 million for Hawaiian Electric, \$5.5 million for Hawaii Electric Light, and \$5.5 million for Maui Electric. The Commission approved the Stipulated Settlement in Order No. 31126 on March 19, 2013. The final deferred CIS costs including the carrying cost after the write-off was \$2,561,551, as shown in Hawaii Electric Light's 2013 Decoupling filing in Transmittal No. 2013-02 HELCO-WP-D1-001. Hawaii Electric Light started the amortization in June 2013.
- D On August 19, 2015, the Commission approved the deferral of software and software development costs associated with the IVR project as well as the amortization of those costs over a period of twelve years. The 2015 balance represents total deferred costs in the amount of \$654,000 offset by amortization scheduled over a period of twelve years and beginning on October 1, 2014. Accordingly, the amortization for 2016 is for 12 months.
- E On October 2, 2015, the Commission issued D&O No. 33233, denying the Companies' request to defer all software development costs for the Implementation Project phase of the ERP/EAM Project, and ordering that they apply their existing accounting policy for software project costs to the Implementation Project phase. Due to the timing of the project commencement targeted in 2017 with a target in-service date in the fourth quarter of 2018, Hawaii Electric Light will not incorporate its portion of the deferred cost in the 2016 test year estimate. However, the Company proposes an adjustment to incorporate the costs to be expensed in 2016 through 2018 on a normalized basis, amounting to \$1,197,588 in O&M expenses and \$6,468 in payroll tax expense, in the 2016 test year estimate. See the data obtained and the calculation performed at HELCO-WP-1122B.
- G In Decision and Order No. 33313 in Docket No. 2012-0164, the Commission approved (1) the deferral treatment of non-labor costs associated with Hawaii Electric Light's geothermal request for proposals ("Geothermal RFP") to acquire up to 50 MW of dispatchable renewable geothermal firm capacity generation on the island of Hawaii and (2) the accrual of carrying costs at the Company's short term debt rate of 3.25% on the Geothermal RFP costs. See HELCO-WP-1122 for the costs incurred and the calculation of carrying costs.
- H The Company filed an application in Docket No. 2015-0074 to defer certain O&M costs associated with monitoring, preparing for and responding to the June 27, 2014 Kilauea lava flow. The Company will include the costs in revenue requirements if the application is approved during this rate case proceeding.
- I On June 20, 2016, in Docket No. 2016-0156, the Hawaiian Electric Companies filed an Application requesting approval to defer all non-labor consultant outside services costs associated with the Companies' development of the interim and updated PSIPs and expected follow-on work incurred from January 1, 2016 until the closing of Docket No. 2014-0183 (the PSIP docket). See HELCO-610 for background information and details on the associated amounts.

Hawaii Electric Light Company, Inc.
SUMMARY OF ABANDONED PROJECTS
Test Year 2016 Estimate
(\$ Thousands)

Line #	Acct #/ Block of Acct	A	B	C	D	E	F	G
		2013	2014	2015	3 yr avg =(sumA:C)/3	2016 Budget	Adj	2016 Test Year Estimate
<u>Detail by NARUC Account</u>								
1	571	43	3	248	98	-	98	98
2	580	-	-	-	-	-	-	-
3	583	11	24	13	16	-	16	16
4	584	26	16	11	18	-	18	18
5	588	-	-	-	-	40	(40)	-
6	593	173	38	143	118	-	118	118
7	594	52	24	13	30	-	30	30
8	903	-	1	-	0	-	0	0
9	553290	-	8	-	3	-	3	3
10	Grand Total	307	115	428	283	40	243	283
<u>Summary by Block of Accounts</u>								
11	Production	Line 9	-	8	-	3	-	3
12	Transmission	Line 1	43	3	248	98	-	98
13	Distribution	Lines 2 to 7	263	103	180	182	40	142
14	Customer Accounts	Line 8	-	1	-	0	-	0
15	Total		307	115	428	283	40	243

Notes:

- Totals may not add exactly due to rounding.
- See HELCO-WP-1123 for supporting historical data.
- The entire test year estimate amount is reflected in Engineering Department. See HELCO-WP-1803 for the adjustment incorporated.

Line 5 See lines 11 and 12 on HELCO-WP-1802 p.1 for the budget entries. The amounts are reversed out to incorporate the estimated abandoned projects calculated based on the historical amounts and NARUC accounts recorded.

Purpose of the Calculation and Background Information

An abandoned capital project is one in which a “no go” decision is made during the time the project costs are classified as construction work in progress during the detailed engineering through construction completion stages of the project’s life cycle. A project is also considered to be abandoned if the project is significantly delayed generally for more than two years. Costs of abandoned capital projects are normally charged to the appropriate O&M expense account(s), unless the costs result in items that have future value. If any of the costs represent items that have future value (e.g., assets that are usable on another capital project), the related costs are transferred to the other project or to other accounts (e.g., inventory in the case of stock material) as appropriate. If a capital project is abandoned and unusual circumstances exist, the Company may seek Commission approval for special accounting and ratemaking treatment as appropriate under the circumstances. See HELCO-1125 for the Company’s policy on capital project costs.

The Company expects capital projects to be abandoned from time to time and the related costs incurred to be written off to expense. The Company’s operating budget does not normally include O&M expense estimates for abandoned project costs since forecasters do not generally contemplate projects to be abandoned. However, for a rate case test year purpose, an adjustment to the Company’s operating budget is necessary to include in revenue requirements a reasonable amount for abandoned project costs which the Company expects to incur. The Commission has allowed abandoned project costs for ratemaking purposes in past rate cases, including its decision and orders in Hawaii Electric Light’s 2010 and 2006 test year rate cases.

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Preliminary Engineering Charges Transferred To Clearing
And Resulting O&M Expense
2013-2015 3-Year Average
(\$ Thousands)

Year	Clearing Account	A Preliminary Engineering Charges Transferred to Clearing	B Percent Cleared to O&M	C Percent Cleared to Capital	D =A * B Amount Cleared to O&M	E =A * C Amount Cleared to Capital
2013	184050-Power Supply	-	100.00%	0.00%	-	-
2014	184050-Power Supply	217	100.00%	0.00%	217	-
2015	184050-Power Supply	166	100.00%	0.00%	166	-
	2013-2015 Average Power Supply PE Charges Cleared to O&M				<u>128</u>	
2013	184060-Energy Delivery	(23)	35.90%	62.48%	(8)	(14)
2014	184060-Energy Delivery	-	25.86%	71.68%	-	-
2015	184060-Energy Delivery	5	31.39%	65.37%	1	3
	2013-2015 Average Energy Delivery PE Charges Cleared to O&M				<u>(2)</u>	
2013	184080-Customer Install	85	0.00%	97.94%	-	83
2014	184080-Customer Install	84	0.00%	80.53%	-	68
2015	184080-Customer Install	51	0.00%	87.64%	-	44
	2013-2015 Average Customer Install PE Charges Cleared to O&M				<u>-</u>	
	Total 2013-2015 Average PE Charges Cleared to O&M				<u>125</u>	

Notes:

- Totals may not add or tie exactly due to rounding.

column A

See HELCO-WP-1124 for the details and the compilation of the preliminary engineering amounts charged to Clearing.

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Preliminary Engineering Charges Transferred To Clearing
And Resulting O&M Expense
O&M Allocation By Block Of Account

Clearing Account	Block of Account	Block Description	A % Allocation to Block	B Total Cleared to O&M	C =A * B O&M Cleared - Allocation by Block	
1	184050-Power Supply	B30	Production operation	0.00%	128	-
2	184050-Power Supply	B31	Production maintenance	100.00%	128	128
3	184050-Power Supply	B32	Transmission operation	0.00%	128	-
4	184050-Power Supply	B33	Transmission maintenance	0.00%	128	-
5	184050-Power Supply	B34	Distribution operation	0.00%	128	-
6	184050-Power Supply	B35	Distribution maintenance	0.00%	128	-
7	184050-Power Supply	B36	Customer accounts	0.00%	128	-
8	184050-Power Supply	B37	Customer service	0.00%	128	-
9	184050-Power Supply	B38	A&G operations	0.00%	128	-
10	184050-Power Supply	B39	A&G maintenance	0.00%	128	-
11			<u>100.00%</u>		<u>128</u>	
12	184060-Energy Delivery	B30	Production operation	0.21%	(2)	(0)
13	184060-Energy Delivery	B31	Production maintenance	0.76%	(2)	(0)
14	184060-Energy Delivery	B32	Transmission operation	4.07%	(2)	(0)
15	184060-Energy Delivery	B33	Transmission maintenance	16.32%	(2)	(0)
16	184060-Energy Delivery	B34	Distribution operation	19.58%	(2)	(0)
17	184060-Energy Delivery	B35	Distribution maintenance	46.37%	(2)	(1)
18	184060-Energy Delivery	B36	Customer accounts	1.06%	(2)	(0)
19	184060-Energy Delivery	B37	Customer service	0.00%	(2)	(0)
20	184060-Energy Delivery	B38	A&G operations	11.03%	(2)	(0)
21	184060-Energy Delivery	B39	A&G maintenance	0.62%	(2)	(0)
22			<u>100.00%</u>		<u>(2)</u> x	

Summary by Block of Accounts:

23	B30	Production operation	Line 1 + Line 12	(0)
24	B31	Production maintenance	Line 2 + Line 13	128
25	B32	Transmission operation	Line 3 + Line 14	(0)
26	B33	Transmission maintenance	Line 4 + Line 15	(0)
27	B34	Distribution operation	Line 5 + Line 16	(0)
28	B35	Distribution maintenance	Line 6 + Line 17	(0)
29	B36	Customer accounts	Line 7 + Line 18	(0)
30	B37	Customer service	Line 8 + Line 19	(0)
31	B38	A&G operations	Line 9 + Line 20	(0)
32	B39	A&G maintenance	Line 10 + Line 21	(0)
33				<u>128</u>
34		Revised Adjustment		<u>-</u>

x No adjustments will be made for these smaller amounts.

**GENERAL ACCOUNTING GUIDELINES
ACCOUNTING FOR CAPITAL PROJECT COSTS**

(CLARIFIED as of March 19, 2010)

The purpose of this document is to describe the general policies and procedures with respect to accounting for capital project costs. This document does not address how to account for the costs of non-capital projects. There may be facts and circumstances unique to a given project (e.g. a new generating unit addition project) that may not be specifically or adequately addressed by the following discussion. When in doubt as to the proper accounting treatment for capital project costs, please consult with the Controller or the Director of Corporate and Property Accounting of the General Accounting Department.

USUAL CAPITAL PROJECT LIFE CYCLE

The following summarizes the typical sequence of activities, approval procedures, and accounting treatment in a capital project's life cycle:

Step	Project Life Cycle Activities & Approval Procedures	Accounting Treatment
1.	General planning Study problems Consider possible solutions	Expense or clearing
2.	Proposed solution probably resulting in capital project Estimate scope and cost	PEWON
3.	Initialize project	PEWON
4.	Refine scope and updating cost estimate	PEWON
5.	Obtain authorization	CWIP
6.	Construction Work-In-Progress:	
	• Develop detailed design	CWIP
	• Obtain permits and external approvals	CWIP
	• Purchase equipment and materials	CWIP
	• Construct plant facilities	CWIP
7.	Project deemed used or useful	Plant Addition

**ACCOUNTING FOR CAPITAL PROJECT COSTS –
USUAL PROJECT LIFE CYCLE**

STEP 1: General Planning (Expense or Clearing)

General planning involves activities to determine system requirements, current state assessments, identifying problems and identifying potential solutions to problems. For example, planning, analyses, feasibility studies, investigations, requests for engineering assistance, studies of alternative solutions, etc. to determine if there is sufficient

GENERAL ACCOUNTING GUIDELINES
ACCOUNTING FOR CAPITAL PROJECT COSTS

(CLARIFIED as of March 19, 2010)

justification to propose solutions, are considered general planning activities. After this step is completed, a proposed solution in which either a proposed capital project, proposed O&M project or no further action would result. Since the costs of these general planning activities cannot be directly attributable to a specific project at this time, these costs are functionally charged to expense or charged to clearing¹ accounts, depending on the RA of the individual incurring the costs.

STEP 2: Propose Solution; Estimate Scope and Cost (Preliminary Engineering)

In general, when a proposed solution is determined, the scope of the solution and rough cost estimates are prepared. If it is probable that a proposed solution will result in a capital project, a preliminary engineering work order number (PEWON) should be created. The PEWON captures the preliminary engineering costs of developing the potential capital project's scope and its cost estimate. Also, appropriate management approval should be obtained depending on the level of preliminary engineering charges to be incurred. Refer to the Company's approval policy on preliminary engineering charges. Costs during this phase are usually intermittent as decisions have not been made regarding which potential projects will move forward. The results of this phase are refined as the project develops and used as support for project evaluation by management. The costs of these activities charged to the proposed project's PEWON are temporarily held in the clearing account and do not accrue AFUDC. These PEWON charges are transferred to clearing or expense (depending on the RA of the department that created the workorder) account workorders if a capital project does not evolve from this phase or transferred to the approved capital project.

See special treatment explained in Customer Service Requests Projects discussion below.

STEP 3: Initializing a Project (Preliminary Engineering)

When the Process Area determines that the project merits consideration for inclusion in the annual capital expenditure budget, initialization should be requested. The project is initialized on a Project Identification Form (PIF). The PIF is required in order to have a project number assigned to the project. Only projects with permanent project numbers can be considered for incorporation into the respective process area's capital budget. Initialized projects are then prioritized and considered in determining the annual capital expenditure budget. Please see "Project and Program Initialization and Authorization Procedures Manual" for detailed instructions.

STEP 4: Refining Scope and Updating Costs Estimate as Needed (Preliminary Engineering)

¹ Charges to clearing accounts are allocated as an on-cost (overhead) charge to projects during the activities of steps 5 and 6 of the project's life cycle. Note, that a portion of the costs are actually charged to expense or other accounts as a result of the clearing process.

GENERAL ACCOUNTING GUIDELINES
ACCOUNTING FOR CAPITAL PROJECT COSTS

(CLARIFIED as of March 19, 2010)

After a project is initialized, additional work may be needed in order to refine cost estimates and scope before management can make a decision whether or not the project is justified. Some examples of the activities in this step may include more detailed studies, additional investigations and site visits, updating cost estimates and/or determining estimate project schedules. Costs in this phase continue to be charged to PEWON. Appropriate management approval should be obtained depending on the level of preliminary engineering charges to be incurred. Refer to the Company's approval policy on preliminary engineering charges. Costs during this phase may continue to be intermittent as decisions may not have been made regarding which potential projects will move forward.

STEP 5: Authorizing a Project

When the project justification is complete, authorization from management should be requested. The project may be authorized for engineering only or authorized in total. The authorization (management approval) of a project typically occurs after the proposed project's scope and costs are refined and updated, respectively, and after initialization. Sometimes, a project's authorization may occur concurrently with its initialization. After obtaining management approval, the project number is activated in Ellipse and costs can be charged to the project. Project Managers/Engineers or others can then set up project hierarchies in Ellipse. Please see "Project and Program Initialization and Authorization Procedures Manual" for detailed instructions.

As a general rule, management's approval should not be obtained until work on the project needs to begin in order to meet the project's required "in service" date. Management's approval normally means that work on the project should start now and should continue until completion. Once a project is started, the activities in step 6 should be completed on a *planned progressive basis*, i.e. without delay, except for the delays that are inherent in the asset acquisition process such as the ordering, purchasing and delivering of long lead time material, and delays due to permitting and external approval processes.

Subsequent to its authorization and project number activation in Ellipse, the proposed project is deemed a capital project and enters into its construction work-in-progress (CWIP) phase where costs are charged to the project. The Property Accountants must be advised when preliminary engineering costs incurred need to be transferred to the approved capital project. At this time, all accumulated costs in the project's PEWON are transferred to the activated project number. In addition, an allowance for funds used during construction (AFUDC)² is applied on the capital project's costs while in CWIP.

STEP 6: Construction Work-In-Progress

² AFUDC represents the cost to finance the project during the construction period.

GENERAL ACCOUNTING GUIDELINES
ACCOUNTING FOR CAPITAL PROJECT COSTS

(CLARIFIED as of March 19, 2010)

Subsequent to its authorization, a capital project enters into its CWIP phase. This phase includes developing detailed project designs, permitting and securing external approvals³, incurring costs for equipment, materials, contractors and all components of construction costs and/or direct costs necessary to install the assets. Abandoned CWIP projects in this phase are written off to expense.

STEP 7: Facilities Declared Used or Useful (Plant Addition)

Capital projects which are deemed used or useful are considered completed and placed into service. Facilities become useful generally when: 1) construction is for the most part complete, 2) the facilities have been tested (if testing is possible and appropriate), and 3) the facilities are ready for use (i.e. they are able to perform their intended function, and can be energized, pending completion of a related facility(ies), without a significant amount of additional costs incurred). As a general rule, it is expected that facilities will become used within a reasonable period of time after they become useful.

To facilitate the proper and timely closing of capital project costs, projects will generally close at the authorized project number (controlled fifth segment) level. Therefore, the project(s) hierarchy should be scoped/structured with the following in mind: 1) the facilities included in a project should represent full units of property as defined in the Company's property unit catalog⁴, 2) the planned completion dates for all of the facilities should be approximately the same and 3) the facilities should be used or useful (see guidelines in the previous paragraph) at the time the facilities are completed. With respect to item 2) in the previous sentence, if the planned completion dates for the facilities included in a fifth segment project (each of which represent full property units) become significantly different, the cost of any facilities which are completed and ready for service (used or useful) should be closed.

When the capital project is deemed used or useful, accrual of AFUDC is stopped and the costs of the project are placed in-service (a date in-service is entered into Ellipse). The costs are then transferred to plant-in-service. Typically, late or subsequent invoices and charges to closed projects will be recorded to plant-in-service (no AFUDC will be accrued on these late or subsequent charges). Once all charges have been submitted and all work has been completed on the project, the project should be inactivated in Ellipse. This will prevent any further costs from being charged to the project.

Customer Service Requests Projects:

³ In certain instances, the process of permitting and securing external approvals may commence during the preliminary engineering phase depending on the project's scope and requirements, however AFUDC will not accrue on these costs during the preliminary engineering phase.

⁴ A copy of the Company's Property Unit Catalogue can be downloaded from the General Accounting intranet page under Policies and Procedures.

GENERAL ACCOUNTING GUIDELINES
ACCOUNTING FOR CAPITAL PROJECT COSTS

(CLARIFIED as of March 19, 2010)

The Customer Installations Department (CID) receives a significant amount of customer service requests for various types of utility-related work (e.g., new service, underground service, etc.) on an annual basis. The estimated project costs of these service requests are typically under \$20,000. The task of transferring these service request project costs from PEWONs to clearing or O&M, for projects that do not materialize, or to CWIP for projects that do materialize represents a significant administrative burden to the CID department. To address this issue, the CID department will account for customer service request projects that are less than \$20,000 in the following manner.

Accounting for step 1 general planning costs will remain unchanged. General planning costs of CID will be charged to the clearing account. Since the majority of these customer service requests result in capital projects, PEWONs will not be utilized for preliminary engineering as described in steps 2-4 above. Rather, CID will charge the costs of preliminary engineering activities directly to CWIP workorders. This will eliminate the administrative burden of transferring PEWON costs. However, once these charges are in a CWIP workorder, the accounting guidelines for CWIP costs in the step 6 and 7 will remain unchanged or if project is not developed as described below.

**ACCOUNTING FOR CAPITAL PROJECT COSTS –
DELAYED OR ABANDONED PROJECTS**

A chart summarizing the discussion below is attached.

Projects Not Developed

If a capital project does not evolve from steps 2-4, PEWON charges are transferred to either clearing account workorders (and the costs are eventually allocated as an on-cost) or expense account workorders, depending on the originating project's department RA.

Delayed Projects

The accounting for delayed project costs depends on the cause and length of the delay. As a general rule, if the delay is imposed upon the company by external factors (i.e. the delay is unavoidable and beyond the company's control), project costs are treated as described under the Usual Project Life Cycle scenario above, provided that the costs are recoverable from ratepayers. If cost recoverability is uncertain, the appropriate accounting treatment (which is beyond the scope of this discussion) depends on the facts and circumstances of the situation. In these situations, the Controller should be consulted regarding the appropriate accounting treatment.

If a project is delayed at management's discretion rather than by external factors, the treatment of costs will generally depend on the length of the delay. As a general

GENERAL ACCOUNTING GUIDELINES
ACCOUNTING FOR CAPITAL PROJECT COSTS

(CLARIFIED as of March 19, 2010)

rule, costs related to projects delayed for two years or less will be treated as described under the Usual Project Life Cycle scenario above, except that AFUDC will not be applied during the period(s) of project delay. If the delay is for more than two years, the costs will be treated as though the project were abandoned as described below.

Regardless of the reason for the delay (e.g. external factors or internal management decisions), project costs need to be analyzed when delays of more than one or two months are anticipated. If any of the facilities included in the project scope are used or useful at the time of such project delays, it will generally be necessary to close (capitalize) the costs related to the facilities that are used or useful.

Please note: the determination that a delay has occurred does not necessarily require a complete stoppage of work. A delay generally means that work on the project is no longer proceeding on a planned progressive basis, i.e. is no longer proceeding without delay, except for the delays that are inherent in the asset acquisition process. In other words, if construction is not proceeding as fast as would normally be expected for the type of construction involved, a delay in the project may have occurred.

Abandoned Projects

An abandoned project is one in which a "no go" decision is made during the time the project costs are classified as CWIP. Under normal circumstances, the costs of abandoned capital projects are charged to appropriate operation and maintenance expense account(s), unless the costs result in items that have future value. If any of the costs represent items that have future value, e.g. assets that are usable on another capital project, the related costs are transferred to the other project or accounts (e.g. inventory in the case of stock material) as appropriate. If a capital project is abandoned and unusual circumstances exist, e.g. the accumulated costs are significant, the Company will seek PUC approval for special accounting and ratemaking treatment as appropriate under the circumstances.

REQUIRED COMMUNICATIONS

The policies and procedures described above with respect to accounting for capital project costs are administered by the General Accounting Department, based on input from Project Managers or other appropriate individuals. Project Managers or other appropriate individuals must provide, on a timely basis, the Property Accountants with all the information necessary to properly account for capital project costs. For example, the Property Accountants must be advised when preliminary engineering costs incurred in step 5 need to be transferred to the approved capital project. The Property Accountants must also be advised as soon as projects are completed and/or facilities become used or useful, and as soon as projects are delayed, re-started, or abandoned.

GENERAL ACCOUNTING GUIDELINES
ACCOUNTING FOR CAPITAL PROJECT COSTS

(CLARIFIED as of March 19, 2010)

Usual Treatment of Costs Under Various Delayed or Abandoned Project Scenarios (Please consult with Controller or Property Accounting Division)		
Scenario	Cost Treatment	AFUDC Treatment
1. PEWON projects not developed	Transfer costs to clearing or O&M expense – depending on the originating project's department RA	N/A
2. Delays due to external factors and cost recovery is probable	Hold in CWIP	Continue
3. Delays ≤ 2 years at management's discretion	Hold in CWIP	Stop until work resumes
4. Work PERMANENTLY stopped (project is abandoned)	a. Transfer costs to replacement project, inventory, etc. only if costs represent items with value	Continue or stop depending on status of new project
	b. If no replacement project or items have not value, write-off costs to various appropriate O&M expense accounts	Stop and write-off AFUDC
	c. After performing a and b above, if costs are significant, seek PUC determination of cost treatment	PUC decides treatment
5. Delays > 2 years at management's discretion	Same as 3 above	Same as 3 above

ACCOUNTING FOR PENSION
AND POSTRETIREMENT BENEFITS OTHER THAN PENSIONS

BACKGROUND

As described by Mr. Liuone Faagai in HELCO T-12, the Company provides pension benefits to its employees by participating in the Retirement Plan for Employees of Hawaiian Electric Industries, Inc. and Participating Subsidiaries, a qualified defined benefit pension plan. Hawai'i Electric Light provides postretirement benefits other than pensions ("OPEB") through participation in the Postretirement Welfare Benefits Plan for Employees of Hawaiian Electric Company, Inc. and Participating Employers.

Under generally accepted accounting principles ("GAAP"), accounting and reporting requirements with respect to its pension and OPEB plans are governed by Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") 715 Compensation-Retirement Benefits.¹

Pension Guidance

Financial statements present pension in the following manner:

- **Income Statement** - The costs of the benefits provided by the Company's pension plan are recognized as net periodic pension costs ("NPPC") over the period the benefits are earned (i.e., as employees provide the related employment services). The NPPC is the annual amount that the Company must recognize on its financial statement as the cost of providing pension benefits to its employees for the year, and includes amounts ultimately charged primarily to both expense and to capital. In addition, a portion of the NPPC is charged to outside third parties for services rendered, i.e., to billable work. The five major components of the NPPC are: service cost, interest cost, actual return on plan assets, amortization of prior service cost, and amortization of gains and losses. There are a number of factors that affect the NPPC, such as the provisions of the plan, the demographic characteristics of the employees, the performance of the pension fund as it is invested over time, and the actuarial assumptions used in the calculations.
- **Balance Sheet** - FASB ASC 715 requires balance sheet recognition of the funded status of defined benefit pension plans measured as the difference between the fair value of the pension assets and the projected benefit obligation ("PBO"). The PBO is an estimate of the pension promise as of a specified date, and is measured using various assumptions including an assumption for future compensation levels. More specifically, Hawai'i Electric Light is required to (1) recognize the overfunded or underfunded status of its defined benefit pension plan (based on the difference between the fair value of the plan assets and the PBO) in its balance sheet, and (2) recognize as a component of equity, called accumulated other comprehensive income ("AOCI"), net of tax, the actuarial gains and losses, the prior service costs and credits that arise during the period but are not recognized as components of NPPC, and any remaining transition obligation from the initial application of SFAS No. 87.
- **Financial Statement Footnote** - The value of the pension plan assets and the pension obligation are included in the footnotes to the financial statements. Footnote disclosure also includes

¹ Prior to the implementation of FASB ASC beginning with interim and annual period ending September 15, 2009, accounting and financial reporting guidance regarding pension and OPEB were provided in Statement of Financial Accounting Standards ("SFAS") No. 87, "Employers' Accounting for Pensions", SFAS No. 106, "Employers' Accounting for Postretirement Benefits Other Than Pensions", and under SFAS No. 158, "Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans, an amendment of FASB Statements No. 87, 88, 106 and 132 (R)"

descriptions of the plan, items which have in the past or can in the future impact the cost of the pension, and the components of the AOCI.

OPEB Guidance

Financial statements present OPEB in the following manner:

- **Income Statement** - The costs of the benefits provided by the Company's OPEBs are recognized as net periodic benefit costs ("NPBC") over the period the benefits are earned (i.e., as employees provide the related employment services). The NPBC is the annual amount that the Company must recognize on its financial statement as the cost of providing OPEBs to its employees for the year, and includes amounts ultimately charged primarily to both expense and to capital. A portion of the NPBC also is charged to outside third parties for services rendered, i.e., to billable work. Similar to pensions, the five major components of the NPBC are: service cost, interest cost, actual return on plan assets, amortization of prior service cost, and amortization of gains and losses. The factors that impact NPBC, such as the provisions of the plan, the demographic characteristics of the employees, the performance of the plan assets as they are invested over time, and the actuarial assumptions used in the calculations, impact the NPBC as well. In addition, the income statement reflects the amortization costs of the unrecognized transition obligation regulatory asset related to the timing of the initial adoption of SFAS No. 106 (SFAS No. 106 amortization), as approved by the Commission in Interim Decision and Order No. 12886, dated April 6, 1993, Decision and Order No. 13659 dated November 29, 1994, and the letter from the Commission dated December 28, 1994 in Docket Nos. 7233 and 7243 (Consolidated).
- **Balance Sheet** - FASB ASC 715 requires balance sheet recognition of the funded status of the OPEB plan measured as the difference between the fair value of the OPEB Plan's assets and the accumulated postretirement benefit obligation ("APBO") for the OPEB plan. Hawai'i Electric Light is required to: (1) recognize the overfunded or underfunded status of its OPEB plan based on the difference between the fair value of the plan assets and the APBO in its balance sheet, and (2) recognize as a component of AOCI, net of tax, the actuarial gains and losses, the prior service costs and credits that arise during the period but are not recognized as components of NPBC, and any remaining transition obligation from the initial application of SFAS No. 106.
- **Financial Statement Footnote** - The value of the OPEB plan assets and the OPEB obligation are included in the footnotes to the financial statements. Footnote disclosure also includes descriptions of the plan, items which have in the past or can in the future impact the cost of the plan, and the components of AOCI.

RATEMAKING TREATMENT

The concept of pension and OPEB tracking mechanism was first introduced to the Hawaiian Electric Companies² in Hawai'i Electric Light's 2006 rate case in Docket 05-0315 ("2006 Rate Case"), by the Division of Consumer Advocacy of the Department of Commerce and Consumer Affairs ("Consumer Advocate") in its direct testimony filed on February 21, 2007³. In this subject docket, Hawai'i Electric Light and the Consumer Advocate (the parties in the proceeding) agreed on pension and OPEB tracking

² Hawaiian Electric Companies consists of Hawaiian Electric and its two subsidiaries, Hawai'i Electric Light Company, Inc. ("Hawai'i Electric Light") and Maui Electric Company, Ltd.

³ The Commission approved, on an interim basis, the adoption of pension and OPEB tracking mechanisms in its Interim Decision and Order No. 23342, issued on April 5, 2007.

mechanisms. The Commission approved the adoption of a pension tracking mechanism and an OPEB tracking mechanism in its Decision and Order filed October 28, 2010. In its most recent traditional rate case, Hawai'i Electric Light's 2010 test year rate case ("2010 Rate Case"), the Commission approved the revenue requirements based on the continuation of the pension and OPEB tracking mechanisms in its Decision and Order No. 30168 issued on February 8, 2012. Copies of the pension and OPEB tracking mechanisms were provided in HELCO-1021 and HELCO-1023 in Docket No. 2009-0164. The pension tracking mechanism ensures that over time, the pension costs recovered through rates are based on the FASB ASC 715 NPPC as reported for financial reporting purposes, and ensures that all amounts contributed to the pension trust funds are in an amount equal to actual NPPC and are recoverable through rates. The OPEB tracking mechanism ensures that over time, the OPEB costs recovered through rates are based on the FASB ASC 715 NPBC as reported for financial reporting purposes, and ensures that all amounts contributed to the OPEB trust funds are in an amount equal to the actual NPBC and are recoverable through rates.

Pension Tracking Mechanism

The benefits of the pension tracking mechanism are as follows:

- (1) it specifies agreement on the ratemaking treatment of pension costs and pension fund contributions, thus reducing disputable items in rate cases,
- (2) it ensures that neither customers nor the company gains or loses to the detriment or benefit of the other party, based on the pension cost included in rates in a rate case,
- (3) it demonstrates rate support for the Company's pension plan, and
- (4) it results in leveling pension costs reported on the financial statements.

Under the pension tracking mechanism, the test year NPPC is identified and incorporated into rates in each rate case ("NPPC in rates"). Once new rates are effective and until rates are changed in a subsequent rate case, the amount of NPPC in rates and the actual NPPC is separately tracked. The difference between the NPPC in rates and the actuarially calculated NPPC for the year is charged/credited to a regulatory asset/liability. This unamortized regulatory asset/liability is included in rate base. When new rates are established in a rate case, the regulatory asset/liability is amortized over a five year period. The total test year pension cost is the test year NPPC plus or minus the amortization of the regulatory asset/liability. For Hawai'i Electric Light, the mechanism requires the Company to make fund contributions at the actuarially calculated NPPC as determined under GAAP, subject to certain exceptions. The pension tracking mechanism also allows Hawai'i Electric Light to reverse the pension AOCI charge to equity and create a regulatory asset for financial statement purposes. The mechanism allows the utility to recover through rates the amount of contributions to the pension trust in excess of the FASB ASC 715 NPPC that were made for specific reasons. The mechanism also addresses the situation when the NPPC becomes negative. The objective of the pension tracking mechanism is that, over time, the Company will recover through rates FASB ASC 715 based NPPC, including the amortization of the unrecognized amounts.

As required in the pension tracking mechanism, Hawai'i Electric Light has reflected in its results of operations, a pension expense based on the estimated ASC 715 based NPPC for 2016 plus the amortization of the net regulatory asset balance as of December 31, 2015, and reflected the net unamortized regulatory asset as an addition to rate base. See page 2 of HELCO-1111 for the roll-forward of the pension tracking regulatory asset and liability balances.

OPEB Tracking Mechanism

Benefits of the OPEB tracking mechanism specifies ratemaking treatment that allows financial statement treatment of benefit costs to be smoothed based on the amount of NPBC established in a rate case, and

addresses potential situations in the future where contributions to OPEB trusts are not equal to the NPBC recognized.

Similar to the pension tracking mechanism, an amount for OPEB costs is identified and incorporated into rates in each rate case (“OPEB costs in rates”). Once new rates are effective and until rates are changed in a subsequent rate case, the amount of OPEB costs in rates is separately tracked. The difference between the OPEB costs in rates and the actuarially calculated NPBC (excluding executive life costs) plus the SFAS No. 106 amortization for the year is charged/credited to a regulatory asset/liability. This unamortized regulatory asset/liability is included in rate base. When new rates are established in a rate case, the regulatory asset/liability is amortized over a five year period. The total test year OPEB cost is the test year NPBC (excluding executive life costs) plus the SFAS No. 106 amortization plus or minus the amortization of the regulatory asset/liability. The mechanism requires Hawai‘i Electric Light to make fund contributions at the actuarially calculated NPBC as determined under GAAP, subject to certain exceptions. The OPEB tracking mechanism also allows Hawai‘i Electric Light to reverse the OPEB AOCI charge to equity and create a regulatory asset for financial statement purposes. The mechanism allows the utility to recover through rates the amount of contributions to the OPEB trust in excess of the NPBC that were made for specific reasons. The mechanism also addresses the situation when the NPBC becomes negative. The objective of the OPEB tracking mechanism is that, over time, the Company will recover through rates the FASB ASC 715 based NPBC, including the amortization of the unrecognized amounts.

As required by the OPEB tracking mechanism, Hawai‘i Electric Light has reflected in its results of operations, an OPEB expense based on the estimated FASB ASC 715 based NPBC for 2016 less the amortization of the regulatory liability, and the net unamortized regulatory liability in rate base. HELCO-1112 provides the roll-forward of the OPEB tracking regulatory asset and liability balances.

The estimated FASB ASC 715 based NPBC for 2016 is (\$543,788) as shown at HELCO-1302. The tracking mechanism specifies that if the NPBC is negative at the time of the next rate case, as is the case for this test year, the amount included in rates will be “zero” (i.e. \$0)⁴. As such, the 2016 test year estimate for NPBC is zero. In addition, Hawai‘i Electric Light has set up a regulatory liability to offset the OPEB asset created by the negative NPBC. The NPBC has been negative since 2013 and HELCO-1112, page 3 provides a roll-forward of the related regulatory liability balance. In accordance with the OPEB tracking mechanism, the regulatory liability created from the negative NPBC has not been included in rate base and is not subjected to amortization. This regulatory liability is separate from the OPEB tracking regulatory liability. In the recorded years that the NPBC was negative (2013-2015), the OPEB tracking regulatory liability was calculated as the difference between the level of FASB ASC 715 based NPBC in rates and zero.⁵ HELCO-1112, page 4 provides a roll-forward of the OPEB tracking regulatory liability. In accordance with the OPEB tracking mechanism, and as mentioned above, the balance of the unamortized OPEB tracking regulatory liability is included in rate base and the amortization of the balance is included in the results of operations.

Pension Asset

The pension asset is the cumulative amounts of contributions to the pension trust in excess of cumulative pension costs (NPPC accrual), as shown on HELCO-1111, page 1. It represents the net of the cumulative investor supplied fund contributions in excess of the cumulative previously recognized pension cost. Fund contributions are the cash payments the Company has made to the pension fund over the years.

⁴ See Procedure Item 5 of the OPEB tracking mechanism shown at HELCO-1112A.

⁵ See Procedure Item 4 of the OPEB tracking mechanism shown at HELCO-1112A.

Recognized pension cost is the accumulated NPPC that the Company has recognized on its financial statements.

In the settlement agreement among the parties in the 2006 rate case, and under the pension mechanism subsequently approved by the Commission, Hawai'i Electric Light's revenue requirement includes the amortization of the pension asset in expense and the pension asset in rate base. The pension asset became fully amortized in 2015. Because the pension asset and related amortization are included in rates (due to the introduction of the pension tracking mechanism in the 2006 rate case and its continuation in the 2010 rate case), and are part of the aforementioned agreed upon pension tracking mechanism, the amortization of the pension asset continued despite the asset becoming fully amortized. This resulted in the pension asset becoming negative, now representing a regulatory liability ("regulatory liability – prepaid pension"). Hawai'i Electric Light has reflected in its results of operations, the amortization of the regulatory liability and the net unamortized regulatory liability in rate base. HELCO-1111, page 1 provides the roll-forward of the regulatory liability – prepaid pension balance.

Contributions in Excess of NPPC

Under the pension tracking mechanism, contributions in excess of NPPC are recorded in a separate regulatory asset account and included in rate base. In 2011, Hawai'i Electric Light was required to contribute \$8,897,000 to the pension trust while the NPPC was \$5,850,000. The excess contribution amounting to \$3,047,000 was recorded as an addition to contributions in excess of NPPC regulatory asset. There were no other years in which the required contribution amount exceeded the NPPC, including the estimates for 2016. HELCO-1111 page 3 presents the roll-forward balances of this regulatory asset account. Hawai'i Electric Light has reflected in its results of operations the amortization of the regulatory asset account and the net unamortized regulatory asset in rate base.

PENSION AND OPEB SUMMARY

Since its 2006 Rate Case, Hawai'i Electric Light has incorporated the pension and OPEB tracking mechanisms, originally proposed by the Consumer Advocate in the subject rate case. The Commission has approved the revenue requirements based on the continuation of the pension and OPEB tracking mechanisms, including Hawai'i Electric Light's most recent 2010 Rate Case. The tracking mechanisms have the intended effect of balancing NPPC and NPBC in rates with actual NPPC and NPBC over time, and protect ratepayers from having rates set on a level NPPC and NPBC materially higher or lower than the actual NPPC and NPBC. Hawai'i Electric Light proposes the continued use of the pension and OPEB tracking mechanisms. Pension and OPEB costs should be reflected for ratemaking purposes based on the pension and OPEB tracking mechanisms, and accordingly the 2016 test year estimates reflect the continued use of the pension and OPEB tracking mechanisms.

Not Used

Not Used

Not Used

Hawai'i Electric Light Company, Inc.
Account 923.01 Outside Services - Legal
2011 - 2015
(\$ Thousands)

<u>Department</u>	<u>Recorded</u>					<u>Budget</u>	<u>Adjustments</u>		<u>Test Year</u> <u>2016</u>	
	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>Budget</u>	<u>Normali-</u> <u>zation</u>		<u>Rate-</u> <u>making</u>
President										
Feed In Tariff	29	11	9			3			3	
Miscellaneous Regulatory				1	6	2			2	
PPA Litigation - Tawhiri	(2)	8	0	1		1			1	
PGV PPA	57	4	0	0		0			0	
Renewable Portfolio Standards	0	1							0	
	<u>85</u>	<u>24</u>	<u>10</u>	<u>2</u>	<u>6</u>	<u>6</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>6</u>
Accounting										
Biofuels Project	17	28	44						0	
Financing & Line of Credit	32	26	7	2	4	19			19	
Miscellaneous Regulatory	0			1					0	
	<u>49</u>	<u>53</u>	<u>51</u>	<u>2</u>	<u>4</u>	<u>19</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>19</u>
Administration										
Miscellaneous Arbitration	3								0	
	<u>3</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Engineering										
Miscellaneous Regulatory		1							0	
	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Quarterly Accruals	12	(36)	(25)	52	(63)				0	
	<u>149</u>	<u>43</u>	<u>35</u>	<u>56</u>	<u>(54)</u>	<u>25</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>25</u>

Notes:

- Totals may not add exactly due to rounding.
- See discussion on departmental O&M expense at HELCO-1106 and details of the 2016 operating budget at HELCO-WP-1102A and HELCO-WP-1102B.

Hawai'i Electric Light Company, Inc.
Account 923.020 - Other Outside Services
2011-2015
(\$ Thousands)

<u>Department</u>	<u>Recorded</u>					<u>Budget</u>	<u>Adjustments</u>		<u>Test Year</u> <u>2016</u>	
	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>Budget</u>	<u>Normali-</u> <u>zation</u>		<u>Rate-</u> <u>making</u>
Accounting	170	158	148	23	38					
	170	158	148	23	38	0	0	0	0	0
Administration	0	0	0	0	0	0			0	0
	0	0	0	0	0	0	0	0	0	0
	170	158	148	23	38	0	0	0	0	0

Hawai'i Electric Light Company, Inc.
Account 923.030 Outside Services - Associated Companies
(\$ Thousands)

(See HELCO-WP-1103)

Department	Activity/Type Of Service	Recorded					Budget 2016	Adjustments			Test Year 2016
		2011	2012	2013	2014	2015		Budget	Normali- zation	Rate- making	
President											
700	Develop & Administer Business Plans	2	279	128	135	201	184				184
720	Improve Business Processes		103				3				3
723	Manage & Admin Incentive & Recog Prog		0	12	18	24	11		(11)		(0)
730	Research New Technology		176	66	8	7	14				14
738	Other PUC Reg Filings		(5)		471	3					0
745	Maintain Rel w/Legis & Govt Agencies		57	27	7						0
750	Maintain Relations with Customers		3	1	0						0
805	Manage BU & Othr Labor Agreements		0								0
807	Manage & Provide Companywide Emp Comr		16	2	1						0
950	Provide & Mnge Risk Mgmt Svcs-Liability		70	11	11	10	6	8			14
951	Provide & Mnge Risk Mgmt Svcs-Property		0								0
		2	701	247	652	244	218	8	0	(11)	215
Accounting											
700	Develop & Administer Business Plans	5	10	13	10	120	157				157
701	Develop & Manage Forecasts	(44)	164	77	70	185	112	(75)			37
710	Develop & Manage Forecasts-Sales & Load	31	60	38	49	39	31				31
720	Improve Business Processes					27					0
735	Prepare & Support Rate Case Filings		0								0
737	Prep & Supp Cost Recov& Rate Adj Filings	32	24	30	135	178	257				257
738	Prepare & Support Othr PUC Reg Filings	2	4	14	17	22	26				26
749	Maint Rel w/Ind, Prof & Trade Assoc	3	0		93	88	84	(84)			0
756	Maintain Relations with Investors	315	266	272	304	267	308				308
760	Coord, Conduct & Assist w/Audit-Internal	6	20	113	62	29	82				82
765	Dev, Mnge & Admin Empl Pol,Prac & Proced	9	10	10	14	9	10				10
776	Dev,Mnge& Admin Empl Benefits Plans Pol,Prac	60	65	68	76	77	70				70
777	Process Payroll	22	23	11	47	109	147				147
807	Manage & Provide Companywide Emp Comm	0	1			3	2				2
815	Develop & Admin Acctg Policies & Proced	44	35	30	35	372	568	(90)			478
817	Maintain Fixed Asset Records	22	30	39	184	103	19				19
818	Maintain G/L & Subledgers & Stat Info	21	19	26	117	571	751				751
819	Administer Tax Returns & Reports	96	154	155	153	175	145				145
825	Manage Cash	243	185	171	189	252	255				255
826	Manage Financing	104	142	142	119	194	249				249
827	Perform Economic/Financial Analysis		1								0
835	Prep & File Fin Rpts/Stat Info-Int	526	(1,071)	(120)	1	1					0
836	Prep & File Fin Rpts/Stat Info-Ext	268	235	218	249	188	214				214
891	Develop Computer Applic System-Enhanced	7	104	65	48	81	85				85
Various										(120)	(120)
		1,773	482	1,371	1,971	3,089	3,570	(249)	0	(120)	3,201
Administrative											
701	Develop & Manage Forecasts	0		0							
723	Manage & Admin Incentive & Recog Prog					1	2				2
738	Prepare & Support Othr PUC Reg Filings				0						0
745	Maintain Rel w/Legis & Govt Agencies				14	21	31				31
750	Maintain Relations with Customers				0	0	112				112
765	Dev, Mnge & Admin Empl Pol,Prac & Proced	8	8	29	73	63	67				67
766	Maintain Employee Records	47	2		3	1	3				3
775	Dev,Mnge& Admin Empl Comp Pol,Prac& Proc	18	22	8	16	60	93				93
778	Administer Flexible Benefit Programs	165	267	230	240	257	264	7			271
779	Administer Retirement Programs	27	(25)	20	(6)	(9)	36				36
780	Adm Ben Plans,Pol&Proc-Oth than Flex&Ret	6	(0)	(1)	36	95	126				126
788	Conduct Employee Training	0	0	13	6	0	1				1
789	Attend Training - Insurance		3		3	10					0
805	Manage BU & Othr Labor Agreements	1	0	1	1		17				17
807	Manage & Provide Companywide Emp Comm				2	1	11				11
890	Develop New Comp App					0					0
928	Process Easements	4	2								0
950	Provide & Mnge Risk Mgmt Svcs-Liability	2	1								0
		278	278	300	390	500	764	7		0	771

Hawai'i Electric Light Company, Inc.
Account 923.030 Outside Services - Associated Companies
Hawaiian Electric Industries Charges to Hawaii Electric Light
(\$ Thousands)

Activity/Type of Service	Recorded					Budget 2016	Adjustments			Test Year 2016
	2011	2012	2013	2014	2015		Budget	Normali- zation	Rate- making	
ACC Accounting	6	8	5	4	4	4		(0)	4	
ADM Administration	0	1	16	29	23	27		(4)	24	
ANN Annual Meeting	7	9	10	8	3	6			6	
AUD Audits	2	6	4	3	1	1		(0)	1	
BOD Board of Directors Mtg	0	0	0	0	1	0			0	
BUD Budgets	1	0	1	0	0	0		(0)	0	
COB Chairman of the Board	1	0	0	0	0	0			0	
FIN Financing	0	0	0	0	0	0			0	
HUM Human Resources	9	9	9	14	8	10		(7)	3	
INV Investor Relations	174	118	148	149	149	163		(67)	95	
ITA Internal Audit	0	0	0	0		0			0	
PEN Pension Plan	62	65	73	76	75	70		(25)	45	
RPT Reporting	242	204	187	207	192	211		(9)	202	
STO Stock Transfer	131	145	116	150	112	139			139	
TAX Tax	102	168	149	152	197	145		(8)	136	
	736	733	717	791	765	775	0	0	(120)	655

Notes:

- Totals may not add exactly due to rounding.
- See detail of budget and rate making adjustments at HELCO-WP-1102A

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Accounts 924 and 925 Insurance Premium, Absorbed Losses and Safety Expenses
(\$ Thousands)

Type of Expense	Reference	Recorded										2016 Op Budget	2016 Test Year Estimate		
		2011	Δ %	2012	Δ %	2013	Δ %	2014	Δ %	2015	Δ %				
<u>ACCOUNT 924.00, PROPERTY</u>															
1	Premiums	p 2 line 3	903	1%	915	7%	984	1%	995	-9%	909	-10%	820	-	820
2	Losses	p 3 line 3	172	-54%	79	-81%	15	115%	32	-18%	26	147%	65	-	65
3	Others	p 3 line 7	1	160%	1	221%	5	173%	13	50%	19	-22%	15	-	15
4	Total 924		<u>1,075</u>	<u>-7%</u>	<u>996</u>	<u>1%</u>	<u>1,004</u>	<u>4%</u>	<u>1,040</u>	<u>-8%</u>	<u>955</u>	<u>-6%</u>	<u>900</u>	<u>-</u>	<u>900</u>
<u>ACCOUNT 925.01, INJURIES & DAMAGES - EMPLOYEE</u>															
5	Premium	p 2 line 6	105	14%	120	7%	128	-11%	114	-19%	92	-14%	80	-	80
6	Claims	p 3 line 9	137	-45%	75	-25%	57	-72%	16	519%	99	120%	219	-	219
7	Reserve Accrual	p 3 line 10	(22)	201%	22	202%	67	-111%	(7)	2052%	139	-52%	67	-	67
8	Labor/On-cost	p 3 line 17	84	-41%	49	77%	88	-17%	73	18%	86	-100%	-	-	-
9	Safety and Security Program	p 3 line 26	1,476	-4%	1,414	3%	1,457	-18%	1,202	0%	1,204	31%	1,574	(563)	1,012
10	Subtotal		<u>1,780</u>	<u>-6%</u>	<u>1,681</u>	<u>7%</u>	<u>1,797</u>	<u>-22%</u>	<u>1,398</u>	<u>16%</u>	<u>1,620</u>	<u>20%</u>	<u>1,940</u>	<u>(563)</u>	<u>1,377</u>
<u>ACCOUNT 925.02, INJURIES & DAMAGES - PUBLIC</u>															
11	Premium	p 2 line 12	570	-19%	462	30%	600	-7%	560	5%	588	1%	594	-	594
12	Claims	p 3 line 30	639	-82%	117	-123%	(26)	469%	98	32%	129	23%	158	-	158
13	Labor/On-cost	p 3 line 39	(836)	74%	(216)	-7%	(230)	-1%	(233)	-7%	(250)	-50%	(374)	(33)	(407)
14	Subtotal		<u>373</u>	<u>-3%</u>	<u>363</u>	<u>-5%</u>	<u>344</u>	<u>23%</u>	<u>424</u>	<u>10%</u>	<u>467</u>	<u>-19%</u>	<u>378</u>	<u>(33)</u>	<u>345</u>
15	Total 925		<u>2,153</u>	<u>-5%</u>	<u>2,044</u>	<u>5%</u>	<u>2,141</u>	<u>-15%</u>	<u>1,822</u>	<u>15%</u>	<u>2,087</u>	<u>11%</u>	<u>2,317</u>	<u>(596)</u>	<u>1,722</u>
16	Grand Total		<u>3,227</u>	<u>-6%</u>	<u>3,040</u>	<u>3%</u>	<u>3,144</u>	<u>-9%</u>	<u>2,862</u>	<u>6%</u>	<u>3,042</u>	<u>6%</u>	<u>3,218</u>	<u>(596)</u>	<u>2,622</u>

Notes:

- Totals and percentage calculations may not come out exactly due to rounding.
- The schedule combines the insurance premium and related expenses presented on page 2 and the absorbed losses and safety program expenses presented on page 3 of this exhibit.

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Insurance Premiums and Related Expenses
(\$ Thousands)

Insurance Premium By Type of Insurance / Department	Recorded										2016 Op Budget	L Adj	M =K+L 2016 Test Year Estimate	N HELCO- WP-1132 Reference
	A 2011	B Δ %	C 2012	D Δ %	E 2013	F Δ %	G 2014	H Δ %	I 2015	J Δ %				
<u>ACCOUNT 924.00, PROPERTY</u>														
1 Property, Crime, Marine and Freight	639	-3%	618	9%	673	0%	672	-12%	595	-13%	515		515	
2 Boiler/Machinery	263	13%	297	5%	311	4%	323	-2%	315	-3%	305		305	
3 Subtotal	903	1%	915	7%	984	1%	995	-9%	909	-10%	820	-	820	line 7
<u>ACCOUNT 925.01, INJURIES & DAMAGES - EMPLOYEE</u>														
4 Excess Workers Comp	102	10%	112	11%	124	-6%	111	2%	89	-16%	75		75	
5 State Self-Insurers	3	149%	8	-45%	5	-16%	3	5%	3	48%	4	-	4	
6 Subtotal	105	14%	120	7%	128	-17%	114	-2%	92	6%	80	-	80	line 12
<u>ACCOUNT 925.02, INJURIES & DAMAGES - PUBLIC</u>														
7 Special Risk	-		-		-		-		-		-		-	
8 Fiduciary/EmpBenefits	18	0%	18	-2%	17	0%	17	0%	17	0%	17	-	17	
9 Director/Officer	82	-2%	80	-2%	79	4%	82	1%	83	-4%	80	-	80	
10 EngrProf/Misc Bonds	22	-1%	22	0%	22	3%	23	2%	23	2%	24	-	24	
11 General Liability	448	-24%	342	41%	482	-9%	438	6%	465	2%	473		473	
12 Subtotal	570	-19%	462	30%	600	-7%	560	5%	588	1%	594	-	594	line 16
13 Grand Total	1,578	-5%	1,497	14%	1,713	-3%	1,669	-5%	1,590	-6%	1,494	-	1,494	

Notes:

- Totals and percentage calculations may not come out exactly due to rounding.
- See details of the historical and 2016 operating budget amounts in the respective departments' exhibits and workpapers. See also mapping of the operating budgets from the insurance expense schedule to the respective departments' workpapers at HELCO-WP-1132, as referenced in column N above.

Hawai'i Electric Light Company, Inc.
2016 Test Year Rate Case
Absorbed Losses and Safety Expenses
(\$ Thousands)

Type of Claim/ Department	Recorded										2016 Op Budget	L Adj	M =K+L 2016 Test Year Estimate	N HELCO- WP-1132 Reference
	A	B	C	D	E	F	G	H	I	J				
	2011	Δ %	2012	Δ %	2013	Δ %	2014	Δ %	2015	Δ %				
ACCOUNT 924.00, PROPERTY														
1 Absorbed Losses														
2 Customer Service	172	-54%	79	-81%	15	115%	32	-18%	26	147%	65	-	65	
3 Subtotal	172	-54%	79	-81%	15	115%	32	-18%	26	147%	65	-	65	line 20
Other														
4 Production	1	-11%	1	-100%	-		-		-		-	-	-	
5 Support Services	-		-		2	376%	11	76%	19	-22%	15	-	15	
6 Engineering	-		1	151%	2	-20%	2	-99%	0	-100%	-	-	-	
7 Subtotal	1	160%	1	221%	5	173%	13	50%	19	-22%	15	-	15	line 25
8 Account 924 Total	172	1	81	1	20	3	45	0	46	1	80	-	80	
ACCOUNT 925.01, INJURIES & DAMAGES - EMPLOYEE														
9 Claims - Administration	137	-45%	75	-25%	57	-72%	16	519%	99	120%	219	-	219	line 36
10 Reserve Accrual - Accounting	(22)	201%	22	202%	67	-111%	(7)	2052%	139	-52%	67	-	67	line 39
11 Subtotal	115	-15%	97	27%	124	-93%	9	2578%	239	20%	286	-	286	
Labor/On-cost, Other														
12 Customer Service	-		2	-100%	-		-		1		-	-	-	line 42
13 Distribution	17	-12%	15	299%	60	-38%	37		77		-	-	-	line 54
14 Production	9		0	-100%	-		25		7		-	-	-	line 64
15 Administrative	58	-44%	32	-15%	28	-62%	10	-91%	1	-100%	-	-	-	line 71
16 Engineering	-		0	-100%	-		-		-		-	-	-	line 77
17 Subtotal	84	-41%	49	77%	88	-17%	73	18%	86	-100%	-	-	-	
Safety & Security Program														
18 President	6	-23%	5	-61%	2	-100%	-		-		-	-	-	line 83
19 Accounting	-		-		1	-56%	0	-100%	-		-	-	-	line 89
20 Customer Service	26	-41%	15	0%	15	-52%	7	-7%	7	-100%	-	-	-	line 108
21 Distribution	489	-31%	338	48%	501	-38%	312	-4%	299	55%	463	(456) a	6	line 172
22 Production	160	-18%	132	-10%	118	-7%	110	-42%	64	65%	106	(105) b	1	line 240
23 Administrative	789	17%	923	-41%	544	-98%	9	-96%	0	995%	4	(1) c	3	line 291
24 Support Services	5	-94%	0	n/a	275	175%	756	10%	831	20%	1,001	-	1,001	line 344
25 Engineering	-		-		0	n/a	7	-84%	1	-100%	-	-	-	line 351
26 Subtotal	1,476	-4%	1,414	3%	1,457	-18%	1,202	0%	1,204	31%	1,574	(563)	1,012	
27 Account 925.01 Total	1,675	-7%	1,561	7%	1,668	-23%	1,284	19%	1,528	22%	1,860	(563)	1,297	
ACCOUNT 925.02, INJURIES & DAMAGES - PUBLIC														
28 Customer Claims - Administration	728	-90%	72	-68%	23	282%	86	-25%	65	108%	134	-	134	line 356
29 Other Public Claims - President	(89)	150%	45	-209%	(49)	123%	11	469%	64	-63%	24	-	24	line 361
30 Subtotal	639	-82%	117	-123%	(26)	469%	98	32%	129	23%	158	-	158	
Labor/On-cost														
31 Distribution	4	-87%	1	7378%	41	-87%	5	98%	11	-100%	-	-	-	line 382
32 Production	-		-		38	-100%	-		-		10	-	10	line 386
33 Administrative	27	10%	29	-37%	19	-100%	-		-		-	-	-	line 392
34 Support Services	-		-		1	260%	3	-42%	2	32%	3	-	3	line 398
35 Engineering	-		-		-		1	-100%	-		-	-	-	line 402
Other														
36 GL	(924)	69%	(282)	-23%	(348)	23%	(269)	-8%	(291)	-57%	(458)	(33) d	(491)	line 403
37 Administrative	57	-36%	37	-85%	6	-96%	0	-100%	-		3	-	3	line 440
38 Support Services	-		-		14	91%	26	13%	29	134%	68	-	68	line 462
39 Subtotal	(836)	74%	(216)	-7%	(230)	-1%	(233)	-7%	(250)	-50%	(374)	(33)	(407)	
40 Account 925.02 Total	(197)	50%	(99)	-159%	(257)	47%	(136)	11%	(121)	-78%	(216)	(33)	(249)	
41 Account 925 Total	1,478	-1%	1,462	-3%	1,412	-19%	1,148	23%	1,407	17%	1,644	(596)	1,048	
42 Grand Total	1,650	-6%	1,543	-7%	1,432	-17%	1,193	22%	1,453	19%	1,724	(596)	1,128	

Notes:

- Totals and percentage calculations may not come out exactly due to rounding
- See details of the historical and 2016 operating budget amounts in the respective departments' exhibits and workpapers. See also mapping of the operating budget from the insurance expense schedule to the respective departments' workpapers at HELCO-WP-1132, as referenced in column N above.
- L See details of the adjustments at the following locations
 - a HELCO-WP-803; Adjustment No. 3
 - b HELCO-WP-703; Adjustment Nos 12, 13, and 14
 - c HELCO-WP-1503; Adjustment No. 10
 - d HELCO-WP-1103C; Adjustment No. 3

Hawaii Electric Light Company, Inc.
Employee Benefits Transfer
Account 926020
(\$ Thousands)

	<u>2016</u>	Adj	<u>Adjusted 2016</u>	
<u>Cost Pool:</u>				
Labor to 926	\$ 32		\$ 32	
NPW	5		5	
Payroll Taxes	3		3	
Corp Admin	2		2	
Non Labor ^a	\$ 16,243	\$ (505)	\$ 15,738	
	<u>\$ 16,285</u>	<u>\$ (505)</u>	<u>\$ 15,780</u>	A
<u>Cost Base:</u>				
Total Company Productive Labor	679	(5)	674	
	<u>679</u>	<u>(5)</u>	<u>674</u>	B
Employee Benefits Rate per Hour	\$ 23.98		\$ 23.41	C =A / B
Total Company Productive Hours	<u>679</u>		<u>674</u>	D
Employee Benefits Transfer Based on Total Productive Hours	\$ 16,285		\$ 15,780	E =C x D
Reversal of Employee Benefits On-cost Charged to O&M	<u>(9,227)</u>		<u>(9,005)</u>	F
Employee Benefits transfer (Credit)	<u>\$ 7,058</u>		<u>\$ 6,775</u>	G =E + F
926020 Employee Benefits Transfer in Operating Budget	\$ 7,058		\$ 7,058	H HELCO-1103
Adjustment to 926020 Employee Benefits Transfer (Credit)	<u>\$ -</u>		<u>\$ (283)</u>	J =H - G

Notes:

a Adjustments to non-labor expenses are compiled from adjustments in HELCO-1201 as follows:

Employee benefits budget / normalization	\$ 245
HMSA early penalty	(24)
Employee contribution correction	(118)
Training materials	29
HEIRS matching contribution	40
NPPC Adjustment	(723)
Reclass outside services	46
Total	<u>(505)</u>

J The difference between the adjusted employee benefits transfer amount and the amount reflected in 2016 operating budget is proposed as a budget adjustment in HELCO-WP-1103C.

Hawaii Electric Light Company, Inc.
Employee Benefits Transfer
Reversal of Employee Benefits and Plant Addition Adjustment
(\$ Thousands)

<u>Reversal of Employee Benefits Adjustment</u>			<u>Source</u>
Reversal of Employee Benefits on-cost charged to O&M	(9,227)	A	HELCO-1133 page 1
Employee Benefits on-cost rate	<u>23.98</u>	B	HELCO-1133 page 1
O&M Hours	(385)	C	=A / B
Adjusted Employee Benefits on-cost rate	<u>23.41</u>	D	HELCO-1133 page 1
Adjusted Reversal of Employee Benefits on-cost charged to O&M	(9,005)	E	=C * D
Original Reversal of Employee Benefits on-cost charged to O&M	<u>(9,227)</u>	F	=A
Reversal of Employee Benefits adjustment	222	G	=E - F
 <u>Impact to Capital/Plant Additions:</u>			
Employee benefits allocated to capital per operating budget	3,408	H	HELCO-WP-1133 p.7 (NARUC 107)
Employee Benefits on-cost rate	<u>23.98</u>	I	HELCO-1133 page 1
Capital Hours	142	J	=H / I
Adjusted Employee Benefits on-cost rate	<u>23.41</u>	K	HELCO-1133 page 1
Adjusted employee benefits allocated to capital	3,326	L	=J * K
Original employee benefits allocated to capital	<u>3,408</u>	M	=H
Capital adjustment	(82)	N	=L - M
Ratio of capital / plant additions	<u>82.1%</u>	O	HELCO-1113, page 2
Adjustment to plant additions	<u>(67)</u>	P	=N * O

Notes:

- Totals and other computations may not come out exactly due to rounding.

Hawaii Electric Light Company, Inc.
Test Year 2016 Estimate
Account 928 - Regulatory Commission Expenses
(\$ Thousands)

	A	B	C	D	E	F	G
							= Sum(A:F)
	Preparation & Filing	Discovery	Rebuttal	Settlement	Hearing	Briefing	Total Estimate
1 Outside Legal Services	\$ 245	\$ 174	\$ 221	\$ 71	\$ 237	\$ 197	\$ 1,145
2 Consultant - Return on Common Equity	50	25	23	-	15	-	113
3 Consultant - HEI Impact (affidavit)	10	-	-	-	-	-	10
4 Consultant - Pension/OPEB	10	-	-	-	-	-	10
5 Consultant - Benefits	15	5	-	-	8	-	28
6 Consultant - Regulatory Support	150	240	100	50	30	30	600
7 Consultant - ECAC	65	15	10	-	15	-	105
8 Consultant - Cost of Capital Analysis	42	12	12	-	12	-	78
9 Consultant - Ratemaking	62	14	10	-	14	-	100
10 Other non-labor charges (Hearing notices, travel, supplies, etc.)	3	13	2	2	-	-	20
11 Estimated 2016 Rate Case Costs	\$ 652	\$ 498	\$ 378	\$ 123	\$ 331	\$ 227	\$ 2,209
12 Amortization period (number of years)							<u>2</u>
13 2016 Test Year Estimate for Regulatory Commission Expense							<u>\$ 1,104</u>

Notes:

- Totals may not add exactly and references made may not tie exactly due to rounding.

Lines 1 to 9

The estimates for the 2016 test year rate case for the respective consultants/attorneys are based on the quotes received.

Line 13

The 2016 operating budget for code block HAA 735 HEL NE NHAZZZZZ 900 set up for regulatory commission expense is zero in the rate case data file. The Company proposes an adjustment for the normalized estimate of \$1,104,000, in Adjustment #1 at HELCO-WP-1103A.

Hawai'i Electric Light Co., Inc.
Account 9302 - Miscellaneous General Expenses
Test Year 2016 Estimate
(\$ Thousands)

Expense Description	Recorded					2016	Budget	Rate	2016
	2011	2012	2013	2014	2015	Op Budget	Adj	Making Adj	Test Year Estimate
930.21 - Community Service Activity (see page 2)									
President (1)	1	6	45	54	47	46	(46)	-	0
Accounting	1	1	1	1	0	-	-	-	-
Administration	4	1	1	1	0	0	-	-	0
Total Community Service Activity	6	8	48	56	47	47	(46)	-	1
930.220 - Company Membership (see page 3)									
President	10	12	19	10	5	11	-	-	11
Accounting (2)	91	76	85	-	-	-	84	(14)	70
Administration	-	0	0	0	0	0	-	-	0
Customer Service	-	0	-	0	-	-	-	-	-
Energy Services	1	2	0	-	-	-	-	-	-
Production	-	-	-	0	0	-	-	-	-
Total Company Membership	103	90	104	11	5	11	84	(14)	82
930.240 - Research & Development Expenses									
Accounting - EPRI (see page 5)	118	197	197	219	219	219	-	-	219
Customer Service	-	0	4	1	-	-	-	-	-
Energy Services	3	-	-	-	-	-	-	-	-
Engineering	-	-	4	6	6	13	-	-	13
Support Services	39	30	25	21	2	-	-	-	-
Production	27	22	21	3	4	-	-	-	-
Total R&D Expenses	188	249	251	250	230	231	-	-	231
930.25 - Preferred Stock & Long-Term Debt Expenses									
Accounting									
RB Service Fees - 99A (Refunding)	1	1	1	1	-	-	-	-	-
RB Service Fees - 2011-15 Refi Authorizations	6	0	-	-	-	-	-	-	-
RB Service Fees - 2012 (Refi Note)	-	6	3	3	3	3	-	-	3
RB Service Fees - 2013 (Refi Bond)	-	-	7	6	6	6	-	-	6
Bank Service Fees	4	4	4	5	-	3	-	-	3
Others - Rating Agencies/Legal	0	-	-	-	-	-	-	-	-
Total Pref Stock & LT Debt Expenses	12	12	16	15	9	12	-	-	12
Other Overhead Reclass									
GL Entries	(19)	(14)	(13)	(9)	(3)	-	-	-	-
Total - Miscellaneous General Expenses	290	344	405	323	288	301	38	(14)	326
Reclass adjustments									
Pension Reclass to 926000 (1)			(44)	(49)	(46)	-	-	-	-
EEL Reclass from 923030 (2)				93	88	-	-	-	-
Total - Miscellaneous General Expenses Adjusted	290	344	361	367	330	301	38	(14)	326

Hawai'i Electric Light Co., Inc.
Account 930.21 - Community Service Activity
Activities 753 and 755
Test Year 2016 Estimate
(\$ Thousands)

Department/Activity	Recorded					2016	Budget	2016
	2011	2012	2013	2014	2015	Op Budget	Adj	Test Year Estimate
Accounting								
Better Business Bureau	1	1	1	1	0	-	-	-
President								
Miscellaneous/Others	1	6						
Towers Watson	(1)		45	54	47	46	(46)	0
Administration								
Hawaii Island United Way	4	1	1	1	0	0	-	0
Subtotal - Community Svc Activity	6	8	48	56	47	47	(46)	1
Reclass Adjustment: (Towers Watson)			(44)	(49)	(46)			
Total - Community Svc Activity	6	8	4	7	1	47	(46)	1

Notes:

- (1) The Company inadvertently recorded Towers Watson's fees for actuary and other employee benefit analysis service through the President's Office in account no. 930.21 in 2013 through 2015, and also prepared the 2016 budget in the same manner. The Company is proposing a reclassification entry to reflect the item in Administration Department's budget in account no. 926000 at HELCO-WP-1102B, page 5.

Hawai'i Electric Light Co., Inc.
Account 930.220 - Company Memberships
Test Year 2016 Estimate
(\$ Thousands)

Department	Recorded					2016 Op Budget	Rate Making Adj	2016 Test Year Estimate		
	2011	2012	2013	2014	2015					
Accounting										
EEI	(2)	91	76	85	-	-	84	(14)	70	
President										
Hawaii Employers Council		3	3	3	3	3	2	-	2	
Hawaii Island Economic Development Board		5	5	10	4	-	5	-	5	
Hawaii Leeward Planning		-	2	4	2	-	2	-	2	
Hawaii Visitors Bureau		2	2	2	2	2	2	-	2	
Others		1	0	0	0	0	0	-	0	
Administration		-	0	0	0	0	0	-	0	
Customer Service		-	0	-	0	-	-	-	-	
Energy Services		1	2	0	-	-	-	-	-	
Production		-	-	-	0	0	-	-	-	
Subtotal - Company Memberships		103	90	104	11	5	11	84	(14)	82
Reclass Adjustment: (EEI)					93	88		-	-	
Total - Company Memberships		103	90	104	103	93	11	84	(14)	82

Note:

- (2) The Accounting Department recorded the EEI Dues for 2014 and 2015 and the budget for EEI dues in 2016, in the amounts of \$93k, \$88k, and \$84k, respectively, in NARUC account no. 923030, instead of no. 930.220. See HELCO-WP-1102A for the reclassification entry proposed for the 2016 operating budget.

The EEI dues in the operating budget of \$84,000 includes amounts allocable to activities such as legislative advocacy, lobbying, and charitable contribution. See page 4 for the calculation of the amount allocable to those activities and the associated ratemaking adjustment proposed.

Hawai'i Electric Light Co., Inc.
Account 930.220 - Company Memberships
EEI Dues
Test Year 2016 Estimate
(\$ Thousands)

	A	B	C	D	E	F	G
							=SUM(C:F)
	Ratemaking Adjustments						
Membership Dues	Total 2016 EEI Invoice	Hawaii Electric Light's Share 13.5%	2016 Budget	Legislative Advocacy and Other 13%	Lobbying 26%	Charitable Contrib.	TY 2016
Regular Activities of EEI	545	74	74	(10)			64
Industry Issues	54	7	7		(2)		5
Mutual Assistance Program	8	1	1				1
Contribution to Edison Foundation	15	2	2			(2)	0
Total	622	84	84	(10)	(2)	(2)	70

Summary:

2016 Operating Budget (HELCO-1135)	84
Less ratemaking adjustments to remove lobbying, legislative advocacy, charitable contribution	(14) a
2016 Test Year Estimate	70

Notes:

- A Invoice amount is for Hawaiian Electric Companies. Refer to HELCO-WP-1135.
 B Refer to HELCO-WP-1135. \$84,027/ \$622,422 = 13.50%
 Hawaii Electric Light's share is calculated as follows:

H	I	J	K	=J * K
Total Invoice	HEI Portion	Remaining to be allocated	HELCO's portion	Allocation of invoice total
100%	10%	90%	15%	13.50%

- D Amount represents EEI's 2016 estimate of amounts to be spent on issues related to influencing legislation. Obtained % per the 2016 EEI invoice.
 E Amount represents EEI's 2016 estimate of amounts to be spent on lobbying activities. Obtained % per the 2016 EEI invoice.
 F Amount represents EEI's 2016 estimate of amounts relate to chritable contributions. Obtained % per the 2016 EEI invoice.
 a Hawai'i Electric Light proposes an adjustment to remove EEI dues allocable to legislative advocacy, lobbying, charitable contribution. The adjustment is incorporated into the 2016 test year O&M expense estimate through Adjustment #4 at HELCO-WP-1103A.

Hawai'i Electric Light Co., Inc.
Account 930.240 Research & Development Expenses
EPRI Dues
(\$ Thousands)

Derivation of 2016 Budget Amount:

2016 EPRI Dues - Hawaiian Electric Companies Consolidated	\$ 2,190	A	
Hawai'i Electric Light's Allocation Percentage	<u>10.000%</u>	B	
HELCO's Allocable Portion of 2016 EPRI Dues	219	C	=A * B
Adjustment required	<u>0</u>	D	=C - E
2016 EPRI Dues included in 2016 Operating Budget	<u>\$ 219</u>	E	

Notes:

- A Hawaiian Electric's EPRI agreement containing a schedule of annual payment amounts for 2012 through 2016 was provided in MECO-WP-1106 in Docket No. 2011-0092, MECO's 2012 test year rate case.
- B HELCO's allocation of the total EPRI dues is based on the arrangement made between Hawaiian Electric, MECO, and HELCO in July 2011, to use allocation factors of 82%, 9%, 9% for Hawaiian Electric, MECO, and HELCO, respectively. Beginning in 2014, the EPRI dues allocation was transitioned to 80% Hawaiian Electric, 10% Hawaii Electric Light, and 10% Maui Electric.

Hawai'i Electric Light Co., Inc.
Account 932.00 A & G Maintenance Expense
Test Year 2016

<u>Department</u>	<u>Recorded</u>					<u>Budget</u>	<u>Budget</u>	<u>Test Year</u>
	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>Adj</u>	<u>2016</u>
Accounting	22	9	13	7	6	6		6
Customer Service	0	0	1	0	2	0		0
Distribution	97	67	84	40	40	21		21
Administration	1	2	0	0	0	0		0
Support Services	195	430	345	363	339	470		470
Engineering	15	0	0	7	0	0		0
Others, GL	(26)	(47)	(38)	(28)	(40)	(73)	(7)	(80)
							a	
	<u>304</u>	<u>462</u>	<u>405</u>	<u>389</u>	<u>347</u>	<u>424</u>	<u>(7)</u>	<u>417</u>

Notes:

- Totals may not add exactly due to rounding.
- See details of Support Services amounts at HELCO-1001 and HELCO-1002.
- a The adjustment relates to the vacancy adjustment proposed at HELCO-1142.

Not Used

Not Used

Not Used

Hawaii Electric Light Company, Inc.
O&M Labor Cost Breakdown - BU vs. non-BU
For Revenue Decoupling RAM Calculations
Test Year 2016 Estimate
(\$ Thousands)

	A	B	C	D
	Bargaining Unit	Non- Bargaining Unit	Total O&M Labor Costs	Reference
1 2016 Operating Budget	12,134	6,757	18,891	HELCO-1101 p.1
Adjustments:				
2 Production	(592)	(585)	(1,177)	HELCO-1101 p.5
3 Transmission	(51)	(56)	(107)	HELCO-1101 p.5
4 Distribution	(154)	(37)	(191)	HELCO-1101 p.5
5 Customer accounts			-	
6 Customer service			-	
7 A&G	(501)	(8)	(509)	HELCO-1101 p.5
2016 Test Year - Subtotal Before Labor Cost &				
8 Normalization Adjustment	10,836	6,070	16,907	
9 BU / Non-BU % of Total	64.10%	35.90%	100.00%	
Labor Cost Adjustments:				
10 Production	(383)	(214)	(597)	See notes
11 Transmission	(75)	(42)	(118)	
12 Distribution	(148)	(83)	(232)	
13 Customer accounts	(2)	(1)	(4)	
14 Customer service	(19)	(11)	(30)	
15 A&G	(157)	(88)	(244)	
16 Normalization Adjustment:				
17 Distribution		10	10	HELCO-1101 p.4
18 A&G		78	78	HELCO-1101 p.5
19 Rounding				
20 2016 Test Year - Direct	10,052	5,720	15,771	

Notes:

Columns A & B Line 1

HELCO grouped the detailed labor operating budget by labor class and then further categorized the labor classes into bargaining unit ("BU") or non-bargaining unit ("Non-BU") to break down the total O&M labor cost shown in HELCO-1101 p.1.

Columns A & B Lines 2 through 7

HELCO manually categorized the adjustments relating to labor listed in the references in column D into BU and Non-BU.

Columns A & B Lines 10 through 15

The allocation of the total labor cost adjustment by block of accounts in column C between bargaining unit (column A) and non-bargaining unit (column B) is calculated by applying the BU/Non-BU % on line 9 to the respective total labor cost adjustment amounts

Column C Lines 10 through 15

Labor cost adjustment by block of account per HELCO-1142, column (C).

Columns B & C Lines 17 through 18

ERP normalization adjustment by block of account per HELCO-WP-1122B.

Hawaii Electric Light Company, Inc.
2016 Test Year Rate Case
Operation & Maintenance Non-Labor Costs
Use Of General Inflator

<u>Block Of Account</u>	A	B	C	D
	2016 Base Costs	2016 General Inflator	=A + B 2016 Operating Budget	Column B Source
1 Production Operations				
2 Costs not using general inflator	11,478,990		11,478,990	
3 Costs using general inflator	22,757	410	23,167	HELCO-WP-1141
4 Total Production Operations	11,501,747	410	11,502,157	HELCO-703
5 Production Maintenance				
6 Costs not using general inflator	9,942,406		9,942,406	
7 Costs using general inflator	199,289	3,587	202,876	HELCO-WP-1141
8 Total Production Maintenance	10,141,695	3,587	10,145,282	HELCO-703

Notes:

A Lines 2, and 6

The amounts represent costs that are not using a general inflation rate. This can include costs either not using any flation factor, whether general or specific, or costs utilizing a specific inflation rate or cost indice, as applicable. Specific cost indices include negotiated contracts, lease agreements, and other cost indices.

B and D Lines 3, and 7

The amounts represent the cost escalations based on the general inflation factor. See references in column D for these line for the calculation of these amounts.

- The account blocks shown above were the only block of accounts with the use of a general inflator.

Hawaii Electric Light Company, Inc.
Payroll & Benefits - Vacancy Rate Adjustment
2016 Test Year
(\$ Thousands)

Line No.	A Description	B Test Year 2016 O&M labor	C =B * b		E Employee Benefits	F Total
			Labor	Payroll Tax		
1	Production	\$ 8,246	\$ (597)			\$ (597)
3	Transmission	1,626	(118)			(118)
4	Distribution	3,199	(232)			(232)
5	Customer Accounts	49	(4)			(4)
6	Customer Service	409	(30)			(30)
7	Administrative & General	3,377	(244)		(641)	(886)
8	Subtotal	<u>\$ 16,907</u>	(1,224)	-	(641)	(1,865)
9	Taxes Other Than Income			(87)		(87)
10	Employee Cost Adjustment		<u>\$ (1,224)</u>	<u>\$ (87)</u>	<u>\$ (641)</u>	<u>\$ (1,952)</u>

Notes:

- Totals may not add exactly due to rounding.
- B Amount represent the labor expenses in 2016 operating budget, modified by the adjustments proposed in T-6, T-7, T-8, and T-11. See HELCO-WP-1142 p.1 for details.
- C Vacancy adjustment to the labor charges is incorporated into the 2016 test year estimates through the "GL Code Entry" O&M expense summary exhibits in HELCO-1101C. See HELCO-WP-1142 pp.2-4 for the \$1,224,000 adjustment proposed by NARUC account and HELCO-WP-1103C for the adjustments incorporated into the list of adjustments for HELCO-1101C.
- D Calculation of Payroll Tax Impact; see HELCO-WP-1140 p.2

E Employee Benefits:

Total HELCO 2016 Forecast Employee Count	HELCO-1513 p.2	319	a
Proposed Labor Cost Adjustment Rate	HELCO-1519 p.1	-7.24%	b
Calculated Equivalent Positions		(23)	c =a * b
Benefits per Employee - see calculation below in note d		\$ 27.8	d =j
Total Employee Benefits Reduction		<u>\$ (641)</u>	e

d Calculated Benefits per Employee:

HELCO Test Year Employee Benefits O&M	HELCO-1201	\$ 8,217	f
Add Back Employee Benefits Related to this Adjustment		<u>\$ 641</u>	g = - e
Adjusted Employee Benefits Forecast		\$ 8,858	h =f+g
Average Employees Covered for Group Insurance Plans		319	i =a
Adjusted Benefit Cost per Employee		<u>\$ 27.8</u>	j =h / i