HECO T-9
DOCKET NO. 2006-0386

TESTIMONY OF
ALAN K.C. HEE

MANAGER
ENERGY SERVICES DEPARTMENT
HAWAIIAN ELECTRIC COMPANY, INC.

Subject: Customer Service Expense,
Demand-Side Management Program Expense,
Integrated Resource Planning Expense,
Energy Cost Adjustment Clause

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INTRODUCTION

Q. Please state your name and business address.

A. My name is Alan K.C. Hee and my business address is 220 South King Street, Honolulu, Hawaii.

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

A. I am the Manager of Hawaiian Electric Company, Inc.'s Energy Services Department ("ESD").

Q. What is your educational background and professional experience?

A. My experience and educational background are listed in HECO-900.

Q. What is your area of responsibility in this testimony?

A. My testimony will cover HECO's 2007 test year estimate of Customer Service Expense (including Demand-Side Management ("DSM") expenses), Integrated Resource Planning ("IRP") Expense, and the Energy Cost Adjustment Clause ("ECAC"), including a discussion of the risk sharing properties of the Clause per the requirements of Act 162 (2006). Mr. Jeff Makholm (HECO T-21) and Mr. Eugene Meehan (HECO T-22) discuss the ECAC's compliance with Act 162 and fuel price hedging, respectively, in more detail.

CUSTOMER SERVICE EXPENSE

Q. What is HECO's 2007 test year estimate for Customer Service Expense?

A. HECO's normalized 2007 test year Customer Service Expense is $7,176,000, as shown in HECO-901.

Q. What expenses are included as Customer Service Expense?

A. Customer Service Expense includes the following block of accounts:

Account 909 - Supervision – Customer Service Expense

Account 910 - Customer Assistance Expense

Account 911 - Informational Advertising Expense

Account 912 - Miscellaneous Customer Service Expense

Q. Are costs associated with the Company's DSM efforts included in the Customer Service block of accounts?

A. Certain DSM program and DSM-related base labor and base non-labor costs are included in Account 910. However, incremental DSM program costs recovered through the DSM Surcharge component ("DSM Surcharge") of the IRP Cost Recovery Provision ("IRP Clause") have been removed from the test year expense through a rate case adjustment and are not included in the Company's test year revenue requirements. The rate case adjustment is discussed later in my testimony.

Q. What areas of the Company charge their expenses to the Customer Service block of accounts?

A. The primary departments/divisions at HECO that charge expenses to the Customer Service block of accounts are the:

1) Vice President, Customer Solutions Division
2) Energy Services Department, including the Administration and Customer Efficiency Programs Divisions,
3) Customer Technology Applications Division,
4) Marketing Services Division,
5) Forecasts and Research Division,
6) Corporate Communications Division, and
7) Education & Consumer Affairs Division.

These areas constitute 95% of HECO's Customer Service Expenses. Other

departments at HECO providing support to Customer Service activities account for the remaining 5%.

Q. How was the 2007 test year estimate for Customer Service Expense developed?

A. The 2007 test year estimate for Customer Service Expense was based on HECO's O&M Expense Budget for 2007 (prepared in 2006), plus a rate case adjustment to remove incremental DSM program costs, and a normalization adjustment for the Pacific Coast Electrical Association ("PCEA") convention, as shown in HECO-902.

Q. How was the Customer Service Expense for the 2007 O&M Expense Budget prepared?

A. The Customer Service Expense for the 2007 O&M Expense Budget was prepared by first determining workload requirements for various customer service activities in 2007, including DSM expenses, and assigning employees to specific labor classes. Second, labor expenses for employees were then established using standard Company-wide labor rates for the respective labor classes. Third, non-labor charges, such as materials purchases, consulting fees, training, and other expenses were estimated based on continuing 2006 expenses and the application of recent years' trend in expenses. Fourth, non-labor expenses for new activities were also incorporated into the forecast.

Q. Please describe the rate case adjustment to the O&M Expense Budget.

A. The rate case adjustment removes incremental DSM program costs from test year expenses. The adjustment affects primarily Account 910 – Customer Assistance Expense.

Q. What are incremental DSM program costs?

A. Incremental DSM program costs are those costs that are recovered through the

DSM Surcharge and are not recovered through base rates. In general, they include labor provided by outside services and non-labor costs. Major exceptions to this general guideline are load management program costs for the Residential Load Direct Control ("RDLC") Program and the Commercial and Industrial Direct Load Control ("CIDLC") Program. The stipulations between the Company and the Consumer Advocate, approved by the Commission in Decision and Order ("D&O") No. 21415, issued October 14, 2004 in Docket No. 03-0166, and D&O No. 21421, issued October 19, 2004, in Docket No. 03-0415, for the RDLC and CIDLC Programs respectively, identify which program costs are incremental and which costs HECO recovers through base rates.

Q. Why is HECO not including incremental DSM program costs in the test year?

A. DSM program cost recovery is an issue in the on-going Energy Efficiency Docket, Docket No. 05-0069. Because the Commission's decision regarding the appropriate DSM program cost recovery mechanism is pending, for the purposes of this proceeding, the Company is using the method of cost recovery that is currently in place; namely, that DSM program costs currently being recovered in base rates continue to be recovered in base rates, and incremental DSM program costs currently being recovered through the DSM Surcharge continue to be recovered through that surcharge.

Q. What is the assumption for DSM program implementation in the test year?

A. The test year assumption is that nine DSM programs are implemented beginning in January 2007. Those programs are:

1) Commercial and Industrial Energy Efficiency ("CIEE")

2) Commercial and Industrial New Construction ("CINC")

3) Commercial and Industrial Customized Rebate ("CICR")

4) Residential Efficient Water Heating ("REWH")

5) Residential New Construction ("RNC")

6) Residential Low Income ("RLI")

7) Energy Solutions for the Home ("ESH")

8) Commercial and Industrial Direct Load Control ("CIDLC")

9) Residential Direct Load Control ("RDLC")

Furthermore, HECO indicated in the Energy Efficiency Docket that it intends to file modifications to its CIDLC and RDLC Programs before the end of 2006. The modifications to the RDLC Program were filed on November 22, 2006. The test year base labor and non-labor estimates for those two programs assume that the modifications are implemented in January 2007.

Q. Is HECO requesting recovery of expenses associated with the Residential Customer Energy Awareness ("RCEA") Program in the test year?

A. No, not in this direct testimony. Pending the Commission's determination on this matter in the HECO Test Year 2005 Rate Case (Docket No. 04-0113) and the Energy Efficiency Docket (Docket No. 05-0069), HECO has not included any RCEA Program costs in this proceeding.

Q. Does the removal of incremental DSM program costs from revenue requirements have an impact on the level of rate relief that HECO is requesting?

A. No, there is no impact because HECO is currently allowed to recover all prudent and reasonable incremental DSM program costs through the DSM Surcharge. As long as HECO is permitted to continue to recover incremental DSM program costs through the DSM Surcharge, the incremental program costs plus associated revenue taxes are completely offset by revenue recovered through that surcharge.

Q. Are any lost margins associated with the DSM programs included in the

Company's test year estimates?

A. Cumulative energy savings (on an annualized basis) from DSM measures installed prior to the test year, plus an estimate of ramped energy savings from DSM measures installed during the test year are included in the Company's estimate of test year sales and peak. However, HECO has not included a separate recovery of lost margins for the balance of the ramped 2007 test year measures installations in any of its test year estimates.

Q. Are utility incentives for pursuing DSM programs on a forward going basis included in any of the Company's test year estimates?

A. No, HECO has not included any utility incentives for implementing DSM programs in its test year estimates. The issue of utility incentives for DSM program implementation is one of the issues that are pending Commission decision making in the Energy Efficiency Docket.

Q. Does this treatment of DSM Program cost recovery, lost margins, and utility incentives for DSM supersede the Company's proposal in the Energy Efficiency Docket?

A. No, it does not. In the Energy Efficiency Docket, HECO's position, as updated, was that all DSM program costs be recovered through the DSM Surcharge. HECO also proposed that it be allowed to earn incentives for pursuing energy efficiency with recovery also through the DSM Surcharge. (See HECO's Opening Brief, pages 172-180, filed October 25, 2006, in Docket No. 05-0069.) However, because a decision on this matter is pending at the Commission, for this proceeding HECO is continuing the current cost recovery mechanism, has excluded the recovery of lost margins between rate cases, and has not included any utility incentives in its test year estimates. Should the Commission issue a

D&O in the Energy Efficiency Docket specifying the cost recovery mechanism prior to a final D&O in this proceeding, HECO will adjust its revenue requirements to conform to the Energy Efficiency Docket D&O. However, should the Commission issue an Energy Efficiency Docket D&O after a final D&O in this proceeding, HECO would work with the Commission to determine an appropriate transition to implement the Commission's order.

Q. How was the rate case adjustment determined?

A. First, the DSM expenses were examined to determine which costs were allowed to be recovered in base rates and which costs were incremental and would be recovered through the DSM Surcharge. Second, NARUC accounts impacted by the rate case adjustment were identified. While the rate case adjustment primarily impacted NARUC 910, adjustments for DSM incremental program on-costs included in the G/L code transfers also had to be accounted for. I will explain the G/L code transfers later in my testimony.

Q. What do DSM expenses include?

A. DSM expenses include:

1) Base and incremental DSM program expenses directly related to the administration and implementation of specific DSM programs, including customer incentives, direct labor, outside services and equipment, advertising and marketing, and miscellaneous; and

2) Other base DSM-related expenses such as on-going administration expenses for the overall supervision of the DSM programs that are not attributable to specific programs, the costs associated with the Pay-As-You-Save ("PAYS") Program to be initiated as a result of Act 240 of the 2006 Legislative Session, and Information Technology Services ("ITS") expenses

that are incurred in support of all DSM Programs.

DSM expenses are primarily charged to Account 910 – Customer Assistance Expense, but some expenses are charged to Accounts 909, 920, 921, and 931, as shown in HECO-903. The total amount of incremental DSM Program expenses shown in this exhibit was developed earlier this year at the same time as the O&M Expense Budget. Since that time, the estimated amount of incremental costs may have changed (including changes reflected in HECO's proposed modifications to the RDLC and CIDLC Programs). However, since HECO is requesting recovery of base labor and base non-labor DSM program costs through its proposed base rates in this proceeding (i.e., excluding any incremental DSM program costs), any differences between the incremental cost estimates shown in HECO-903 and current updated estimates of incremental costs do not affect the test year revenue requirements. My testimony will support a total Customer Service DSM test year expense of $2,980,000, which consists of $24,000 in Account 909 and $2,956,000 in Account 910.

Q. What DSM program costs are currently being recovered through base rates?

A. HECO currently recovers DSM program base labor and certain base non-labor costs through base rates or through the interim rate increase ordered by the Commission in Interim D&O No. 25050, issued September 27, 2006, in Docket No. 04-0113. Base labor costs are those costs associated with the 11 base positions directly associated with DSM program costs, as shown in HECO-904. HECO-904 also identifies the 11 incremental DSM program positions that are being removed from the test year.

Included in base non-labor costs are marketing, advertising, tracking and evaluation, and miscellaneous costs associated with HECO's two load

management programs, the CIDLC Program and the RDLC Program.

The amount of DSM program incremental labor and non-labor expense included in the rate case adjustment, which is $17,472,000, is shown in HECO-905.

Q. What is a G/L code adjustment?

A. The G/L code adjustment removes expense elements ("EE") corresponding to Corporate Administration (406), Employee Benefits (422), and Payroll Taxes (423) from Customer Service labor expense. These expenses are classified as non-labor expenses even though they are related to employees. This adjustment is necessary because the Company's Customer Service O&M Expense Budget includes these expense elements. However, for the purposes of the rate case these expenses are collected under other NARUC accounts. The G/L code adjustment removes those expenses from the Customer Service Expense estimate and collects them under different NARUC accounts, thus, avoiding a double counting of these expense elements. The Customer Service G/L code amount originally corresponded to these expenses for all positions in the Operating Budget, including the incremental positions.

Q. What is the impact on the G/L code due to the removal of incremental DSM program expenses from the Test Year?

A. Included in the G/L code adjustment is ($339,100) of incremental on-costs related to the incremental DSM positions that were removed from the Test Year. The G/L code adjustment for Account 910 -- Customer Assistance Expense was reduced by $339,100 and the following amounts were transferred via the G/L Code to the NARUC accounts indicated below:

NARUC 922 Admin	(EE 406)	($ 67,700)
NARUC 926 Employee Benefits	(EE 422)	($223,400)
NARUC 408 Payroll Taxes	(EE 423)	($ 48,000)
Total		($ 339,100)

Adjustments for these transferred incremental DSM program on-costs have been made from the above NARUC accounts to properly reflect associated on-costs for the removed incremental DSM positions.

Combining the removal of DSM program incremental costs from NARUC 910 (see HECO-905) with the adjustments explained above, results in the total rate case adjustment of $17,472,000, as shown in HECO-906.

Q. What adjustment was made to normalize the O&M Expense Budget for test year purposes?

A. The O&M Expense Budget was reduced by $24,000 because the PCEA meeting, the costs of which are included in the 2007 O&M Expense Budget, is held once every two years. Therefore, for the purposes of the test year, the estimated $47,000 of PCEA meeting cost was averaged over two years, and $24,000 was subtracted from the 2007 O&M Expense Budget, as shown in HECO-907.

Q. With the removal of incremental DSM program expenses and the application of the normalization adjustment, what is the split between base DSM and non-DSM expenses in the Customer Service Expense block of accounts?

A. The split between base DSM and non-DSM expenses is shown in HECO-908, along with the adjusted G/L code. Over 99% of all DSM expenses are included in Customer Assistance Expense.

Q. How does HECO's test year 2007 Customer Service Expense compare with preceding years' recorded information?

A. HECO's recorded Customer Service Expenses for the period from 2001 through 2005, the budget forecast for 2006, and the test year estimate for 2007, are reflected in HECO-909. Customer Service Expense is projected to increase in 2006 and 2007, primarily reflecting the expanded activities of the Energy Services DSM programs and an increase in Informational Advertising. The impact of the DSM activities can be demonstrated by removing base DSM expenses from the Customer Service expenses. As shown in HECO-910, the costs excluding DSM base expenses are relatively stable, with the exception of Account 911 – Informational Advertising, which will be addressed later in this testimony.

Q. How will the rest of your testimony be organized?

A. My testimony will first discuss test year expenses by account, including supporting information arranged by Department/Division areas. In addition, since DSM is a large expense item and since functional support for DSM is provided by many of the organizational areas listed above, a subsequent section of my testimony will focus on the expenses associated with DSM. My testimony will continue with a discussion of the test year estimate of IRP expenses, an enumeration of the head count, and conclude with a section on the Energy Cost Adjustment ("ECA") Clause and the ECA factors at present and proposed rates.

Account 909 - Supervision

Q. What is the 2007 test year estimate for Account 909 – Supervision?

A. HECO's 2007 test year estimate for Account 909 – Supervision expense is $308,000, as shown in HECO-901. The test year estimate consists almost entirely of labor, representing the salaries and overheads of the Customer Solutions Vice President and Secretary (the VP, Customer Solutions Division). There are also a

few labor hours and overheads from the Manager, Energy Services Department. The VP, Customer Solutions position was created on June 28, 2004, after a re-organization in the HECO Energy Solutions process area.

Q. What is the mission of the Customer Solutions process area?

A. The mission of the Customer Solutions process area is to provide the customer with a wide range of choices related to energy options and optimum energy usage. The process area consists of the:

1) VP, Customer Solutions Division,
2) Energy Services Department (including the Administration, Customer Efficiency Programs, and Pricing Divisions),
3) Customer Technology Applications Division,
4) Marketing Services Division,
5) Forecasts and Research Division, and
6) Integrated Resource Planning Division.

Q. How was the test year labor estimate for Account 909 – Supervision developed?

A. The test year labor estimate is based on the 2007 O&M Expense Budget of $282,000. This estimate was based primarily on the hours spent by the VP, Customer Solution and Secretary on general supervision and the direction of the Customer Solutions process area.

Q. How was the test year non-labor estimate for Account 909 developed?

A. The non-labor amount of $26,000 was estimated by taking continuing 2006 non-labor costs for the VP, Customer Solutions Division and adjusting for higher anticipated costs for various goods and services.

Q. How much of the test year Account 909 expense estimate is associated with DSM?

A. There is about $24,000 of base DSM labor expenses included in the Account 909 test year estimate.

Q. How does HECO's 2007 test year Account 909 – Supervision labor expense estimate compare with the recorded expense for the past five years, 2001-2005?

A. The test year labor expense is higher than in 2005, as shown in HECO-909, because more hours are expected to be allocated to General Supervision by the VP, Customer Solutions. Beginning in 2002, there was a HECO accounting change that affected the number of hours in Account 909. Prior to 2002, all ESD Manager and Secretary labor was charged to Account 909. However, from 2002 onwards, only Manager and Secretary labor charges to General Supervision and Direction were accumulated in Account 909. All other labor was charged to Account 910. Furthermore, as indicated above, beginning in June 2004, labor charges for the newly created VP, Customer Solutions Division were accumulated under Account 909.

Account 910 – Customer Assistance Expense

Q. What is the 2007 test year estimate for Account 910 – Customer Assistance Expense?

A. HECO's 2007 test year estimate of Account 910 – Customer Assistance Expenses is $5,724,000 as shown in HECO-901. This amount includes a 2007 test year labor expense estimate of $3,236,000 and a non-labor expense estimate of $2,488,000, as shown in HECO-902.

Q. How much of the test year Account 910 – Customer Assistance Expense is associated with DSM?

A. About 40% of the total test year estimate of Customer Assistance Expense

(excluding the G/L code), or $2,956,000, is related to DSM, as shown in HECO-908. Customer Assistance Expenses include nearly all of the DSM expenses for the test year.

Account 910 – Labor

Q. How does the 2007 test year labor expense estimate for Account 910 compare with the recorded 2005 labor expense for this account?

A. Test year 2007 labor expense estimate for Account 910 is $3,236,000 as compared to $2,824,000 recorded expenses in 2005, an increase of $412,000, as shown in line 8 of HECO-911.

Q. What are the major differences between 2005 recorded labor expense and the 2007 test year expense estimate?

A. The major difference is an increase in DSM program activities, which will be described later in my testimony.

Q. What are the various divisions included in Account 910?

A. The divisions captured in this account are as follows, as shown in HECO-912:

1) Administration Division – Energy Services Department
2) Customer Efficiency Programs Division (responsible for DSM programs) – Energy Services Department. Note that all DSM expenses for Account 910, including those DSM expenses that are incurred outside the CEP Division, are consolidated here for descriptive purposes
3) Customer Technology Applications Division
4) Marketing Services Division
5) Forecasts and Research Division
6) Corporate Communications Division
7) Education and Consumer Affairs Division

8) Others – Customer Service Expense

Administration Division, Energy Services Department – Labor

Q. What is the mission of the Energy Services Department ("ESD")?

A. ESD is responsible for developing fair and competitive rates, ensuring that customers are provided with accurate information about rates, and planning, designing, and implementing DSM programs.

Q. What are the activities of the Energy Services Department?

A. The divisions of ESD that roll up into Customer Service Expenses include Administration, Customer Efficiency Programs, and Pricing Divisions. I will discuss the activities of the ESD later in my testimony when I cover each of the organizational areas that contribute to Customer Service Expense.

Q. What are the mission and major activities of the Administration Division?

A. The Administration Division of ESD is responsible for the supervision of the Divisions that report to it. A portion of the expenses for the Administration Division is charged to Account 909, as stated earlier. However, a much larger portion of the Division's effort is directed towards the overall planning and coordination of the DSM programs and is included in Account 910.

Q. What is the 2007 test year labor expense estimate, and how does it compare to 2005 recorded expense?

A. The 2007 test year labor expense estimate is $35,000 in comparison to the 2005 recorded expense of $96,000, or a decrease of $61,000, as shown in HECO-912, line 4.

Q. Why has the Administration Division's labor expenses changed?

A. The lower expense estimate in the 2007 test year reflects an increased emphasis on overseeing the DSM programs. As indicated above, these additional labor

charges for DSM are captured under expenses associated with the Customer Efficiency Programs Division. Therefore, the remaining hours that are unrelated to DSM are fewer, resulting in a lower test year labor expense for the Administration Division.

Customer Efficiency Programs Division – Labor

Q. What is the mission of the Customer Efficiency Programs ("CEP") Division?

A. The mission of the CEP Division is to design cost effective Demand-Side Management (energy efficiency and load management) programs to be included in the analysis of HECO's IRP plan and to manage and implement those programs once they are approved by the Commission.

Q. What are the CEP Division's major activities?

A. The major activities of the CEP Division include:

1. Program Planning. The Division develops DSM program concepts, establishes budgets, develops estimates of kW and kWh impacts and performs preliminary cost benefit tests for proposed DSM programs to be included in HECO's IRP plan.

2. Preparing Regulatory Applications and Testimony: The Division prepares the DSM sections and exhibits of HECO's IRP reports. This also includes preparing and presenting written testimony, responding to information requests, and presenting oral testimony as needed to support the DSM programs in the IRP dockets.

3. Preparing DSM Program Applications: The Division prepares DSM program applications for those programs included in the IRP plan. Again, this includes preparing and presenting written testimony, responding to information requests, and presenting oral testimony as needed to support the

programs.

4. Implementing the DSM Programs: Following approval of the DSM program applications by the Commission, the Division implements the programs. These duties include direct customer visits to promote the programs, conducting customer training and workshops, processing customer applications and other direct implementation duties.

5. Managing the DSM Programs: CEP Division manages the DSM programs including processing all customer applications, tracking program costs, and maintaining the Demand-Side Management Information System which accounts for all customer incentives and program impacts. The Division also prepares and files the Annual Program Modification and Evaluation ("M&E") Report and the Annual Program Accomplishments and Surcharge ("A&S") Report.

Q. What is the 2007 test year labor expense estimate for the CEP Division, and how does it compare to 2005 recorded expense?

A. The 2007 test year labor expense estimate for the CEP Division, which includes all Account 910 DSM expenses incurred outside of the CEP Division, is $1,029,000 as compared to 2005 recorded expense of $656,000, which also includes all Account 910 DSM expenses incurred outside the CEP Division, as shown in HECO-912, line 1.

Q. Why is the 2007 test year labor expense estimate for DSM $373,000 higher than the recorded 2005 labor cost?

A. Forecasted labor costs for 2007 reflect a new Load Management Engineer position and the full year contribution of positions that were filled part way into 2005. Details regarding the DSM programs are provided in a separate section of this

testimony.

Customer Technology Applications Division – Labor

Q. What is the mission of the Customer Technology Applications ("CTA") Division?

A. The Division's overall mission is to provide multi-faceted technical support to our residential, commercial, and industrial customers. The Division identifies, promotes, and introduces innovative and beneficial applications of electro-technologies, in addition to providing expert engineering staff that are trained in the measurement and analysis of power quality.

Q. What are the CTA Division's major activities?

A. The CTA Division focuses on the following program areas:

- Marketing publications - *Powerlines* Newsletter,
- Electro-technologies education, technical support, and promotion,
- Commercial customer power quality education, technical support, and onsite measurements/analyses, and
- Residential customer power quality education, technical support, and onsite measurements/analyses.

Examples of electro-technology applications in which the Division has been an active participant are as follows:

- Ice Thermal Energy Storage ("TES") or Cool Storage Systems
- Ultraviolet Germicidal Irradiation ("UVGI") for Tuberculosis Mitigation and Mold Control
- Medical Waste Disposal Technologies including Plasma Vitrification
- Post-Harvest Cooling Systems
- Integrated Dual-Path Air-Conditioning Systems for Supermarkets
- Voltage Ride-Through Systems using Advanced Flywheel

Technologies and the Roesel Written Pole Motor Generator

- Demand-Controlled Ventilation ("DCV") Techniques
- Ozone Laundry and Water Disinfection Systems
- Ultraviolet Disinfection of Water and Wastewater Systems
- Membrane Separation Processes for Food Processing
- Adjustable Speed Drives
- Advanced Heat Pump Systems Research and Field Testing
- Web-Based Monitoring and Control Systems

The Division also provides technical support for HECO's DSM programs, particularly in the areas of engineering site evaluations for the CIDLC Program and customized rebate assessment.

Q. What is the test year labor expense estimate for the Customer Technology Applications Division, and how does it compare to the 2005 actual expense?

A. The 2007 test year labor expense estimate of $379,000 is $62,000 higher than the 2005 recorded expense of $317,000, as shown in HECO-912, line 7.

Q. What are the reasons for the increase?

A. The CTA Division intends to replace two Senior Technical Engineers who transferred to other departments/divisions within the Company. These Senior Technical Engineers will be working on the DSM programs (the labor costs of which are included under the labor costs for the Customer Efficiency Programs Division), as well as on customer related CTA Division activities. Increased 2007 hours for time spent on the DSM programs are reflected in the Customer Efficiency Programs Division labor expense. Increased 2007 Normal Support "above the line" activity hours are included in the increased base labor costs in the 2007 test year estimate.

Marketing Services Division – Labor

Q. What is the mission of the Marketing Services Division?

A. The Marketing Services Division is responsible for providing account management services for the Company's largest customers.

Q. What are the Marketing Services Division's major activities?

A. The Marketing Services Division provides a single point of contact for HECO's major customers. There are about 400 major commercial customers, primarily Schedules PP, PS, and PT, representing a total of over 6,200 accounts and about 54.7% of HECO's billed kWh sales in 2005. The account managers in the Marketing Services Division provide frequent proactive contact and develop multilevel relationships with each customer organization.

Major customer services also include communication during power outages, rate analyses, meter and billing consolidation analyses, power factor payback calculations, and coordination of service connections and related services. The Division provides energy solutions assessments and recommendations for major customers; sponsors and conducts conferences, seminars, workshops, trade shows; conducts power quality assessments and recommendations; and assists major customers with electro-technologies applications.

While the account managers do assist customers with information about the Company's DSM programs, that is only a small portion of their entire customer-related responsibilities. Therefore, the account managers are not considered DSM positions.

Q. What is the 2007 test year labor expense estimate, and how does it compare to the 2005 recorded expense for the Marketing Services Division?

A. The 2007 test year labor expense estimate for the Marketing Service Division is

$809,000 as compared to 2005 recorded expense of $764,000, an increase of $45,000, as shown in HECO-912, line 10.

Q. Why has the Marketing Services Division's labor expense increased?

A. In 2005, the Marketing Services Coordinator position was vacant from January 1, 2005 until March 17, 2005, thereby resulting in lower 2005 labor. For 2007, all positions were assumed filled for the year. In addition, the increase in labor costs can also be attributed to higher 2007 budgeted non-productive wages on-costs and standard hourly rates used in comparison to the actual 2005 non-productive wages on-costs and hourly rates, thereby resulting in increased labor costs.

Forecasts and Research Division – Labor

Q. What is the mission of the Forecasts and Research Division?

A. The Forecasts and Research Division provides support for a number of activities that help the Company provide products, services, and features designed to meet the wants, needs, and expectations of its customers.

Q. What are the Forecasts and Research Division's major activities?

A. The Division has seven main areas of focus.

1. Sales and peak forecasting: The Division develops short and long-term projections of sales and peak demand for HECO, and assists HELCO and MECO with their respective forecast processes. This includes the collection of historical data, developing projections for the local economies, analysis of market segments, and the integration of all of this information into a forecast of electricity sales and demand.

2. Customer and market research: The Division conducts ongoing assessment of customer satisfaction and expectations, market conditions and trends, energy usage and technology adoption patterns, and related activities

intended to help the Company understand and meet customer expectations. The Division conducts similar work for HECO's subsidiary companies, HELCO and MECO, as well.

3. DSM planning and evaluation: The Division develops market potential studies for new and enhanced DSM programs for IRP purposes. In addition, the Division is responsible for the impact evaluations of implemented DSM programs. Through these efforts, new options are made available to our customers for energy efficiency, and existing programs are refined. These efforts also contribute to fulfilling reporting requirements. The Division conducts similar work for HECO's subsidiary companies, HELCO and MECO as well.

4. Load research: The Division coordinates and conducts load research projects that help the Company understand energy usage by different classes of customers. An example of these studies is the 2003 HECO Class Load Study, which provides support for forecasting, pricing, and IRP efforts. The Division conducts similar work for HECO's subsidiary companies, HELCO and MECO as well.

5. Advertising and promotional activities: The Division manages the Company's mass market advertising efforts for DSM and educational and awareness purposes. These efforts help the Company inform the public about issues related to energy use and efficiency, and about programs and options offered by the Company.

6. Budget and accounting support: The Division provides budget and accounting support for the Energy Services Department to ensure proper accounting, tax treatment, and recording of transactions in accordance with

Generally Accepted Accounting Principles ("GAAP").

7. Ad hoc studies and consultative support: In addition to these activities, the Division provides ad hoc studies and consultative support as needed. The Division conducts similar work for HECO's subsidiary companies, HELCO and MECO as well.

Q. What is the 2007 test year labor expense estimate, and how does it compare to the 2005 recorded expense?

A. 2007 test year labor expense estimate for the Forecasts and Research Division is $337,000 as compared to 2005 recorded expense of $405,000, a decrease of $68,000, as shown in HECO-912, line 13.

Q. Why is the 2007 test year labor expense estimate lower than the 2005 actual labor cost?

A. The decrease in labor costs is due primarily to an expected shift of labor costs from O&M to more work that is billable to HECO's subsidiary companies, HELCO and MECO. 2007 Billable labor work increased by $53,000 from 2005 due to more Billable work envisioned for HELCO and MECO.

Corporate Communication Division – Labor

Q. What is the mission of the Corporate Communications Division?

A. The Division's mission is to support the Company's strategic plan with clear and credible external public, media and community relations, issues management, and employee communications.

Q. What are the Corporate Communications Division's major activities?

A. The Division's major activities include:

- Writing and designing *Consumer Lines*, the Company's monthly informational bill insert to customers, as well as preparation of a website

version of the insert,

- Writing and designing *Currents*, the Company's monthly newsletter, and producing and maintaining employee communications information for the Company's Intranet site,
- Writing and editorial assistance for *Hoa Hana*, a quarterly publication,
- Editing assistance for *Powerlines*, a major customer electronic newsletter,
- Managing content on the www.heco.com website,
- Providing video production and other audiovisual assistance to support employee training and safety needs,
- Participating in partnership efforts with major customers such as the Department of Defense and the University of Hawaii,
- Providing promotional and other support for customer events such as the HECO-sponsored Pacific Coast Electrical Association conference, the Efficient Electro-technology Expo and Seminar, and Live Energy Lite energy efficiency program,
- Responding to customer information requests or complaints,
- Communicating with customers and media about outages and other system problems, and
- Planning for and preparing general public communications about issues such as planned company infrastructure projects, rate increases, renewable energy, underground lines, and other topics.

Q. What is the 2007 test year expense estimate for Account 910 for Corporate Communications?

A. Corporate Communications' 2007 test year labor expense estimate for Account 910 – Customer Service Expense is $233,000. The estimated labor expense is for

planning and executing customer communications.

Q. How does the 2007 test year expense estimate compare to the 2005 recorded expense?

A. 2007 test year estimate of $233,000 is $33,000 higher than the 2005 recorded expense amount of $200,000, as shown in HECO-912, line 16. The primary reason for the increase is that one staff vacancy in the division, resulting from a retirement in the fall of 2004, was filled in April 2005. By comparison, the 2007 labor charges reflect full staffing for the entire year. The remaining increase is primarily due to normal fluctuations in areas of planned work amongst various activities and accounts.

Education & Consumer Affairs – Labor

Q. What is the mission of the Education and Consumer Affairs ("E&CA") Division?

A. E&CA educates residential customers and provides information about electrical safety, efficiency, conservation, renewable energy, and alternative energy technologies. E&CA is also responsible for developing, implementing and directing programs and efforts to build and sustain good relations with the community, and to facilitate two-way communication with the public.

Q. What are the E&CA Division's major activities?

A. The E&CA Division accomplishes its mission through the following programs:

- HECO in Your Community: Educational exhibits, interactive tools, and information on safe, efficient, and wise use of energy, conservation, renewable energy, and DSM programs are provided at community-sponsored events.
- Lending Library: Educational materials, brochures, videos and information on the safe, efficient and wise use of energy, conservation, renewable energy

and the environment are available via the internet or by direct contact with E&CA. Educational materials and speakers are available to schools, customers, and community organizations.

- Electric Magnetic Fields ("EMF"): Educational information and surveys of residential properties are provided to customers.
- Educational Materials: Information on the safe, efficient, economical use of electricity and energy related technology is provided to customers through publications and materials such as the Energy Tips and Choices and Handbook for Emergency Preparedness brochures.
- Sun Power for Schools: HECO supports the Department of Education's implementation of the PowerQuest program, an educational program about electricity, photovoltaics, and alternative energy, which teaches students about energy and the environment.
- Customer Education Campaign: Community outreach and information to provide information, awareness and knowledgeable choices on electrical safety, power quality, outage prevention and energy conservation. The 2005 campaign was focused on energy conservation, with the theme "Live Energy Lite", to teach customers ways to conserve in general and especially during peak hours. The 2006 campaign included both the energy conservation outreach and a Mylar Balloon Outage Prevention Campaign to educate customers about actions they can take to prevent outages caused by Mylar balloons and subsequent safety hazards, customer losses and financial damages.
- The Electric Kitchen: The Electric Kitchen is a venue to promote safe, efficient use of electrical appliances and energy conservation through the use

of new electric technologies and proven energy saving tips for the home. This information is provided to customers in a popular weekly newspaper column that features recipes from our recipe files and from various civic and community service groups.

- Integrated Resource Planning ("IRP"): Assistance with the planning, developing, implementing, and reporting of HECO's IRP Plan, with emphasis on the expanded community outreach and public input.

Q. What is the 2007 test year labor expense estimate, and how does it compare to 2005 recorded expense?

A. The E&CA Division's 2007 test labor is $377,000 as compared to $300,000 recorded expense in 2005, an increase of $77,000, as shown in HECO-912, line 19.

Q. Why is the 2007 test year labor estimate cost higher than 2005 actual labor cost?

A. The increase in labor costs is primarily due to staff vacancies in 2005. The 2007 labor estimates reflect the effect of full staffing levels for direct labor costs and associated overheads.

Others – Customer Service Expense – Labor

Q. What is included in the expense labeled "Others" in exhibit HECO-912, lines 22 to 24?

A. Legal, Construction & Maintenance, Customer Installations, Engineering, Management Accounting & Financing Services, and System Operations are the departments that have included cost in "Others". These departments provide support to the activities coded to Account 910.

Q. What is the 2007 test year labor expense estimate and 2005 recorded expense for "Others – Customer Service Expense"?

A. 2007 test year expense estimate is $37,000 versus $86,000 recorded in 2005, a decrease of $49,000.

Account 910 – Non-labor

Q. How does HECO's test year non-labor expense estimate for Account 910 compare with the 2005 recorded expense in this account?

A. The test year non-labor expense estimate is $2,488,000 for Account 910, an increase of $1,051,000 above recorded 2005 expense of $1,437,000, as shown in HECO-912, line 31. Changes to the non-labor costs are primarily due to expanded DSM programs. An explanation of other non-labor costs will follow.

Administration – Energy Services Department – Non-Labor

Q. What is the test year non-labor expense estimate and 2005 recorded expense for Administration?

A. The 2007 test year expense estimate for non-labor is $41,000 as compared to $89,000 in 2005 reflecting a decrease of $48,000, as shown in HECO-912, line 5. The decrease is largely due to 2005 expenditures being high in comparison to the 2007 estimate for two reasons. First, 2005 actual non-labor expenditures included HECO IRP non-labor costs ($20,000) that were incurred subsequent to September 27, 2005, the effective date of the HECO 2005 test year rate case interim increase. IRP non-labor costs incurred subsequent to September 27, 2005 were treated as base O&M expenses instead of incremental expenses[1]. This expense was unusual in that it was charged to the ESD, Administrative Division. Normally these expenses are charged to the Forecasts and Research Division, which administers IRP-related service agreements on behalf of the ESD, Administration Division.

[1] For further discussion of the treatment of HECO IRP non-labor costs resulting from the HECO 2005 test year rate case interim rate increase, see the following section: Forecasts and Research Division – Non-Labor.

Thus, the $20,000 non-labor expense for the ESD, Administration Division was a one-time expense. Second, the 2005 actual expenses included recruitment non-labor costs ($36,000) to hire the Director, Customer Efficiency Programs Division.

CEP Division (DSM Programs) – Non-Labor

Q. What is the 2007 test year non-labor expense estimate, and how does it compare to 2005 recorded expense?

A. The 2007 test year non-labor expense estimate for the Customer Efficiency Programs Division is $1,927,000 as compared to the 2005 recorded expense of $670,000, an increase of $1,257,000, as shown in HECO-912, line 2.

Q. Why is the 2007 test year non-labor expense estimate for the Customer Efficiency Programs Division higher than the recorded non-labor costs for 2005?

A. The increase over 2005 expenses reflects primarily an increase in base non-labor costs associated with the CIDLC and RDLC Programs. DSM expenses are discussed in more detail later in my testimony.

Customer Technology Applications Division – Non-labor

Q. How does the Customer Technology Applications Division 2007 test year non-labor expense estimate for Account 910 compare with the 2005 recorded expense in this account?

A. The test year non-labor expense estimate of $339,000 is $148,000 higher than the recorded 2005 non-labor expense of $191,000, as shown in HECO-912, line 8.

Q. Why does the 2007 test year expense estimate increase?

A. The Customer Technology Applications Division non-labor budget includes overhead expenses, employee benefits and education, promotion, and

development work associated with HECO publications, power quality, electro technologies, cool storage, heat pump technical support, and other normal support activities. The higher non-labor expense estimate for 2007 reflects approximately $86,000 higher on-costs due in part to more labor hours/dollars (the bases for on-costs computation) with the addition of the two Senior Technical Services replacement engineers as well as overall higher 2007 on-costs rates in comparison to 2005.

For other non-labor items, 2005 recorded expenses reflect a reduction in education, promotion, and development associated with the Division's core program area and other normal support activities compared to years prior to 2005. A $62,000 increase in the 2007 non-labor estimate reflects a return to the funding support for the Division's core program area and other normal support activities.

Marketing Services – Non-Labor

Q. What is the total non-labor cost of the Marketing Services Division?

A. The total non-labor cost for the Marketing Services Division for 2007 test year is $483,000, an increase of about $123,000 over 2005 actual expenditures, as shown in HECO-912, line 11.

Q. What are the reasons for the increase?

A. The primary reason for the increase is $142,900 higher on-costs in 2007 vs. 2005. The increase in on-costs is consistent with higher labor costs. In addition, 2007 on-cost budgeted rates were significantly higher than 2005 actuals thereby contributing further to the increase. The remaining $19,900 decrease reflects primarily an $18,000 normalization adjustment reduction to the 2007 O&M Budget (see HECO-907.)

Forecasts and Research Division – Non-Labor

Q. How does the Forecasts and Research Division 2007 test year non-labor expense estimate for Account 910 compare with the 2005 recorded expense in this account?

A. The Forecasts and Research Division 2007 non-labor test year expense estimate is $496,000, an increase of $199,000 above 2005 recorded expenses of $297,000, as shown in HECO-912, line 14.

Q. Why is the test year non-labor cost higher than the 2005 actual non-labor expenses?

A. The primary reason for the increase in non-labor costs is the revised Company treatment for IRP non-labor costs which contributed to a $160,400 increase. In its 2005 test year rate case, Docket No. 04-0113, IRP planning costs that in previous years were incremental, and therefore deferred on HECO's financial records, were included in its revenue requirements. In Interim Decision & Order No. 22050, dated September 27, 2005, IRP planning costs that were previously incremental were included in the interim rate increase, effective September 28, 2005. Beginning September 28, 2005, HECO IRP non-labor costs were treated as base O&M costs. 2005 actuals of $71,300 O&M IRP non-labor reflects costs incurred for the September 28, 2005 thru December 31, 2005 period only, while 2007 HECO IRP O&M non-labor costs of $231,700 reflects O&M treatment for all of 2007.

Corporate Communications Division – Non-Labor

Q. What is the 2007 test year non-labor expense estimate for Corporate Communications for Account 910?

A. Corporate Communications' 2007 test year non-labor expense estimate is

$246,000 as shown in HECO-912, line 17. The estimated non-labor expense for Corporate Communications includes costs for producing and printing customer communications including the *Consumer Lines* monthly newsletter, and miscellaneous supporting audiovisual charges for activities as explained earlier in the discussion of labor expense for the Corporate Communication Division.

Q. How does the 2007 test year estimate for Account 910 compare to the 2005 recorded amounts?

A. The $246,000 test year estimate is $42,000 higher than the 2005 recorded amount of $204,000.

Q. What is the primary reason for the increase between 2005 and 2007?

A. The increase is primarily due to higher on-costs on the additional labor expected to be incurred due to the reasons discussed above. The higher on-costs are partially offset by a decrease in estimated outside services needed for the web-based version of *Consumer Lines*, due to the new web platform used for the company's website.

Education & Consumer Affairs Division – Non-Labor

Q. How does the E&CA Division 2007 test year non-labor expense estimate for Account 910 compare with the 2005 recorded expense in this account?

A. E&CA Division 2007 test year expense estimate is $451,000, and 2005 recorded expenses were $296,000, as shown in HECO-912, line 20.

Q. Please explain the difference between the 2007 test year expense estimate and 2005 recorded expense.

A. The 2005 expenditures were lower due to staff vacancies and subsequent temporary reductions in program expenses and operations. Positions have been filled and 2007 projections are at full capacity. Also, 2007 reflects increased

outreach for customer energy conservation in response to customer demand and to help mitigate reduced reserve margins and higher peak usage; increased printing costs of highly requested educational publications; increased involvement in the IRP process; increased emphasis on the Mylar Balloon Outage Prevention Campaign; and an increase in associated overhead charges.

Others – Customer Service Expense – Non-Labor

Q. What is the 2007 test year non-labor expense estimate, and how does it compare to the 2005 recorded non-labor expense?

A. The 2007 test year non-labor expense estimate of $225,000 is $133,000 lower than 2005 recorded non-labor expense of $358,000, as shown in HECO-912, line 23.

Q. What non-labor expenses are included in the "Others – Customer Service Expense"?

A. The test year non-labor expense estimate of $225,000 consists primarily of ITS charges in support of the activities coded to Account 910 ($204,000), plus related on-costs ($21,000) for associated labor included in the "Others – Customer Services Expense" category.

Q. What was the major reason for the decrease in projected non-labor expenses?

A. The major reason for the non-labor expense decrease was the absence of an E-Business software amortization in the 2007 test year estimate compared to $91,000 in 2005. The E-Business software was fully amortized in 2006. In addition, the 2007 test year estimate of IT charges was $36,000 less than in 2005.

Account 911 – Informational Advertising Expense

Q. What is the 2007 test year expense estimate for Account 911 – Informational Advertising?

A. HECO's 2007 test year expense is $1,123,000 as shown by HECO-909. The estimated expenses in this account for Corporate Communications include labor costs of $15,000 and non-labor costs of $1,108,000. These costs are for the development and placement of print and radio advertising and related print materials to inform customers about energy efficiency and safety (including education about outages caused by mylar balloons), rights to submit damage claims, as well as customer programs and services such as HECO's *Sun Power for Schools* program and Arbor Day "Right Tree, Right Place" program.

The estimated expenses also include $1,000,000 for television, radio and print advertising and collateral materials to more aggressively inform customers about energy efficiency and conservation measures, including publicizing the company's Live Energy Lite events and programs, and to help build a conservation "ethic" with customers.

Also included are labor costs ($3,000) for communications work to support HECO's IRP-3. Other minor labor costs from the Forecasts and Research Division ($4,000) comprise the rest of the labor included in Account 911.

Q. How does the 2007 test year estimate for Account 911 compare to the 2005 recorded amounts?

A. The $1,123,000 test year estimate is $544,000 higher than the 2005 recorded amount of $579,000.

Q. What is the primary reason for the increase between 2005 and 2007?

A. The primary reason for the increase is the additional resources to more

aggressively inform customers about energy efficiency and conservation measures and the importance of making such actions an everyday habit. Consistent with our position in the 2005 HECO rate case, this additional funding is instrumental in helping to drive reductions in demand, which are especially critical as the company continues to operate under tight generating reserve margins.

Q. Please describe how HECO would spend the $1,000,000 to aggressively inform customers about energy efficiency and conservation measures.

A. To educate Oahu customers on the importance of conserving electricity requires a comprehensive effort. The Energy Education and Conservation Campaign is designed to reach people with multiple messages in a variety of different media. The ultimate goal is to educate Oahu consumers of electricity about energy issues and options, and ultimately help households on Oahu to adopt energy efficient products and strategies. To change people's habits of energy usage requires a well-planned, sustained effort throughout 2007 and beyond.

In 2007, HECO plans to deliver conservation messages across a variety of media, using a broad-based Television, Radio, Newspaper, and Magazine schedule. The reach and frequency of these messages will be adjusted throughout the year. Targeted media such as Community Publications, Movie Theater Slides, and Shopping Mall Signs provide opportunities to target specific neighborhoods.

To carry these education and conservation messages, HECO will develop and produce 30-second television spots, 60-second radio spots, newspaper and magazine advertisements, full screen theater slides, and large signs in shopping malls. Themes will range from the personal to the global. On the personal level, energy conservation will help households to save money on their electricity bills. On the global level, energy conservation can help to reduce the levels of

greenhouse gasses, which will make Hawaii and the world a healthier place for future generations.

The 2007 expenditures for the projected media and production budgets total $1,000,000:

	Media Budget
Television	$418,000
Radio	$161,500
Print	$150,700
Movie Screens	$39,300
Mall Signage	$14,000
Media Total	$783,500

	Production Budget
TV Production (two :30 spots)	$140,000
Radio Production (four :60 spots)	$12,000
Music Beds (:30 and :60 versions)	$25,000
Newspaper Ads (two)	$20,000
Community Ads (six)	$7,500
Movie Theater Slides (four)	$6,000
Mall Signs (two)	$6,000
Production Total	$216,500

Q. What were the informational advertising expenditures in 2005 and 2006?

A. 2005 expenditures were approximately $500,000. 2006 expenditures are estimated to be $180,000, which includes actual expenditures through October, plus estimated November and December costs.

Q. Why wasn't more spent on informational advertising in 2006?

A. There is certainly recognition that an Energy Efficiency and Conservation campaign is important to the company. Such a campaign can affect customer behavior and could increase customer acceptance and adoption of energy efficient behaviors and DSM measures. However, because this higher level of ratepayer funded advertising is still an issue of disagreement with the Consumer Advocate and the Department of Defense ("DOD") in the 2005 HECO rate case, HECO did

not spend as much on such advertising in 2006. HECO did spend about $180,000 in advertising in recognition of the need to keep customers aware of steps they can take to improve system reliability. This advertising was supplemented with heavy public relations and community outreach efforts, resulting in media features and other media coverage and community fairs, including HECO's major Live Energy Lite fair at Pearlridge Center, which helped to publicize the importance of energy conservation as well as conservation tips.

In addition, because of the open policy issue of ratepayer funded advertising in the 2005 HECO rate case, HECO opted to spend about $1,000,000 using shareholder funds for advertising, which emphasizes the importance of reducing Hawaii's dependence on oil and the need for everyone to take action to help achieve this goal. These messages support and encourage energy conservation behaviors.

Q. How likely is it that the Company will spend $1,000,000 on the Energy Efficiency and Conservation campaign during the 2007 test year?

A. Unless financial results indicate that the expenditures cannot be made, spending $1,000,000 for the campaign is likely. The decision to go forward with the campaign will also be made in the context of any Commission decision in the 2005 rate case (Docket No. 04-0113) in which HECO requested approval for additional informational advertising expenses. The Consumer Advocate and DOD contested the approval of the additional expenses; therefore, there is some degree of uncertainty surrounding the Commission's decision. Absent that approval, there will be recognition that the expenditures will be made without recovery through base rates. However, as shown by the budgets above, HECO is already moving forward with preliminary planning for the 2007 advertising campaign.

Account 912 – Miscellaneous Customer Service Expense

Q. What is the 2007 test year estimate for Account 912 – Miscellaneous Customer Service Expense?

A. HECO's 2007 test year expense estimate for Account 912 – Miscellaneous Customer Service Expense is $21,000, as shown on HECO-902.

Q. What expenses are included in Account 912 - Miscellaneous Customer Service Expense?

A. The 2007 test year estimate represents an estimate of outside services consultants to conduct training for Customer Service Department personnel.

Q. How does the 2007 test year estimate compare to the 2005 recorded amount for this account?

A. The 2007 test year expense estimate of $21,000 for Account 912 is $17,000 higher than the 2005 recorded amount of $4,000, as shown in HECO-909.

Q. What is the major reason for the increase?

A. The primary reason for the increase is to support more training for technological advances and process improvements.

DEMAND-SIDE MAMANGEMENT EXPENSE

Q. What are DSM expenses?

A. DSM expenses include:

1) Base and incremental DSM program expenses directly related to the administration and implementation of specific DSM programs, including customer incentives, direct labor, outside services and equipment, advertising and marketing, and miscellaneous, and

2) Other base DSM-related expenses such as administration expenses for the overall supervision of the DSM programs that are not attributable to specific programs, the costs associated with the PAYS Program initiated by Act 240 of the 2006 Legislative Session, and (ITS) expenses that are incurred in support of all DSM Programs.

Total test year DSM expenses are $3,002,000, of which $2,232,000 is attributed to DSM Program costs and $770,000 is attributed to Other DSM expenses as shown in HECO-903. DSM expenses are primarily charged to Account 910 – Customer Assistance Expense, but some expenses are charged to Accounts 909, 920, 921, and 931, as shown in HECO-913.

DSM Program Expense

Q. What is the test year estimate of DSM Program costs in Account 910?

A. The test year estimate of base DSM program costs in Account 910 is $2,210,000, as shown in HECO-914, of which $754,000 is labor, and $1,456,000 is non-labor. Other DSM program costs of $24,000 ($6,000 of labor and $18,000 of nonlabor) are included in NARUC accounts 920, 921, and 931. Ms. Nanbu (HECO T-10) and Mr. Tamashiro (HECO T-13) support the Company's test year estimates for Accounts 920/921 and 931, respectively.

Q. Please describe HECO's DSM programs.

A. The 9 DSM programs are:

1) Commercial and Industrial Energy Efficiency ("CIEE")
2) Commercial and Industrial New Construction ("CINC")
3) Commercial and Industrial Customized Rebate ("CICR")
4) Residential Efficient Water Heating ("REWH")
5) Residential New Construction ("RNC")

6) Energy Solutions for the Home ("ESH")

7) Commercial and Industrial Direct Load Control ("CIDLC")

8) Residential Direct Load Control ("RDLC")

9) Residential Low Income ("RLI")

The first eight programs are existing programs (CIEE, CINC, CICR, REWH, RNC, ESH, CIDLC, and RDLC), while the last program (RLI) is new. HECO has requested Commission approval of enhancements to the CIEE, CINC, CICR, REWH, RNC, and ESH Programs, and approval of the new RLI Program in the Energy Efficiency Docket. On April 26, 2006, in Interim D&O No. 22420, the Commission gave interim approval for increased customer incentive levels in the CIEE and CINC Programs, and approved the elimination of the 2-year payback threshold in the CICR Program. The Commission also gave interim approval for the compact fluorescent lamp ("CFL") rebate component of the ESH Program.

HECO filed a RDLC Program modification with the Commission on November 22, 2006, requesting approval to add a residential central air-conditioning load control program element to the program. HECO plans to file modifications to the CIDLC Program by the end of 2006.

The test year estimate of base DSM program costs assume that all enhancements, modifications, and new programs are approved by the Commission and are implemented in January 2007.

Q. Please briefly describe the nine DSM programs.

A. A brief description is included in HECO-915, along with cites to HECO's Opening Brief filed on October 25, 2006 in the Energy Efficiency Docket that contains more DSM program details.

Q. Is HECO requesting recovery of expenses associated with the RCEA Pilot Program in the test year?

A. No, not in this direct testimony. Pending the Commission's determination on this matter in Docket No. 04-0113 and the Energy Efficiency Docket, HECO has not included any RCEA Program costs in this proceeding. The procedural history of the RCEA Pilot Program is described in HECO's Opening Brief filed October 25, 2006, in the Energy Efficiency Docket on pages 23-26.

Q. Since HECO is not requesting any program costs associated with the RCEA Program in the test year estimate pending the outcome of the Energy Efficiency Docket, has HECO included the additional $750,000 in Informational Advertising?

A. Yes, as described earlier in my testimony, the Account 911 – Informational Advertising test year expense estimate includes the additional $750,000. Should the Commission approve the RCEA Program as proposed in Docket No. 03-0142, HECO will replace the additional $750,000 in Informational Advertising expense with the base cost elements of the RCEA Program in a revised test year estimate.

Q. How does the test year base DSM program expense estimate compare to actual 2005 expenditures?

A. As shown in HECO-916, the Account 910 test year base program expense is $1,407,000 higher than 2005 actual expense resulting from a $286,000 increase in base labor and a $1,121,000 increase in base non-labor expense.

Q. What are is the reason(s) for the higher base labor expense?

A. Over half of the increase in base DSM program labor is the result of an increase in CIDLC Program expense, which is due to two reasons. First, 2005 was the first year that the CIDLC program was implemented. Because the program was

starting up a significant number of engineering site assessments and evaluations performed by HECO's in-house labor did not begin until later in the year. During the test year, HECO expects that engineering evaluations will extend throughout the year. Second, HECO expects to fill a Load Management Engineer position in anticipation of increased customer adoption of the program resulting from EnerNOC's engineering and marketing assistance that will begin December 1, 2006 (see HECO's letter dated November 21, 2006, notifying the Commission of this agreement) and the resulting follow-up engineering work with these new customers. In addition, HECO expects that the approval of CIDLC Program modifications to be filed by HECO before the end of 2006 will lead to additional customers and the need for a continued level of engineering and other support.

The rest of the increase in base DSM program expense is due to increased labor hours and wage levels for all DSM programs.

Q. Are the costs for EnerNOC's assistance included in the test year DSM program expense estimates?

A. No. EnerNOC's assistance is contracted for only 6 months beginning December 1, 2006 and is not expected to be an on-going effort at this time. Because of the one-off nature of the EnerNOC contract, the associated costs of the contract that would have to be recovered through base rates are not included in the test year.

Q. What are the reasons for test year DSM program non-labor expense being higher than 2005 actual expenses?

A. The increase is primarily due to higher base non-labor expenses for the two load management programs, CIDLC and RDLC.

Q. What are the reasons for the increase in the CIDLC Program base non-labor expense?

A. A comparison of the CIDLC Program base non-labor test year expense estimate against actual 2005 non-labor program costs is shown in HECO-917. The increase is primarily the result of proposed modifications to the CIDLC Program, which will increase the flexibility of the program to accommodate customer preferences and will increase the capacity deferral and reliability value of the program. Base non-labor expenses included in base rates in accordance with the D&O 21421 in Docket No. 03-0415 include tracking and evaluation, advertising, and miscellaneous costs. HECO intends to file modifications to the CIDLC Program with the Commission before the end of the year. The test year base non-labor estimates are consistent with that filing.

Q. Briefly describe the CIDLC Program modifications that HECO will be filing by the end of 2006.

A. The modifications include an increase in the customer incentive levels for participating in the program, a reduction in the minimum interruptible load in order to participate in the program, the availability of a non-underfrequency relay option, and two new program elements: a voluntary load control element and a small business load control element. These modifications will provide additional reliability and capacity deferral benefits by increasing customer participation, but also will increase the costs of the program. Tracking and evaluation, advertising, and miscellaneous costs are expected to increase as the result of the program modifications.

Q. What are the reasons for the increase in the RDLC Program base non-labor expense?

A. A comparison between the test year base non-labor expense estimate and actual 2005 expenses is shown in HECO-918. There are three major reasons for the

increase in base RDLC Program non-labor expense. First, 2005 expenses reflect partial and startup year implementation of the RDLC program. The test year expense estimate reflects a full year implementation. Second, advertising expenses are expected to increase as RDLC Program success increases the market saturation of installed load control switches. Third, as the program expands its customer base, tracking and evaluation costs are also expected to increase. HECO filed a modification to the RDLC Program on November 22, 2006. The modification consisted of adding residential central air-conditioning load control to the program; however, the modification did not result in an increase in base non-labor costs.

Q. What are the estimated test year sales and demand savings from the DSM programs?

A. The annualized test year savings for DSM program measures installed in 2007 are 49.4 gigawatthours (gWh) of energy at the customer level and 17.1 mW of demand at the net-to-system level, as shown in HECO-919. The exhibit also shows the cumulative savings over the next 5 years, 2006-2010.

Q. The test year sales estimate discussed in HECO T-2 indicates a future DSM sales impact of 54.4 gWh. Why is there a difference?

A. The difference is due to different base years from which the DSM impact is measured and the assumed timing of the DSM measure installations. The test year DSM energy impact of 49.4 gWh shown in HECO-919 represents the impact of measures installed in 2007. Therefore, this is the incremental reduction in sales from the prior year, with 2006 being the base year. Furthermore, the 2007 energy impact is annualized; i.e., in effect, the DSM measures are all assumed to be installed on January 1, 2007.

On the other hand, the test year DSM sales impact in HECO T-2 reflects a base year of 2005 (for sales forecast purposes future DSM is DSM installed in 2006 and thereafter). The 54.4 gWh is the accumulation of DSM reductions since the end of 2005, i.e. for 2006 and 2007. In addition, measures installed in 2006 and 2007 are assumed to be installed throughout the year, rather than all at the beginning of the year. The derivation of the two measures of DSM impact is shown in HECO-920.

Q. How does the test year DSM sales impact estimate compare with the estimates provided in the Energy Efficiency Docket?

A. The test year DSM sales impact estimate of 54.4 gWh is lower than the cumulative 2006-2007 estimate provided in the Energy Efficiency Docket (92.5 gWh at the customer level) because the Energy Efficiency Docket estimate is annualized and assumed that new and enhanced DSM programs were implemented beginning in January 2006. The test year DSM sales impact estimate is ramped and assumes that the new and enhanced DSM programs are implemented beginning in January 2007.

DSM-Related Expenses

Q. What is the test year estimate for DSM-related expense?

A. The test year estimate is $770,000 of which $24,000 is in Account 909, and $746,000 is in Account 910, as shown in HECO-921. Thus, all DSM-related expenses are in the Customer Services block of accounts.

Q. How do the test year estimates for DSM-related expenses compare with actual 2005 expenses?

A. The test year estimate is $247,000 above 2005 actuals, as shown in HECO-922.

Q. What are DSM-related expenses?

A. DSM-related expenses include Administration, PAYS program, and ITS expenses. DSM Administration costs include labor and non-labor costs to be incurred by the VP, Customer Solutions and the Energy Services Department Administration Divisions that are related to the overall supervision and direction of the Company's energy efficiency and load management efforts. The PAYS program is a pilot project authorized by Act 240 (2006). ITS expenses are non-labor charges for ITS support of the Company's energy efficiency and load management efforts.

Q. What is the PAYS program?

A. The PAYS program is a pilot project designed to overcome the barrier of up-front costs in the residential solar water heating market. Residential customers participating in the PAYS program will incur no upfront cost and will pay for the cost of the installed solar water heating system over time through the savings in the customer's electricity bill. The focus of the program is on "rental housing and homes in need of retrofit." (See HECO-923, page 2, lines 15-16.) The Commission is tasked with determining the time frame of the pilot program and for gathering and analyzing information to evaluate the program. The Commission is also tasked with "ensuring that all reasonable costs incurred by electric utilities to start up and implement the pay as you save model system are recovered as part of the utility's revenue requirement, including necessary billing system adjustments and any costs for pay as you save model system efficiency measures that are not recovered via participating residential consumers' pay as you save model system bill payments or otherwise." (See HECO-923, page 4, lines 11-18.) The Company must implement the program by tariff no later than June 30, 2007, and must provide at least six month's prior notice of its proposed

tariff to the Commission.

Q. What are the details of HECO's proposed PAYS program and tariff?

A. HECO continues to work out the details of the program and tariff and intends to file the tariff as mandated by Act 240 by the end of 2006. On October 24, 2006, the Commission opened an investigative proceeding for the PAYS, or SWH Financing Program, Docket No. 2006-0425. The parties to the proceeding developed a stipulated procedural order to govern the matters of this investigation, and submitted the order for Commission review and approval on December 15, 2006. Related to the development of this stipulated procedural order, HECO plans to file its proposed PAYS tariff by December 29, 2006.

Q. What is the test year expense estimate for the PAYS program?

A. The test year expense estimate is $164,000, as shown in HECO-924. The estimate assumes that the PAYS program is implemented beginning January 1, 2007 and that HECO's role consists of:

1) Administering the program, which at this time assumes the installation of 100 solar water heating systems per year,
2) Collecting monthly payments from 100 customers through the electric bill and disbursing those payments to a third party financing entity,
3) Paying incentives currently estimated to be $540 per system (see HECO-924) to the 3rd party financing entity via loan and/or monthly payment buydowns,
4) Promoting the program through print and radio advertising,
5) Tracking and evaluating the program impacts, and
6) Conducting solar water heating contractor training.

However, since HECO continues to work out the details of the program and tariff,

these basic assumptions about the program may not reflect actual implementation. Therefore, this test year estimate for the program may be an over or under estimate of actual program costs.

Q. Since the PAYS program details have not been finalized, how does HECO propose to recover the costs associated with the program?

A. In its proposed PAYS tariff that HECO plans to file by December 29, 2006, HECO will propose a revenue recovery mechanism for costs associated with the PAYS program.

DSM Reconciliation Clause

Q. Is HECO proposing a DSM Reconciliation Clause?

A. Yes, it is. HECO had also proposed a DSM Reconciliation Clause in its 2005 Test Year rate case as a mechanism to:

1) Reconcile actual DSM customer incentives paid with customer incentives included in base rates,
2) Recover the costs of approved DSM programs not included in base rates,
3) Provide an accounting of the actual performance of the DSM programs, and
4) Allow only the actual utility incentive earned by the Company to be recovered.

Q. Why is the Company proposing a DSM Reconciliation Clause?

A. The Company is proposing the Clause because it is integral to one of the possible outcomes of the Energy Efficiency Docket, which is currently before the Commission. One of the possible outcomes is that DSM program costs would be recovered through base rates. If that should be the decision of the Commission, then the DSM Reconciliation Clause is necessary to recover the actual costs of the

DSM programs.

INTEGRATED RESOURCE PLANNING

Q. What is the test year expense estimate for IRP costs that HECO is proposing to be included in base rates?

A. HECO is proposing a total of $1,291,500 be included in base rates as shown in HECO-925. This amount is comprised of labor and non-labor components. The labor component consists of $814,800 in labor and associated on-costs for employees who support HECO's IRP process, as shown in HECO-926. These employees are currently in base rates. The second component consists of $476,700, as shown in HECO-927, which represents the 2007 IRP normalized test year estimate of HECO's IRP planning non-labor costs.

Q. Please describe the costs associated with Integrated Resource Planning ("IRP")?

A. The costs for IRP are those costs for planning activities associated with the IRP process. Included in these costs are the costs of data gathering, development of models, research and development of options in meeting the demand for energy, and obtaining public input into the IRP process. The costs for IRP include: (1) consultant services; (2) legal services; (3) information services; (4) labor and associated on-costs; (5) materials and supplies, travel, training, and other miscellaneous costs.

Q. How does HECO currently recover the costs associated with IRP?

A. In HECO's Test Year 2005 rate case, Docket No.04-0113, HECO proposed to change the method for recovering IRP associated cost such that IRP costs are recovered entirely through base rates. The Commission, in granting HECO an interim rate increase in Interim Decision & Order No. 22050, allowed HECO to

recover its entire IRP costs through base rates. Accordingly, as of September 28, 2005, the effective date of the interim rate increase, HECO discontinued recovering its IRP expenses incurred through the IRP Clause and currently recovers its IRP related costs through base rates. However, pending before the Commission for decision making is a final decision and order for the recovery of IRP incremental costs between and including the years 1995 through 2005. Any reconciling balances between what has already been recovered and the amount ultimately approved by the Commission will be returned/recovered through the IRP Clause, with interest.

Q. Is HECO proposing any further change to the method of recovering IRP costs?

A. No. The Company is proposing to continue recovering its IRP costs entirely through base rates.

Q. Did HECO make a normalizing adjustment to its O&M Expense Budget for rate case purposes?

A. Yes. HECO increased its O&M Expense Budget for non-labor by $30,500, as shown in HECO-927. The normalization calculation is shown in HECO-928. The amount was determined by taking the average of:

1) Actual IRP-related planning non-labor costs incurred in 2005;

2) The actual IRP-related planning non-labor costs incurred from January to August 2006 plus the forecasted IRP-related non-labor cost from September to December 2006; and

3) The forecasted amount of IRP-related planning non-labor costs for 2007.

The derived average then served as a basis for the normalization adjustment.

Q. Why is this methodology for derivation of the normalization amount considered reasonable?

A. The Company's methodology for derivation of the normalization amount is reasonable because it is consistent with the method used in Docket No. 04-0113, in that the IRP costs to be included in base rates were derived using an average of 3 years (2003 – 2005).

Q. How does the test year IRP expense estimate compare with 2005 actual expenses?

A. The test year IRP expense estimate is $268,500 lower than 2005, as shown in HECO-929.

Q. Why is the test year expense estimate lower than 2005 actual expenses?

A. The test year normalized estimate is actually only $18,600 lower than 2005 IRP incurred costs. To determine the IRP expenditures incurred in 2005, the amortized 2004 IRP cost ($633,200 - incurred in 2004 but recorded in 2005) should be subtracted from the 2005 actual IRP expense ($1,560,000) and the amortized 2005 IRP cost ($383,300 - incurred in 2005 but recorded in 2006) should be added, which results in 2005 IRP incurred expenditures of $1,310,100. (See note #5 in HECO-929.) The test year expense estimate ($1,291,500) is lower than the 2005 IRP incurred expenditures by $18,600 primarily because HECO was actively working on the HECO IRP-3 in 2005, which was filed in October 2005. The test year estimate, however, is a normalized estimate of IRP expenses and thus reflects a more average level of IRP-related expenses.

CUSTOMER SOLUTIONS HEAD COUNT

Q. What is the test year year-end employee count for the Customer Solutions process area?

A. The test year employee count is 57, which is 8 more than the count as of September 30, 2006, as shown in HECO-930.

Q. Is the entire labor expense for all of the 57 positions encompassed within the Customer Services block of accounts?

A. No it is not. HECO-930 shows that the primary NARUC codings for the different organizational areas within the Customer Solutions process area include Account 920, which is not in the Customer Services block of accounts. There are also some labor expenses in the Customer Services block of accounts that originate from other areas of the company. However, by and large, the labor expenses included in Customer Service expense originate within the Customer Solutions process area.

Q. Does this test year employee count include incremental DSM labor?

A. No. The eleven DSM positions that are incremental and identified in HECO-904 are not included in the test year employee count of 57.

Q. Please briefly describe the increase in employee count shown in HECO-930.

A. The increase of eight positions originates from the following areas:

1) 2 positions in the Customer Efficiency Programs (CEP) Division
2) 1 position in the Pricing Division
3) 2 positions in the Customer Technology Applications (CTA) Division
4) 1 position in the Marketing Services Division
5) 1 position in the Forecasts and Research Division
6) 1 position in the Integrated Resource Planning (IRP) Division

CEP Division. The two vacancies in the CEP Division are the CIDLC Program Manager and the Load Management Engineer. The CIDLC Program Manager was filled on October 30, 2006 by an employee from the Marketing Services Division.

The Load Management Engineer position has been vacant due to the current

slow adoption of the CIDLC Program by customers. However, in anticipation of increased customer adoption of the program resulting from EnerNOC's engineering and marketing assistance that will begin December 1, 2006 (see HECO's letter dated November 21, 2006, informing the Commission of this agreement) and the resulting follow-up engineering work with these new customers, HECO has submitted a request to fill this position. HECO expects this position to be filled in January 2007.

Pricing Division. The vacant position in the Pricing Division is a Rate Analyst resulting from the promotion of a Rate Analyst to Director, Pricing Division, in September 2005. Interviews were conducted with prospective applicants in October 2006, but none of the applicants were qualified. As a result, HECO has hired a temporary employee while it continues its search for a qualified regular employee. Because the temporary employee is not counted as a filling a vacant position in the employee head count, a vacancy remains in the Pricing Division.

CTA Division. The vacant positions in the CTA Division are two Senior Technical Services Engineers, whose primary efforts are directed towards DSM base program support and customer related activities. HECO has submitted a request to fill these positions.

Marketing Services Division. The vacancy in this division is an Account Manager resulting from a retirement in August 2006. That position will be filled on December 25, 2006. However, on October 30, 2006, another Account Manager transferred from to the CEP Division to become the CIDLC Program Manager (see CEP Division above). This position has been approved for replacement, but due to the time necessary to recruit, interview, and hire, is not

expected to be filled until January 2007.

Forecasts and Research Division. The vacancy in this division is a Forecast Analyst resulting from a resignation in August 2006. Interviews are currently being conducted and the position is expected to be filled in early January 2007.

IRP Division. The new position in this division is a new Senior Resource Planning Engineer created to satisfy the division's increased work load. Labor charges from the new engineer will be included primarily in Administration and General ("A&G"), and inter-company billings. This position was filled on November 13, 2006, by an employee from the Power Supply Services Department.

ENERGY COST ADJUSTMENT CLAUSE

Q. What is the test year Energy Cost Adjustment ("ECA") factor at current and proposed rates?

A. The test year ECA factor is 7.299 ¢/kWh at current rates, and 0.000 ¢/kWh at proposed rates as shown in HECO-931.

Q. What is the Energy Cost Adjustment Clause ("ECAC")?

A. The ECAC is an automatic adjustment provision in the utility's rate schedules that allows the utility to automatically increase or decrease charges to reflect the change in the Company's energy costs of fuel and purchased energy above or below the levels included in the base charges without a rate proceeding. The Company's current base fuel energy charges and fixed efficiency factor embedded in the base charges, shown in HECO-932, were established in HECO's 1995 Test Year rate case, Docket No. 7766.

Q. What is the purpose of ECAC?

A. The purpose of ECAC is (1) to address price changes in the Company's cost of fuel and purchased energy and (2) to accommodate changes to the actual mix of generation, DG (distributed generation) and purchased energy resources, without the need for a rate case.

Q. How does ECAC work?

A. A rate case proceeding determines the base electricity rates into which are embedded test year levels of fuel prices, payment rates for purchased energy and a test year resource mix. The ECAC mechanism, expressed in cents per kilowatt-hour, allows the Company to recover costs due to subsequent changes in (1) fuel and purchased energy costs, (2) the resource mix between utility-owned generation, utility-DG and purchased energy, (3) the resource mix among the utility plants, and (4) the resource mix among purchased energy producers. Prior rate case proceedings established a fixed efficiency factor, or sales heat rate, for the utility central station generation to encourage efficient operation of the system units. An ECA Factor, which sets the rate adjustment that reflects these changes for the coming month, is filed with the Commission monthly.

Q. How much revenue has been collected/returned through HECO's ECAC on a historical basis?

A. Since 1984 annual revenues have varied between a return to customers of $184,000,000 in 1988, to a collection from customers of $385,000,000 in 2005, as shown in HECO-933. The amount of revenue recovered or returned through the ECAC is a function of the actual costs and resource mix percentages for generated and purchased energy, the costs embedded in base rates, and the fixed efficiency factor of HECO's generating units embedded in base charges.

Q. What costs are currently passed through the ECAC?

A. The Company's fuel oil and fuel related costs in the Generation Component and purchased energy cost in the Purchased Energy Component pass through the ECAC. In the generation component, the low sulfur fuel oil (LSFO) and diesel fuel oil costs, discussed by Mr. Sakuda (HECO-T-4), pass through the ECAC. Fuel related costs that currently pass through the ECAC are the inspection cost (referred to as Petrospect expense). In the purchased energy component, only payments for purchased energy are passed through the ECAC.

Q. Are costs being passed through the ECAC at present rates the same as the costs being passed through the ECAC at proposed rates?

A. No. At proposed rates, in addition to the costs currently being passed through the ECAC, the Company is proposing to pass Honolulu trucking costs, DG fuel and trucking costs and the additive costs that are discussed in Mr. Sakuda's testimony (HECO-T-4). These costs are not currently being passed through the ECAC.

In the Commission's 2005 Test Year HECO rate case interim D&O the 2005 test year estimates of Honolulu trucking costs, and DG fuel and trucking costs were included in the calculation of the Company's revenue requirement at both present and proposed rates. However, these costs have not been recovered (through the ECAC or any other recovery mechanism) since the date of the interim increase (i.e., they have not been recovered through "present" rates). Thus, it is HECO's intention to include the recovery of actual 2006 Honolulu trucking costs, and DG fuel and trucking costs, in its 4th quarter 2006 ECA reconciliation, which will be filed along with HECO's ECAF filing effective February 1, 2007. Actual quarterly Honolulu trucking costs, and DG fuel and trucking costs incurred will continue to be included in subsequent quarterly ECA reconciliations until a final D&O in the 2005 HECO rate case is issued.

Since Honolulu trucking costs, and DG fuel and trucking costs will then be recovered through present rates, revenues at present rates for this rate case will be recalculated to include such recovery, and the amount of its requested increase can be reduced accordingly.

Q. Why does the Company need the ECAC?

A. The Company needs the ECAC because fuel costs are a large portion of its expenses and because fuel price levels are largely beyond the Company's control.

In the test year, fuel and purchased energy expenses make up about 68% of total O&M expenses. This makes the Company's financial condition very sensitive to changes in fuel prices. The ECAC benefits the Company and its shareholders by:

- Limiting the swings in cash flow and earnings,
- Reducing the cost of capital,
- Improving the Company's ability to earn a fair return on investor capital, and;
- Providing a more timely recovery of fuel and purchased energy costs.

Q. How does the ECAC benefit customers?

A. The ECAC benefits customers by:

- Reducing the Company's financial risk and lowering the cost of capital. The resulting savings are passed on to our customers through lower base rates in rate proceedings such as this one.
- Passing through to customers, the savings incurred when fuel prices fall below the prices embedded in base rates, to the same extent that they will incur additional costs when fuel prices are above the embedded fuel prices.

Q. What other benefits does the ECAC have?

A. Since the ECAC is an automatic clause it allows the Commission time to concentrate on other key, substantive strategic issues.

Q. How is the ECA factor computed at present rates?

A. The calculation of the ECA factor at present rates has two base composite cost components, the generation component and the purchase energy component. The ECA factor is equal to the difference between actual generation and purchased energy composite costs and test year energy costs and base composite costs of the generation and purchased energy component that were established in the last rate case. The fixed efficiency factor for the central station generation is also established in the last rate case. Computation of the ECA factor at present rates is similar to the monthly factor computation filed with the Commission, as shown in HECO-934.

Q. With respect to Kalaeloa and AES Hawaii, what is included in the ECAC?

A. For both current and proposed rates, only the fuel and fuel additive components of Kalaeloa's energy charge and the fuel component of AES Hawaii's energy charge are included in the ECAC.

Q. Why is there a difference between the composite cost of generation at present rate and proposed rates, as shown on HECO-935?

A. At proposed rates, the Company is proposing to pass through the ECAC the trucking cost of fuel to the Honolulu Plant and fuel additive costs for the Kahe 6 unit. (The recovery of Honolulu trucking costs was approved on an interim basis by the Commission in D&O 22050, in Docket No. 04-0113.) This increases the test year estimate of the composite cost of generation at proposed rates. Since additives may also be injected into other HECO generating units, HECO is proposing that the cost of additives, when used in other generating units, would

also be passed through the ECAC.

In addition, costs of DG fuel and trucking are currently not being passed through the ECAC at present rates. In effect, the current ECAC treats these expenses as having no cost. As noted below, at proposed rates the DG fuel and trucking costs will be included in the ECAC under a new DG energy component. The removal of DG fuel and trucking expenses at zero cost from the composite cost of generation at present rates also leads to an increase in the test year estimate of the composite cost of generation at proposed rates. (As discussed above, an adjustment will be made to reflect recovery of these costs at present rates after the February 1, 2007 ECA reconciliation filing.)

Q. How is the ECA factor computed at proposed rates?

A. The proposed calculation of the ECA factor consists of three base composite cost components, the central station generation component, the DG energy component and the purchased energy component, as shown in HECO-936.

Q. Why are the ECA factors different at current and proposed rates?

A. There are two reasons for the difference. First, the base central station fuel cost, base DG energy cost and base purchased energy cost at proposed rates have been changed to reflect the test year composite costs for central station fuel, DG energy and purchased energy. Second, the fuel efficiency factor (sales heat rate) used to calculate the base central station generation component cost at proposed rates has been revised to reflect the test year fuel efficiency. The current rates include the composite costs for fuel and purchased energy and the fuel efficiency factor established in the HECO's 1995 Test Year rate case, Docket No. 7766.

Q. Why is the Company proposing to include the DG component?

A. The Company is proposing to include the DG component in its proposed rates, to

allow the Company to recover the fuel, transportation costs, and related revenue taxes, incurred under the utility's DG agreements to the extent that the costs are not recovered in the Company's base charges. The DG component is the same DG component proposed in Docket No. 04-0113, HECO's 2005 Test Year Rate Case.

Q. Did any party in Docket No. 04-0113 object to the Company's proposal to flow DG fuel, trucking, and other costs through the ECAC in this manner?

A. No. There were no objections to this proposal.

Q. If the Company's DG installations are utility-owned generators why are they segregated from the Company's other utility-owned generators?

A. DG units are generally more efficient than other Company-owned generating units and would tend to improve system efficiency and lower the system heat rate. As more utility DG units are installed, the system heat rate will continue to improve. Separating the Company's DG generation from the Company's other utility-owned generation in the ECA factor calculation will allow the benefits of the DG units' improved efficiency to pass through the ECAC to HECO's customers. If the utility-owned DG generation were included with the Company's other utility owned generation, the resulting efficiency factor would be fixed in base rates. However, as the number of DG units increase over time, the actual system heat rate would improve. With the DG generation included in the fixed efficiency factor, the heat rate improvements would not be passed through to the customers.

Q. How does the DG component allow ratepayers to benefit from the improved efficiency resulting from the installation of utility-owned DG?

A. The DG component would recover DG fuel and transportation costs at actual expense levels and would not be subject to the fixed efficiency factor. Thus, to

the extent that the DG unit heat rates are better than the fixed efficiency factor, the actual DG efficiency will pass through the ECAC.

Q. Why is the Company proposing a weighted efficiency factor in its central station generation component?

A. The Company is proposing to include a weighted efficiency factor in its proposed ECAC calculations, in the same manner as was introduced in Docket No. 05-0315, Hawaii Electric Light Company, Inc. (HELCO) 2006 Test Year Rate Case. That docket is on-going before the Commission. The proposed weighted efficiency factor addresses the diversity of fuel burned in HECO's central station generating units.

Q. How is the weighted efficiency factor determined?

A. The fixed efficiency factors for LSFO and diesel generating units, as shown in HECO-937, are determined from the production simulation as discussed in Mr. Sakuda's testimony. The efficiency factor of each generating unit type is weighted by the MWh contribution of each type to the total central station MWh generation. At HELCO, a third efficiency factor was derived for company-owned renewable generating units (wind and hydro at HELCO). While HECO does not own any renewable generating units, the third "other" efficiency factor has been derived and included in HECO's proposed ECA clause for consistency.

Q. How will the weighted efficiency factor work in the monthly ECAC calculations?

A. The actual MWh contribution of each type to the total central station will be incorporated in determining the weighted efficiency factor. The weighted central station composite cost is determined by multiplying the composite cost of generation by the weighted efficiency factor. An illustration of the proposed weighted composite generation cost in the ECAC calculations mechanism is

shown on HECO-938.

Q. How are the avoided energy cost rates and Schedule Q rates for Qualifying Facilities < 100 kW determined?

A. The Company uses the proxy method in its calculations of the avoided cost rates and Schedule Q rates. The calculations incorporate a factor equal to their composite fuel costs, which is applied to certain proxy heat rates. The composite fuel costs include the fuel and transportation costs for all company-owned generation.

Pending before the Commission is Docket No. 7310, in which the parties to the proceeding are in agreement that the proxy method should be replaced by the QF In/QF Out method. Upon the issuance of a Commission decision and order in that proceeding, HECO will comply with the Commission's ruling included in the decision and order.

Q. Are the calculations of avoided energy cost and Schedule Q modified due to the inclusion of the DG component in ECAC?

A. Yes. The avoided energy cost rates and Schedule Q payment rate incorporates the DG component in the composite fuel cost, as proposed in HECO's 2005 test year Rate Case, Docket No. 04-0113.

Q. What modifications were made to the calculations of avoided energy cost and Schedule Q?

A. The composite fuel cost of total generation is a weighted composite cost, based on the central station energy component and the company owned DG energy component, as shown in HECO-WP-936, page 7.

Q. Why are the avoided costs for on-peak and off-peak and schedule Q at proposed rates used in determining the energy expense for as-available IPPs at present rates

and proposed rates?

A. The Company is proposing to pass through the Honolulu Plant trucking costs and the fuel additive in the ECAC at proposed rates, which have not been passed through under present rates.[2] Therefore, the composite fuel costs are different under present and proposed rates. Since under the current proxy method the avoided cost depends on the composite fuel cost, there would be differing avoided costs and schedule Q rates at present rates and proposed rates. Instead, the avoided costs and schedule Q at proposed rates were used in the present rates calculations in order to keep fuel prices consistent in the determination of the ECA factors at present rates and proposed rates.

Act 162

Q. On June 2, 2006, the Governor of Hawaii signed into law Act 162, which amends Section 269-16 of the Hawaii Revised Statutes. How does Act 162 affect the ECAC?

A. Act 162, in part, states "any automatic fuel rate adjustment clause requested by a public utility in an application filed with the commission shall be designed, as determined in the commission's discretion, to:

(1) Fairly share the risk of fuel cost changes between the public utility and its customers;

(2) Provide the public utility with sufficient incentive to reasonably manage or lower it fuel costs and encourage greater use of renewable energy;

(3) Allow the public utility to mitigate the risk of sudden or frequent fuel cost changes that cannot otherwise reasonably be mitigated through other

[2] HECO intends to recover 2006 Honolulu Plant trucking and DG fuel and trucking costs through its ECA Reconciliation beginning with the 4th Quarter 2006 Reconciliation.

commercially available means, such as through fuel hedging contracts;

(4) Preserve, to the extent reasonably possible, the public utility's financial integrity; and

(5) Minimize, to the extent reasonably possible, the public utility's need to apply for frequent applications for general rate increases to account for the changes to its fuel costs."

Q. Did the Commission order the Company to address the issues relating to the ECAC as raised by Act 162?

A. Yes. In Order No. 22537 dated June 19, 2006, Docket No. 04-0113, HECO's 2005 Test Year Rate Case, the Commission directed the Company, the Customer Advocate and the Department of Defense (DOD) to file a procedural schedule on this matter.

Q. How did the Company, Consumer Advocate and DOD respond to the Commission's Order?

A. On August 7, 2006, the Company, Consumer Advocate and DOD filed a stipulation, subject to the Commission's approval, which stated among other things:

"2. Docket No. 04-0113 should not be held open to review the ECAC issues specified in Act 162, since HECO's Application was filed and the record of this proceeding was completed before Act 162 was signed into law, and the parties signed the Settlement in Docket No. 04-0113 to allow the existing ECAC to be continued." The stipulation also states: "4. It would be more efficient to explicitly address the Act 162 factors in the context of HECO's ECAC in HECO's next general rate case, given (a) the need to develop information on matters such as hedging, (b) the opportunity to address the factors in the context

of HELCO's ECAC in HELCO's pending general rate case (Docket No. 05-0315) . . ."

Q. What did the Commission order in Order No. 22903 dated September 28, 2006, Docket No. 05-0315 HELCO's 2006 Test Year Rate Case?

A. The Commission ordered that the proposed Stipulated Procedural Order filed on September 12, 2006 be amended to include in the proceeding whether HELCO's ECAC complies with the requirements of Act 162.

Q. How is the Company complying with the Commission's order?

A. The Company has selected a highly qualified consultant, National Economic Research Associates, Inc. ("NERA"), to provide assistance in evaluating the extent to which HECO, HELCO and MECO ("the Companies") currently comply with the requirements of Act 162. The consultant's final report is due on December 28, 2006 and the Companies will file that report with the Commission.

Q. In this proceeding is the Company addressing the issue of whether HECO's ECAC complies with Act 162?

A. Yes. Consistent with the August 7, 2006 stipulation, the Company is addressing this issue in this proceeding. In particular, in HECO T-21, Mr. Jeff Makholm explains the role of fuel adjustment clauses in utility ratemaking in the United States and analyzes whether HECO's ECAC complies with Act 162. In addition, in HECO T-22, Mr. Eugene Meehan discusses the possibility of HECO engaging in fuel price hedging and assesses the potential impact of fuel price hedging on HECO, its customers, and the regulatory ratemaking process.

Q. Act 162 authorizes the Commission to evaluate the ECAC from the perspective of fuel price risk-sharing between the Company and its ratepayers. What is HECO's position on the appropriate level of fuel price risk sharing in the ECAC?

A. It is HECO's position that the current level of ECAC fuel price risk-sharing is appropriate, and that no change is necessary to the current ECAC risk-sharing approach.

The ECAC does not necessarily pass 100% of any change in fuel expenses to ratepayers. As indicated above, HECO's ability to recover its fuel expenses is subject to an efficiency factor, which measures how efficiently HECO converts fuel energy into electrical energy. If HECO cannot meet the efficiency factor embedded in the ECAC, it recovers only a portion of its fuel expenses. Thus, HECO is already at risk for the non-recovery of fuel expense and this risk profile is inherent in the currently employed ECAC mechanism.

The risk associated with meeting the efficiency factor is one that HECO can address through the overhaul and maintenance of its generating units and unit commitment schedule among others. Thus, it is reasonable for the Commission to hold the Company responsible for not meeting the efficiency standard and for its fuel expenses to be subject to the risk of non-recovery as a result.

However, fuel prices are subject to market forces and geopolitical events that HECO cannot control. A risk-sharing mechanism which penalizes the Company because prices increase above an expected base price, even one which provides a symmetric positive incentive when prices are below the base, holds the Company financially responsible for events beyond its control. Such a risk-sharing mechanism places the Company in an untenable financial position, for which it is not compensated.

Therefore, HECO maintains that the current level of ECAC risk-sharing is appropriate, and that no change is necessary to the current ECAC risk-sharing approach.

Q. Does this conclude your testimony?

A. Yes, it does.

ALAN K.C. HEE

EDUCATIONAL BACKGROUND AND EXPERIENCE

BUSINESS ADDRESS:	Hawaiian Electric Company, Inc. 220 South King Street Honolulu, Hawaii 96813
POSITION:	Manager, Energy Services Department
YEARS OF SERVICE:	20 Years
EDUCATION:	MBA, University of Hawaii, 1982 BS, Civil Engineering Cornell University, NY, 1974
OTHER QUALIFICATIONS:	Registered Professional Engineer, Hawaii Civil Engineering Branch
OTHER EXPERIENCE:	Director, Forecasts Division Energy Services Department, 1995-2004 Director, Forecasting Division Rate and Regulatory Affairs Dept., 1991-1995 Planning Analyst, Forecasting Division Rate and Regulatory Affairs Dept., 1986-1991 Operations Engineer GASCO, Inc., Hilo 1982-1986 Peace Corps Volunteer Fiji Islands, 1974-1976

HAWAIIAN ELECTRIC COMPANY, INC.

CUSTOMER SERVICE EXPENSE
2007 TEST YEAR
($1000s)

Line			Test Year 2007
1	909	Supervision	308
2	910	Customer Assistance	5,724
3	911	Informational Advertising	1,123
4	912	Miscellaneous Customer Service	21
5		TOTAL	7,176

Source
HECO-902

HAWAIIAN ELECTRIC COMPANY, INC.

CUSTOMER SERVICE EXPENSE

TEST YEAR 2007 ($1000s)

Line		A O&M EXPENSE BUDGET	B RATE CASE ADJ	C NORMALIZATION	D TEST YEAR ESTIMATE
	909 SUPERVISION				
1	LABOR	282			282
2	NON-LABOR	26			26
3	TOTAL ACCT. 909	308	0	0	308
	910 CUSTOMER ASSISTANCE				
4	LABOR	3,900	(664)		3,236
5	NON-LABOR	19,320	(16,808)	(24)	2,488
6	TOTAL ACCT. 910	23,220	(17,472)	(24)	5,724
	911 INFORMATIONAL ADVERTISING				
7	LABOR	15			15
8	NON-LABOR	1,108			1,108
9	TOTAL ACCT. 911	1,123	0	0	1,123
	912 MISC. CUSTOMER SERVICE				
10	LABOR	0			0
11	NON-LABOR	21			21
12	TOTAL ACCT. 912	21	0	0	21
13	TOTAL CUSTOMER SERVICE	24,672	(17,472)	(24)	7,176
	RECAP:				
14	LABOR	4,197	(664)	0	3,533
15	NON-LABOR	20,475	(16,808)	(24)	3,643
16	TOTAL	24,672	(17,472)	(24)	7,176

SOURCE

Column A:	HECO-WP-101(B)
Column B:	HECO-905
Column C:	HECO-907
Column D:	Columns (A+B+C)

Hawaiian Electric Company, Inc.

Test Year DSM Expenses
($1,000s)

Line		Base	Incremental	TOTAL
1	DSM Program Costs			
2	CIEE	149	3,435	3,584
3	CINC	91	1,577	1,668
4	CICR	138	1,570	1,708
5	REWH	74	2,445	2,519
6	RNC	42	1,861	1,903
7	ESH	20	1,903	1,923
8	RLI	21	889	910
9	CIDLC	1,017	1,139	2,156
10	RDLC	680	2,992	3,672
11	Total Program Costs	2,232	17,811	20,043
12	DSM-Related Expenses			
13	Administration	406	0	406
14	PAYS	164	0	164
15	ITS	200	0	200
16	Total DSM-Related Expense	770	0	770
17	**Total DSM Expenses All NARUC Accounts**	**3,002**	**17,811**	**20,813**
18	Less NARUC 920/921/931	23	0	23
19	**Total DSM Expense Customer Service Only Accounts 909 & 910**	**2,980**	**17,811**	**20,791**
20	**909 -- Supervision**	**24**	**0**	**24**
21	**910 -- Customer Assistance**	**2,956**	**17,811**	**20,767**
22	**Total Customer Service DSM Expense**	**2,980**	**17,811**	**20,791**

Reference: HECO-913, 914, 921

DSM Program Positions

Base Rates	Incremental
ESD CEP Division (9)	ESD CEP Division (9)
Director	CEP Analyst
PM, Residential	C&I Engineer
PM, Commercial	C&I Engineer
PM, RDLC	Engineering Consultant
PM, CIDLC	Engineering Consultant
CEP Analyst	Engineering Consultant
CEP Analyst	Engineering Consultant
LM Engineer	Engineering Consultant
Clerk	Engineering Consultant
Customer Technology Applications (2)	Forecasts & Research (2)
Sr Technical Svc Engr	Energy Services Aide
Sr Technical Svc Engr	Marketing Specialist

Hawaiian Electric Company, Inc.

DSM Program Expenses ($000)

2007 FORECAST ADJUSTMENT
REMOVE INCREMENTAL DSM PROGRAM EXPENSE

	LABOR	NON-LABOR*	TOTAL
DSM Program Costs			
CIEE	331	3,253	3,584
CINC	211	1,457	1,668
CICR	310	1,398	1,708
REWH	93	2,426	2,519
RNC	45	1,858	1,903
ESH	14	1,909	1,923
RLI	14	896	910
CIDLC	308	1,848	2,156
RDLC	97	3,575	3,672
Total Program Costs	1,423	18,620	20,043
DSM Base Program Costs			
CIEE	98	51	149
CINC	60	31	91
CICR	91	47	138
REWH	49	25	74
RNC	28	14	42
ESH	14	6	20
RLI	14	7	21
CIDLC	308	709	1,017
RDLC	97	583	680
Total Base Program Costs	759	1,473	2,232
DSM Incremental Program Costs			
CIEE	233	3,202	3,435
CINC	151	1,426	1,577
CICR	219	1,351	1,570
REWH	44	2,401	2,445
RNC	17	1,844	1,861
ESH	0	1,903	1,903
RLI	0	889	889
CIDLC	0	1,139	1,139
RDLC	0	2,992	2,992
Total Incremental Costs	664	17,147	17,811
Less G/L code adjustment		-339	-339
Rate Case Adjustment	664	16,808	17,472

Reference: HECO-906

* Non-labor costs include EE 406, 422, and 423.

Account 910 -- Customer Assistance Expense

Incremental DSM Program Expense
By Expense Element

	Expense Element	Dollars	
Incremental Labor			
	150	586,885	
	421	77,366	
Incr. Labor Total		664,251	
Incremental Non-Labor			
Corporate Admin	406	67,741	} EE elements 406, 422, 423
Employee Benefits	422	223,381	} **=339,131**
Payroll Taxes	423	48,009	}
	201	306,489	
	205	18,540	
	301	9,955	
	462	3,432	
	501	16,264,166	
	520	18,540	
	521	44,518	
	522	3,708	
	570	81,258	
	640	23,836	
	401	33,867	
Total Incr. Non-Labor		17,147,440	
Total Incremental DSM Program Exp (Including EE elements 406, 422, 423)		17,811,691	
G/L Code Adjustment		-339,131	
Rate Case Adjustment		**17,472,560**	

HAWAIIAN ELECTRIC COMPANY, INC.

CUSTOMER SERVICE EXPENSE
NORMALIZE PCEA EXPENSE (IN 2007 BUDGET, BUT OCCURS EVERY TWO YEARS)
($1000s)

Line		A 2007 O&M Expense Budget	B Normalization	Note
	ACCT. 909			
	Non-Labor:			
1	PCEA Travel Expense (1W)	1	--	
2	**Total Normalization - Account 909**	1	--	
	ACCT. 910			
	Non-Labor:			
3	PCEA Travel Expense (SA)	1	--	
4	PCEA Travel Expense (SD)	2	(1)	(1)
5	PCEA Travel Expense (SM)	3	(2)	(1)
6	PCEA Travel Expense (SN)	10	(5)	(1)
7	PCEA Travel Expense (SP)	3	(2)	(1)
8	PCEA Travel Expense (SR)	3	(1)	(1)
9	PCEA Sponsorship (SN)	25	(13)	(1)
10	**Total Normalization - Account 910**	47	(24)	

Note
(1) Normalization for 50% of Pacific Coast Electrical Association (PCEA) - Hawaii biennial conference expenses forecast in 2007.

HAWAIIAN ELECTRIC COMPANY, INC.

CUSTOMER SERVICE EXPENSE
2007 TEST YEAR
BASE DSM vs. NON DSM EXPENSES
($1000s)

Line			A BASE DSM	B NON DSM	C GL CODE	D TEST YEAR ESTIMATE
1	909	Supervision	24	371	(87)	308
2	910	Customer Assistance	2,956	4,488	(1,720) (1)	5,724
3	911	Informational Advertising		1,130	(7)	1,123
4	912	Miscellaneous Customer Service		21	0	21
5		TOTAL	2,980	6,010	(1,814)	7,176

SOURCE
Column A: For Account 909: HECO-921
For Account 910: HECO-912
Column B: For Accounts 909, 911 and 912: HECO WP-101(D)
For Account 910: HECO-912
Column C: HECO-WP-101(D)
Column D: Columns (A+B+C)

NOTE:
(1) GL Code of ($1,720,000) is net of initial GL Code amount of ($2,059,000) and ($339,000) of DSM incremental on-costs (EE's 406, 422, 423).
Rate Case adjustments related to the transfer of the ($339,000) Expense Elements have been made directly to the end NARUC account.

HAWAIIAN ELECTRIC COMPANY, INC.
CUSTOMER SERVICE EXPENSES*
2001-2007
($1000s)

Line			A	B	C	D	E	F	G
			Recorded 2001	Recorded 2002	Recorded 2003	Recorded 2004	Recorded 2005	Budget 2006	Test Year 2007
	909	Supervision							
1		Labor	125	2	0	115	229	296	282
2		Non-labor	15	11	0	9	17	24	26
3		Total	140	13	0	124	246	320	308
	910	Customer Assistance							
4		Labor	2,274	2,380	2,685	2,456	2,824	3,058	3,236
5		Non-labor	823	911	794	1,175	1,437	1,681	2,488
6		Total	3,097	3,291	3,479	3,631	4,261	4,739	5,724
	911	Informational Advertising							
7		Labor	1	5	15	15	25	19	15
8		Non-labor	65	339	55	477	554	220	1,108
9		Total	66	344	70	492	579	239	1,123
	912	Miscellaneous Customer Services							
10		Labor	1	2	1	8	1	0	0
11		Non-labor	15	0	0	1	3	11	21
12		Total	16	2	1	9	4	11	21
		TOTAL CUSTOMER SERVICE EXPENSES							
13		Labor	2,401	2,389	2,701	2,594	3,079	3,373	3,533
14		Non-labor	918	1,261	849	1,662	2,011	1,936	3,643
15		Total	3,319	3,650	3,550	4,256	5,090	5,309	7,176

* DSM incremental Program costs (Act. 714) have been excluded for all years.

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HAWAIIAN ELECTRIC COMPANY, INC.

NON DSM* CUSTOMER SERVICE EXPENSES
2001-2007
($1000s)

Line			A	B	C	D	E	F	G
			Recorded 2001	Recorded 2002	Recorded 2003	Recorded 2004	Recorded 2005	Budget 2006	Test Year 2007
	909	Supervision							
1		Labor	125	2	0	103	229	276	262
2		Non-labor	23	11	0	28	76	98	109
3		Total	148	13	0	131	305	374	371
	910	Customer Assistance							
4		Labor	2,072	2,175	2,438	2,213	2,168	2,109	2,207
5		Non-labor	894	922	1,618	1,469	1,795	2,157	2,305
6		Total	2,966	3,097	4,056	3,682	3,963	4,266	4,512
	911	Informational Advertising							
7		Labor	1	5	15	15	25	19	15
8		Non-labor	65	339	60	481	563	228	1,115
9		Total	66	344	75	496	588	247	1,130
	912	Miscellaneous Customer Services							
10		Labor	1	2	1	8	1	0	0
11		Non-labor	15	0	0	4	4	11	21
12		Total	16	2	1	12	5	11	21
		TOTAL CUSTOMER SERVICE EXPENSES							
13		Labor	2,199	2,184	2,454	2,339	2,423	2,404	2,484
14		Non-labor	997	1,272	1,678	1,982	2,438	2,494	3,550
15		Total	3,196	3,456	4,132	4,321	4,861	4,898	6,034

* GL Code Credit has been excluded for all years.
Amounts exclude all DSM expenses.

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HAWAIIAN ELECTRIC COMPANY, INC.
ACCOUNT 910 - CUSTOMER ASSISTANCE EXPENSE
RECORDED 2005 and 2007 EXPENSE COMPARATIVE
($1000s)

Line		Recorded 2005	**Test Year 2007**		Change
	Demand-Side Management Expense *				
1	Labor	$656	$1,029		$373
2	Nonlabor	$670	$1,927		$1,257
3	Total	$1,326	$2,956		$1,630
	Non-DSM				
4	Labor	$2,168	$2,207		$39
5	Nonlabor	$1,795	$2,281		$486
6	Total	$3,963	$4,488		$525
7	**GL Code (Nonlabor)**	($1,028)	($1,720)	**	($692)
	Total Customer Assistance Expense				
8	Labor	$2,824	**$3,236**		$412
9	Nonlabor	$1,437	**$2,488**		$1,051
10	Total	$4,261	**$5,724**		$1,463

* Base DSM expenses only. Incremental DSM program costs (Activity 714) have been excluded.
** GL Code of ($1,720,000) is net of initial GL Code amount of ($2,059,000) and ($339,000) of DSM incremental on-costs (EE's 406, 422, 423).
Rate Case adjustments related to the transfer of the ($339,000) Expense Elements have been made directly to the end NARUC account.

Reference: HECO-912

HAWAIIAN ELECTRIC COMPANY, INC.
CUSTOMER SERVICE EXPENSE
RECORDED 2005 and 2007 EXPENSE COMPARATIVE
ACCOUNT 910
($1000s)

Line	Acct. 910		Recorded 2005	Test Year 2007	Change
	DSM Expense				
	(includes all support from outside the Customer Efficiency Programs Div.*)				
1		Labor	$656	$1,029	$373
2		Nonlabor	$670	$1,927	$1,257
3	**Total DSM**		**$1,326**	**$2,956**	**$1,630**
	Non-DSM Expense				
4	Energy Services-Administration	Labor	$96	$35	($61)
5		Nonlabor	$89	$41	($48)
6			$185	$76	($109)
7	Cust Tech. Appl.	Labor	$317	$379	$62
8		Nonlabor	$191	$339	$148
9			$508	$718	$210
10	Mktg. Svcs.	Labor	$764	$809	$45
11		Nonlabor	$360	$483	$123
12			$1,124	$1,292	$168
13	Fcst & Research	Labor	$405	$337	($68)
14		Nonlabor	$297	$496	$199
15			$702	$833	$131
16	Corporate Communications	Labor	$200	$233	$33
17		Nonlabor	$204	$246	$42
18			$404	$479	$75
19	Education & Consumer Affairs	Labor	$300	$377	$77
20		Nonlabor	$296	$451	$155
21			$596	$828	$232
22	Others	Labor	$86	$37	($49)
23		Nonlabor	$358	$225	($133)
24			$444	$262	($182)
	Total				
25		Labor	$2,168	$2,207	$39
26		Nonlabor	$1,795	$2,281	$486
27	**Total Non-DSM**		**$3,963**	**$4,488**	**$525**
28	GL Code		($1,028)	($1,720) **	($692)
29	**TOTAL 910**		**$4,261**	**$5,724**	**$1,463**
		RECAP			
30		Labor	$2,824	$3,236	$412
31		Nonlabor	$1,437	$2,488	$1,051
32			$4,261	$5,724	$1,463

* DSM incremental program costs (Act. 714) have been excluded from the DSM amount summaries. Only Act. 713 transactions (base DSM program costs and other base DSM costs) are summarized.
** GL Code of ($1,720,000) is net of initial GL Code amount of ($2,059,000) and ($339,000) of DSM incremental on-costs (EE's 406, 422, 423).
Rate Case adjustments related to the transfer of the ($339,000) Expense Elements have been made directly to the end NARUC account.

Hawaiian Electric Company, Inc.

Test Year DSM Expense
($1,000s)

Line		Labor	Non-Labor	TOTAL
1	**Account 910**			
2	DSM Program Costs	754	1,456	2,210
3	DSM-Related Costs			
4	Administration	252	130	382
5	PAYS	23	141	164
6	ITS		200	200
7	Total Acct 910 DSM Expenses	1,029	1,927	2,956
8	**Other Than Account 910**			
9	DSM Program Costs			
10	Account 920 - Regulatory	5	0	5
11	Account 921 - Regulatory	1	3	4
12	Account 931 - Rents	0	15	15
13	DSM-Related Costs			
14	Account 909 - Admin	20	4	24
15	Total Other Than Acct 910 Expenses	26	22	48
16	**Total DSM Expenses**	**1,055**	**1,949**	**3,004**

Reference: HECO-903, 912, 914, 921

Hawaiian Electric Company, Inc.

Test Year DSM Program Expense
($1,000s)

Line		Labor	Non-Labor	TOTAL
	DSM Program Costs			
1	Account 910			
2	CIEE	96	50	146
3	CINC	60	31	91
4	CICR	91	47	138
5	REWH	47	23	70
6	RNC	28	14	42
7	ESH	14	7	21
8	RLI	14	7	21
9	CIDLC	308	702	1,010
10	RDLC	97	575	672
11	**Acct. 910 Program Costs**	**754**	**1,456**	**2,210**
12	Other Than 910 - DSM Program Costs			
13	Account 920 - Regulatory	5	0	5
14	Account 921 - Regulatory	1	3	4
15	Account 931 - Rents	0	15	15
16	Other than 910 - Subtotal	6	18	24
17	Total DSM Program Costs	760	1,474	2,234 *

* Does not foot to HECO-903 due to rounding.

DSM Program Descriptions
Including Enhanced and New Programs

Program	Program Description	Docket No. 05-0069 Opening Brief Reference
CIEE Commercial & Industrial Energy Efficiency	Provides prescriptive incentives to commercial and industrial customers for purchasing and installing energy efficient motors, air conditioning systems, and lighting systems.	Pp. 67-81
CINC Commercial & Industrial New Construction	Seeks to maximize opportunities for saving energy in new commercial and industrial buildings and in major renovations of commercial/industrial facilities.	Pp. 81-89
CICR Commercial and Industrial Customized Rebate	Addresses the large number of DSM measures that are available to the commercial and industrial sector, which, due to the limited potential size of the market for these measures or to the site-specific savings resulting from their installation, do not lend themselves to a prescriptive incentive program design.	Pp. 89-98
REWH Residential Efficient Water Heating	Encourages customers to reduce their electricity consumption for water heating by promoting the sale, installation, and use of energy-efficient water heaters in the existing residential market. The program specifically offers financial incentives for the installation of solar, heat pump, and high efficiency electric water heaters.	Pp. 98-107
RNC Residential New Construction	Encourages homebuilders, including HECO customers who are building their own homes, to reduce electricity consumption in newly constructed homes. The program promotes the installation and use of solar water heaters, heat pumps, high efficiency electric water heaters, and high efficiency electric water heaters coupled with load control devices in newly constructed homes.	Pp. 107-117

Program	Program Description	Docket No. 05-0069 Opening Brief Reference
RLI Residential Low Income	Enables qualified low-income customers, as defined by the State of Hawaii guidelines for low income residents, to receive CFLs and high-efficiency water heating measures at no cost to them.	Pp. 117-120
ESH Energy Solutions for the Home	Provides a comprehensive range of energy efficiency options that address several major appliance end-uses. The program is intended to work in parallel with the US-EPA's Energy Star program to maximize the benefits of this national initiative.	Pp. 120-127
CIDLC Commercial and Industrial Direct Load Control	Increases HECO's system reliability and potentially reduces its spinning reserve requirements by installing under-frequency relays on the contracted commercial and industrial load. The under-frequency relays allow for automatic control of electrical loads in the event of system frequency degradation during sudden unexpected loss of generating units and also allow HECO to remotely control, or dispatch, the load by sending a radio frequency ("RF") signal to the unit. In return the customer will receive a monthly credit for each kW committed to the program.	Pp. 132-134
RDLC Residential Direct Load Control	Obtain load reductions through the installation of load control devices on residential customer water heaters. These reductions will help HECO to reduce its system requirements during peak load periods and thus potentially avoid service disruptions due to insufficient capacity. In return the customer will receive a $3 monthly credit.	Pp. 132-134

Hawaiian Electric Company, Inc.
Account 910 -- Customer Assistance Expense
Test Year DSM Program Expense
Variance with Actual 2005
($1,000s)

Line		2005	2007 TY	TY - 2005 Difference
1	DSM Program Labor Costs			
2	CIEE	82	96	14
3	CINC	44	60	16
4	CICR	42	91	49
5	REWH	51	47	-4
6	RNC	19	28	9
7	ESH	0	14	14
8	RLI	0	14	14
9	CIDLC	164	308	144
10	RDLC	67	97	30
11	Total Program Costs	469	754	286
12	DSM Program Non-Labor Costs			
13	CIEE	22	50	28
14	CINC	16	31	15
15	CICR	16	47	31
16	REWH	18	23	5
17	RNC	7	14	7
18	ESH	0	7	7
19	RLI	0	7	7
20	CIDLC	83	702	619
21	RDLC	173	575	402
22	Total Program Costs	335	1,456	1,121
23	Total DSM Program Costs	804	2,210	1,407

Reference: HECO-914, 917, 918

Hawaiian Electric Company, Inc.

2005 ACTUALS VS. 2007 TEST YEAR BUDGET
COMMERCIAL & INDUSTRIAL
DIRECT LOAD CONTROL PROGRAM
BASE NON-LABOR PROGRAM EXPENSES
($000)

	2005 Base Actuals	2007 Test Year Base	Variance
NON-LABOR OHs	70	155	85
TRACKING	0	22	22
EVALUATION	0	125	125
ADVERTISING	0	293	293
TRAINING & MISC.	13	107	94
TOTAL	83	702	619

Hawaiian Electric Company, Inc.

2005 ACTUALS VS. 2007 TEST YEAR BUDGET
RESIDENTIAL DIRECT LOAD CONTROL PROGRAM
BASE NON-LABOR PROGRAM EXPENSES
($000)

	2005 Base Actuals	2007 Test Year Base	Variance
NON-LABOR OHs	13	49	36
TRACKING	0	22	22
EVALUATION	0	82	82
ADVERTISING	157	415	258
TRAINING & MISC.	3	7	4
TOTAL	173	575	402

Hawaiian Electric Company, Inc.

Cumulative DSM Program Impacts (Net of Free-riders)

For DSM Measures Implemented in 2006 and Thereafter

Line		2006	2007#	2008	2009	2010
1	Energy (gWh - Grs Gen Level)	31.1	86.7	135.1	179.6	224.0
2	Energy (gWh - Cust Level) [1]	27.6	77.0	120.0	159.5	199.0
3	Demand (mW - Grs Gen Level)	16.2	34.4	55.5	72.5	88.1
4	Demand (mW - Net-to-Sys Level) [2]	15.1	32.2	51.8	67.7	82.2

Incremental DSM Program Impacts

		2006	2007#	2008	2009	2010
5	Energy (gWh - Cust Level) [1]	27.6	49.4	43.0	39.5	39.5
6	Demand (mW - Net-to-Sys Level) [2]	15.1	17.1	19.6	15.9	14.5

Notes:

[1] Customer Level, Including Free-riders, Annualized. 11.17% losses from the Grs Gen Level.

[2] Net-to-System Level, Net of Free-riders. 4,864% losses to the Customer Level.

Test Year

Reference: HECO-920

Hawaiian Electric Company, Inc.

DSM Energy Impact
Test Year Sales vs. Program Year

Line		Test Year Sales Estimate (mWh) 2005	2006	2007	Annualized Program Year (mWh) 2007
1	Jan	0	199	2,702	4,194
2	Feb	0	343	2,731	3,789
3	Mar	0	578	3,380	4,194
4	Apr	0	746	3,605	4,059
5	May	0	971	4,081	4,194
6	Jun	0	1,126	4,283	4,059
7	Jul	0	1,363	4,782	4,194
8	Aug	0	1,562	5,139	4,194
9	Sep	0	1,698	5,306	4,059
10	Oct	0	1,954	5,840	4,194
11	Nov	0	2,078	5,985	4,059
12	Dec	0	2,346	6,541	4,194
13	Total	0	14,964	54,376	49,386

Hawaiian Electric Company, Inc.

Test Year DSM-Related Expense
($1,000s)

Line		Labor	Non-Labor	TOTAL
1	**DSM-Related Expenses**			
2	Account 909 - Admin	20	4	24
3	Account 910			
4	Administration	252	130	382
5	PAYS	23	141	164
6	ITS		200	200
7	Acct 910 Other DSM Expense	275	471	746
8	**Total DSM-Related Expenses**	**295**	**475**	**770**

Reference: HECO-903, 924

Hawaiian Electric Company, Inc.

Test Year DSM-Related Expenses
($1,000s)

Line		2005	2007 Test Year	Difference
1	**Labor**			
2	Account 909 - Admin	0	20	20
3	Account 910			
4	Administration	187	252	65
5	PAYS	0	23	23
6	Total Labor	187	295	108
7	**Non-Labor**			
8	Account 909 - Admin	0	4	4
9	Account 910			
10	Administration	85	130	45
11	PAYS	0	141	141
12	ITS	251	200	-51
13	Total Non-Labor	336	475	139
14	**Labor/Non-Labor Total**	**523**	**770**	**247**

Reference: HECO-921, 924

EXECUTIVE CHAMBERS

HONOLULU

LINDA LINGLE
GOVERNOR

GOV. MSG. NO. 770

June 26, 2006

The Honorable Robert Bunda, President
and Members of the Senate
Twenty-Third State Legislature
State Capitol, Room 003
Honolulu, Hawaii 96813

Dear Mr. President and Members of the Senate:

This is to inform you that on June 26, 2006, the following bill was signed into law:

SB2957 SD2 HD2 CD1 — A BILL FOR AN ACT RELATING TO ENERGY.
(ACT 240)

Sincerely,

LINDA LINGLE

PART IV

SOLAR WATER HEATING PAY AS YOU SAVE

SECTION 13. **Solar water heating pay as you save program; purpose; establishment; tariff filing.** (a) Solar water heating systems are a renewable energy technology that uses solar collectors placed on roofs to heat water. These systems decrease reliance on imported oil used to generate electricity to heat water because they use less energy than the electric hot water heating systems replaced.

The legislature finds that the up-front cost of installation is a barrier preventing many Hawaii residents from installing solar water heating systems. The legislature further finds that the renewable energy technologies income tax credit and electric utility rebates have not been enough of an incentive to overcome these up-front costs, especially for rental housing and homes in need of retrofit for these important energy-saving devices.

The purpose of this section is to authorize the public utilities commission to implement a pilot project to be called the "solar water heating pay as you save program".

(b) The public utilities commission shall implement a pilot project to be called the "solar water heating pay as you save program", which shall:

(1) Allow a residential electric utility customer to purchase a solar water heating system:

(A) With no upfront payments; and

(B) By paying the cost of the system over time on the customer's electricity bill;

provided that the estimated life cycle electricity savings from the solar water heating system exceeds the cost of the system;

(2) Provide for billing and payment of the solar water heating system on the utility bill;

(3) Provide for disconnection of utility service for non-payment of solar water heating system pay as you save payments; and

(4) Allow for assignment of system repayment costs attached to the meter location.

(c) The public utilities commission shall determine the time frame of the pilot program and shall gather and analyze information to evaluate the pilot program.

(d) No later than June 30, 2007, each electric utility shall implement by tariff a pay as you save model system program for residential consumers that is consistent with this section. Each utility shall provide at least six months prior notice of its proposed tariff to the public utilities commission as prescribed in section 269-12(b), Hawaii Revised Statutes. Within the prescribed notice period, the public utilities commission shall review the proposed tariff and after a hearing may require modifications to the proposed tariff as necessary to comply with or effectuate the purposes of this section.

(e) The commission shall ensure that all reasonable costs incurred by electric utilities to start up and implement the pay as you save model system are recovered as part of the utility's revenue requirement, including necessary billing system adjustments and any costs for pay as you save model system efficiency measures that are not recovered via participating residential consumers' pay as you save model system bill payments or otherwise.

PART V

MISCELLANEOUS PROVISIONS

Hawaiian Electric Company, Inc.

PAYS PROGRAM COST SUMMARY
($000)

2007 Test Year Estimate

Line		Base
1	INCENTIVES	54
	DIRECT LABOR	
2	Account 910 (150, 421)	23
3	Nonlabor OH	11
4	DIRECT LABOR TOTAL	34
5	OUTSIDE SERVICES (incl Tracking/Eval)	11
6	ADVERTISING/MARKETING	60
7	MATERIALS, TRAVEL, MISC.	5
8	TOTAL BASE PROGRAM COSTS	164

HAWAIIAN ELECTRIC COMPANY, INC.
TOTAL BASE INTEGRATED RESOURCE PLANNING COSTS [1]
2007 TEST YEAR
($1000s)

Line	NARUC Acct.	Description	Cost Type	O&M EXPENSE BUDGET 2007	NORM. ADJ.	TEST YEAR 2007
1	506	Miscellaneous Stm Power Expense	Non-Labor	0.5	30.5	31.0
2				0.5	30.5	31.0
3	909	Supervision	Labor	19.6		19.6
4			Non-Labor: On-Costs[2]	4.3		4.3
5				23.9		23.9
6	910	Customer Assistance	Labor	221.5		221.5
7			Non-Labor: On-Costs[2]	108.4		108.4
8			Non-Labor	231.6		231.6
9				561.5		561.5
10	911	Informational Advertising	Labor	2.1		2.1
11			Non-Labor: On-Costs[2]	1.0		1.0
12				3.1		3.1
13	920	A&G - Labr	Labor	280.9		280.9
14	921	A&G - Nlabr	Labor	32.3		32.3
15			Non-Labor: On-Costs[2]	144.7		144.7
16			Non-Labor	214.1		214.1
17				391.1		391.1
18		TOTAL		1,261.0	30.5	**1,291.5**

NOTES:
(1) Represents gross amounts charged to the respective NARUC accounts.
Excludes impact of GL Code transfers.

(2) Non-Labor On-Costs represents the total of the following EE#s loaded directly unto labor.
EE# 406 (Corporate Administration)
EE# 422 (Employee Benefits)
EE# 423 (Payroll Taxes)

Reference: HECO-926, 927, 928

HAWAIIAN ELECTRIC COMPANY, INC.
BASE INTEGRATED RESOURCE PLANNING COSTS-LABOR/OVERHEADS [1]
2007 TEST YEAR
($1000s)

Line				TEST YEAR 2007
1	909	Supervision	Labor	19.6
2			Non-Labor: On-Costs[2]	4.3
3				23.9
4	910	Customer Assistance	Labor	221.5
5			Non-Labor: On-Costs[2]	108.4
6				329.9
7	911	Informational Advertising	Labor	2.1
8			Non-Labor: On-Costs[2]	1.0
9				3.1
10	920	A&G - Labr	Labor	280.9
11	921	A&G - Nlabr	Labor	32.3
12			Non-Labor: On-Costs[2]	144.7
13				177.0
14		TOTAL		**814.8**

NOTES:
(1) Represents gross amounts charged to the respective NARUC accounts.
Excludes impact of GL Code transfers.

(2) Non-Labor On-Costs represents the total of the following EE#s loaded directly unto labor.
EE# 406 (Corporate Administration)
EE# 422 (Employee Benefits)
EE# 423 (Payroll Taxes)

HAWAIIAN ELECTRIC COMPANY, INC.
BASE INTEGRATED RESOURCE PLANNING COSTS-NONLABOR COSTS ONLY*
2007 TEST YEAR
($1000s)

Line				O&M EXPENSE BUDGET 2007	NORMALIZATION ADJUSTMENT	TEST YEAR 2007
1	506	Miscellaneous Stm Power Expense	Non-Labor	0.5	30.5	31.0
2	910	Customer Assistance	Non-Labor	231.6		231.6
3	921	A&G - Nlabr	Non-Labor	214.1		214.1
4		TOTAL		446.2	30.5	**476.7**

* Activtiy 711 Non-labor costs. Excludes non-labor on-costs (EE#s 406, 422 and 423) of 258.4

Reference: HECO-928

HAWAIIAN ELECTRIC COMPANY, INC.
INTEGRATED RESOURCE NON LABOR PLANNING COSTS

IRP NON-LABOR COST NORMALIZATION ADJUSTMENT
($1000s)

Line				
	2005 HECO IRP NON LABOR			
1	JAN - SEPT. INCREMENTAL IRP	338		
2	OCT -DEC BASE IRP	141	(1)	
3				479
	2006 HECO IRP NON LABOR			
4	JAN - AUG	204		
5	UPDATE SEPT. - DECEMBER	301		
6				505
7	2007 HECO IRP NON LABOR			446.2
8	THREE YEAR TOTAL			1,430.2
9	TEST YEAR NORMALIZED NON-LABOR COSTS			476.7
10	2007 HECO IRP NON LABOR			446.2
11	NARUC 506 ADJUSTMENT TO OPERATING FORECAST			**30.5**

NOTE:
(1) Effective September 28, 2005 HECO IRP nonlabor costs were treated as O&M expenses in accordance with Interim Decision & Order No. 22050.

HAWAIIAN ELECTRIC COMPANY, INC.
TOTAL BASE INTEGRATED RESOURCE PLANNING COSTS [1]
2005 ACTUALS vs. 2007 TEST YEAR
($1000s)

Line				ACTUALS 2005	TEST YEAR 2007 [4]	TY -2005 Dfference
1	506	Miscellaneous Stm Power Expense	Non-Labor	0.0	31.0	31.0
2				0.0	31.0	31.0
3	909	Supervision	Labor	9.7	19.6	9.9
4			Non-Labor: On-Costs[2]	2.9	4.3	1.4
5			Non-Labor [3]	0.3	0.0	(0.3)
6				12.9	23.9	11.0
7	910	Customer Assistance	Labor	288.1	221.5	(66.6)
8			Non-Labor: On-Costs[2]	93.7	108.4	14.7
9			Non-Labor [3]	91.6	231.6	140.0
10				473.4	561.5	88.1
11	911	Informational Advertising	Labor	7.2	2.1	(5.1)
12			Non-Labor: On-Costs[2]	2.3	1.0	(1.3)
13			Non-Labor [3]	3.0	0.0	(3.0)
14				12.5	3.1	(9.4)
15	920	A&G - Labr	Labor	239.3	280.9	41.6
16	921	A&G - Nlabr	Labor (Overheads)	24.7	32.3	7.6
17			Non-Labor: On-Costs[2]	87.9	144.7	56.8
18			Non-Labor [3]	76.1	214.1	138.0
19			Amortization [5]	633.2	0.0	(633.2)
20				821.9	391.1	(430.8)
21		TOTAL		1,560.0	1,291.5	(268.5)

NOTES:

(1) Represents gross amounts charged to the respective NARUC accounts.
Excludes impact of GL Code transfers.

(2) Non-Labor On-Costs represents the total of the following EE#s loaded directly unto labor.
EE# 404 (Energy Delivery)
EE# 406 (Corporate Administration)
EE# 422 (Employee Benefits)
EE# 423 (Payroll Taxes)

(3) For 2005 Non-Labor, amounts represent IRP non-labor planning costs incurred subsequent to September 27, 2005 Treatment is in accordance with Interim Decision & Order 22050.

(4) From HECO-925.

(5) Represents IRP Amortization of 2004 IRP Costs recovered in 2005.
NOTE:
IRP Amortization of 2005 HECO IRP Non-Labor costs amounting to $383.3 for the period January 1, 2005 thru September 27, 2005 was recorded in 2006. These HECO IRP Costs were included in the 2005 Cost Recovery filing of IRP Planning Costs filed with the Commission on March 31, 2006 (Docket No. 04-0295).

Taking into consideration the 2005 IRP Amortization, 2005 "true" IRP costs is $1,310.1 ($1,560.0 - $633.2 {2004 Costs} + $383.3 {2005 Costs} = $1,310.1)

Difference between "true" 2005 IRP costs of $1,310.1 and TY 2007 $1,291.5 results in a $18.6 reduction.

Customer Solutions Employee Count
Including Major Areas Charging Labor to Customer Service Expenses

	Primary NARUC Codings	2005 YE Actuals	2006 (As of 9/30/06)	2006 YE Estimate (9/30/06)	2007 Test Year	2007 Test Year Less 2006 @ 9/30/06
Customer Solutions, VP Office	909	2	2	2	2	0
ESD Administration	910	3	3	3	3	0
Customer Efficiency Programs (CEP) Div	910	8	7	8	9	2
Pricing Division	920	4	4	4	5	1
Cust. Technology Applications Division	910	8	8	8	10	2
Marketing Services Division	910	12	11	11	12	1
Forecasts & Research Division	910,920	10	9	9	10	1
IRP Division	920	5	5	5	6	1
TOTAL CUSSOL		52	49	50	57	8

Hawaiian Electric Company, Inc.

2007 TEST YEAR ENERGY COST ADJUSTMENT FACTORS
DIRECT TESTIMONY

ENERGY COST ADJUSTMENT FACTOR CURRENT EFFECTIVE RATES	ENERGY COST ADJUSTMENT FACTOR PROPOSED RATES
7.299 ¢/KWH	0.000 ¢/KWH

Source: HECO-934, 936

Hawaiian Electric Company, Inc.

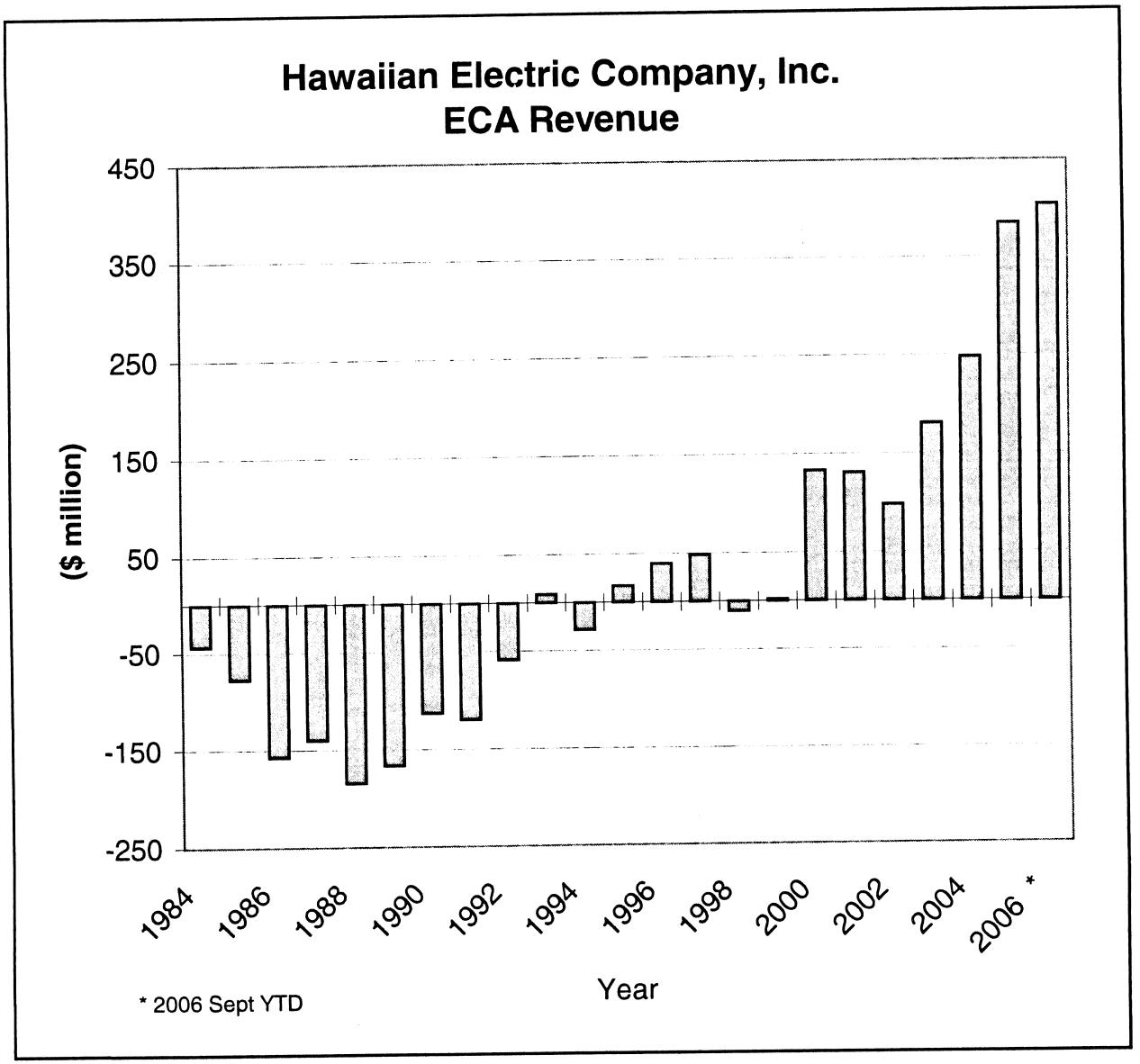
CURRENT BASE FUEL ENERGY CHARGE AND FIXED EFFICIENCY FACTOR (OR SALES HEAT RATE)

Line		
	Rate Proceeding	Docket No. 7766, Jan 1996
1	Base Fuel Energy	3.5140 ¢/kWh
	Fuel Price	
2	LSFO	$ 17.82 /bbl
3	Diesel	$ 23.04 /bbl
	Base Composite Cost	
4	Generation	287.33 ¢/mil btu
5	Purchased Energy	3.005 ¢/kWh
	Fixed Efficiency Factor or	
6	Sales Heat Rate	11,170 btu/kWh of sales

Year	ECA Revenue ($ million) **
1984	-43.408
1985	-77.146
1986	-157.098
1987	-139.662
1988	-184.172
1989	-166.246
1990	-112.381
1991	-119.346
1992	-58.726
1993	8.951
1994	-28.189
1995	16.882
1996	39.733
1997	48.656
1998	-10.042
1999	1.646
2000	133.240
2001	130.984
2002	98.611
2003	180.738
2004	247.831
2005	384.550
2006 *	403.297

* 2006 Sept YTD
** Includes Revenue Taxes

Note:
Positive values are collections.
Negative values are returns.



Hawaiian Electric Company, Inc.
ENERGY COST ADJUSTMENT FILING
Present Rates

Line			Line			
1	Effective Date	2007 Test Year - Direct		PURCHASED ENERGY COMPONENT		
2	Supercedes Factor			PURCHASED ENERGY PRICE - ¢/KWH		
			26	THC	- On Peak	14.600
			27		- Off Peak	11.050
			28	HRRV	- On Peak	12.753
			29		- Off Peak	9.688
	GENERATION COMPONENT		30	HRRV	- On Peak (excess)	0.000
			31		- Off Peak (excess)	9.687
	FUEL PRICES, ¢/MBTU		32	Chevron	- On Peak	14.600
3	Honolulu	1,050.17	33		- Off Peak	11.050
4	Kahe	1,050.17	34	Kalaeloa		9.919
5	Waiau-Steam	1,050.17	35	AES-HI		2.671
6	Waiau-Waste	0.00				
7	Waiau-Diesel	1,698.53		PURCHASED ENERGY KWH MIX, %		
8	DG	0.00				
			36	THC	- On Peak	0.09
	BTU MIX, %		37		- Off Peak	0.07
9	Honolulu	3.62	38	HRRV	- On Peak	5.84
10	Kahe	69.65	39		- Off Peak	2.69
11	Waiau-Steam	25.10	40	HRRV	- On Peak (excess)	0.00
12	Waiau-Waste	0.00	41		- Off Peak (excess)	1.48
13	Waiau-Diesel	1.17	42	Chevron	- On Peak	0.01
14	DG	0.46	43		- Off Peak	0.01
		100.00	44	Kalaeloa		44.16
			45	AES-HI		45.65
						100.00
15	COMPOSITE COST OF GENERATION, ¢/MBTU	1,052.93	46	COMPOSITE COST OF PURCHASED ENERGY, ¢/KWH		6.772
16	% Input to system kWh Mix	58.41	47	% Input to System kWh Mix		41.59
17	Efficiency Factor, Mbtu/kWh	0.011170	48	WTD CMP PURCH ENRGY COST, ¢/KWH (Line 46 x 47)		2.81647
18	WEIGHTED COMPOSITE GEN COST, ¢/KWH (Line 15 x 16 x 17)	6.86973				
19	BASE GENERATION COST, ¢/Mbtu	287.83	49	BASE PURCH ENERGY COMP COST		3.005
20	Base % Input to System kWh Mix	58.64	50	Base % Input to System kWh Mix		41.36
21	Efficiency Factor, Mbtu/kWh	0.011170	51	WTD BASE PRCH ENERGY COST, ¢/KWH (Line 49 x 50)		1.24287
22	WEIGHTED BASE GEN COST, ¢/KWH (Line 19 x 20 x 21)	1.88531				
			52	Cost Less Base (Line 48 - 51)		1.57360
23	Cost Less Base (Line 18 - 22)	4.98442	53	Loss Factor		1.059
24	Revenue Tax Req Multiplier	1.0975	54	Revenue Tax Req Multiplier		1.0975
25	GENERATION FACTOR, ¢/KWH (Line 23 x 24)	5.47040	55	PURCHASED ENERGY FACTOR, ¢/KWH (Line 52 x 53 x 54)		1.82892

Line		
56	Fuel & Purchased Energy Factor, ¢/kWh (Line 25 + 55)	7.29932
57	Adjustment, ¢/kWh	0.000
58	ECA Reconciliation Adjustment, ¢/kWh	0.000
59	ENERGY COST ADJUSTMENT FACTOR, ¢/KWH (Line 56 + 57 + 58)	7.299

Reference: HECO-WP-934

HAWAIIAN ELECTRIC COMPANY, INC.
Comparison of Present Rates and Proposed Rates
Composite Cost of Genereration - Central Station

2007 Test Year - Direct Testimony

Line		(A) At Present Rates	(B) At Proposed Rates	(C) Difference (B) - (A)
	FUEL PRICES, ¢/mmbtu			
1	Kahe	1,050.17	1,050.49	0.32
2	Waiau	1,050.17	1,050.17	0.00
3	Honolulu	1,050.17	1,100.18	50.01
4	Diesel	1,698.53	1,698.53	0.00
5	DG	0.00	0.00	0.00
	BTU MIX, %			
6	Kahe	69.65	69.97	0.32
7	Waiau	25.10	25.22	0.12
8	Honolulu	3.62	3.63	0.01
9	Diesel	1.17	1.18	0.01
10	DG	0.46	0.00	-0.46
		100.00	100.00	0.00
11	COMPOSITE COST OF GENERATION ¢/mmbtu	1,052.93	1,059.86	6.93

Source:
Col (A): HECO-WP-934, p. 3
Col (B): HECO-WP-936, p. 2

HAWAIIAN ELECTRIC COMPANY, INC.
ENERGY COST ADJUSTMENT (ECA) FILING
Proposed Rates

ENERGY COST ADJUSTMENT (ECA) FILING - 2007 Test Year - Direct (page 1 of 2)

Line
1 Effective Date 2007 Test Year - Direct
2 Supercedes Factors of

GENERATION COMPONENT

CENTRAL STATION

FUEL PRICES, ¢/mmbtu

3	Honolulu	1,100.18
4	Kahe	1,050.49
5	Waiau-Steam	1,050.17
6	Waiau-Diesel	1,698.53
7	Other	0.00

BTU MIX, %

8	Honolulu	3.63
9	Kahe	69.97
10	Waiau-Steam	25.22
11	Waiau-Diesel	1.18
12	Other	0.00
		100.00

13	COMPOSITE COST OF GENERATION, CNTRL STN + OTHER ¢/mmbtu	1,059.86
14	% Input to System kWh Mix	58.13

EFFICIENCY FACTOR, mmbtu/kWh

	(A) Fuel Type	(B) Eff Factor mmbtu/kwh	(C) Percent of Centrl Stn + Other	(D) Weighted Eff Factor
15	LSFO	0.011139	99.59	0.011094
16	Diesel	0.032003	0.41	0.000131
17	Other	0.011225	0.00	0.000000

(Lines 15, 16, 17): Col(B) x Col(C) = Col(D)

18	Weighted Efficiency Factor, mmbtu/kWh [lines 15(D) + 16(D) + 17(D)]	0.011225
19	WGTD. COMPOSITE CNTRL STN + OTHER GEN COST, ¢/kWh (lines (13x14x18))	6.91568
20	BASE CNTRL STN + OTHER GEN. COST, ¢/mmbtu	1,059.86
21	Base % Input to Sys kWh Mix	58.13
22	Efficiency Factor, mmbtu/kwh	0.011225
23	WEIGHTED BASE CNTRL STN + OTHER GEN COST ¢/kWh (lines (20x21x22))	6.91568
24	COST LESS BASE (line(19-23))	0.00000
25	Revenue Tax Req Multiplier	1.0975
26	CNTRL STN + OTHER GENERATION FACTOR, ¢/kWh (line (24x25))	0.00000

DG ENERGY COMPONENT

27	COMPOSITE COST OF DG ENERGY, ¢/kWh	18.114
28	% Input to System kWh Mix	0.28
29	WTD COMP DG ENRGY COST, ¢/kWh (Lines 27 x 28)	0.05072
30	BASE DG ENERGY COMP COST	18.114
31	Base % Input to System kWh Mix	0.28
32	WTD BASE DG ENERGY COST, ¢/kWh (Line 30 x 31)	0.05072
33	Cost Less Base (Line 29 - 32)	0.00000
34	Loss Factor	1.050
35	Revenue Tax Req Multiplier	1.0975
36	DG FACTOR, ¢/kWh (Line 33 x 34 x 35)	0.00000

SUMMARY OF TOTAL GENERATION FACTOR, ¢/kWh

37	Cntrl Stn+Other (line 26)	0.00000
38	DG (line 36)	0.00000
39	TOTAL GENERATION FACTOR, ¢/kWh (lines 37 + 38)	0.00000

HAWAIIAN ELECTRIC COMPANY, INC.
ENERGY COST ADJUSTMENT (ECA) FILING
Proposed Rates

ENERGY COST ADJUSTMENT (ECA) FILING - 2007 Test Year - Direct (page 2 of 2)

Line	PURCHASED ENERGY COMPONENT			
	PURCHASED ENERGY PRICE, ¢/kWh			
40	THC	- On Peak		14.600
41		- Off Peak		11.050
42	HRRV	- On Peak		12.753
43		- Off Peak		9.688
44	HRRV	- On Peak	(excess)	0.000
45		- Off Peak	(excess)	9.687
46	Chevron	- On Peak		14.600
47		- Off Peak		11.050
48	Kalaeloa			9.919
49	AES-HI			2.671
	PURCHASED ENERGY KWH MIX, %			
50	THC	- On Peak		0.09
51		- Off Peak		0.07
52	HRRV	- On Peak		5.84
53		- Off Peak		2.69
54	HRRV	- On Peak	(excess)	0.00
55		- Off Peak	(excess)	1.48
56	Chevron	- On Peak		0.01
57		- Off Peak		0.01
58	Kalaeloa			44.16
59	AES-HI			45.65
				100.00
60	COMPOSITE COST OF PURCHASED ENERGY, ¢/kWh			6.772
61	% Input to System kWh Mix			41.59
62	WEIGHTED COMP. PURCH. ENERGY COST, ¢/kWh (lines (60x61))			2.81647
63	BASE PURCHASED ENERGY COMPOSITE COST, ¢/kWh			6.772
64	Base % Input to Sys kWh Mix			41.59
65	WEIGHTED BASE PURCH ENERGY COST, ¢/kWh (lines (63 x 64))			2.81647
66	COST LESS BASE(lines (62 - 65))			0.00000
67	Loss Factor			1.050
68	Revenue Tax Req Multiplier			1.0975
69	PURCHSD ENERGY FCTR, ¢/kWh (lines (66 x 67 x 68))			0.00000

Line	SYSTEM COMPOSITE	
70	GEN AND PURCHASED ENERGY FACTOR, ¢/kWh (lines (39 + 69))	0.00000
71	Adjustment, ¢/kWh	0.000
72	ECA Reconciliation Adjustment	0.000
73	ECA FACTOR, ¢/kWh (lines (70 + 71 + 72))	0.000

Reference: HECO-WP-936, HECO-937

Hawaiian Electric Company, Inc.
WEIGHTED COMPOSITE GENERATION COST CALCULATIONS CENTRAL STATION AND OTHER
2007 Test Year - Direct Testimony
At Proposed Rates

	LSFO	Diesel	Other	Total	units
1 Fixed Efficiency Factor	0.011139	0.032003	0.011225		mbtu/kwh
2 Gen Mwh %	99.59	0.41	0.00	100.00	%
3 Weighted Efficiency Factor (line 1 x line 2)	0.011094	0.000131	0.000000	0.011225	mbtu/kwh

Reference:
1 HECO-WP-936, lines 15-17, Col. B.
2 HECO-WP-936, lines 15-17, Col C.

Hawaiian Electric Company, Inc.

ILLUSTRATION OF
THE PROPOSED WEIGHTED COMPOSITE GENERATION COST IN THE ECAC CALCULATIONS MECHANISM
2007 Test Year - Direct Testimony

As Proposed in Base Rates:

	LSFO	Diesel	Other	Total	
1 Fixed Efficiency Factor	0.011139	0.032003	0.011225		mbtu/kwh
2 Gen Mwh %	99.59	0.41	0.00	100.00	%
3 Weighted Efficiency Factor (line 1 x line 2)	0.011094	0.000131	0.000000	0.011225	mbtu/kwh

For illustration purposes,
assume during a month the kWh percent of LSFO, Diesel and Other to the total Generation - Central Station percent are the following:

LSFO	99.0 %
Diesel	1.0 %
Other	0.0 %
	100.0 %

Assume there are no changes to the Central Station, DG and Purchased Power fuel prices from proposed rates. Also no changes to the kwh % mix between Central Station, DG and Purchased Power.
Note: For illustration purposes only, assumes no change to the btu mix %.

The Weighted Efficiency Factor for that month is as follows:

	LSFO	Diesel	Other	Total	
1 Fixed Efficiency Factor	0.011139	0.032003	0.011225		mbtu/kwh
2 Gen Mwh %	99.00	1.00	0.00	100.00	%
3 Weighted Efficiency Factor (line 1 x line 2)	0.011028	0.000320	0.000000	0.011348	mbtu/kwh

The result is an ECA factor of 0.083 cents/kwh. (Refer to HECO-938 page 3)

HAWAIIAN ELECTRIC COMPANY, INC.
ENERGY COST ADJUSTMENT (ECA) FILING
Illustration of a Month with
the Proposed Weighted Generation Efficiency Factor & DG Component

ENERGY COST ADJUSTMENT (ECA) FILING - 2007 Test Year - Direct Illustration (page 1 of 2)

Line		
1	Effective Date	2007 Test Year - Direct Illustration
2	Supercedes Factors of	

GENERATION COMPONENT

CENTRAL STATION

FUEL PRICES, ¢/mmbtu

3	Honolulu	1,100.18
4	Kahe	1,050.49
5	Waiau-Steam	1,050.17
6	Waiau-Diesel	1,698.53
7	Other	0.00

BTU MIX, %

8	Honolulu	3.63
9	Kahe	69.97
10	Waiau-Steam	25.22
11	Waiau-Diesel	1.18
12	Other	0.00
		100.00

13	COMPOSITE COST OF GENERATION, CNTRL STN + OTHER ¢/mmbtu	1,059.86
14	% Input to System kWh Mix	58.13

EFFICIENCY FACTOR, mmbtu/kWh

	(A) Fuel Type	(B) Eff Factor mmbtu/kwh	(C) Percent of Centrl Stn + Other	(D) Weighted Eff Factor
15	LSFO	0.011139	99.00	0.011028
16	Diesel	0.032003	1.00	0.000320
17	Other	0.011225	0.00	0.000000

(Lines 15, 16, 17): Col(B) x Col(C) = Col(D)

18	Weighted Efficiency Factor, mmbtu/kWh [lines 15(D) + 16(D) + 17(D)]	0.011348
19	WGTD. COMPOSITE CNTRL STN + OTHER GEN COST, ¢/kWh (lines (13x14x18))	6.99146
20	BASE CNTRL STN + OTHER GEN. COST, ¢/mmbtu	1,059.86
21	Base % Input to Sys kWh Mix	58.13
22	Efficiency Factor, mmbtu/kwh	0.011225
23	WEIGHTED BASE CNTRL STN + OTHER GEN COST ¢/kWh (lines (20x21x22))	6.91568
24	COST LESS BASE (line(19-23))	0.07578
25	Revenue Tax Req Multiplier	1.0975
26	CNTRL STN + OTHER GENERATION FACTOR, ¢/kWh (line (24x25))	0.08317

DG ENERGY COMPONENT

27	COMPOSITE COST OF DG ENERGY, ¢/kWh	18.114
28	% Input to System kWh Mix	0.28
29	WTD COMP DG ENRGY COST, ¢/kWh (Lines 27 x 28)	0.05072
30	BASE DG ENERGY COMP COST	18.114
31	Base % Input to System kWh Mix	0.28
32	WTD BASE DG ENERGY COST, ¢/kWh (Line 30 x 31)	0.05072
33	Cost Less Base (Line 29 - 32)	0.00000
34	Loss Factor	1.050
35	Revenue Tax Req Multiplier	1.0975
36	DG FACTOR, ¢/kWh (Line 33 x 34 x 35)	0.00000

SUMMARY OF TOTAL GENERATION FACTOR, ¢/kWh

37	Cntrl Stn+Other (line 26)	0.08317
38	DG (line 36)	0.00000
39	TOTAL GENERATION FACTOR, ¢/kWh (lines 37 + 38)	0.08317

HAWAIIAN ELECTRIC COMPANY, INC.
ENERGY COST ADJUSTMENT (ECA) FILING
Illustration of a Month with
the Proposed Weighted Generation Efficiency Factor & DG Component

ENERGY COST ADJUSTMENT (ECA) FILING - 2007 Test Year - Direct Illustration (page 2 of 2)

Line	**PURCHASED ENERGY COMPONENT**			
	PURCHASED ENERGY PRICE, ¢/kWh			
40	THC	- On Peak		14.600
41		- Off Peak		11.050
42	HRRV	- On Peak		12.753
43		- Off Peak		9.688
44	HRRV	- On Peak	(excess)	0.000
45		- Off Peak	(excess)	9.687
46	Chevron	- On Peak		14.600
47		- Off Peak		11.050
48	Kalaeloa			9.919
49	AES-HI			2.671
	PURCHASED ENERGY KWH MIX, %			
50	THC	- On Peak		0.09
51		- Off Peak		0.07
52	HRRV	- On Peak		5.84
53		- Off Peak		2.69
54	HRRV	- On Peak	(excess)	0.00
55		- Off Peak	(excess)	1.48
56	Chevron	- On Peak		0.01
57		- Off Peak		0.01
58	Kalaeloa			44.16
59	AES-HI			45.65
				100.00
60	COMPOSITE COST OF PURCHASED ENERGY, ¢/kWh			6.772
61	% Input to System kWh Mix			41.59
62	WEIGHTED COMP. PURCH. ENERGY COST, ¢/kWh (lines (60x61))			2.81647
63	BASE PURCHASED ENERGY COMPOSITE COST, ¢/kWh			6.772
64	Base % Input to Sys kWh Mix			41.59
65	WEIGHTED BASE PURCH ENERGY COST, ¢/kWh (lines (63 x 64))			2.81647
66	COST LESS BASE(lines (62 - 65))			0.00000
67	Loss Factor			1.050
68	Revenue Tax Req Multiplier			1.0975
69	PURCHSD ENERGY FCTR, ¢/kWh (lines (66 x 67 x 68))			0.00000

Line	SYSTEM COMPOSITE	
70	GEN AND PURCHASED ENERGY FACTOR, ¢/kWh (lines (39 + 69))	0.08317
71	Adjustment, ¢/kWh	0.000
72	ECA Reconciliation Adjustment	0.000
73	ECA FACTOR, ¢/kWh (lines (70 + 71 + 72))	0.083

HECO T-10
DOCKET NO. 2006-0386

TESTIMONY OF
PATSY H. NANBU

CONTROLLER
HAWAIIAN ELECTRIC COMPANY, INC.

Subject: Administrative & General Expense; Budget Process; Accounting for Computer Software Development Costs; Abandoned Capital Project Costs; Unamortized Gain on Sale of Land; Iolani Court Plaza Lease Premium; Accounting for Pensions and Postretirement Benefits Other than Pensions; General Accounting Department Staffing

INTRODUCTION

Q. Please state your name and business address.

A. My name is Patsy H. Nanbu and my business address is 900 Richards Street, Honolulu, Hawaii.

Q. By whom are you employed and in what position?

A. I am Hawaiian Electric Company, Inc.'s ("HECO") Controller. My educational background and experience are shown in HECO-1000.

Q. What are your areas of responsibility with respect to this case?

A. I am responsible for presenting the Company's overall normalized Test Year 2007 estimates for Administrative and General ("A&G") Expenses, which include Account Nos. 920-932. I am the Company's primary witness for Administrative Expenses (Account Nos. 920, 921 and 922), Outside Services (Account Nos. 923010 and 923020) and Employee Benefits Transferred (Account No. 926020).

Besides addressing A&G expenses, I am responsible for addressing the Company's budget process, the ratemaking treatment for computer software development costs, abandoned capital projects and the unamortized gain on sale amounts included in rate base. In addition, I will discuss the accounting for pensions and postretirement benefits other than pensions. Finally, I will discuss the General Accounting department's staffing.

Q. Will certain A&G expenses be addressed by other Company witnesses?

A. Yes. Several witnesses will address detailed Test Year A&G expense estimates as follows:

1) Mr. Russell Harris (HECO T-11) will address Insurance Expense (Account Nos. 924 and 925),

2) Ms. Julie Price (HECO T-12) will address Employee Benefit Expenses

(Account Nos. 926000 and 926010), and

3) Mr. Bruce Tamashiro (HECO T-13) will address Miscellaneous A&G Expenses (Account Nos. 928, 9301, 9302, 931 and 932).

ADMINISTRATIVE AND GENERAL EXPENSES

Q. What is the Company's normalized estimate of total A&G expenses for Test Year 2007?

A. The Company's normalized estimate of total A&G expenses for Test Year 2007 is $72,007,000. The total represents the combined test year estimates for Account Nos. 920 through 932. HECO's test year estimates, summarized by primary account for the various expense categories included within the broad A&G expense category, are as follows:

Primary Account			Test Yr. 2007 Estimate ($ Thousands)
920	A&G Expense - Labor		$16,223
921	A&G Expense – Non Labor		12,731
922	Administrative Expenses Transferred		(3,130)
923	Outside Services		1,320
924	Property Insurance		2,939
925	Injuries & Damages		6,801
926	Employee Benefits		27,636
928	Regulatory Commission Expense		283
930	Miscellaneous		3,345
931	Rents		2,757
932	Maintenance of General Plant		1,102
	Total A&G Expenses		$72,007

Q. Is the total Test Year 2007 normalized A&G expense estimate presented by detailed accounts and sub-accounts?

A. Yes, it is, in HECO-1001 and HECO-1002. HECO-1001 presents the detailed accounts and sub-accounts by labor and non-labor amounts, and shows any related budget adjustments and test year normalizations. HECO-1002, page 1, presents the detailed account and sub-account amounts for 2001 through 2005 (recorded) and for 2006 and Test Year 2007 (budget). Pages 2 and 3 of HECO-1002 identifies, by account number and code block, the significant differences between the Test Year 2007 amounts and the recorded 2005 amounts. Brief explanations of the differences are provided on pages 2 and 3 of HECO-1002, as a cross reference to the more detailed explanations provided later in this testimony under

the related account numbers.

Q. How were the test year estimates developed?

A. As described later in my testimony, the 2007 test year estimates are the result of a detailed budget process, as well as three type of adjustments that were made to determine the test year estimates, including 1) budget adjustments, 2) issue simplification adjustments, and 3) normalization adjustments.

General Nature of A&G Expenses

Q. What is the general nature of A&G expenses?

A. A&G expenses represent a diverse group of expenses under the National Association of Regulatory Utility Commissioners Uniform System of Accounts ("NARUC USOA"), which the Commission has directed HECO to follow.

Q. Why are A&G expenses so diverse?

A. Under the NARUC USOA, A&G expenses often times represent operating expenses not provided for in other functional areas. For example, the NARUC USOA description for Account 923 - Outside Services includes the statement, "This account shall include the fees and expenses of professional consultants and others for general services which are not applicable to a particular operating function or to other accounts." Another reason for the diversity in A&G expenses is that these expenses represent the total Company costs for certain specific items, e.g. Property Insurance (Account No. 924).

Q. How will A&G expenses be organized and presented in this case?

A. Because A&G expenses cover such a diverse group of expenses, the A&G expense estimates will be presented and analyzed by individual account numbers. However, to make the presentation more meaningful, the sequential account numbers in HECO-1001 and HECO-1002 have been arranged into groups where

there is some relationship between the accounts in a particular group. There are five groups of accounts as follows:

1) Administrative (Accounts 920 - 922),
2) Outside Services (Accounts 923010 and 923020),
3) Insurance (Accounts 924 and 925),
4) Employee Benefits (Accounts 926000 - 926020), and
5) Miscellaneous (Accounts 928 - 932).

ADMINISTRATIVE

Q. What are the accounts and test year estimates for the Administrative group of accounts?

A. As shown in HECO-1001, page 1, the Administrative group of accounts, and the associated amounts totaling $25,824,000 for Test Year 2007 are as follows:

Acct. No.	Description	Test Yr. 2007 Estimate ($ Thousands)
920	A&G Expense - Labor	$16,223
921	A&G Expense – Non Labor	$12,731
922	Administrative Expenses Transferred	$ (3,130)

Q. What is the nature of Administrative expenses?

A. The Administrative group of expenses represents the expenses incurred in connection with the general administration of the Company's operations that are not chargeable against other specific functional accounts. Administrative expenses include the labor and related non-labor costs of Company officers, as well as employees in diverse functional areas such as accounting and finance,

corporate compliance, internal audit, purchasing, human resources, information services (e.g. mailing, printing, records management, and word processing), legal, government relations, regulatory affairs, environmental, information technology, safety and security, risk management, energy services, energy projects, forecasts and research, corporate communications and integrated resource planning.

Q. Where are gross Administrative expenses charged?

A. Administrative labor costs are charged to Account No. 920 – A&G Expense - Labor, while related non-labor costs are charged to Account No. 921 – A&G Expense – Non Labor.

Q. Do all of the gross costs remain classified as Administrative expenses?

A. No. Some of the Administrative activities support the Company's plant construction effort. An appropriate portion of gross Administrative costs charged to Account Nos. 920 and 921 is, therefore, transferred to construction projects. This transfer is accomplished by means of an on-cost (overhead) charge to construction projects, with a concurrent credit to Account No. 922 - Administrative Expenses Transferred, which I will cover later in my testimony.

Q. Are any Administrative costs incurred by HECO charged to other parties?

A. Yes. The Company provides administrative, as well as other types of services, to its operating electric utility subsidiaries, Hawaii Electric Light Company, Inc. ("HELCO") and Maui Electric Company, Limited ("MECO"); to its non-regulated subsidiary, Renewable Hawaii, Inc. ("RHI"); to other affiliated companies, including its parent company, Hawaiian Electric Industries, Inc. ("HEI"); and to various outside parties. To the extent practical, labor and non-labor costs incurred by HECO in providing such administrative and other services are billed directly to the party receiving the services. The labor amounts billed are based primarily on

the actual time spent by individuals on various billable activities, although some other reasonable basis for allocation is used when keeping time is not practical or appropriate. Because these amounts are directly charged to outside parties (e.g. time-sheets are coded with a charge number referencing a "receivable from customer" account), the amounts are not charged to HECO operations. However, a portion of the charges billed directly to HEI is charged back to HECO, as explained later in this testimony under Account No. 921 – A&G Expense – Non Labor.

Besides directly billable costs, the Company incurs a certain amount of indirectly assignable administrative costs with respect to the various services provided, such as the labor costs of clerical support personnel. These costs are first charged to HECO A&G Expenses. Appropriate amounts of the indirectly assignable administrative costs are then billed, primarily in the form of on-cost charges, to HELCO, MECO, RHI, HEI, other affiliated companies and outside parties, with concurrent credits to Account No. 922 - Administrative Expenses Transferred.

Q. Please describe in more detail the types of costs included in Administrative Expenses.

A. For each organization budgeting charges to administrative expenses, a brief description of the organization's major administrative activities is provided in HECO-1003. The amounts forecast by each organization to 2007 Administrative Expense Account Nos. 920 and 921 are summarized, by responsibility area code, in HECO-WP-101(C), beginning on page 53.

<u>920 - Administrative and General Expense -Labor</u>

Q. What is the Test Year 2007 normalized estimate for Account No. 920 - A&G

Expense-Labor?

A. As shown in HECO-1001, page 1, the Test Year 2007 estimate for Account No. 920 is $16,223,000, after a net downward adjustment of $2,077,000.

Q. What are the specific adjustments?

A. There are 3 specific adjustments included in the $2,077,000:

1) a budget adjustment reduction of $2,035,000 for performance incentive compensation ("PIC"),
2) a budget adjustment reduction of $43,000 with respect to the Human Resource Suite System ("HR Suite") project costs, and
3) a budget adjustment increase of $1,000 for abandoned capital project costs.

Q. What is the PIC adjustment?

A. The Company offers several incentive plans consisting of an Executive Incentive Compensation Plan ("EICP"), Long-Term Incentive Compensation Plan ("LTIP"), Team Merit Incentive Awards, Individual Merit Awards, and service awards program. PIC refers to awards made under these plans/programs. The Company has removed from its Test Year 2007 estimate $2,035,000 for the PIC payments/awards that it estimates will be earned by employees in 2007. Although PIC costs are appropriate costs of doing business, the Company adjusted its O&M expense budget for PIC costs to reduce the number of issues in this case. The Company has not waived its right to seek recovery of these costs in future rate cases.

Q. What is the HR Suite adjustment?

A. The cost estimate and schedule for the HR Suite project was updated after the 2007 O&M budget was completed. Based on the current schedule and cost estimate as discussed by Ms. Julie Price in HECO T-12, the project is expected to

commence later than what was assumed when the budget was prepared. The delay in the project will result in more labor costs being deferred as software development costs in 2007 and less labor costs being charged as expense to Account No. 920. The downward adjustment of $43,000 reflects the revised cost estimate as a result of the revised implementation schedule.

Q. What is the $1,000 adjustment for abandoned capital project costs?

A. The costs of abandoned capital projects (where a "no go" decision is made during the time project costs are classified as Construction Work in Progress) are generally written off to appropriate operation and maintenance ("O&M) expense accounts, including Account No. 920. The recorded 2001-2005 amounts for Account No. 920 include abandoned capital project costs. However, the 2006 and 2007 budget estimates for O&M expenses do not include amounts for abandoned capital project costs as forecasters do not generally contemplate that projects will be abandoned. The $1,000 adjustment is necessary, therefore, to include in revenue requirements a reasonable amount for the write-off of abandoned capital project costs with respect to Account No. 920.

Q. How was the $1,000 adjustment computed?

A. The calculation of the $1,000 adjustment, as well as more details regarding abandoned capital project costs, are provided later in this testimony.

Q. How does the Test Year 2007 estimate for Account No. 920 – A&G Expense – Labor compare to prior year amounts?

A. A comparison is shown below, based on the amounts shown in HECO-1002, reduced by the amount of PIC included in Account No. 920 each year.

	($ Thousands) Per HECO-1002*	Less PIC	Adj. Total
2001 Recorded	$13,000	$749	$12,251
2002 Recorded	14,082	1,246	12,836
2003 Recorded	14,593	1,311	13,282
2004 Recorded	15,185	1,613	13,572
2005 Recorded	15,759	1,634	14,125
2006 Budget	17,423	1,613	15,810
2007 Adj. TY Estimate	18,258**	2,035**	16,223**

* A breakdown of the HECO-1002 amounts, before adjustments, by responsibility area code is provided on HECO-WP-101(C), pages 53 and 54.

** HECO-1002 shows the adjusted total of $16,223,000. The $18,258,000 before PIC adjustment is shown here for consistency of presentation. It reflects the amount on HECO-WP-101(C) and other budget adjustments.

Q. Are PIC amounts recorded and budgeted in accounts other than Account 920?

A. Yes, the recorded and budgeted PIC amounts by account number are shown in HECO-1004.

Q. Why is the Test Year 2007 estimate for Account No. 920 higher than the amounts for earlier years?

A. The Test Year 2007 estimate of $16,223,000 is $2,098,000 higher than the recorded 2005 amount, adjusted for PIC amounts. The major reasons for the increase are approximately as follows:

1) general wage increases ($947,000),

2) increase in positions that perform administrative activities ($412,000)

3) increase in labor charges to administrative activities ($858,000).

1) General Wage Increases

Q. What is the impact of general wage increases?

A. General wage rates for Test Year 2007 are expected to be 6.53% (for bargaining unit employees) and 7.64% (for merit employees) higher than the respective 2005 wage rates (see HECO-1005). This accounts for an approximately $947,000 increase in labor costs (excluding PIC) between 2005 and 2007, other things being equal. I discuss the assumptions used in determining the bargaining unit and merit salary increases included in the 2007 budget later in my testimony under Budget Process. Ms. Julie Price, HECO T-12, discusses in more detail how the bargaining unit and merit salary increases are determined.

2) Increase in positions performing administrative work

Q. How many positions are to be added by the Company in 2006 and 2007 where most, if not all, of the labor costs are charged to Account No. 920?

A. HECO-1006, page 1, shows the net 10 positions to be added to the Company's administrative staffing in 2006 and 2007.

Q. What is the impact of the increased number of employees?

A. As detailed in HECO-1006, page 1, the net increase in the number of employees accounts for approximately $412,000 of the increase in Account No. 920 labor costs between 2005 and Test Year 2007.

Q. What is the justification for the 10 new positions?

A. The justification for each of the new positions is provided by the other witnesses as described by Ms. Faye Chiogioji at HECO T-14.

3) Increase in labor charges for administrative activities

Q. What is meant by an increase in labor charges for Administrative activities?

A. During 2007, certain positions are expected to do more administrative type work

than in 2005, resulting in higher labor costs charged to Account 920. For example, the Director of Enterprise Resource Planning ("ERP") Administration was temporarily assigned to a project in 2005, and the person's labor charges were recorded under Account 9302. During 2006, the person returned to the ERP Administration position, and continues to work on ERP coordination efforts which are expected to continue in 2007. In addition, certain positions were vacant during 2005, which resulted in less labor costs charged to Account 920 in 2005. However, those positions have been filled or are expected to be filled during 2007. See HECO-1006, page 2 for a listing of the positions that were vacant for a significant portion of 2005 that have been filled or are expected to be filled during 2007, and the estimated amount that such vacancies contribute to the increase in charges to Account No. 920 from 2005 to the 2007 test year. Also shown on HECO-1006, page 2 is an estimate of the extent to which the reduction in positions in the security area offsets the increases in costs due to filling the vacancies.

Q. The above three items account for more than the increase in costs between 2005 and the test year 2007 estimates. Are there other factors that contribute to the change in labor charges to Account No. 920?

A. As mentioned earlier, charges to Account 920 include labor in connection with the general administration of the Company's operations that are not chargeable against other specific functional accounts. To the extent that specific organizational areas expect to spend time in specific functional areas or on specific projects that are not administrative in nature, the costs are budgeted to those specific project/areas, which would reduce the estimated charges to Account 920. For example, the Work Force Staffing and Development area charged most of their time to Account

920 in 2005, however, they expect to be working on the HR Suite project and the Customer Information System ("CIS") project during 2007. Labor costs for such work are budgeted to those projects and accordingly less time was budgeted to Account 920 in 2007 than actually charged in 2005.

Q. Why is the 2007 test year estimate of $16,223,000 for A&G labor costs reasonable?

A. The test year estimate is reasonable in that the increase is due principally to wage and salary increases, including wage increases set forth in the Company's negotiated labor agreement and an estimate for non-bargaining unit employees. The increase is also due to additional positions needed to perform the Company's administrative functions.

921 – Administrative and General Expenses – Non Labor

Q. What is the Test Year 2007 normalized estimate for Account No. 921 – A&G Expenses – Non Labor?

A. As shown in HECO-1001, page 1, the Test Year 2007 normalized estimate for Account No. 921 is $12,731,000 after a net downward adjustment totaling $477,000.

Q. What are the specific adjustments?

A. There are 3 specific adjustments included in the $477,000: (1) an increase of $5,000 for abandoned capital project costs, (2) a decrease of $30,000 to reflect the revision to the amortization amount for computer software development project costs for Phase 1 of the HR Suite project expected to be completed in 2007, (3) a decrease of $452,000 to remove performance incentive compensation amounts from the Test Year 2007 estimates (including incentive compensation amounts in the HEI charges to HECO).

Q. What is the $5,000 adjustment for abandoned capital project costs?

A. As stated above, the costs of abandoned capital projects (where a "no go" decision is made during the time project costs are classified as Construction Work in Progress) are generally written off to appropriate operation and maintenance expense accounts, including Account No. 921. The recorded 2001-2005 amounts for Account No. 921 include abandoned capital project costs. However, the 2006 and 2007 budget estimates for O&M expenses do not include amounts for abandoned capital project costs as forecasters do not generally contemplate that projects will be abandoned. The $5,000 adjustment is necessary, therefore, to include in revenue requirements a reasonable amount for the write-off of abandoned capital project costs with respect to Account No. 921.

Q. How was the $5,000 adjustment computed?

A. The calculation of the $5,000 adjustment, as well as more details regarding abandoned capital project costs, is provided later in this testimony.

Q. What is the $30,000 adjustment with respect to the HR Suite software development project?

A. As described by Ms. Julie Price in HECO T-12, Phase 1 of the HR Suite project is now expected to be implemented in November 2007. When the budget was prepared, Phase 1 of the HR Suite project was expected to be implemented in December 2006, and the amortization of the deferred costs was expected to begin in January 2007. The adjustment reflects starting the amortization in December 2007. The accounting for computer software development projects is discussed later in my testimony.

Q. What is the $452,000 downward adjustment for performance incentive compensation (PIC) amounts?

A. As discussed earlier in this testimony, the Company has excluded from its Test Year 2007 estimates all budgeted PIC amounts, including the $452,000 budgeted to Account No. 921. Recorded and budgeted PIC amounts from 2001 through 2007 are shown on HECO-1004.

Q. Are there any other adjustments to consider in comparing the Test Year 2007 amount for Account No. 921 with prior period amounts?

A. Yes. The recorded amounts for 2001 through 2003 include the amortization of APPRISE project costs. Under Project APPRISE, the Company's core business system now called ELLIPSE (formerly referred to as Mincom Information Management System, or MIMS, which was purchased from Mincom, Inc., an Australian based company) was implemented effective January 1, 1999. For financial statement purposes, the costs of APPRISE were deferred and amortized over a five year period from 1999 through 2003. For ratemaking purposes, however, the Commission disallowed the deferral and amortization of project costs in Decision and Order No. 18635, in Docket No. 99-0207, HELCO's Test Year 2000 rate case. As a result, the amortization amounts should be removed in comparing the Test Year 2007 amount with the amounts recorded in prior years.

Q. How does the Test Year 2007 estimate for Account No. 921 compare with prior year amounts?

A. After excluding the Project APPRISE amortization amounts and the available PIC amounts (the HEI PIC amounts for 2001-2004 are not available) from the 2001 through Test Year 2007 data shown on HECO-1002, the Test Year 2007 normalized estimate for Account No. 921 of $12,731,000 compares with prior year amounts as follows:

	Per HECO-1002*	($ Thousands) Less APPRISE Amortization/PIC	Adj. Total
2001 Recorded	$13,684	$1,205/37	$12,442
2002 Recorded	8,805	485/40	8,280
2003 Recorded	9,831	485/42	9,304
2004 Recorded	12,539	0/42	12,497
2005 Recorded	14,276	0/864	13,412
2006 Budget	5,117	0/789***	4,328
2007 Adj. TY Estimate	12,945**	0/ 214**	12,731

* A breakdown of the HECO-1002 amounts, before adjustments, by responsibility area code is provided on HECO-WP-101(C), pages 54 and 55.

** HECO-1002 shows the adjusted total of $12,731,000. The $12,945,000 before PIC adjustment is shown here for consistency of presentation. It reflects the amount on HECO-WP-101(C) and other budget adjustments.

***Of the $789,000 PIC adjustment, $329,000 should have been budgeted against Account No. 920.

Q. What is the difference between 2005 and the 2007 test year estimate for the costs in Account No. 921?

A. Between 2005 and the 2007 test year estimate, Account No. 921 costs decreased by $681,000 to $12,731,000. The primary reasons for the net decrease are summarized below:

1) EEI dues recorded in Account 921 in 2005 but budgeted in Account 9302 in 2007 ($268,000)

2) Research and Development costs recorded in Account 921 in 2005 but budgeted in Account 9302 in 2007 ($257,000)

3)	Amortization of deferred incremental IRP planning costs recorded in Account 921 in 2005	($633,000)
4)	Lower billings from HEI	($302,000)
5)	ELLIPSE migration to Unix platform	$509,000
6)	Axis and Strategizer software implementation	$271,000
7)	Others, net	($ 1,000)

Q. Items 1 and 2. - Please explain the reason for the first two items.

A. HECO is a member of Edison Electric Institute ("EEI"), which is the industry's trade organization. Under NARUC, membership dues should be included in Account 9302. During 2005, the costs were incorrectly posted to an activity that translated to Account 921. For the 2007 budget, the costs were properly budgeted in Account 9302. Mr. Bruce Tamashiro, in HECO T-13, discusses the EEI dues estimate for the test year.

In 2005, costs related to certain research and development activities (those that are not charged to the functional accounts) were recorded in an activity that translated to Account 921. During 2006, the translation for that activity was revised, such that these research and development activities are reflected in Account 9302. Mr. Bruce Tamashiro, in HECO T-13, discusses research and development activities not charged to the functional accounts.

Q. Item 3. - What is the amortization of deferred incremental IRP Planning costs that was recorded in 2005?

A. Prior to the interim decision in HECO's pending rate case, Docket No. 04-0113, the Company recovered its planning related costs of IRP through a combination of base rates and the IRP Clause. Costs recovered through the IRP clause were reflected in a deferred account when incurred, and charged to expense as an

amortized cost as the costs were recovered through the IRP Clause. In 2005, the expenses in Account 921 reflected the amortization of the 2004 deferred incremental costs. In Docket No. 04-0113, HECO's pending 2005 test year rate case, the parties agreed to include all IRP planning costs in base rates. In determining HECO's revenue requirements for purposes of Interim Decision and Order No. 22050 issued September 27, 2006 in Docket No. 04-0113, IRP planning costs were reflected as being recovered in base rates. Thus, subsequent to the Interim Decision and Order, IRP planning costs are recorded as an expense as incurred. In 2007, there would not be an amortization of the prior year's deferred costs, and expenses are budgeted as incurred. Integrated resource planning costs are discussed by Mr. Alan Hee in HECO T-9.

Q. Item 4. – Of the total Test Year 2007 estimate for Account No. 921, what is the estimate for billings from HECO's parent company, HEI?

A. The Test Year 2007 estimate for billings from HEI to HECO is $1,635,000. A summary of the total HEI billing amount by type of activity is provided in HECO-1007.

Q. Does the Test Year 2007 estimated billings from HEI include any performance incentive compensation (PIC)?

A. No, PIC amounts are excluded from the test year estimate of billings from HEI to HECO.

Q. How does the Test Year 2007 HEI billing amount compare with amounts billed in previous years?

A. The 2007 HEI billings estimate of $1,635,000 compares to recorded amounts of $1,575,000, $1,509,000, $2,013,000, $2,080,000, and $1,937,000 for 2001, 2002, 2003, 2004, and 2005, respectively.

Q. What services are provided by HEI to HECO?

A. HEI provides HECO with a variety of services, including those with respect to financial accounting and reporting, administrative, investor relations and stock transfer activities. Detailed descriptions of the types of services performed by HEI on HECO's behalf are identified in the service agreement between HEI and HECO, which is provided in HECO-1008. The service agreement also provides the basis used by HEI to allocate (when direct charging is not possible or practical) billing amounts to its various subsidiaries.

Q. Has HEI's billing to HECO been reviewed for appropriateness?

A. Yes, in 1992, HECO requested Arthur Andersen & Co. to evaluate HEI's inter-company billing system. HEI's current billing methodology essentially incorporates all of the significant recommendations made by Arthur Andersen & Co. in its report on the study, which was addressed in detail in Docket No. 7700.

Q. Why do billing amounts from HEI to HECO include certain costs initially incurred by HECO and billed to HEI?

A. HECO provides HEI with staff support in a number of functional areas. In most cases, the staff support provided by HECO represents services with respect to HEI corporate functions that are commonly required by most businesses, such as payroll, office services (e.g. printing, mailing, record storage, etc.) and personnel administration. To the extent that HEI activities benefit all HEI-affiliated companies, it is proper that the cost of staff support for commonly required corporate functions, whether provided by HECO or a non-HEI-affiliated company, be allocated among all HEI subsidiaries, including HECO.

Q. Has the Company provided a detailed list of the services performed by HECO for HEI?

A. Yes. The list is provided in HECO-1009.

Q. On what basis does HECO charge HEI for services rendered?

A. HECO charges HEI on a full-cost basis to the extent practical.

Q. How does HECO bill HEI for services rendered?

A. HECO's billing amounts are directly charged to the extent possible and practical. However, some amounts are allocated, such as the costs of HECO's pension accounting services.

Q. For Test Year 2007, what is HECO's estimated billing to HEI for services rendered?

A. HECO's estimated billings to HEI, excluding performance incentive compensation amounts, total $1,565,000. A breakdown of the total billing amount by HECO organization is shown in HECO-1009.

Q. What portion of HECO's total billings to HEI is charged back to HECO?

A. Of the estimated $1,565,000 in billings from HECO to HEI for 2007, only $23,000 is included in HEI's billing to HECO (see HECO-1007, page 5). The "charge-back" to HECO from HEI is quite conservative. Only a limited amount of HECO billings to HEI is being allocated by HEI to its subsidiaries. In general, only those costs of HECO services that have a direct benefit to HEI subsidiary companies (i.e. services which involve activities that would otherwise have to be performed by the subsidiaries themselves if they were on a "stand alone" basis) are being allocated by HEI. The costs of other types of HECO services, although indirectly benefiting HEI's subsidiary companies, are not being billed by HEI.

Q. How was the test year estimate for HEI charges to HECO determined?

A. The 2007 estimate starts with the 2005 actual charges and are adjusted for known changes for the 2007 year and escalated for inflation for 2006 and 2007. The

actual 2005 amounts were adjusted to exclude costs related to incentive compensation. The specific adjustments made are described in the notes provide on HECO-1007, pages 3 and 4.

Q. Why are the HEI charges to HECO estimate for 2007 lower than the actual charges in 2005?

A. In part, the 2007 estimate is lower than the actual charges in 2005 because the labor rates used for the 2007 estimate do not reflect incentive compensation. In addition, fees related to management assessment for HECO executives, participation in a health information exchange and other compensation consulting services allocated to HECO in 2005 are not expected to be incurred in the future.

Q. Item 5. --Please explain in more detail the additional $509,000 of costs related to the Ellipse migration to Unix platform.

A. Currently, ACCESS (the current customer information system), ELLIPSE (the company's core business system), and Tesseract (the employee benefits system) are the three systems that run on the IBM mainframe platform. Plans are in place for both ACCESS and Tesseract to be replaced with systems that will be operating on a new standard Unix/Oracle platform in the near future. ACCESS is scheduled to complete its transition in early 2008 as part of its replacement with the new Customer Information System ("CIS") system (the subject of Docket No. 04-0268, which was approved in Decision and Order No. 21798 issued on May 3, 2005), while Tesseract will be replaced with the installation of the HR Suite project in 2007, subject to Commission approval in Docket No. 2006-0003. Similarly, HECO plans to migrate the ELLIPSE application and associated interfaces from the IBM/DB2 mainframe platform to a standard Unix/Oracle platform. The intent of the migration is to simplify the maintenance of the

enterprise hardware platforms by standardizing its systems on Unix and Oracle. In addition, the migration to Unix/Oracle for ELLIPSE will enhance our ability to obtain vendor support for various reasons: 1) most of Mincom's support staff is experienced in the Unix/Oracle environments and not the mainframe or DB2; and 2) the ELLIPSE application is primarily written in the Unix/Oracle environment and will not need to be converted to IBM/DB2 going forward.

Q. Item 6. - Please explain in more detail the additional costs of $271,000 for the Axis and Strategizer software implementation.

A. The Axis and Strategizer software are complements to our purchasing module in our ELLIPSE system. The Axis software will provide an electronic business-to-business solution with our suppliers to allow transmission of procurement information via an integrated connection to ELLIPSE. This will help to reduce purchase order and invoice errors and corrections, increase on-time and accuracy of deliveries of materials, and provide additional data for analysis, and opportunities for early pay discounts. The Strategizer software will allow us to create a more robust data base, and analytical tools for identifying who we are doing business with and to what extent, to identify opportunities for consolidating purchasing and discount purchasing, create potential supplier alliances and better manage procurement and supplier performance.

922 - Administrative Expenses Transferred

Q. What is the Company's Test Year 2007 estimate for Account No. 922 - Administrative Expenses Transferred?

A. As shown in HECO-1001, page 1, the Test Year 2007 estimate for Account No. 922 - Administrative Expenses Transferred is ($3,130,000), after a net downward normalization adjustment of $39,000. The calculation of the ($3,130,000),

including a list of the budget and normalization adjustments, is shown on HECO-1011.

Q. What does the Test Year 2007 estimate represent?

A. The estimated amount transferred represents that portion of the total costs charged to Account Nos. 920 – A&G Expense - Labor and 921 – A&G Expense – Non Labor that relate to plant construction or services provided by HECO to affiliated companies and outside third parties.

Q. What types of services are billed to affiliated companies and to outside third parties?

A. HECO bills affiliated companies for various services performed, such as those related to executive management, accounting, finance, risk management, benefits administration and communications. HECO bills outside third parties for services such as repairing poles and other Company property damaged by outsiders, and for providing temporary electrical service to contractors and carnival operators.

Q. How does the Company account for Administrative Expenses related to non-capital, non-billable work, i.e. Administrative Expenses in support of O&M expense related work?

A. Under the NARUC USOA, the O&M expense related portion of Administrative Expenses must be classified as A&G expense. The Company's core business software system called ELLIPSE (formerly referred to as Mincom Information Management System, or MIMS, which was purchased from Mincom, Inc., an Australian based company) generally applies on-costs to the designated clearing base regardless of the NARUC account number being charged. As a result, ELLIPSE applies Administrative Expenses 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 Administrative Expenses on-costs applied by ELLIPSE to the various O&M expense accounts are "reversed" and added back to Administrative and General expenses.

Q. Does this reversing entry concept/procedure apply to other on-costs besides Administrative Expenses?

A. Yes, the concept/procedure is applied to three other on-costs as follows:

1) The O&M expense related portion of Employee Benefits on-costs applied to various O&M expense accounts is reversed and added back to Administrative and General Expenses.

2) Under the NARUC USOA, 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.

3) The Customer Installations on-cost should be applied only to capital projects and work billable to other parties. Therefore, Customer Installations on-costs applied by ELLIPSE to O&M accounts are reversed and added back to the Customer Installations clearing account.

Q. How are the reversed amounts identified in the Company's application?

A. The reversed amounts can generally be identified in the detailed Pillar Test Year 2007 O&M Expense Budget reports provided as work papers in this docket, i.e. the HECO-WP-101 series of work papers. On these work papers, the line items labeled "(G/L codes)" include the reversal amounts. With respect to forecast amounts, i.e. amounts for 2006 and Test Year 2007 the (G/L codes) amounts will equal the reversed amounts. With respect to recorded amounts, the (G/L codes)

amount will not necessarily equal the reversed amounts since (G/L codes) include other types of accounting entries required to complete the financial closing process.

Q. Can you illustrate how the reversed amounts are identified in the HECO-WP-101 series of work papers?

A. Yes. For ease of reference, HECO-1010 represents a duplication of pages selected from the HECO-WP-101 series of work papers to illustrate how to identify the reversed amounts. Pages 1289 and 1290 of HECO-WP-101(I) (HECO-1010, pages 3 and 4) show that a total of $6,807, i.e. the Total (G/L codes) amount, was reversed out of account no. 911 and added back to Administrative and General Expenses and Taxes Other than Income Taxes. The specific amounts that were reversed are also provided on this work paper, i.e. the on-cost amounts for Corporate Administration Expense, Employee Benefits and Payroll Taxes (see expense elements 406, 422 and 423, respectively). 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.

Q. Do the total on-cost amounts always net to zero for each of the accounts?

A. No. While the (G/L codes) amount for Test Year 2007 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 <u>are</u> 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 (G/L codes) amount, 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.

Q. Can you illustrate the situation where the total on-costs for an account do not net to zero?

A. Yes, pages 1401 and 1402 of HECO-WP-101(I) (HECO-1010, pages 1 and 2) show that the net on-cost total for account no. 9301 is $7,106. The (G/L codes) amount of ($7,397) represents the total on-cost amount reversed. The on-cost amounts reversed include a portion of the Energy Delivery on-cost amount of $9,018 (see expense element 404).

Q. Can you please summarize your testimony with respect to the "reversal" of certain on-costs and how the reversal relates to "(GL codes)" amounts?

A. Yes. The Company's core business software system called ELLIPSE generally applies on-costs to the designated clearing base regardless of the NARUC account number being charged. However, for Corporate Administration Expenses, Employee Benefits and Payroll Taxes, the NARUC USOA requires that the O&M expense related portion of the on-cost be charged to a particular account or accounts. Therefore, the ELLIPSE applied on-costs are "reversed" and added back to the NARUC designated account numbers. With respect to the 2006 and 2007 budget expenses, the reversed amounts equal the (GL codes) amounts (e.g. see HECO-WP-101 series of work papers). With respect to recorded year amounts, the (G/L codes) amount will not necessarily equal the reversed amounts,

since (G/L codes) include other types of accounting entries required to complete the financial closing process.

Q. How is the estimated Account No. 922 – Administrative Expenses Transferred amount determined?

A. The calculation of the Test Year 2007 estimate of $3,130,000 is shown on HECO-1011.

Q. How does the Test Year 2007 normalized estimate for Account No. 922 compare with prior year amounts?

A. As shown in HECO-1002, page 1, the Test Year 2007 normalized estimate for Account No. 922 of ($3,130,000) compares with prior year amounts as follows:

	($ Thousands)
2001 Recorded	(2,337)
2002 Recorded	(1,757)
2005 Recorded	(1,965)
2004 Recorded	(1,833)
2005 Recorded	(1,815)
2006 Budget	(2,175)
2007 Adj. TY Estimate	(3,130)

Q. What are the more significant factors affecting the amount of Administrative Expenses Transferred from year to year?

A. The year-to-year differences are driven by the individual factors comprising the calculation of the transfer amount. The most significant factors are the amount of costs charged to Account Number 921, and the relative proportion of HECO capital and billable work to non-capital and non-billable work. In addition, the transfer amount has increased in 2007, reflecting a change in the accounting for

the Contract Administrators in the Purchasing Division. In 2006, three Contract Administrators, who were previously included in the Power Supply and Construction and Maintenance areas (and whose costs were charged to the Power Supply O&M expense and Construction and Maintenance clearing accounts), were consolidated under the Purchasing Division. Upon consolidation, the Contract Administrators began charging their time to Account 920, similar to the other Purchasing Division employees (Buyers, and Purchasing Administrators). The budget for 2006 did not reflect the Contract Administrators in the labor cost pool to determine the Administrative Expenses to be transferred. For the 2007 budget and test year estimates, the Contract Administrators were included in the labor cost pool to determine the Administrative Expenses to be transferred. Similarly, the non-labor costs for the contract administrators were included in Account 921 and included as part of the non-labor costs to determine the non-labor administrative costs to be transferred for 2007.

OUTSIDE SERVICES

Q. What are the accounts and test year amounts for the Outside Services group of accounts?

A. As shown in HECO-1001, page 1, the Outside Services group of accounts, and the associated normalized amounts totaling $1,320,000 for Test Year 2007 are as follows:

Acct. No.	Description	Test Yr. 2007 Estimates ($ Thousands)
923010	Outside Services - Legal	$ 155
923020	Outside Services – Other	$1,165

Q. What is the general nature of Outside Services expenses?

A. Outside Services expenses include amounts paid by the Company for the services of attorneys (Account No. 923010 - Outside Services - Legal) and for the services of auditors, consultants, etc. (Account No. 923020 - Outside Services - Other). Note that billings from HEI for services rendered to HECO are included in Account No. 921 – A&G Expenses – Non Labor, and has been discussed earlier in my testimony. Some of the outside services are needed by HECO on an ongoing basis, such as the audit by the Company's independent auditor, KPMG LLP. Other outside services are incurred on an "as needed" basis. For example, the cost of consultants to assist the Company in matters such as fuel oil contract negotiations and salary administration are charged to Outside Services.

<u>923010 - Outside Services - Legal</u>

Q. What is the Company's Test Year 2007 estimate for Account No. 923010 - Outside Services - Legal?

A. The Test Year 2007 estimate for Account No. 923010 - Outside Services - Legal is $155,000 as shown in HECO-1001, page 1.

Q. How was the test year amount determined?

A. The Test Year 2007 estimate was developed as part of the Company's budgeting process. In general, forecasters most knowledgeable about the requirements for outside legal services estimate these costs and include them in preparing their 2007 O&M Expense Budget.

Q. How does the Test Year 2007 amount compare with amounts for previous years?

A. The Test Year 2007 estimate of $155,000 is $121,000 more than the 2005 recorded amount. Refer to HECO-1002, page 1.

Q. What are the reasons for the increase?

A. The increase is due largely to the following items:

Grievances and arbitration expenses	$70,000
Managing securities	28,000
Processing easements	12,000
Processing/managing legal documentation	12,000
Other	(1,000)

Q. Please explain the $70,000 increase related to grievances and arbitration expenses.

A. The Test Year 2007 amount of $75,000 for grievances and arbitration expenses reflects the increase in the number of pending arbitrations for 2007. The 2005 recorded amount of $5,000 is exceptionally low because the arbitrations scheduled for 2005 were either settled or cancelled prior to arbitration. Prior to 2005, there were 11 pending cases, but currently there are 28 cases that may result in arbitration.

Q. Please explain the $28,000 increase related to managing securities.

A. The Test Year 2007 amount for legal services related to managing securities is $56,000, which reflects an increase of $28,000 over 2005 expenses of $28,000. Legal services for the Treasury area are expected to be higher due to increased financing requirements, such that more legal fees will be required to review documents.

Q. Please explain the $12,000 increase in outside legal fees related to processing easements.

A. The test year 2007 amount for Account No. 923010 includes $12,000 for outside fees to research and issue opinions and/or draft documents for the Company with respect to processing easements, when the work would be too time consuming or

too complicated for in-house attorneys to work on. The legal costs related to processing easements, like other legal costs, vary each year with the number and complexity of issues that arise during the year.

Q. Please explain the increase in outside legal costs related to processing/managing legal documentation.

A. Outside legal costs for processing/managing legal documentation are expected to be $12,000 higher in 2007 than in 2005 due to the increase in expected legal requirements. The legal costs related to legal documentation, like other legal costs, vary each year with the number and complexity of issues that arise during the year.

923020 - Outside Services – Other

Q. What is the Company's Test Year 2007 estimate for Account No. 923020 - Outside Services - Other?

A. As shown in HECO-1001, page 1, the Test Year 2007 estimate for Account No. 923020 - Outside Services – Other is $1,165,000.

Q. What is included in the test year estimates for Account No. 923020?

A. Each year, a good portion of the costs included in Account No. 923020 is for KPMG LLP audit fees and cash management related fees such as bank fees, line of credit fees and rating agency fees. The other costs included in this account are generally for consultant fees to various firms. Although the nature of the consulting work varies from year to year, the Company requires a certain overall level of consulting work each year. For the test year, Account No. 923020 includes consulting fees for:

1) Integrated audit fees to KPMG $752,000

2) Cash management and financing related fees $264,000

3) Other $149,000

Q. How does the test year estimate for Account 923020 compare with the actual costs incurred during 2005?

A. The Company's 2007 test year estimate for Account No. 923020 of $1,165,000 is $564,000 less than the actual 2005 expenses. Refer to HECO-1002, page 1.

Q. What are the reasons for the decrease?

A. The test year estimates are lower than the amounts incurred in 2005 in part because HECO incurred consulting fees of approximately $362,000 related to tax research that are not expected to be incurred in 2007. In addition, fees for the integrated audit in 2007 are expected to be less than in 2005. Audit fees in 2005 were higher as it reflected the first year of filing the Company's Annual Report on Form 10-K to the Securities and Exchange Commission under the requirements of Section 404 of the Sarbanes-Oxley Act of 2002 (SOX 404). Under SOX 404, KPMG LLP is required to attest to management's evaluation and certification of HECO's system of internal controls over financial reporting. In addition, HECO expects to incur less fees related to cash management.

INSURANCE

Q. What are the accounts and Test Year 2007 amounts for the Insurance group of accounts?

A. As shown in HECO-1001, page 2, the Insurance group of accounts, and the associated Test Year 2007 amounts totaling $9,740,000, , are as follows:

Acct. No.	Description	Test Yr. 2007 Estimate ($ Thousands)
924	Property Insurance	$2,939
925	Injuries and Damages	$6,801

Q. Why are these accounts grouped together, and what are the differences among the accounts?

A. Incurring these expenses is necessary to prevent or control the financial impact of accidental losses on the Company's performance. Account No. 924, "Property Insurance", includes the cost of insurance for utility property owned by the Company and claims reserves for damage to this property.

Account No. 925, "Injuries & Damages", includes the cost of insurance to protect the utility against injuries to, and damage claims of, employees as well as claims reserves for payments not covered by insurance. Account No. 925 also includes the cost of insurance or claims reserves to protect the Company against injuries to, and damage claims of, members of the general public. Further, Account No. 925 includes the costs incurred with respect to safety and accident prevention programs and activities.

Q. Are the costs for the Insurance group of accounts addressed by another Company witness?

A. Yes, the Company's witness for insurance costs is Mr. Russell Harris (HECO T-11).

EMPLOYEE BENEFITS

Q. What are the accounts and Test Year 2007 amounts for the Employee Benefits group of accounts?

A. As shown in HECO-1001, page 2, the Employee Benefits group of accounts, and the associated Test Year 2007 normalized amounts totaling $27,636,000, are as follows:

Acct. Nos.	Description	Test Year 2007 Estimates ($ Thousands)
926000	Employee Pensions and Benefits	$27,391
926010	Employee Benefits – Flex Credits	$10,716
926020	Employee Benefits Transfer	($10,471)

Q. What is the general nature of Employee Benefits expense?

A. These expenses represent the amount of employee benefit costs charged to operation and maintenance (O&M) expenses. The amount of employee benefits charged to O&M expenses represents a net amount resulting from (1) the total cost of employee benefits (Account Nos. 926000 and 926010 and the electric discount for retirees) less (2) the amount transferred to plant construction or billed to affiliated companies and outside third parties for services rendered (Account No. 926020).

Q. Are employee benefit expenses addressed in detail by another Company witness?

A. Yes. Ms. Julie Price (HECO T-12) addresses the gross costs of employee benefits expenses (Account Nos. 926000 and 926010 and the electric discount for retirees). The employee benefits transferred amount is addressed later in this testimony.

Q. Do employee benefit expenses include post-employment benefit costs?

A. Yes.

Q. What are post-employment benefits?

A. Post-employment benefits are benefits to former or inactive employees (including beneficiaries and covered dependents) after employment but before retirement.

Inactive employees are those who are not currently rendering service to the employer and who have not been terminated. Examples of post-employment benefits include salary continuation, severance benefits, job training, counseling, and the continuation of health care benefits and life insurance coverage.

Q. What are the most significant post-employment benefits costs incurred by HECO?

A. The most significant post-employment benefit costs incurred by the Company are disability and medical coverage payments to employees on long-term disability ("LTD"). The liability for this LTD benefit, as of September 30, 2006, was $487,000.

Q. What does Statement of Financial Accounting Standards ("SFAS") No. 112 - Employers' Accounting for Post-employment Benefits say about accounting for post-employment benefit costs?

A. SFAS No. 112 requires the Company to recognize an expense and a liability (accrual method) for the full amount of post-employment benefits to be paid to qualifying employees if: 1) the liability is attributable to the employees' services already rendered, 2) the employees' rights to those benefits accumulate or vest, 3) payment of the benefits is probable, and 4) the amount of the benefits can be reasonably estimated.

Q. Does the Company's Test Year 2007 estimate for Employee Benefits Expense include post-employment benefit expenses on an accrual basis?

A. No, post-employment benefit expenses are included in the Company's Test Year 2007 estimate based on when the benefits are paid (pay-as-you-go method) versus when the liability for the benefit is incurred. The Commission has approved post-employment benefit expenses based on the pay-as-you-go method of accounting for such benefits in its decision and orders in prior rate cases.

Q. Is the Company requesting that the costs under SFAS No. 112 (accrual method) be included in its Test Year 2007 Employee Benefits Expense?

A. No. The Company's Test Year 2007 estimates reflect post-employment benefits costs on a pay-as-you-go basis.

Q. If SFAS No. 112 costs (accrual method) are not included in revenue requirements in this rate case, what will be the impact on the Company's financial statements?

A. The Company's liability for post-employment benefits under SFAS No. 112 is being recorded, even if the costs are not included in the current rate case. The costs to establish the liability are accrued and classified as a regulatory asset until the benefits are paid, after which time the amounts paid are reclassified from regulatory asset to expense.

Q. Has this changed from the 2005 test year rate case?

A. No, the Company has been consistently accounting for post-employment benefit costs as described above.

Q. Is the Company's accounting treatment for post-employment benefits in compliance with accounting principles generally accepted in the United States of America?

A. Yes. The Company's accounting treatment is in accordance with SFAS No. 71, Accounting for the Effects of Certain Types of Regulation, if it is probable that future rates will provide recovery of the liability for post-employment benefits, i.e. if the Commission's decision and order in this case affirms the continued use of the pay-as-you-go method of accounting for post-employment benefit costs.

<u>Account No. 926020 – Employee Benefits Transferred</u>

Q. What is the Company's Test Year 2007 estimate for Account Number 926020 – Employee Benefits Transferred?

A. As shown on HECO-1001, page 2, the Test Year 2007 estimate for Account 926020 – Employee Benefits Transferred is ($10,471,000).

Q. What does the transfer amount represent?

A. The transfer amount represents the portion of total employee benefits expenses, most of which are initially recorded in Accounts 926000 and 926010, which is transferred as an on-cost to the costs of plant construction or billed as an on-cost to affiliated companies and outside third parties for services rendered.

Q. How does the Company account for Employee Benefits Costs related to non-capital, non-billable work, i.e. Employee Benefits Costs with respect to O&M expense related work?

A. As discussed earlier with respect to Account No. 922-Administrative Expenses Transferred, under the NARUC USOA, the O&M expense related portion of Employee Benefits Costs must be classified as A&G expense. As a result, the O&M expense related portion of Employee Benefits on-costs applied to various O&M expense accounts by ELLIPSE (the Company's core business software system) is "reversed" and added back to Administrative and General Expenses.

Q. How was the Test Year 2007 transfer estimate determined?

A. The calculation of the Test Year 2007 estimate of ($10,471,000) is shown in HECO-1012.

Q. How does the Test Year 2007 transfer estimate compare with previous year amounts?

A. The Test Year 2007 transfer estimate is ($10,471,000) and the recorded 2005 was ($6,783,000), resulting in a difference of $3,688,000. Refer to HECO-1002, page 1.

Q. What are the more significant factors affecting the amount of Employee Benefits

Transferred from year to year?

A. The year-to-year differences are driven by the individual factors comprising the calculation of the transfer amount. The most significant factors are the amount of costs charged to Account Number 926, and the relative proportion of HECO capital and billable work to non-capital and non-billable work. In addition, there have been large swings in recorded benefit costs (primarily pension and postretirement benefit other than pensions) over the past several years due to significant volatility in the stock market and, therefore, the trust fund's return on assets.

MISCELLANEOUS

Q. What are the accounts and Test Year 2007 estimates for the Miscellaneous group of accounts?

A. As shown in HECO-1001, page 3, the Miscellaneous group of accounts, and the associated amounts totaling $7,487,000 for Test Year 2007, are as follows:

Acct. No.	Description	Test Yr. 2007 Estimates ($ Thousands)
928	Regulatory Commission Expense	$ 283
9301	Inst or Goodwill Adv Expense	30
9302	Misc General Expenses	3,315
93100	Rents Expense	2,757
93200	A&G Maintenance	1,102

Q. What is the nature of the costs charged to the miscellaneous group of accounts?

A. The miscellaneous group of accounts includes a variety of unrelated costs which

are necessary for Company operations, but which are not provided for in other functional accounts.

Q. Are Miscellaneous A&G Expenses addressed in detail by another Company witness?

A. Yes. Miscellaneous A&G Expenses are addressed in detail by Mr. Bruce Tamashiro in HECO T-13.

BUDGET PROCESS

Q. How were the test year 2007 estimates for Operations and Maintenance ("O&M") expenses developed?

A. The test year 2007 estimates for O&M expenses were initially developed in early 2006. During the budgeting process, detailed estimates of O&M expenses, called responsibility area ("RA") budgets, were prepared by responsible parties ("users") throughout the Company. The Company's officers reviewed the O&M expense estimates for their respective areas of responsibility. In addition, Company witnesses for O&M expenses reviewed the estimates for their respective series of O&M expense accounts and participated in review meetings with the Company's officers. The RA budgets were then summarized to produce a 2007 O&M expense budget that was presented to the Company's officers.

Q. Were adjustments to the 2007 O&M expense budget made after the reviews by the Company's officers and witnesses?

A. Yes. The users were given opportunities to make adjustments to the 2007 O&M expense budget. After those adjustments were made, the 2007 O&M expense budget became the starting point for the test year 2007 O&M expense estimates, which are summarized at HECO-WP-101.

Q. Was the 2007 O&M expense budget subsequently reviewed?

A. Yes. The Company's officers further reviewed the 2007 O&M expense budget which was incorporated in the 2007 earnings estimate, and subsequently presented to HEI and the Board of Directors of the Company and HEI.

Q. Did the O&M expense witnesses make adjustments to the 2007 O&M expense budget to arrive at the test year 2007 O&M expense estimates?

A. Yes. There are three types of adjustments that were made to determine the test year estimates: (1) budget adjustments, (2) issue simplification adjustments, and (3) normalization adjustments.

Q. What are the reasons for making budget adjustments?

A. Adjustments to the 2007 O&M expense budget are made either (1) to make adjustments for known or expected significant changes in the test year, which were not reflected in the final budget at the time it was completed, or (2) to correct errors that were discovered after the estimates were completed.

Q. What is an example of a budget adjustment?

A. As discussed earlier in this testimony, e.g. under the discussion with respect to Account No. 920, the Company's unadjusted 2007 O&M Expense Budget does not include amounts for abandoned capital project costs as forecasters do not generally contemplate that projects will be abandoned. A budget adjustment is necessary, therefore, to include in revenue requirements a reasonable amount for the write-off of abandoned capital project costs.

Q. What are issue simplification adjustments?

A. These adjustments are made to simplify issues and are adjustments made only for rate case purposes. Adjustments relating to issue simplification are addressed by Mr. Robert Alm in HECO T-1. For example, HECO has excluded from the test

year estimate certain costs (such as performance incentive compensation expenses, which I discussed earlier) from the test year results of operations, which were denied and/or contested in prior rate cases, in order to simplify and limit the contested issues in this case. As Mr. Alm explains, HECO's position continues to be that these are appropriate costs of doing business that HECO will actually incur, and must be included in rates if HECO is to be afforded a full opportunity to earn a fair return. Therefore, HECO has not waived its right to seek recovery of these costs in future rate cases.

Q. What are normalization adjustments?

A. These are ratemaking rather than budget adjustments. Normalization adjustments are intended to make the test year results of operation more representative of a normal, on-going level of operations, or of the operating conditions that are expected to be in effect during the period that the rates set in this docket will be in effect. For example, it may be appropriate to amortize an unusual, non-recurring expense over a period of several years for ratemaking purposes if rates are not adjusted on an annual basis.

Q. What is an example of a normalization adjustment?

A. As discussed later by Ms. Julie Price in HECO T-12, a normalization adjustment to reduce the 2007 budget estimates to only one fourth of the cost of the union negotiations consultant costs that will be incurred in 2007 has been made to determine the test year estimates. For such consulting costs, it may be appropriate to amortize such a non-recurring expense over a period of four years for ratemaking purposes.

<u>General Wage Increase</u>

Q. What is the impact of general wage increases included in the 2007 budget?

A. On an annual basis, general wage rates for test year 2007 are expected to be 6.53% (for bargaining unit employees) and 7.64% (for merit employees) higher than the respective 2005 wage rates (see HECO-1005).

Q. How are wage increases determined for bargaining unit positions for the test year?

A. In accordance with the Company's negotiated labor agreement with the International Brotherhood of Electrical Workers, Local 1260, non-compounded wage increases for bargaining unit employees are 1.5% on May 1, 2005, 1.5% on November 1, 2005, 1.5% on May 1, 2006, and 3% on November 1, 2006. The percentage increases are applied to bargaining unit wage rates as of November 1, 2002. As discussed by Ms. Julie Price in HECO T-12, for purposes of the 2007 budget, wages for bargaining unit positions were increased by 3.5% effective November 1, 2007.

Q. How was the 2007 salary increase budget determined for merit positions?

A. For merit employees, wage rates increased by an average of 3.5% on May 1, 2005 and 0.25% on September 1, 2005 over wage rates as of April 30, 2005. Merit wage rates are estimated to increase by 3.5% effective May 1, 2006, 0.25% effective September 1, 2006 applied to merit wage rates as of April 30, 2006 and 3.5% effective May 1, 2007 and 0.25% effective September 1, 2007 with the percentage increases being applied to merit wage rates as of April 30, 2007.

Standard Labor Rates

Q. What is the general concept behind standard labor rates?

A. The general concept is to distribute labor costs (amounts paid to employees) using the same rate per hour regardless of the type of "pay" hour involved (e.g. straight time, time and one-half, or double time pay).

Q. Why is HECO using standard labor rates?

A. One key reason is that the Company's core business software system called ELLIPSE (formerly referred to as the Mincom Information Management System, or MIMS, which was purchased from Mincom, Inc., an Australian based company) requires the use of standard labor rates in distributing labor costs.

Q. How are the Companies accounting for the difference between the amounts paid employees for hours worked and the amount of labor costs distributed using standard labor rates?

A. The difference between labor amounts paid and the amounts distributed is "trued up" in that the difference is used to adjust the amounts distributed so that, in total, the amounts distributed equal the amounts paid for each employee.

Q. How were the Standard Labor Rates calculated?

A. The basic calculation is to divide actual amounts paid by total labor hours, e.g. straight time, time and one-half and double time hours. Separate standard labor rates are calculated based on employees grouped with similar roles or positions. These employee groupings are called labor classes. The calculated hourly rate is then adjusted to reflect any general pay increases expected during the year in which the Standard Labor Rates will be in effect. The Standard Labor Rates are re-evaluated at least once a year, and adjusted as appropriate.

Q. What is the basis for the standard labor rates used for the test year?

A. Recorded 2005 labor information was used to develop the standard labor rates for the 2007 test year labor estimates. The 2005 labor hours information was then adjusted for the merit overtime hours that were not compensated to determine the base standard labor rate for 2007. For the bargaining unit labor classes, 2005 hours were adjusted to reflect the overtime levels anticipated in 2007.

Q. Is this consistent with what was done for the 2005 test year standard labor rate

calculation?

A. In the direct testimony filing in the 2005 test year rate case, HECO did not adjust the base information for the bargaining unit labor classes to reflect the overtime levels anticipated in the test year. In the discovery process, HECO proposed an adjustment to reflect the overtime levels for the bargaining unit labor classes. The adjustment was accepted by the Consumer Advocate and Department of Defense in that proceeding. The process to adjust for the base information was consistently applied to determine the standard labor rates for the 2007 test year estimates.

Q. How is the true-up calculated?

A. The true-up is based on the proportionate share of labor dollars charged to each activity, work order, etc. to the total amount of labor dollars charged during the applicable period. For each employee, the true-up is calculated and applied at the time of each paycheck run and the processing of each month-end payroll accrual. The payroll accrual records labor costs from the end of the last pay-period in the month to the end of the month.

Q. Can you illustrate the "true-up" process?

A. Yes. The "true-up" process is illustrated in HECO-1013. The left side of the exhibit illustrates how an employee's pay is calculated, and how the pay would be distributed if the employee's actual pay rate was used. The right side of the exhibit illustrates how the standard labor rate is calculated and how the employee's labor costs are initially distributed and then trued-up to the employee's total actual pay. For simplicity, the illustration is based on an assumed actual straight time pay rate of $10.00 per hour, and an assumed equivalent calculated standard labor rate of $10.00 per hour.

Q. Were the details of standard labor rates and the true-up process discussed in a prior rate case?

A. Yes. The details of standard labor rates and the true-up process were discussed in HECO T-13 in Docket No. 04-0113.

Q. What is the impact of using standard labor rates instead of actual employee pay rates in calculating the Test Year 2007 labor estimates?

A. The impact has not been quantified, and the calculation would be very difficult to perform. However, a sense of the possible difference can be obtained from reviewing the size of the net true-up adjustment in prior years. The annual net true-up adjustments for 2001 through 2005, by block of NARUC account numbers, are provided in HECO-1014.

General Inflation Factor

Q. Was a general inflation factor utilized in HECO's budgeting process?

A. Yes, in developing the non-labor O&M expense estimates for the 2007 budget, HECO used a general inflation factor when specific known cost indices for non-labor costs were not available. Users were instructed to reflect in their 2007 budget, specific inflation rates or cost indices that were applicable to the cost items being estimated. When specific known cost indices for non-labor costs were not available, a general inflation factor was used.

Q. What general inflation factor was used in developing the 2007 O&M expense budget?

A. HECO used a general inflation factor of 2.5% for the 2007 O&M expense budget.

Q. How was the above general inflation factor determined?

A. HECO used an inflation rate that appeared to be reasonable considering the information available at the time the budget was prepared. The Blue Chip

Economic Indicators reported in its February 10, 2006 issue (see HECO-WP-1015, page 1) that the Consumer Price Index (CPI) for 2007 would increase by 2.4%, which was rounded to 2.5% to arrive at the general inflation factor for the 2007 O&M expense budget.

Q. Do more recent estimates support HECO's inflation rate assumptions as reasonable?

A. Yes. HECO's inflation rate assumption for test year 2007 is reasonable, or perhaps understated, as the August 10, 2006 issue of the Blue Chip Economic Indicators reported that the CPI for 2007 would now increase by 2.7% (see HECO-WP-1015, page 2).

Q. Has the Commission allowed the use of inflation factors in determining projected expenses in previous rate case decisions?

A. Yes. The Commission allowed the use of an inflation adjustment based on an inflation factor in previous decisions, including HECO's 1995 test year rate case, Docket No. 7766.

Q. Has the Company provided a list of activities where the inflation factor was used, as requested by the Consumer Advocate in prior cases?

A. Yes, a list of activities where the general inflation factor was used in the Company's budgeting tool in determining the non-labor estimates for the test year is provided in HECO-1015.

Q. How were the list of activities where the inflation factor was used and the corresponding budget amounts determined?

A. The Company's budgeting tool allows the user to select a data field indicating the use of an "escalator" (general inflation factor). By selecting this "escalator" data field, the budgeting tool will automatically "escalate" the amount budgeted by the

"escalation" factor that has been set up in the budgeting tool. The information on HECO-1015, pages 1 through 8, was developed by selecting the budget data that used the "escalation" data field.

Comparison of 2007 and 2005 expenses

Q. How do the test year 2007 estimates compare with the actual expenses in 2005?

A. Comparisons of the test year 2007 estimates with the actual expenses for 2005 will be addressed by the Company witness responsible for their respective series of account numbers. Production O&M expenses will be covered by Mr. Dan Giovanni in HECO T-6, T&D O&M expenses will be covered by Mr. Robert Young in HECO T-7, Customer Accounts O&M expenses will be covered by Mr. Darren Yamamoto in HECO T-8, Customer Service O&M expenses will be covered by Mr. Alan Hee in HECO T-9, Administrative and General O&M expenses will be covered by myself in this testimony, as well as Mr. Russell Harris in HECO T-11, Ms. Julie Price in HECO T-12, and Mr. Bruce Tamashiro in HECO T-13.

Budgeting for Information Technology Services ("ITS")?

Q. Please describe ITS costs?

A. ITS costs are those costs incurred by the Information Technology & Services department. This department operates and maintains the IT systems used at HECO. The department consists of 3 major divisions: Infrastructure and Operations, Development Services, and Customer Care. The latter division also handles the Mailing Services, Records Management, and Printing Services function for the Company. The major department costs include labor, outside services expenses, IT consulting, materials and other (primarily software costs and equipment rentals).

Q. Where are ITS costs reflected in this filing and how are they developed?

A. ITS costs are reflected in each NARUC expense area, to functions benefiting from ITS services. These costs are either directly charged or "costed" via the ITS costing process. See HECO-WP-1050 for the distribution of "costed" ITS expenses to the various NARUC accounts.

Q. Please describe the ITS costing process.

A. As mentioned a portion of the ITS department costs are directly charged to functional areas. Direct charged costs primarily relate to the Mailing Services, Records Management and Printing Services groups of the Customer Care division in ITS. All ITS department operating costs other than direct charges are charged to the ITS Clearing Account, which are subsequently "costed" to the functional areas of the Company, and reflected as costs under the responsibility area ("RA") code PEZ and expense element 451. The ITS costing process for 2007 test year expenses is documented in detail in workpapers provided as HECO-WP-1051. The process is summarized in a narrative provided in pages marked "A" with additional details reflected in the other workpapers of HECO-WP-1051 marked as A-1 through J-1.

Q. How much of the ITS costs are estimated to be either directly charged or cleared through the Clearing Account in test year 2007?

A. Direct charges for 2007 are estimated at $1,102,043 and budgeted directly to the functional areas. These costs are shown on workpaper J. For 2007, costs of $14,834,300 are projected costs to be charged to the clearing account and costed via the clearing account process. These costs are shown on workpaper A-1.

Q. When did the Company start using the ITS clearing account and costing process?

A. The current ITS costing system has been used by the Company since 2001, the

year the ITS department was reorganized into its current structure.

Q. Have there been any changes made to the 2007 Costing process since 2001?

A. Yes. In 2006, ITS implemented a new procedure for costing software maintenance and license costs. A new allocation was established to ensure that all software maintenance and license costs are charged to expense, per AICPA Statement of Position 98-1 – Accounting for the Costs of Computer Software Developed or Obtained for Internal Use. Prior years' allocations included charges to clearing accounts (i.e. Energy Delivery clearing, Power Supply clearing, Customer Installations clearing), which did not result in the full allocation of these costs to expense.

Q. How was the costing process modified to ensure that all ITS costs are charged to expense?

A. The Company established a new allocation by using one predominant expense code for each NARUC expense category benefiting from the software costs.

Q. Did the Company use this new allocation in preparing the budget used for the test year.

A. Yes, it did.

Q. What was the budget impact of using this new allocation?

A. For some NARUC expense accounts, the proportion of allocated ITS costs have increased when compared to 2005 actuals, prior to the implementation of this new allocation. The impact of the new ITS costing allocation process is identified by the other O&M expense witnesses to the extent it affects their O&M expense comparisons.

COMPUTER SOFTWARE DEVELOPMENT COSTS

Q. What directive has the Commission issued regarding the ratemaking treatment for computer software development costs?

A. In Decision and Order No. 18365, Docket No. 99-0207 (Hawaii Electric Light Co., Inc.'s Test Year 2000 rate case), the Commission ruled that its pre-approval is required before any computer software development project costs may be deferred and amortized for ratemaking purposes.

Q. How is the Company currently recording the costs of computer software development projects?

A. In accordance with the Commission's ruling in Docket No. 99-0207, the Company is expensing as incurred, for ratemaking purposes, all computer software development project costs, unless prior Commission approval is obtained to defer and amortize certain project costs.

Q. If Commission approval is obtained to defer and amortize certain project costs, how is the Company currently recording computer software development costs?

A. The Company's current accounting policy with respect to computer software development costs is provided in HECO-1016. The Company's policy, updated as of April 1, 2006, is consistent with the accounting treatment specified in the stipulated agreements approved by the Commission in the Outage Management System ("OMS") and Customer Information System ("CIS") proceedings. As a result of those dockets, the previous policy was updated to incorporate more of the details of implementing the policy.

The Company's policy is also consistent with the American Institute of Certified Public Accountants' Statement of Position 98-1 (SOP 98-1) – Accounting for the Costs of Computer Software Developed or Obtained for

Internal Use, issued in March 1998, and Emerging Issues Task Force ("EITF") Issue 97-13 – Accounting for Costs Incurred in Connection with a Consulting Contract or an Internal Project That Combines Business Process Reengineering and Information Technology Transformation, discussed by the EITF on November 20,1997.

Q. What specific details were incorporated into the policy as a result of the stipulated agreements?

A. In the stipulated agreements, HECO agreed to work with the Consumer Advocate to identify costs related to process reengineering, and agreed that such costs would be expensed as incurred. In addition, HECO and the Consumer Advocate agreed that certain overhead costs related to energy delivery, customer installations and corporate administration, which would be included in the deferred costs as the current ELLIPSE system includes such costs as part of the normal overhead calculation process, should be expensed in accordance with SOP 98-1.

Q. Please summarize how the costs are treated under the policy.

A. In summary, software development projects can be segregated into three stages as follows:

1. Preliminary Project Stage (Stage I) - includes conceptual formulation of software alternatives, evaluation of the alternatives, determination of the existence of needed technology, and final selection of alternatives, and if necessary, selection of a consultant to assist in the development/installation. These costs are expensed as incurred.

2. Application Development Stage (Stage II) - includes the design of a chosen path, including software configuration and software interface, coding, software installation, and testing of the software and parallel processing. Certain internal and external costs incurred during this stage should be capitalized (i.e., charged to a deferred account.) However, external and internal training costs, as well as certain conversion costs, are charged to expense.

3. Post-Implementation/Operation Stage (Stage III) - includes training and application maintenance. Internal and external costs incurred during

this stage should be charged to expense as incurred.

4. Allowance for funds used during construction ("AFUDC") would be applied to the deferred project costs during Stage II. The deferred costs would be amortized over a straight-line basis over the useful life of the software (or such other amortization period as the Commission determines to be reasonable) beginning the month following when the software is ready for intended use. Generally, the software is ready for intended use after substantial testing is completed.

5. Similar to the un-depreciated costs of capitalized plant and equipment, the unamortized costs of computer software development projects should be included in the calculation of rate base. Rate base treatment is appropriate because investors have provided the funds up front to develop the computer software system and should be allowed to earn a fair return on their unamortized investments.

6. Under the current Company policy, the costs of projects estimated at less than $500,000 are expensed as incurred based on immateriality, even though some of the costs could theoretically be capitalized. For purposes of HECO's Test Year 2007 estimates, the costs of projects estimated at less than $500,000 were assumed to be expensed. This is consistent with the treatment for costs in Docket No. 04-0113, HECO's pending rate case. The parties in the proceeding did not object to such treatment for software development costs below $500,000.

Q. Has the Commission approved the deferral and amortization of computer software development costs for certain projects?

A. Yes, the Commission has approved in Decision and Order No. 21798 in Docket No. 04-0268, issued May 3, 2005, the request of HECO, HELCO and MECO (as modified by the stipulation with the Consumer Advocate) to defer certain computer software development costs for the Customer Information System ("CIS") project, accumulate AFUDC on the deferred costs during the deferral period, amortize the deferred costs over a twelve year period, and include the unamortized deferred costs in rate base. In addition the Commission has approved in Decision and Order No. 21899 in Docket No. 04-0131, issued June 30, 2005, the Company's request (as modified by the stipulation with the Consumer Advocate) to defer certain software development costs for the Outage

Management System ("OMS") project, accumulate AFUDC on the deferred costs during the deferral period, amortize the deferred costs over a twelve year period, and include the unamortized deferred costs in rate base. HECO also has requested, in Docket No. 2006-0003, approval to defer certain software development costs for the Human Resource Suite System ("HR Suite") project, accumulate AFUDC on the deferred costs during the deferral period, amortize the deferred costs over a twelve year period, and include the unamortized deferred costs in rate base. HECO and the Consumer Advocate are discussing a possible settlement agreement in that proceeding. The Consumer Advocate has indicated it does not object to approval of the application. However, it had several concerns and recommended several conditions to address those concerns. A settlement agreement is expected to address those concerns.

Q. How are the costs for the CIS project reflected in the test year estimates?

A. As described by Mr. Darren Yamamoto in HECO T-8, the CIS project is expected to be completed in April 2008. During 2007, the project will be in stage II, and costs incurred for the project are either expensed or deferred (with related AFUDC) depending on the type of work performed. Since the project will not be ready for use by the end of the test year, the deferred costs are budgeted to accrue AFUDC and are not included in rate base. No amortization expense is included in the test year for the CIS project.

Q. How are the costs related to the OMS project reflected in the test year estimates?

A. As described by Mr. Robert Young in HECO T-7, the 2007 budget and test year estimates were developed under the assumptions that (1) the deferred OMS project costs (including AFUDC) would amount to $4,247,000, (2) the software would be ready for use in March 2007, and (3) amortization of the deferred costs

over a twelve year period would begin in April 2007. The amortization expense from April through December 2007 was estimated to be $258,000. The unamortized cost as of the end of the year was estimated at $3,989,000, as shown on HECO-1017, and included in rate base, as discussed by Ms. Gayle Ohashi in HECO T-17. However, as discussed by Mr. Robert Young in HECO T-7, the project is now projected to be ready for use in January 2007, and amortization of the deferred costs would begin in February 2007.

Q. How are the costs related to the HR Suite project reflected in the test year estimates?

A. As described by Ms. Price in HECO T-12, Phase 1 of the HR Suite project is expected to be completed in November 2007. The deferred costs for Phase 1 of the HR Suite project (including AFUDC) are estimated at $2,044,000, which will be amortized over a twelve year period beginning December 2007, the month following the completion of Phase 1. Amortization expense for 2007 amounts to $14,000. The estimated unamortized balance at December 31, 2007 for the HR Suite project amounts to $2,029,000, as shown on HECO-1017 and is included in the year end rate base as discussed by Ms. Gayle Ohashi in HECO T-17.

ABANDONED CAPITAL PROJECT COSTS

Q. What is an abandoned capital project?

A. 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, i.e. a "no go" decision is made sometime 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 at management's

discretion, i.e. delayed generally for more than two years.

Q. How are abandoned project costs treated?

A. 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 to other 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 may seek PUC approval for special accounting and ratemaking treatment as appropriate under the circumstances.

Q. Is there a more detailed description of how the Company accounts for capital project costs?

A. Yes. The Company's policy is provided at HECO-1018.

Q. Why is an adjustment for abandoned project costs necessary?

A. The Company expects that projects will be abandoned from time to time, and that the related costs incurred will be written off to expense. However, the Company's 2007 O&M Expense Budget does not include estimates for specific abandoned project costs since forecasters do not generally contemplate that projects will be abandoned. Therefore, an adjustment to the Company's 2007 O&M Expense Budget is necessary to include in revenue requirements a reasonable amount for abandoned project costs since such costs are expected to be incurred.

Q. How were the adjustment amounts for abandoned project costs determined?

A. The adjustment amount represents the five-year average of actual abandoned project cost write-offs from 2001 through 2005. As shown on HECO-1019, the

test year estimate for abandoned project costs is $224,000.

Q. How are the adjustment amounts presented in the Company's Test Year 2007 estimates?

A. The adjustment amounts were provided to the respective witnesses (Mr. Dan Giovanni, HECO T-6 for Production operations expense; Mr. Robert Young, HECO T-7 for Transmission and Distribution operations expenses; Mr. Darren Yamamoto, HECO T-8 for Customer Accounts expense and myself for A&G expenses) for inclusion in their test year estimates, based on the historical account numbers that were charged with the write-offs. In other words, the Company assumed that future abandoned project costs will be written off to the various NARUC expense accounts in the same proportions that were recorded from 2001 to 2005.

UNAMORTIZED GAIN ON THE SALE OF LAND; IOLANI COURT PLAZA LEASE PREMIUM

Q. What is the Test Year 2007 amount with respect to gains on the sale of land and the Iolani Court Plaza lease premium?

A. As discussed by Mr. Bruce Tamashiro in HECO T-13, included in Test Year 2007 Other Operating Revenue is $507,000 for the amortization of gains on the sale of land and $3,500 for the amortization of the Iolani Court Plaza lease premium, for a total of $511,000. In addition, as discussed by Ms. Gayle Ohashi in HECO T-17, subtractions in the calculation of rate base include the unamortized gains on the sale at the beginning of the test year of $1,582,000 ($1,570,000 for unamortized utility gain on sale and $11,000 for the unamortized Iolani Court Plaza lease premium) and $1,207,000 at the end of the year ($1,199,000 for unamortized utility gain on sale and $8,000 for the unamortized Iolani Court Plaza

lease premium).

Q. What is the support for the test year amounts?

A. The support is provided on HECO-1020, which shows information by the individual property sold, and the Docket No. and Decision and Order No. approving the sale and accounting and ratemaking treatment for the sale. For one property, the Aiea Park Place parcel, the sale is pending approval from the Commission in Docket No. 2006-0323.

Q. What is the Commission approved accounting and ratemaking treatment for the gains on sale of land?

A. The accounting and ratemaking treatment approved by the Commission is generally as follows:

1) The net gain is prorated between utility and non-utility based on the period during which the property was classified as utility property and the period during which the property was classified as non-utility property.

2) With respect to the utility portion of the net gain, the gain is amortized to income over a five-year period beginning with the month following the sale.

3) The amount of unamortized gain is deducted in the calculation of rate base.

Q. How were the test year estimates for the Aiea Park Place property determined?

A. To determine the test year estimates, HECO followed the accounting treatment proposed in Docket No. 2006-0323. HECO assumed the net gain from the sale of the Aiea Park Place property would be apportioned on a prorated basis between the period during which the property was classified as utility property and the period during which the property was classified as non-utility property. HECO also assumed the sale would occur in April 2007, and amortization of the gain apportioned to the utility property would begin in May 2007, and the unamortized

balance at the end of the year would be reflected as a reduction in rate base.

Q. What is the status of Docket No. 2006-0323?

A. After filing its application on August 2, 2006, the Consumer Advocate issued its Statement of Position indicating it did not object to the approval of the Company's request to sell the property and to the Company's proposed accounting treatment.

Q. What is the Commission approved accounting and ratemaking treatment for the Iolani Court Plaza lease premium?

A. The unamortized lease premium attributable to the leased fee interests that are sold are amortized to income over the same five year period as is the related net gain. The unamortized lease premium attributable to the leased fee interests that are not sold and thus retained continue to be amortized over the original thirty year period (1980 through 2010) until such time as the units are sold. The unamortized lease premium amount is subtracted in the calculation of rate base.

ACCOUNTING FOR PENSION AND POST RETIREMENT BENEFIT OTHER THAN PENSION PLANS

Pension and OPEB Background

Q. Please briefly explain the Company's qualified pension and postretirement benefit plans.

A. As described by Ms. Julie Price in HECO 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. HECO provides postretirement benefits other than pensions through participation in the Postretirement Welfare Benefits Plan for Employees of Hawaiian Electric Company, Inc. and Participating Employers.

Q. Please briefly describe the accounting and reporting requirements for pensions and postretirement benefits other than pensions ("OPEB").

A. The Companies' accounting and reporting requirements with respect to the postretirement benefits other than pensions ("OPEB") plans are recorded in accordance with generally accepted accounting principles ("GAAP"), specifically under 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 the newly issued 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)" upon its effective date (which for HECO is December 31, 2006).

Q. Under the guidance provided by SFAS No. 87, how are pensions reflected on the Company's financial statements?

A. Pensions are reflected on the financial statements as follows:

- 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. As explained by Ms. Julie Price in HECO T-12, 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

  A liability (unfunded accrued pension cost) is recognized if the cumulative NPPC exceeds the cumulative amounts the employer has contributed to the plan. An asset (prepaid pension cost) is recognized if the cumulative NPPC recognized is less than the cumulative amounts contributed to the pension plan. However, under SFAS No. 87, the accounting changes when the pension obligation exceeds the fair value of the pension plan assets. The fair value of the pension plan assets represents the estimated market value of the fund at the measurement date, which is December 31, for HECO. The accumulated benefit obligation ("ABO") approximates the actuarial present value of benefits previously earned by participants based on current compensation levels, at the measurement date. Under SFAS No. 87, if at the measurement date, the fair value of the assets of the pension plan was less than the ABO by as little as $1, the Companies would be required to (1) record a liability, at least equal to the difference between the ABO and the fair value of the pension plan assets, (2) eliminate any prepaid pension asset, and (3) record a charge, net of income taxes (which would represent a net loss not yet recognized as a periodic pension cost) directly to a component of equity, called accumulated other comprehensive income ("AOCI").

- 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 descriptions of the plan and items which have in the past or can in the future impact the cost of the pension.

Q. Under the guidance provided by SFAS No. 106, how are OPEBs reflected on the Company's financial statements?

A. OPEBs are reflected on the financial statements as follows:

- 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. As explained by Ms. Julie Price in HECO T-12, 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 pensions, such as the provisions of the plan, the demographic characteristics of the employees, the performance of the plan assets as it is 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 related to the timing of the initial adoption of SFAS No. 106, 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 letter from the Commission dated December 28, 1994 in Docket Nos. 7233 and 7243 (Consolidated).

- Balance Sheet

  A liability (unfunded accrued OPEB cost) is recognized if the cumulative NPBC exceeds the cumulative amounts the employer has contributed to the OPEB plans. An asset (prepaid OPEB cost) is recognized if the cumulative NPBC recognized is less than the cumulative amounts contributed to the OPEB plans. OPEB accounting is very similar to pensions; however, unlike the minimum pension liability recognition requirement under SFAS No. 87, there is no requirement to recognize a minimum OPEB liability under 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 and items which have in the past or can in the future impact the cost of the plan.

Q. What has changed as a result of the new SFAS No. 158?

A. SFAS No. 158 is the initial phase of a comprehensive project of the Financial Accounting Standards Board to improve the accounting for defined benefit and other postretirement plans. The new SFAS No. 158 amends both SFAS Nos. 87 and 106. SFAS No. 158 requires the recognition of the funded status of defined benefit pension plans measured as the difference between the fair value of the pension plan assets and projected benefit obligation ("PBO"), as opposed to the accumulated benefit obligation ("ABO"). The PBO is an estimate of the pension promise as of a specified date, and is measured using an assumption as to future

compensation levels.

In addition, SFAS No. 158 requires the recognition of the funded status of the OPEB plan measured as the difference between the fair value of the OPEB Plans' assets and the accumulated postretirement benefit obligation ("APBO") for other postretirement plans.

More specifically, under SFAS No. 158, HECO is required to (1) recognize the overfunded or underfunded status of its defined benefit pension and other post retirement plans (based on the difference between the fair value of the plan assets and the PBO for pensions and the APBO for other post retirement plans) in its balance sheet, (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 NPPC, and any remaining transition obligation from the initial application of SFAS No. 87 or SFAS No. 106, and (3) disclose additional information in the notes to financial statements about certain effects on net periodic benefit costs.

Q. How have pension and OPEB costs been treated for ratemaking purposes?

A. For ratemaking purposes, the Company incorporates the NPPC and NPBC in its budget of employee benefits, which are included in administrative and general ("A&G") expense.[1] If the Company forecasts a prepaid pension asset or OPEB asset, the Company includes the prepaid pension asset or OPEB asset in rate base. If the Company forecasts a pension or OPEB liability, the pension or OPEB liability is treated as a deduction in the rate base calculation. In addition, the Company has recognized an OPEB liability relating to OPEB costs incurred in the

[1] A portion of the NPPC (approximately 27% for the test year 2007) is allocated to corporate overhead, i.e. on-costs. Most of the allocated portion is capitalized annually as plant in service, and some is charged to outside third parties for services rendered, i.e. billable work.

transition to implementing SFAS No. 106, which is offset by a regulatory asset in the same amount. The Company's forecast of working cash is based on the accrual method of accounting for pension expense, consistent with the other pension components.

Q. Is there a rate base tax effect associated with the prepaid pension asset or liability?

A. Yes, there is an accumulated deferred income tax liability amount or a deferred tax asset amount associated with a prepaid pension asset or pension liability amount, respectively.

Accounting Overview – Pensions and OPEB

Q. Please provide an accounting overview of pension and OPEB costs for 2006 and projected costs for 2007.

A. As shown on HECO-1021 page 2, HECO's balance sheet at December 31, 2005 reflected a prepaid pension asset of $82,497,000. For the year ended December 31, 2006, HECO expects to recognize $14,237,000 of NPPC, and HECO does not expect to make any contributions to the pension plan during the year. The activity in 2006 is expected to result in a decrease in the prepaid pension asset at December 31, 2006 to $68,260,000. Based on the market value of pension plan assets as of December 31, 2005, a 9% return on plan asset assumption, a discount rate of 5.75%, and an asset experience (used to determine the fair value of the plan) of 8.5%, the estimated PBO and fair value of plan assets as of December 31, 2006 are estimated as follows:

PBO	$636,054,000
Fair value of plan assets	$546,848,000
Estimated underfunded position	$ 89,206,000

In 2007, HECO expects to recognize $18,029,000 of NPPC, and HECO

does not expect to make any contributions to the pension plan. The activity in 2007 is expected to result in a decrease in the prepaid pension asset at December 31, 2007 to $50,231,000. Based on the market value of pension plan assets as of December 31, 2005, a 8.5% return on plan asset assumption, a discount rate of 6.0%, and an asset experience (used to determine the fair value of the plan) of 8.5% in 2006 and 2007, the estimated PBO and fair value of plan assets as of December 31, 2007 are estimated as follows:

PBO	$672,113,000
Fair value of plan assets	$557,435,000
Estimated underfunded position	$114,678,000

This information is also presented in HECO-1021, page 1.

For the OPEB plans, in 2006, HECO expects to recognize $5,758,000 of NPBC excluding the executive life portion, and amortization of the transition obligation related to the timing of the initial adoption of SFAS 106, of $1,302,000. HECO expects to make contributions of $7,060,000 to the various OPEB plans during 2006. Based on the market value of pension plan assets as of December 31, 2005, a 9% return on plan asset assumption, a discount rate of 5.75%, and an asset experience (used to determine the fair value of the plan) of 8.5% in 2006, the estimated APBO and fair value of plan assets as of December 31, 2006 are estimated as follows:

APBO (excluding executive life)	$126,458,000
Fair value of plan assets	$ 88,570,000
Estimated underfunded position	$ 37,888,000

For the OPEB plans, in 2007, HECO expects to recognize $6,571,000 of NPBC excluding the executive life portion, and amortization of the transition

obligation related to the timing of the initial adoption of SFAS 106, of $1,302,000. HECO expects to make contributions of $7,873,000 to the various OPEB plans during 2007. Based on the market value of pension plan assets as of December 31, 2005, a 9% return on plan asset assumption, a discount rate of 5.75%, and an asset experience (used to determine the fair value of the plan) of 8.5% in 2006 and 2007, the estimated APBO and fair value of plan assets as of December 31, 2007 are estimated as follows:

APBO (excluding executive life)	$133,755,000
Fair value of plan assets	$ 96,773,000
Estimated underfunded position	$ 36,982,000

This information is also shown on HECO-1022, page 1.

Q. Who estimated the fair value of the plan assets?

A. Watson Wyatt Worldwide, the consulting enrolled actuary, developed the estimate to assist the Company in analyzing the impact of the new SFAS No. 158, based on the assumptions noted above. The pension and OPEB plans' trustee, The Bank of New York, will determine the fair value of the funds as of December 31, 2006 and December 31, 2007, for financial reporting purposes.

Q. Who determined the PBO and APBO?

A. Watson Wyatt Worldwide, the consulting enrolled actuary, determined the PBO and APBO.

Q. Who administers HECO's pension plan?

A. The Pension Investment Committee ("PIC") is the named fiduciary for the HEI and Participating Subsidiaries' (including HECO) pension plan and is responsible for overseeing the administration of the plan and management of all plan assets. The PIC uses professional money managers to manage plan assets.

Q. What has been the PIC's general funding policy?

A. The PIC's funding policy is to contribute amounts to the plan in accordance with the funding requirements of ERISA and the IRC. For the OPEB Plans, based on Decision and Order No. 13659, the Utility Companies fund the full SFAS No.106 cost amounts.

ERISA has a specific methodology for determining the required funding for the pension plan. HECO relies on its actuary, Watson Wyatt Worldwide, for the annual calculation of minimum funding under ERISA.

The IRC also specifies minimum and maximum fund contributions to avoid adverse tax consequences. HECO also relies on its actuary, Watson Wyatt Worldwide, for the annual calculation of minimum and maximum funding under the IRC.

Within the minimum funding requirements of ERISA and the maximum deductible funding allowed under the IRC, the PIC considers the impact of funding on the financial accounting and disclosure of the plan in the Company's financial statements. There are no specific requirements under generally accepted accounting principles as to how a company should fund its pension. Generally, it has been the practice of the PIC to fund the NPPC; however, in 2003, 2004 and 2005, the PIC based its funding decision largely on the adequacy of the funding relative to the ABO. As mentioned earlier, under SFAS No. 87, if at the measurement date, the fair value of the assets of the pension plan was less than the ABO by as little as $1, the Companies would be required to (1) record a liability, at least equal to the difference between the ABO and the fair value of pension plan assets, (2) eliminate any prepaid pension asset, and (3) record a charge, net of income taxes (which would represent a net loss not yet recognized as a periodic

pension cost) directly to a component of equity, called AOCI ("AOCI charge").

Q. How did the fair value of HECO's pension plan assets compare to its ABO at December 31, 2005?

A. At December 31, 2005, the fair value of the pension plan assets of $536.7 million exceeded the ABO of $532.0 million; therefore the Company reflected a prepaid pension asset on its balance sheet. However, the fair value of the assets exceeded the ABO by only approximately $4.7 million, or 0.9 percent. In other words, the fair value was in jeopardy of being insufficient to cover the ABO at the valuation date (December 31, 2005), which was of significant concern. HECO faced similar situations in 2003 and 2004. The fund contributions in 2003, 2004 and 2005 were intended to reduce the possibility of an AOCI charge. The Company was not required to make any contributions to the plan to meet minimum funding requirements under ERISA or the IRC in those years.

Q. Did the Company's consider other means for mitigating an AOCI charge?

A. Yes, HECO, HELCO and MECO (the "Utility Companies") filed a consolidated application on December 8, 2005 (Docket No. 05-0310) requesting the Commission to:

(1) Allow the companies to record as a regulatory asset pursuant to the Statement of Financial Accounting Standards No. 71, "Accounting for the Effects of Certain Regulations", the amount that would otherwise be charged to AOCI as required under SFAS No. 87 as a result of recording a minimum pension liability;

(2) Allow the companies to continue to record as a regulatory asset in subsequent years the amount that would otherwise be charged directly to AOCI; and

(3) Allow the companies to continue to recover their annual cost of providing pension benefits to their employees, as actuarially calculated under the provisions of SFAS No. 87.

Q. What was the reason for the application when it was initially filed?

A. The application was filed in the event the Utility Companies were required to record a minimum pension liability, and a charge to AOCI, under SFAS No. 87 at the end of 2005. If approved, the requested regulatory asset treatment was intended to mitigate the negative effects that could otherwise result from a charge to AOCI.

Q. Was HECO required to record a minimum pension liability and charge to AOCI at the end of 2005?

A. No. HECO was able to retain a prepaid pension asset position at December 31, 2005, but only by a slim margin. As I mentioned previously, the fair value of the plan assets exceeded the ABO by only approximately $4.7 million, or 0.9 percent.

Q. Is the pending application and request for regulatory asset treatment still needed?

A. Yes. Even though HECO was not required to record a minimum pension liability and charge to AOCI for 2005, HECO continues to request approval to record as regulatory asset the amount that would otherwise be charged to equity. Based on the requirements of SFAS No. 158, the Utility Companies, by letter dated November 17, 2006, updated their application filed on December 8, 2005 to incorporate the changes in accounting as a result of SFAS No. 158. SFAS No. 158 requires the recognition of the funded status of defined benefit pension plans measured as the difference between the fair value of the pension plans' assets and the PBO as opposed to the ABO. The PBO is defined as the actuarial present value of pensions benefits attributed to service already rendered, measured using

assumptions as to future compensation levels. Because the PBO is significantly larger than the ABO, based on this new measurement, it is probable that the Companies will be required to record a significant liability equal to the underfunded status of their pension plans, and record a charge, net of tax, to AOCI. In addition, SFAS No. 158 requires the recognition of the funded status of OPEB plans measured as the difference between the fair value of the OPEB plans' assets and the APBO. There was no such requirement under SFAS No. 106. It also is expected that a liability will have to be recorded for the OPEB plans at December 31, 2006, with a charge, net of tax, to AOCI.

Q. What is the concern regarding reflecting the underfunded status of the pension and OPEB plans?

A. Although the recordation of the pension and OPEB plans probable underfunded status would be non-cash balance sheet changes and would not impact the income statement, HECO's equity and rate base amounts would be significantly impacted. A significant charge to AOCI would artificially increase HECO's return on average common equity, since the Company's equity would decrease significantly, without any change in economic conditions or net income. Ms. Tayne Sekimura, in HECO T-19, discusses the impact of a charge to equity to the financial ratios and how rating agencies analyze the Company's financial ratios.

Q. What is the status of Docket No. 05-0310?

A. The parties in the proceeding include the Utility Companies, the Consumer Advocate and the Department of Defense. The Utility Companies have responded to information requests from the Consumer Advocate and the Department of Defense. The Consumer Advocate and Department of Defense submitted their statements of position, and the Utility Companies are scheduled to file their Reply

Statement of Positions on January 12, 2007. The Utility Companies have requested a decision by January 16, 2007, in order to complete the closing of their financial records for 2006 and meet their external disclosure filing deadlines. However, if a later decision is necessary, a decision after January 16, 2007, but before January 31, 2007, may still allow the Utility Companies enough time to meet their external disclosure filing deadlines. A decision issued after January 31, 2007 would impact the Utility Companies' scheduled closing for January 2007 and impact HECO's ability, as well as its parent company, HEI's ability, to timely file their 2006 Form 10-K with the Securities and Exchange Commission.

Q. Were the issues in the proceeding updated to include OPEBs?

A. The Statement of Issues in the Stipulated Prehearing Order No. 23012 ("SPO") issued on November 3, 2006, refers to SFAS No. 158, which indicates that SFAS No. 158 addresses SFAS No. 106. In the November 17, 2006 letter updating the application in Docket No. 05-0310, the Utility Companies proposed modifications to the issues in the SPO to clarify what SFAS No. 106 covers. The Consumer Advocate objected to the modifications because the schedule for the proceeding did not allow the Consumer Advocate to analyze the issues and ramifications of including OPEBs in the issues in the proceeding. Thus, the Utility Companies withdrew the proposed modifications, and plan to work on a supplemental procedural schedule to address the regulatory asset treatment for OPEB amounts that would otherwise be charged to AOCI. The assumption is that the application will be modified to include the OPEB portion, and the test year estimates reflect that assumption.

Q. Is there other guidance as to why the Company is requesting regulatory asset treatment for the amounts that should otherwise be charged to AOCI?

A. Under FERC's general instructions in the Uniform System of Accounts, when an item of other comprehensive income becomes probable it will be included in the development of cost of service rates in subsequent periods, that amount should be recorded in other regulatory assets or other regulatory liabilities. For the Utility Companies, the Commission has consistently determined pension and OPEB costs under SFAS No. 87 and SFAS No. 106. By consistently applying SFAS No. 87 and SFAS No. 106 in the development of cost of service rates, the amount included in AOCI would be recovered in subsequent periods, and would support the reclassification as a regulatory asset.

Q. In Docket No. 05-0310, are the Utility Companies seeking approval of the ratemaking treatment of the amount that is being requested to be recorded as a regulatory asset pursuant to SFAS No. 71?

A. No, the Utility Companies are requesting approval in Docket No. 05-0310 to record as a regulatory asset, the amount that would otherwise be charged to equity as required under the provisions of SFAS No. 87 or SFAS No. 158 as a result of recognizing the funded status of pension and OPEB plan liabilities. The Utility Companies have indicated that the ratemaking treatment of the regulatory asset will be addressed in their rate cases.

Ratemaking Treatment Proposal

Q. How does HECO propose to treat pension and OPEB costs in light of the new SFAS No. 158?

A. HECO proposes to continue to include in revenue requirements the NPPC for pensions and the NPBC for OPEBs, as actuarially calculated under the provisions of SFAS No. 87, and SFAS No. 106, respectively.

In addition, if HECO is in an underfunded position for its pension and OPEB

plans, which would require HECO to record a pension and an OPEB liability (the situation expected for the 2007 test year), HECO proposes to include the pension and OPEB liabilities in rate base, as well as the regulatory assets related to pension and OPEB (the amounts that would have been charged to AOCI, which the Utility Companies are seeking approval to record as a regulatory asset in Docket No. 05-0310), and the related deferred taxes.

Although SFAS No. 158 changes the components that comprise the pension and OPEB as presented on the balance sheet, the net amounts are the same as previously calculated under SFAS No. 87 and SFAS No. 106, respectively. The net impact to rate base of the pension regulatory asset and the pension liability is exactly the same as what the prepaid asset amount would be for the test year if there was no requirement to charge AOCI. See HECO-1021, pages 1 and 2. The OPEB regulatory asset and the OPEB liability would net to zero impact to rate base, which is the same result as would occur if there was no requirement to charge AOCI. See HECO-1022, page 1. The test year estimates in this proceeding reflect such proposed accounting treatment. Ms. Julie Price in HECO T-12 includes the NPPC and the NPBC as part of the employee benefits expenses.[2] As shown in HECO-1701, HECO's rate base for the test year includes the Pension Regulatory Asset, the OPEB Regulatory Asset – SFAS 158, Unamortized OPEB Reg Asset – SFAS 106, Pension Liability and the OPEB Liability.

Q. Why is the Company's ratemaking proposal reasonable?

A. HECO's ratemaking proposal reflects the inclusion of all components of pension

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[2] Approximately 27% of NPPC and NPBC for the test year are allocated to corporate overhead, i.e. on-costs. Most of the allocated portion is capitalized annually as plant in service, and some is charged to outside third parties for services rendered, i.e. billable work.

and OPEB accounting in the ratemaking process. NPPC and NPBC have consistently been used in the past to determine benefit costs for ratemaking purposes, and should continue to be used to determine benefit costs in the future. The difference between the cumulative NPPC (or NPBC) and cumulative fund contributions should be accounted for in rate base to properly reflect investor-supplied funds.

Q. Should an accounting methodology be consistently applied in the determination of revenue requirements?

A. Yes, an accounting methodology should be consistently applied for cost recognition, rate base and return on rate base. The accounting for pensions and OPEB is governed by SFAS No. 87, SFAS No. 106 and the new SFAS No. 158. The proposed ratemaking treatment reflects consistent application of the accounting standards. HECO, as discussed above, has requested approval in Docket No. 05-0310 to record as a regulatory asset the amounts that would otherwise be charged to AOCI.

Q. What would happen if the Commission denies the regulatory asset treatment for the amounts charged to AOCI in Docket No. 05-0310?

A. If the Commission denies the regulatory asset treatment for the amounts charged to AOCI, the Company would seek to recover the net pension investment in rate base, to the extent that cumulative fund contributions exceed the cumulative NPPC. In order to achieve a fair and equitable return on their investment, investors would still require a return on investment in the prepaid asset. The prepaid asset amount would be the amount that was charged to AOCI, net of the pension liability and related deferred income taxes. The impact on rate base and on revenue requirements would be the same as HECO's prepaid pension asset

treatment before the issuance of SFAS No. 158. If no pension-related asset is included in rate base there would be an increase in the cost of capital, which would need to be taken into consideration in the revenue requirement calculation. If, in the future, the cumulative fund contributions are less than the cumulative NPPC, the difference would be reflected as a net deduction in the calculation of rate base. For the OPEB portion, only the OPEB regulatory asset related to the initial adoption of SFAS No. 106 and the liability related to the offset of that OPEB regulatory asset would be included in rate base assuming cumulative fund contributions are equal to cumulative NPBC. Note that if NPBC were to be a negative charge, the Company would be prohibited from taking "negative" contributions (i.e. fund distribution), which would result in a difference between cumulative fund contributions and cumulative NPBC, and this difference would need to be addressed as a rate base item.

Creation of the Prepaid Pension Asset

Q. What is the prepaid pension asset?

A. The prepaid pension asset is the net of the cumulative investor supplied fund contributions and the previously recognized pension cost.

Fund contributions are the cash payments the Company has made to the pension fund over the years. Recognized pension cost is the accumulated NPPC that the Company has recognized on its income statement.

Q. How was the prepaid pension asset created?

A. Under SFAS No. 87, a prepaid pension asset is created when fund contributions exceed the NPPC. HECO-1021 page 2 summarizes the annual activity in HECO's prepaid pension asset account since the inception of SFAS No. 87.

The historical activity in the prepaid pension asset account shows that in the

period from 1987 through 1994, in general, the NPPC was rising annually and HECO funded the NPPC. Beginning in 1995, the NPPC begins showing greater volatility, primarily declines. The declining NPPC resulted primarily from higher stock prices increasing the fair value of plan assets and the lower interest rate environment, which resulted in a lower discount rate used to calculate the net present value of the pension obligation. Under SFAS No. 87, the increase in plan asset returns (due to the higher fair value of the plan assets) and the decrease in pension obligation (due to the lower discount rate and lower net present value of the plan obligation) are not immediately recognized. Rather, the recognition of the change is deferred in order to smooth the NPPC (as compared to the volatility that would be experienced if the changes were entirely recognized in the year they occur). In the period from 1987 through 1994, in general, the NPPC was rising annually and HECO funded the NPPC. Therefore there was no prepaid pension asset recorded during this period. Beginning in 1995, the NPPC begins showing greater volatility, primarily declines from prior years. The declining NPPC resulted primarily from a combination of higher stock prices, which increased the fair value of plan assets and the lower interest rate environment, and resulted in a lower discount rate used to calculate the net present value of the pension obligation. From 1995 through 1998, because HECO generally funded the NPPC, the prepaid pension asset balance was not significant. Beginning in 1999 and continuing through 2002, HECO began experiencing negative NPPC accruals. Therefore, although no fund contributions were made in those years, the prepaid pension asset grew significantly. In addition, as stated earlier, HECO made fund contributions in 2003 and 2004 that were significantly more than the NPPC, further increasing the prepaid pension asset balance. In 2005, the fund

contribution of $6,000,000 was somewhat greater than the NPPC of $4,588,000.

Q. Why was the prepaid pension asset created?

A. Even though the negative NPPC accruals in the period 1999 through 2002 increased the prepaid pension asset significantly during these years, ERISA prohibited HECO from taking cash refunds from the pension fund. Funds contributed to the pension fund must stay in the pension fund (except under special circumstances such as plan termination). Moreover, under Section 4980 of the IRC, there is a 20% tax on the amount of any reversion of qualified pension plan assets to an employer. Thus, even though HECO's contributions to the pension fund generally matched the NPPC in earlier years, HECO could not take cash from the pension fund to match the negative NPPC accruals in 1999 through 2002. Further, from 1999 through 2002, HECO was not required to make a minimum contribution under ERISA and could not make deductible fund contributions under the IRC. Contributions in excess of the IRC maximum contribution would be subject to a 10% non-deductible excise tax, effectively a 10% penalty for contributions, under Section 4972 of the IRC. As a result, in the period 2000 through 2002, the increase in the prepaid pension asset was solely a function of the negative NPPC. Essentially, the prepaid pension asset was created during this period because HECO complied with law.

Q. Please explain why HECO increased the prepaid pension asset in 2003, 2004, and 2005?

A. In 2003, HECO had a relatively low NPPC, but was potentially facing a situation at the measurement date, December 31, 2003, in which the fair value of the pension plan assets may not have been sufficient to cover the ABO. HECO faced a similar situation in 2004, when it had a negative NPPC, in which the ABO at the

measurement date, December 31, 2004, potentially could have exceeded the fair value of the pension assets. In 2005, HECO made a contribution, because it was again facing a situation in which the fair value of the pension plan assets would not be sufficient to cover the ABO. As discussed earlier, funding the pension to sufficiently cover the ABO is significant because it is a rough, optimistic measure of whether the funds are sufficient to cover the plan if the plan were terminated. If the fair value of the pension assets is less than the ABO, it also results in a different and adverse accounting treatment under SFAS No. 87. HECO tried to anticipate the estimated values of the pension fund and the ABO at year end via careful monitoring of the stock market and interest rates and reach a decision, prior to year end, whether or not to provide a certain level of funding.

Q. Does the fact that HECO estimated prepaid pension asset balance of $68 million at December 31, 2006 indicate that it had overfunded its pension plan?

A. No. In fact, the situation is generally the opposite. As I mentioned earlier, at December 31, 2006, the PBO is estimated to exceed the pension fund (the pension is underfunded by this measure) by approximately $89 million. In addition, at December 31, 2005, the pension fund exceeded the ABO (an optimistic measure of funding) by only 0.9%, or $4.7 million.

Rate Base Treatment

Q. Why is it proper to include the prepaid pension asset in rate base?

A. Including the prepaid pension asset in rate base is proper because: (1) the prepaid pension asset reflects a prudent investment, funded by investors, that is used or useful in providing electric utility service, (2) the prepaid pension asset benefits the ratepayers and (3) other jurisdictions have allowed a prepaid pension asset to be included in rate base.

(1) The Prepaid Pension Asset Was Funded By Investors and Is Used or Useful In Providing Electric Utility Service

Q. Was the prepaid pension asset funded by investors?

A. Yes. From the standpoint of accounting theory, the prepaid pension asset was funded by investors. It is a fundamental principle of accounting that all assets must be funded either by debt or equity. Investors, not ratepayers, provide the funds for a corporation's debt and equity. When an asset is positive it necessarily means that with respect to total company costs the shareholders have contributed some surplus that needs to be recognized in rate base.

Payments made to the pension fund were from the same sources of funds that HECO would use to make any investment. There were no special contributions from any source. Ratepayers do not fund Company investments. Rather, they pay for services and those payments are recorded as revenues. Investor funds are used to fund the pension plan just as investor funds are used to construct or purchase the gross plant assets. Investors contributed $138.3 million to the pension plan for the period 1987 to 2005 (see HECO-1021 page 2).

Q. Is the pension plan used or useful in providing electric utility service?

A. Yes. HECO 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. The pension plan is an integral part of the Company's compensation package to its employees, and is necessary to attract and retain quality employees that are engaged in the provision of providing electric service to the public.

Q. Was HECO's investment in the pension plan prudent?

A. Yes, HECO's investment in the pension plan was prudent. Part of the asset was established when the NPPC was negative. From 1999 through 2002, the activity in the prepaid pension asset was solely a function of the negative NPPC. The negative NPPC resulted from the performance of the pension fund, the actuarial valuations, and the accounting treatment prescribed under SFAS No. 87. By law HECO could not withdraw funds from the ERISA Plan. The rest of the asset was established when HECO made lawful contributions to avoid the risk of having the ABO exceed the fair value of the pension plan assets. HECO made contributions in 2003, 2004 and 2005 to avoid the possibility of an AOCI charge that would have resulted if the fair value of the pension fund in each of those years were less than the ABO. The consequences of an AOCI charge are significant. If the Company is required to record substantial charges to AOCI in the future, the Company's financial ratios would deteriorate, which could result in security ratings downgrades and/or difficulty (or greater expense) in obtaining future financing.

Q. Was the decision to make a pension contribution to sustain a prepaid pension asset, including determining the amount to contribute, difficult?

A. Yes, the decision to make a contribution to sustain a prepaid pension asset rather than record a charge to AOCI was difficult because it requires making a decision without knowledge of actual year-end plan asset and liability information and the decision and actual contribution must be made prior to year end. The decision had to consider the estimated ABO at year end, the estimated fair market value of the assets at year end (i.e., predicting where the stock market would be at year end), and making the contribution days in advance of year end such that the trust fund has the funds as of December 31. Despite the difficulty of the decision, the

contribution amounts were reasonable, and the fair value of HECO's plan assets exceeded the ABO by only $4.8 million, or 0.9%, at the December 31, 2005 valuation date.

Q. Do the fund contributions in 2003, 2004 and 2005 mitigate the impact of the requirement of SFAS No. 158?

A. Yes. As previously discussed, SFAS No 158 requires companies to compare the fair value of pension plan assets to the projected benefit obligation (PBO), and to report on its balance sheet the amount by which the defined pension obligation is over or under funded. Contributions to the plan increase the fair value of the plan assets. Thus in comparing the fair value of the plan to the projected benefit obligation, all other things being equal, additional contributions reduce the amount of any under funding of the plan or increase any overfunding position. The estimated pension liability at December 31, 2006 would be higher if there were no contributions in 2003, 2004, and 2005.

(2) Ratepayers Have Benefited From The Prepaid Pension Asset

Q. How do ratepayers benefit from the prepaid pension asset?

A. Ratepayers have benefited from the prepaid pension asset, and its components, in several ways. The negative accruals of the past are negative costs that reduced expenses and lowered revenue requirements, which in turn helped make it unnecessary for HECO to apply for a general rate increase for the ten-year period from 1994 to 2004.

In addition, some of the negative NPPC was transferred to construction resulting in a lower amount of construction work in progress upon which AFUDC is accrued and thus, lower costs added to rate base. The transfer percentage in HECO's test year 1995 rate case was about 34 percent. In the present proceeding,

approximately 27% is transferred to construction and to outside third parties for services rendered.

Further, ratepayers have benefited from the prepaid pension asset. The prepaid pension asset resulted in part from HECO's contributions of $138.3 million during the period 1987 to 2005. Those contributions increased the assets in the pension fund on which a return on investment could be earned. Return on pension plan assets is one of the components of the NPPC, and is normally a credit, which reduces the NPPC. The higher the level of funds in the pension's portfolio, the greater will be the earnings to offset other pension costs resulting in a lower NPPC.

Moreover, ratepayers benefit from an adequately funded pension plan. Adequate funding reduces the risk that, in the future, HECO will be required to make a contribution to the pension plan at a time when the Company may not have funds available or access to capital markets to contribute to the pension. If the pension plan is not adequately funded, the Company may be required under ERISA or under IRC to make fund contributions. Minimum fund contribution requirements may come at a time when the Company has other significant capital requirements or when capital markets are constrained. Maintaining an adequately funded pension plan preserves the financial flexibility of having discretion over the timing of fund contributions. Conversely, inadequate funding of the pension plan could adversely impact the Company's credit quality, which would ultimately result in higher financing costs.

Q. Do the credit rating agencies evaluate the funding status of the pension fund on a company's creditworthiness?

A. Yes, I understand that credit rating agencies evaluate risks associated with

companies' pension plans and pension funding and may make specific financial ratio adjustments relating to pensions. Ms. Tayne Sekimura discusses this subject in HECO T-19.

(3) Other Jurisdictions

Q. Have other jurisdictions addressed the subject of the recovery of the prepaid pension asset?

A. Yes. This subject has been discussed in the opening and reply briefs of the parties in HECO's test year 2005 rate case (Docket No. 04-0113).

Summary

Q. How should pension and OPEBs be included reflected for ratemaking purposes?

A. All of the components for accounting for pension and OPEBs should be reflected for ratemaking purposes. The NPPC and NPBC as determined under SFAS Nos. 87 and 106 should continue to be used in determine the annual costs of pension and OPEB plans. In addition, any pension liability and regulatory asset, net of the deferred taxes, should be included in rate base. As discussed, the net impact to rate base of the pension regulatory asst and pension liability is essentially the prepaid pension asset amount. The prepaid pension asset is the net of the cumulative investor supplied fund contributions less the recognized pension cost. Investors have provided the cash to the pension fund, the contributions were prudent and ratepayers have benefited from the prepaid pension asset. Inclusion of the prepaid pension asset in rate base will fairly compensate investors for the funds they have advanced for the funding of the pension.

STAFFING-GENERAL ACCOUNTING DEPARTMENT

Q. How many employees are in the General Accounting Department?

A. There were 26 employees in the General Accounting department at the end of 2005. The staffing count projected for the end of 2006 and for the 2007 test year for the General Accounting department is the same 26 employees as shown on HECO-1403.

SUMMARY

Q. Please summarize your testimony.

A. The Test Year 2007 normalized amounts which the Company has demonstrated to be fair and reasonable in this docket include the following:

Description	Test Yr. Estimates
Administrative and General Expenses	$ 72,007,000
Computer Software Develop Costs	
Amortization expense for 2007	$ 272,000
Unamortized System Development costs 12/31/06	$ 0
Unamortized System Development costs 12/31/07	$ 6,018,000
Abandoned Capital Project Costs	$ 224,000
Gain on Sales of Land –	
Amount of gain amortized in 2007	$ 507,000
Unamortized gain – 12/31/06	$ 1,570,000
Unamortized gain – 12/31/07	$ 1,199,000
Iolani Court Plaza Lease Premium	
Amortization of premium in 2007	$ 3,500
Unamortized lease premium – 12/31/06	$ 11,000
Unamortized lease premium – 12/31/07	$ 8,000
Pension Regulatory Asset	
Balance at 12/31/06	$157,466,000
Balance at 12/31/07	$164,909,000

Pension Liability	
Balance at 12/31/06	$ 89,206,000
Balance at 12/31/07	$114,678,000
SFAS 106 OPEB Regulatory Asset	
Balance at 12/31/06	$ 7,811,000
Balance at 12/31/07	$ 6,509,000
SFAS 158 OPEB Regulatory Asset	
Balance at 12/31/06	$ 30,077,000
Balance at 12/31/07	$ 30,473,000
OPEB Liability	
Balance at 12/31/06	$ 37,888,000
Balance at 12/31/07	$ 36,982,000

The Test Year 2007 normalized Administrative and General Expense estimates (see HECO-1001) are presented by Mr. Russell Harris (HECO T-11), Ms. Julie Price (HECO T-12), Mr. Bruce Tamashiro (HECO T-13) and I. The $272,000 with respect to the Amortization of Computer System Software Development costs represents the amortization expense during 2007 related to the OMS project and HR Suites project, which are expected to be ready for use in service in 2007. The $224,000 with respect to abandoned capital project costs represents the historical five year average of abandoned project cost write-offs (from 2001 through 2005), which would not otherwise be included in the Company's test year estimates as forecasters do not generally contemplate that projects will be abandoned. See HECO-1019 for the distribution of the $224,000 to various operation and maintenance expense accounts. The Test Year 2007 amortization amounts and year end 2006 and 2007 unamortized amounts with respect to gains on the sale of land and the Iolani Court Plaza lease premium, which are detailed on HECO-1020, reflect the accounting and ratemaking treatments previously approved by the Commission.

With respect to the pension and OPEB plans, the pension and OPEB liabilities

should be included in rate base as well as the regulatory assets related to pension and OPEB for the amounts that would have been charged to AOCI. Although SFAS No. 158 changes the components that comprises the pension and OPEB as presented on the balance sheet, the net amounts are the same as previously calculated under SFAS No. 87 and SFAS 106, respectively.

Q. What other accounting and ratemaking treatment is the Company requesting of the Commission in this docket?

A. The Company is asking the Commission to specifically reaffirm, in its Decision and Order in this docket, the continued use of the pay-as-you-go method of accounting for post-employment benefit costs. Please see the earlier discussion with respect to SFAS No. 112 under EMPLOYEE BENEFITS.

Q. Ms. Nanbu, does this conclude your testimony?

A. Yes, it does.

HAWAIIAN ELECTRIC COMPANY, INC.

PATSY H. NANBU

EDUCATIONAL BACKGROUND AND EXPERIENCE

Business Address:	Hawaiian Electric Company, Inc. 900 Richards Street Honolulu, HI 96813
Position:	Controller
Previous Positions:	Director, Regulatory Affairs Director, Internal Audit Senior Regulatory Analyst Budget Administrator Budget Analyst
Years of Service:	20 years
Education:	Bachelor of Business Administration in Accounting with Distinction, University of Hawaii, 1981 Master of Accountancy, University of Hawaii, 1983
Professional Registration:	Certified Public Accountant (not in public practice) State of Hawaii, 1984
Other Experience:	Senior Auditor, Arthur Young & Company
Previous Testimony:	Docket No. 05-0146 – Accounting and Ratemaking Treatment For Reverse Osmosis Water Pipeline Project and Environmental Monitoring Programs

HAWAIIAN ELECTRIC COMPANY, INC.
TEST YEAR 2007 ($1000S)

	BUDGET	BUD ADJ	NORMAL-IZATIONS	DIRECT
ADMIN & GENL O & M EXPENSE				
ADMINISTRATIVE				
920 ADMIN & GENL EXP - LABR				
LABOR	16,090	(42)		16,048
NON-LABOR	2,210	(2,035)		175
TOTAL 920	18,300	(2,077)	0	16,223
921 ADMIN & GENL EXP - NLABR				
NON-LABOR	13,208	(477)		12,731
TOTAL 921	13,208	(477)	0	12,731
922 ADMIN EXPENSES TRANSFERRED				
NON-LABOR	(3,091)	(39)		(3,130)
TOTAL 922	(3,091)	(39)	0	(3,130)
TOTAL ADMINISTRATIVE	28,417	(2,593)	0	25,824
OUTSIDE SERVICES				
923010 OUTSIDE SERVICES - LEGAL				
NON-LABOR	155	0		155
TOTAL 923020	155	0	0	155
923020 OUTSIDE SERVICES - OTHER				
NON-LABOR	1,165			1,165
TOTAL 923020	1,165	0	0	1,165
TOTAL OS SVCS	1,320	0	0	1,320
TOTAL 920-923 EXPENSE	29,737	(2,593)	0	27,144

HAWAIIAN ELECTRIC COMPANY, INC.
TEST YEAR 2007 ($1000S)

	BUDGET	BUD ADJ	NORMAL-IZATIONS	DIRECT
INSURANCE EXPENSE				
INSURANCE				
924 PROPERTY INSURANCE				
LABOR	199			199
NON-LABOR	2,740			2,740
TOTAL 924	2,939	0	0	2,939
925 INJURIES & DAMAGES				
LABOR	1,375			1,375
NON-LABOR	5,506	(19)	(61)	5,426
TOTAL 925	6,881	(19)	(61)	6,801
TOTAL INSURANCE	9,820	(19)	(61)	9,740
EMPLOYEE BENEFITS EXPENSE				
EMPLOYEE BENEFITS				
926000 EMPL PENSIONS AND BENEFITS				
LABOR	604			604
NON-LABOR	27,260	(454)	(19)	26,787
TOTAL 926000	27,864	(454)	(19)	27,391
926010 EMPL BENEFITS - FLEX CREDITS				
LABOR	283	(103)		180
NON-LABOR	10,401	135		10,536
TOTAL 926010	10,684	32	0	10,716
926020 EMPL BENEFITS TRANSFER				
NON-LABOR	(10,636)	165		(10,471)
TOTAL 926020	(10,636)	165	0	(10,471)
TOTAL EMP BEN	27,912	(257)	(19)	27,636

HAWAIIAN ELECTRIC COMPANY, INC.
TEST YEAR 2007 ($1000S)

	BUDGET	BUD ADJ	NORMAL-IZATIONS	DIRECT
MISCELLANEOUS				
OTHER ADMIN & GENL				
928 REGULATORY COMMISSION EXPENSES				
NON-LABOR	198	(198)	283	283
TOTAL 928	198	(198)	283	283
9301 INSTITUTN/GOODWILL ADVERT EXP				
LABOR	11			11
NON-LABOR	19			19
TOTAL 9301	30	0	0	30
9302 MISCELLANEOUS GENERAL EXPENSES				
LABOR	365	(5)		360
NON-LABOR	3,042	(87)		2,955
TOTAL 9302	3,407	(92)	0	3,315
931 RENTS EXPENSE				
NON-LABOR	3,019	(262)		2,757
TOTAL 932	3,019	(262)	0	2,757
932 ADMIN AND GENL MAINTENANCE				
LABOR	176			176
NON-LABOR	1,458	(150)	(382)	926
TOTAL 932	1,634	(150)	(382)	1,102
TOTAL MISCELLANEOUS	8,288	(702)	(99)	7,487
TOTAL ADMINISTRATIVE & GENERAL	75,757	(3,571)	(179)	72,007
ADMIN & GENL - TOTAL				
LABOR	19,103	(150)	0	18,953
NON-LABOR	56,654	(3,421)	(179)	53,054
TOTAL	75,757	(3,571)	(179)	72,007

HAWAIIAN ELECTRIC COMPANY, INC.
ADMINISTRATIVE AND GENERAL EXPENSES
($ Thousands)

	RECORDED					BUDGET		Normalization/ Rate Case Adjustment	Test year 2007
	2001	2002	2003	2004	2005	2006	2007		
ADMINISTRATIVE									
920 A&G Expense - Labor	13,000	14,082	14,593	15,185	15,759	17,423	18,300	(2,077)	16,223
921 A&G Expense - Non labor	13,684	8,805	9,831	12,539	14,276	5,117	13,208	(477)	12,731
922 A&G Expenses Transferred	(2,337)	(1,757)	(1,965)	(1,833)	(1,815)	(2,175)	(3,091)	(39)	(3,130)
Total Administrative	24,347	21,130	22,459	25,891	28,220	20,365	28,417	(2,593)	25,824
OUTSIDE SERVICES									
923010 Outside Services - Legal	201	52	38	15	34	163	155		155
923020 Outside Services - Other	1,565	1,251	731	872	1,729	1,577	1,165		1,165
Total Outside Services	1,766	1,303	769	887	1,763	1,740	1,320	0	1,320
INSURANCE									
924 Property Insurance	1,144	1,774	2,356	3,088	2,541	2,580	2,939		2,939
925 Injuries & Damages - Employees	6,170	5,459	4,919	6,761	3,870	6,449	6,881	(80)	6,801
Total Insurance	7,314	7,233	7,275	9,849	6,411	9,029	9,820	(80)	9,740
EMPLOYEE BENEFITS									
926000 Employee Pensions and Benefits	(15,939)	(9,388)	15,199	7,398	14,532	24,406	27,864	(473)	27,391
926010 Employee Benefits - Flex Credits	6,679	7,550	7,044	8,245	9,081	9,954	10,684	32	10,716
926020 Employee Benefits Transfer	2,511	697	(6,543)	(4,446)	(6,783)	(9,875)	(10,636)	165	(10,471)
Total Employee Benefits	(6,749)	(1,141)	15,700	11,197	16,830	24,485	27,912	(276)	27,636
MISCELLANEOUS									
928 Regulatory Commission Expenses	0	0	0	0	61	198	198	85	283
9301 Inst. or Goodwill Advertising Expense	98	96	93	76	73	75	30		30
9302 Miscellaneous General Expenses	2,330	3,503	3,842	2,803	2,841	751	3,407	(92)	3,315
931 Rents Expense - A&G	1,428	1,398	1,524	1,544	2,202	2,404	3,019	(262)	2,757
932 Admin and General Maintenance	838	684	496	505	524	520	1,634	(532)	1,102
Total Miscellaneous	4,694	5,681	5,955	4,928	5,701	3,948	8,288	(801)	7,487
TOTAL ADMINISTRATIVE & GENERAL EXPENSES	31,372	34,206	52,158	52,752	58,926	59,568	75,757	(3,750)	72,007

Account	Codeblock	2005 Recd	2007 O&M Expense Budget	Inc/(Dec)	%Inc/(Dec)	Explanation
920	P8M723PHENENPZZZZZZ150	1,191,898	0	(1,191,898)	-100%	These costs are related to Performance Incentive Compensation ("PIC"). The variance is a result of budgeting the 2007 amounts to a different codeblock (with a 900 rather than 150 expense element used in 2005). The PIC amount was removed from the 2007 O&M expense budget as a rate case adjustment to detemine the 2007 TY estimate.
920	P8M723PHENENPZZZZZZ900	0	1,677,109	1,677,109	-	
920	P8V700PHENENPASVP8Z150	0	275,954	275,954	-	These costs represent the labor costs of the Senior VP, Operations' office to develop and administer business plans. The variance is a result of budgeting the 2007 amounts to a different codeblock (with a 8Z rather than the 7ZZ default project number used in 2005)
920	P8V700PHENENPAVP7ZZ150	225,103	0	(225,103)	-100%	
920	PFC723PHENENPFZZZZZ150	435,276	2,359	(432,916)	-99%	These costs are related to Performance Incentive Compensation ("PIC"). The variance is a result of budgeting the 2007 amounts to a different codeblock (with a 900 rather than a 150 expense element used in 2005). The PIC amount was removed from the 2007 O&M expense budget as a rate case adjustment to determine the 2007 TY estimate.
920	PFC723PHENENPFZZZZZ900	0	358,000	358,000	-	
920	PHS933WRDNENPHZZZZZ150	709,644	254,555	(455,089)	-64%	The decrease is primarily due to the down-sizing of in-house security personnel in 2007.
920	PHS933WRDNENPHZZZZZ155	(235,892)	0	235,892	-100%	
	PHS933KNGNENPHZZZZZ150	41,037	31,313	(9,724)		
	PHS933KNGNENPHZZZZZ155	(17,679)	0	17,679		
	PHS933PHENENPHZZZZZ150	8,947	140,498	131,551		
	PHS933PHENENPHZZZZZ155	(336)	0	336		
		505,721	426,367	(79,354)	-16%	
920	PVP842PHENENPVZZZZZ150	232,736	504,376	271,640	117%	The increase is primarily due to the consolidation of Contract Administrators under the Purchasing Division from 2006 and an additional Senior Contract Administrator position.
921	P4V891PHENEMgtAcctg462	0	353,966	353,966	-	These amounts are related to ELLIPSE Migration software costs.
921	P6V749PHENENPAVP6ZZ516	268,591	2,000	(266,591)	-99%	The decrease is due to the incorrect posting of the EEI dues in 2005 to an activity that translated to Account 921 rather than Account 9302.
921	P9P723PHENENPAPRESI550	820,279	175,704	(644,575)	-79%	The decrease is due to the accelerated recognition of stock option costs in 2005 for participants who were already retirement-eligible or who would become retirement-eligible earlier than the normal four year vesting period. This amount is related to incentive compensation and was removed from 2007 O&M expense budget as a rate case adjustment to determine the test year estimate.

Account	Codeblock	2005 Recd	2007 O&M Expense Budget	Inc/(Dec)	%Inc/(Dec)	Explanation
921	P9S730PHENENPASVP7Z501	235,347	0	(235,347)	-100%	These costs relate to certain research and development expenses which were recorded to an activity whose translation was changed from Account 921 to Account 9302 in 2006.
921	PEZ600OAHNENPCZZZZZ451	90,667	0	(90,667)		These costs represent information technology costs in support of a customer service activity. The variances are a result of budgeting the 2007 amounts to different codeblocks (shown in this section) than those used to record the 2005 actuals.
	PEZ600OAHNENPEZZZZZ451	0	210,888	210,888	-	
	PEZ600OAHNENPWZZZZZ451	280,411	179,329	(101,082)		
		371,078	390,217	19,139	5%	
921	PEZ700PHENENPAPRESI451	44,380	0	(44,380)		These costs represent information technology costs in support of creating business plans. The variances are a result of budgeting the 2007 amounts to different codeblocks (shown in this section) than those used to record the 2005 actuals.
	PEZ700PHENENPASVP7Z451	97,114	0	(97,114)		
	PEZ700PHENENPASVP8Z451	48,306	0	(48,306)		
	PEZ700PHENENPASVP9Z451	12,840	0	(12,840)		
	PEZ700PHENENPAVP3ZZ451	31,754	0	(31,754)		
	PEZ700PHENENPAVP5ZZ451	12,840	0	(12,840)		
	PEZ700PHENENPAVP7ZZ451	10,804	243,984	233,180	2158%	
		258,038	243,984	(14,054)	-5%	
921	PEZ750PHENENPHZZZZZ451	253,598	0	(253,598)	-100%	The decrease is primarily due toWeb platform license and software costs paid in 2005. The license was paid to reduce maintenance fees in the future. The variances are also the result of budgeting the 2007 amounts to different codeblocks (shown in this section) than those used to record the 2005 actuals.
	PEZ750PHENENPNEZZZZ451	0	305,832	305,832	-	
	PEZ750PHENENPQCZZZZ451	286,361	0	(286,361)		
		539,959	305,832	(234,127)	-43%	
921	PHS933PHENENPHZZZZZ501	519,272	183,195	(336,077)	-65%	In 2005, charges for contract security services at Ward and the Command Center were incorrectly charged to a PHE rather than a WRD location. Variances were also due to special security coverage for the Ena substation in 2005 and the need for additional contract security coverage due to the decrease in security staff.
921	PHS933WRDNENPHZZZZZ501	252,883	575,235	322,352	127%	
921	PVP840PHENENPVZZZZZ501	38,690	308,256	269,566	697%	These costs are related to the Axis and Procurement Strategizer software implementation.
921	PYP712PHENENPASVP7Z901	633,195	0	(633,195)	-100%	These amounts are related to the amortization of deferred incremental IRP costs. IRP planning costs are currently budgeted and expensed as incurred.
923020	PAC819PHENENPAZZZZZ501	362,311	0	(362,311)	-	This amount relates to tax research fees that are not expected to be incurred in 2007.

BRIEF DESCRIPTION OF ADMINISTRATIVE ACTIVITIES BY ORGANIZATION

PA0 - GENERAL ACCOUNTING DEPARTMENT

The General Accounting Department is comprised of three divisions, i.e. the Administrative Division, Cost Accounting Division, and Corporate & Property Accounting Division. The major functional responsibilities for each division are as follows:

The Administrative Division is responsible for the overall supervision, direction and support of the other divisions in the department. The division is also responsible for providing support, direction, and training on the use of the Project Control module in the Enterprise Resource Planning ("ERP") system; improving work processes and reporting where possible; and testing and implementing software fixes and upgrades to the ERP system. In addition, the Division is responsible managing and enhancing the Company's process and activities for the design and operating effectiveness of internal controls over financial reporting pursuant to the provisions of the Sarbanes-Oxley Act of 2002 (SOX), and manages the Company's requirements under SOX.

The Cost Accounting Division is comprised of two sections, i.e. the Payroll section and the Disbursements section.

The Payroll section is responsible for maintaining and enhancing the Company's payroll and payroll tax reporting systems. This section is responsible for processing payroll data (e.g. timesheets, withholding exemptions, and deductions), and for monitoring and enforcing Company compliance with payroll tax laws and regulations.

The Disbursements section is responsible for maintaining and enhancing the Company's accounts payable and purchasing card systems. This section is responsible for the timely and proper processing of disbursement documents (e.g. invoices, employee expense reports, check

request vouchers); and for monitoring and enforcing Company compliance with disbursement procedures.

The Corporate & Property Accounting Division is comprised of two sections, i.e. the Corporate Accounting section and the Property Accounting section.

The Corporate Accounting section is responsible for meeting the Company's internal and external financial accounting and reporting requirements. This section closes the books each month, and prepares monthly, quarterly and annual financial statements for internal and external distribution for HECO as well as is non-regulated subsidiary, Renewable Hawaii, Inc. This section keeps abreast of generally accepted accounting policies and procedures necessary to insure that the Company's accounting practices comply with the requirements of such bodies as the Financial Accounting Standards Board, the Public Utilities Commission and NARUC's Chart of Accounts. The Corporate Accounting Division is also responsible for maintaining other financial and statistical data for the Company. This section is also responsible for reconciling all of the Company's bank accounts.

The Property Accounting section is responsible for maintaining the Company's property, plant and equipment, and related records, which involve such activities as the unitization of plant installation costs, the recording of plant removal costs, and the calculation of depreciation expense. This division conducts the detailed depreciation study for HECO. The Property Accounting Division also processes billing information for all billings to affiliated companies, based on information provided by other HECO organizations.

PK0 - MANAGEMENT ACCOUNTING & FINANCIAL SERVICES

The Management Accounting & Financial Services organization is comprised of five divisions, i.e. the Administrative Division, the Budgets Division, Treasury Division, Financial

Analysis Division, and ERP Administration Division. The major functional responsibilities for each division are as follows:

The Administrative Division is responsible for the overall supervision and direction of the other divisions in the department, including providing support to the other divisions.

The Budgets Division is responsible for directing and coordinating the preparation of the detailed annual budget of Company earnings and capital budgeting process at HECO. The test year estimates, before normalizations and adjustments, used in this proceeding were developed under the direction of the Budgets Division. This Division also directs and coordinates the preparation of updates to the annual earnings estimate, and prepares the Company's long-range financial forecasts, including the estimates of external financing requirements.

The Treasury Division administers all of the outstanding long-term securities for the three electric utilities, including coordinating the work necessary for the sale of long-term securities. This Division is also responsible for the Company's cash management function, including borrowing and investing funds on a daily basis. This Division also maintains operational contacts with the Company's banks and brokers.

The Financial Analysis Division is responsible for conducting various financial and economic analyses. Examples include the analyses of purchase power contracts, avoided cost analyses, and lease versus buy analyses. This division is also responsible for assisting other departments in analyzing the revenue requirement impact of various decisions.

The ERP Administration Division is responsible for maintaining the application security and authorization within our ERP system. Additionally, this division assists users with resolving functional problems which includes the submitting and tracking of software problems reported to the software vendor.

PE0 - INFORMATION TECHNOLOGY & SERVICES DEPARTMENT

The Information Technology & Services Department charges a portion of its costs directly to administrative expenses.

The IT Customer Care Division of the Information Technology & Services Department directly charges Mailing Services, Records Management, corporate printing and word processing, and printer copier maintenance functions to administrative expenses.

The Mailing Services section is responsible for the pickup and delivery of all inter-office mail, and for providing messenger service as required by the Company. This section is also responsible for mailings external to the company, including such bulk mailing projects as light and power bills, dividend checks, and annual reports.

The Records Management Services section is responsible for the Company's overall records management function, including maintaining and upgrading the company's records filing system. This section also coordinates the microfilming of various corporate documents and records.

The Printing Services section is responsible for mass Company printing projects.

The Word Processing section is responsible for providing word processing services as requested by various departments. The section prepares documents such as manuals, contracts, agreements, mailing labels and mass mailing material.

Printer/copier maintenance expenses related to Administrative and General, Customer Accounts, and Customer Services functions are charged directly to administrative expenses.

PFB - COMPENSATION & BENEFITS

The Compensation & Benefits Department is comprised of three divisions, which incur costs chargeable to Administrative expenses, i.e. the Benefits Division, Disability Management Division and the Compensation Division.

The Benefits Division is responsible for the administration, management and delivery of the Company's employee benefits program to employees and retirees. The division's functions include the maintenance of data and administration systems, legal compliance, communication to employees and the calculation of benefit payments. The Benefits Division is responsible for maintaining and enhancing the Company's Flex Benefits system. This division is responsible for preparing all benefit information and for processing all benefit payments.

The Disability Management Division is responsible for the management and administration of the Company's occupational and non-occupational disability program. The division monitors absences related to sick leave and other leaves, administers the Company's self-insured workers' compensation program, coordinates the return-to-work program, and insures compliance with workers' compensation and family leave statutory requirements.

The Compensation Division is responsible for managing and administering the compensation programs for the Company's non-bargaining employees. Their activities include conducting and/or coordinating compensation analyses of the Company's compensation levels to insure that they are competitive with the industry and local job market, and evaluating and rating all non-bargaining unit positions. The Compensation Division also monitors all changes in non-bargaining employee status (e.g. promotions, terminations, etc.).

PF1 - WORKFORCE STAFFING & DEVELOPMENT

The Workforce Staffing & Development Department is comprised of three divisions,

which incur costs chargeable to Administrative expenses, i.e. the Administrative Division, the Client Services & Consulting Division and the Organizational Development Division.

The Administrative Division is responsible for the overall supervision and direction of the work of the other divisions. Also part of this division is the Human Resources Information Systems (HRIS) function, which provides information systems oversight and coordination specific to employee data maintenance, reporting, security and integrity.

The Client Services & Consulting Division is responsible for processing and filling all job vacancies that exist within the Company. This division coordinates all activities with respect to new external hires, including advertising, testing, recruiting, and corporate orientation. The Client Services & Consulting Division is also responsible for activities related to the discipline of salaried employees, career and performance coaching, and Equal Employment Opportunity, including investigations and employee complaints. It also has responsibility for HECO's Affirmative Action Program compliance and reporting.

The Organizational Development Division is responsible for the Company's centralized leadership development, succession planning and non-technical training programs. This division, which conducts some of the training, is responsible for upgrading current in-house programs as well as initiating and designing additional training programs. The Organizational Development Division is also responsible for coordinating and reporting HECO's annual Corporate Culture Survey (measures employee perceptions at a point in time) and overseeing the salaried performance development system.

PH9 - SAFETY, SECURITY & FACILITIES DEPARTMENT

The Safety, Security & Facilities Department costs include building service expenses with respect to the Company's King Street office building and the extensive Ward Avenue Operation's

complex, such as in-house custodial and grounds-keeping labor costs, structural, electrical and mechanical repairs, painting, office rearrangements and building security including fire and hold-up alarms, ID card access reading and monitoring and CCTV coverage monitored at Ward Avenue's Security Command Center. External contract costs include supplemental custodial and grounds-keeping cost, refuse collection, fire alarm and water leak monitoring, window cleaning, carpet and drapes cleaning, special Indoor Air Quality issues [mold prevention and eradication] and air conditioning and elevator maintenance.

PJ0 - ENVIRONMENTAL DEPARTMENT

The Environmental Department is comprised of four divisions, i.e. Air Quality/Noise ("Air"), Water & Hazardous Materials, Chemistry, and the Administrative. In general, the department's activities involve the permitting of proposed operations, renewal of permits for existing operations, and the review of ongoing operations for compliance with existing permit conditions. In addition, the department monitors federal and state environmental legislation and regulations, and prepares the utility for cost effective compliance and potential impacts to the Company. Each of the divisions in the department provides services for HECO, MECO and HELCO. The department interacts with environmental regulators on issues raised by HECO, its subsidiaries, or by the regulators relative to existing or planned future operations. The department also interacts with industry, customers, community associations and other public constituents on environmental matters related to HECO and its subsidiaries.

More specifically, the Air Division is responsible for air permit applications, renewals, and compliance monitoring. The Water & Hazardous Materials Division is responsible for water quality permitting, compliance, and monitoring. The division is also involved in various hazardous materials management activities (e.g. activities related to PCBs, hazardous waste, Emergency Planning, and Superfund), including permitting and compliance. Both the Air and

Water and Hazardous Material divisions monitor federal and state legislation, conduct compliance training, and keep Company supervisors informed of the Company's obligations in order to minimize the potential financial exposure for noncompliance.

The Chemistry Division of the Environmental Department conducts analytical chemistry work for the Company and its subsidiaries, primarily in support of environmental permit or other regulatory requirements. This includes testing of water, soil, oils and fuels to support energy production and delivery operations.

The Administrative Division provides administrative support as well as environmental audit services. The purpose of the environmental auditor position is to achieve regulatory and permit compliance through the audit function.

PKID - RISK MANAGEMENT DIVISION

The Risk Management Division is responsible for all aspects of property and liability insurance administration for the Company, including the review, negotiation, and acquisition of insurance coverage. This division is responsible for the analyses and control of risk exposures. The division is also responsible for the investigation and settlement of certain claims and lawsuits.

PNX / PNA – CORPORATE AUDIT AND COMPLIANCE DEPARTMENT

The Corporate Audit & Compliance Department (CACD) is responsible for (1) conducting independent analyses, appraisals and reviews of the adequacy and effectiveness of the system of internal controls, risk management practices, and corporate governance process of HECO and its subsidiaries for management and the Audit Committee of the Board of Directors;

(2) reviewing organizational activities and processes and providing recommendations for improving existing business practices; (3) testing the design and operating effectiveness of the Company's internal controls over financial reporting to assist management in achieving compliance with the requirements of the Sarbanes Oxley Act (SOX); (4) receiving, compiling, investigating and monitoring Code of Conduct violations and questions, as appropriate; (5) reviewing new or existing information technology systems, applications and devices to ensure the reliability of the Company's operating systems, accuracy of data outputs and protection of equipment and information; (6) performing special studies and examinations requested by management; (7) evaluating and assisting in establishing corporate compliance programs, activities and training; and (8) coordinating documentation for annual audit activities.

PNC - LEGAL DEPARTMENT

The Legal Department handles legal matters in a multitude of areas, including environmental matters; regulatory matters; contract review and negotiation, including the establishment of standard form contracts; litigation and claims monitoring; EEO compliance and claims (e.g., civil rights, workers' compensation, etc.); due diligence investigations for Securities and Exchange Commission filings and financing applications, including special purpose revenue bonds; purchase power agreements; land and easement acquisitions; compliance investigations; counseling on employment and labor contract issues; and collections.

The Land and Rights-of-Way Division of the Legal Department is involved in all Company land acquisition, disposition and land management functions. This typically includes obtaining required easements, substation sites, office space, generating sites and general management of the Company's real property assets.

PNID - GOVERNMENT RELATIONS DEPARTMENT

The Government Relations Department is responsible for coordinating all of the Company's legislative activities. The department monitors both the State Legislative and City Council sessions, and coordinates the Company's support of or opposition to the various bills and resolutions having an impact on the Company. The Government Relations Department coordinates the Company's government contact program involving the State Legislature and the Honolulu, Hawaii, and Maui County Councils.

PNP - REGULATORY AFFAIRS DIVISION

The Regulatory Affairs Division coordinates regulatory matters before the Public Utilities Commission. These regulatory matters include rate cases, routine filings required by the Commission or its rules, tariff filings, capital projects with estimated expenditures over $2,500,000, public hearings for overhead transmission or sub-transmission lines, power purchase agreements, IRP and DSM programs, fuel contracts, customer complaints, and commission investigations.

PNR - TECHNOLOGY

The Technology Division was formed in September 2002 to monitor, evaluate, pursue, recommend and implement new energy-related technologies and alternatives (focusing on renewable energy research, development and demonstration); manage EPRI membership, technology transfer and integration with Company strategies; and support Integrated Resource Planning related to renewable energy supply-side development.

PNG – ENERGY PROJECTS DEPARTMENT

The Energy Projects Department was created in 2003 to pursue utility combined heat and power (CHP) projects at customer sites for HECO and its subsidiaries. The Department is a part of the Energy Solutions process area and its mission has expanded to include other forms of distributed generation (DG) technologies.

In 2005 Energy Projects was responsible for the implementation of HECO's Substation DG Projects and it continues with installations of utility DG projects. The Department is also evaluating new opportunities for DG based on technical feasibility, financial merit and community acceptance.

The Department is responsible for all aspects of project development. The Department develops the business case and project scope, prepares the schedule and budget, coordinates regulatory and permit applications, and if approved, provides project management for implementation and construction.

PP0 - INDUSTRIAL RELATIONS DEPARTMENT

The Industrial Relations Department is comprised of two divisions, i.e. the Administrative Division and the Labor Relations & Wage Administration Division.

The department's major responsibilities include labor relations and wage administration (which includes day-to-day dealings with labor unions regarding compliance with the collective bargaining agreements for HECO, MECO and HELCO), personnel administration, and recognition program administration.

The following programs specifically represent major components of Labor Relations responsibilities.

- Negotiating the Collective Bargaining Agreement for HECO, MECO and HELCO.

- Administration of the Substance Abuse Program, the Federal Department of Transportation Drug and Alcohol Program.
- Administration of the Apprenticeship Program
- Administration of the Preventive Vehicle Accident and Loss of License policy.
- Performance Appraisal and wage administration system for union employees.

PQC – CORPORATE COMMUNICATIONS

Corporate Communications is responsible for coordinating external company public and media communications, as well as internal employee communications. Corporate Communications coordinates the development of the communications strategy for company issues, and helps carry out that strategy through activities such as preparing communications materials and responding to the media about issues such as proposed company infrastructure projects, rate increases, alternative energy projects, energy conservation initiatives, and other topics; communicating with customers and the media about power outages and other electric system issues; production of the company's monthly *Currents* employee newsletter; and reviewing and contributing to the development of content for the employee Intranet portal. The department also provides video and other audiovisual assistance to support employee training and safety needs; manages the corporate engineering library; provides other internal communications support functions; and helps develop investor communications regarding utility operations.

PS0 – ENERGY SERVICES DEPARTMENT

The Energy Services Department is comprised of three divisions. They are the

Administrative Division, Customer Efficiency Programs Division, and Pricing Division. The major functional responsibilities for each of the divisions are as follows:

The Administrative Division is responsible for the overall supervision and direction of the work of the other divisions.

The Customer Efficiency Programs Division plans and implements the Company's demand-side management energy efficiency and load management programs. The program manager for the commercial and industrial energy efficiency programs oversees the following Division activities: meeting with large commercial customers one-on-one to explain the programs, conducting customer meetings to explain any changes in existing programs, conducting workshops on energy efficiency practices and technologies, and directing the work of outside engineering firms that support the Division in performing detailed analyses of customers' facilities. The program manager for the residential programs directs and manages a contractor who implements most of the activities of the Company's residential water heating programs. The program managers for the Company's two load control programs are responsible for all aspects of implementing those programs, including marketing, meeting with customers' facility managers and engineers, managing outside consults, and developing load control protocols. The Division develops and supports tracking and accounting systems used to monitor and report program expenses and kW and kWh impacts achieved by the programs. The Division also prepares regulatory reports and filings including program applications; the Annual Modification and Evaluation Report, which provides the findings of any Impact Evaluations and presents any recommended modifications to the programs to be made in the following year; and the Annual Accomplishments and Surcharge Report, which details the programs' performance in the past year and provides the basis for adjustments in the IRP surcharge. The Division also tracks monthly program costs for HELCO and MECO and supports those companies in IRP Planning,

regulatory reporting requirements, and in implementation issues as they arise.

The Pricing Division's primary responsibilities include:

(1) the development and accurate implementation of the Company's tariffs (both rates and rules) for HECO, HELCO, and MECO; (2) providing expert testimonies on revenues, cost-of-service, and rate design for rate case purposes for HECO, HELCO, and MECO; (3) development of cost of service studies and rate research studies for new tariff proposals for HECO, HELCO, and MECO for PUC filings; (4) development and implementation of cost recovery mechanisms and any temporary rate adjustments approved and/or ordered by the PUC; (5) development of tariff-related customer contracts, including preparation of the applications for PUC approval of such contracts; (6) providing rate analyses and/or tariff interpretations to other employees upon request, in response to customers' tariff inquiries, and (7) administering and calculating the utilities' monthly Energy Cost Adjustment Clause and quarterly Avoided Cost Payment Rate filings.

PSM – FORECASTS AND RESEARCH

The Forecasts and Research Division develops the Company's short and long-term sales and demand forecasts and assists HELCO and MECO with their sales and demand forecast process. These projections are used for financial planning and resource planning purposes. The Division also provides electric revenue forecasts for the utility companies. The Division also provides follow-up support for the Company's forecasts including variance reporting. The Division also coordinates and conducts load research projects for HECO, MECO and HELCO.

The Division also provides support for a number of activities that help the Company provide products, services, and features designed to meet the wants, needs, and expectations of its customers, for which the labor is recorded in account 910. The Division conducts ongoing

assessments of customer satisfaction and expectations, market conditions and trends, energy usage and technology adoption patterns, and related activities intended to help the Company understand and meet customer expectations. The Division coordinates the planning of new and enhanced demand-side management ("DSM") programs for IRP purposes and is responsible for conducting impact evaluations of implemented DSM programs. The Division is responsible for the development, tracking, and reporting of the IRP budget for the Company. The Division manages the Company's mass market advertising efforts for DSM and educational and awareness purposes. The Division also provides budget and accounting support to ensure proper accounting and tax treatment, and to ensure that transactions are recorded in accordance with generally accepted accounting principles. The Division conducts similar work to that described above for HECO's subsidiary companies, HELCO and MECO.

V9 - SUPPORT SERVICES DEPARTMENT

The Support Services Department is comprised of five divisions. Two of the five divisions incur costs chargeable to administrative expenses, i.e. the Administrative Division, and the Purchasing Division. The Purchasing Division handles procurement of all HECO expenditures for goods and provides purchasing assistance to HELCO and MECO. Effective January 2006, three full-time Contract Administrator positions, previously reporting to Operating Departments, were reorganized to report to the Purchasing Division. This reorganization centralized responsibility for contracting the majority of HECO's expenditures for services under the Purchasing Division.

PYP - INTEGRATED RESOURCE PLANNING

The test year amounts represent the costs of activities directly related to coordinating and

managing of the Integrated Resource Planning (IRP) process within HECO and with the public advisory group, which include meeting with the advisory group and public, development of the IRP plan, preparation of the IRP report, and regulatory activities. Also included in the test year amounts are activities relating to long range resource planning that are not directly related to the preparation of HECO's IRP Plan, such as working with government agencies on their energy plans or on HECO's business strategies.

PY9 - PLANNING & ENGINEERING

Only a portion of the Planning & Engineering Department's costs is charged to administrative expenses. The test year amount represents the costs of activities with respect to Integrated Resource Planning support.

P1V-P9V - EXECUTIVE RELATED COSTS

Labor and non-labor costs associated with the Company's executives are included in administrative expenses. Executive-related costs generally represent the costs incurred in the overall supervision and direction of Company activities.

Hawaiian Electric Company, Inc.
Performance Incentive Compensation
($000)

	Account	2001	2002	2003	2004	2005	Budget 2006	Budget 2007
LTIP/EICP/TIP	920	491	923	986	1,188	1,192	1,613	1,677
LTIP/EICP/TIP	921	-	-	-	-	-	-	-
PRODUCTION OPERATIONS - OTHER AWARDS	506	189	191	140	50	173	256	279
PRODUCTION MAINTENANCE - OTHER AWARDS	514	1	1	-	1	-	-	-
TRANSMISSION OPERATION - OTHER AWARDS	566	36	32	41	12	39	37	39
DISTRIBUTION OPERATION - OTHER AWARDS	588	108	91	110	(13)	126	110	101
DISTRIBUTION MAINTENANCE - OTHER AWARDS	598	3	1	2	1	-	-	-
ADMIN & GENL - OTHER AWARDS	920	258	323	325	425	442	-	358
ADMIN & GENL - OTHER AWARDS	921	37	40	42	42	44	367	38
HEI INCENTIVE COMPENSATION*	921					820	422	176
Total Performance Incentive Compensation		1,123	1,602	1,646	1,706	2,836	2,805	2,668

*HEI Incentive Compensation for recorded years 2001-2004 is not available.

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HAWAIIAN ELECTRIC COMPANY, INC.
EFFECT OF GENERAL PAY INCREASE

RELATIVE WAGE RATES

	2005		2006		2007	
	BU	Merit	BU	Merit	BU	Merit
JAN	1.0000	1.0000	1.0287	1.0375	1.0718	1.0764
FEB	1.0000	1.0000	1.0287	1.0375	1.0718	1.0764
MAR	1.0000	1.0000	1.0287	1.0375	1.0718	1.0764
APR	1.0000	1.0000	1.0287	1.0375	1.0718	1.0764
MAY	1.0144	1.0350	1.0431	1.0738	1.0718	1.1141
JUN	1.0144	1.0350	1.0431	1.0738	1.0718	1.1141
JUL	1.0144	1.0350	1.0431	1.0738	1.0718	1.1141
AUG	1.0144	1.0350	1.0431	1.0738	1.0718	1.1141
SEP	1.0144	1.0375	1.0431	1.0764	1.0718	1.1168
OCT	1.0144	1.0375	1.0431	1.0764	1.0718	1.1168
NOV	1.0287	1.0375	1.0718	1.0764	1.1093	1.1168
DEC	1.0287	1.0375	1.0718	1.0764	1.1093	1.1168
TOTAL	12.144	12.290	12.517	12.751	12.936	13.229
	(A)	(B)	(C)	(D)	(E)	(F)

					BU	Merit
Percentage increase 2007 over 2005						
(G)	BU	(E-A)/A	Merit	(F-B)/B	6.53%	7.64%
FY2005 Account 92000 Labor ($000)					1,143	11,415
Increase in 2005 labor due to general pay increase ($000)					75 +	872 = 947

Assumptions:

BU Increases

5/1/2005 1.5% of 11/1/02 rates
11/1/2005 1.5% of 11/1/02 rates
5/1/2006 1.5% of 11/1/02 rates
11/1/2006 3.0% of 11/1/02 rates
11/1/2007 3.5% of 10/31/07 rates

Merit Increases

5/1/2005 3.5% of 4/30/2005 rates
9/1/2005 0.25% of 4/30/2005 rates
5/1/2006 3.5% of 4/30/2006 rates
9/1/2006 0.25% of 4/30/2006 rates
5/1/2007 3.5% of 4/30/07 rates
9/1/2007 0.25% of 4/30/2007 rates

HAWAIIAN ELECTRIC COMPANY, INC.
A/C 920-A&G SALARIES

	Position	Budget Assumption Hire Date	Hours	2007
HF	Facilities Building Technician	01/2006	1,904	62,432
YP	IRP Analyst	11/2006	653	24,847
VP	Senior Contract Administrator	01/2007	1,624	53,251
NP	Director	07/2007	948	39,427
NP	Manager	07/2007	948	39,427
NP	Analysts (4 positions)	07/2007	3,792	124,340
NP	Administrative Assistant	07/2007	948	22,013
	Subtotal		10,817	365,737
	Add: Nonproductive Wages On-cost			46,080
	Total Effect of "New" Positions			411,817

HAWAIIAN ELECTRIC COMPANY, INC.
A/C 920-A&G SALARIES

	Position	2005 Actual Charges	2007 Hours	2007 Dollars
NA	Internal Auditors (5 positions)	68,537	6,603	216,508
NX	IT Auditor	5,945	1,704	55,874
NX	Secretary	17,536	1,944	45,140
HF	Facilities Planning Clerk	8,493	2,198	53,258
VP	Contract Administrator (3 positions)	0	4,871	159,720
VP	Buyers (3 positions)	97,726	4,871	159,720
AA	Director, Financial Reporting Compliance	32,412	1,824	88,373
AA	Financial Systems Analyst	21,868	1,412	46,299
KB	Financial Systems Analyst	28,065	1,874	61,448
KC	Management Analyst	25,646	1,970	64,596
KM	Director, ERP Administration	12,894	1,326	55,148
8V	Manager, Operations Strategic Planning	9,731	1,904	97,561
SP	Rate Analyst	38,932	1,412	46,299
SP	Rate Analyst	8,095	1,412	46,299
NP	Regulatory Analyst II	44,307	1,740	57,055
NP	Regulatory Analyst I	0	1,740	57,055
	Subtotal	420,186 (a)	38,805	1,310,354
	Add: 2007 Nonproductive Wages On-cost			165,309
				1,475,662
	2007 General Wage Increase Factor-Merit [1]			1.0764
				1,370,924
	2005 Actual Charges			(420,186) (a)
	Total Effect of Vacancies [2]			950,738
	Reduction in number of Security positions:			
	2007 Forecasted Hours and Dollars		7,116	165,233
	Add: 2007 Nonproductive Wages On-cost			30,314
	Less: 2005 Actual Charges			(287,882)
				(92,335)
	Net Impact of Vacancies			858,403

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2 Includes differences due to changes in the allocation of labor charges.

HAWAIIAN ELECTRIC COMPANY, INC.
HEI BILLINGS TO HECO
TEST YEAR 2007

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HECO
EXCLUDING INCENTIVE COMPENSATION

Activity code	ACTIVITY CODE DESCRIPTIONS	Direct Charges-2006 Direct Labor Hours	Direct Labor Dollars	Direct Nonlabor Dollars	Shared Charges-2005 Shared Labor Hours	2006 Allocation Factor	Shared Labor Dollars	Shared Nonlabor Dollars	2005 Actual w/ 2006 Alloc Factor	2006 Adjustments	2006 Estimate (1)	2007 Adjustments	2007 Estimate (2)
ACC	**Accounting**												
ACC 001	Research accounting issues				25.00	39.9%	748.83		748.83		772.04		791.34
ACC 004	Maintain general ledger	195.00	11,508.45						11,508.45		11,865.21		12,161.84
ACC 008	Analyze financial results	2.50	1,755.75						1,755.75		1,810.18		1,855.43
ACC 009	Monitor accounting and reporting standards	0.50	36.74		53.00	39.9%	1,993.02		2,029.76		2,092.68		2,145.00
ACC 011	Preparation of audit workpapers	8.00	464.24		4.00	39.9%	117.26		581.50	535.05 (3)	1,151.16		1,179.94
ACC 018	Intercompany billing administration				458.75	38.7%	9,312.44		9,312.44		9,601.13		9,841.16
		206.00	13,765.18	0.00	540.75		12,171.55	0.00	25,936.73	535.05	27,292.40	0.00	27,974.71
ADM	**Administrative**												
ADM 006	Assist on rate cases	866.50	72,463.29						72,463.29		74,709.65	25,214.14 (4)	102,421.88
ADM 007	Corporate risk review				4.50	38.7%	1,240.47		1,240.47		1,278.92		1,310.89
ADM 010	Training rooms (primarily supplies)	4.25	251.86	3,000.00					3,251.86		3,352.67		3,436.49
ADM 011	Telephone charges			4,494.51					4,494.51	(3,476.00) (26)	1,050.08		1,076.33
ADM 016	Assist on MECO rate case	6.00	473.76						473.76			4,982.22 (4)	5,106.78
ADM 111	Sarbanes-Oxley Section 404	3.00	357.50						357.50		488.45		500.66
ADM 112	Sarbanes-Oxley Section 302										368.58		377.79
		879.75	73,546.41	7,494.51	4.50		1,240.47	0.00	82,281.39	(3,476.00)	81,248.35	30,196.36	114,230.82
ANN	**Annual meeting**												
ANN 001	Annual shareholder meeting planning & coordination				110.50	39.6%	6,130.85	4,579.28	10,710.13		11,042.14		11,318.19
ANN 002	Annual meeting facilities					39.6%		360.84	360.84		372.03		381.33
		0.00	0.00	0.00	110.50		6,130.85	4,940.12	11,070.97	0.00	11,414.17	0.00	11,699.52
AUD	**Audits**												
AUD 004	Audit Committee meeting preparation			4,125.80					4,125.80		4,253.70		4,360.04
AUD 005	Audit Committee meeting attendance			311.40					311.40		321.06		329.08
AUD 006	Coordinate activities with external auditors				1.00	39.9%	277.56		277.56		286.16		293.31
AUD 010	Audit expenses				1.00	39.9%	125.80		125.80		129.70		132.94
		0.00	0.00	4,437.20	2.00		403.36	0.00	4,840.56	0.00	4,990.81	0.00	5,115.37
BOD	**Board of Directors**												
BOD 001	Board of Directors meetings	291.00	22,823.08	595.14					23,418.22		24,144.18		24,747.78
BOD 002	Attendance (presentations)	69.00	43,174.83	12.67					43,187.50		44,526.31		45,639.47
BOD 005	Misc. board matters	5.58	1,074.57	4,182.13					5,256.70		5,419.66		5,555.15
		365.58	67,072.48	4,789.94	0.00		0.00	0.00	71,862.42	0.00	74,090.15	0.00	75,942.40
BUD	**Budgets**												
BUD 002	Attendance (presentations)	1.50	1,088.45						1,088.45		1,101.57		1,129.11
		1.50	1,088.45	0.00	0.00		0.00	0.00	1,088.45	0.00	1,101.57	0.00	1,129.11
CAS	**Cash Management**												
CAS 002	Bank lines and relationships	2.00	91.46	50.00					50.00	(50.00) (23)	0.00		0.00
CAS 008	Cash disbursements (wire confirmations)								91.46	(91.46) (5)	0.00		0.00
		2.00	91.46	50.00	0.00		0.00	0.00	141.46	(141.46)	0.00	0.00	0.00
CON	**Consulting - general**												
CON 002/004	Meetings & other	62.63	40,044.35	5,471.70					45,516.05	15,072.10 (14)	62,466.38	21,848.59 (15)	86,422.84
		62.63	40,044.35	5,471.70	0.00		0.00	0.00	45,516.05	15,072.10	62,466.38	21,848.59	86,422.84
FIN	**Financing**												
FIN 002	Debt financing due diligence	2.00	146.94						146.94	(146.94) (6)	0.00		0.00
		2.00	146.94	0.00	0.00		0.00	0.00	146.94	(146.94)	0.00	0.00	0.00
HUM	**Human Resources**												
HUM 002	Compensation consulting services	11.25	2,163.90	94,828.48	34.50	43.3%	3,517.95	9,001.90	109,512.23	(101,743.82) (25)	8,009.23	4,696.05 (20)	13,024.96
HUM 003	Personnel issues	11.50	2,249.73	6,952.15	1.00	42.3%	87.81		9,289.69		9,577.67		9,817.11
HUM 008	Code of Conduct development and administrative assistance	1.00	207.58		24.50	42.3%	1,734.71		1,942.29		2,002.50		2,052.56
HUM 009	Code of Conduct review	1.00	173.22	1,214.46	12.50	42.3%	952.41	699.76	3,039.85		3,134.09		3,212.44

HECO
EXCLUDING INCENTIVE COMPENSATION

Activity code	ACTIVITY CODE DESCRIPTIONS	Direct Charges-2005 Direct Labor Hours	Direct Labor Dollars	Direct Nonlabor Dollars	Shared Charges-2005 Shared Labor Hours	2006 Allocation Factor	Shared Labor Dollars	Shared Nonlabor Dollars	2005 Actual w/ 2006 Alloc Factor	2006 Adjustments	2006 Estimate (1)	2007 Adjustments	2007 Estimate (2)
HUM 010	Compensation committee meetings				118.50	43.3%	6,917.93	4,149.87	11,067.80		11,410.90		11,696.17
HUM 011	Long-term incentive plan (LTIP)	1.75	270.96		88.50	22.2%	1,599.30	203.97	2,074.22 (a)	(2,074.22) (7)	0.00		0.00
HUM 012	Executive incentive compensation plan (EICP)	17.50	3,048.53		86.75	44.4%	3,520.76	2,350.43	8,919.72 (b)	(8,919.72) (7)	0.00		0.00
HUM 013	Stock options with dividend equivalents	16.20	1,252.62		602.25	40.5%	25,725.41	30,536.66	57,514.69 (c)	(57,514.69) (7)	0.00		0.00
HUM 015	Executives deferred compensation				67.25	66.7%	6,002.93		6,002.93 (d)	(6,002.93) (7)	0.00		0.00
HUM 017	Executive incentive compensation consulting services				14.50	44.4%	1,377.66		1,377.66 (e)	(1,377.66) (7)	0.00		0.00
HUM 018	Other incentive compensation consulting services	8.58	1,607.69	670.21					2,277.90 (f)	(2,277.90) (7)	0.00		0.00
HUM 019	Executive Compensation - Sarbanes Oxley Related Charges				128.00	44.4%	3,804.45	411.86	4,216.31 (g)	(4,216.31) (7)	0.00		0.00
		68.78	10,974.22	103,665.30	1,177.25		55,241.32	47,354.45	217,236.29	(184,127.25)	34,134.39	4,696.05	39,803.24
INV	**Investor Relations**												
INV 001	Analysvmedia communications				77.50	39.6%	3,806.72		3,806.72		3,923.70		4,021.79
INV 003	Fact sheet					39.6%		2,647.62	2,647.62		2,729.70		2,797.94
INV 004	Financial mailing list				52.00	39.6%	1,213.61	2,705.55	3,919.16		4,040.65		4,141.67
INV 005	Financial news releases				201.00	39.6%	9,012.84	3,422.39	12,435.23		12,820.72		13,141.24
INV 006	Group analyst meetings				726.50	39.6%	55,922.82	93,894.55	149,817.37		154,461.71		158,323.25
INV 007	HEI stock - share forecast				2.00	39.6%	66.37		66.37		70.49		72.25
INV 008	Investor base/stockholder monitoring				2.00	39.6%	66.65		66.65		91.40		93.69
INV 009	Investor relations planning				8.00	39.6%	179.66		179.66		185.23		189.86
INV 012	One-on-one meetings/visits with analysts				44.50	39.6%	5,356.53		5,356.53		5,522.58		5,660.64
INV 013	Other investor relations activities				214.50	39.6%	6,566.08	40,303.11	46,891.19		48,344.82		49,553.44
INV 015	Retail/broker/shareholder communications				11.50	39.6%	514.23		514.23		530.17		543.42
INV 018	Statistical supplement				20.00	39.6%	517.49	633.59	1,151.08		1,186.76		1,216.43
INV 019	Surveys				37.25	49.9%	1,289.65		1,289.65		1,329.63		1,362.87
INV 020	Teleconferencing				5.00	39.6%	110.86	511.46	622.32		641.61		657.65
INV 022	Investor Relations-Sarbanes Oxley Related Chgs				47.50	39.6%	1,124.40	226.46	1,350.86	1,148.40 (13)	2,576.74	(356.40) (13)	2,275.85
		0.00	0.00	0.00	1,449.25		85,792.91	144,344.73	230,137.64	1,148.40	238,455.91	(356.40)	244,051.99
PEN	**Pension plan**												
PEN 005	HEIRS				552.25	46.9%	17,163.64	12,700.11	29,863.75	(29,863.75) (27)	0.00		0.00
PEN 007	HEI Retirement Plan				13.00	71.7%	657.26		657.26		677.64		694.58
PEN 009	Master pension trust				796.25	66.0%	47,251.84	2,110.90	49,362.54	(334.40) (8)	50,548.01		51,811.71
PEN 010	Pension-Sarbanes Oxley Related Charges				63.00	66.0%	3,020.57	392.22	3,412.79	3,894.00 (13)	7,533.30	(1,186.00) (13)	6,503.93
PEN 022	Supplemental Exec. Retirement plan				2.50	50.0%	259.48	1,271.00	1,530.48		1,577.92		1,617.37
PEN 026	OPEB funded plans/trusts				731.75	67.9%	43,976.39	2,141.76	46,118.15	(344.02) (8)	47,193.13		48,372.96
PEN 028	HECO OPEB Plan	147.00	9,452.01		13.25	66.0%	491.61		9,943.62		10,251.87		10,508.17
PEN 030	HEI postretirement electric discount trust	6.50	418.86		1.50	31.3%	40.55		459.41		473.55		485.49
		153.50	9,870.87	0.00	2,173.50		112,861.14	18,615.99	141,348.00	(26,648.17)	118,255.52	(1,186.00)	119,994.21
RPT	**Reports**												
RPT 001	10K preparation	2.70	163.52		364.50	39.9%	12,398.24	15,772.53	28,332.29		29,210.59		29,940.85
RPT 004	10K - Sarbanes Oxley Related Charges								0.00	4,095.66 (9)	4,222.63		4,328.20
RPT 011	10Q preparation	10.00	822.70	1,920.59	759.00	39.9%	26,224.53	27,980.31	54,204.84		55,865.19		57,262.32
RPT 021	8K preparation				100.75	39.9%	2,899.85	3,596.29	9,239.43		9,525.85		9,764.00
RPT 028	Controller's - 8K SOX testing				46.00	39.9%	1,180.43		1,180.43		1,217.02		1,247.45
RPT 041	Proxy preparation				28.50	39.6%	993.41	15,914.04	16,907.45	(830.61) (21)	16,575.22		16,989.60
RPT 045	Proxy printing and mailing	3.00	255.27		874.00	37.1%		115,921.55	115,921.55	10,944.50 (22)	130,799.90		134,068.87
RPT 051	Annual report preparation					39.9%	29,952.40	143,036.09	173,242.76		178,613.29		183,078.62
RPT 055	Annual report printing and mailing				348.50	37.4%		71,636.71	71,636.71		73,857.45		75,703.89
RPT 098	Financial Reporting-Sarbanes Oxley Related Charges					39.9%	9,435.42	61,927.73	71,363.15	(7,737.43) (10)	48,564.42	1,995.00 (16)	50,760.07
										(20,032.73) (11)		(1,037.40) (13)	
		15.70	1,241.49	1,920.59	2,621.25		83,082.28	456,784.25	542,028.61	3,511.20 (13)			
										(10,049.41)	548,470.56	957.60	563,163.87
STO	**Stock Transfer activities**												
STO 001	Preferred stock dividend payments	11.35	626.04						626.04				
STO 003	Form 1099 (for preferred stockholders)	2.50	178.78						178.78		645.45		661.59
STO 004	Preferred stockholder database maintenance	15.00	705.18						705.18		184.32		188.93
STO 006	Preferred stock transfer administrative activities	25.25	1,381.72	103.58					1,485.30		727.04		745.22
STO 011	Common stock dividend payments				52.55	37.1%	1,077.85	1,718.63	2,796.48		1,531.34		1,569.62
STO 012	HEI dividend reinvestment program administration				2,743.25	37.1%	52,868.16	35,322.62	88,190.78	14,159.83 (12)	2,883.17	(217.02) (17)	2,732.80
STO 013	Form 1099 Dividends				28.75	37.1%	578.66	1,163.04	1,741.70		105,523.48	(7,257.01) (17)	100,723.13
STO 014	Common stockholder database maintenance				1,193.95	37.1%	20,682.06	1,659.18	22,341.24	(534.37) (12)	1,795.69		1,840.58
											22,482.88	(11,504.66) (17)	11,252.68

HAWAIIAN ELECTRIC COMPANY, INC.
HEI BILLINGS TO HECO
TEST YEAR 2007

	HECO	Direct Charges-2006				Shared Charges-2006				2005 Actual	2006	2006	2007	2007
	EXCLUDING INCENTIVE COMPENSATION	Direct Labor Hours	Direct Labor Dollars	Direct Nonlabor Dollars		Shared Labor Hours	2006 Labor Allocation Factor	Shared Labor Dollars	Shared Nonlabor Dollars	w/ 2006 Alloc Factor	Adjustments	Estimate (1)	Adjustments	Estimate (2)
Activity code	ACTIVITY CODE DESCRIPTIONS													
STO 015	Other common stock communications					1,899.05	37.1%	37,173.68		37,173.68		38,326.04		
STO 016	Common stock transfer administrative activities					2,562.05	37.1%	68,418.40	10,914.41	69,333.81			(7,618.30) (17)	31,475.43
STO 018	Stock transfer system					282.20	37.1%	5,437.19	44,464.70	51,901.89		71,483.16	865.07 (17)	74,146.89
STO 019	Stock transfer division expenses						37.1%		46,834.06	46,834.06		53,510.85		53,331.56
STO 020	Stock transfer division miscellaneous income						37.1%		(36,166.70)	(36,166.70)	4,832.27 (12)	52,030.79	(1,446.90) (13)	(37,162.24)
STO 021	Stock Transfer Division-Sarbanes Oxley Related Chge					604.00	37.1%	13,477.19		13,477.19		(36,256.84)		17,934.53
						9,386.70		180,714.19	107,710.82	300,420.41		18,944.00	(27,166.62)	314,289.14
TAX	Tax	54.10	2,891.72	109.58							4,897.20 (13)	333,812.37		
TAX 001	Tax return preparation	261.25	16,041.31	866.64		127.50	27.5%	2,286.58	4,286.85	23,460.38	23,354.83			
TAX 002	Tax return review	64.00	8,114.59			82.50	27.5%	2,269.61		10,484.20		24,208.27		24,813.48
TAX 003	Tax and financial planning	164.00	14,754.85			325.25	27.5%	8,007.21		22,762.16		10,809.21		11,079.44
TAX 006	Tax research	160.28	11,311.86	807.78		1.75	27.5%	24.17		12,143.81		23,467.79		24,054.48
TAX 007	Tax accrual review	182.60	14,354.03			9.50	27.5%	189.46		14,354.03		12,520.27		12,833.28
TAX 008	Tax compliance software implementation	160.08	8,714.87			121.00	27.5%	3,148.20		8,904.43		14,799.00		15,168.98
TAX 009	Assistance on the IRS/State examination	231.00	17,635.36							20,884.56		10,211.47	1,190.04 (18)	11,686.55
TAX 010	Information returns	145.50	8,586.11							8,586.11		35,271.71		36,163.50
TAX 011	IRS/Dept. of Taxation correspondence	21.00	1,112.89	223.74		28.25	27.5%	543.00		1,333.73		8,861.25		9,072.53
TAX 012	Estimated tax computation	3.35	234.97							777.97		1,378.17		1,412.62
TAX 013	General excise tax returns	1.25	108.36							106.36		802.09		822.14
TAX 014	Payroll tax withholding	56.25	3,120.65							3,120.65		108.66		112.40
TAX 017	Other tax matters	46.25	3,816.53							3,816.53		3,217.39		3,287.82
TAX 018	Executive payroll issues	8.00	717.02							717.02		3,934.84	16,390.00 (19)	20,832.86
TAX 019	Tax-Sarbanes Oxley Related Charges	43.00	4,058.20							4,058.20		738.25		757.73
TAX 020	Tax Depreciation	200.00	11,830.75							11,830.75	2,420.00 (13)	6,680.06	(716.00) (13)	6,114.19
		(1,778.57)	(125,710.84)	(1,887.16)						(127,598.00)		(12,197.50)		(12,502.44)
	Total of all activity codes										(168,832.14)	168,187.83	16,865.04	180,714.54
		3,560.11	346,424.21	129,619.98		706.75		18,070.46		583,207.30	783,047.31	1,822,498.80		1,794,531.76
													45,832.42	
	Less other costs related to incentive compensation to be consistent with HECO-1310													
HUM 011	Long-term incentive plan (LTIP)									16,588.23	4,286.85			
HUM 012	Executive incentive compensation plan (EICP)													
HUM 013	Stock options with dividend equivalents													
HUM 015	Executives deferred compensation													
HUM 017	Executive incentive compensation consulting services													
HUM 018	Other incentive compensation consulting services													
HUM 019	Executive Compensation - Sarbanes Oxley Related Charges													
	Adjusted total													

Notes:

(1) The 2006 estimate was based upon the 2006 actuals using the 2006 allocation factors adjusted by 3.1% for estimated cost increases.

(2) The 2007 estimate was based upon the 2006 estimate adjusted by 2.5% for estimated cost increases.

(3) The 2005 actual was adjusted to include more time being spent to prepare the workpapers related to the quarterly and annual SEC filings.

(4) The 2005 actual was adjusted to include more time being spent to provide assistance in the HECO and HECO rate cases primarily by the HEI Tax department (HECO does not have its own tax department).

(5) The 2005 actual was adjusted to exclude time spent on wire transfer confirmations performed by HEI's internal audit department. The HEI internal Audit function was outsourced effective May 2006.

(6) The 2005 actual was adjusted to exclude time spent on HECO revenue bond review which is not expected to be incurred in the future.

(7) The 2005 actual was adjusted to exclude costs related to incentive compensation. This adjustment was made to simplify the issues related to this rate case only.

(8) The 2005 actual was adjusted to exclude costs related to the former VP Administration that is not expected to be incurred in the future.

(9) The 2005 actual was adjusted to include time spent by the Director of Enterprise Risk on the HEI consolidated Sarbanes-Oxley 404 effort.

(10) The 2005 actual was adjusted to exclude time spent by the HEI Internal Audit department. The HEI Internal Audit functions have been outsourced, effective 05/06. See footnotes 18 and 20 below for the internal audit functions that have been outsourced.

(11) The 2005 actual was adjusted to reflect the estimated decrease in Sarbanes-Oxley (SOX) 404 external auditor attestation fees.

(12) The 2005 actual was adjusted to include annual costs for a lockbox, voice response system; a nonmaterialized adjustment for DRIP registration fees and centricate costs; and a decrease in NYSE fees.

(13) The 2005 actual and the 2006 estimate were adjusted to include costs for SOX 404 testing and review by the outsourced internal audit functions.

(14) The 2006 estimate was adjusted to remove the former HEI CEO's hours from 06/06 thru 12/06 and include the new HEI CEO's estimated hours for the same period in order to compute the 2006 estimate.

(15) The 2007 estimate was adjusted to remove the former HEI CEO's hours from 01/06 thru 04/06 and include the new HEI CEO's estimated hours for the same period in order to compute the 2007 estimate.

(16) The 2006 estimate was adjusted to reflect the increase in Sarbanes-Oxley (SOX) 404 external auditor attestation fees.

(17) The 2006 estimate was adjusted for the transfer of a Shareholder Services employee to the Treasury area.

(18) The 2007 estimate was adjusted to include a normalization adjustment for time spent to implement new tax provision software.

(19) The 2007 estimate was adjusted to include charges for outsourced internal auditing services related to the HEI consolidated tax function.

HAWAIIAN ELECTRIC COMPANY, INC.
HEI BILLINGS TO HECO
TEST YEAR 2007

Activity code	HECO EXCLUDING INCENTIVE COMPENSATION ACTIVITY CODE DESCRIPTIONS	Direct Charges-2006 Direct Labor Hours	Direct Labor Dollars	Direct Nonlabor Dollars	Shared Charges-2006 Shared Labor Hours	2006 Allocation Factor	Shared Labor Dollars	Shared Nonlabor Dollars	2005 Actual w/ 2006 Alloc Factor	2006 Adjustments	2006 Estimate (1)	2007 Adjustments	2007 Estimate (2)
	OTHER CHARGES NOT INCLUDED IN THE TOTALS SHOWN ON THE PREVIOUS PAGE:												
ADMI	**Administrative**												
ADM 012	Rent - ASB Tower (formerly Pacific Tower)								55,691.74		57,418.18		56,853.63
ADM 014	Rent - Central Pacific								43,013.74	2,589.00 (26)	47,016.42		48,191.83
	Notes:												
	(26) The 2006 actual was adjusted to include an adjustment for the estimated rent for 2006.												
INT	**Internet**												
INT 002	Firewall services								2,407.53		16,643.55		19,246.30
INT 003	Internet services												
INT 004	Shared Internet connection												
INT 006	File Transfer Protocol (FTP) server (& secure e-mail server)												
INT 006	Disaster recovery (ISDN line)												
		0.00	0.00	2,407.53		32.0%	16,143.11	16,143.11					
						33.0%	5,378.13	5,378.13					
						58.6%	27,486.86	27,486.86					
						80.0%	78.12	78.12					
									2,407.53		28,337.91		29,046.36
											60.54	6,800.00 (30)	6,847.55
											2,482.16		2,544.21
		0.00		0.00			49,086.21	0.00	51,482.74	0.00	53,089.01	8,733.33	63,387.89

Notes:
(29) The 2007 estimate was adjusted to include a normalization adjustment for a firewall hardware replacement.
(30) The 2007 estimate was adjusted to include a normalization adjustment for a secure e-mail server requested by HECO.

(20) The 2007 estimate was adjusted to include charges for outsourced internal auditing services related to executive base compensation.
(21) The 2006 actual was adjusted to exclude charges for proxy preparation documentation which is not expected to be incurred in the future.
(22) The 2006 actual was adjusted to include a normalization adjustment for proxy solicitation charges related to management proposals.
(23) The 2006 actual was adjusted to exclude charges related to a banking relationship which is not expected to be incurred in the future.
(24) The 2006 actual was adjusted to include more time spent on answering IRS and/or State taxing authorities information requests.
(25) The 2006 actual was adjusted to exclude costs related to management assessment fees for HECO executives, participating in a health information exchange and other reimbursements which are not expected to be incurred in the future.
(26) The 2006 estimate was adjusted to remove certain telephone charges which are not expected to be incurred in the future.
(27) The 2006 actual was adjusted to exclude costs related to the administration of the HEI Retirement Savings Plan. This adjustment was made to simplify the issues related to this rate case only.

HAWAIIAN ELECTRIC COMPANY, INC.
HEI BILLINGS TO HECO
2005 HECO Charges to HEI TEST YEAR 2007

Group	Description	ICB Code	Workorder #	2005 Total	2006 Estimate (1)	2007 Estimate (2)
ANNUAL MEETING ACTIVITIES						
	GM Svc Fees for HEI - Annual mtg	ANN001	AD000684	4,063.97	4,189.95	4,294.70
	Annual meeting - communications	ANN001	CR000047	1,839.14	1,896.15	1,943.55
	HECO work for HEI	ANN002	AD001377	911.20	939.45	962.94
	Total annual meeting charges			6,814.31	7,025.55	7,201.19
	2006 HECO allocation factor (3)			39.9%	39.9%	39.9%
	Total annual meeting charges to HECO			2,718.91	2,803.19	2,873.27
INVESTOR RELATIONS ACTIVITIES						
	HEI - IR Printing Services	INV004	IT000293	312.23	321.91	329.96
	GM Service Fees for HEI-Inv Rel	INV006	AD000201	16,582.36	17,096.41	17,523.82
	GM Service Fees for HEI-Inv Rel Meals	INV006	AD000202	693.39	714.89	732.76
	HEI - Labor & Non-Lab	INV006	IT000323	212.50	219.09	224.57
	GM Service Fees for HEI-Inv Rel	INV013	AD000196	(2.74)	(2.82)	(2.89)
	Total investor relations charges			17,797.74	18,349.48	18,808.22
	2006 HECO allocation factor (3)			39.6%	39.6%	39.6%
	Total investor relations charges to HECO			7,047.91	7,266.39	7,448.06
PENSION PLAN ACTIVITIES						
	GM Svc Fees for HEI - Pension	PEN009	AD000578	2,369.11	2,442.55	2,503.61
	Total Master Pension Trust charges			2,369.11	2,442.55	2,503.61
	2006 HECO allocation factor (3)			66.0%	66.0%	66.0%
	Total Master Pension Trust charges to HECO			1,563.61	1,612.08	1,652.38
	GM Svc Fees for HEI - Pension	PEN026	AD000578	2,369.14	2,442.58	2,503.64
	Total OPEB funded plans/trusts charges			2,369.14	2,442.58	2,503.64
	2006 HECO allocation factor (3)			67.9%	67.9%	67.9%
	Total OPEB funded plans/trusts charges to HECO			1,608.65	1,658.51	1,699.97
REPORTING ACTIVITIES						
	HEI - Controller - Form 10-Q	RPT011	IT000294	36.34	37.47	38.41
	Total 10Q filing charges			36.34	37.47	38.41
	2006 HECO allocation factor (3)			39.9%	39.9%	39.9%
	Total 10Q filing charges to HECO			14.50	14.95	15.33
	Proxy Statement	RPT041	AD000164	14,712.33	15,168.41	15,547.62
	Proxy Review Services	RPT041	HR000516	38.99	40.20	41.21
	Total proxy charges			14,751.32	15,208.61	15,588.83
	2006 HECO allocation factor (3)			39.6%	39.6%	39.6%
	Total proxy charges to HECO			5,841.52	6,022.61	6,173.18
	Annual report	RPT051	CR000048	5,291.25	5,455.28	5,591.66
	Total annual report charges			5,291.25	5,455.28	5,591.66
	2006 HECO allocation factor (3)			39.9%	39.9%	39.9%
	Total annual report charges to HECO			2,111.21	2,176.66	2,231.07
STOCK TRANSFER ACTIVITIES						
	HEI-Stock Transfer	STO016	AD000140	334.31	344.67	353.29
	HEI - Shareholder service	STO016	IT000295	64.77	66.78	68.45
	HEI Stock Transfer Job-Printing	STO019	IT000255	3,180.00	3,278.58	3,360.54
	Total stock transfer charges			3,579.08	3,690.03	3,782.28
	2006 HECO allocation factor (3)			37.1%	37.1%	37.1%
	Total stock transfer charges to HECO			1,327.84	1,369.00	1,403.23
	Total shared charges to HECO			22,234.15	22,923.39	23,496.49

(1) The 2006 estimate was based upon the 2005 actual adjusted by 3.1% for estimated cost increases.
(2) The 2007 estimate was based upon the 2006 estimate adjusted by 2.5% for estimated cost increases.
(3) The 2006 allocation factors were applied to the 2005 shared charges since these were the most current allocation factors available at the time that the 2007 estimate was calculated.

HAWAIIAN ELECTRIC COMPANY, INC.
HEI BILLINGS TO HECO
TEST YEAR 2007

Hawaiian Electric Company, Inc.
HEI Charges to HECO
2007 Test Year

HECO Acct No.	HEI Activities		2007 Budget	2007 Test Year Estimate	Adjustment
921	ACC	Accounting	32,040	27,975	(4,065)
921	ADM	Administrative	133,063	114,231	(18,832)
921	ANN	Annual Meeting	15,620	11,700	(3,920)
921	AUD	Audits	5,660	5,115	(545)
921	BOD	Board of Directors	124,070	75,942	(48,128)
921	BUD	Budgets	2,730	1,129	(1,601)
921	CON	Consulting	142,180	86,423	(55,757)
921	INV	Investor Relations	303,120	244,052	(59,068)
921	RPT	Reporting	579,360	563,164	(16,196)
921	STO	Stock Transfer	307,210	314,289	7,079
921	TAX	Tax	228,220	190,715	(37,505)
	Total Account 921		1,873,273	1,634,734	(238,539)
926	HUM	Human Resources	151,300	39,803	(111,497)
926	PEN	Pension Plan	185,250	119,994	(65,256)
	Total Account 926		336,550	159,797	(176,753)
			2,209,823	1,794,532	(415,291)
921		Mgt Incent & Recog Program	175,704	-	(175,704)
			2,385,527	1,794,532	(590,995)

HAWAIIAN ELECTRIC COMPANY, INC.
HEI/HECO SERVICE AGREEMENTS

ADMINISTRATIVE SERVICES AGREEMENT

BETWEEN

HAWAIIAN ELECTRIC INDUSTRIES, INC.

AND

HAWAIIAN ELECTRIC COMPANY, INC.

THIS AGREEMENT ("Agreement") is made this 4th day of February, 1993, but is effective as of January 1, 1993, by and between HAWAIIAN ELECTRIC INDUSTRIES, INC. (hereinafter referred to as "HEI"), a Hawaii corporation and HAWAIIAN ELECTRIC COMPANY, INC., (hereinafter referred to as "HECO"), a Hawaii corporation.

WHEREAS, the Managements of both HEI and HECO have determined in the exercise of their sound business judgment that in order to achieve their common goals, HECO will purchase certain administrative support services from HEI ("Services"), and

WHEREAS, HECO desires to reimburse HEI for the cost of providing these administrative support services,

NOW, THEREFORE, in consideration of the mutual covenants contained herein, the parties agree as follows:

ARTICLE I. SCOPE OF SERVICE

1.1 HEI will render to HECO those administrative support services listed in Exhibit A. Additional activity codes may be added to those listed in Exhibit A in order to provide greater detail of the services being performed.

1.2 HECO reserves the right to terminate certain administrative support services provided by HEI. Cancellation of certain services must be in writing and submitted to HEI at least 60 days prior to the effective cancellation date.

1.3 Services rendered, if any, by the HEI Internal Audit Department and the HEI Data Center are covered under separate agreements.

1.4 Notwithstanding anything to the contrary, the parties understand and agree that the President of HECO and its Board of Directors have not, by virtue of this Agreement or any corporate practice, delegated their responsibility or discretion to accept or reject any Services covered by this Agreement.

1.5 All services and decisions related hereto shall be rendered in a manner acceptable to the President of HECO.

ARTICLE II. TERM/CANCELLATION

2.1 The initial annual term of this Agreement shall commence on January 1, 1993 and shall automatically renew each year until canceled. Cancellation of this Agreement must be in writing and submitted at least 60 days prior to the effective cancellation date.

HAWAIIAN ELECTRIC COMPANY, INC.
HEI/HECO SERVICE AGREEMENTS

ARTICLE III. COMPENSATION AND MANNER AND TIME OF PAYMENT

3.1 HECO will pay HEI for the Services listed in Exhibit A. In addition, HECO will pay HEI for any charges from third parties paid by HEI on behalf of HECO for the Services listed in Exhibit A.

3.2 a. Beginning February 20, 1993, and on or before the twentieth day of each month thereafter, HEI shall bill HECO for the services performed in the prior month (the billing period). Invoices will be rendered for each activity group listed in Exhibit A where HEI renders services to HECO (e.g. Administrative services, Accounting services, Stockholder Relations services, etc.). Costs will be accumulated by chargeable activities within the activity groups.

b. Included in the cost of chargeable activities will be the cost of shared activities. Shared activities are activities which would be necessary for HECO to perform if HECO were a stand-alone publicly traded company. See Exhibit B for the allocation methods for shared activities. The allocation percentages will be calculated annually, and will be based primarily on prior year data. Allocation percentages are effective January 1 of each year. Existing allocation percentages will be used until data to calculate the new allocation percentages are available. Retroactive adjustments will be made as necessary to adjust billings made in any given year before the new allocation percentages for that year are available.

c. In order to charge for labor and certain departmental costs, HEI employees will complete reports twice a month to document the time spent on chargeable activities. Invoices will show the labor hours charged to activities and the related employee loaded labor rate.

d. Loaded labor rates will be developed for each HEI employee who will perform services for HECO. Labor costs will be based upon actual labor rates. Labor rates will be changed twice a year. Once, effective May 1 for base salary rate changes and again, effective January 1 for changes in loadings. A listing of loaded labor rates by employee will be provided annually for the existing employees at that time.

e. Loadings will be added onto labor costs to ensure fair recovery of normal departmental costs. These costs include those with respect to rent, office supplies, dues and subscriptions, meetings and seminars, employee benefits, pension costs, depreciation, computer costs, utilities, insurance, incentive compensation, telephone, etc. Loading rates will be developed annually based upon the prior year actual costs and submitted to HECO. Existing loading rates will be used until the new loading rates are developed. Loading rates are effective January 1 of each year. Retroactive adjustments will be made as necessary to adjust billings made prior to the updating of HEI computer programs for the new loading rates.

f. Other nonlabor costs which relate to chargeable activities, but which have not been reflected in the loaded labor rate will also be billed to HECO. Invoices or other supporting documentation for these other nonlabor costs will be provided with the billings to HECO.

3.3 a. HECO shall pay each invoice upon receipt. HECO shall have the right to request further documentation of the fees and charges. In the event there is a dispute with respect to an invoice, HECO shall pay all portions of the invoice which are not in dispute and may withhold the disputed charge.

b. Disputed charges will be resolved internally between HECO and HEI to the extent possible. The HECO and HEI representatives listed in Section 4.1 will initially attempt to resolve the disputed charges. After resolution of the disputed charges, HEI will submit a revised bill to HECO based upon the agreed upon amount. Payment will be due upon receipt of the revised bill. Refunds, if any, will be applied to HECO's next bill.

c. If the disputed charges cannot be resolved between the HECO and HEI representatives, disputes will be taken to the President of HECO and the HEI Diversified Group Vice President. If resolution cannot be reached between the HECO President and the HEI Diversified Group Vice President, then the disputes will be taken up to the HEI Chief Executive Officer. If resolution of disputed charges is still not accomplished, HEI will seek the help of an outside arbitrator for final resolution.

3.4 Billing corrections may be made from time to time to correct any errors. HEI will submit revised bills to HECO. Payments will be due upon receipt of the revised bill. Refunds will be applied to HECO's next bill.

ARTICLE IV. REPRESENTATIVES

4.1 The individuals identified below are the Representatives of HECO and HEI. An employee of HEI performing services hereunder shall be entitled to rely on the advice and direction of the HECO Representative, who shall have the authority to make any decisions and give any direction on behalf of HECO that does not materially change the Services hereunder. Similarly, an employee of HECO shall be entitled to rely on the advice and direction of the HEI Representative concerning matters hereunder, who shall

have the authority to make any decisions on behalf of HEI that do not materially change the Services, hereunder.

HECO Representative:
Controller
HAWAIIAN ELECTRIC COMPANY, INC.
900 Richards Street
Honolulu, Hawaii 96813
(808) 543-7552

HEI Representative:
Controller
Hawaiian Electric Industries, Inc.
900 Richards Street
Honolulu, Hawaii 96813
(808) 543-7350

ARTICLE V. ADMINISTRATION

5.1 The HEI Controller's office will be responsible for administering the intercompany billing function. The HEI Controller's office will maintain an intercompany billing database to capture time and expenses billed to subsidiaries. HECO will reimburse HEI for a portion of the costs relating to the administration of the intercompany billing system.

ARTICLE VI. CONFIDENTIALITY OF INFORMATION

6.1 All information pertaining to the labor rates of HEI employees should not be disclosed externally without prior written release by an HEI officer.

ARTICLE VII. HEI'S ACCOUNTING RECORDS: AUDIT

7.1 HEI shall maintain and retain books and accounts of its charges. These records are to be kept at HEI's principal office. HECO shall at all reasonable times have access to these books and accounts to the extent required to verify all costs and charges incurred by HEI. Such verification would be at the expense of HECO. The HEI Controller's office is located on the fourth floor at 900 Richards Street, Honolulu, Hawaii 96813, Telephone (808) 543-7350.

7.2 HEI agrees to fully cooperate with HECO or its designee (as evidenced in writing signed by a HECO representative) in connection with HECO's audit functions and with regard to audits or examinations by the Public Utilities Commission of the State of Hawaii ("PUC") and any other regulator having jurisdiction over HECO. If the PUC or other regulator requests or directs program or procedural changes concerning Services under the Agreement, HEI will work with HECO to make such changes as agreed to be appropriate.

ARTICLE VIII. PRIOR NEGOTIATIONS: AMENDMENTS

8.1 This Agreement supersedes all prior negotiations, representations, or agreements with respect to the matters set forth herein, either written or oral. This Agreement may be amended only by written instrument signed by both parties.

HAWAIIAN ELECTRIC COMPANY, INC.
HEI/HECO SERVICE AGREEMENTS

ARTICLE IX. MISCELLANEOUS

9.1 All questions concerning the validity, operation and interpretation of this Agreement and the performance of the obligations imposed upon the parties hereunder or thereunder shall be governed by the laws of the State of Hawaii.

9.2 If any non-material term or provision of this Agreement shall be found to be illegal or unenforceable then, notwithstanding, this Agreement shall remain in full force and effect so long as the purposes hereof or the expectations of the parties shall not be frustrated thereby, and such term or provision shall be deemed stricken.

HAWAIIAN ELECTRIC COMPANY, INC.
HEI/HECO SERVICE AGREEMENTS

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date first above written.

HAWAIIAN ELECTRIC COMPANY, INC.

By _____
Its President

By _____
Its Vice-President

("HECO")

HAWAIIAN ELECTRIC INDUSTRIES, INC.

By _____
Its Financial Vice President and Chief Financial Officer

By _____
Its Controller

("HEI")

HAWAIIAN ELECTRIC COMPANY, INC.
HEI/HECO SERVICE AGREEMENTS

HEI CHARGEABLE ACTIVITY CODES
(Effective 1/1/93)

Exhibit A

ACTIVITY CODE	ACTIVITY CODE DESCRIPTIONS
	Administrative
ADM 001	Activity no longer valid
ADM 002	Activity no longer valid
ADM 003	Activity no longer valid
ADM 004	Maintenance of corporate records
ADM 005	Activity no longer valid
ADM 006	Assist on rate cases
ADM 007	Insurance procurement/administration
ADM 008	Administration of company policies
ADM 009	Assist administrator of HECO's President's office
	Accounting
ACC 001	Research accounting issues
ACC 002	SFAS 106 (Postretirement Benefits)
ACC 003	SFAS 107 (Fair Value of Financial Instruments)
ACC 004	Maintain general ledger
ACC 005	Bank reconciliations (common dividend account)
ACC 006	Cash receipts
ACC 007	Activity no longer valid
ACC 008	Analyze financial results
ACC 009	Monitor accounting and reporting standards
ACC 010	Consolidation of financial results
ACC 011	Preparation of audit workpapers
ACC 012	Resolve audit/tax issues
ACC 013	Maintain detailed property, plant & equipment records
ACC 014	Maintain depreciation schedules
ACC 015	Depreciation study
ACC 016	Payroll
ACC 017	Intercompany billing study
ACC 018	Intercompany billing administration
ACC 019	Interisland communication system
ACC 020	EDGAR (SEC electronic data filing)
	Acquisitions/Divestitures
ACQ 001	Due diligence (set up separate project code number)
ACQ 002	Special project code number
	Annual meeting
ANN 001	Annual shareholder meeting planning & coordination
ANN 002	Annual meeting facilities
	Audits
AUD 001	Review audit plans
AUD 002	Assist with audits
AUD 003	Review audit reports
AUD 004	Audit Committee meeting preparation
AUD 005	Audit Committee meeting attendance
AUD 006	Coordinate activities with external auditors
AUD 007	EDP audits
AUD 008	Operational audits
AUD 009	Activity no longer valid
AUD 010	Audit expenses
	Board of Directors Meetings
BOD 001	Preparation
BOD 002	Attendance (presentations)
BOD 003	Minutes
BOD 004	Review of minutes
BOD 005	Misc. board matters

HAWAIIAN ELECTRIC COMPANY, INC.
HEI/HECO SERVICE AGREEMENTS

HEI CHARGEABLE ACTIVITY CODES
(Effective 1/1/93)

Exhibit A

ACTIVITY CODE	ACTIVITY CODE DESCRIPTIONS
	Budgets
BUD 001	Preparation
BUD 002	Attendance (presentations)
BUD 003	Review
	Capital Appropriations
CAP 001	Capital appropriations analysis
CAP 002	Capital appropriations review
	Cash Management (Short-term)
CAS 001	Monthly cash review and report
CAS 002	Bank lines & relationships
CAS 003	Other relationships (dealer, trustee, etc.)
CAS 004	Cash resolutions, policies, & procedures
CAS 005	Rating agency reports
CAS 006	Cash disbursements & check signing
	Community relations
COM 001	Media relations and communications
COM 002	Administration of HEI Charitable Foundation
	Consulting - general
CON 001	Review of monthly results
CON 002	Meetings
CON 003	Preparation
CON 004	Other
	Financing (Long-term)
FIN 001	Debt financing planning & coordination
FIN 002	Debt financing due diligence
FIN 003	Presentations
FIN 004	Debt compliance
FIN 005	Rating agencies - communications
FIN 006	Rating agencies - planning
FIN 007	Rating agencies - presentations
FIN 008	Rating agencies - meetings
FIN 009	Rating agency matters
FIN 050	Equity financing planning & coordination
FIN 051	Equity financing due diligence
FIN 052	Presentations
FIN 099	Dividend policy
FIN 100	Stock split
	Human Resources
HUM 001	Benefits administration
HUM 002	Compensation administration
HUM 003	Personnel issues
HUM 004	Benefit plan report preparation
HUM 005	Employee benefit consulting
HUM 006	Activity no longer valid
HUM 007	Activity no longer valid
HUM 008	Code of Conduct administration & development
HUM 009	Code of Conduct review
HUM 010	Compensation committee meetings

HAWAIIAN ELECTRIC COMPANY, INC.
HEI/HECO SERVICE AGREEMENTS

HEI CHARGEABLE ACTIVITY CODES
(Effective 1/1/93)

Exhibit A

ACTIVITY CODE	ACTIVITY CODE DESCRIPTIONS
	Investor Relations
INV 001	Analyst/media communications
INV 002	Broker meetings
INV 003	Fact sheet
INV 004	Financial mailing list
INV 005	Financial news releases
INV 006	Group analyst meetings
INV 007	HEI stock - share forecast
INV 008	Investor base/stockholder monitoring
INV 009	Investor relations planning
INV 010	Investment Society of Hawaii
INV 011	National Association of Investors Corporation (NAIC)
INV 012	One-on-one meetings/visits with analysts
INV 013	Other investor relations activities
INV 014	Retail program
INV 015	Retail/broker/shareholder communications
INV 016	Smith Barney utility diversified seminar
INV 017	Smith Barney West Coast seminar
INV 018	Statistical supplement
INV 019	Surveys
INV 020	Teleconferencing
	Legal
LEG 001	Review of reports
LEG 002	Legal overview
LEG 003	KCPL litigation
LEG 004	Other legal work
	Legislation
LEI 001	Review of legislative proposals
LEI 002	Monitor executive/legislative proposals
LEI 003	Lobbying
LEI 004	Preparation of testimony and other reports on proposed legislation
LEI 005	Preparation for meetings on govt. issues
LEI 006	Meetings on govt. issues
LEI 007	Preparation of govt. reports
	Pension plan
PEN 001	Activity no longer valid
PEN 002	Activity no longer valid
PEN 003	Activity no longer valid
PEN 004	Activity no longer valid
PEN 005	HEIRS
PEN 006	Activity no longer valid
PEN 007	HEI Retirement Plan
PEN 008	HTB Salaried Plan
PEN 009	Defined Benefit Commingled Trust
PEN 010	HEI Diversified Defined Contribution Plan
PEN 018	American Savings Bank Retirement Plan
PEN 019	Young Brothers, Limited Pension Plan
PEN 020	Directors Retirement Plan
PEN 021	Individual arrangements
PEN 022	Supplemental Executive Retirement Plan
PEN 023	Excess Benefit Plan
PEN 024	Other Postretirement Benefits

HAWAIIAN ELECTRIC COMPANY, INC.
HEI/HECO SERVICE AGREEMENTS

HEI CHARGEABLE ACTIVITY CODES
(Effective 1/1/93)

Exhibit A

ACTIVITY CODE	ACTIVITY CODE DESCRIPTIONS
	Reports
	Government filings
RPT 001	10K
RPT 011	10Q
RPT 021	8K
RPT 031	Amendments to articles of incorporation
RPT 032	U-3A-2 filing
RPT 039	Other government reports
	Proxy
RPT 041	Proxy
	Annual Report
RPT 051	Annual report
	Quarterly Reports
RPT 061	Quarterly report
	Other reports
RPT 099	Other
	Stock Transfer activities
STO 001	Preferred stock dividend payments
STO 002	Preferred stock redemption payments
STO 003	Form 1099 (for preferred stockholders)
STO 004	Preferred stockholder database maintenance
STO 005	Other preferred stock communications
STO 006	Preferred stock transfer administrative activities
STO 011	Common stock dividend payments
STO 012	HEI Dividend Reinvestment program administration
STO 013	Form 1099 Dividends
STO 014	Common stockholder database maintenance
STO 015	Other common stock communications
STO 016	Common stock transfer administrative activities
STO 017	Promotions
STO 018	Stock transfer system
STO 019	Stock transfer division expenses
	Strategic Planning
STR 001	Strategic planning, research, analysis
STR 002	Financial planning, research, analysis
STR 003	Capital allocation policies and standards
STR 004	Project analysis or management
STR 005	Performance standards, measurement, analysis
STR 006	Investment/business research and analysis
STR 007	Securities market (stock market) analysis
STR 008	Peer, industry, market, or environmental analysis
STR 009	Economic research and analysis
STR 010	Special projects

HAWAIIAN ELECTRIC COMPANY, INC.
HEI/HECO SERVICE AGREEMENTS

HEI CHARGEABLE ACTIVITY CODES
(Effective 1/1/93)

Exhibit A

ACTIVITY CODE	ACTIVITY CODE DESCRIPTIONS
	Tax
TAX 001	Tax return preparation
TAX 002	Tax return review
TAX 003	Tax and financial planning
TAX 004	Tax issues on leveraged leases
TAX 005	SFAS 109 planning and implementation
TAX 006	Tax research
TAX 007	Tax accrual review
TAX 008	Tax compliance software implementation
TAX 009	Assistance on the IRS examination
TAX 010	Information returns
TAX 011	IRS/Dept. of Taxation correspondence
TAX 012	Estimated tax computation
TAX 013	General excise tax returns
TAX 014	Payroll tax withholding

HAWAIIAN ELECTRIC COMPANY, INC.
HEI/HECO SERVICE AGREEMENTS

Exhibit B

ALLOCATION METHODS FOR HEI CHARGEABLE ACTIVITIES

Note: Where there are negative data values (i.e. if a subsidiary has a pretax loss) the absolute value will be used since a negative value would be illogical.

METHOD	ACTIVITY CODE	ACTIVITY CODE DESCRIPTIONS
		Administrative
n/a	ADM 001	Activity no longer valid
n/a	ADM 002	Activity no longer valid
n/a	ADM 003	Activity no longer valid
Direct charged	ADM 004	Maintenance of corporate records
n/a	ADM 005	Activity no longer valid
Direct charged	ADM 006	Assist on rate cases
General allocator	ADM 007	Insurance procurement/administration
Employees	ADM 008	Administration of company policies
Direct charged	ADM 009	Assist administrator of HECO's President's office
		Accounting
Publicly held equity (common & preferred)	ACC 001	Research accounting issues
OPEB pension expense	ACC 002	SFAS 106 (Postretirement Benefits)
Publicly held equity (common & preferred)	ACC 003	SFAS 107 (Fair Value of Financial Instruments)
Direct charged	ACC 004	Maintain general ledger
Common equity	ACC 005	Bank reconciliations (common dividend account)
Direct charged	ACC 006	Cash receipts
n/a	ACC 007	Activity no longer valid
Publicly held equity (common & preferred)	ACC 008	Analyze financial results
[illegible]ly held equity (common & preferred)	ACC 009	Monitor accounting and reporting standards
[illegible]ly held equity (common & preferred)	ACC 010	Consolidation of financial results
[illegible]ly held equity (common & preferred)	ACC 011	Preparation of audit workpapers
Publicly held equity (common & preferred)	ACC 012	Resolve audit/tax issues
Direct charged	ACC 013	Maintain detailed property, plant & equipment records
Direct charged	ACC 014	Maintain depreciation schedules
Direct charged	ACC 015	Depreciation study
Gross payroll	ACC 016	Payroll
General allocator	ACC 017	Intercompany billing study
General allocator	ACC 018	Intercompany billing administration
Direct charged	ACC 019	Interisland communication system
Publicly held equity (common & preferred)	ACC 020	EDGAR (SEC electronic data filing)
		Acquisitions/Divestitures
Direct charged	ACQ 001	Due diligence (set up separate project code number)
Direct charged	ACQ 002	Special project code number
		Annual meeting
Common equity	ANN 001	Annual shareholder meeting planning & coordination
Common equity	ANN 002	Annual meeting facilities
		Audits
Publicly held equity (common & preferred)	AUD 001	Review audit plans
Publicly held equity (common & preferred)	AUD 002	Assist with audits
Publicly held equity (common & preferred)	AUD 003	Review audit reports
Publicly held equity (common & preferred)	AUD 004	Audit Committee meeting preparation
Publicly held equity (common & preferred)	AUD 005	Audit Committee meeting attendance
Publicly held equity (common & preferred)	AUD 006	Coordinate activities with external auditors
Direct charged	AUD 007	EDP audits
Direct charged	AUD 008	Operational audits
n/a	AUD 009	Activity no longer valid
Publicly held equity (common & preferred)	AUD 010	Audit expenses
		Board of Directors (BOD) Meetings
agenda	BOD 001	Preparation
agenda	BOD 002	Attendance (presentations)
BOD agenda	BOD 003	Minutes
BOD agenda	BOD 004	Review of minutes
BOD agenda	BOD 005	Misc. board matters

HAWAIIAN ELECTRIC COMPANY, INC.
HEI/HECO SERVICE AGREEMENTS

Exhibit B

ALLOCATION METHODS FOR HEI CHARGEABLE ACTIVITIES

Note: Where there are negative data values (i.e. if a subsidiary has a pretax loss) the absolute value will be used since a negative value would be illogical.

METHOD	ACTIVITY CODE	ACTIVITY CODE DESCRIPTIONS
		Budgets
Direct charged	BUD 001	Preparation
Direct charged	BUD 002	Attendance (presentations)
Direct charged	BUD 003	Review
		Capital Appropriations
Direct charged	CAP 001	Capital appropriations analysis
Direct charged	CAP 002	Capital appropriations review
		Cash Management (Short-term)
Projected short-term borrowings	CAS 001	Monthly cash review and report
Projected short-term borrowings	CAS 002	Bank lines & relationships
Projected short-term borrowings	CAS 003	Other relationships (dealer, trustee, etc.)
Projected short-term borrowings	CAS 004	Cash resolutions, policies, & procedures
Projected short-term borrowings	CAS 005	Rating agency reports
Direct charged	CAS 006	Cash disbursements & check signing
		Community relations
charged	COM 001	Media relations and communications
charged	COM 002	Administration of HEI Charitable Foundation
		Consulting - general
Direct charged	CON 001	Review of monthly results
Direct charged	CON 002	Meetings
Direct charged	CON 003	Preparation
Direct charged	CON 004	Other
		Financing (Long-term)
Direct charged	FIN 001	Debt financing planning & coordination
Direct charged	FIN 002	Debt financing due diligence
Direct charged	FIN 003	Presentations
Direct charged	FIN 004	Debt compliance
Direct charged	FIN 005	Rating agencies - communications
Direct charged	FIN 006	Rating agencies - planning
Direct charged	FIN 007	Rating agencies - presentations
Direct charged	FIN 008	Rating agencies - meetings
Direct charged	FIN 009	Rating agency matters
Equity to be financed	FIN 050	Equity financing planning & coordination
Equity to be financed	FIN 051	Equity financing due diligence
Equity to be financed	FIN 052	Presentations
General allocator	FIN 099	Dividend policy
Common equity	FIN 100	Stock split
		Human Resources
Employees	HUM 001	Benefits administration
Executives	HUM 002	Compensation administration
Employees	HUM 003	Personnel issues
Employees	HUM 004	Benefit plan report preparation
Employees	HUM 005	Employee benefit consulting
n/a	HUM 006	Activity no longer valid
n/a	HUM 007	Activity no longer valid
yees	HUM 008	Code of Conduct administration & development
yees	HUM 009	Code of Conduct review
Executives	HUM 010	Compensation committee meetings

HAWAIIAN ELECTRIC COMPANY, INC.
HEI/HECO SERVICE AGREEMENTS

Exhibit B

ALLOCATION METHODS FOR HEI CHARGEABLE ACTIVITIES

Note: Where there are negative data values (i.e. if a subsidiary has a pretax loss) the absolute value will be used since a negative value would be illogical.

METHOD	ACTIVITY CODE	ACTIVITY CODE DESCRIPTIONS
		Investor Relations
Common equity	INV 001	Analyst/media communications
Common equity	INV 002	Broker meetings
Common equity	INV 003	Fact sheet
Common equity	INV 004	Financial mailing list
Common equity	INV 005	Financial news releases
Common equity	INV 006	Group analyst meetings
Common equity	INV 007	HEI stock - share forecast
Common equity	INV 008	Investor base/stockholder monitoring
Common equity	INV 009	Investor relations planning
Common equity	INV 010	Investment Society of Hawaii
Common equity	INV 011	National Association of Investors Corporation (NAIC)
Common equity	INV 012	One-on-one meetings/visits with analysts
Common equity	INV 013	Other investor relations activities
Common equity	INV 014	Retail program
Common equity	INV 015	Retail/broker/shareholder communications
Common equity	INV 016	Smith Barney utility diversified seminar
Common equity	INV 017	Smith Barney West Coast seminar
Common equity	INV 018	Statistical supplement
Debt + Equity	INV 019	Surveys
Common equity	INV 020	Teleconferencing
		Legal
Direct charged	LEG 001	Review of reports
Direct charged	LEG 002	Legal overview
Direct charged	LEG 003	KCPL litigation
Direct charged	LEG 004	Other legal work
		Legislation
General allocator	LEI 001	Review of legislative proposals
General allocator	LEI 002	Monitor executive/legislative proposals
General allocator	LEI 003	Lobbying
General allocator	LEI 004	Preparation of testimony and other reports on proposed legislation
General allocator	LEI 005	Preparation for meetings on govt. issues
General allocator	LEI 006	Meetings on govt. issues
General allocator	LEI 007	Preparation of govt. reports
		Pension plan
n/a	PEN 001	Activity no longer valid
n/a	PEN 002	Activity no longer valid
n/a	PEN 003	Activity no longer valid
n/a	PEN 004	Activity no longer valid
HEIRS participants	PEN 005	HEIRS
n/a	PEN 006	Activity no longer valid
Plan assets	PEN 007	HEI Retirement Plan
Plan assets	PEN 008	HTB Salaried Plan
Plan assets	PEN 009	Defined Benefit Commingled Trust
Plan participants	PEN 010	HEI Diversified Defined Contribution Plan
Direct charged	PEN 018	American Savings Bank Retirement Plan
Direct charged	PEN 019	Young Brothers, Limited Pension Plan
Plan participants	PEN 020	Directors Retirement Plan
Direct charged	PEN 021	Individual arrangements
Direct charged	PEN 022	Supplemental Executive Retirement Plan
Direct charged	PEN 023	Excess Benefit Plan
Net pension expense	PEN 024	Other Postretirement Benefits

HAWAIIAN ELECTRIC COMPANY, INC.
HEI/HECO SERVICE AGREEMENTS

Exhibit B

ALLOCATION METHODS FOR HEI CHARGEABLE ACTIVITIES

Note: Where there are negative data values (i.e. if a subsidiary has a pretax loss) the absolute value will be used since a negative value would be illogical.

METHOD	ACTIVITY CODE	ACTIVITY CODE DESCRIPTIONS
		Reports
		Government filings
Publicly held equity (common & preferred)	RPT 001	10K
Publicly held equity (common & preferred)	RPT 011	10Q
Publicly held equity (common & preferred)	RPT 021	8K
Publicly held equity (common & preferred)	RPT 031	Amendments to articles of incorporation
Publicly held equity (common & preferred)	RPT 032	U-3A-2 filing
Publicly held equity (common & preferred)	RPT 039	Other government reports
		Proxy
Common equity	RPT 041	Proxy
		Annual Report
Publicly held equity (common & preferred)	RPT 051	Annual report preparation
		Quarterly Reports
Publicly held equity (common & preferred)	RPT 061	Quarterly report preparation
		Other reports
ly held equity (common & preferred)	RPT 099	Other
		Stock Transfer activities
Preferred equity	STO 001	Preferred stock dividend payments
Preferred equity	STO 002	Preferred stock redemption payments
Preferred equity	STO 003	Form 1099 (for preferred stockholders)
Preferred equity	STO 004	Preferred stockholder database maintenance
Preferred equity	STO 005	Other preferred stock communications
Preferred equity	STO 006	Preferred stock transfer administrative activities
Common equity	STO 011	Common stock dividend payments
Common equity	STO 012	HEI Dividend Reinvestment program administration
Common equity	STO 013	Form 1099 Dividends
Common equity	STO 014	Common stockholder database maintenance
Common equity	STO 015	Other common stock communications
Common equity	STO 016	Common stock transfer administrative activities
Common equity	STO 017	Promotions
Common equity	STO 018	Stock transfer system
Common equity	STO 019	Stock transfer division expenses
		Strategic Planning
Direct charged	STR 001	Strategic planning, research, analysis
Direct charged	STR 002	Financial planning, research, analysis
Direct charged	STR 003	Capital allocation policies and standards
Direct charged	STR 004	Project analysis or management
Direct charged	STR 005	Performance standards, measurement, analysis
Direct charged	STR 006	Investment/business research and analysis
Common equity	STR 007	Securities market (stock market) analysis
Direct charged	STR 008	Peer, industry, market, or environmental analysis
Direct charged	STR 009	Economic research and analysis
Direct charged	STR 010	Special projects

HAWAIIAN ELECTRIC COMPANY, INC.
HEI/HECO SERVICE AGREEMENTS

Exhibit B

ALLOCATION METHODS FOR HEI CHARGEABLE ACTIVITIES

Note: Where there are negative data values (i.e. if a subsidiary has a pretax loss) the absolute value will be used since a negative value would be illogical.

METHOD	ACTIVITY CODE	ACTIVITY CODE DESCRIPTIONS
		Tax
Pretax income	TAX 001	Tax return preparation
Pretax income	TAX 002	Tax return review
Pretax income	TAX 003	Tax and financial planning
Pretax income	TAX 004	Tax issues on leveraged leases
Pretax income	TAX 005	SFAS 109 planning and implementation
Pretax income	TAX 006	Tax research
Pretax income	TAX 007	Tax accrual review
Pretax income	TAX 008	Tax compliance software implementation
Pretax income	TAX 009	Assistance on the IRS examination
Pretax income	TAX 010	Information returns
Pretax income	TAX 011	IRS/Dept. of Taxation correspondence
Pretax income	TAX 012	Estimated tax computation
Pretax income	TAX 013	General excise tax returns
Pretax income	TAX 014	Payroll tax withholding

12/8/2006 **HECO Billings to HEI - Test Year 2007** 8:56AM

_RA	Resp Area	_Act	Activity	Exp Class	FY07
P9P	President	700	Dev & Adm Business Plans	Labor	$13,454.97
P9P	President	700	Dev & Adm Business Plans	Non-Labor	$17,900.00
P9P	President	700	Dev & Adm Business Plans	On-Costs	$4,204.99
P9P	President	700	Dev & Adm Business Plans		$35,559.96
P9P	President	701	Dev & Mg Forecasts	Labor	$1,095.00
P9P	President	701	Dev & Mg Forecasts	On-Costs	$292.47
P9P	President	701	Dev & Mg Forecasts		$1,387.47
P9P	President	720	Improve Bus Processes	Labor	$1,204.50
P9P	President	720	Improve Bus Processes	On-Costs	$321.72
P9P	President	720	Improve Bus Processes		$1,526.22
P9P	President	755	Maint Rel-BOD	Labor	$46,848.33
P9P	President	755	Maint Rel-BOD	On-Costs	$19,313.46
P9P	President	755	Maint Rel-BOD		$66,161.79
P9P	President	756	Maint Rel-Invest	Labor	$16,244.61
P9P	President	756	Maint Rel-Invest	On-Costs	$7,030.30
P9P	President	756	Maint Rel-Invest		$23,274.91
P9P	President	779	Adm Retirement Pgm	Labor	$2,025.45
P9P	President	779	Adm Retirement Pgm	On-Costs	$612.06
P9P	President	779	Adm Retirement Pgm		$2,637.51
P9S	Sr VP-Energy Solutions	827	Perf Econ/Fin Anlys	Labor	$290.70
P9S	Sr VP-Energy Solutions	827	Perf Econ/Fin Anlys	On-Costs	$145.52
P9S	Sr VP-Energy Solutions	827	Perf Econ/Fin Anlys		$436.22
PAC	Corp Accounting	818	Maint G/L & Stat Info	Labor	$360.69
PAC	Corp Accounting	818	Maint G/L & Stat Info	On-Costs	$252.69
PAC	Corp Accounting	818	Maint G/L & Stat Info		$613.38
PAC	Corp Accounting	836	Fin Rpts/StatInfo-Ext	Labor	$852.54
PAC	Corp Accounting	836	Fin Rpts/StatInfo-Ext	On-Costs	$597.28
PAC	Corp Accounting	836	Fin Rpts/StatInfo-Ext		$1,449.82
PAD	Cost Accounting	777	Process Payroll	Labor	$4,014.28
PAD	Cost Accounting	777	Process Payroll	Non-Labor	$1,219.00
PAD	Cost Accounting	777	Process Payroll	On-Costs	$2,907.01
PAD	Cost Accounting	777	Process Payroll		$8,140.29
PAD	Cost Accounting	778	Adm Flexible Ben Pgm	Labor	$448.69
PAD	Cost Accounting	778	Adm Flexible Ben Pgm	On-Costs	$259.89
PAD	Cost Accounting	778	Adm Flexible Ben Pgm		$708.58
PCP	Pmt Proc & Supp Ctr	600	Resp to Cus Inq/Svc Req	Labor	$13,084.20
PCP	Pmt Proc & Supp Ctr	600	Resp to Cus Inq/Svc Req	On-Costs	$12,026.89
PCP	Pmt Proc & Supp Ctr	600	Resp to Cus Inq/Svc Req		$25,111.09

_RA	Resp Area	_Act	Activity	Exp Class	FY07
PED	Development Svcs	778	Adm Flexible Ben Pgm	Labor	$2,459.25
PED	Development Svcs	778	Adm Flexible Ben Pgm	On-Costs	$1,722.92
PED	Development Svcs	778	Adm Flexible Ben Pgm		$4,182.17
PEI	Infrastruct & Oper	778	Adm Flexible Ben Pgm	Labor	$65.58
PEI	Infrastruct & Oper	778	Adm Flexible Ben Pgm	On-Costs	$45.94
PEI	Infrastruct & Oper	778	Adm Flexible Ben Pgm		$111.52
PEI	Infrastruct & Oper	895	Op & Maint Mainframe	Non-Labor	$3,600.00
PEI	Infrastruct & Oper	895	Op & Maint Mainframe		$3,600.00
PEI	Infrastruct & Oper	900	Op Desktop OffcTelecom	Non-Labor	$24,000.00
PEI	Infrastruct & Oper	900	Op Desktop OffcTelecom		$24,000.00
PEZ	ISD Chargeback	775	Empl Comp PolPracProc	Non-Labor	$4,800.00
PEZ	ISD Chargeback	775	Empl Comp PolPracProc		$4,800.00
PEZ	ISD Chargeback	776	Ben Plan PolPracProc	Non-Labor	$360.00
PEZ	ISD Chargeback	776	Ben Plan PolPracProc		$360.00
PEZ	ISD Chargeback	778	Adm Flexible Ben Pgm	Non-Labor	$3,720.00
PEZ	ISD Chargeback	778	Adm Flexible Ben Pgm		$3,720.00
PEZ	ISD Chargeback	779	Adm Retirement Pgm	Non-Labor	$852.00
PEZ	ISD Chargeback	779	Adm Retirement Pgm		$852.00
PEZ	ISD Chargeback	825	Manage Cash	Non-Labor	$4,440.00
PEZ	ISD Chargeback	825	Manage Cash		$4,440.00
PFA	Admin-WFS & Dev	766	Maint Employee Recds	Labor	$198.21
PFA	Admin-WFS & Dev	766	Maint Employee Recds	On-Costs	$137.95
PFA	Admin-WFS & Dev	766	Maint Employee Recds		$336.16
PFA	Admin-WFS & Dev	778	Adm Flexible Ben Pgm	Labor	$1,684.54
PFA	Admin-WFS & Dev	778	Adm Flexible Ben Pgm	On-Costs	$1,172.59
PFA	Admin-WFS & Dev	778	Adm Flexible Ben Pgm		$2,857.13
PFB	Employee Benefits	701	Dev & Mg Forecasts	Labor	$32.79
PFB	Employee Benefits	701	Dev & Mg Forecasts	On-Costs	$22.97
PFB	Employee Benefits	701	Dev & Mg Forecasts		$55.76
PFB	Employee Benefits	755	Maint Rel-BOD	Labor	$102.48
PFB	Employee Benefits	755	Maint Rel-BOD	On-Costs	$48.96
PFB	Employee Benefits	755	Maint Rel-BOD		$151.44
PFB	Employee Benefits	761	Audits-External	Labor	$32.79
PFB	Employee Benefits	761	Audits-External	On-Costs	$22.97
PFB	Employee Benefits	761	Audits-External		$55.76

_RA	Resp Area	_Act	Activity	Exp Class	FY07
PFB	Employee Benefits	776	Ben Plan PolPracProc	Labor	$262.32
PFB	Employee Benefits	776	Ben Plan PolPracProc	On-Costs	$183.78
PFB	Employee Benefits	776	Ben Plan PolPracProc		$446.10
PFB	Employee Benefits	778	Adm Flexible Ben Pgm	Labor	$3,642.92
PFB	Employee Benefits	778	Adm Flexible Ben Pgm	Non-Labor	$44,132.41
PFB	Employee Benefits	778	Adm Flexible Ben Pgm	On-Costs	$2,935.69
PFB	Employee Benefits	778	Adm Flexible Ben Pgm		$50,711.02
PFB	Employee Benefits	779	Adm Retirement Pgm	Labor	$6,186.16
PFB	Employee Benefits	779	Adm Retirement Pgm	Non-Labor	$8,936.00
PFB	Employee Benefits	779	Adm Retirement Pgm	On-Costs	$4,584.32
PFB	Employee Benefits	779	Adm Retirement Pgm		$19,706.48
PFB	Employee Benefits	780	AdmBen Oth than Flex Ret	Labor	$2,432.16
PFB	Employee Benefits	780	AdmBen Oth than Flex Ret	Non-Labor	$108,561.00
PFB	Employee Benefits	780	AdmBen Oth than Flex Ret	On-Costs	$1,842.44
PFB	Employee Benefits	780	AdmBen Oth than Flex Ret		$112,835.60
PFC	Compensation	775	Empl Comp PolPracProc	Labor	$3,205.46
PFC	Compensation	775	Empl Comp PolPracProc	On-Costs	$2,169.47
PFC	Compensation	775	Empl Comp PolPracProc		$5,374.93
PFC	Compensation	778	Adm Flexible Ben Pgm	Labor	$1,933.88
PFC	Compensation	778	Adm Flexible Ben Pgm	On-Costs	$1,213.27
PFC	Compensation	778	Adm Flexible Ben Pgm		$3,147.15
PFD	Client Svcs & Consult	767	Recruit PolPracProc	Labor	$557.28
PFD	Client Svcs & Consult	767	Recruit PolPracProc	On-Costs	$532.55
PFD	Client Svcs & Consult	767	Recruit PolPracProc		$1,089.83
PFD	Client Svcs & Consult	777	Process Payroll	Labor	$557.28
PFD	Client Svcs & Consult	777	Process Payroll	On-Costs	$532.55
PFD	Client Svcs & Consult	777	Process Payroll		$1,089.83
PFD	Client Svcs & Consult	778	Adm Flexible Ben Pgm	Labor	$616.11
PFD	Client Svcs & Consult	778	Adm Flexible Ben Pgm	On-Costs	$496.78
PFD	Client Svcs & Consult	778	Adm Flexible Ben Pgm		$1,112.89
PFI	Org Development	778	Adm Flexible Ben Pgm	Labor	$604.74
PFI	Org Development	778	Adm Flexible Ben Pgm	On-Costs	$414.69
PFI	Org Development	778	Adm Flexible Ben Pgm		$1,019.43
PFS	Corporate Safety	778	Adm Flexible Ben Pgm	Labor	$166.36
PFS	Corporate Safety	778	Adm Flexible Ben Pgm	On-Costs	$94.77
PFS	Corporate Safety	778	Adm Flexible Ben Pgm		$261.13
PHB	Facilities Operation	934	Prov&Mg Svcs-Custodial	Labor	$4,389.76
PHB	Facilities Operation	934	Prov&Mg Svcs-Custodial	On-Costs	$3,443.16

12/8/2006 HECO Billings to HEI - Test Year 2007 8:56AM

_RA	Resp Area	_Act	Activity	Exp Class	FY07
PHB	Facilities Operation	934	Prov&Mg Svcs-Custodial		$7,832.92
PHF	Facilities Planning	931	Care for Bldgs & Grnds	Labor	$1,573.92
PHF	Facilities Planning	931	Care for Bldgs & Grnds	On-Costs	$1,102.67
PHF	Facilities Planning	931	Care for Bldgs & Grnds		$2,676.59
PKI	Risk Management	749	Maint Rel-Ind Assoc	Non-Labor	$2.00
PKI	Risk Management	749	Maint Rel-Ind Assoc		$2.00
PKI	Risk Management	789	Attend Training	Non-Labor	$24.99
PKI	Risk Management	789	Attend Training		$24.99
PKI	Risk Management	950	Prov Risk Mgt Svcs-Liab	Labor	$21,911.03
PKI	Risk Management	950	Prov Risk Mgt Svcs-Liab	Non-Labor	$1,068,873.38
PKI	Risk Management	950	Prov Risk Mgt Svcs-Liab	On-Costs	$14,736.73
PKI	Risk Management	950	Prov Risk Mgt Svcs-Liab		$1,105,521.14
PKI	Risk Management	951	Prov Risk Mgt Svcs-Prop	Labor	$900.79
PKI	Risk Management	951	Prov Risk Mgt Svcs-Prop	Non-Labor	$11,894.00
PKI	Risk Management	951	Prov Risk Mgt Svcs-Prop	On-Costs	$615.83
PKI	Risk Management	951	Prov Risk Mgt Svcs-Prop		$13,410.63
PKI	Risk Management	953	Prov Risk Mgt Svcs-WC	Labor	$18.16
PKI	Risk Management	953	Prov Risk Mgt Svcs-WC	Non-Labor	$1,024.50
PKI	Risk Management	953	Prov Risk Mgt Svcs-WC	On-Costs	$12.64
PKI	Risk Management	953	Prov Risk Mgt Svcs-WC		$1,055.30
PKM	ERP Administration	778	Adm Flexible Ben Pgm	Labor	$65.58
PKM	ERP Administration	778	Adm Flexible Ben Pgm	On-Costs	$45.94
PKM	ERP Administration	778	Adm Flexible Ben Pgm		$111.52
PKT	Treasury	749	Maint Rel-Ind Assoc	Non-Labor	$1,499.00
PKT	Treasury	749	Maint Rel-Ind Assoc		$1,499.00
PKT	Treasury	825	Manage Cash	Labor	$24,428.55
PKT	Treasury	825	Manage Cash	Non-Labor	$75,623.00
PKT	Treasury	825	Manage Cash	On-Costs	$17,114.31
PKT	Treasury	825	Manage Cash		$117,165.86
PKT	Treasury	826	Manage Financing	Non-Labor	$75,029.00
PKT	Treasury	826	Manage Financing		$75,029.00
PNA	Internal Audit	836	Fin Rpts/StatInfo-Ext	Labor	$1,530.76
PNA	Internal Audit	836	Fin Rpts/StatInfo-Ext	On-Costs	$1,017.98
PNA	Internal Audit	836	Fin Rpts/StatInfo-Ext		$2,548.74
PNC	Legal	756	Maint Rel-Invest	Labor	$581.40
PNC	Legal	756	Maint Rel-Invest	On-Costs	$291.04

12/8/2006 **HECO Billings to HEI - Test Year 2007** 8:56AM

_RA	Resp Area	_Act	Activity	Exp Class	FY07
PNC	Legal	756	Maint Rel-Invest		$872.44
PNC	Legal	961	Cond Legal Due Diligence	Labor	$580.50
PNC	Legal	961	Cond Legal Due Diligence	On-Costs	$554.73
PNC	Legal	961	Cond Legal Due Diligence		$1,135.23
PPA	Admin-Ind Rel	778	Adm Flexible Ben Pgm	Labor	$185.76
PPA	Admin-Ind Rel	778	Adm Flexible Ben Pgm	On-Costs	$177.52
PPA	Admin-Ind Rel	778	Adm Flexible Ben Pgm		$363.28
PPI	Labor Rel & Wage Adm	778	Adm Flexible Ben Pgm	Labor	$550.53
PPI	Labor Rel & Wage Adm	778	Adm Flexible Ben Pgm	On-Costs	$450.83
PPI	Labor Rel & Wage Adm	778	Adm Flexible Ben Pgm		$1,001.36
PPW	Disablity Management	778	Adm Flexible Ben Pgm	Labor	$1,240.06
PPW	Disablity Management	778	Adm Flexible Ben Pgm	On-Costs	$831.88
PPW	Disablity Management	778	Adm Flexible Ben Pgm		$2,071.94
PQC	Corp Communications	750	Maint Rel- Cust	Non-Labor	$500.00
PQC	Corp Communications	750	Maint Rel- Cust		$500.00
PQC	Corp Communications	753	Maint Rel-Community	Labor	$163.95
PQC	Corp Communications	753	Maint Rel-Community	On-Costs	$114.86
PQC	Corp Communications	753	Maint Rel-Community		$278.81
PQC	Corp Communications	756	Maint Rel-Invest	Labor	$4,990.80
PQC	Corp Communications	756	Maint Rel-Invest	On-Costs	$2,843.05
PQC	Corp Communications	756	Maint Rel-Invest		$7,833.85
PVP	Purchasing	753	Maint Rel-Community	Non-Labor	$3,473.00
PVP	Purchasing	753	Maint Rel-Community		$3,473.00
PVP	Purchasing	807	Co-wide Empl Commun	Non-Labor	$14,596.00
PVP	Purchasing	807	Co-wide Empl Commun		$14,596.00
					$1,772,327.15

HAWAIIAN ELECTRIC COMPANY, INC.
REVERSAL OF ON-COST AMOUNTS
TEST YEAR 2007

O2
Block: A & G Operation
Account: 926020

HAWAIIAN ELECTRIC COMPANY, INC.
RATE CASE NON-LABOR ONCOST REPORT

RUN DATE: 10/5/2006
RUN TIME: 5:54:47 PM
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BLOCK OF ACCOUNT / ACCOUNT / DEPARTMENT / RA / EXPENSE ELEMENT / ACTIVITY / LOCATION	2007 Budget
926020 EMPLOYEE BENEFITS TRANSFER	
(G/L codes)	
422 Employee Benefits	27,827,978
	-38,464,030
Total (G/L codes)	**-10,636,052**
Total (G/L codes)	**-10,636,052**
Total 926020	**-10,636,052**
9301 INSTITUTN/GOODWILL ADVERT EXP	
(G/L codes)	
	-7,397
Total (G/L codes)	**-7,397**
Total (G/L codes)	**-7,397**
PQC Corp Communications	
PQC Corp Communications	
406 Corp Admin Expense	
754 Adm Inst or Goodwill Ad	
PHE HECO	224
422 Employee Benefits	
754 Adm Inst or Goodwill Ad	
PHE HECO	738
423 Payroll Taxes	
754 Adm Inst or Goodwill Ad	
PHE HECO	133
Total PQC	**1,095**
Total PQCD	**1,095**

HAWAIIAN ELECTRIC COMPANY, INC.
REVERSAL OF ON-COST AMOUNTS
TEST YEAR 2007

O2
Block: A & G Operation
Account: 9301

HAWAIIAN ELECTRIC COMPANY, INC.
RATE CASE NON-LABOR ONCOST REPORT

RUN DATE: 10/5/2006
RUN TIME: 5:54:47 PM
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BLOCK OF ACCOUNT / ACCOUNT / DEPARTMENT / RA / EXPENSE ELEMENT / ACTIVITY / LOCATION	2007 Budget
PV9 Support Services	
PVL Electric & Welding Svcs	
404 Energy Delivery	
754 Adm Inst or Goodwill Ad	
PHE HECO	9,018
406 Corp Admin Expense	
754 Adm Inst or Goodwill Ad	
PHE HECO	865
422 Employee Benefits	
754 Adm Inst or Goodwill Ad	
PHE HECO	2,854
423 Payroll Taxes	
754 Adm Inst or Goodwill Ad	
PHE HECO	671
Total PVL	**13,408**
Total PV9	**13,408**
Total 9301	**7,106**
9302 MISCELLANEOUS GENERAL EXPENSES	
(G/L codes)	
	-228,429
Total (G/L codes)	**-228,429**
Total (G/L codes)	**-228,429**
P2V VP-Energy Delivery	
P2V VP-Energy Delivery	
406 Corp Admin Expense	
731 Dev & Demo New Tech	
PHE HECO	30
422 Employee Benefits	
731 Dev & Demo New Tech	
PHE HECO	98
423 Payroll Taxes	
731 Dev & Demo New Tech	
PHE HECO	21
Total P2V	**150**
Total P2VD	**150**

HAWAIIAN ELECTRIC COMPANY, INC.
REVERSAL OF ON-COST AMOUNTS
TEST YEAR 2007

O2
Block: Customer Services
Account: 910

HAWAIIAN ELECTRIC COMPANY, INC.
RATE CASE NON-LABOR ONCOST REPORT

RUN DATE: 10/5/2006
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BLOCK OF ACCOUNT / ACCOUNT / DEPARTMENT / RA / EXPENSE ELEMENT / ACTIVITY / LOCATION	2007 Budget
PHE HECO	443
423 Payroll Taxes	
112 Dev & Mng Cust Rel	
OUT Outside Entities	114
PHE HECO	114
Total PWP	**7,665**
Total PW9	**7,665**
Total 910	**-32,474**
911 INFORMATIONAL ADVERTISING EXP	
(G/L codes)	
	-6,807
Total (G/L codes)	**-6,807**
Total (G/L codes)	**-6,807**
PQC Corp Communications	
PQC Corp Communications	
406 Corp Admin Expense	
711 Adm & Impl IRP Pgm-Base	
PHE HECO	205
751 Adm Informational Ad	
PHE HECO	768
422 Employee Benefits	
711 Adm & Impl IRP Pgm-Base	
PHE HECO	677
751 Adm Informational Ad	
PHE HECO	2,534
423 Payroll Taxes	
711 Adm & Impl IRP Pgm-Base	
PHE HECO	151
751 Adm Informational Ad	
PHE HECO	607
Total PQC	**4,942**
Total PQCD	**4,942**

HAWAIIAN ELECTRIC COMPANY, INC.
REVERSAL OF ON-COST AMOUNTS
TEST YEAR 2007

O2
Block: Customer Services
Account: 911

HAWAIIAN ELECTRIC COMPANY, INC.
RATE CASE NON-LABOR ONCOST REPORT

RUN DATE: 10/5/2006
RUN TIME: 5:54:45 PM
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BLOCK OF ACCOUNT / ACCOUNT / DEPARTMENT / RA / EXPENSE ELEMENT / ACTIVITY / LOCATION	2007 Budget
PSM Fcsts & Research	
PSM Forecasts & Research	
406 Corp Admin Expense	
751 Adm Informational Ad	
PHE HECO	358
422 Employee Benefits	
751 Adm Informational Ad	
PHE HECO	1,181
423 Payroll Taxes	
751 Adm Informational Ad	
PHE HECO	327
Total PSM	**1,865**
Total PSMD	**1,865**
Total 911	**0**
Total Customer Services	**-32,447**
Grand Total Customer Services	**-32,447**

HAWAIIAN ELECTRIC COMPANY, INC.
ADMINISTRATIVE EXPENSES TRANSFERRED
ACCOUNT 922

				2007 (000)
Cost Pool:				
Labor			$ 1,719	
Transfer Rate per updated KPMG study		X	41%	
				$ 705
NPW				102
Payroll Taxes				58
Emp Ben				296
Nonlabor-Acct. 921			$ 14,009	
Transfer Rate per updated KPMG study		X	6%	
				$ 841
Capital Budgets Labor				142
NPW				17
Payroll Taxes				12
Emp Ben				49
	A			$ 2,221
Cost Base:				
Capital Labor Hours			383	
Clearings to Capital		+	213	
	B			596
Corporate Admin rate per hour	C = A ÷ B			$ 3.73
Total Productive hours	D	X		3,127
Administrative Expenses Transferred - based on total productive hours	E = C X D			$ 11,664
Reversal of Corporate Admin on-cost charged to O&M	F	+		(8,573)
Subtotal - Naruc 922	G = E + F			3,091

HAWAIIAN ELECTRIC COMPANY, INC.
ADMINISTRATIVE EXPENSES TRANSFERRED
ACCOUNT 922

Subtotal from page 1				3,091
Administrative Expenses Transfer Adjustments and Normalizations:				
Budget adjustment HEI Charges		(414)		
Performance Incentive Compensation		(38)		
Abandoned Capital Project adjustment		5		
Human Resources Suite project adjustment		(30)		
			-477	
Transfer Rate per updated KPMG study	X		6%	
				(29)
Adjustment: DSM				68
Administrative Expenses Transferred				$ 3,130

HAWAIIAN ELECTRIC COMPANY, INC.
EMPLOYEE BENEFITS TRANSFER
ACCOUNT 926020

Cost Pool:		2007 (000)	Adjustments: Pension	DSM	Cust Svc delay in hiring	HR Suites, etc.	Total	Adjusted 2007 (000)
Labor to 926		$ 781				-91	-91	$ 690
NPW		106				-12	-12	94
Payroll Taxes		64					0	64
Eng Del		0					0	0
Corp Admin		93					0	93
Stores		3					0	3
Emp Ben		307					0	307
Nonlabor		37,676	[illegible] -348			-686	-338	37,338
	A	$ 39,030	$ 348	$ -	$ -	$ (789)	$ (441)	A1 $ 38,589
Cost Base:								
Total Company Productive Hours		3,127		[illegible] -18	-4		-22	3,105
	B	3,127	0	-18	-4	0	-22	B1 3,105
Employee Benefits rate per hour	C = A ÷ B	$ 12.48						C1 = A1 ÷ B1 $ 12.43
Total Company Productive Hours	D X	3,127						D1 3,105
Employee Benefits transfer - based on total productive hours	E = C X D	$ 39,026						E1 = C1 X D1 $ 38,597
Reversal of Employee Benefits on-cost charged to O&M	F +	-27,828 2262.439						F1 -28,125
Employee Benefits transfer	G = E + F	$ 11,198						G1 = E1 + F1 $ 10,471

926020 Employee Benefits Transfer per Report D1 H1 10,636
Adjustment to 926020 Employee Benefits Transfer J1 = H1 - G1 $ 165

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Standard Labor Rates + True-up

(Illustration Only)

Actual ST Pay = $10.00/hr			
	hrs		Amt
	8	@ st	$ 80
	2	@ ot	30
	1	@ dt	20
Total	11		$ 130

Standard Rate Calculation			
Calculation is made for each labor class.			
(A)	Total labor $'s	$223,000	
(B)	Total hours of work	23,000	
(C)	Std labor rate - unadjusted	$9.70/hr	(A)/(B)
	Std labor rate - adj for GPI	$10.00/hr	

Cost Distribution

Under Previous "Actual" Method

	hrs	type	Descr	Amt
s-tot	4	@ st	Proj 1	$ 40
	4	@ st	Proj 2	40
	1	@ ot	Proj 2	15
s-tot	5		Proj 2	55
	1	@ ot	Billable	15
	1	@ dt	Billable	20
s-tot	2		Billable	$ 35
total	11			$ 130 *

Under Standard Labor Rates

	hrs	Descr	Amt	True-up**	Adj Tot
	4	Proj 1	$ 40	$ 7	$ 47
	5	Proj 2	50	9	59
	2	Billable	20	4	24
Total	11		110 *	20	130

* Actual costs under-distributed by $20 ($130-110)

** True-up is in proportion to the amount of dollars charged e.g. the $7 true-up for Proj 1 = (40/110) x 20

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True-up (Expense Element 155)
By Account Group, By NARUC
2001-2005 Recorded

TRAN_TYPE	LAB

Sum of SumOfTRAN_AMOUNT		CCYY_IND				
GROUP	NARUC	2001	2002	2003	2004	2005
G10 Operating Revenues	454	(163.85)	188.71	1,247.61	569.32	41.28
	456	319.70	380.77	155.69	(10.54)	(86.12)
G10 Operating Revenues Total		155.85	569.48	1,403.30	558.78	(44.84)
G20 Fuel & Purch Pwr	501	15,170.60	16,545.67	13,634.88	43,263.29	10,702.61
	547	(688.09)	(2,685.92)	2,486.26	2,359.73	1,527.12
G20 Fuel & Purch Pwr Total		14,482.51	13,859.75	16,121.14	45,623.02	12,229.73
G30 O&M	500	(1,700.29)	5,773.77	3,066.80	13,219.49	28,684.84
	502	95,414.04	16,284.82	156,377.69	238,928.93	109,958.04
	505	96,948.27	14,581.77	150,749.07	234,143.64	131,926.67
	506	12,735.39	(23,246.68)	(13,317.02)	2,618.66	(74,511.46)
	510	197.23	75.69	19,136.74	13,884.40	65.85
	511	(11,216.35)	(9,906.05)	15,648.27	29,314.48	14,496.00
	512	(35,381.08)	(12,289.55)	249,764.22	349,558.20	226,947.93
	513	(31,895.49)	(40,380.00)	140,458.86	144,625.65	65,691.24
	514	(46,119.85)	(19,567.07)	29,053.44	985.59	5,160.11
	546					8,760.96
	548			3.66	(11.00)	(1,902.24)
	549				3,418.68	(688.77)
	551				850.23	2,981.40
	552	91.39	50.30	18.17	592.26	3,208.33
	553	(23,226.41)	2,509.57	2,592.61	10,858.00	24,433.82
	554				24.29	(5.26)
	557	28,492.78	33,064.61	36,301.34	28,784.69	30,587.94
	560	13,216.29	1,437.39	(7,241.14)	(10,097.44)	9,147.72
	561	14,243.54	11,962.07	1,340.08	44,749.34	55,939.45
	562	(2,381.76)	2,821.00	6,467.65	29,127.68	(182.57)
	563	3,708.17	(3,408.30)	(7,089.36)	15,381.91	36.20
	564	82.53	(12.86)	24.44	72.92	35.59
	566	(10,140.21)	8,914.52	24,742.41	598.59	1,414.69
	569	4,687.51	5,930.60	1,501.25	1,734.03	2,074.14
	570	(14,682.03)	(13,939.82)	9,571.25	16,948.43	20,194.43
	571	7,533.74	(3,094.46)	8,739.91	10,196.40	(12,881.26)
	572	4,311.98	13,763.09	2,555.60	5,802.51	5,328.73
	573	852.96	69.16	1,683.74	894.65	625.57
	580	19,143.06	9,702.51	(7,712.93)	(7,888.73)	13,084.92
	581	(2,540.35)	1,962.78	(5,774.98)	24,898.58	39,240.47
	582	1,695.18	(2,000.86)	4,485.64	16,046.54	4,634.92
	583	13,590.22	(2,069.74)	10,200.87	51,965.88	10,453.15
	584	12,584.30	(18,731.36)	8,081.71	(1,278.03)	5,085.89
	586	25,575.37	26,981.28	36,841.33	48,285.69	4,516.44
	587	(2,556.85)	(10,885.94)	(15,184.11)	(9,625.62)	(9,090.72)
	588	42,046.73	54,028.18	54,224.16	106,161.66	4,159.48
	590	191.45				
	591	109.63	121.07	56.53	77.58	(5,094.80)
	592	(21,859.77)	(5,696.04)	5,459.60	11,854.43	16,067.73
	593	164,105.69	98,828.17	77,202.77	153,646.20	35,883.40
	594	175,150.45	84,413.12	122,381.65	147,059.62	101,966.21
	595	21,789.31	38,594.90	32,653.44	47,383.62	13,227.66
	596	4,376.89	476.06	1,128.57	3,175.28	(922.22)
	597	886.44	187.60	121.52	118.34	(57.91)
	598	17,116.48	14,471.94	4,575.13	24,418.82	(19,080.07)
	901	(17,759.14)	(8,548.62)	(7,782.43)	(6,266.15)	(20,148.27)
	902	(116,684.27)	(92,929.45)	(66,354.22)	(157,665.52)	(184,425.57)

True-up (Expense Element 155)
By Account Group, By NARUC
2001-2005 Recorded

G30 O&M	903	57,719.33	140,667.05	150,988.53	214,619.27	101,650.68
	905	(556.57)	(150.86)		72.63	(242.51)
	909	(3,869.03)	221.91	(11.64)	(21,910.18)	(43,645.58)
	910	196,654.58	175,065.55	93,354.16	144,968.60	132,975.96
	911	28.21	(182.44)	2,130.63	1,020.31	693.71
	912	96.60	30.29	11.12	(1,114.36)	(157.40)
	920	(16,434.92)	124,867.31	(175,752.96)	(540,720.14)	(984,036.97)
	924	3,756.49	791.50	(3,730.12)	(6,922.46)	(8,409.07)
	925	28,273.26	(3,915.85)	(38,335.66)	(21,813.71)	8,043.79
	926	(25,312.36)	(21,879.67)	(23,000.59)	(18,550.97)	(40,266.72)
	9301	1,230.84	2,496.36	957.93	911.97	194.37
	9302	10,874.12	(17,212.03)	(28,105.63)	2,703.22	(29,041.78)
	932	5,042.77	15,395.11	4,935.01	3,092.09	136.01
G30 O&M Total		700,236.49	596,493.40	1,070,194.71	1,395,929.67	(195,076.71)
G40 Oth Income Statement	416	126.36	6.37	499.11		
	417	38,081.65	39,447.36	4,828.90	5,569.50	7,603.57
	426	4,562.55	3,313.20	1,070.32	9,035.91	14,635.44
G40 Oth Income Statement Total		42,770.56	42,766.93	6,398.33	14,605.41	22,239.01
G50 Capital	107	219,220.41	50,569.16	682,880.96	901,374.10	55,045.97
	108	54,629.66	30,228.83	119,217.88	166,789.46	24,623.06
G50 Capital Total		273,850.07	80,797.99	802,098.84	1,068,163.56	79,669.03
G60 Billable	1861	107,995.81	104,644.10	16,185.27	44,555.41	(37,646.04)
G60 Billable Total		107,995.81	104,644.10	16,185.27	44,555.41	(37,646.04)
G70 Deferred Debit	185	(320.41)	(5,097.76)	2,579.77	8,236.68	(12,681.47)
	186	1,589.41	1,392.14	1,988.20	1,280.21	(600.01)
	1862	190.74	221.69	25.53	(2,753.86)	(3,764.76)
G70 Deferred Debit Total		1,459.74	(3,483.93)	4,593.50	6,763.03	(17,046.24)
G80 Charges to Clearing	163	200,553.71	106,908.52	171,778.83	241,378.56	138,972.04
	184	555,105.29	389,449.06	442,562.08	514,983.82	(235,348.22)
G80 Charges to Clearing Total		755,659.00	496,357.58	614,340.91	756,362.38	(96,376.18)
G90 Oth Balance Sheet	121		27.41			(0.62)
	253	1,365.96	1,320.14	90.99	108.66	836.49
G90 Oth Balance Sheet Total		1,365.96	1,347.55	90.99	108.66	835.87
Grand Total		1,897,975.99	1,333,352.85	2,531,426.99	3,332,669.92	(231,216.37)

Hawaiian Electric Company, Inc.
Operations & Maintenance Non-Labor Costs
Use of General Inflator
2007

Block of Account	(A) 2007 Costs Using Specific Cost Indices (Note 1)	(B) 2007 Costs Using 2.50% General Inflator	HECO XXX, Page	(C) = (A) + (B) 2007 Budget
Production Operations	13,186,196	-		13,186,196
Production Maintenance	21,397,561	31,366	2	21,428,927
Transmission Operations	1,210,668	24,678	3	1,235,346
Transmission Maintenance	1,555,063	141,617	4	1,696,680
Distribution Operations	2,538,385	31,992	5	2,570,377
Distribution Maintenance	4,673,159	154,295	6	4,827,454
Customer Accounts	6,864,356	-		6,864,356
Customer Service	20,507,763	-		20,507,763
A&G Operations	69,304,937	232,573	7	69,537,510
A&G Maintenance	1,403,468	18,450	8	1,421,918
Total O&M - Non-Labor (Note 2)	142,641,556	634,971		143,276,527
Total O&M - Labor (Note 3)				66,656,950
Total O&M - Labor/Non-labor OnCosts				28,015,422
Total O&M - A&G/Emp Ben Transferred to Constr/Other				(19,446,094)
Total O&M - per HECO-WP-101				218,502,805

Note 1 - i.e., - Negotiated Contract, Lease Agreement, Other Cost Indices
Note 2 - Excludes Non-labor Oncosts
Note 3 - Excludes Labor Oncosts

Hawaiian Electric Company, Inc.
Operations & Maintenance Non-Labor Costs
Use of General Inflator
2007

Block of Account	NARUC Account	RA	Activity	Location	Indicator	Project	Expense Element	2007 Amount	General Inflator
Production	551	PNG	210	PDG	NE	NPASVP7Z	501	15,683	2.50%
Maintenance	551	PNG	210	PDG	NE	NPASVP7Z	506	15,683	2.50%
								31,366	

Hawaiian Electric Company, Inc.
Operations & Maintenance Non-Labor Costs
Use of General Inflator
2007

Block of Account	NARUC Account	RA	Activity	Location	Indicator	Project	Expense Element	2007 Amount	General Inflator
Transmission	561	PRD	376	OAH	NE	NPRZZZZZ	501	10,037	2.50%
Operations	562	PRC	333	OAH	NE	NPRZZZZZ	201	2,095	2.50%
|	564	PDS	329	OAH	NE	P0000361	501	12,546	2.50%
V								24,678	

Hawaiian Electric Company, Inc.
Operations & Maintenance Non-Labor Costs
Use of General Inflator
2007

Block of Account	NARUC Account	RA	Activity	Location	Indicator	Project	Expense Element	2007 Amount	General Inflator
Transmission	569	PVL	351	OAH	NE	NPVZZZZZ	205	2,460	2.50%
Maintenance	570	PRC	350	OAH	NE	NPRZZZZZ	501	85,313	2.50%
|	571	PDS	342	OAH	NE	P3401000	501	18,342	2.50%
|	571	PDS	342	OAH	NE	P3401000	505	7,929	2.50%
|	571	PDS	342	OAH	NE	P3402000	501	1,171	2.50%
|	571	PDS	342	OAH	NE	P3402000	505	3,762	2.50%
|	571	PDS	344	OAH	NE	P0000124	505	3,789	2.50%
|	571	PDS	360	OAH	NE	P0000124	201	161	2.50%
|	571	PDS	360	OAH	NE	P0000124	505	240	2.50%
V	572	PVL	347	OAH	NE	NPVZZZZZ	205	18,450	2.50%
								141,617	

Hawaiian Electric Company, Inc.
Operations & Maintenance Non-Labor Costs
Use of General Inflator
2007

Block of Account	NARUC Account	RA	Activity	Location	Indicator	Project	Expense Element	2007 Amount	General Inflator
Distribution Operations	588	PBP	419	OAH	NE	P0000828	505	31,992	2.50%
								31,992	

Hawaiian Electric Company, Inc.
Operations & Maintenance Non-Labor Costs
Use of General Inflator
2007

Block of Account	NARUC Account	RA	Activity	Location	Indicator	Project	Expense Element	2007 Amount	General Inflator
Distribution	591	PVL	488	OAH	NE	NPVZZZZZ	205	2,460	2.50%
Maintenance	593	PDH	440	OAH	NE	P1510000	201	482	2.50%
|	593	PDH	442	OAH	NE	P1510000	505	612	2.50%
|	593	PDH	442	OAH	NE	P1580000	505	741	2.50%
|	593	PDS	473	OAH	NE	P3400000	501	5,357	2.50%
|	593	PDS	473	OAH	NE	P3400000	505	40,436	2.50%
|	593	PDS	475	OAH	NE	P0000123	501	3,049	2.50%
|	593	PDS	475	OAH	NE	P0000123	505	22,718	2.50%
|	594	PDH	443	OAH	NE	P1700000	501	828	2.50%
|	594	PDH	443	OAH	NE	P1700000	505	1,871	2.50%
|	594	PDH	443	OAH	NE	P1820000	501	329	2.50%
|	594	PDH	443	OAH	NE	P1820000	505	485	2.50%
|	594	PDS	416	OAH	NE	P1990000	501	12,813	2.50%
|	594	PDS	441	OAH	NE	P1700000	201	785	2.50%
|	594	PDS	501	OAH	NE	P0000122	501	1,800	2.50%
|	594	PDS	501	OAH	NE	P0000122	505	856	2.50%
|	595	PDS	481	OAH	NE	P0000120	201	1,246	2.50%
|	595	PDS	481	OAH	NE	P0000120	501	8,797	2.50%
|	595	PDS	481	OAH	NE	P0000120	505	2,829	2.50%
|	595	PDS	481	OAH	NE	P0000120	508	1,521	2.50%
|	595	PDS	484	OAH	NE	P0000121	501	11,335	2.50%
|	595	PDS	484	OAH	NE	P0000121	505	1,709	2.50%
|	595	PVL	481	OAH	NE	NPVZZZZZ	205	7,687	2.50%
V	598	PVL	492	OAH	NE	NPVZZZZZ	205	23,549	2.50%
								154,295	

Hawaiian Electric Company, Inc.
Operations & Maintenance Non-Labor Costs
Use of General Inflator
2007

Block of Account	NARUC Account	RA	Activity	Location	Indicator	Project	Expense Element	2007 Amount	General Inflator
A & G Operation	9302	PWX	731	PHE	NE	P0001320	201	44,588	2.50%
	9302	PWX	731	PHE	NE	P0001320	501	187,985	2.50%
								232,573	

Hawaiian Electric Company, Inc.
Operations & Maintenance Non-Labor Costs
Use of General Inflator
2007

Block of Account	NARUC Account	RA	Activity	Location	Indicator	Project	Expense Element	2007 Amount	General Inflator
A & G Maintenance	932	PVL	932	WRD	NE	NPVZZZZZ	205	18,450	2.50%
								18,450	

ACCOUNTING FOR THE COSTS OF COMPUTER SOFTWARE DEVELOPED OR OBTAINED FOR INTERNAL USE

(Updated as of April 1, 2006)

Introduction

The following guidelines are provided to assist in the accounting for computer hardware and software costs (acquired, internally developed, or modified solely to meet the entity's needs). This is not meant to be all-inclusive, however we will continue to add or revise the information below, as needed, to provide additional clarification. Questions with respect to these guidelines should be addressed to the Controller or Director of Corporate and Property Accounting.

As a general rule, the costs of computer software, including applicable labor to install the software, and ongoing maintenance are generally charged to the appropriate functional operation and maintenance (O&M) expense account(s), i.e. expensed as incurred, based on the benefiting organization unless:

1. Deferrable software costs have been identified in accordance with applicable accounting standards AND approval has been obtained from the PUC allowing the Company to defer those costs,
2. The computer software is an operating system-type (e.g., Windows XP) software needed to render the new computer hardware "used or useful",
3. Specific overhead costs allowed to be applied to deferrable software costs,
4. AFUDC on deferrable software costs.

Costs for software development projects less than $500K would generally be expensed as incurred. (The $500K threshold refers to the amount of costs that would be deferred during the application development stage described below. It does not refer to the total costs that would be incurred during all three project stages described below.) Please notify the Controller or Director of Corporate and Property Accounting of projects that are less than $500K that will be expensed.

Accounting for Computer Software Guidelines

The costs of software upgrades and enhancements that do not provide additional functionality to the existing software (i.e., modifications to the existing software that would enable the software to perform tasks that it was previously incapable of performing) should be charged to the appropriate functional O&M expense account(s), i.e. expensed as incurred, based on the benefiting organization.

Software that is acquired, internally developed, or modified solely to meet the entity's needs should adhere to the guidance set forth below. In general, software development can be segregated into three stages as follows (also summarized in Exhibit 1):

- Preliminary Project Stage. This stage includes conceptual formulation of software alternatives, evaluation of the alternatives, determination of the existence of needed technology, and final selection of alternatives. Internal and external costs incurred during this stage should be charged as incurred to the appropriate functional O&M expense account(s), based on the benefiting organization, i.e. expensed as incurred.

- Application Development Stage. This stage includes the design of a chosen path, including software configuration and software interface, coding, software installation, and testing, including parallel processing. Certain internal and external costs incurred during this stage should be deferred, including costs to develop or obtain software that allows for access of old data by new systems. Certain applicable overhead and AFUDC costs on the deferrable software costs is also deferred.

  The process of data conversion from old to new systems may include purging or cleansing of existing data, reconciliation or balancing of the old data and the old/new system, creation of new/additional data, and conversion of old data to the new system. Data conversion often occurs during the Application Development Stage; however, data conversion costs, other

ACCOUNTING FOR THE COSTS OF COMPUTER SOFTWARE DEVELOPED OR OBTAINED FOR INTERNAL USE

(Updated as of April 1, 2006)

than the costs to develop or obtain software that allows for access of old data by new systems, should be charged as incurred to the appropriate functional O&M expense account(s), based on the benefiting organization, i.e. expensed as incurred.

- Post-Implementation/Operation Stage. This stage includes training and application maintenance. Internal and external costs incurred during this stage should be charged as incurred to the appropriate functional O&M expense account(s), based on the benefiting organization, i.e. expensed as incurred.

Further, costs of activities typically associated with business process reengineering should be charged as incurred to the appropriate functional O&M expense account(s), based on the benefiting organization, i.e. expensed as incurred. Note that these activities can occur during any stage above. Examples include the following:

- Preparation of a request for proposal
- Current state assessment – The process of documenting the entity's current business process, except as it relates to current software structure. Often referred to as *mapping, developing an "as-is" baseline, flow charting,* and *determining current business process structure.*
- Process reengineering – The effort to reengineer the entity's business process to increase efficiency and effectiveness. This activity is sometimes referred to as *analysis, determining "best-in-class," profit/performance improvement development,* and *developing "should-be" processes.*
- Restructuring the work force – The effort to determine what employee is necessary.

Accounting for Computer Hardware Guidelines:
Any computer hardware costs incurred relative to the development or acquisition of software should be capitalized following existing Company policies and procedures. Computer operating system software which is acquired in connection with new hardware should be capitalized together with the hardware under the basis that the operating system is needed to deem the hardware "used or useful".

ACCOUNTING FOR THE COSTS OF COMPUTER SOFTWARE DEVELOPED OR OBTAINED FOR INTERNAL USE

(Updated as of April 1, 2006)

Exhibit 1

The following table sets forth the accounting for typical components of a software development project based on whether the item should be expensed, deferred, or capitalized. Please note that some of the activities listed below may occur in multiple stages.

	Internal or Third Party		
Steps	**Expensed**	**Deferred**	**Capitalized**
Business process reengineering and information technology transformation (these activities primarily occur, but not limited to, prior to preliminary project stage):			
Preparation of request for proposal (RFP)	X		
Current state assessment (*i.e., mapping, developing an "as-is" baseline, flow charting, determining current business process structure.*)	X		
Process reengineering (*i.e., analysis, determining "best-in-class," profit/ performance improvement development, developing "should-be" processes.)*	X		
Restructuring work force	X		
Preliminary software project stage activities:			
Conceptual formulation of alternatives	X		
Evaluation of alternatives	X		
Determination of existence of needed technology	X		
Final selection of alternatives	X		
Examples of the preliminary project stage include: • Strategic decisions to allocate resources between alternative projects at a given point in time (e.g., should programmers develop a new payroll system or direct their efforts toward correcting existing problems in an operating payroll system?) • Determine the performance requirements (i.e., what the software needs to do) and systems requirements for the project • Invite vendors to perform demonstrations of how their software will fulfill an entity's needs • Explore alternative means of achieving specified performance requirements (e.g., should an entity	X		

ACCOUNTING FOR THE COSTS OF COMPUTER SOFTWARE DEVELOPED OR OBTAINED FOR INTERNAL USE

(Updated as of April 1, 2006)

	Internal or Third Party		
Steps	**Expensed**	**Deferred**	**Capitalized**
make or buy the software? Should the software run on a mainframe or a client server system?) • Determine that the technology needed to achieve performance requirements exists • Select a vendor if an entity chooses to obtain software • Select a consultant to assist in the development or installation of the software			
Application development stage activities:			
Design of chosen path, including software configuration and software interface		X	
Coding		X	
Installation to hardware		X	
Testing, including parallel processing phase		X	
Data conversion costs: a. Costs to develop or obtain software that allows for access of old data by new system		X	
b. Process of converting data from old to new systems (e.g., purging or cleansing of existing data), reconciliation or balancing of the old data and the new data in the new system, creation of new/additional data, and conversion of the old data to the new system.	X		
Training	X		
Post-implementation/ operation stage activities:			
Training	X		
Application maintenance	X		
Ongoing support	X		
Acquisition of fixed assets:			
Purchase of hardware, office furniture, or work stations, including operating system			X
Reconfiguration of work area - architect fees and hard construction costs			X

Hawaiian Electric Company, Inc.

Unamortized System Development Costs

($ in thousands)

	Outage Management System	HR Suites Phase 1	TOTAL
BALANCE - 12/31/06	0	0	0
Deferred Project cost	4,247	2,044	6,290
Amortization	(258)	(14)	(272)
ESTIMATED BALANCE - 12/31/07	3,989	2,029	6,018
AVERAGE 2007 BALANCE	3,009		

NOTE: Totals may not add exactly due to rounding.

ACCOUNTING FOR CAPITAL PROJECT COSTS

(As of October 1, 2000) *

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. A chart summarizing the discussion below is attached. There may be facts and circumstances unique to a given project (e.g. a new generating unit addition project) that are not 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 a Property Accountant in the Property Accounting Division of the General Accounting Department.

Usual Capital Project Life Cycle

The steps usually encountered in a project's life cycle, which provide useful reference points in describing the accounting for capital project costs, are as follows:

1. General planning work to determine overall system requirements. Work includes analyses, feasibility studies and investigations to determine if there is sufficient justification to propose potential projects.
2. Preliminary engineering work associated with potential projects prior to formal project approval by management. Some of the potential projects are eventually constructed, while others do not materialize.
3. Project is initiated, and formally approved by management.
4. Detailed design and permitting work on projects formally approved by management.
5. Purchase of equipment and materials.
6. Construction of plant facilities.
7. Facilities are declared to be used or useful.
8. Closing (capitalization) of project costs.

Potential capital projects are identified and evaluated during step 2. Preliminary engineering work on potential projects is usually intermittent during step 2 because decisions have not yet been made regarding which projects will move forward.

During step 3, projects selected to move forward are initiated by the Project Manager or other appropriate individual, and formally approved by management. 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, steps 4 through 8 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.

*Clarified on May 1, 2006

Accounting for Capital Project Costs - Usual Project Life Cycle

Under the usual project life cycle summarized above, general planning costs incurred in step 1 are charged initially to appropriate clearing accounts and are then allocated as an on-cost (overhead) charge to projects during steps 4-6 of the projects' life cycles (note that a portion of the costs are actually charged to expense or other accounts as a result of the clearing process). Preliminary engineering costs incurred in step 2 are also charged initially to appropriate clearing accounts. However, preliminary engineering costs are identified with the related potential project, and are temporarily held in the clearing account. The preliminary engineering costs incurred in step 2 are eventually allocated as an on-cost (i.e. treated the same as costs incurred in step 1) if no project is formulated. However, if the related potential project is approved for construction, the preliminary engineering costs are transferred to construction work in progress (CWIP) as explained in the next paragraph.

After a potential project is formally approved by management (step 3), a fifth segment project is activated in the MIMS General Ledger and concurrently set up in the MIMS Project Control Module. Project Managers or other appropriate individuals can then set up the project hierarchy in the MIMS Project Control Module, after which all related project costs incurred during steps 4-7 are classified as CWIP. In addition, any related preliminary engineering costs incurred in step 2 are transferred from the clearing account to the now approved project and CWIP.

During the time project related costs are classified as CWIP (steps 4-7), an Allowance For Funds Used During Construction (AFUDC) is applied on the project costs. AFUDC represents the cost to finance the project during the construction period. When the facilities being constructed are declared to be used or useful, the application of AFUDC is stopped, and the project costs are closed (capitalized), i.e. transferred from CWIP to Plant in Service (step 8).

Facilities become used when they are 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, we will generally close costs at the controlled fifth segment project level. Therefore, controlled fifth segment projects should be scoped/structured with the following in mind: 1) the facilities included in the project scope should represent full units of property as defined in the company's property unit catalog, 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, i.e. capitalized.

Accounting for Capital Project Costs - Delayed or Abandoned Projects

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 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, i.e. a "no go" decision is made sometime during steps 4 through 6 of the project's life cycle. 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 Property Accounting Division of the General Accounting Department, based on input required 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 2 need to be transferred from a clearing account 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.

Steps - Construction of Capital Projects

				CWIP/ AFUDC					
	Gen plng (clrng)	Prelim eng (e.g., pewon)	Proj. ini; appvd by mgt	Detailed eng	Permits/ apprvls	Purch equip/ mtl	Construct plant	Used or useful	Close proj costs
Step	1	2	3	4	4	5	6	7	8

Usual Treatment of Costs Under Various Scenarios
(please consult with Controller or Property Accountants)

Scenario	Cost Treatment	AFUDC Treatment
1. Delays due to external factors and cost recovery is probable	Hold in CWIP	Continue
2. Delays </= 2 yrs @ mgt's discretion	Hold in CWIP	Stop until work resumes
3. Work **PERMANENTLY** stopped (project is abandoned)	Transfer to replacement project, inventory, etc. if costs represent items with value	Continue or stop depending on status of new project
	If no replacement project, etc.: Write-off costs to various appropriate O&M expense accounts	Stop and write-off AFUDC
	If costs are significant, seek PUC determination of cost treatment	PUC decides treatment
4. Delays > 2 yrs @ mgt's discretion	Same as 3. above	Same as 3. above

* Clarified on May 1, 2006

HAWAIIAN ELECTRIC COMPANY, INC.
ABANDONED PROJECT COSTS
TEST YEAR 2007 ($ 000s)

Sum of SumOfDEC_ACTUAL_YTD			CCYY_IND					
NARUC	PROJ_WO_NO	WO_DESC	2001	2002	2003	2004	2005	Grand Total
500	HP001833	ABAN-P4683000-K7 EMS & Comm Equip	-	-	-	18	-	18
	HP001833 Total		-	-	-	18	-	18
	LA000168	PS - CEIP Generation Site	-	58	-	-	-	58
	LA000168 Total		-	58	-	-	-	58
500 Total			-	58	-	18	-	75
502	FI000733	Power Supply - AFUDC Reversal	-	(3)	-	-	-	(3)
	FI000733 Total		-	(3)	-	-	-	(3)
	HP001833	ABAN-P4683000-K7 EMS & Comm Equip	-	-	-	24	-	24
	HP001833 Total		-	-	-	24	-	24
502 Total			-	(3)	-	24	-	21
546	AD001618	Expense Project - Pacific Allied	-	-	-	-	99	99
	AD001618 Total		-	-	-	-	99	99
546 Total			-	-	-	-	99	99
566	EE005651	Frq/Vlt for Kalae to DATAQ:P0000157	-	-	4	-	-	4
	EE005651 Total		-	-	4	-	-	4
	LA000180	ABAN-AES-CEIP #2 Trans Ln	-	-	4	-	-	4
	LA000180 Total		-	-	4	-	-	4
566 Total			-	-	8	-	-	8
569	CE051313	ED (Trans) - Opakapaka Line	-	3	-	-	-	3
	CE051313 Total		-	3	-	-	-	3
569 Total			-	3	-	-	-	3
570	CE051313	ED (Trans) - Opakapaka Line	-	37	-	-	-	37
	CE051313 Total		-	37	-	-	-	37
570 Total			-	37	-	-	-	37
572	CE051313	ED (Trans) - Opakapaka Line	-	52	-	-	-	52
	CE051313 Total		-	52	-	-	-	52
572 Total			-	52	-	-	-	52
580	EE007815	BP NAS PRIVATIZATION:Y00004	-	-	143	-	-	143
	EE007815 Total		-	-	143	-	-	143
	EE009592	DIAMOND HEAD RD OH/UG IMPVT:P000059	-	-	-	1	-	1
	EE009592 Total		-	-	-	1	-	1
	LA000166	ABAN-ED-Dist-Leilehua SS Site	-	10	-	-	-	10
	LA000166 Total		-	10	-	-	-	10
580 Total			-	10	143	1	-	154
584	CE051318	ED (Dist) - Opakapaka SS and Line	-	7	-	-	-	7
	CE051318 Total		-	7	-	-	-	7
584 Total			-	7	-	-	-	7
588	EE007815	BP NAS PRIVATIZATION:Y00004	-	-	335	-	-	335
	EE007815 Total		-	-	335	-	-	335
	EE009592	DIAMOND HEAD RD OH/UG IMPVT:P000059	-	-	-	15	-	15
	EE009592 Total		-	-	-	15	-	15
588 Total			-	-	335	15	-	351
591	CE051318	ED (Dist) - Opakapaka SS and Line	-	7	-	-	-	7
	CE051318 Total		-	7	-	-	-	7
591 Total			-	7	-	-	-	7
592	CE051318	ED (Dist) - Opakapaka SS and Line	-	27	-	-	-	27
	CE051318 Total		-	27	-	-	-	27

Average write-off per year	Account	Total Escalation to 2007 2%/yr esc	Average escalated write-off per year
15	500	83	17
4	502	22	4
20	546	103	21
2	566	9	2
1	569	3	1
7	570	41	8
10	572	58	12
31	580	166	33
1	584	8	2
70	588	379	76
1	591	8	2

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HAWAIIAN ELECTRIC COMPANY, INC.
ABANDONED PROJECT COSTS
TEST YEAR 2007 ($ 000s)

	EE003716	MAKALOA SS VLT 2603 REPL:P9535000	10	-	-	-	-	10				
	EE003716 Total		10	-	-	-	-	10				
592 Total			10	27	-	-	-	37	7	592	41	8
593	EE007803	WAIMANALO DRAINAGE IMPVMT:P1690000	-	-	1	-	-	1				
	EE007803 Total		-	-	1	-	-	1				
593 Total			-	-	1	-	-	1	-	593	1	-
594	EE003715	Queens & Mililani Vaults:P9521000	8	-	-	-	-	8				
	EE003715 Total		8	-	-	-	-	8				
594 Total			8	-	-	-	-	8	2	594	9	2
903	CS001324	ACD/IVR Project Reversal of charge	-	138	-	-	-	138				
	CS001324 Total		-	138	-	-	-	138				
903 Total			-	138	-	-	-	138	28	903	152	30
920	CE051313	ED (Trans) - Opakapaka Line	-	3	-	-	-	3				
	CE051313 Total		-	3	-	-	-	3				
	FA127056	P0000722 - Project Abandonment	-	-	-	1	-	1				
	FA127056 Total		-	-	-	1	-	1				
920 Total			-	3	-	1	-	4	1	920	4	1
921	CE051313	ED (Trans) - Opakapaka Line	-	3	-	-	-	3				
	CE051313 Total		-	3	-	-	-	3				
	FA127056	P0000722 - Project Abandonment	-	-	-	1	-	1				
	FA127056 Total		-	-	-	1	-	1				
	FA127063	P0000586 - Project Abandonment	-	-	-	-	31	31				
	FA127063 Total		-	-	-	-	31	31				
	FI000982	General Support Srvcs - AFUDC Reversal	-	(10)	-	-	-	(10)				
	FI000982 Total		-	(10)	-	-	-	(10)				
921 Total			-	(7)	-	1	31	25	5	921	25	5
923	CE051313	ED (Trans) - Opakapaka Line	-	1	-	-	-	1				
	CE051313 Total		-	1	-	-	-	1	-	923	1	-
923 Total			-	1	-	-	-	1				
Grand Total			18	333	487	59	130	1,027	205		1,113	224

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Hawaiian Electric Company, Inc.
Test Year 2007
Unamortized Gain on Sales of Land

Description	Docket No.	Decision and Order No.	Balance 12/31/2005	Additions	Amortize	Balance 12/31/2006	Additions	Amortize	Balance 12/31/2007
Gain on Sales:									
Aiea Park Place *	2006-0323						135,327	18,044	117,283
Palolo (1)	05-0280	22664		44,077	2,204	41,873		8,815	33,057
Queen Emma (2)	02-0098	19839	1,143,226		279,974	863,252		279,974	583,278
Iolani Court Plaza (3)	98-0170	16833	424,225	171,316	137,201	458,340		137,738	320,602
Waianae (4)	98-0314	16935		111,227	7,415	103,811		22,245	81,566
Kuliouou (5)	98-0314	16935	143,075		39,928	103,147		39,928	63,219
Utility Gain on Sales			1,710,526	326,619	466,722	1,570,423	135,327	506,744	1,199,006
Iolani Court Plaza Lease Premium (6)	2640	3921	14,987		3,622	11,366		3,500	7,865
Total Gain on Sales			1,725,513	326,619	470,344	1,581,789	135,327	510,244	1,206,872
Non-utility Gain on Sales **									
Aiea Park Place (Non-Utility) *	2006-0323						154,522	154,522	0
Waianae (Non-utility)	98-0314	16935		51,697	51,697	0			0
Total Non-utility Gain on Sales			0	51,697	51,697	0	154,522	154,522	0

(1) Amortized to 41411000
(2) Amortized to 41408000
(3) Amortized to 41403000
(4) Amortized to 41412000
(5) Amortized to 41409000
(6) Amortized to 45407100

* Assumptions and cost estimates as provided in Docket No. 2006-0323.
** Non-utility gain recognized entirely in month of sale to NARUC acct 422.

Hawaiian Electric Company, Inc.

Pension Regulatory Asset and Pension Liability Balances

($ thousands)

	12/31/2006	12/31/2007	
Projected Benefit Obligation	$ 636,054	$ 672,113	[A]
Fair Value of Plan Assets	546,848	557,435	[B]
Overfunded (Underfunded)	(89,206)	(114,678)	[C] = [B] - [A]
Less: Prepaid Asset	68,260	50,231	[D]
AOCI Charge (pre-tax)	$ (157,466)	$ (164,909)	[E] = [C] - [D]
Pension Regulatory Asset	$ 157,466	$ 164,909	[E]
Pension Liability	89,206	114,678	[C]
Net Rate Base (excluding deferred tax impact)	$ 68,260	$ 50,231	[D] = [E] - [C]

Sources:
[A] & [B] Estimates per Watson Wyatt
[D] See HECO-1021 p. 2 of 2

Hawaiian Electric Company, Inc.
Prepaid Pension Asset Balances
1987-2007
($ in thousands)

Year		Contributions to Trust A	NPPC Accrual B	Ending Pension Asset Balance C= Prior C+A-B
1986				$ 480
1987		$ 8,736	$ 9,216	-
1988		8,308	8,308	-
1989		9,007	9,007	-
1990		9,740	9,740	-
1991		10,618	10,618	-
1992		11,382	11,382	-
1993		10,940	10,940	-
1994		10,925	10,925	-
1995		9,058	6,408	2,650
1996		6,972	8,381	1,241
1997		5,876	7,117	-
1998		2,206	1,871	335
1999		0	(1,074)	1,409
2000		0	(19,322)	20,731
2001		0	(20,465)	41,196
2002		0	(15,656)	56,852
2003		13,394	5,894	64,352
2004		15,186	(1,547)	81,085
2005		6,000	4,588	82,497
2006	*	0	14,237	68,260
2007	*	0	18,029	50,231
Total		$ 138,348	$ 88,597	

Recorded balances for 1987-2005.

* NPPC accrual amounts for 2006 and 2007 are estimates. 2006 and 2007 "prepaid pension balances" are for illustrative purposes only. Illustration assumes HECO was not required to record a pension liablity in these years.

Hawaiian Electric Company, Inc.
SFAS 106 and SFAS 158 OPEB Regulatory Asset Balances
OPEB Liability Balances
$ thousands

	12/31/2006	12/31/2007	
Accumulated Postretirement Benefit Obligation	$ 126,458	$ 133,755	[A]
Fair Value of Plan Assets	88,570	96,773	[B]
Overfunded (Underfunded)	(37,888)	(36,982)	[C] = [B] - [A]
Less: OPEB Liability (SFAS 106)	(7,811)	(6,509)	[D]
AOCI Charge (pre-tax)	$ (30,077)	$ (30,473)	[E] = [C] - [D]
SFAS 106 OPEB Regulatory Asset	$ 7,811	$ 6,509	[F]
SFAS 158 OPEB Regulatory Asset	30,077	30,473	[E]
OPEB Liability	37,888	36,982	[C]
Net Rate Base	-	-	[D] = [F] + [E] - [C]

Sources:
[A] & [B] Estimates per Watson Wyatt
[D] See HECO-1022 p. 3 of 3
[F] See HECO-1022 p. 2 of 3

Hawaiian Electric Company, Inc.
SFAS 106 OPEB Regulatory Asset
1994-2007
($ in thousands)

Year	Amortization & Adjustment	Ending FAS 106 Reg Asset Balance
	A	B Prior Year B - A
1994		$ 24,882
1995	$ 2,751	22,131
1996	1,302	20,829
1997	1,302	19,528
1998	1,302	18,226
1999	1,302	16,924
2000	1,302	15,622
2001	1,302	14,320
2002	1,302	13,018
2003	1,302	11,717
2004	1,302	10,415
2005	1,302	9,113
2006	1,302	7,811
2007	1,302	6,509
Total	$ 18,373	

Source: Recorded balances for 1994-2005.

Hawaiian Electric Company, Inc.
OPEB Liability Balances
1994-2007
($ in thousands)

Year	NPBC Accrual	less: Payments & Electric Discount to Retirees[2]	less: Contributions to Trusts	add: Trust Reimbursement[2]	less: Executive Life Adj	Timing & Reconciling Differences	Ending OPEB Liability Balance for Ratemaking
	A	B	C	D	E	F	G=Prior G+ A-B-C+D-E+F
1994							$ 21,286
1995	$ 15,725	$ 3,227	$ 14,270	$ -	$ 609		18,904
1996	14,936	3,858	15,580	7,059	657	26	20,829
1997	14,393	3,257	15,024	3,009	671	248	19,528
1998	9,285	3,280	10,046	2,995	540	284	18,226
1999	3,574	3,398	4,357	3,936	519	(538)	16,924
2000	1,761	4,106	2,605	4,103	458	3	15,622
2001	2,107	1,633	2,857	1,635	551	(2)	14,320
2002	4,263	3	4,927		637	3	13,018
2003	6,906	1	7,364		844	1	11,717
2004	6,233	4	6,680		855	4	10,415
2005	7,034		7,435		900	0	9,113
2006 [1]	6,620		7,060		862	0	7,811
2007 [1]	7,395		7,873		824	0	6,509

NPBC for Ratemaking Purposes:

	A		E				Reg Asset Amort HECO-1022 p. 2 of 3		
2006	$ 6,620	-	$ 862	=	$ 5,758	+	$ 1,302	=	$ 7,060
2007	$ 7,395	-	$ 824	=	$ 6,571	+	$ 1,302	=	$ 7,873

Recorded balances for 1994-2005.

[1] Estimated balances for 2006 and 2007 per Watson Wyatt. 2006 and 2007 "OPEB liability balances" are for illustrative purposes only. Illustration assumes HECO was not required to record an OPEB liablity in these years.

[2] From 1995-2001, HECO made payments to retirees and was reimbursed by the trust. Beginning in 2002, trust reimbursements for electric discount to retirees are shown net in col. C.

HECO T-11
DOCKET NO. 2006-0386

TESTIMONY OF
RUSSELL R. HARRIS

DIRECTOR
RISK MANAGEMENT
HAWAIIAN ELECTRIC COMPANY, INC.

Subject: Insurance as included in Administrative and General Expenses

INTRODUCTION

Q. Please state your name and business address.

A. My name is Russell R. Harris, and my business address is 220 South King Street, Honolulu, Hawaii.

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

A. I am the Director, Risk Management, at Hawaiian Electric Company, Inc. ("HECO"). My educational background and experience are shown in HECO-1100.

Q. What are your areas of responsibility with respect to this case?

A. I am the Company's primary witness for presenting the Company's normalized test year 2007 estimates for insurance expense. These costs are included in administrative and general ("A&G") expenses addressed by Ms. Patsy Nanbu in HECO T-10.

INSURANCE

Q. What are the accounts and test year 2007 amounts for insurance?

A. As shown in HECO-1201, page 1, the insurance and the associated test year 2007 amounts totaling $9,740,000 are as follows:

Acct. No.	Description	Test Year 2007 Estimate
924	Property Insurance	$2,939,000
925	Injuries and Damages	6,801,000
	Total	$9,740,000

Q. Does your test year estimate have any adjustments from the 2007 O&M Expense Budget?

A. Yes, the test year estimate was reduced by $80,000 from the 2007 O&M Expense

Budget. There are two reasons for this reduction both affecting the Safety Program costs included in NARUC 925.01. First, the budgeted start up costs of initiating heat-resistant coveralls was reduced by $61,000 to an on-going annual replacement cost. Second, the amortized expense allocated to Safety for the HR Suite program was reduced by $19,000. The HR Suite project and allocation is explained by Ms. Julie Price in HECO T-12.

Q. How do the Test Year Estimates compare to recorded 2005 costs?

A. Recorded 2005 costs were the lowest of the years from 2001. This was primarily due to an unanticipated avoidance of a $1 million liability claim retention which had been expensed prior to 2005 plus lower than trended workers compensation claims. The total $9,740,000 projected for test year 2007 is 52% higher than the recorded $6,411,000 costs in 2005. Market increases in insurance premiums and trended absorbed loss projection increases for workers compensation, property and liability exposures contributed to the 2007 increase over 2005. For more details on specific expenses varying more than $200,000 and 10% in Test Year Estimate 2007 from recorded 2005 amounts, please refer to HECO-WP-1101, page 1.

Q. If 2005 actual expenses were abnormally low, how does the 2007 estimate compare with the Company's experience over the last several years?

A. As reflected in HECO-1101, actual expenses have been volatile over the past several years. However, the 2007 estimate for expenses is lower than the actual 2004 recorded expenses and only 9% higher than what is anticipated for 2006. Year to date through August 2006 expensed amounts totaled $6,240,000 or approximately 69% of projected 2006 annual expenses.

Q. Why are Accounts 924, 925.01 and 925.02 grouped together in your testimony,

and what are the differences among these accounts?

A. Incurring these expenses is necessary to prevent or control the financial impact of accidental losses on the Company. Account 924, "Property Insurance", includes the cost of insurance for utility property owned by the Company and claims payments or reserves for damage to this property not covered by insurance. Account 925, "Injuries & Damages" has two components:

1) Employees (Account 925.01) - this includes the cost of insurance to protect the utility against injuries to employees as well as claims payments or reserves for costs not covered by insurance. This component also includes the cost of safety and accident prevention.

2) Public (Account 925.02) - this includes the cost of insurance and claims payments or reserves to protect the company against injuries to, and damage claims of, members of the public.

Q. What is the general nature of the expenses included in these accounts?

A. As indicated below, the expenses represent labor and non-labor costs. Non-labor costs, which represent the lion share of the expenses, include insurance premiums, absorbed losses, safety program designed to control losses, other costs and a general ledger ("G/L") credit. (See Ms. Patsy Nanbu's testimony, HECO T-10, for explanation about G/L codes.)

	Test Year 2007 Estimate
Combined Accounts 924 & 925:	
Labor	$1,574,000
Non-Labor (Net of Adjustment)	8,166,000
Total Accounts 924 and 925	$9,740,000

Total Non-Labor Expenses for Accounts 924 and 925:

Premiums	$4,127,000
Absorbed Losses	2,882,000
Safety Program (Net of Adjustment)	1,509,000
Other Costs	541,000
G/L Code	(893,000)
Total Non-Labor	$8,166,000

Q. What are the premium-related expenses that are included in Accounts 924.00, 925.01 and 925.02?

A. Premium-related expenses are estimated at $4,127,000 (approximately 42% of the total costs for the insurance group of accounts). These expenses include insurance premiums, premium taxes, and insurance broker fees. The totals of premium-related expenses by account, for 2001 through 2007, are shown in HECO-1101, page 2.

Q. What are the non-labor "absorbed losses" that are included in Accounts 924.00, 925.01, and 925.02?

A. Non-labor "absorbed losses" are costs borne by the Company (i.e. costs not reimbursed by insurance). These non-labor costs are estimated at approximately $2,882,000 for test year 2007 (approximately 30% of the total costs for the insurance group of accounts). Absorbed losses result from many types of events, including work-related injuries to Company employees, injuries and damages to the public, and property losses that are subject to insurance deductibles or are self-insured. (Deductibles are HECO's portion of insured losses and self-insured amounts are HECO's portion of losses payable before any excess level of insurance applies.) The totals of these non-labor costs, by account, for the six-year period 2001 through 2007, are shown in HECO-1101, page 3.

Q. What are the safety program expenses included in Account 925.01?

A. These costs include all tasks associated with employee safety, fire safety and public safety. Safety materials such as protective equipment and outside services such as laboratory analysis are also included. Non-labor safety program costs total approximately $1,509,000 (net of adjustment) for test year 2007 as shown in HECO-1101, page 6, which is approximately 15% of the total costs for the insurance group of accounts).

Q. What are the "Other Costs" included in Accounts 924 and 925?

A. These include Information Technology services (See Ms. Patsy Nanbu's testimony, HECO T-10, for explanation about Information Technology cost allocations), outside services plus office supplies and transportation. These expenses total $541,000 (approximately 6% for the insurance group of accounts).

Q. What are the G/L code adjustments included in Accounts 924 and 925?

A. The ($893,000) G/L code adjustments are amounts which have been removed from the Accounts 924 and 925 non-labor totals presented in this testimony and are discussed in the testimony of Ms. Patsy Nanbu (HECO T-10). This represents approximately (9%) of the insurance group of accounts.

Q. What are the Labor expenses included in Accounts 924 and 925?

A. These are costs to administer the safety program and insurance program, and for internal coordination of claims processing. They total approximately $1,574,000 as shown in HECO-1101, page 5 and account for approximately 16% of the total costs for the insurance group of accounts.

Company Policy With Respect to Insurance Coverage

Q. What is the Company's policy with respect to purchasing insurance coverage?

A. The Company's policy is to minimize the combined cost of insurance and

absorbed losses. The Company purchases insurance as protection against catastrophic losses when it is economically feasible to do so. HECO does not insure against the smaller, on-going and relatively predictable losses that are an inevitable consequence of doing business in the electric utility industry. These less significant losses are paid directly by the Company in the form of an insurance policy deductible or a formal self-insured program. It is HECO's policy to do everything economically feasible to contain the on-going types of losses and to control conditions which might cause catastrophic losses.

HECO Covered In HEI Policies

Q. Is HECO covered in policies purchased by Hawaiian Electric Industries, Inc. ("HEI")?

A. Yes. HECO's coverage is part of a consolidated HEI program.

Q. How does HECO get charged for its share of the HEI premium-related expenses?

A. For the most part, the insurance companies give us breakdowns of the total premium by company. HECO's share is the portion of the total premium that the insurer attributes to the risks at HECO. From this information, it is a simple matter to charge HECO its appropriate share of the premium.

When insurance companies do not provide a breakdown of the total premium, the Company's insurance broker provides the breakdown based on the underwriting statistics submitted to insurers. (A measurable statistic such as payroll, which reflects the Company's exposure to loss, is used as the basis for the broker's allocation.)

Determining Insurance Requirements

Q. How does the Company determine insurance requirements for a given category of insurance?

A. First, the Company identifies how it could experience a catastrophic loss. The types of losses which could occur are researched and an assessment is made with respect to the probability of each type of loss. In particular, HECO's loss history (losses which have already occurred) is examined to assess the probable level of future losses for the given category of insurance. Our insurance broker assists in reviewing losses and providing its evaluation as part of our review process.

In some cases, after evaluating the financial impact of the exposure to loss, the Company decides that the potential is small enough that insurance is not required. However, even when losses are not financed with insurance, the exposure area is still subjected to loss control (e.g. safety precautions) to reduce or eliminate losses.

Once probable levels of losses are estimated, the Company's broker, on HECO's behalf, requests bids for insurance having various levels of coverage. Alternatives are compared with respect to the total costs of projected losses within various deductible levels, plus associated premiums. The Company then selects the insurance proposal that gives the best overall protection in light of the cost of probable losses and premium. HECO's broker and its industry experts give the Company very valuable advice in this process and we rely heavily on their expertise.

Q. How was the test year 2007 estimate for insurance premiums determined?

A. The Company expects it will need all the same types of coverage in 2007 as it has in 2006. The cost of this insurance typically changes annually.

Projected insurance premium expenses (shown in HECO-1101, page 2) for the 2007 O&M Expense Budget preliminary costs were estimated in April 2006, based on the known cost of the annual policies purchased in 2005 and early 2006.

This estimate has been further adjusted based on renewal experience through September 2006. Policy period purchases were adjusted to a 2007 calendar year basis.

Where applicable, the current costs were adjusted for three factors: 1) future insurance market pricing, 2) any insurance coverage changes, and 3) any risk exposure changes (changes in the number of things insured or in levels of risk).

Account 924 – Property Insurance

Q. What is the Company's estimate of premium-related expenses and absorbed losses to be charged to Account 924, Property Insurance, for the 2007 test year?

A. The Company's test year 2007 estimate for Account 924.00 totals $2,939,000, as shown in HECO-1101, page 1. The expenses can be broken into labor and non-labor costs. Non-labor costs include premiums, absorbed losses, other costs and a G/L adjustment to remove benefit related on-costs:

	Test Year 2007 Estimate
Property:	
Labor	$ 199,000
Non-Labor	2,740,000
Total Account 924	$2,939,000
Breakdown of Non-labor Expense:	
Premiums	$2,343,000
Absorbed Losses	295,000
Other Costs	218,000
G/L Code Adjustment	(116,000)
Total Account 924 Non-Labor	$2,740,000

(See HECO-1101, pages 1 through 4 for breakdown of non-labor expenses.)

Q. How do the estimates for test year 2007 compare with previous year amounts?

A. The changes in annual premium expense are caused by several factors, including the market price for insurance, loss history, inflation, and increases in the amount of property insured. HECO experienced a significant premium increase during the hardening property insurance market at renewal on September 1, 2001 but when the September 11, 2001 ("9/11") losses occurred in New York City eleven days later, the property insurance market hardened further. The September 2002 renewal encountered significant increases again and in 2003 the market stabilized. As reflected in HECO-1101, page 2, the premiums increased by 73% in 2002 and 38% in 2003. They then decreased by 6% in 2004 and 2% in 2005. With the stabilization in the market, a 1.5% increase was projected for September 1, 2006 renewals. Unfortunately, Hurricane Katrina and other losses affected the insurance market after the September 1, 2005, renewal (especially for locations with hurricane exposures like HECO has) and the market hardened considerably (see HECO-1106 for broker letter recommending HECO budget for September 1, 2007 renewal in response to the underwriters' indications).

With respect to absorbed property/ boiler & machinery losses, the total costs fluctuated significantly from year to year. These ranged from a low of $98,000 in 2001 to a high of $908,000 in 2004 (see HECO-1101, page 3). These swings in costs are typical of property damage claims, which usually involve low-frequency, high-dollar losses.

Q. What types of insurance are included in Account 924?

A. There are four main types of coverage in Account 924:

1) property coverage for perils such as fire, wind, quake and flood,

2) boiler & machinery for mechanical breakdown and electrical arcing,

3) freight insurance, and

4) crime insurance

The property/boiler & machinery coverages are on a combined policy and cover scheduled locations such as each power plant and substation. The freight insurance is for property in transit (such as a turbine shipped for repair) and is under a separate policy. The crime insurance insures HECO for losses due to theft or fraud.

Property Insurance

Q. Why does the Company purchase property insurance?

A. The Company buys property insurance to repair or replace physical assets which have been damaged by insurable events. HECO has various types of utility property that might be damaged or destroyed. Real property such as power plants, and personal property such as computer equipment, computer software, and mobile equipment are subject to damage from various perils.

HECO's property insurance coverage is quite broad and covers losses because of fire, vandalism, riot, sprinkler leakage, lightning, wind, hail, explosion, smoke, liquid damage, vehicle impact, aircraft impact, sonic boom, collapse, flood, and earthquake.

Q. How is the property insurance premium priced?

A. The Company provides total replacement values by scheduled location to the underwriters. Underwriters assess the risk exposure and determine the property insurance costs.

Q. How was the estimated property insurance premium for test year 2007 calculated?

A. The test year 2007 estimate is based on maintaining the same types of coverage in

place at the time the O&M Expense Budget was prepared with further adjustment to the 2007 O&M Expense Budget after September 2006 renewal information became available. Projected expenses (shown in HECO-1101, page 2) for premiums were originally based on the known cost of the annual policy purchased in 2005 but now adjusted for 2006 purchases. Policy period purchases were adjusted to a 2007 calendar year basis. The test year 2007 estimate of $1,650,000 is based on projected insurance market conditions and similar replacement costs of property owned.

Q. What is the deductible for property insurance?

A. The deductible is $1 million per occurrence for catastrophic perils such as earthquake and flood (hurricane wind deductible is two percent of location value with a minimum of $1 million per location). The deductible is $750,000 for other perils such as fire at generating plant locations and $100,000 at non-generating locations.

Q. What types of property are not insured under this policy?

A. Examples of uninsured property are transmission and distribution ("T&D") lines and business interruption exposures. With HECO's hurricane wind exposures, insurance underwriters do not offer T&D property coverage or if coverage is made available, reasonable pricing is not offered. Similarly, because HECO is not connected to a grid as mainland utilities are, business interruption coverage is not available to HECO based on the lack of replacement power to mitigate the interruption.

Boiler and Machinery Insurance

Q. Why does HECO buy boiler and machinery insurance?

A. Boiler and machinery insurance pays for replacement or repairs related to steam

explosions or machinery breakdowns. The boiler and machinery policy covers losses to boilers, pressure vessels (fired and unfired), electrical equipment (such as generators, transformers, motors, and switch gear), and mechanical power equipment (such as turbines, pumps, compressors, and fans). The boiler and machinery coverage is insured with the same insurer as the property coverage to avoid potential gaps in coverage where it is difficult to tell whether a claim should be under the property coverage or under the boiler and machinery coverage.

Q. How is the boiler and machinery insurance premium priced?

A. The underwriters base their charges on their appraisal of the risk of loss for each type of equipment and the possible consequences of an insured accident.

Q. How was the estimated boiler and machinery insurance premium for test year 2007 calculated?

A. The 2007 test year estimate is based on maintaining the same coverage in place at the most recent renewal in September 2006. The 2007 cost is expected to be $602,000. This cost is projected to be 19% more than 2005 (see HECO-1101, page 2).

Q. What is the deductible for boiler and machinery insurance?

A. The deductible is $750,000 per occurrence.

Absorbed Property and Boiler/Machinery Losses

Q. How was the cost for absorbed property and boiler and machinery losses estimated?

A. The Company's deductible of $750,000 per loss was used as a maximum cost per loss under our insured program. The frequency of this type of loss is relatively low, making such losses very difficult to predict. On the other hand, the value of the loss can be quite substantial.

Besides absorbed losses related to the Company's insured property insurance program, HECO regularly experiences damage by third parties to its uninsured transmission and distribution property (e.g. poles damaged/destroyed in automobile accidents). A portion of these losses are unrecoverable and must be absorbed.

As shown in HECO-1101, page 3, total absorbed losses in Account 924.00 for property/boiler and machinery amounted to a high of $908,000 in 2004 and a low of $98,000 in 2001. In developing the 2007 test year estimate, the Company calculated a 98-month loss average (see HECO-1102, page 1) for the period beginning January 1998 through February 2006. The 98-month average annual losses totaled $282,000. This was inflated by 2% to project 2006 losses of $287,000 and another 2.5% for test year 2007 totaling $295,000, a very conservative estimate when compared to the 2001 – 2005 non-inflated loss average of $347,000.

HECO's deductible for hurricane exposures is extremely high. For each scheduled location, the deductible is 2% of replacement values with a minimum deductible of $1 million. HECO's exposure would be capped at the aggregate wind deductible of $25 million for any one occurrence. For example, Kahe Power Plant has a wind deductible of $15 million and Waiau Power Plant has a deductible of $12.8 million. If the two plants were struck by a hurricane, HECO would have to cover the first $25 million in damage costs before insurance would contribute.

Freight Insurance

Q. Why does the Company buy "freight" insurance?

A. Freight, or cargo, insurance is purchased to cover the cost of loss or damage to

property being transported from one location to another. Because of the various modes of transportation and the limited liability assumed by carriers, it is often less expensive and safer to buy our own freight insurance. This way, the freight insurance coverage is in place and will reimburse HECO for the costs of loss or damage to HECO's property.

Q. How are the premiums for freight insurance determined?

A. The freight insurance premium is calculated by multiplying the declared value of the shipment times the applicable premium rate.

There are actually two types of freight insurance: "ocean freight" and "inland freight". If freight is transported by land only (such as between a plant and a repair facility), the inland freight rate applies. The ocean cargo rate applies if freight is shipped via ocean and land or ocean and air. A lower ocean freight rate applies when oil cargo is shipped.

Q. How were the estimated freight premiums for test year 2007 calculated?

A. The projected cost for the test year 2007 is $22,000, as shown in HECO-1101, page 2, based on the Company's insurance broker's projection for market pricing. This is a conservative estimate when compared to the 2004 costs of $46,000, 2003 costs of $19,000 and 2002 costs of $23,000. .

Crime Insurance

Q. Why does the Company buy "crime" insurance?

A. Crime insurance is purchased to cover acts of theft or fraud.

Q. How were the estimated crime premiums for test year 2007 calculated?

A. The projected cost for the test year 2007 is $68,000, as shown in HECO-1101, page 2, was estimated based on the Company's insurance broker's projected market pricing. Like freight insurance, the crime insurance costs are very

reasonable when compared to the 2005, 2004, and 2003 costs of $75,000, $74,000, and $67,000, respectively.

Other Non-labor Expenses

Q. What are the "Other Costs" included in Account 924?

A. These include Information Technology services plus office supplies and transportation. On-costs are included which will be addressed by Ms. Patsy Nanbu (HECO T- 10) in her discussion of A&G expenses. These "Other Costs" expenses total $218,000 as reflected in HECO-1101, page 4.

Q. What are the G/L adjustments?

A. The ($116,000) G/L adjustments as shown on HECO-1101, page 1, are reversed amounts of on-costs which have been removed from the Account 924 non-labor totals presented in this testimony and included in the testimony of Ms. Patsy Nanbu (HECO T- 10) in her discussion of A&G expenses.

Labor Expense

Q. What are the Labor expenses included in Account 924?

A. Labor expenses include direct labor to administer the insurance program and for internal coordination of claims processing. In addition, they include on-costs. In total, the labor expense for Account 924 is $199,000. (See HECO-1101, page 5.)

Account 925.01 – Injuries and Damages – Employees

Q. What is the Company's test year 2007 estimate of labor and non-labor expenses including the non-labor costs of premium, absorbed claims, the safety program and other expenses charged to Account 925.01, Injuries and Damages – Employees?

A. The test year 2007 estimates for Account 925.01, which total $4,193,000 (see HECO-1101, page 1), are as follows:

Test Year 2007 Estimate

Labor		$1,018,000
Non-Labor (After Adjustment)		3,175,000
Total Account 925.01 (before G/L credit)		$4,193,000

Q. How do the estimates for the 2007 test year compare with previous year amounts?

A. These costs fluctuate considerably over each year. Costs decreased 6% from $3,302,000 in 2001, dropped another 1% in 2003 to $3,093,000, increased 14% in 2004 and dropped 17% in 2005. The estimate for test year 2007 for all charges to Account 925.01 is $4,193,000, or 31 percent more than the $3,193,000 average non-inflated, recorded amounts for 2001 - 2005 (see HECO-1101, page 1). The increase is due to excess workers compensation insurance, absorbed workers compensation losses, and increased Safety Program costs as explained further in my testimony.

Q. What are the Labor expenses included in Account 925.01?

A. These costs are for direct labor for the Safety Program, insurance program and internal coordination of claims processing, and also include non-productive labor and on-costs. The safety program accounts for $899,000 and workers compensation for $119,000 of the total $1,018,000 labor costs. (See HECO-1101, page 5.)

Q. What are the amounts of the non-labor components of Account 925.01?

A. The amounts for the various components are as follows:

Non-Labor includes:

Premium:

Excess Workers' Compensation Premium	$ 181,000
State W/C Special Fund Assessments	56,000
USL&H Bond	6,000

Absorbed Losses	1,332,000
Other Workers Compensation Non-labor Expense	91,000
Safety Program (Net of Adjustment)	1,509,000
Total Account No. 925.01 Non-labor (before G/L credit)	$3,175,000

(See HECO-1101, pages 2 through 4 and 6.)

Q. What are the premium expenses for Account 925.01?

A. The insurance premium expenses for this account are the:

1) Excess Workers' Compensation insurance premium,

2) State Worker's Compensation fund assessments, and

3) a United States Longshore and Harbor Workers (USL&H) bond.

The test year 2007 premium is conservative because it does not reflect any significant payroll increases, and no change is contemplated in the current program maintained by the Company. The test year 2007 premiums are estimated at $243,000 (see HECO-1101, page 2). Similar to the impact on property premiums, workers compensation premiums have increased significantly as a result of the 9/11 losses to insurance underwriters.

Excess Workers' Compensation

Q. What is meant by "excess" workers' compensation insurance?

A. In order to limit our financial exposure to catastrophic losses, the Company purchases "excess" insurance above the first $1 million of workers' compensation claims. In this case, the insurance industry term "excess" simply means "above". It does not mean "more than necessary".

Q. How is the premium for excess workers' compensation insurance derived?

A. The Company's insurance carrier charges a fixed premium for this coverage, based on such factors as payroll, job classifications and accident prevention measures.

Q. How was the estimated excess workers' compensation premium for test year 2007 calculated?

A. The estimated premium for test year 2007 for excess workers' compensation was based on the known cost of similar coverage in 2005, which was approximately $163,000. Based on HECO's insurance broker's projections and our recent 2006 renewals, the company estimates a premium rate increase of 11% for test year 2007 compared to 2005 recorded expenses (included in the O&M Expense Budget are net premiums, broker's fees, commissions, and other expenses). The resulting test year 2007 estimate for excess workers' compensation premium of $181,000 is shown in HECO-1101, page 2.

State Workers' Compensation Special Fund

Q. What are the state workers' compensation special fund assessments?

A. HECO has the State of Hawaii's approval to be self-insured up to $1 million for workers' compensation. This means that claims under $1 million are not insured. (The cost of these claims is charged to Account 925.01, as discussed in the preceding section). HECO purchases workers' compensation insurance for loss occurrences over $1 million to provide protection for catastrophic losses (such as a bus load of workers injured in one accident).

Under the Hawaii State workers' compensation program, a special compensation fund is established and maintained to pay for certain benefits not provided through the employer's workers' compensation benefits. This fund is maintained by an annual levy, the "special fund assessment," against insurers and self-insured employers.

Q. How is the State workers' compensation special fund assessment derived?

A. The State has a formula based on the "average annual compensation" paid out for

injuries and damages to employees over the two consecutive calendar years immediately preceding the year for which the charge is assessed. The formula relates to total compensation paid by all employers during this period as well as the compensation paid by all insurance carriers on behalf of employers. For each calendar year, the Director of Commerce and Consumer Affairs determines the amount of the charge to be paid by HECO and notifies the Company during the following year.

Q. How was the estimated state workers' compensation special fund premium for test year 2007 calculated?

A. The estimated workers' compensation special fund assessment for test year 2007 is $56,000. (See HECO-1101, page 2.) The 2007 O&M Expense Budget is based on historical assessments as shown in HECO-1105.

USL&H

Q. What is the USL&H bond?

A. HECO has the Federal Government's approval to be self-insured up to $1 million for USL&H exposures. USL&H is a federal act (sometimes referred to as the Longshore Harbor Worker's Compensation Act - LHWCA) designed to provide compensation to an employee if an injury or death occurs upon navigable waters of the US - including any adjoining pier, wharf, dry dock, terminal, building way, marine railway or other adjoining area customarily used by an employer in loading, unloading, repairing, dismantling or building a vessel. HECO has incidental exposure for claims when employees are working around docking facilities.

Q. How was the estimated USL&H bond premium for test year 2007 calculated?

A. The estimated USL&H bond premium for test year 2007 is $6,000. The 2007

O&M Expense Budget is based on broker projections reflecting significant increases for this product.

Absorbed Losses

Q. What are the "absorbed losses" for Account 925.01?

A. Under the authority of the State Labor Department, the Company operates a "self-insured" workers compensation program, whereby HECO pays costs related to injured workers directly for any losses, up to $1 million per occurrence (for injuries) or $1 million per person (for disease). HECO does this because it is more economical to self-insure such losses and avoid paying for insurance company profit and overhead.

Under the self-insured program, the Company is responsible for paying monetary awards for degrees of disability, as well as wage benefits. In addition, medical costs are a substantial portion of workers' compensation claims, and the Company sometimes incurs legal expenses related to settling its claims. Absorbed workers' compensation amounts for 2001-2007 are shown in HECO-1101, page 3.

Q. How does the Company record workers' compensation losses?

A. The company accrues the costs of workers' compensation awards and related expenses (e.g. medical costs and legal fees) at the time an accident/incident is reported. The best estimate of the ultimate value of the loss is recorded in (matched to) the period in which the accident/incident is reported, rather than the year of settlement or payment. Claims settlements often occur in years subsequent to the one in which the accident occurs, and the payment of related costs often continues in subsequent years as well.

Q. What specific actions are required to accomplish the cost accrual?

A. The Company has established a reserve liability for workers' compensation

claims, representing the ultimate estimated awards and related costs to be paid (absorbed) by the Company in the future for all known accidents. The reserve liability balance is evaluated and adjusted for significant changes at the end of each month and updated for all claims at the end of each quarter. Any required increase in the reserve balance adds to the workers' compensation recorded expenses, and any required decrease in the reserve balance reduces workers' compensation recorded expenses except to the degree they are offset by actual payments made. As actual payments are made, reserve amounts are reduced in like amounts and previously recorded expenses remain unchanged.

Q. How does the test year 2007 estimate for workers' compensation claims compare with prior year amounts?

A. A comparison of the non-labor costs for workers' compensation claims from 2001 through test year 2007 is shown in HECO-1101, page 3. The 2007 test year estimate of $1,332,000 compares to a low of $275,000 in 2003 and a high of $1,344,000 in 2004. Historically, as shown in the previous table, the costs of workers' compensation claims have fluctuated widely from year to year.

Q. Is estimating the costs of workers' compensation claims relatively straightforward?

A. No. Predicting workers' compensation claims is somewhat difficult since in any given year one severe claim can distort the annual expense. In other years, it may take many small claims to produce the same effect as one severe claim.

Q. How was the workers' compensation cost estimate for test year 2007 derived?

A. As previously detailed in HECO T-10, Docket No. 7766, pages 24-27 (test year 1995) and again in HECO T-14, Docket No. 04-0113, pages 22-24, several ways were evaluated to determine a way to smooth out, or normalize, the test year

estimate. It was determined that the best method was to use the actual amounts paid toward all open claims during each calendar year to project forward as to future claims payments. This system has carried forward and we continue to use the same methodology. The following steps were taken to derive the 2007 test year estimate of $1,332,000 (see HECO-1103, page 1 for calculations and HECO-1101, page 3 detailing this total into non-labor absorbed losses):

1) Calculated the average number of claims for 1980 through 2006, which was based on the annualized number of claims as of April 2006.

2) Calculated the average cost per claim for each year from 1980 through April 2006.

3) Adjusted the average cost per claim for each year from 1980 through April 2006 to 2005 constant dollars based on the Consumer Price Index for All Urban Consumers ("CPI").

4) Calculated a 27-year average cost per claim in 2005 constant dollars.

5) Calculated a 2006 estimate, assuming the average 237 claims per year and a 3% general inflation factor, and using the 27-year average cost per claim in 2005 constant dollars (derived in step 4 above).

6) Applied a 2.5% inflation factor to the 2006 estimate (the amount calculated in step 5 above to derive the 2007 estimate.

Q. Why were the historical costs adjusted to 2005 constant dollars?

A. The average cost per claim for each year from 1980 through April 2006 was adjusted to 2005 constant dollars since 2005 was used as the base to which the 3% inflation factor was applied. In essence the data available was restated to 2005 levels before applying the inflation factor.

Q. Why was a 3% general inflation factor used?

A. The 3% general inflation factor was used to escalate the cost of workers' compensation claims because, although probably conservative, we were not aware of a specific escalator that could be used. Workers' compensation claims consist of wage benefits, monetary awards for degrees of disability, medical and legal costs. While wage and salary increases are independent of injuries, the medical and legal costs depend upon the nature of the injury and expected price increases for medical and legal services. Due to the uncertainty with respect to the severity of future claims, which may also affect the amount of the monetary award, we concluded that a reasonable cost estimate would result from using the general inflation factor of 3%.

Q. Why was the 1980 through April 2006 history used to develop the test year estimate?

A. The test year estimate is based on the historical information that was available at the time the estimate was prepared. An attempt was made to go as far back as practical. The roughly 27 years of historical information should provide a sufficient history of the severity of claims and cost escalations.

Q. What are the workers' compensation other non-labor expenses included in Account 925.01?

A. These include Information Technology services, office supplies and outside services. Also included are on-costs addressed by Ms. Patsy Nanbu in HECO T-10. These combined other non-labor expenses total $91,000. (See HECO-1101, page 4.)

Safety Program

Q. What are the safety program expenses for Account 925.01?

A. Safety program costs (which include prevention of injuries and damages to both employees and the public) have fluctuated from a high of $2,122,000 in 2003 to a low of $1,521,000 in 2002. The 2007 test year estimate for safety program costs is $2,407,000 (including both labor and non-labor) after adjustment - see HECO-1101, page 6. Examples of cost increases in 2007 over 2005 include one additional employee in the Safety division (see Ms. Faye Chiogioji's testimony, T-14), increased costs to obtain flame retardant coveralls for employees in the Construction and Maintenance Department, general increases in costs to obtain and service safety equipment and training costs. These costs include all tasks associated with employee safety, fire safety and public safety. As an electric utility, HECO is governed and bound by Hawaii Occupational Safety & Health Division ("HiOSH") to provide electrical safety training (to maintain and ensure that our crews are "qualified" electrical workers) as well as all other HiOSH-related training such as Hazard Communications, Personal Protection Equipment training (safety hat, glasses/face shield, gloves, respirators, hearing protectors, proper fire – flame resistive burn protection clothing, electrical protective equipment use and care training) and Emergency Rescue training (cardio-pulmonary resuscitation, Pole Top, Aerial Bucket, Underground, Structure, First Aid, and automated external defibrillator ("AED") use). Also included in this account are programs to ensure that HECO conforms with Fire and Building Code standards relative to fire protection and fire safety training, including emergency evacuation for all facilities owned and operated by HECO along with vehicle fleet safety services (e.g., training for commercial drivers license, crane, forklift, and

State Department of Transportation ("DOT") required Driver Improvement Training) plus HiOSH and DOT required medical exams for our employees.

Additionally, costs are included for safety materials required to repair and maintain fire protection, detection and emergency notification systems (including 52 automatic fire sprinkler systems, 4 Halon systems, 2 Cardox systems for the Waiau Gas Turbines and 10 CO2 high pressure systems within the power plants), maintenance and repair of personal protection equipment/personal protection monitoring equipment, and outside services, such as laboratory analysis for lead, asbestos and air conditioner – mold exposures.

Q. How are the costs for the safety program calculated?

A. The Safety program costs are primarily costs incurred by the Company's Safety Division. These costs are estimated based on historical costs and adjusted as necessary to meet changing requirements such as new regulations and to satisfy business and social needs to ensure that deaths and serious disabling injuries are not incurred by HECO employees and customers.

Q. What do the safety program costs include?

A. The primary cost elements are labor, materials, information services costs, transportation and outside contract services. Non-labor on-costs are also included and later reduced by G/L code adjustments discussed by Ms. Patsy Nanbu, T-10. These costs for 2001-2005 recorded, and for 2006 and test year 2007 are detailed in HECO-1101, page 6. Activities of the Safety Division include all elements of a program which promotes a safe work environment and safe work practices as mandated by HiOSH, State Public Utilities Commission, Honolulu Fire Dept., DOT and State Department of Health. This helps to control both the frequency and size of workers' compensation and general liability claims as well as aiding

electrical system reliability. Examples of Safety Division activities include conducting safety surveys, providing safety equipment, and servicing of safety equipment including more than 110 AED's for our employees with electrical exposure. In addition to our Safety Division, the operating departments of the company also incur safety-related costs, primarily for purchase of safety materials, such as protective shoes, fire resistive clothing (Nomex coveralls), electrical insulated high and low voltage rubber protective gloves, sleeve, hot sticks and line protective covers. Also safety-related costs incurred by the operating departments include the HiOSH required di-electric (insulated) testing of the rubber protective equipment, hot sticks, etc. including the more than 75 aerial bucket and boom trucks that enable HECO employees to safely work on energized electrical equipment without interruption to service.

HECO's Safety Division also provides electrical safety education and related inspections for outside "Emergency Responders" (e.g. Honolulu Fire Department, Police Department, State and County Agencies) and customers such as contracting firms, schools and Federal agencies.

HECO's Safety Program is recognized as one of the best overall safety programs in the State. In 1996, 1998, and 2002, HECO received Safety Achievement and Program awards from the Governor's Pac-Rim Safety and Health Conference event (co-sponsored by HiOSH and the American Society of Safety Engineers). In 2003, HECO enjoyed its best safety achievement record in the Company's history with 96 Lost Time Hours per 100 employees. The comparable annual rate for the State of Hawaii was 630 Lost Time Hours per 100 employees and for the Transportation and Utility Group 978 Lost Time Hours per 100 employees. The average Lost Time Hours Rate for the electric utility industry

was 150 Lost Time Hours per 100 employees. The Company's record is remarkable in view of the dangerous exposures that are experienced daily by the more than 800 Trades and Crafts employees. In addition to more than 200 workers handling energized electrical equipment, there is field work including climbing of steel towers/poles up to 100 feet high and cliff side trails/work sites in the Koolaus.

Account 925.02 – Injuries and Damages – Public

Q. What components are included in the Company's test year 2007 with respect to Account 925.02, Injuries and Damages – Public?

A. The Company's estimate of Account 925.02 expenses, which total $3,386,000 (see HECO-1101, page 1), includes $358,000 of labor and $3,028,000 of non-labor expenses. Non-labor includes premiums, absorbed losses and other expenses:

	Test Year 2007 Estimate
Premiums	$1,541,000
Absorbed losses	1,255,000
Other non-labor	232,000
Subtotal Account 925.02 Non-labor (before G/L credits)	$3,028,000

(See HECO-1101, pages 2 to 4.)

Q. What causes the annual changes in these costs?

A. Changes in the cost of general liability insurance have a significant impact on the costs for Account 925.02 (see HECO-1101, pages 1 and 2). Changes in the annual cost of general liability insurance are caused primarily by insurance market conditions/prices. Absorbed losses can also have a significant impact since HECO retains the first $1 million of insured general liability losses. Changes in the limits

and the deductibles/retentions selected by the Company can also cause cost variations.

Q. Why does the Company buy liability insurance?

A. The Company buys liability insurance because of the difficulty in predicting the size and frequency of the related types of losses. Exposure to liability loss is the most difficult of risks to assess. The amounts of losses depend on the circumstances of an event, the nature and severity of the injury or damage, the degree of negligence, the applicable laws, the decisions of judges or juries, and even general societal trends.

Liability losses can arise from many things, such as the ownership and use of property, conduct and activities of employees, conduct and actions of subcontractors, lease of aircraft, contractual assumption of liability and the ownership of vehicles.

Liability claims are not commonly self-insured due to the difficulty in predicting such claims. A review of the past several years of loss history guides both HECO and insurance company underwriters in identifying smaller, more frequent losses. This "predictable" level is an appropriate amount for a deductible and the Company adapts the deductible to the particular type of exposure/insurance. However, insurance is necessary to transfer the risk of unpredictable, catastrophic losses.

Q. How are liability premiums determined?

A. Underwriters base general liability rates for electric utilities on various factors such as KWH sales by type, revenue, employee count, geographical location and claims history. Executive risk is rated by underwriters based on corporate

governance, losses, business activities, financial performance and management skills.

Q. How were the estimated liability premiums for test year 2007 calculated?

A. The estimates for test year 2007 were developed as follows:

1) General Liability – The 2007 premium is based on the actual cost for the June 1, 2006-2007 policy period, when two layers of coverage were purchased to achieve adequate limits. These were adjusted for future periods based on broker-provided projections. The 2007 test year estimate reflects a combination of two policy periods: June 1, 2006-2007 and June 1, 2007-2008. When preparing the test year 2007 O&M Expense Budget after June 2006 renewals, premiums were projected to be $1,152,000. See HECO-1101, page 2.

2) Executive Risk – This cost consists of premiums for exposures including directors and officers ("D&O") liability and fiduciary. The D&O premium is the largest of these items at $194,000 and fiduciary at $159,000 in test year 2007 (as shown in HECO-1101, page 2). The 2007 test year estimate is based on the actual expense incurred for each exposure area at the February 1, 2006 policy purchase, escalated for future purchases in February 2007. The 2006 actual purchase cost was adjusted by broker-provided projections for two policy periods: February 1, 2006-2007 and February 1, 2007-2008 to derive the 2007 test year estimate.

3) Professional Liability Insurance - The test year 2007 estimate for engineer's professional liability insurance is $33,000. This is based on the projections from HECO's broker under current market conditions. The previously

4) recorded year is in 2005 at a recorded cost of $27,000. Prior to that year, the coverage was included in HECO's general liability insurance.

5) Other Liability Insurance – The test year 2007 estimate for other costs of liability premiums (miscellaneous bonds) is estimated to total $3,000 in test year 2007. These costs are based on the insurance broker's projections for market pricing.

Absorbed General Liability Losses

Q. How is the cost for absorbed general liability losses calculated?

A. The Company's self-insured retention was used as a maximum cost exposure per occurrence. The recorded losses for years 1998 through February 2006 were first indexed to 2005 dollars. A 98-month average was then calculated and annualized to a 2005 annual estimated cost (see HECO-1104).

The 2006 estimate was developed by applying a conservative 2% inflation factor to the 2005 annual estimated cost. The test year 2007 estimate is based on the 2006 O&M Expense Budget, with a conservative 2.5% factor added.

The resulting 2007 test year absorbed losses estimate is $1,090,000, as shown in HECO-1104, page 1. In addition, a reclassified $165,000 is added to this total for a combined $1,255,000 as shown in HECO-1101, page 3. This additional $165,000 is from a reclassification of costs attributed to employment practices liability claims. Until early 2006, these were captured under NARUC 921 but have since been recorded in NARUC 925.02 to correct the classification. Even with the addition, the total $1,255,000 is in line with historical costs with the non-inflated average 2001-2004 at $1,467,000. As explained in HECO-WP-1101, 2005 costs are abnormally low due primarily to a fortuitous reversal of $1 million previously expensed for a large claim.

Other Non-Labor

Q. What is the projected cost for "Other Non-labor" items related to Account 925.02?

A. "Other Non-labor" costs are projected at $232,000 as shown in HECO-1101, page 4. These include Information Technology department service charges for usage and equipment (e.g. batch processing, disk storage, terminal lease rent, LAN connection fee, etc.) and in-house systems development work. Costs also include a claims management information system annual fee, office supplies and transportation costs. Also included are on-costs that are addressed by Ms. Patsy Nanbu in HECO T-10.

Labor

Q. What is the projected cost for labor related to Account 925.02?

A. Labor is projected at $358,000 for test year 2007 which is a 2% increase from 2005 recorded. Labor costs have been relatively stable from a low of $319,000 in 2001 to a high of $351,000 in 2005

Total Account 925

Q. In summary, what is the total Labor and Non-Labor cost for Account 925 – Injuries & Damages?

A. Total costs for Account 925, which include labor and non-labor costs for both Account 925.01 – Injuries & Damages – Employees, and Account 925.02 – Injuries & Damages – Public, with the combined non-labor costs adjusted by a G/L credit (discussed in Ms. Patsy Nanbu's HECO T-10 testimony) as follows:

Account 925.01	Test Year 2007 Estimate
Labor	$1,018,000
Non-Labor (After Adjustment)	3,175,000

Account 925.02	
Labor	$ 358,000
Non-Labor	3,028,000
G/L code adjustment (Acct. 925.01, 925.02)	(777,000)
Grand Total Account 925	$6,802,000

CONCLUSION

Q. Please summarize your testimony regarding the test year 2007 premium-related expenses, safety program costs, and absorbed losses estimates for Account Nos. 924.00, 925.01, and 925.02.

A. Insurance is a necessary cost of doing business. The costs related to securing reasonable levels of coverage should be included in the electric rates charged to the Company's customers. The Company believes that the coverages planned for test year 2007 give the Company and its customers a reasonable level of protection against catastrophic losses.

The most cost-effective approach with respect to covering losses is for the Company to:

1) make reasonable efforts to provide a safe work environment and implement other loss control measures to protect Company property and prevent liability to others,
2) absorb losses which are somewhat predictable, and
3) purchase insurance for less predictable catastrophic losses.

Therefore, the following premium-related expenses, safety program costs, and

absorbed losses should be included in the calculation of HECO's test year 2007 revenue requirements upon which electric rates will be set:

1) $2,939,000 for Account 924, Property Insurance

2) $6,802,000 for Account 925, Injuries and Damages

Q. Does this conclude your testimony?

A. Yes.

Hawaiian Electric Company

RUSSELL R. HARRIS

EDUCATIONAL BACKGROUND AND EXPERIENCE

Business Address:	Hawaiian Electric Company, Inc. 220 South King Street Honolulu, Hawaii 96813
Position:	Director, Risk Management
Education:	Masters in Business Administration, 1984 University of Hawaii
	Bachelor in Business Administration (Travel Industry Management), 1972 University of Hawaii
Other Qualifications:	Chartered Property & Casualty Underwriter (CPCU) designation, 1993 American Institute for Chartered Property Casualty Underwriters
	Associate in Marine Insurance Management (AMIM), 1990 American Institute for Chartered Property Casualty Underwriters
	Associate in Risk Management (ARM), 1987 Insurance Institute of America
Previous Positions	Risk Management Coordinator, 1984-1987 Pacific Resources, Inc.
	Manager, Safety & Security, 1981-1984 Aloha Airlines, Inc.
	Assistant Manager, Claims, 1980-1981 Aloha Airlines, Inc.

HAWAIIAN ELECTRIC COMPANY, INC.
Combined Insurance Premium, Absorbed Losses, Non Labor Expenses and
Labor and Related Expenses ($000s)

Type of Expense	2001 Recorded	* Change * Percent	2002 Recorded	* Change * Percent	2003 Recorded	* Change * Percent	2004 Recorded	* Change * Percent	2005 Recorded	* Change * Percent	2006 Budget	* Change * Percent	2007 Budget	2007 Adjustment	2007 Test Yr Est
ACCOUNT 924.00, PROPERTY															
Labor	182.2	-7%	170.3	5%	178.0	4%	184.5	5%	194.5	-4%	186.9	6%	198.8	0.0	198.8
Non-Labor	973.0	67%	1,623.2	39%	2,259.0	31%	2,967.0	-18%	2429.0	2%	2488.1	15%	2855.8	0.0	2855.8
Less: G/L Code	(11.4)	68%	(19.2)	323%	(81.3)	-22%	(63.6)	30%	(82.7)	15%	(95.1)	22%	(115.8)	0.0	-115.8
Total Non-Labor	961.6	67%	1,604.0	36%	2,177.7	33%	2,903.4	-19%	2,346.3	2%	2,393.0	15%	2,740.0	0.0	2,740.0
Combined 924	1,143.7	55%	1,774.3	33%	2,355.7	31%	3,087.9	-18%	2,540.8	2%	2,579.9	14%	2,938.8	0.0	2,938.8
ACCOUNT 925.01, INJURIES & DAMAGES - EMPLOYEES															
Labor - Workers' Compensation	595.7	-4%	569.8	-35%	372.4	-11%	332.2	-20%	267.1	-3%	257.8	-54%	119.0	0.0	119
Labor - Safety Program	720.3	0%	722.1	16%	834.1	-6%	785.8	-2%	769.1	21%	927.0	-3%	898.8	0.0	898.8
Subtotal	1,316.0	-2%	1,291.9	-7%	1,206.5	-7%	1,118.0	-7%	1,036.2	14%	1,184.8	-14%	1,017.8	0.0	1,017.8
Non-Labor - Workers' Compensation	999.0	2%	1,020.2	-41%	598.3	118%	1,305.2	-46%	710.5	116%	1,533.4	9%	1,666.5	0.0	1666.5
Non-Labor - Safety Program	987.1	(0.2)	798.7	0.6	1,288.1	(0.1)	1,103.1	0.1	1,185.0	-3%	1,155.0	31%	1,588.9	(80.3)	1,508.6
Subtotal	1,986.1	-8%	1,818.9	4%	1,886.5	28%	2,408.3	-21%	1,895.5	42%	2,688.4	18%	3,255.4	(80.3)	3,175.1
Combined 925.01	3,302.1	-6%	3,110.8	-1%	3,093.0	14%	3,526.3	-17%	2,931.7	32%	3,873.2	8%	4,273.2	(80.3)	4,192.9
ACCOUNT 925.02, INJURIES & DAMAGES - PUBLIC															
Labor - Liability	318.8	2%	325.3	1%	328.1	-2%	320.0	10%	351.0	-1%	346.1	3%	357.6	0.0	357.6
Non-Labor - Liability	2,634.1	-18%	2,155.2	-2%	2,122.5	27%	3,344.3	-67%	1,094.9	168%	2,933.8	3%	3,028.0	0.0	3,028.0
Combined 925.02	2,952.9	-16%	2,480.5	-1%	2,450.6	50%	3,664.3	-61%	1,445.9	127%	3,279.9	3%	3,385.6	0.0	3,385.6
COMBINED ACCOUNT 925, INJURIES & DAMAGES															
Total Labor 925	1,634.8	-1%	1,617.2	-5%	1,534.6	-6%	1,438.1	-4%	1,387.2	10%	1,530.9	-10%	1,375.4	0.0	1,375.4
Total Non-Labor 925	4,620.3	-14%	3,974.1	1%	4,009.0	43%	5,752.6	-48%	2,990.4	88%	5,622.3	10%	6,283.4	(80.3)	6203.1
Less: G/L Codes	(84.7)	56%	(132.0)	373%	(624.7)	-31%	(429.2)	18%	(507.3)	39%	(704.4)	10%	(777.0)	0.0	-777
Total Non-Labor 925	4,535.6	-15%	3,842.1	-12%	3,384.3	57%	5,323.4	-53%	2,483.1	98%	4,917.9	10%	5,506.4	(80.3)	5,426.1
Combined 925	6,170.4	-12%	5,459.3	-10%	4,918.9	37%	6,761.5	-43%	3,870.3	67%	6,448.8	5%	6,881.8	(80.3)	6,801.5
GRAND TOTAL	7,314.1	-1%	7,233.6	1%	7,274.6	35%	9,849.4	-35%	6,411.2	68.2%	9,028.7	8%	9,820.6	(80.3)	9,740.3

HAWAIIAN ELECTRIC COMPANY, INC.

Non-Labor Insurance Premiums and Related Expenses ($000's)

Type of Expense	2001 Recorded	* Change * Percent	2002 Recorded	* Change * Percent	2003 Recorded	* Change * Percent	2004 Recorded	* Change * Percent	2005 Recorded	* Change * Percent	2006 Budget	* Change * Percent	2007 Test Yr Est
ACCOUNT 924.00, PROPERTY													
Property	570.7	76%	1,002.0	44%	1,444.3	-7%	1,349.9	-1%	1,341.7	4%	1,397.9	18%	1,649.8
Boiler/Machinery	260.6	66%	432.2	28%	553.1	-8%	509.5	-1%	505.7	13%	570.3	5%	601.6
Crime					***SEE ACCOUNT 925.02***					0.3%	75.5	-10%	67.8
Other					***SEE ACCOUNT 925.02***								2.1
Freight	10.1	130%	23.2	-17%	19.3	138%	46.0	-53%	21.5	25%	26.8	-18%	21.9
Subtotal	841.4	73%	1,457.4	38%	2,016.7	-6%	1,905.4	-2%	1,868.9	7%	1,995.0	17%	2,343.2
ACCOUNT 925.01, INJURIES & DAMAGES - EMPLOYEES													
Excess Workers' Compensation	89.1	-14%	76.9	103%	156.1	5%	164.2	0%	163.4	4%	170.5	6%	181.4
State W/C Special Fund	97.1	81%	175.7	-74%	46.4	1%	46.7	27%	59.1	79%	105.6	-47%	55.8
USL&H Bond	2.1	0%	2.1	-38%	1.3	8%	1.4	0%	1.4	0%	1.4	321%	5.9
Subtotal	188.3	35%	254.7	-20%	203.8	4%	212.3	5%	223.9	24%	277.5	-12%	243.1
ACCOUNT 925.02, INJURIES & DAMAGES - PUBLIC													
General Liability	627.5	-2%	615.2	24%	764.0	20%	916.5	13%	1,037.8	7%	1,115.5	3%	1,151.5
Directors & Officers	25.5	-114%	(3.6)	-206%	3.8	4284%	166.6	2%	169.5	13%	191.7	1%	194.2
Fiduciary	22.7	-83%	3.9	905%	39.2	216%	123.8	-3%	120.4	-4%	115.1	38%	158.9
Crime	11.6	184%	32.9	102%	66.5	11%	74.0	2%	75.3	***SEE ACCOUNT 924.00***			
Professional E&O									27.4	11%	30.3	10%	33.2
Other	1.7	88%	3.2	6%	3.4	-91%	0.3	0%	0.3	1000%	3.3	0%	3.3
Subtotal	689.0	-5%	651.6	35%	876.9	46%	1,281.2	12%	1,430.7	2%	1,455.9	6%	1,541.1
GRAND TOTAL	1,718.7	38%	2,363.7	31%	3,097.4	10%	3,398.9	4%	3,523.5	6%	3,728.4	11%	4,127.4

HAWAIIAN ELECTRIC COMPANY, INC.
Non-Labor Absorbed Losses and Expenses (000's)

Type of Expense	2001 Recorded	* Change * Percent	2002 Recorded	* Change * Percent	2003 Recorded	* Change * Percent	2004 Recorded	* Change * Percent	2005 Recorded	* Change * Percent	2006 Budget	* Change * Percent	2007 Test Yr Est
ACCOUNT 924.00, PROPERTY													
Property Losses	98.3	7%	105.6	20%	126.5	618%	908.0	-45%	496.6	-37%	311.1	-5%	294.6
Subtotal	98.3	7%	105.6	20%	126.5	618%	908.0	-45%	496.6	-37%	311.1	-5%	294.6
ACCOUNT 925.01, INJURIES & DAMAGES - EMPLOYEES													
Workers' Comp Losses	739.8	-6%	696.3	-60%	275.5	388%	1,344.2	-54%	613.4	85%	1,135.4	17%	1,332.2
Subtotal	739.8	-6%	696.3	-60%	275.5	388%	1,344.2	-54%	613.4	85%	1,135.4	17%	1,332.2
ACCOUNT 925.02, INJURIES & DAMAGES - PUBLIC													
Liability Losses	1,840.7	-27%	1,345.1	-35%	869.7	108%	1,812.4	-130%	(549.6)	-313%	1,170.0	7%	1,255.2
Subtotal	1,840.7	-27%	1,345.1	-35%	869.7	108%	1,812.4	-130%	(549.6)	-313%	1,170.0	7%	1,255.2
GRAND TOTAL	2,678.8	-20%	2,147.0	-41%	1,271.7	220%	4,064.6	-86%	560.4	367%	2,616.5	10%	2,882.0

HAWAIIAN ELECTRIC COMPANY, INC.
Other Non-Labor Expenses (000's)

Type of Expense	2001 Recorded	* Change * Percent	2002 Recorded	* Change * Percent	2003 Recorded	* Change * Percent	2004 Recorded	* Change * Percent	2005 Recorded	* Change * Percent	2006 Budget	* Change * Percent	2007 Test Yr Est
ACCOUNT 924.00, PROPERTY													
Property Other Non-Labor Expenses	33.3	81%	60.3	92%	115.7	33%	153.6	-59%	63.5	187%	182.0	20%	218.0
Subtotal	33.3	81%	60.3	92%	115.7	33%	153.6	-59%	63.5	187%	182.0	20%	218.0
ACCOUNT 925.01, INJURIES & DAMAGES - EMPLOYEES													
Workers' Comp Other Non-Labor Expenses	70.9	-2%	69.2	72%	119.0	-311%	(251.3)	-50%	(126.8)	-195%	120.5	-24%	91.2
Subtotal	70.9	-2%	69.2	72%	119.0	-311%	(251.3)	-50%	(126.8)	-195%	120.5	-24%	91.2
ACCOUNT 925.02, INJURIES & DAMAGES - PUBLIC													
Liability Other Non-Labor Expenses	104.4	52%	158.5	137%	376.0	-33%	250.7	-15%	213.8	44%	307.9	-25%	231.7
Subtotal	104.4	52%	158.5	137%	376.0	-33%	250.7	-15%	213.8	44%	307.9	-25%	231.7
GRAND TOTAL	208.6	38%	288.0	112%	610.7	-75%	153.0	-2%	150.5	306%	610.4	-11%	540.9

Note: "Other Non-Labor Expenses" do not include Premiums, Absorbed Losses or Safety Program related non-labor expenses.
Included are on-costs discussed in Ms. Patsy Nanbu's testimony, HECO T-10. These are adjusted by the G/L code cost reversals after all costs are combined as shown on HECO-1101, page 1.
On-cost amounts included above are $109 for Property, $60 for Workers' Comp, and $183 for Liability.

HAWAIIAN ELECTRIC COMPANY, INC.
Labor and Related Expenses

Type of Expense	2001 Recorded	* Change * Percent	2002 Recorded	* Change * Percent	2003 Recorded	* Change * Percent	2004 Recorded	* Change * Percent	2005 Recorded	* Change * Percent	2006 Budget	* Change * Percent	2007 Test Yr Est
ACCOUNT 924.00, PROPERTY													
Direct Labor	154.9	-7%	144.4	4%	150.8	5%	158.6	8%	170.8	-4%	163.5	6%	173.6
On-Cost	27.3	-5%	26.0	5%	27.2	-5%	25.9	-8%	23.7	-1%	23.4	8%	25.2
Subtotal	182.2	-6%	170.4	4%	178.0	4%	184.5	5%	194.5	-4%	186.9	6%	198.8
ACCOUNT 925.01, INJURIES & DAMAGES - EMPLOYEES													
Workers' Comp Direct Labor	167.2	30%	216.9	-35%	141.2	-6%	133.3	-15%	112.9	16%	130.5	-19%	105.2
Workers' Comp Non-Prod Labor	400.4	-21%	317.9	-35%	207.0	-14%	177.7	-21%	139.5	-21%	110.9	-100%	0
Workers' Comp On-Cost	28.1	25%	35.0	-31%	24.2	-12%	21.2	-31%	14.6	12%	16.4	-16%	13.8
Subtotal	595.7	-4%	569.8	-35%	372.4	-11%	332.2	-20%	267.0	-3%	257.8	-54%	119.0
Safety Program Direct Labor	619.0	0%	617.5	16%	716.3	-4%	685.1	0%	684.1	20%	820.3	-3%	794.4
Safety Program On-Cost	101.3	3%	104.6	13%	117.7	-14%	100.7	-16%	85.0	26%	106.7	-2%	104.4
Subtotal	720.3	0%	722.1	15%	834.0	-6%	785.8	-2%	769.1	21%	927.0	-3%	898.8
Workers' Comp & Safety Program	1,316.0	-2%	1,291.9	-7%	1,206.4	-7%	1,118.0	-7%	1,036.1	14%	1,184.8	-14%	1,017.8
ACCOUNT 925.02, INJURIES & DAMAGES - PUBLIC													
Direct Labor	274.2	2%	279.3	1%	281.1	-1%	278.0	12%	311.2	-2%	306.5	3%	315.8
On-Cost	44.6	3%	46.0	2%	46.9	-10%	42.0	-5%	39.8	-1%	39.6	6%	41.8
Subtotal	318.8	2%	325.3	1%	328.0	-2%	320.0	10%	351.0	-1%	346.1	3%	357.6
Total 925.01 &925.02	1,634.8	-1%	1,617.2	-5%	1,534.4	-6%	1,438.0	-4%	1,387.1	10%	1,530.9	-10%	1,375.4
GRAND TOTAL	1,817.0	-2%	1,787.6	-4%	1,712.4	-5%	1,622.5	-3%	1,581.6	9%	1,717.8	-8%	1,574.2

HAWAIIAN ELECTRIC COMPANY, INC.
Safety Program Expenses ($000's)

Description of Safety Program Expenses	2001 Recorded	* Change * Percent	2002 Recorded	* Change * Percent	2003 Recorded	* Change * Percent	2004 Recorded	* Change * Percent	2005 Recorded	* Change * Percent	2006 Budget	* Change * Percent	2007 Budget	2007 Adjustment	2007 Test Yr Est
Labor (asbestos work, accident investigation, training	720.3	0%	722.1	15%	834.0	-6%	785.8	-2%	769.1	21%	927.0	-3%	898.8	0.0	898.8
Non-Labor:															
Safety Materials Purchased by Safety Division (SS) (equipment, promotional, educational)	213.5	3%	220.9	-5%	209.2	-1%	207.5	-4%	198.4	-63%	74.0	155%	189.0	0.0	189
Safety Materials Purchased Outside Safety Division	144.8	-19%	116.8	11%	130.1	38%	179.8	-3%	174.8	-34%	115.1	42%	224.8	(61.0)	163.8
Information Services	36.2	88%	67.9	14%	77.4	26%	97.3	-1%	96.6	-6%	90.9	-1%	90.3	0.0	90.3
Transportation/Travel	118.8	-2%	116.3	18%	137.5	18%	162.9	7%	173.9	-14%	150.1	23%	184.7	0.0	184.7
Outside Services (1)	403.6	-68%	129.0	151%	323.8	-42%	188.4	29%	242.4	-18%	198.0	43%	282.6	0.0	282.6
Other Costs (2)	70.1	111%	147.8	177%	410.1	-35%	267.1	12%	298.9	76%	526.9	14%	617.5	(19.3)	598.2
Subtotal Non-Labor	987.0	-19%	798.7	61%	1288.1	-14%	1103.0	7%	1185.0	-3%	1155.0	31%	1588.9	-80.3	1508.6
GRAND TOTAL SAFETY PROGRAM	1707.3	-11%	1520.8	40%	2122.1	-11%	1888.8	3%	1954.1	7%	2082.0	16%	2487.7	-80.3	2407.4

(1) "Outside Services" includes fire protection system, outside laboratory analysis, physical (motor vehicles), membership dues, communications, staff training, heavy truck licensure, and records/reports.

(2) "Other Costs" include primarily on-costs which will be reduced by G/L Code reversals after all NARUC 925 components are combined (see HECO-1101, page 1). For Test Year 2007, these costs total $583,000 of $598,000 shown for Safety. G/L Code Adjustments are addressed by Ms. Patsy Nanbu in HECO T-10.

HAWAIIAN ELECTRIC COMPANY, INC.
PROPERTY/BOILER MACHINERY INSURANCE - ABSORBED LOSSES
BUDGET FORECAST FOR 2007/2008 As of 6-2-06

951 ACTIVITY	1998	1999	2000	2001	2002	2003	2004	2005	2/06	
Property Losses	$0	$0	$0	$0	$0	$0	$0	$0	$0	
Boiler/Mach Losses	$252,000	$70,874	$0	$0	$0	$0	$750,000	$399,964	($75,994)	
OH/UG Uncollectibles	$555,955	$144,091	$63,340	$73,019	$114,946	$148,425	$153,516	$38,616	$32,804	
OH/UG Collect Exp	$29,839	$7,401	$6,264	$2,482	$3,696	$1,041	$4,167	$346	$31	
Bad Debt	($101,071)	($87,680)	($39,704)	$22,836	($13,069)	($22,937)	$34,416	($38,301)	$29,526	
		$134,686	$29,899	$98,337	$105,572	$126,528	$942,099	$400,625		
HANDY/WHITMAN INDEX:										
ALL STEAM PLNT	366	369	387	398	412	417	451	451	451	(1/05)
DVLPMNT FACTR	1.23	1.22	1.17	1.13	1.09	1.08	1.00	1.00	1.00	
OH/UG DISTR PLNT	390	391	400	420	434	439	466	466	466	(1/05)
DVLPMNT FACTR	1.19	1.19	1.17	1.11	1.07	1.06	1.00	1.00	1.00	
UG COND & DSTR	325	326	342	342	347	353	395	395	395	(1/05)
DVLPMNT FACTR	1.22	1.21	1.15	1.15	1.14	1.12	1.00	1.00	1.00	
CPI	171.50	173.30	176.30	178.40	180.30	184.50	190.60	197.80	197.80	(12/05)
DVLPMNT FACTR	1.15	1.14	1.12	1.11	1.10	1.07	1.04	1.00	1.00	

92409 SUB ACTIVITY	1998 (2005 $'s)	1999 (2005 $'s)	2000 (2005 $'s)	2001 (2005 $'s)	2002 (2005 $'s)	2003 (2005 $'s)	2004 (2005 $'s)	2005 (2005 $'s)	2006 (2/06)	98 MONTH TOTAL	MONTHLY AVERAGE	YEARLY TOTAL	2006 Forecast	2007 Forecast
Property Losses	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Boiler/Mach Losses	$309,960	$86,466	$0	$0	$0	$0	$750,000	$399,964	($75,994)	$1,470,396	$15,004	$180,048	$183,649	$188,240
OH/UG Uncollectibles		$171,468	$74,107	$81,051	$122,992	$157,330	$153,516	$38,616	$32,804	$831,884	$9,673	$116,076	$118,398	$121,358
OH/UG Collect Exp		$8,437	$7,016	$2,755	$4,065	$1,114	$4,334	$346	$31	$28,098	$327	$3,924	$4,002	$4,102
Bad Debt		($99,955)	($44,469)	$25,348	($14,376)	($24,543)	$35,793	($38,301)	$29,526	($130,977)	($1,523)	($18,276)	($18,642)	($19,108)
												$281,772	$287,407	$294,592

2006 Budget = Yearly total + 2.00%. H/W all steam plnt (1) - Property and Boiler & Machinery Losses.
2007 Budget = 2006 Budget + 2.5%. H/W oh distr plnt (44) - OH/UG Uncollectible Losses
2008 Budget = 2007 Budget + 2.5%. CPI - Collection Expense and Bad Debt

TOTAL PROPERTY:	$ 103,758	$ 106,352
TOTAL BOILER/MACHINERY:	$ 183,649	$ 188,240
	$ 287,407	$ 294,592

NOTE: Due to initiation of MIMS in 1999, trending of OH/UG Uncollectibles, OH/UG Collection Expense and Bad Debt numbers to start in 1999

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HAWAIIAN ELECTRIC COMPANY, INC.
PROPERTY/BOILER MACHINERY INSURANCE - ABSORBED LOSSES
BUDGET FORECAST FOR 2007/2008 As of 6-2-06

Property Code Blocks

92409 SUB ACTIVITY	RA	ACT.	LOC.	IND.	PROJECT	EXPENSE ELEMENT	YEARLY TOTAL	2006 FORECAST	2007 FORECAST	YR 2007 TOTAL BY EXPENSE TYPE	MONTHLY YR 2007
Property Losses	PKI	951	PHE	NE	NPKZZZZZ	501	$0	$0	$0		
Boiler Mach. Losses	PKI	951	PHE	NE	NPKZZZZZ	501	$180,048	$183,649	$188,240		
OH/UG Uncollect.	PKI	951	PHE	NE	NPKZZZZZ	501	$116,076	$118,398	$121,358	$309,598	$ 25,800.00
OH/UG Collect Exp.	PKI	951	PHE	NE	NPKZZZZZ	502	$3,924	$4,002	$4,102	$4,102	$ 342.00
BAD DEBT	PKI	951	PHE	NE	NPKZZZZZ	905	($18,276)	($18,642)	($19,108)	($19,108)	$ (1,592.00)
							$281,772	$287,407	$294,592		$ 24,550.00

TOTAL PROPERTY:	$103,758	$106,352
TOTAL BOILER/MACHINERY:	$183,649	$188,240
	$287,407	$294,592

CONSOLIDATION OF CODE BLOCKS:

							MONTHLY YR 2007
ALL	PKI	951	PHE	NE	NPKZZZZZ	501	$ 25,800.00
ALL	PKI	951	PHE	NE	NPKZZZZZ	502	$ 342.00
ALL	PKI	951	PHE	NE	NPKZZZZZ	905	$ (1,592.00)
							$ 24,550.00

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Hawaiian Electric Company, Inc.
Account 925
Workers' Compensation Claims Estimate

Year	Total Cost [1]	Total # Claims [1]	Avg $ per Claim	CPI Factor [2]	Avg $ /Claim (2005$'s)
1980	439,177	300	1,464	195.3/82.4	3,470
1981	470,000	291	1,615	195.3/90.9	3,470
1982	486,293	284	1,712	195.3/96.5	3,465
1983	479,120	265	1,808	195.3/99.6	3,545
1984	778,975	223	3,493	195.3/103.9	6,566
1985	633,346	235	2,695	195.3/107.6	4,892
1986	642,200	202	3,179	195.3/109.6	5,665
1987	634,420	217	2,924	195.3/113.6	5,026
1988	433,077	228	1,899	195.3/118.3	3,136
1989	790,583	261	3,029	195.3/124.0	4,771
1990	1,088,905	238	4,575	195.3/130.7	6,837
1991	897,187	261	3,437	195.3/136.2	4,929
1992	821,953	273	3,011	195.3/140.3	4,191
1993	888,673	270	3,291	195.3/144.5	4,448
1994	1,367,042	265	5,159	195.3/148.3	6,794
1995	1,243,215	236	5,268	195.3/152.5	6,746
1996	1,000,976	219	4,571	195.3/156.9	5,689
1997	804,469	172	4,677	195.3/160.5	5,691
1998	639,717	190	3,367	195.3/163.0	4,034
1999	1,394,275	297	4,695	195.3/166.6	5,503
2000	1,700,930	223	7,627	195.3/172.2	8,651
2001	1,413,314	236	5,989	195.3/177.1	6,604
2002	1,438,039	216	6,658	195.3/179.9	7,227
2003	1,148,514	185	6,208	195.3/184.0	6,589
2004	1,149,435	166	6,924	195.3/188.9	7,159
2005	810,769	157	5,164	195.3/195.3	5,164
As of April 2006	268,955	75	3,586	195.3/200.2 [3]	3,498
1980-2006 27 year avg		237 [4]			5,325

[1] Note: Above data for 1980-Apr 2006 obtained from Pat Oshiro's worksheet dated 05/22/06.

[2] Note: Above CPI Factor from US Department of Labor - Bureau of Labor Statistics for report call fax-on-demand (415) 975-4567 document # 9210.

Avg$/Claim - 2005 $		5,325
06 Inflation Factor		1.03
2006 Avg $/Claim		5,484
Avg # of Claims	X	237
2006 Estimate		1,299,708
Inflation Factor for '07 Fcst [5]		1.025
2007 Estimate		1,332,201

[3] Assumes 3% inflation factor in 2006, (per (5/2006) latest CPI (per Blue Chip Indicators).

[4] Based on April 2006 annualized total # of claims

[5] Assumes inflation factor of 2.5%, per Blue Chip Economic Indicators 2006 Consumer Price Index - 5/2006

HAWAIIAN ELECTRIC COMANY, INC.
LIABILITY INSURANCE - ABSORBED LOSSES
BUDGET FORECAST FOR 2007/2008

Work Order	Recorded 1998	1999	2000	2001	2002	2003	2004	2005	2/06
Gen Liab Prop Dmg (PD	$203,031	$207,144	$305,937	$352,991	$348,878	$390,219	$537,575	$470,110	$41,343
Gen Liab Bod Inj (BI)	$766,545	$26,084	$29,180	$816,445	$97,700	$401,049	$115,093	$48,428	$8,500
Gen Liab PD Adj Exp	$1,025	$3,542	$4,091	$10,784	$936	$148	$18,525	$1,715	$18,832
Gen Liab BI Adj Exp	$8	$6,730	$14,936	$22,054	$11,123	$10,047	$3,429	($14,060)	$582
Gen Liab Legal PD	$5,429	$10,881	$27,731	$129,004	$263	$20,878	$15,666	$18,522	$1,571
Gen Liab Legal BI	$369,969	$282,861	$106,265	$273,469	$258,467	$307,157	$175,964	$15,005	$230
Prof Liab Claims	$0	$0	$0	$0	$0	$0	$0	$33,278	$0
Auto Liab Prop Dmg (PD	$20,946	$23,281	$20,113	$15,493	$31,757	$14,326	$22,256	$33,278	$2,250
Auto Liab Bod Inj (BI)	$122,185	$17,352	$215,921	$0	$18,721	$524	$238	$20,000	$0
Auto Liab PD Adj Exp	$1,284	$2,185	$534	$1,911	$1,071	$163	$476	$1,926	$160
Auto Liab BI Adj Exp	$0	$191	$120	$0	$152	$0	$0	$0	$0
Auto Liab Legal PD	$311	$0	$0	$0	$0	$0	$0	$0	$0
Auto Liab Legal BI	$10,815	$0	$20,124	$0	$0	$0	$0	$7,590	$0
Auto Liab Reserves	($60,000)	$72,600	($72,600)	$0	$0	$0	$35,000	$121,000	$0
Gen Liab Reserves	($25,000)	$26,000	$29,000	$182,800	$536,200	($145,000)	$904,000	($964,000)	($95,000)
Gen Liab Legal Reserve	($69,100)	($34,600)	$24,700	$95,461	$93,700	($113,200)	$60,500	($136,700)	$10,000
Auto Liab Legal Reserve	($20,000)	$5,000	($5,000)	$0	$5,000	$0	$0	$17,400	$0
CPI	171.50	173.30	176.30	178.40	180.30	184.50	190.60	197.80	197.80 12/05
DVLPMNT FCTR	1.15	1.14	1.12	1.11	1.10	1.07	1.04	1.00	1.00

Work Order	1998 (2005 $'s)	1999 (2005 $'s)	2000 (2005 $'s)	2001 (2005 $'s)	2002 (2005 $'s)	2003 (2005 $'s)	2004 (2005 $'s)	2005 (2005 $'s)	2006 (2/06)	98 MONTH TOTAL	MONTHLY AVERAGE	YEARLY TOTAL	2006 Forecast	2007 Forecast
Gen Liab Prop Dmg (PD	$233,486	$236,144	$342,649	$391,820	$383,766	$417,534	$559,078	$470,110	$41,343	$3,075,930	$31,387	$376,644	$384,177	$393,781
Gen Liab Bod Inj (BI)	$881,527	$29,736	$32,682	$906,254	$107,470	$429,122	$119,697	$48,428	$8,500	$2,563,416	$26,157	$313,884	$320,162	$328,166
Gen Liab PD Adj Exp	$1,179	$4,038	$4,582	$11,970	$1,030	$158	$19,266	$1,715	$18,832	$62,770	$641	$7,692	$7,846	$8,042
Gen Liab BI Adj Exp	$9	$7,672	$16,728	$24,480	$12,235	$10,750	$3,566	($14,060)	$582	$61,962	$632	$7,584	$7,736	$7,929
Gen Liab Legal PD	$6,243	$12,404	$31,059	$143,194	$289	$22,339	$16,293	$18,522	$1,571	$251,914	$2,571	$30,852	$31,469	$32,256
Gen Liab Legal BI	$425,464	$322,462	$119,017	$303,551	$284,314	$328,658	$183,003	$15,005	$230	$1,981,704	$20,221	$242,652	$247,505	$253,693
Prof Liab Claims	$0	$0	$0	$0	$0	$0	$0	$33,278	$0	$33,278	$340	$4,080	$4,162	$4,266
Auto Liab Prop Dmg (PD	$24,088	$26,540	$22,527	$17,197	$34,933	$15,329	$23,146	$33,278	$2,250	$199,288	$2,034	$24,408	$24,896	$25,518
Auto Liab Bod Inj (BI)	$140,513	$19,781	$241,832	$0	$20,593	$561	$248	$20,000	$0	$443,528	$4,526	$54,312	$55,398	$56,783
Auto Liab PD Adj Exp	$1,477	$2,491	$598	$2,121	$1,178	$174	$495	$1,926	$160	$10,620	$108	$1,296	$1,322	$1,355
Auto Liab BI Adj Exp	$0	$218	$134	$0	$167	$0	$0	$0	$0	$519	$5	$60	$61	$63
Auto Liab Legal PD	$358	$0	$0	$0	$0	$0	$0	$0	$0	$358	$4	$48	$49	$50
Auto Liab Legal BI	$12,437	$0	$22,539	$0	$0	$0	$0	$7,590	$0	$42,566	$434	$5,208	$5,312	$5,445
Auto Liab Reserves	($69,000)	$82,764	($81,312)	$0	$0	$0	$36,400	$121,000	$0	$89,852	$917	$11,004	$11,224	$11,505
Gen Liab Reserves	($28,750)	$29,640	$32,480	$202,908	$589,820	($155,150)	$940,160	($964,000)	($95,000)	$552,108	$5,634	$67,608	$68,960	$70,684
Gen Liab Legal Reserve	($79,465)	($39,444)	$27,664	$105,962	$103,070	($121,124)	$62,920	($136,700)	$10,000	($67,117)	($685)	($8,220)	($8,384)	($8,594)
Auto Liab Legal Reserve	($23,000)	$5,700	($5,600)	$0	$5,500	$0	$0	$17,400	$0	$0	$0	$0	$0	$0
												TOTAL:	$1,161,895	$1,190,942
2006 forecast = Yearly total + 2.00%.												Less Clearing Cha	$98,262	$100,719
2007 forecast = 2006 forecast + 2.5%.												NET:	$1,063,633	$1,090,223

NOTE: Included loss (1998 $680,000/GLBI and $320,000/LGL GLBI). Reflects current $1M SIR.
NOTE: Included loss. Obtained full recovery of all costs from first dollar from insurer.

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HAWAIIAN ELECTRIC COMPANY, INC.
WORKERS' COMPENSATION SPECIAL FUND ASSESSMENT

Type of Expense	2001 Recorded	* Change * Percent	2002 Recorded	* Change * Percent	2003 Recorded	* Change * Percent	2004 Recorded	* Change * Percent	2005 Recorded	* Change * Percent	2006 Forecast	* Change * Percent	2007 Test Yr Est.
WORKERS' COMP SPECIAL FUND ASSESSMENT - BREAKDOWN													
Actual Paid/**Forecast**	91.6	34%	122.3	-23%	94.1	-30%	65.9	-19%	53.7	10%	**59.1**	-6%	**55.8**
Current Year Accrual	88.5	60%	141.9	-34%	94.1	-20%	75.0	-21%	59.1				
Previous Year Accrual Reversal	(83.0)	7%	(88.5)	60%	(141.9)	-34%	(94.1)	-20%	(75.0)				
TOTAL	97.1	81%	175.7	-74%	46.3	1%	46.8	-19%	37.8	56%	59.1	-6%	55.8

The State of Hawaii bills the Company in August of the current year for the Special Fund Assessment of the previous calender year. This information is included in the forecast estimate (prepared in September) for the current year and is based on the average % increases/decreases of the previous 5 years. This amount is accrued in December of the current year and is reversed out in August of the following year when the actual invoice is received.

MARSH

Marcus G. Kim, CPCU, ARM
Vice President

Marsh USA Inc.
745 Fort Street, Suite 1100
Honolulu, HI 96813
808 585 3500 Fax 808 585 3510
Marcus.G.Kim@marsh.com
www.marsh.com

August 30, 2006

Mr. Russ Harris
Director, Risk Management
Hawaiian Electric Company, Inc.
PO Box 2750
Honolulu, HI 96840-0001

Re: 2007 Property/Boiler & Machinery Premium Budget

Dear Russ:

I am recommending a revision to the next year's budget renewal from 5% increase to 20-25% increase in premium over this recent renewal. This does not take into account increases in property values, also resulting in increased premiums as a result of rate per $100 in values.

While the Sept. 1, 2006 renewal was very successful in lieu of pressures, a number of Underwriters initially expressed higher rate increases than 15% for this renewal. Further, values increased approximately 7% resulting in an overall premium increase of 22%.

The pressures mentioned above are:
2005 Hurricane Season and Insurer Losses
Reinsurance Markets' extreme hardening and driving up rates in the general property market by 100-300%
Reduction in Catastrophe Capacity
Increase in deductibles
100% CAT exposed to peril of Wind
HEI utility companies' negative loss experience during the past 5 years

Examples of Underwriter's initial responses during marketing:
AIG - 40% rate increase
XL - required a $5 Mill. premium (vs $3.113 Mill.) or a 200% rate increase
Everest Re - 200% rate increase
AEGIS (domestic) - 35% rate increase
Liberty International - 35% rate increase and $2 Mill. Deductibles

Zurich American - $4.5 Mill. premium or an 88% rate increase

A number of Underwriters either declined to quote or did not renew their participation on HEI program and wanted higher deductibles. The two major reasons for their stance was HEI and the Underwriters were trading dollars over the past 5 years (premiums vs losses) and they could not meet our competitive renewal specifications.

A very important view held by the majority of underwriters was that if the utilities suffer another loss this next policy period, no preferential terms will be offered in the next renewal negotiations. Presumably, they will be adverse to HEI and follow the negative examples bulleted above.

After reviewing this suggestion, please let me know if any questions.

Sincerely,

Marcus G. Kim, CPCU, ARM
Vice President