CA-IR-91

Ref: HECO T-8, page 5, HECO-815, HECO-WP-808 (T&D Aging Infrastructure).

HECO-815 (transmission transformers) is supported by HECO-WP-808, which breaks down the 47 transformers by age band for the 2009 forecast year. Please provide the following:

a. For nine (9) transformers (lines 1-3, 7, 22, 33, 44-46), columns (C) and (Q) show different dates of transformer replacement. For each of these transformers, please clarify whether multiple replacements have occurred or whether only one of the "dates" actually represents a transformer replacement.

b. Referring to line 1, both replacement dates [i.e., columns (C) and (Q)] are in 2004. In the 2004 column, the transformer age restarts as "0", indicating new equipment. Please explain why lines 2, 3, 7, 22, 33, 44 and 46 do not similarly restart the age at "0" in the year of replacement.

c. Referring to line 47, the CIP CT1 transformer is first listed in forecast 2009 with an age of "2" but the transformer is listed as "purchased" in 2007. Please provide the following:

   1. Was this transformer placed in service in 2007 or will it be first placed in service in 2009? Please explain.

   2. Should a "0" and a "1" be inserted into the 2007 and 2008 columns or should they remain "blank" with a "0" replacing the "2" in 2009 to reflect a 2009 in-service date? Please explain.

d. With regard to the other 46 transformers (i.e., lines 1-46), is the year of purchase identical to the year the transformer was placed in service? Please explain.

<u>HECO Response:</u>

a. The dates provided in columns (C) and (Q) are for the same transformer and do not represent multiple replacements. The date in column (C) represents the purchase date of the replacement transformer. The date in column (Q) represents the date that the replacement transformer was put into service. Additionally, the reference at the bottom of HECO-815 has been corrected to reflect HECO-WP-808 as the source document. This was the only revision to HECO-815 and is submitted as Attachment 1.

b. The reason for the age not beginning at "0" is because the transformer age begins from the date of purchase as shown in column (C). The time that passes between the purchase date and the replacement date shown in column (Q) shows the aging that has taken place, therefore the transformer is not always at age "0" when placed in service. For example, in line 1, the transformer was purchased in 2004 (1/12/2004) and placed in service in 2004 (10/04), therefore, it was at age "0" when it was installed. In line 2, the transformer was purchased in 2005 (5/9/2005) but placed in service in 2006 (8/06). Therefore, the transformer was already one year old when it was placed into service.

c. For line 47, CIP CT1 transformer:

   1. The transformer is forecasted to be placed in service in 2009. It was purchased in 2007. When it is placed in service in 2009, the transformer will be 2 years old.
   2. The 2007 and 2008 columns should be blank since the transformer is not in service during these years.

d. For the transformers in line 1 - 46, the year of purchase may or may not be the year that the transformer was placed in service. There may be some lag time between the purchase and the installation of the replacement transformer because of the following reasons:

   1. The lead time for the purchase of the transformers takes into account the vendor's manufacturing and delivery schedules. Increased demand for transformers can cause longer lead times, particularly for the large transformers. Sometimes a vendor can manufacture and deliver a transformer sooner than HECO anticipated and the delivery of a new transformer could be several months in advance of when the work to replace the old transformer is scheduled to be done.

2. It is not always possible to place a new transformer in service as soon as it is delivered to HECO because of the competing demands on the resources that will be installing the transformer.

3. The replacement of a large transformer which may take several weeks to accomplish is scheduled for a time when the system is able to handle the risk condition, for example during periods when loads are lower. In emergency situations, however, the transformer is installed as soon as possible to restore system reliability.

Hawaiian Electric Company, Inc.
2009 Test Year

AGING OF 138kV TRANSMISSION TRANSFORMERS

	(A) Year	(B) Number in Service	(C) Total Age (Years)	(D) Avg Age (Years)
1	2002 (recorded)	46	1469	31.9
2	2003 (recorded)	46	1485	32.3
3	2004 (recorded)	46	1474	32.0
4	2005 (recorded)	46	**1520**	**33.0**
5	2006 (**recorded**)	46	1511	32.8
6	2007 (**recorded**)	46	1557	33.8
7	**2008 (forecast)**	**46**	**1481**	**32.2**
8	**2009 (forecast)**	**47**	**1529**	**32.5**

138 kV Transformer Age (**2009** Forecasted)

(A) Years	(B) Number of Transformers	(C) % of Total
30+ Years	31	**66%**
25+ Years	1	**2%**
20+ Years	**2**	**4%**
15+ Years	**3**	**6%**
10+ Years	**2**	**4%**
5+ Years	**3**	**6%**
0+ Years	**5**	**11%**

Source:
HECO-WP-808

CA-IR-92

Ref: HECO T-8, page 5, HECO-816 & HECO-WP-809 (T&D Aging Infrastructure).

HECO-816 (distribution substation transformers) is supported by HECO-WP-809, which breaks down the 273 transformers by age band for the 2009 forecast year. Please provide the following:

a. Please confirm that only 5 of the 109 pre-1970 vintage (i.e., purchase dates ranging from 1935 through 1969) distribution substation transformers have been subsequently replaced. If this cannot be confirmed, please explain.

b. Please confirm that, of the remaining 164 post-1969 transformers, 21 have been replaced and that 13 of those replacements were for transformers installed since 1985. If this cannot be confirmed, please explain.

<u>HECO Response:</u>

a. With respect to CA-IR-92 part a., above, there is a total of 111 (not 109 as stated in part a.) pre-1970 vintage distribution substation transformers listed in HECO-WP-809. To further clarify, 7 of the 111 pre-1970 vintage distribution substation transformers have been subsequently replaced. Specifically, these 7 transformers are:

1. line 29 Kunia
2. line 35 Quarry
3. line 42 Camp Catlin
4. line 44 Waimanalo Beach 2
5. line 83 Waimano 1
6. line 239 Kalaheo 1
7. line 244 Hawaii Metal Recycling

While reviewing Exhibit HECO-816, an inadvertent error was discovered. HECO-816 utilizes the data from HECO-WP-809. The information in HECO-WP-809 is correct, but, as a result of input errors during the creation of HECO-816, some of the figures in HECO-816 are not correct. HECO-816 has been revised to reflect the correct total and average

transformer ages from HECO-WP-809 for the years 2002 through 2005 and the corrections have been noted for easy reference. The revised version of HECO-816 is submitted as Attachment 1 to this response. Additionally, the reference at the bottom of Attachment 1 has been corrected to reflect HECO-WP-809 as the source document.

b. With respect to CA-IR-92 part b., above, there is a total of 162, (not 164), post-1969 distribution substation transformers listed in HECO-WP-809. To further clarify, 19 of the 162 post-1969 transformers have been replaced. Specifically, these 19 transformers are:

1. line 116 East-West Center 1
2. line 132 Puohala
3. line 134 School Street 1
4. line 136 Uwapo 1
5. line 177 Kahala 2
6. line 187 Lagoon
7. line 212 UH Quarry 1
8. line 223 Hickam 2
9. line 236 Waimalu 1
10. line 241 East-West Center 3
11. line 242 Lakeside 2
12. line 246 Ena 1
13. line 247 Kaonohi 2
14. line 248 Ena 2
15. line 251 Helemano 1
16. line 252 Fort Street 1

17. line 253 Kewalo 2

18. line 254 Pohakupu 2

19. line 255 Waiawa 2

Of these 19 transformers, 14 replacements were for transformers installed since 1985.

Specifically, the 14 transformers are:

1. line 177 Kahala 2
2. line 187 Lagoon
3. line 212 UH Quarry 1
4. line 223 Hickam 2
5. line 241 East-West Center 3
6. line 242 Lakeside 2
7. line 246 Ena 1
8. line 247 Kaonohi 2
9. line 248 Ena 2
10. line 251 Helemano 1
11. line 252 Fort Street 1
12. line 253 Kewalo 2
13. line 254 Pohakupu 2
14. line 255 Waiawa 2

Hawaiian Electric Company, Inc.
2009 Test Year

AGING OF DISTRIBUTION SUBSTATION TRANSFORMERS

	(A) Year	(B) Number in Service	(C) Total Age (Years)	(D) Avg Age (Years)
1	2002 (recorded)	254	7314*	28.8
2	2003 (recorded)	257	7447*	29.0
3	2004 (recorded)	258	7573	29.2*
4	2005 (recorded)	265	7753*	29.3*
5	2006 (recorded)	265	7989	30.1
6	2007 (recorded)	268	8180	30.5
7	2008 (forecast)	271	8324	30.7
8	2009 (forecast)	271	8595	31.7

Distribution Substation Transformer Age (2009 Forecasted)

	(A) Years	(B) Number of Transformers	(C) % of Total
7	30+ Years	156	58%
8	25+ Years	12	4%
9	20+ Years	8	3%
10	15+ Years	32	12%
11	10+ Years	12	4%
12	5+ Years	23	8%
13	0+ Years	28	10%

*Revised 9/8/08
Source:
HECO-WP-809

CA-IR-93

Ref: HECO T-8, page 8, lines 16-23 (T&D Deferred O&M).

In a general discussion of historical needs to balance system reliability with financial constraints, HECO T-8 states: "There are times when HECO has to deliberately constrain spending, to the extent that it can do so without compromising reliability. However, such constraints in the level of spending can not continue for an indefinite period of time without eventually affecting reliability." Please provide the following:

a. Since 2002, please identify each instance of internal constraints being imposed on HECO's T&D maintenance due to financial limitations.

b. Referring to each instance identified in response to part (a) of this information request, please provide the following:

   1. The nature of the financial constraint or limitation, including the key factors contributing to that financial position.

   2. The reduction or constraint in T&D O&M spending that directly resulted from the factors identified in response to subpart (b1) of this information request. If available, please provide the amount of spending reduction by NARUC account, activity and expense element.

c. Referring to the response to part (b) of this information request, are the identified financial constraints sufficiently past such that 2008 actual and 2009 forecast T&D spending is no longer constrained? Please explain.

d. Did the identified financial constraints result in the deferral of necessary T&D O&M work such that the Company is now attempting to "catch-up" on the deferred work in 2008 or in the 2009 test year forecast? If so, please identify specific activities, projects and/or programs that are now in catch-up mode and provide the related costs in both periods.

<u>HECO Response:</u>

a. Spending constraints have been discussed in the current proceeding as well as in previous HECO rate case dockets. In the current proceeding, Ms. Lorie Nagata, HECO T-17, explained that management was concerned that cost increases were outpacing sales growth. HECO T-17, page 20. HECO assigned "target" reductions for the 2008 budget to the various process areas. Each process area was given discretion as to how to achieve the reduction, as long as safety, reliability and service were not put at risk. HECO T-1, page 90.

Specifically, a target reduction of about $8 million was made to reflect an assumed reduction in spending in the short run. The target reduction was allocated to the process areas at the Vice President level, and some process areas, such as Energy Delivery, further allocated the target adjustment to their departments. These reductions are reflected in the functional accounts that are expected to be impacted. HECO T-17, pages 20-21. The portion of the reduction allocated to the Energy Delivery process area was $1,942,000 which is comprised of direct costs and the corresponding overheads. This amount was allocated to the departments within the Energy Delivery process area as follows:

Department	Target Reduction Amount
Support Services	$ 210,000
Engineering	$ 76,000
C&M	$ 380,000
SOD	$1,274,000
Total	$1,940,000*

*Difference due to allocation to individual departments.

This allocation within the Energy Delivery process area is not tracked at the Company level but was done to provide guidance to each department on its level of spending.

The amount of the 2008 target reduction has a smaller impact on the T&D block of accounts than on the Energy Delivery process area functional accounts (which include both direct costs and associated on-costs). As shown in Attachment 1 to this response, when applied to the T&D block of accounts, i.e., account blocks for Transmission Operation, Transmission Maintenance, Distribution Operation and Distribution Maintenance expenses, the target reductions total $1,582,775.51. As explained by Ms. Patsy Nanbu (HECO T-11)

on pages 27 and 29 of her testimony, the Company's core business software system applies Administrative Expense on-costs to the designated clearing base regardless of the NARUC account number being charged. In order to comply with the NARUC USOA, the Administrative Expense on-costs applied to the various O&M expense accounts are reversed and reclassified to the appropriate Administrative Expense accounts.

HECO's responses to CA-IR-47 and CA-IR-26, Attachment 1 (Confidential - submitted under protective order) in the current docket, discuss the allocation of the target adjustment by process area. Spending constraints and budget reductions were discussed in HECO's 2007 test year rate case, Docket No. 2006-0386. Management was concerned that revenues would not be able to support the level of spending in the 2006 budget, and a target reduction was made to reflect an assumed reduction in spending. Response to CA-IR-132, Docket No. 2006-0386. HECO's response to CA-IR-186 in Docket No. 2006-0386 provides information regarding budget reductions and/or cost savings to be implemented as a result of financial considerations during 2005 and 2006, and also refers to HECO's response to CA-IR-14 in HECO's 2005 test year rate case, Docket No. 04-0113, regarding a budget reduction in 2005, and HECO's response to CA-IR-119 in Docket No. 2006-0386 regarding a budget reduction in 2006.

In HECO's response to CA-IR-269 in its 2005 test year rate case, Docket No. 04-0113, spending reductions following September 11, 2001, were discussed. Specific efficiency and cost reduction "programs" were provided in response to CA-IR-12 in that docket.

b. 1. Refer to response to part a.

2. Refer to response to part a.

c. Budgets and the need for spending constraints are reviewed on a year-by-year basis. Budget reductions are not accumulated and carried forward from one year to the next. There have not been any target adjustments allocated to 2009.

d. Because of competing operational and maintenance demands, in any given year, certain work may be deferred to the next year or beyond. For example, an increase in corrective work or more capital projects may draw personnel resources away from completing the planned maintenance work. When these situations occur, decisions are made by the people closest to the equipment and with knowledge of the system to adjust the priority of the maintenance work to be done in the year. Referring to the response in part a, above, decisions regarding system maintenance are made so that potential safety, reliability and service risks are minimized. Through periodic inspections, infrared scans, or diagnostic testing, HECO may determine that maintenance is required for a piece of equipment sooner than anticipated to ensure its reliable operation in which case the work would be scheduled and performed. These needs arise, and appropriate actions are taken, whether or not budget reductions are in effect. The shifting of maintenance priorities arises from a number of factors which may or may not include reduced spending. In other words, spending reductions in the past have not resulted in "catch-up" work for 2008 or 2009.

Hawaiian Electric Company, Inc.
2009 Test Year

Transmission & Distribution
2008 Target Adjustments

acct blk	NARUC	VP desc	dept	ra	act	ind	loc	prj	ee	2008fcst
Transmission Operation	561	_								30,882.95
Transmission Operation	562	_								17,526.12
Transmission Operation	566	_								13,519.44
Transmission Operation	566	VP-Energy Delivery	PB9	PBA	307	NE	OAH	NPBZZZZZ	501	(6,000.00)
Transmission Operation	566	VP-Energy Delivery	PB9	PBP	307	NE	OAH	NPBZZZZZ	501	(1,000.00)
Transmission Operation	566	VP-Energy Delivery	PB9	PBT	307	NE	OAH	NPBZZZZZ	501	(7,000.00)
Transmission Operation	566	VP-Energy Delivery	PB9	PBY	300	NE	OAH	NPBZZZZZ	501	(16,500.00)
Transmission Operation	566	Finance & Admin	PE0	PEZ	307	NE	OAH	NPBZZZZZ	451	(4,500.00)
Transmission Operation	566	Finance & Admin	PE0	PEZ	326	NE	OAH	NPRZZZZZ	451	(7,700.00)
Transmission Operation	566	VP-Corp Excellence	PFBD	PFC	723	NE	PTO	NPFZZZZZ	900	3,390.00
Transmission Operation	562	VP-Energy Delivery	PR0	PRC	333	NE	OAH	NPRZZZZZ	150	(14,336.00)
Transmission Operation	562	VP-Energy Delivery	PR0	PRC	333	NE	OAH	NPRZZZZZ	423	(1,187.00)
Transmission Operation	562	VP-Energy Delivery	PR0	PRC	333	NE	OAH	NPRZZZZZ	422	(4,372.00)
Transmission Operation	562	VP-Energy Delivery	PR0	PRC	333	NE	OAH	NPRZZZZZ	421	(1,744.00)
Transmission Operation	562	VP-Energy Delivery	PR0	PRC	333	NE	OAH	NPRZZZZZ	406	(1,353.00)
Transmission Operation	562	VP-Energy Delivery	PR0	PRC	333	NE	OAH	NPRZZZZZ	404	(13,528.00)
Transmission Operation	561	VP-Energy Delivery	PR0	PRD	376	NE	OAH	NPRZZZZZ	150	(13,449.00)
Transmission Operation	561	VP-Energy Delivery	PR0	PRD	376	NE	OAH	NPRZZZZZ	423	(1,114.00)
Transmission Operation	561	VP-Energy Delivery	PR0	PRD	376	NE	OAH	NPRZZZZZ	422	(3,979.00)
Transmission Operation	561	VP-Energy Delivery	PR0	PRD	376	NE	OAH	NPRZZZZZ	421	(1,588.00)
Transmission Operation	561	VP-Energy Delivery	PR0	PRD	376	NE	OAH	NPRZZZZZ	406	(1,231.00)
Transmission Operation	561	VP-Energy Delivery	PR0	PRD	376	NE	OAH	NPRZZZZZ	404	(12,312.00)
Transmission Operation	566	VP-Energy Delivery	PR0	PRE	326	NE	OAH	NPRZZZZZ	150	(11,699.00)
Transmission Operation	566	VP-Energy Delivery	PR0	PRE	326	NE	OAH	NPRZZZZZ	423	(969.00)
Transmission Operation	566	VP-Energy Delivery	PR0	PRE	326	NE	OAH	NPRZZZZZ	422	(5,305.00)
Transmission Operation	566	VP-Energy Delivery	PR0	PRE	326	NE	OAH	NPRZZZZZ	421	(2,117.00)
Transmission Operation	566	VP-Energy Delivery	PR0	PRE	326	NE	OAH	NPRZZZZZ	406	(1,642.00)
Transmission Operation	566	VP-Energy Delivery	PR0	PRE	326	NE	OAH	NPRZZZZZ	404	(16,416.00)
Transmission Operation	561	VP-Energy Delivery	PR0	PRE	376	NE	OAH	NPRZZZZZ	150	(14,910.00)
Transmission Operation	561	VP-Energy Delivery	PR0	PRE	376	NE	OAH	NPRZZZZZ	423	(1,235.00)
Transmission Operation	561	VP-Energy Delivery	PR0	PRE	376	NE	OAH	NPRZZZZZ	422	(6,140.00)
Transmission Operation	561	VP-Energy Delivery	PR0	PRE	376	NE	OAH	NPRZZZZZ	421	(2,450.00)
Transmission Operation	561	VP-Energy Delivery	PR0	PRE	376	NE	OAH	NPRZZZZZ	406	(1,900.00)
Transmission Operation	561	VP-Energy Delivery	PR0	PRE	376	NE	OAH	NPRZZZZZ	404	(19,000.00)
Transmission Operation	562	VP-Energy Delivery	PR0	PRI	333	NE	OAH	NPRZZZZZ	150	(5,527.00)
Transmission Operation	562	VP-Energy Delivery	PR0	PRI	333	NE	OAH	NPRZZZZZ	423	(458.00)
Transmission Operation	562	VP-Energy Delivery	PR0	PRI	333	NE	OAH	NPRZZZZZ	422	(1,719.00)
Transmission Operation	562	VP-Energy Delivery	PR0	PRI	333	NE	OAH	NPRZZZZZ	421	(686.00)
Transmission Operation	562	VP-Energy Delivery	PR0	PRI	333	NE	OAH	NPRZZZZZ	406	(532.00)
Transmission Operation	562	VP-Energy Delivery	PR0	PRI	333	NE	OAH	NPRZZZZZ	404	(5,320.00)
Transmission Operation	561	VP-Energy Delivery	PR0	PRI	376	NE	OAH	NPRZZZZZ	150	(12,203.00)
Transmission Operation	561	VP-Energy Delivery	PR0	PRI	376	NE	OAH	NPRZZZZZ	423	(1,010.00)
Transmission Operation	561	VP-Energy Delivery	PR0	PRI	376	NE	OAH	NPRZZZZZ	422	(3,819.00)
Transmission Operation	561	VP-Energy Delivery	PR0	PRI	376	NE	OAH	NPRZZZZZ	421	(1,524.00)
Transmission Operation	561	VP-Energy Delivery	PR0	PRI	376	NE	OAH	NPRZZZZZ	406	(1,182.00)
Transmission Operation	561	VP-Energy Delivery	PR0	PRI	376	NE	OAH	NPRZZZZZ	404	(11,818.00)
Transmission Operation	562	VP-Energy Delivery	PR0	PRR	333	NE	OAH	NPRZZZZZ	150	(1,686.00)
Transmission Operation	562	VP-Energy Delivery	PR0	PRR	333	NE	OAH	NPRZZZZZ	423	(140.00)
Transmission Operation	562	VP-Energy Delivery	PR0	PRR	333	NE	OAH	NPRZZZZZ	422	(491.00)

Transmission Operation	562	VP-Energy Delivery	PR0	PRR	333	NE	OAH	NPRZZZZZ	421	(196.00)
Transmission Operation	562	VP-Energy Delivery	PR0	PRR	333	NE	OAH	NPRZZZZZ	406	(152.00)
Transmission Operation	562	VP-Energy Delivery	PR0	PRR	333	NE	OAH	NPRZZZZZ	404	(1,520.00)
Transmission Operation	562	VP-Energy Delivery	PR0	PRS	330	NE	OAH	NPRZZZZZ	150	(3,843.00)
Transmission Operation	562	VP-Energy Delivery	PR0	PRS	330	NE	OAH	NPRZZZZZ	423	(318.00)
Transmission Operation	562	VP-Energy Delivery	PR0	PRS	330	NE	OAH	NPRZZZZZ	422	(1,228.00)
Transmission Operation	562	VP-Energy Delivery	PR0	PRS	330	NE	OAH	NPRZZZZZ	421	(490.00)
Transmission Operation	562	VP-Energy Delivery	PR0	PRS	330	NE	OAH	NPRZZZZZ	406	(380.00)
Transmission Operation	562	VP-Energy Delivery	PR0	PRS	330	NE	OAH	NPRZZZZZ	404	(3,800.00)
										(191,399.49)
Transmission Maintenance	570	_								122,220.28
Transmission Maintenance	573	_								7,636.26
Transmission Maintenance	570	VP-Power Supply	PI2D	PIT	348	NE	K02	P0001107	201	(1,000.00)
Transmission Maintenance	570	VP-Power Supply	PI2D	PIT	349	NE	K02	P0001107	501	(7,000.00)
Transmission Maintenance	570	VP-Power Supply	PI2D	PIT	350	NE	K02	P0001107	201	(1,000.00)
Transmission Maintenance	570	VP-Power Supply	PI2D	PIT	350	NE	K02	P0001107	501	(1,000.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRC	348	NE	OAH	NPRZZZZZ	150	(73,820.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRC	348	NE	OAH	NPRZZZZZ	423	(6,112.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRC	348	NE	OAH	NPRZZZZZ	422	(24,560.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRC	348	NE	OAH	NPRZZZZZ	421	(9,800.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRC	348	NE	OAH	NPRZZZZZ	406	(7,600.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRC	348	NE	OAH	NPRZZZZZ	404	(76,000.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRC	350	NE	OAH	NPRZZZZZ	150	(32,776.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRC	350	NE	OAH	NPRZZZZZ	423	(2,714.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRC	350	NE	OAH	NPRZZZZZ	422	(10,905.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRC	350	NE	OAH	NPRZZZZZ	421	(4,351.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRC	350	NE	OAH	NPRZZZZZ	406	(3,374.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRC	350	NE	OAH	NPRZZZZZ	404	(33,744.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRI	348	NE	OAH	NPRZZZZZ	150	(6,869.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRI	348	NE	OAH	NPRZZZZZ	423	(569.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRI	348	NE	OAH	NPRZZZZZ	422	(2,210.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRI	348	NE	OAH	NPRZZZZZ	421	(882.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRI	348	NE	OAH	NPRZZZZZ	406	(684.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRI	348	NE	OAH	NPRZZZZZ	404	(6,840.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRI	350	NE	OAH	NPRZZZZZ	150	(14,695.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRI	350	NE	OAH	NPRZZZZZ	423	(1,217.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRI	350	NE	OAH	NPRZZZZZ	422	(4,694.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRI	350	NE	OAH	NPRZZZZZ	421	(1,873.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRI	350	NE	OAH	NPRZZZZZ	406	(1,453.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRI	350	NE	OAH	NPRZZZZZ	404	(14,526.00)
Transmission Maintenance	573	VP-Energy Delivery	PR0	PRI	354	NE	OAH	NPRZZZZZ	150	(10,812.00)
Transmission Maintenance	573	VP-Energy Delivery	PR0	PRI	354	NE	OAH	NPRZZZZZ	423	(895.00)
Transmission Maintenance	573	VP-Energy Delivery	PR0	PRI	354	NE	OAH	NPRZZZZZ	422	(3,414.00)
Transmission Maintenance	573	VP-Energy Delivery	PR0	PRI	354	NE	OAH	NPRZZZZZ	421	(1,362.00)
Transmission Maintenance	573	VP-Energy Delivery	PR0	PRI	354	NE	OAH	NPRZZZZZ	406	(1,056.00)
Transmission Maintenance	573	VP-Energy Delivery	PR0	PRI	354	NE	OAH	NPRZZZZZ	404	(10,564.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRR	348	NE	OAH	NPRZZZZZ	150	(3,820.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRR	348	NE	OAH	NPRZZZZZ	423	(316.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRR	348	NE	OAH	NPRZZZZZ	422	(1,228.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRR	348	NE	OAH	NPRZZZZZ	421	(490.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRR	348	NE	OAH	NPRZZZZZ	406	(380.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRR	348	NE	OAH	NPRZZZZZ	404	(3,800.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRS	348	NE	OAH	NPRZZZZZ	150	(7,669.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRS	348	NE	OAH	NPRZZZZZ	423	(635.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRS	348	NE	OAH	NPRZZZZZ	422	(2,554.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRS	348	NE	OAH	NPRZZZZZ	421	(1,019.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRS	348	NE	OAH	NPRZZZZZ	406	(790.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRS	348	NE	OAH	NPRZZZZZ	404	(7,904.00)
Transmission Maintenance	570	VP-Energy Delivery	PR0	PRS	350	NE	OAH	NPRZZZZZ	201	(65,000.00)

Transmission Maintenance	570	VP-Energy Delivery	PV9	PVL	350	NE	OAH	NPVZZZZZ	150	(25,570.00)
Transmission Maintenance	570	VP-Energy Delivery	PV9	PVL	350	NE	OAH	NPVZZZZZ	423	(2,117.00)
Transmission Maintenance	570	VP-Energy Delivery	PV9	PVL	350	NE	OAH	NPVZZZZZ	422	(8,813.00)
Transmission Maintenance	570	VP-Energy Delivery	PV9	PVL	350	NE	OAH	NPVZZZZZ	421	(3,517.00)
Transmission Maintenance	570	VP-Energy Delivery	PV9	PVL	350	NE	OAH	NPVZZZZZ	406	(2,727.00)
Transmission Maintenance	570	VP-Energy Delivery	PV9	PVL	350	NE	OAH	NPVZZZZZ	404	(27,271.00)
										(416,134.46)
Distribution Operation	581	_								19,659.08
Distribution Operation	582	_								19,051.98
Distribution Operation	587	_								43,600.00
Distribution Operation	588	_								88,253.60
Distribution Operation	588	VP-Energy Delivery	PB9	PBS	400	NE	OAH	P0000537	501	(1,500.00)
Distribution Operation	588	VP-Energy Delivery	PB9	PBT	408	NE	OAH	NPBZZZZZ	501	(7,000.00)
Distribution Operation	588	VP-Energy Delivery	PB9	PBY	400	NE	OAH	NPBZZZZZ	501	(13,000.00)
Distribution Operation	588	VP-Energy Delivery	PB9	PBZ	402	NE	OAH	NPBZZZZZ	501	(1,000.00)
Distribution Operation	588	VP-Energy Delivery	PD9	PDC	600	NE	OAH	NPDZZZZZ	150	(7,110.00)
Distribution Operation	588	VP-Energy Delivery	PD9	PDC	600	NE	OAH	NPDZZZZZ	423	(589.00)
Distribution Operation	588	VP-Energy Delivery	PD9	PDC	600	NE	OAH	NPDZZZZZ	422	(3,684.00)
Distribution Operation	588	VP-Energy Delivery	PD9	PDC	600	NE	OAH	NPDZZZZZ	421	(1,470.00)
Distribution Operation	588	VP-Energy Delivery	PD9	PDC	600	NE	OAH	NPDZZZZZ	406	(1,140.00)
Distribution Operation	588	VP-Energy Delivery	PD9	PDC	600	NE	OAH	NPDZZZZZ	404	(11,400.00)
Distribution Operation	588	VP-Energy Delivery	PD9	PDF	600	NE	OAH	P0000740	150	(84,760.00)
Distribution Operation	588	VP-Energy Delivery	PD9	PDF	600	NE	OAH	P0000740	423	(7,018.00)
Distribution Operation	588	VP-Energy Delivery	PD9	PDF	600	NE	OAH	P0000740	422	(25,542.00)
Distribution Operation	588	VP-Energy Delivery	PD9	PDF	600	NE	OAH	P0000740	421	(10,192.00)
Distribution Operation	588	VP-Energy Delivery	PD9	PDF	600	NE	OAH	P0000740	406	(7,904.00)
Distribution Operation	588	VP-Energy Delivery	PD9	PDF	600	NE	OAH	P0000740	404	(79,040.00)
Distribution Operation	588	Finance & Admin	PE0	PEZ	455	NE	OAH	NPDZZZZZ	451	(16,400.00)
Distribution Operation	588	Finance & Admin	PE0	PEZ	455	NE	OAH	NPDZZZZZ	451	(200.00)
Distribution Operation	588	Finance & Admin	PE0	PEZ	456	NE	OAH	NPRZZZZZ	451	(7,300.00)
Distribution Operation	588	VP-Corp Excellence	PFBD	PFC	723	NE	PDO	NPFZZZZZ	900	14,090.00
Distribution Operation	581	VP-Energy Delivery	PR0	PRD	377	NE	OAH	NPRZZZZZ	150	(13,449.00)
Distribution Operation	581	VP-Energy Delivery	PR0	PRD	377	NE	OAH	NPRZZZZZ	423	(1,114.00)
Distribution Operation	581	VP-Energy Delivery	PR0	PRD	377	NE	OAH	NPRZZZZZ	422	(3,979.00)
Distribution Operation	581	VP-Energy Delivery	PR0	PRD	377	NE	OAH	NPRZZZZZ	421	(1,588.00)
Distribution Operation	581	VP-Energy Delivery	PR0	PRD	377	NE	OAH	NPRZZZZZ	406	(1,231.00)
Distribution Operation	581	VP-Energy Delivery	PR0	PRD	377	NE	OAH	NPRZZZZZ	404	(12,312.00)
Distribution Operation	581	VP-Energy Delivery	PR0	PRE	377	NE	OAH	NPRZZZZZ	150	(11,928.00)
Distribution Operation	581	VP-Energy Delivery	PR0	PRE	377	NE	OAH	NPRZZZZZ	423	(988.00)
Distribution Operation	581	VP-Energy Delivery	PR0	PRE	377	NE	OAH	NPRZZZZZ	422	(4,912.00)
Distribution Operation	581	VP-Energy Delivery	PR0	PRE	377	NE	OAH	NPRZZZZZ	421	(1,960.00)
Distribution Operation	581	VP-Energy Delivery	PR0	PRE	377	NE	OAH	NPRZZZZZ	406	(1,520.00)
Distribution Operation	581	VP-Energy Delivery	PR0	PRE	377	NE	OAH	NPRZZZZZ	404	(15,200.00)
Distribution Operation	588	VP-Energy Delivery	PR0	PRE	456	NE	OAH	NPRZZZZZ	150	(10,797.00)
Distribution Operation	588	VP-Energy Delivery	PR0	PRE	456	NE	OAH	NPRZZZZZ	423	(894.00)
Distribution Operation	588	VP-Energy Delivery	PR0	PRE	456	NE	OAH	NPRZZZZZ	422	(3,684.00)
Distribution Operation	588	VP-Energy Delivery	PR0	PRE	456	NE	OAH	NPRZZZZZ	421	(1,470.00)
Distribution Operation	588	VP-Energy Delivery	PR0	PRE	456	NE	OAH	NPRZZZZZ	406	(1,140.00)
Distribution Operation	588	VP-Energy Delivery	PR0	PRE	456	NE	OAH	NPRZZZZZ	404	(11,400.00)
Distribution Operation	582	VP-Energy Delivery	PR0	PRI	463	NE	OAH	NPRZZZZZ	150	(25,160.00)
Distribution Operation	582	VP-Energy Delivery	PR0	PRI	463	NE	OAH	NPRZZZZZ	423	(2,083.00)
Distribution Operation	582	VP-Energy Delivery	PR0	PRI	463	NE	OAH	NPRZZZZZ	422	(8,031.00)
Distribution Operation	582	VP-Energy Delivery	PR0	PRI	463	NE	OAH	NPRZZZZZ	421	(3,205.00)
Distribution Operation	582	VP-Energy Delivery	PR0	PRI	463	NE	OAH	NPRZZZZZ	406	(2,485.00)
Distribution Operation	582	VP-Energy Delivery	PR0	PRI	463	NE	OAH	NPRZZZZZ	404	(24,852.00)
Distribution Operation	582	VP-Energy Delivery	PR0	PRR	463	NE	OAH	NPRZZZZZ	150	(1,686.00)
Distribution Operation	582	VP-Energy Delivery	PR0	PRR	463	NE	OAH	NPRZZZZZ	423	(140.00)
Distribution Operation	582	VP-Energy Delivery	PR0	PRR	463	NE	OAH	NPRZZZZZ	422	(491.00)
Distribution Operation	582	VP-Energy Delivery	PR0	PRR	463	NE	OAH	NPRZZZZZ	421	(196.00)

Distribution Operation	582	VP-Energy Delivery	PR0	PRR	463	NE	OAH	NPRZZZZZ	406	(152.00)
Distribution Operation	582	VP-Energy Delivery	PR0	PRR	463	NE	OAH	NPRZZZZZ	404	(1,520.00)
Distribution Operation	587	En Sol	PW9	PWA	600	NE	OAH	P0000571	501	(32,000.00)
Distribution Operation	587	En Sol	PW9	PWP	600	NE	OAH	P0000571	150	(20,200.00)
Distribution Operation	587	En Sol	PW9	PWP	600	NE	OAH	P0000571	406	(1,400.00)
Distribution Operation	587	En Sol	PW9	PWP	600	NE	OAH	P0000571	407	(24,600.00)
Distribution Operation	587	En Sol	PW9	PWP	600	NE	OAH	P0000571	421	(2,800.00)
Distribution Operation	587	En Sol	PW9	PWP	600	NE	OAH	P0000571	422	(7,100.00)
Distribution Operation	587	En Sol	PW9	PWP	600	NE	OAH	P0000571	423	(1,700.00)
Distribution Operation	588	En Sol	PW9	PWP	891	NE	PDO	P0001341	150	(4,300.00)
Distribution Operation	588	En Sol	PW9	PWP	891	NE	PDO	P0001341	406	(400.00)
Distribution Operation	588	En Sol	PW9	PWP	891	NE	PDO	P0001341	407	(8,600.00)
Distribution Operation	588	En Sol	PW9	PWP	891	NE	PDO	P0001341	421	(500.00)
Distribution Operation	588	En Sol	PW9	PWP	891	NE	PDO	P0001341	422	(1,400.00)
Distribution Operation	588	En Sol	PW9	PWP	891	NE	PDO	P0001341	423	(300.00)
Distribution Operation	587	En Sol	PW9	PWX	600	NE	OAH	P0000571	150	(7,900.00)
Distribution Operation	587	En Sol	PW9	PWX	600	NE	OAH	P0000571	421	(1,200.00)
Distribution Operation	587	En Sol	PW9	PWX	600	NE	OAH	P0000571	422	(2,900.00)
Distribution Operation	587	En Sol	PW9	PWX	600	NE	OAH	P0000571	423	(700.00)
Distribution Operation	587	En Sol	PW9	PWX	600	NE	OAH	NPWZZZZZ	150	(11,500.00)
Distribution Operation	587	En Sol	PW9	PWX	600	NE	OAH	NPWZZZZZ	421	(1,800.00)
Distribution Operation	587	En Sol	PW9	PWX	600	NE	OAH	NPWZZZZZ	422	(4,200.00)
Distribution Operation	587	En Sol	PW9	PWX	600	NE	OAH	NPWZZZZZ	423	(1,000.00)
										(407,661.34)
Distribution Maintenance	591	_								8,313.00
Distribution Maintenance	592	_								63,572.63
Distribution Maintenance	593	_								19,155.00
Distribution Maintenance	594	_								18,695.75
Distribution Maintenance	595	_								25,256.46
Distribution Maintenance	598	_								7,738.94
Distribution Maintenance	592	VP-Energy Delivery	PB9	PBY	405	NE	OAH	NPBZZZZZ	501	(23,000.00)
Distribution Maintenance	594	VP-Energy Delivery	PD9	PDS	478	NE	OAH	P0000122	150	(28,107.00)
Distribution Maintenance	594	VP-Energy Delivery	PD9	PDS	478	NE	OAH	P0000122	423	(2,327.00)
Distribution Maintenance	594	VP-Energy Delivery	PD9	PDS	478	NE	OAH	P0000122	422	(8,289.00)
Distribution Maintenance	594	VP-Energy Delivery	PD9	PDS	478	NE	OAH	P0000122	421	(3,308.00)
Distribution Maintenance	594	VP-Energy Delivery	PD9	PDS	478	NE	OAH	P0000122	406	(2,565.00)
Distribution Maintenance	594	VP-Energy Delivery	PD9	PDS	478	NE	OAH	P0000122	404	(25,650.00)
Distribution Maintenance	593	VP-Energy Delivery	PD9	PDS	475	NE	OAH	P0000123	150	(26,334.00)
Distribution Maintenance	593	VP-Energy Delivery	PD9	PDS	475	NE	OAH	P0000123	423	(2,180.00)
Distribution Maintenance	593	VP-Energy Delivery	PD9	PDS	475	NE	OAH	P0000123	422	(8,596.00)
Distribution Maintenance	593	VP-Energy Delivery	PD9	PDS	475	NE	OAH	P0000123	421	(3,430.00)
Distribution Maintenance	593	VP-Energy Delivery	PD9	PDS	475	NE	OAH	P0000123	406	(2,660.00)
Distribution Maintenance	593	VP-Energy Delivery	PD9	PDS	475	NE	OAH	P0000123	404	(26,600.00)
Distribution Maintenance	592	VP-Energy Delivery	PR0	PRI	485	NE	OAH	NPRZZZZZ	150	(34,344.00)
Distribution Maintenance	592	VP-Energy Delivery	PR0	PRI	485	NE	OAH	NPRZZZZZ	423	(2,844.00)
Distribution Maintenance	592	VP-Energy Delivery	PR0	PRI	485	NE	OAH	NPRZZZZZ	422	(11,052.00)
Distribution Maintenance	592	VP-Energy Delivery	PR0	PRI	485	NE	OAH	NPRZZZZZ	421	(4,410.00)
Distribution Maintenance	592	VP-Energy Delivery	PR0	PRI	485	NE	OAH	NPRZZZZZ	406	(3,420.00)
Distribution Maintenance	592	VP-Energy Delivery	PR0	PRI	485	NE	OAH	NPRZZZZZ	404	(34,200.00)
Distribution Maintenance	592	VP-Energy Delivery	PR0	PRI	487	NE	OAH	NPRZZZZZ	150	(15,264.00)
Distribution Maintenance	592	VP-Energy Delivery	PR0	PRI	487	NE	OAH	NPRZZZZZ	423	(1,264.00)
Distribution Maintenance	592	VP-Energy Delivery	PR0	PRI	487	NE	OAH	NPRZZZZZ	422	(4,912.00)
Distribution Maintenance	592	VP-Energy Delivery	PR0	PRI	487	NE	OAH	NPRZZZZZ	421	(1,960.00)
Distribution Maintenance	592	VP-Energy Delivery	PR0	PRI	487	NE	OAH	NPRZZZZZ	406	(1,520.00)
Distribution Maintenance	592	VP-Energy Delivery	PR0	PRI	487	NE	OAH	NPRZZZZZ	404	(15,200.00)
Distribution Maintenance	598	VP-Energy Delivery	PR0	PRI	491	NE	OAH	NPRZZZZZ	150	(10,869.00)
Distribution Maintenance	598	VP-Energy Delivery	PR0	PRI	491	NE	OAH	NPRZZZZZ	423	(900.00)
Distribution Maintenance	598	VP-Energy Delivery	PR0	PRI	491	NE	OAH	NPRZZZZZ	422	(3,463.00)
Distribution Maintenance	598	VP-Energy Delivery	PR0	PRI	491	NE	OAH	NPRZZZZZ	421	(1,382.00)

Distribution Maintenance	598	VP-Energy Delivery	PR0	PRI	491	NE	OAH	NPRZZZZZ	406	(1,072.00)
Distribution Maintenance	598	VP-Energy Delivery	PR0	PRI	491	NE	OAH	NPRZZZZZ	404	(10,716.00)
Distribution Maintenance	592	VP-Energy Delivery	PR0	PRR	485	NE	OAH	NPRZZZZZ	150	(3,820.00)
Distribution Maintenance	592	VP-Energy Delivery	PR0	PRR	485	NE	OAH	NPRZZZZZ	423	(316.00)
Distribution Maintenance	592	VP-Energy Delivery	PR0	PRR	485	NE	OAH	NPRZZZZZ	422	(1,228.00)
Distribution Maintenance	592	VP-Energy Delivery	PR0	PRR	485	NE	OAH	NPRZZZZZ	421	(490.00)
Distribution Maintenance	592	VP-Energy Delivery	PR0	PRR	485	NE	OAH	NPRZZZZZ	406	(380.00)
Distribution Maintenance	592	VP-Energy Delivery	PR0	PRR	485	NE	OAH	NPRZZZZZ	404	(3,800.00)
Distribution Maintenance	592	VP-Energy Delivery	PR0	PRS	485	NE	OAH	NPRZZZZZ	150	(7,669.00)
Distribution Maintenance	592	VP-Energy Delivery	PR0	PRS	485	NE	OAH	NPRZZZZZ	423	(635.00)
Distribution Maintenance	592	VP-Energy Delivery	PR0	PRS	485	NE	OAH	NPRZZZZZ	422	(2,554.00)
Distribution Maintenance	592	VP-Energy Delivery	PR0	PRS	485	NE	OAH	NPRZZZZZ	421	(1,019.00)
Distribution Maintenance	592	VP-Energy Delivery	PR0	PRS	485	NE	OAH	NPRZZZZZ	406	(790.00)
Distribution Maintenance	592	VP-Energy Delivery	PR0	PRS	485	NE	OAH	NPRZZZZZ	404	(7,904.00)
Distribution Maintenance	592	VP-Energy Delivery	PR0	PRS	487	NE	OAH	NPRZZZZZ	201	(165,000.00)
Distribution Maintenance	595	VP-Energy Delivery	PR0	PRX	484	NE	OAH	NPRZZZZZ	150	(8,648.00)
Distribution Maintenance	595	VP-Energy Delivery	PR0	PRX	484	NE	OAH	NPRZZZZZ	423	(716.00)
Distribution Maintenance	595	VP-Energy Delivery	PR0	PRX	484	NE	OAH	NPRZZZZZ	422	(2,542.00)
Distribution Maintenance	595	VP-Energy Delivery	PR0	PRX	484	NE	OAH	NPRZZZZZ	421	(1,014.00)
Distribution Maintenance	595	VP-Energy Delivery	PR0	PRX	484	NE	OAH	NPRZZZZZ	406	(787.00)
Distribution Maintenance	595	VP-Energy Delivery	PR0	PRX	484	NE	OAH	NPRZZZZZ	404	(7,866.00)
Distribution Maintenance	591	VP-Energy Delivery	PR0	PRX	490	NE	OAH	NPRZZZZZ	150	(12,534.00)
Distribution Maintenance	591	VP-Energy Delivery	PR0	PRX	490	NE	OAH	NPRZZZZZ	423	(1,038.00)
Distribution Maintenance	591	VP-Energy Delivery	PR0	PRX	490	NE	OAH	NPRZZZZZ	422	(3,684.00)
Distribution Maintenance	591	VP-Energy Delivery	PR0	PRX	490	NE	OAH	NPRZZZZZ	421	(1,470.00)
Distribution Maintenance	591	VP-Energy Delivery	PR0	PRX	490	NE	OAH	NPRZZZZZ	406	(1,140.00)
Distribution Maintenance	591	VP-Energy Delivery	PR0	PRX	490	NE	OAH	NPRZZZZZ	404	(11,400.00)
Distribution Maintenance	595	VP-Energy Delivery	PV9	PVL	484	NE	OAH	NPVZZZZZ	150	(25,570.00)
Distribution Maintenance	595	VP-Energy Delivery	PV9	PVL	484	NE	OAH	NPVZZZZZ	423	(2,117.00)
Distribution Maintenance	595	VP-Energy Delivery	PV9	PVL	484	NE	OAH	NPVZZZZZ	422	(8,813.00)
Distribution Maintenance	595	VP-Energy Delivery	PV9	PVL	484	NE	OAH	NPVZZZZZ	421	(3,517.00)
Distribution Maintenance	595	VP-Energy Delivery	PV9	PVL	484	NE	OAH	NPVZZZZZ	406	(2,727.00)
Distribution Maintenance	595	VP-Energy Delivery	PV9	PVL	484	NE	OAH	NPVZZZZZ	404	(27,271.00)
Distribution Maintenance	592	VP-Energy Delivery	PV9	PVL	487	NE	OAH	NPVZZZZZ	150	(25,570.00)
Distribution Maintenance	592	VP-Energy Delivery	PV9	PVL	487	NE	OAH	NPVZZZZZ	423	(2,117.00)
Distribution Maintenance	592	VP-Energy Delivery	PV9	PVL	487	NE	OAH	NPVZZZZZ	422	(8,813.00)
Distribution Maintenance	592	VP-Energy Delivery	PV9	PVL	487	NE	OAH	NPVZZZZZ	421	(3,517.00)
Distribution Maintenance	592	VP-Energy Delivery	PV9	PVL	487	NE	OAH	NPVZZZZZ	406	(2,727.00)
Distribution Maintenance	592	VP-Energy Delivery	PV9	PVL	487	NE	OAH	NPVZZZZZ	404	(27,271.00)
										(567,580.22)
										(1,582,775.51)

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Ref: HECO T-8, page 12, lines 3-10 (T&D Budget Process).

In describing how each department within the Energy Delivery Process Area develops its own budget and the O&M work required, the referenced testimony states: "The level of work is based on a combination of the original equipment manufacturer's recommended maintenance cycles, inspections, number of units, units of work, historical trends, and is budgeted by staff with working knowledge of the maintenance requirements for HECO's facilities and the operation of the electric system. Starting with the estimate of the work planned for the year, the available labor resources (i.e., the staffing level and the associated productive man-hours) were allocated to perform this work for the year." Please provide the following:

a. Referring to HECO-800, HECO T-8 workpapers or the response of HECO T-8 to CA-IR-1 and CA-IR-2, please provide a pinpoint reference to the quantification of the specific work planned (or total demand required) for the 2009 test year forecast for each T&D department that has been based on "manufacturer's maintenance cycles, inspections, number of units, units of work, historical trends" or other labor resource requirements.

b. Referring to part (a) of this information request, please provide a summary of the required O&M work planned, with copies of underlying support or citations to the source of the supporting data, if already supplied by HECO.

<u>HECO Response:</u>

a. HECO's responses to CA-IR-1, Attachments 3A to 3G (Engineering department), and Attachment 5A and to CA-IR-2, Attachment 5B (C&M department), Attachments 9B, 9C, 9E, 9F and 9G (System Operation department) and Attachment 11A (Support Services department) provide the estimates for the Energy Delivery departments' planned work for the 2009 test year. For more detailed references, please refer to Attachment 1 to this response. Attachment 1, pages 1 to 3, provides the following information in the table labeled "Labor Estimates":

   1. The first column identifies the department.

   2. The second column lists the methodology that was used to develop the budgeted labor hours.

3. The third column identifies the attachment that contains the workpapers that used the methodology to calculate the labor hours for the budget.
4. Finally, the fourth column cites the page reference for each workpaper in the attachment that has the calculation used to develop the budgeted labor hours.

Additionally, the second table in Attachment 1, pages 4- 6, titled "Reference for Labor," contains the following information:

1. The first column identifies the department.
2. The second column identifies the location of the amount of labor hours and corresponding labor dollars budgeted in the 2009 test year.
3. The third column identifies the O&M program (if applicable) for which the costs are budgeted.
4. The fourth column identifies the responsibility area ("RA") for which the labor hours and labor dollars are budgeted.
5. The fifth column identifies the activity to which the labor hours and dollars are budgeted.
6. Column 6, titled "Labor Estimates" cites the specific location of the labor hours that were calculated for the 2009 budget, for the respective program (if applicable), RA, and activity.
7. Column 7, identifies the page number in Workpaper 101(F) that ties the labor costs from the calculations in the workpapers in the attachments to CA-IR-1 and CA-IR-2 used by the respective department to the amount submitted for the 2009 test year estimate.

Note that the labor hours in the estimating work sheets and the labor input sheet may differ slightly due to rounding or may have been adjusted by the person developing the estimate based on his or her experience and knowledge of the equipment and the system. Note 1 to the table, "Reference For Labor" of Attachment 1, pages 4-6, identifies those instances where the original estimate was changed for resource leveling for capital projects and/or O&M work resulting in additional differences between the original estimate and the final labor hours and corresponding dollars.

In developing the response to this information request, it was noted that Attachment 9B, page 3, provided in response to CA-IR-1 was illegible. A clearer copy of this page is resubmitted as Attachment 2 to this response.

b. Please refer to the response to part a.

LABOR ESTIMATES

DEPARTMENT	METHODOLOGY	REFERENCE ATTACHMENT	LABOR INPUT SHEETS
C&M	Trends / Historical averages	C&M Corrective Programs are typically trended over the 5-yr period prior to budget preparation. Several C&M Preventive Programs are similarly trended. Refer to CA-IR-1, Attachment 5A: P1810000 – pages 8-11 P0000120 – pages 16-22 P0000121 – pages 23-30 P0000122 – pages 31-41 P0000123 – pages 42-50 P0000124 – pages 51-57 P0000359 – pages 58-63 P0000362 – pages 64-66 P0000361 – pages 67-69 P1789000 – pages 70-73 P1793000 – pages 74-78 P3400000 – pages 79-84 P3401000 – pages 85-89 P3402000 – pages 90-93	CA-IR-1, Attachment 5A pages 8, 16-17, 23-24, 31-33, 42-44, 51-52, 58, 64, 67, 70, 74, 79-80, 85, 90, 96, 98 and 101.
	Inspections	Refer to CA-IR-1, Attachment 5A: P0000362 – pages 64-66 P0000361 – pages 67-69. Also refer to CA-IR-2 Attachment 5B pages 1-2.	CA-IR-1, Attachment 5A pages 15, 64, and 67.
	Maintenance cycles	For Transmission System – see HECO T-8, page 26, lines 18-25 and page 27 lines 1-13. For Distribution System – see HECO T-8, page 60 lines 17-25 and page 61 lines 18-20. C&M programs that are based on maintenance cycles also	CA-IR-1, Attachment 5A pages 15, 67, 70, 74, 79-80, 85, 90, 99, and 100.

DEPARTMENT	METHODOLOGY	REFERENCE ATTACHMENT	LABOR INPUT SHEETS
		have a component(s) that is (are) based on trends/historical averages. Refer to CA-IR-1, Attachment 5A: P0000361 – pages 67-69 P1789000 – pages 70-73 P1793000 – pages 74-78 P3400000 – pages 79-84 P3401000 – pages 85-89 P3402000 – pages 90-93. Also refer to CA-IR-2 Attachment 5B pages 1-2.	
	Number of units / units of work	Refer to CA-IR-1, Attachment 5A: P1789000 – pages 70-73 P1793000 – pages 74-78 P3400000 – pages 79-84 P3401000 – pages 85-89. Also refer to CA-IR-2 Attachment 5B pages 1-2.	CA-IR-1, Attachment 5A pages 70, 74, 79-80, and 85.
System Operation	Trends / Historical averages	Refer to CA-IR-1, Attachments 9C page 1, 9E pages 1 to 4 for corrective work, 9G page 3.	For CA-IR-1, Attachment 9E, the labor input sheets can be found in Attachment 9E pages 5 to 7. For CA-IR-1, Attachment 9G, the labor input sheet can be found in Attachment 9G page 1.
	Inspections	Refer to CA-IR-1, Attachment 9G pages 3 to 5 predictive inspections.	The labor input sheet for CA-IR-1,

DEPARTMENT	METHODOLOGY	REFERENCE ATTACHMENT	LABOR INPUT SHEETS
			Attachment 9G can be found in Attachment 9G page 1.
	Maintenance cycles	Refer to CA-IR-1, Attachments 9F page 14, 9G pages 4 and 5.	Labor input sheets for CA-IR-1, Attachment 9F are shown in Attachment 9F pages 1 to 13. Labor input sheets for CA-IR-1, Attachment 9G are shown in Attachment 9G page 1.
	Number of units / units of work	Refer to CA-IR-1, Attachments 9B page 3, and 9E pages 1 to 4.	Labor input sheets for CA-IR-1, Attachment 9B are shown in Attachment 9B page 2, 7 and 8. Labor input sheets for CA-IR-1, Attachment 9E are shown on pages 5 to 7 of Attachment 9E.
Support Services	Trends / Historical averages	Refer to CA-IR-1, Attachment 11A.	Input sheets are provided in CA-IR-1, Attachment

DEPARTMENT	METHODOLOGY	REFERENCE ATTACHMENT	LABOR INPUT SHEETS
			11A.
Engineering	Trends / Historical averages	Refer to CA-IR-1, Attachments 3A pages 1, 3B, 3D, and 3F.	Refer to CA-IR-1, Attachment 1, page 1 for inputs.
	Estimate/Knowledge of the system	Refer to CA-IR-1, Attachments 3A pages 2, 3C, 3E, and 3G.	Refer to CA-IR-1 Attachment 1, page 1 for inputs.

REFERENCE FOR LABOR

DEPT	SOURCE	PROGRAM	RA	ACT	LABOR ESTIMATES	WP-101(F) REFERENCE
C&M	CA-IR-1, Att. 5A, p 3	P0000120	PDS	481	Att. 5A, p 16-17	p 870
	CA-IR-1, Att. 5A, p 3	P0000121	PDF PDS	484 484 505	Att. 5A, p 23 Att. 5A, p 23-24 Att. 5A, p 23-24	p 870[1] p 870[2] p 870
	CA-IR-1, Att. 5A, p 3	P0000122	PDF PDS	478 501 347 478 501	Att. 5A, p 31, 58 Att. 5A, p 31 Att. 5A, p 32 Att. 5A, p 31-32, 58 Att. 5A, p 31, 33	p 869[3] p 869 p 852 p 869 p 869
	CA-IR-1, Att. 5A, p 3	P0000123	PDF PDS	475 500 475 500	Att. 5A, p 43, 58 Att. 5A, p 43 Att. 5A, p 42-43, 58 Att. 5A, p 42-44	p 867[4] p 867 p 867 p 867
	CA-IR-1, Att. 5A, p 3	P0000124	PDF PDS	344 344 360	Att. 5A, p 52 Att. 5A, p 51-52 Att. 5A, p 51	p 851 p 852[5] p 852
	CA-IR-1, Att. 5A, p 3	P0000126	PDV	355 494	Att. 5A, p 99-100 Att. 5A, p 99-100	p 852 p 867
	CA-IR-1, Att. 5A, p 3	P0000127	PDC PDP	341 471 471	Att. 5A, p 13 Att. 5A, p 13 Att. 5A, p 15	p 851 p 867 p 867
	CA-IR-1, Att. 5A, p 3	P0000359	PDF PDS	484 344 445 473 484	Att. 5A, p 58 Att. 5A, p 58 Att. 5A, p 58 Att. 5A, p 58 Att. 5A, p 58	p 870[1] p 852[5] p 867 p 867[6] p 870[2]
	CA-IR-1, Att. 5A,	P0000361	PDS	458 459	Att. 5A, p 67 Att. 5A, p 67	p 855[7] p 856

[1] Refer to Attachment 5A, page 3, sum of activity 484 for programs P0000121 and P0000359 for PDF.
[2] Refer to Attachment 5A, page 3, sum of activity 484 for programs P0000121 and P0000359 for PDS.
[3] Refer to Attachment 5A, pages 3-4, sum of activity 478 for programs P0000122 and P0000740 for PDF.
[4] Refer to Attachment 5A, pages 3-4, sum of activity 475 for programs P0000123 and P0000740 for PDF.
[5] Refer to Attachment 5A, page 3, sum of activity 344 for programs P0000124 and P0000359 for PDS.
[6] Refer to Attachment 5A, pages 3, 4 and 7, sum of activity 473 for programs P0000359, P0000360, and P3400000 for PDS.

DEPT	SOURCE	PROGRAM	RA	ACT	LABOR ESTIMATES	WP-101(F) REFERENCE
	p 4			464 328 329	Att. 5A, p 67 Att. 5A, p 67 Att. 5A, p 67	p 856[8] p 846[9] p 847
	CA-IR-1, Att. 5A, p 4	P0000362	PDS	328 458 464	Att. 5A, p 64 Att. 5A, p 64 Att. 5A, p 64	p 846[9] p 855[7] p 856[8]
	CA-IR-1, Att. 5A, p 4-5	P0000740	PDF	331 333 445 461 462 463 475 478 600	Att. 5A, p 101 Att. 5A, p 101 Att. 5A, p 101 Att. 5A, p 101 Att. 5A, p 101 Att. 5A, p 101 Att. 5A, p 101 Att. 5A, p 101 Att. 5A, p 101	p 846 p 845 p 867 p 855[10] p 856[11] p 855 p 867[4] p 869[3] p 862[12]
	CA-IR-1, Att. 5A, p 7	P1789000	PDF PDS	479 479	Att. 5A, p 70 Att. 5A, p 70	p 870 p 870
	CA-IR-1, Att. 5A, p 7	P1793000	PDF PDS	482 482	Att. 5A, p 74 Att. 5A, p 74	p 870 p 870
	CA-IR-1, Att. 5A, p 7	P3400000	PDF PDS	473 473	Att. 5A, p 79 Att. 5A, p 79	p 867 p 867[6]
	CA-IR-1, Att. 5A, p 7	P3401000	PDF PDS	342 342	Att. 5A, p 85 Att. 5A, p 85	p 851[13] p 852[14]
	CA-IR-1, Att. 5A, p 7	P3402000	PDF PDS	342 342	Att. 5A, p 90 Att. 5A, p 90	p 851[13] p 852[14]
SOD	CA-IR-1		RC	333	Att. 9B, p 2, 6	p 846

[7] Refer to Attachment 5A, page 4, sum of activity 458 for programs P0000361 and P0000362 for PDS.
[8] Refer to Attachment 5A, page 4, sum of activity 464 for programs P0000361 and P0000362 for PDS.
[9] Refer to Attachment 5A, page 4, sum of activity 328 for programs P0000361 and P0000362 for PDS.
[10] Refer to Attachment 5A, pages 4 and 6, sum of activity 461 for program P0000740 and projects P0001520 and P0001522 for PDF.
[11] Refer to Attachment 5A, pages 3-5, sum of activity 462 for program P0000740 and projects P0000192 and P0001040 for PDF.
[12] Refer to Attachment 5A, page 4, sum of activity 600 for project P0000571 and program P0000740 for PDF.
[13] Refer to Attachment 5A, page 7, sum of activity 342 for programs P3401000 and P3402000 for PDF.
[14] Refer to Attachment 5A, pages 4 and 7, sum of activity 342 for programs P0000360, P3401000, and P3402000 for PDS.

DEPT	SOURCE	PROGRAM	RA	ACT	LABOR ESTIMATES	WP-101(F) REFERENCE
	Att. 1			376	Att. 9B, p 3, p 2	p 845
	Page 4			348	Att. 9B, p 3	Note 1
				350	Att. 9B, p 3	Note 1
				485	Att. 9B, p 3	p 865
				487	Att. 9B, p 3	p 865
	CA-IR-1		RR	327		p 846
	Att. 1			333		p 846
	page 5			340	Att. 9F, p 14, 6, 12	p 850
				348	Att. 9F, p 14, 12	Note 1
				350	Att. 9F, p 14, p 2, 6, 12	p 850
				366	Att. 9F, p 14, p 2, 6, 12	p 851
				463		p 855
				600	Att. 9F, p 14	p 854
				485	Att. 9F, p 14, p 2, 6, 12	Note 1
				487	Att. 9F, p 14, p 2, 6, 12	p 866
				492	Att. 9F, p 14, p 2, 6, 12	p 872
				509		p 866
	CA-IR-1,		RS	330	Att. 9G, p 5, 6	p 846
	Att. 1			720	Att. 9G, p 5, 6	p 848
	Page 5			789	Att. 9G, p 5, 6	p 849
				797	Att. 9G, p 5, 6	p 849
				788	Att. 9G, p 5, 6	p 848
				891	Att. 9G, p 5, 6	p 849
				348	Att. 9G, p 5, 6	p 851
				350	Att. 9G, p 5, 6	p 851
				460	Att. 9G, p 5, 6	p 855
				600	Att. 9G, p 5, 6	p 854
				788	Att. 9G, p 5, 6	p 863
				482	Att. 9G, p 5, 6	p 870
				484	Att. 9G, p 5, 6	p 870
				485	Att. 9G, p 5, 6	p 866[15]
				487	Att. 9G, p 5, 6	p 866
				489	Att. 9G, p 5, 6	p 865
				440	Att. 9G, p 5, 6	p 868

Note 1: Original estimate changed for resource leveling for capital projects and other O&M work.

[15] Refer to T-8 Attachment 1, sum of activity 485 Distribution Maintenance and 485 program P0000433.

CA-IR-94
DOCKET NO. 2008-0083
ATTACHMENT 2
PAGE 1 OF 1

CA-IR-1
DOCKET NO. 2008-0083
HECO T-8
ATTACHMENT 9B
PAGE 3 OF 8
(REVISED 10/01/2008)

2008 PLANNED MAINTENANCE

Priority Level	Equipment	Units in System	Man Hrs/Per Unit	Times/yr	348 Account Code "348" Hours	350 Account Code "350" Hours	266 Account Code "266" Hours	268 Account Code "268" Hours	917 Account Code "917" Hours	915 Account Code "915" Hours	376 Account Code "376" Hours	485 Account Code "485" Hours	487 Account Code "487" Hours	797 Account Code "797" Hours	798 Account Code "798" Hours
1	Transfer Trip (Preventive) SORC2066														
1	Transfer Trip (Corrective) SORC2069														
2	Battery & Chargers (Preventive) SORC2050	70	9.43	4	660										
2	Battery & Chargers (Corrective) SORC2093														
2	Emer Generats (Preventive) SORC2036	21	18.1	4	380	72									
2	Emer Generats (Corrective) SORC2038														
3	Morning Checks (SORC) 150	7	6	1	42	21									
3	6 GHz Microwave (Preventive) SORC2050														
3	6 GHz Microwave (Corrective) SORC2051	72	5.28	4	380	72									
3	10 GHz Microwave (Preventive) SORC2054														
3	10 GHz Microwave (Corrective) SORC2057	20	11.5	4	230	125									
3	2 GHz Microwave (Preventive) SORC2054														
3	2 Ghz Microwave (Corrective) SORC2057	4	10	4	40	120									
3	6 GHz ICS PM (Preventive) SORC6100														
3	6 GHz ICS PM (Corrective) SORC6103	4	10	4		21									
3	6 GHz ICS Ward (Preventive) SORC6200														
4	6 GHz ICS Ward (Corrective) SORC6203	2	10	4											
4	Multiplexer (Preventive) Various														
4	Multiplexer (Corrective) Various	583	1.44	12	837				40						
5	Fiber Optic (Preventive) SORC3106														
5	Fiber Optic (Corrective) SORC3111	86	7.09	2	1218	215			20	63					
5	Mobrad (Prev & Corr) SORC1060														
5	Radio Console (Preventive) SORC1024	65	7	1	455					21					
5	Radio Console (Corrective) SORC1027	18	5.33	1	192	212									
5	150 MHz Base (Preventive) SORC1004														
5	150 MHz Base (Corrective) SORC1007	18	16	4	288										
5	450 MHz Base (Preventive) SORC1008														
5	450 MHz Base (Corrective) SORC1011	10			270	200									
5	800 MHz PP Radio (Preventive) SORC1040														
5	800 MHz PP Radio (Corrective) SORC1043	6	8	1	180	180									
5	900 MHz Radio (Preventive) SORC1040														
6	900 MHz Radio (Corrective) SORC1043	13	4	1	52	64									
6	Gen & Sys HL (Preventive) SORC2062														
7	Gen & Sys HL (Corrective) SORC2065	27	6	1	162	24									
7	Safety SORC9000														
7	SOC Data link (Preventive) SORC2070	50	4	1	200	72									
7	SOC Data link (Corrective) SORC2073														
7	ADS Telemetry & Control (Preventive) SORC	10	6	1	60	162		66							
7	ADS Telemetry & Control (Corrective) SORC														
7	Microwave Antenna (Preventive) SORC2055	38	1	1	38	50									
7	Microwave Antenna (Corrective) SORC2058														
7	Base Repeater Antennas (Preventive) SORC2061	18	4	1	72	13									
7	Base Repeater Antennas (Corrective) SORC														
5	Telephone Sentry (Preventive) SORC 1015	3	24	1	72	24									
5	Telephone Sentry (Corrective) SORC5100														
8	Mobile Radio Install/Removal (SORC5103	450	2	1	180	24									
8	Mobile Radio & Ant (Preventive) (SORC1036)														
9	Mobile Radio and Ant (Corrective) SORC1000	200	1.5	1	180										
10	Portable Radio (Preventive) SORC1003														
11	Portable Radio (Corrective) SORC1018														
	RPI SORC1048														
	Training				660										
	O/M Labor Deferred														
	Mobile				180	800									
	Portable					400									
	Tower Inspection					200									
	Test Equipment Calibration/Check	110			5870										
		80	2	1	220	2718	152	66	60	84	240	72	36	96	252
		14	1.5	1	120										
			36	1	500										
					175										
					1015										
	Hours:				9 377309982										
	Percent O/M Labor Deferred:														

Hours O/M		
O/M		9/350
Capital		57.63558595
		12.36141507

CA-IR-95

Ref: HECO T-8, pages 14-15 (T&D Over-Demand & Overtime).

In the context of discussing over-demand, the referenced testimony states: "Typically, overtime that is less than 12%-15% is acceptable; however working at this level of overtime for extended periods is not good for the employees because of the impact on their personal lives which then leads to morale issues." Please provide the following:

a. Please explain the basis for the conclusion that overtime "less than 12%-15% is acceptable."

b. Referring to part (a) of this information request, please provide a copy of any documents relied on in support of this conclusion.

HECO Response:

a. Attachment 1 presents the overtime and straight time data and calculated percentages for the period from 2001 through 2007. In general, the level of overtime for the Construction and Maintenance ("C&M") and the System Operation (SOD) departments varied between 7% to 10% for SOD and between 15% to 17% for C&M. This historical level of overtime, as well as the experience and judgment of C&M and SOD supervisors, is the basis for the statement that "overtime less than 12% to 15% is acceptable." There was one year, 2004, where C&M overtime was higher (above 20%). However, this is generally not the normal level that is worked. More overtime may be worked as a result of more capital or O&M work, or because of system emergencies resulting from equipment failures or from storm conditions.

b. See response to part a. above.

Hawaiian Electric Company, Inc.
2009 Test Year

STRAIGHT TIME AND OVERTIME LABOR HOURS PERCENTAGE BY DEPARTMENT AND RA

		2001	2002	2003	2004	2005	2006	2007		2001	2002	2003	2004	2005	2006	2007		2001	2002	2003	2004	2005	2006	2007
		RECORDED								RECORDED								OT PERCENTAGE						
DEPT	STRAIGHT TIME								OVERTIME															
Engineering	PBA	12,723	12,700	14,339	12,322	12,444	12,394	11,400	PBA	126	234	103	201	257	211	208		1%	2%	1%	2%	2%	2%	2%
Engineering	PBE	29,298	37,365	36,210	35,253	42,012	39,676	38,108	PBE	383	650	702	568	534	602	605		1%	2%	2%	2%	1%	2%	2%
Engineering	PBO	12,568	2,244	-	-	-	-	-	PBO	-	-	-	-	-	-	-		0%	0%	0%	0%	0%	0%	0%
Engineering	PBP	12,817	11,872	10,763	11,099	10,840	12,563	15,432	PBP	84	4	13	-	-	-	-		0%	0%	0%	0%	0%	0%	0%
Engineering	PBS	12,743	2,340	-	-	-	-	3,376	PBS	-	-	-	-	-	-	-		0%	0%	0%	0%	0%	0%	0%
Engineering	PBT	33,208	32,817	32,549	30,230	32,417	32,986	32,177	PBT	352	270	537	436	1,349	476	618		1%	1%	2%	1%	4%	1%	2%
Engineering	PBY	28,975	33,227	33,654	34,891	37,999	38,148	39,555	PBY	688	360	312	469	313	492	554		2%	1%	1%	1%	1%	1%	1%
Engineering	PBZ	15,782	20,353	19,771	15,623	16,451	12,523	14,000	PBZ	235	106	78	11	29	12	-		1%	1%	0%	0%	0%	0%	0%
Engineering	PNT	16,397	1,555	-	-	-	-	-		2	-	-	-	-	-	-		0%	0%	0%	0%	0%	0%	0%
	Engineering Subtotal	174,510	154,471	147,285	139,417	152,163	148,290	154,047		1,869	1,623	1,744	1,684	2,481	1,792	1,985	Engineering OT %	1%	1%	1%	1%	2%	1%	1%
C&M	PDA	10,675	11,707	9,511	9,635	8,954	8,844	9,658	PDA	339	69	-	4	-	-	-		3%	1%	0%	0%	0%	0%	0%
C&M	PDC	12,547	11,189	15,295	15,409	11,756	10,193	8,381	PDC	873	316	1,163	1,167	132	17	69		7%	3%	8%	8%	1%	0%	1%
C&M	PDD	39,358	30,402	28,678	36,048	13,800	5,222	20,195	PDD	3,387	2,963	1,969	5,211	641	276	887		9%	10%	7%	14%	5%	5%	4%
C&M	PDF	32,202	33,472	37,790	38,309	38,566	40,193	38,919	PDF	7,360	6,488	8,846	11,250	8,769	9,568	10,562		23%	19%	23%	29%	23%	24%	27%
C&M	PDH	7,345	7,571	5,458	9,050	1,905	-	-	PDH	454	149	548	1,766	283	-	-		6%	2%	10%	20%	15%	0%	0%
C&M	PDJ	87,555	89,553	89,337	84,516	86,370	78,984	72,040	PDJ	16,613	10,467	13,150	21,576	10,809	11,085	13,684		19%	12%	15%	26%	13%	14%	19%
C&M	PDK	31,859	32,306	30,989	35,697	43,851	43,100	43,668	PDK	6,785	4,973	7,041	10,654	5,771	5,741	6,727		21%	15%	23%	30%	13%	13%	15%
C&M	PDL	67,604	68,562	67,898	62,198	76,928	70,872	67,868	PDL	13,288	13,677	16,060	21,988	12,735	10,869	13,076		20%	20%	24%	35%	17%	15%	19%
C&M	PDM	7,101	7,281	6,107	3,660	892	-	-	PDM	-	-	-	-	-	-	-		0%	0%	0%	0%	0%	0%	0%
C&M	PDP	3,696	3,624	9,546	14,698	29,485	37,609	41,364	PDP	-	-	-	-	910	1,231	1,460		0%	0%	0%	0%	0%	0%	0%
C&M	PDS	10,898	10,855	11,374	14,172	21,308	22,287	22,963	PDS	-	-	-	3	-	-	-		0%	0%	0%	0%	0%	0%	0%
C&M	PDT	17,087	15,666	3,959	-	-	-	-	PDT	1,252	944	298	-	-	-	-		7%	6%	8%	0%	0%	0%	0%
C&M	PDU	47,302	46,390	43,439	38,284	41,012	43,665	46,058	PDU	15,979	14,381	14,435	23,751	17,139	15,154	12,884		34%	31%	33%	62%	42%	35%	28%
C&M	PDV	2,488	1,040	3,176	3,572	3,552	3,524	3,768	PDV	-	-	-	-	-	-	-		0%	0%	0%	0%	0%	0%	0%
C&M	PDZ	1,756	1,828	1,841	1,321	-	-	-	PDZ	-	-	-	-	-	-	-		0%	0%	0%	0%	0%	0%	0%
	C&M Subtotal	379,472	371,444	364,395	366,565	378,377	364,491	374,880		66,331	54,424	63,510	97,368	57,189	53,940	59,349	C&M OT %	17%	15%	17%	27%	15%	15%	16%
Sys Op	PRA	10,014	10,828	9,912	10,598	9,957	10,626	12,394	PRA	3	5	71	69	10	12	2		0%	0%	1%	1%	0%	0%	0%
Sys Op	PRC	14,218	15,270	15,249	13,560	14,930	14,789	14,555	PRC	445	1,400	682	1,105	1,725	1,716	807		3%	9%	4%	8%	12%	12%	6%
Sys Op	PRD	39,641	39,830	39,349	38,565	42,087	43,284	43,213	PRD	2,391	2,525	2,373	3,407	4,924	4,419	6,139		6%	6%	6%	9%	12%	10%	14%
Sys Op	PRE	24,156	25,485	21,346	16,643	21,496	22,782	21,872	PRE	85	152	467	1,232	808	579	681		0%	1%	2%	7%	4%	3%	3%
Sys Op	PRI	12,193	11,317	11,463	13,696	16,841	15,333	16,667	PRI	174	471	466	991	1,615	1,948	1,139		1%	4%	4%	7%	10%	13%	7%
Sys Op	PRR	18,540	18,627	18,688	18,114	17,743	18,304	17,973	PRR	524	958	946	1,520	2,188	2,732	1,231		3%	5%	5%	8%	12%	15%	7%
Sys Op	PRS	64,775	59,601	53,258	55,576	65,724	63,642	65,437	PRS	6,386	6,523	6,292	6,339	8,081	8,041	7,713		10%	11%	12%	11%	12%	13%	12%
Sys Op	PRX	9,430	9,341	6,463	5,375	5,646	5,427	5,510	PRX	300	440	504	588	879	851	721		3%	5%	8%	11%	16%	16%	13%
	Sys Op Subtotal	192,966	190,298	175,728	172,127	194,423	194,186	197,620		10,307	12,474	11,801	15,251	20,230	20,297	18,432	Sys Op OT %	5%	7%	7%	9%	10%	10%	9%
Supp Svcs	PVA	6,930	8,141	8,943	8,626	9,247	8,989	8,684	PVA	17	-	-	14	126	207	130		0%	0%	0%	0%	1%	2%	1%
Supp Svcs	PVF	44,750	47,099	45,016	41,547	41,043	40,051	41,801	PVF	853	1,163	2,488	4,623	6,140	8,365	5,890		2%	2%	6%	11%	15%	21%	14%
Supp Svcs	PVL	28,124	25,388	23,282	20,718	21,215	20,456	21,070	PVL	1,909	3,708	730	2,482	2,398	1,093	2,126		7%	15%	3%	12%	11%	5%	10%
Supp Svcs	PVM	41,163	46,493	46,539	46,112	49,326	48,211	47,030	PVM	4,900	4,026	5,315	9,205	6,965	6,369	7,337		12%	9%	11%	20%	14%	13%	16%
Supp Svcs	PVP	17,649	16,983	16,122	15,539	17,739	22,768	25,921	PVP	-	1	12	236	251	147	171		0%	0%	0%	2%	1%	1%	1%
	Supp Svcs Subtotal	138,615	144,104	139,902	132,541	138,569	140,474	144,505		7,678	8,898	8,545	16,560	15,880	16,181	15,653	Supp Svcs OT %	6%	6%	6%	12%	11%	12%	11%
EDP Total		**885,563**	**860,316**	**827,310**	**810,650**	**863,532**	**847,440**	**871,051**		**86,184**	**77,419**	**85,601**	**130,864**	**95,779**	**92,210**	**95,419**		**10%**	**9%**	**10%**	**16%**	**11%**	**11%**	**11%**

* Assumes 2,088 hours per employee.

CA-IR-95
DOCKET NO. 2008-0083
ATTACHMENT 1
PAGE 1 OF 1

CA-IR-96

Ref: HECO T-8, pages 14-15 & 18, HECO-825 (T&D Labor & Overtime).

In HECO's 2007 rate case (Docket No. 2006-0386), the Company provided straight time and overtime labor hours as well as composite O&M/capital ratios in response to CA-IR-104. Please provide comparable information as requested below:

a. Please provide actual incurred straight time and overtime labor hours for each T&D department RA labor category for calendar years 2007 and 2008 to-date, as well as the comparable labor hour data included in the Company's 2008 budget and 2009 test year rate case forecast. [Note: This request seeks total labor hours, not any allocation between O&M and capital accounts.]

b. For each RA listed in response to part (a) of this information request, please provide the actual composite O&M/capital ratios in calendar years 2007 and 2008 to-date as well as the comparable O&M/capital ratio included in the Company's 2008 budget and 2009 test year rate case forecast.

<u>HECO Response:</u>

a. Please refer to Attachment 1, page 1, for the straight time and overtime labor hours for the periods requested.

b. Please refer to Attachment 1, page 2, for the composite O&M/capital ratios for the periods requested.

Hawaiian Electric Company, Inc.
2009 Test Year

STRAIGHT TIME AND OVERTIME LABOR HOURS BY DEPARTMENT AND RA

Dept	STRAIGHT TIME	2007 RECORDED	YTD 2008* RECORDED	2008 BUDGET**	2009 BUDGET**	OVERTIME	2007 RECORDED	YTD 2008* RECORDED	2008 BUDGET**	2009 BUDGET**
Engineering	PBA	11,400	7,814	13,529	13,514	PBA	208	145	889	914
Engineering	PBE	38,108	20,155	38,284	36,900	PBE	605	381	5,404	5,940
Engineering	PBP	15,432	10,525	17,755	17,650	PBP	-	-	3,239	4,970
Engineering	PBS	3,376	7,440	13,300	15,250	PBS	-	-	2,268	2,370
Engineering	PBT	32,177	20,117	40,697	43,036	PBT	618	51	7,661	10,156
Engineering	PBY	39,555	26,137	57,535	55,560	PBY	554	313	17,211	15,240
Engineering	PBZ	14,000	8,738	16,743	15,055	PBZ	-	38	295	2,415
C&M	PDA	9,658	7,338	11,796	11,235	PDA	-	-	786	2,106
C&M	PDC	3,881	5,702	11,859	11,533	PDC	69	22	1,202	876
C&M	PDD	20,195	1,855	16	28	PDD	887	12	0	0
C&M	PDF	38,919	26,872	53,505	60,413	PDF	10,562	6,141	10,880	14,237
C&M	PDJ ***	72,040	51,954	0	0	PDJ **	13,684	4,421	0	0
C&M	PDK ***	43,668	29,836	0	0	PDK **	6,727	2,175	0	0
C&M	PDL ***	67,868	47,529	0	0	PDL **	13,076	5,499	0	0
C&M	PDP	41,364	26,206	32,078	29,041	PDP	1,460	778	3,569	2,311
C&M	PDS ***	22,963	14,967	345,615	351,012	PDS **	-	-	46,409	41,805
C&M	PDU ***	46,058	29,604	0	0	PDU **	12,884	7,041	0	0
C&M	PDV	3,768	2,392	5,801	5,722	PDV	-	-	264	289
Sys Op	PRA	12,395	8,114	12,708	15,211	PRA	2	1	68	2,567
Sys Op	PRC	14,556	9,485	19,349	16,430	PRC	807	169	4,881	1,954
Sys Op	PRD	43,213	31,273	52,696	52,574	PRD	6,139	2,872	6,360	7,046
Sys Op	PRE	21,871	15,656	28,470	28,452	PRE	681	-	2,513	2,572
Sys Op	PRI	16,667	10,800	21,720	19,500	PRI	1,139	336	5,544	3,404
Sys Op	PRR	17,973	11,313	19,955	21,169	PRR	1,231	538	1,747	2,841
Sys Op	PRS	65,437	44,777	78,852	79,770	PRS	7,713	4,885	8,580	9,808
Sys Op	PRX	5,510	3,449	6,775	8,006	PRX	721	442	1,387	854
Supp Svcs	PVA	8,684	5,550	9,106	9,099	PVA	130	-	27	0
Supp Svcs	PVF	41,801	28,027	46,907	46,922	PVF	5,890	1,345	1,615	1,630
Supp Svcs	PVL	21,070	12,960	24,841	25,814	PVL	2,126	1,400	3,265	4,238
Supp Svcs	PVM	47,030	30,542	57,276	57,027	PVM	7,337	4,697	7,168	6,927
Supp Svcs	PVP	25,921	17,036	28,303	28,298	PVP	171	166	423	418
		866,555	574,161	1,065,471	1,074,221		95,419	43,866	143,655	147,888

* Through pay period ending 8/17/08
** Assumes 2,088 hours per employee.
*** Forecast budget for RA PDS includes RA's PDJ, PDK, PDL, & PDU.

Hawaiian Electric Company, Inc.
2009 Test Year

COMPOSITE O&M AND CAPITAL RATIOS BY DEPARTMENT AND RA

		2007 RECORDED		2008 YTD* RECORDED		2008 BUDGET		2009 BUDGET	
Dept		**O&M**	**CAPITAL**	**O&M**	**CAPITAL**	**O&M**	**CAPITAL**	**O&M**	**CAPITAL**
Engr	PBA	48%	52%	2%	98%	11%	89%	16%	84%
Engr	PBE	59%	41%	6%	94%	6%	94%	4%	96%
Engr	PBP	11%	89%	2%	98%	1%	99%	1%	99%
Engr	PBS	0%	100%	8%	92%	7%	93%	7%	93%
Engr	PBT	14%	86%	13%	87%	5%	95%	3%	97%
Engr	PBY	6%	94%	4%	96%	0%	100%	3%	97%
Engr	PBZ	77%	23%	50%	50%	99%	1%	83%	17%
C&M	PDA	31%	69%	47%	53%	100%	0%	100%	0%
C&M	PDC	91%	9%	85%	15%	100%	0%	100%	0%
C&M	PDD	35%	65%	104%	-4%	100%	0%	100%	0%
C&M	PDF	84%	16%	81%	19%	83%	17%	86%	14%
C&M	PDH **	4%	96%	1%	99%	3%	97%	4%	96%
C&M	PDJ **	33%	67%	43%	57%	0%	100%	0%	100%
C&M	PDK **	48%	52%	44%	56%	0%	0%	0%	0%
C&M	PDL **	53%	47%	51%	49%	0%	0%	0%	0%
C&M	PDM **	0%	0%	0%	0%	100%	0%	100%	0%
C&M	PDP	59%	41%	58%	42%	90%	10%	90%	10%
C&M	PDS **	37%	63%	6%	94%	45%	55%	47%	53%
C&M	PDU **	56%	44%	64%	36%	100%	0%	1%	99%
C&M	PDV	100%	0%	100%	0%	100%	0%	100%	0%
Sys Op	PRA	100%	0%	100%	0%	100%	0%	100%	0%
Sys Op	PRC	66%	34%	73%	27%	64%	36%	54%	46%
Sys Op	PRD	100%	0%	100%	0%	100%	0%	100%	0%
Sys Op	PRE	100%	0%	100%	0%	99%	1%	99%	1%
Sys Op	PRI	79%	21%	78%	22%	73%	27%	65%	35%
Sys Op	PRR	72%	28%	74%	26%	56%	44%	67%	33%
Sys Op	PRS	78%	22%	70%	30%	61%	39%	69%	31%
Sys Op	PRX	33%	67%	44%	56%	68%	32%	27%	73%
Supp Svcs	PVA	100%	0%	100%	0%	100%	0%	0%	0%
Supp Svcs	PVF	100%	0%	0%	0%	100%	0%	0%	0%
Supp Svcs	PVL	79%	21%	80%	20%	93%	7%	78%	22%
Supp Svcs	PVM	93%	7%	90%	10%	99%	1%	100%	0%
Supp Svcs	PVP	100%	0%	100%	0%	100%	0%	0%	0%

* Through month ending 7/31/08
** Forecast budget for RA PDS includes RA's PDJ, PDK, PDL & PDU

CA-IR-97

Ref: HECO T-8, pages 17-18 & HECO-825 (T&D Staffing).

In HECO's 2007 rate case (Docket No. 2006-0386), the Company provided actual T&D monthly staffing levels, broken down by department by RA in response to CA-IR-100. Please provide comparable information as requested below:

a. Actual monthly staffing levels for calendar years 2007 and 2008, to-date, with a further breakdown by department and RA.

b. A monthly breakdown of the 2008 projected staffing levels, with a further breakdown by department and RA.

c. A monthly breakdown of the 2009 test year forecast staffing levels, consistent with the monthly counts HECO seeks to include in setting rates, with a further breakdown by department and RA.

d. Referring to part (a) of this information request, please supplement the 2008 actual staffing levels as additional monthly data becomes available.

<u>HECO Response:</u>

a. Please refer to Attachment 1 for monthly staffing levels broken down by department and RA for the periods requested.

b. Please refer to item (a) above.

c. Please refer to item (a) above.

d. HECO will provide the remaining month-ending 2008 actual T&D (Energy Delivery process area) staffing levels when available, which is anticipated to be late January 2009.

	2007 ACTUAL											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Construction & Maintenance												
PDA	5	5	5	5	5	5	5	5	5	7	7	7
PDC	5	5	5	5	5	5	5	5	5	5	5	5
PDD	17	17	17	17	8	8	9	8	8	2	2	1
PDF	23	23	23	23	22	22	22	22	22	21	21	21
PDJ *	40	40	40	40	43	43	43	43	43	46	46	46
PDK *	26	26	25	25	27	27	26	26	26	27	27	27
PDL *	38	38	38	38	40	40	40	40	40	43	43	43
PDP	22	22	23	23	24	25	25	24	24	23	23	23
PDS	13	13	13	12	12	12	12	12	12	13	13	13
PDU *	26	26	27	27	27	27	27	27	27	27	27	27
PDV	2	2	2	2	2	2	2	2	2	2	2	2
Total	217	217	218	217	215	216	216	214	214	216	216	215
Engineering												
PBA	6	7	7	7	7	7	7	7	6	7	7	7
PBE	23	23	23	23	24	25	25	24	16	15	15	15
PBP	7	7	7	7	7	10	10	9	9	10	10	10
PBS	-	-	-	-	-	-	-	-	6	6	6	6
PBT	18	18	18	18	18	19	19	19	18	17	17	17
PBY	22	22	21	22	25	24	24	21	20	21	21	21
PBZ	7	8	8	8	8	9	9	8	7	7	7	7
Total	83	85	84	85	89	94	94	88	82	83	83	83
Support Services												
PVA	5	5	5	5	5	5	5	5	5	5	5	5
PVF	23	23	22	22	23	23	23	24	24	24	24	24
PVL	12	12	12	12	12	12	12	12	12	12	12	12
PVM	27	27	27	27	27	27	27	28	28	27	27	27
PVP	14	14	15	15	15	15	15	14	15	16	16	16
Total	81	81	81	81	82	82	82	83	84	84	84	84
System Operation												
PRA	7	7	7	7	7	7	7	7	7	7	7	7
PRC	8	8	8	8	8	8	8	8	8	8	8	8
PRD	22	22	22	22	23	25	25	24	24	26	26	26
PRE	10	11	11	11	12	12	12	12	12	13	14	14
PRI	9	9	9	9	9	9	9	9	9	9	9	9
PRR	10	10	10	10	10	10	10	10	10	10	10	10
PRS	38	38	38	38	38	37	37	38	38	37	37	37
PRX	3	3	3	3	3	3	3	3	3	3	3	3
Total	107	108	108	108	110	111	111	111	111	113	114	114
TOTAL EDP	488	491	491	491	496	503	503	496	491	496	497	496

	2008 YTD ACTUAL THRU JULY / AUG-DEC BUDGET											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Construction & Maintenance												
PDA	7	7	6	6	7	6	6	6	6	6	6	6
PDC	5	5	5	5	5	6	6	6	6	6	6	6
PDD	1	1	1	1	1	1	5	-	-	-	-	-
PDF	21	22	22	22	23	23	27	24	24	24	24	24
PDJ *	46	46	46	46	45	45	43	-	-	-	-	-
PDK *	27	26	26	26	26	26	26	-	-	-	-	-
PDL *	43	42	42	42	42	42	39	-	-	-	-	-
PDP	23	23	23	22	23	24	24	16	16	16	16	16
PDS	13	13	13	13	13	13	13	165	165	165	165	165
PDU *	27	27	27	27	27	27	27	-	-	-	-	-
PDV	2	2	2	2	2	2	2	3	3	3	3	3
Total	215	214	213	212	214	215	218	220	220	220	220	220
Engineering												
PBA	7	7	7	7	7	7	7	7	7	7	7	7
PBE	17	17	17	19	19	19	18	18	18	18	18	18
PBP	10	10	10	7	7	7	7	7	7	7	7	7
PBS	6	6	6	6	6	7	7	6	6	6	6	6
PBT	17	17	17	18	18	18	17	18	18	18	18	18
PBY	20	20	20	23	23	24	24	22	22	22	22	22
PBZ	7	7	7	8	8	8	8	7	7	7	7	7
Total	84	84	84	88	88	90	88	85	85	85	85	85
Support Services												
PVA	5	5	5	5	5	5	5	5	5	5	5	5
PVF	24	24	24	24	25	24	25	25	25	25	25	25
PVL	12	12	12	12	12	12	12	12	12	12	12	12
PVM	27	28	28	28	28	27	28	28	28	28	28	28
PVP	16	15	15	15	14	16	14	15	15	15	15	15
Total	84	84	84	84	84	84	84	85	85	85	85	85
System Operation												
PRA	7	7	7	7	7	7	7	7	7	7	7	7
PRC	8	8	8	8	8	8	8	8	8	8	8	8
PRD	26	26	26	26	26	27	27	27	27	27	27	27
PRE	14	14	13	13	13	13	13	14	14	14	14	14
PRI	9	9	9	9	9	9	9	9	9	9	9	9
PRR	10	10	10	10	10	10	10	10	10	10	10	10
PRS	39	39	39	39	39	39	39	39	39	39	39	39
PRX	3	3	3	3	3	3	3	3	3	3	3	3
Total	116	116	115	115	115	116	116	117	117	117	117	117
TOTAL EDP	499	498	496	499	501	505	506	507	507	507	507	507

	2009 TEST YEAR											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Construction & Maintenance												
PDA	5	5	5	5	5	5	5	5	5	5	5	5
PDC	6	6	6	6	6	6	6	6	6	6	6	6
PDD	-	-	-	-	-	-	-	-	-	-	-	-
PDF	26	26	26	26	26	26	26	26	26	26	26	26
PDJ *	-	-	-	-	-	-	-	-	-	-	-	-
PDK *	-	-	-	-	-	-	-	-	-	-	-	-
PDL *	-	-	-	-	-	-	-	-	-	-	-	-
PDP	15	15	15	15	15	15	15	15	15	15	15	15
PDS	165	165	165	165	165	165	165	165	165	165	165	165
PDU *	-	-	-	-	-	-	-	-	-	-	-	-
PDV	3	3	3	3	3	3	3	3	3	3	3	3
Total	220	220	220	220	220	220	220	220	220	220	220	220
Engineering												
PBA	7	7	7	7	7	7	7	7	7	7	7	7
PBE	17	17	17	17	17	17	17	17	17	17	17	17
PBP	7	7	7	7	7	7	7	7	7	7	7	7
PBS	7	7	7	7	7	7	7	7	7	7	7	7
PBT	18	18	18	18	18	18	18	18	18	18	18	18
PBY	22	22	22	22	22	22	22	22	22	22	22	22
PBZ	7	7	7	7	7	7	7	7	7	7	7	7
Total	85	85	85	85	85	85	85	85	85	85	85	85
Support Services												
PVA	5	5	5	5	5	5	5	5	5	5	5	5
PVF	25	25	25	25	25	25	25	25	25	25	25	25
PVL	12	12	12	12	12	12	12	12	12	12	12	12
PVM	28	28	28	28	28	28	28	28	28	28	28	28
PVP	15	15	15	15	15	15	15	15	15	15	15	15
Total	85	85	85	85	85	85	85	85	85	85	85	85
System Operation												
PRA	7	7	7	7	7	7	7	7	7	7	7	7
PRC	8	8	8	8	8	8	8	8	8	8	8	8
PRD	27	27	27	27	27	27	27	27	27	27	27	27
PRE	14	14	14	14	14	14	14	14	14	14	14	14
PRI	9	9	9	9	9	9	9	9	9	9	9	9
PRR	10	10	10	10	10	10	10	10	10	10	10	10
PRS	39	39	39	39	39	39	39	39	39	39	39	39
PRX	4	4	4	4	4	4	4	4	4	4	4	4
Total	118	118	118	118	118	118	118	118	118	118	118	118
TOTAL EDP	508	508	508	508	508	508	508	508	508	508	508	508

* Forecast budget for RA PDS includes RAs PDJ, PDK, PDL, PDU

CA-IR-98

Ref: HECO T-8, pages 17-20 (Vacant Positions).

Please provide the following:

a. Please provide a monthly schedule for 2006 through 2008, to-date, showing both actual employee count and the number of authorized or approved positions by T&D department and RA.

b. Please confirm that HECO's test year forecast assumes that the Company will fill all of the vacant T&D positions and maintain full employment throughout 2009 with no vacancies. If this cannot be confirmed, please explain.

c. Please provide a detailed calculation of the avoided supplemental labor contractor charges, excessive overtime and all other avoided costs that were not included in the because of full employment assumption referenced in part (b) of this information request. If none, please explain.

<u>HECO Response:</u>

a. Please refer to CA-IR-98 Attachment 1 for the actual employee counts for 2006 through July 2008. HECO does not have "authorized" positions and staffing levels are monitored by using the "budget employee count." The difference between the budget employee count and the actual employee count levels may be viewed as the number of unfilled positions. Using the 2009 test year end of year employee count, the vacancies by department as of March 31, 2008 were shown on page 18 of HECO T-8. As of July 31, 2008 the Energy Delivery departments had the following vacancies: C&M: 2 vacant positions; Engineering: no vacancies; Support Services: 1 vacant position; and System Operation: 2 vacant positions.

b. We confirm that HECO's test year forecast assumes that the Company will fill all of the vacant T&D positions and maintain full employment throughout 2009 with no vacancies.

c. The assumption of full staffing is based on HECO's assessment of the number of employees required to perform the amount of work estimated for the test year. HECO does not have a

calculation of avoided contractor or outside labor costs as a result of the budget for full employment. However, basing the test year estimate on less than full staffing for 2009 would result in a significant understatement of the T&D O&M expense for 2009, unless an upward revision also was made to reflect the additional overtime, the contract services incurred and the temporary hires added to accomplish the expected work load.

Some significant contract services expenses will be incurred regardless of whether T&D is fully staffed in 2009. Certain contractors perform specialized services, such as vegetation management or maintenance on the energy management system, in areas where HECO does not have the required qualifications or skills. As a result, the contractor costs for these services would not be affected by the HECO staffing levels. In areas where contractors are used to supplement the HECO employees, it is a business decision to continue using contractors for these other services so that HECO employees with the electrical knowledge can focus on performing these higher skilled functions. For example, contractors are used to dig pole holes when poles are replaced. HECO's employees are used after the pole hole is dug to stand up the pole and perform the work necessary to transfer or install the equipment and lines to the new pole.

CA-IR-99

Ref: HECO T-8, page 15, HECO-825 & HECO-829 (T&D Staffing & Outside Services).

At page 15, HECO T-8 generally refers to using contractors to perform some of the "over-demand" that cannot be met by HECO employees working regular time and overtime. HECO T-8 also discusses outside service cost variances (e.g., see pages 30, 32, 39, 41, etc.). In HECO's 2007 rate case (Docket No. 2006-0386), the Company provided certain contract services costs in response to CA-IR-112. Please provide the following:

a. Please supplement the vegetation management outside contractor information presented on HECO-829 (2003 through 2009 forecast) with "contract services other" data, comparable to the referenced response from HECO's 2007 rate case – adding vegetation management and other contract services costs charged to T&D O&M expense in 2008 to-date.

b. Referring to part (a) of this information request, please further disaggregate contract services costs charged to T&D O&M expense in calendar years 2007 and 2008 (actual), as well as 2008 (budget) and 2009 test year rate case forecast as follows:

   1. segregate vegetation management contract services between transmission and distribution; and

   2. break down other contract services by department within the Energy Delivery Process Area.

HECO Response:

a. Please refer to the table below.

Description	2003 Actual	2004 Actual	2005 Actual	2006 Actual	2007 Actual	2008 budget	2008 Actuals thru 7/31/08	2009 estimate
Vegetation Management	2,142,713	2,000,395	1,880,366	2,758,007	3,846,830	3,902,856	1,882,086	4,524,350
Contract Services Other	2,705,895	3,441,227	4,953,224	3,759,936	4,286,915	3,136,958	2,448,126	7,457,569
TOTALS	4,848,608	5,441,622	6,833,590	6,517,943	8,133,745	7,039,814	4,330,212	11,981,919

In addition, Exhibit HECO-829 is revised to reflect the reallocation of on-costs from Outside Contractors to HECO Labor. The on-costs should have been included in the HECO Labor line item since the on-costs are associated with HECO labor but were inadvertently included in the Outside Contractors line for years 2006 through 2009. Overall however, the total

Vegetation Management Program O&M expense amounts by years, as previously submitted in HECO-829 remain the same. The revised HECO-829 is submitted as Attachment 1. For easy reference, the corrected figures have been noted.

b.1 Please refer to the table below.

Description	2007 Actual	2008 budget	2008 Actuals thru 7/31/08	2009 estimate
Vegetation Management:				
Transmission	1,069,078	879,672	407,170	1,365,300
Distribution	2,777,752	3,023,184	1,474,915	3,159,050
TOTALS	3,846,830	3,902,856	1,882,085	4,524,350

b.2. Please refer to the table below.

Contract Services Other by:	2007 Actual	2008 budget	2008 Actuals thru 7/31/08	2009 estimate
Energy Delivery Process Area Construction & Maintenance (without VM)	1,764,959	1,477,033	1,093,108	3,697,948
Engineering	215,717	60,200	10,434	44,700
Support Services	39,398	36,200	24,454	36,200
System Operations	1,236,427	1,167,549	856,666	2,467,722
VP Energy Delivery	0	0	0	0
Other Departments	1,030,414	395,976	463,464	1,210,999
TOTALS	4,286,915	3,136,958	2,448,126	7,457,569

Hawaiian Electric Company, Inc.
2009 TEST YEAR

VEGETATION MANAGEMENT PROGRAM O&M EXPENSE

	2003 Actual	2004 Actual	2005 Actual	2006 Actual	2007 Actual	2008 budget	2009 estimate
Outside Contractors	2,142,713	2,000,395	1,880,366	2,758,007*	3,846,830*	3,902,856*	4,524,350*
HECO Labor	253,594	298,054	334,307	324757*	379,187*	554,666*	551,865*
HECO Non-Labor	3,439	1,234	1,622	(29)	167	0	0
	2,399,746	2,299,683	2,216,295	-29	167	0	0

* Revised 9/8/2008

CA-IR-100

Ref: HECO T-8, page 23 & HECO-WP-805 (T&D Variances - Vegetation Management).

Expense variance items E and K of HECO-WP-805 refer to "HECO-838 for details" regarding the increase in the scope of the vegetation management program. HECO's filing does not contain an exhibit or schedule identified as HECO-838. Please provide the following:

a. Was HECO-838 inadvertently excluded from the Company's filing? If so, please provide a copy thereof.

b. Did the Company decide to not include HECO-838 in its filing? If so, please explain why the referenced document was excluded.

c. Please provide a copy of the information explaining the change in scope of the vegetation management program that was intended to have been included in HECO-838.

<u>HECO Response:</u>

a. No, HECO-838 was not inadvertently excluded from the Company's filing. HECO-838 does not exist. HECO-838 was referenced in error.

b. See response to "a" above.

c. HECO-WP-805 has been revised to include explanations of the variances resulting from the change in scope of the vegetation management program. Specifically, line E (page 3 of 21) and the last line of K (page 4 of 21) have been revised. Furthermore, on line 17, page 2 of 21, the RA in column (B) was incorrectly listed as PDS. It has been corrected to PDV. The revised pages 2 through 4 of HECO-WP-805 is attached as Attachment 1.

Hawaiian Electric Company, Inc.
2009 TEST YEAR

T&D O&M EXPENSE VARIANCES BY ACCOUNTS
(Over $200,000 and 10%)

	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
						2009			
				Expense	2007	Test Year	Variance		
	Account	RA	Activity*	Element**	Recorded	Estimate	$	%	
	Distribution Maintenance								
14	593	PDL	475	150	297,140	-	(297,140)	(100)	K
15	593	PDS	473	150	1,068	406,906	405,838	38,000	K
16	593	PDS	475	150	10,226	746,552	736,326	7,201	K
17	593	PDV***	494	501	2,776,696	3,159,050	382,354	14	K
18	594	PDS	478	150	4,905	705,369	700,464	14,281	L
19	594	PDS	478	201	-	234,535	234,535	#DIV/0!	L
20	594	PDS	478	505	-	1,259,349	1,259,349	#DIV/0!	L
21	594	PDU	478	150	537,040	-	(537,040)	(100)	L
22	594	PDU	478	201	228,753	-	(228,753)	(100)	L
23	598	PDA	492	201	238,419	-	(238,419)	(100)	M
24	598	PDS	492	201	-	225,000	225,000	#DIV/0!	M

Source: Rate Case Variance Report V1pages 7-10; run date 5/20/08
Note: Figures may not total exactly due to rounding.
* Detailed activity descriptions can be found on pages 5-20 of this work paper, in the order in which they appear.
** Expense element descriptions can be found on page 21 of this work paper in the order in which they appear.
*** Revised 9/8/08

Hawaiian Electric Company, Inc.
2009 TEST YEAR
T&D O&M EXPENSE VARIANCES BY ACCOUNTS
(Over $200,000 and 10%)

A	282,764	Variance due to new EMS/OMS related 24/7 maintenance contracts for hardware, software and display boards technical support to take effect as warranty ends.
B	567,792	Variance is due to climbing inspections forecasted for 2009 based off of work plan developed by C&M Planning Division.
	212,751	Variance is due to an increase in program P0000361, Preventive Inspection of T&D System, for outside services for transmission overhead inspections. Amounts are forecasted into RA (DS) but charges are recorded to multiple RA's.
C	320,000	Variance represents increased activity for IRS (Interconnection Requirement Study) work for non-utility generation proposals and the Oahu Renewable Energy RFP. An IRS is performed when a developer proposes to interconnect a generation facility to the HECO system to 1) identify system requirements; 2) evaluate impacts to operation of the system; and 3) evaluate and refine performance requirements for the proposed facility. Actual cost of the IRS is borne by the developer and will be offset by a receivable.
D	382,773	Increase due to labor over demand transferring to outside contractors for communications work relating to mobile/portable repairs, air conditioning maintenance; tower maintenance, vegetation management, EME (electromagnetic) surveys required by FCC, preventive maintenance inspections.
	272,737	Increase due to labor over demand transferring to outside contractors for work relating to structural refurbishment, mobile sub refurbishment and laser leak detection.
E	319,179	Increase in scope of vegetation management program due to increase in vegetation management crews to implement HECO's goal of a 12 to 15 month cycle for Roadside trimming, a 3 to 6 month cycle for hot spot trimming, and keeping the ROWs clear of impeding vegetation growth, all to insure reliable service.*
F	281,299	Variance due to partial year amortization of OMS software costs in '07 vs. full year in '09.
G	323,942	Variance is due to an increase in underground inspections to be performed during 2009 to enter information into a detailed inspection database and to incorporate infrared and VLF (very low frequency) testing of underground cables.
H	-289,725	Variance due to expense for AMI (Advanced Meter Infrastructure) business case analysis by outside consulting firm, KEMA, Inc. in 2007.
I	261,079	Variance represents the internal labor to perform preliminary engineering, sustain the pilot AMI system and develop the PUC application. Activities will be performed by staff in 5 positions, three of which are currently filled.

*Revised 9/8/08

Hawaiian Electric Company, Inc.
2009 TEST YEAR
T&D O&M EXPENSE VARIANCES BY ACCOUNTS
(Over $200,000 and 10%)

	351,888	Variance represents services of third party AMI technical and regulatory consultants.
K	-297,140	Variance due to procedural reclassification from one Responsibility Area (RA) to another for program P0000123, Corrective Overhead Distribution Replacements . Amounts are forecasted into one RA (DS), but charges are recorded to multiple RA's. Work in this program is forecasted based off of historical trends.
	405,838	Variance is due to an increase in labor for program P340000, Preventive Overhead Distribution. Amounts are forecasted into one RA (DS), but charges are recorded to multiple RA's. Work in this program is forecasted based off of a work plan developed by the C&M Planning Division.
	736,326	Variance due to an increase in labor for program P0000123, Corrective Overhead Distribution Replacements. Amounts are forecasted into one RA (DS), but charges are recorded to multiple RA's. Work in this program is forecasted based off of historical trends.
	382,354	Increase in scope of vegetation management program due to increase in vegetation management crews to implement HECO's goal of a 12 to 15 month cycle for Roadside trimming, a 3 to 6 month cycle for hot spot trimming, and keeping the ROWs clear of impeding vegetation growth, all to insure reliable service.*
L	700,464	Variance due to procedural reclassification from one Responsibility Area (RA) to another for program P0000122, Corrective Cable Failures. Amounts are forecasted into one RA (DS), but charges are recorded to multiple RAs.
	234,535	Variance due to procedural reclassification from one Responsibility Area (RA) to another for materials in program P0000122, Corrective Cable Failures . Amounts are forecasted into one RA (DS), but charges are recorded to multiple RAs.
	1,259,349	Increase due to over demand of labor so fault finding work will be transferred to outside contractors.
	-537,040	Variance due to procedural reclassification from one Responsibility Area (RA) to another for program P0000122, Corrective Cable Failures. Amounts are forecasted into one RA (DS), but charges are recorded to multiple RAs.
	-228,753	Variance due to procedural reclassification from one Responsibility Area (RA) to another materials for program P000122, Corrective Cable Failures. Amounts are forecasted into one RA (DS), but charges are recorded to multiple RAs.
M	-238,419	Variance due to procedural reclassification from one Responsibility Area (RA) to another for Construction and Maintenece Non Project materials. Amounts are forecasted into one RA (DS), but charges are recorded to multiple RAs.
	225,000	Variance due to procedural reclassification from one Responsibility Area (RA) to another for Construction and Maintenece Non Project materials. Amounts are forecasted into one RA (DS), but charges are recorded to multiple RAs.

*Revised 9/8/08

CA-IR-101

Ref: HECO T-8, page 33 (Vegetation Management).

The discussion of HECO's vegetation management program refers to a 2004 U.S.-Canada Power System Outage Task Force report (see footnote 5). Please provide a copy of this report.

HECO Response:

See Attachment 1. Attachment 1 is voluminous and available for inspection at HECO's Regulatory Affairs Division office, Suite 1301, Central Pacific Plaza, 220 South King Street, Honolulu, Hawaii. Please contact Dean Matsuura at 543-4622 to make arrangements to inspect the document. An electronic copy of the requested information is being provided.

Attachment 1 is voluminous and available for inspection at HECO's Regulatory Affairs Division office, Suite 1301, Central Pacific Plaza, 220 South King Street, Honolulu, Hawaii. Please contact Dean Matsuura at 543-4622 to make arrangements to inspect the document. An electronic copy of the requested information is being provided.

CA-IR-102

Ref: HECO T-8, pages 36-39 & HECO-827 ("Wet Cycle" & Vegetation Management).

HECO-827 presents a historical comparison of Oahu precipitation data for calendar years 2000 through 2007 and 2008 through May. Please provide the following:

a. Please explain why the "normal" precipitation values were changed in 2006 for some weather locations (e.g., Hnl Ap, Waimanalo, Manoa Lyon, Poamoho and Waihee P).

b. Regarding the weather locations referenced in part (a) of this information request, please provide a copy of the NOAA data supporting the original and revised "normal" precipitation values.

c. The footnotes on HECO-827 indicate that the 2008 actual and normal precipitation values are for the period January through May 2008. Please update these columns for the most current information presently available and provide copies of the documentation supporting the actual and normal values.

<u>HECO Response:</u>

a. The source of the data presented in HECO-827 is from the National Oceanic and Atmospheric Administration ("NOAA") web site (www.prh.noaa.gov/hnl). NOAA calculates climate normals for its official sites by using a 30-year mean that is adjusted every 10 years. NOAA is currently using 30-year normals calculated for the period from 1971-2000. Most of the sites that are included in HECO-827 (and what NOAA posts online) are not part of the official NOAA climate monitoring network and are provided to the public for informational purposes only. Many of the sites posted have not been in place for 30-years. For these sites, the "normals" provided have been extracted by NOAA from the Rainfall Atlas of Hawaii prepared by the Hawaii Department of Land and Natural Resources rather than from actual observations by NOAA over a 30-year period. When these sites reach the 30-year period of record, the normals will be calculated by NOAA. NOAA has not indicated which normal precipitation values that changed in 2006 are from the Rainfall Atlas

of Hawaii or NOAA's 30-year calculated normal values. HECO has not revised any of its Vegetation Management practices in response to the revised NOAA data.

b. HECO does not have the NOAA data sheets supporting the original precipitation values shown in HECO-827 as the table that was used to consolidate the information from the NOAA data sheets was not retained by HECO after HECO-827 was prepared and filed with testimony.

c. HECO-827 has been updated with the latest information available from http://www.prh.noaa.gov/hnl/ (see Attachment 1) and the corresponding backup data from the website is also attached (see Attachment 2).

OAHU PRECIPITATION DATA

		2000		2001		2002		2003		2004		2005		2006			2007			2008*		
Location	Norm	YTD	% Norm	YTD	% Norm	YTD	% Norm	YTD	% Norm	YTD	% Norm	YTD	% Norm	YTD	Norm	% Norm	YTD	Norm	% Norm	YTD	Norm **	% Norm
Hnl Ap	22.00	7.11	32	9.16	42	12.19	66	12.67	69	39.02	212	15.61	71	29.72	18.29	162	11.97	18.29	65	2.79	9.8	28%
Waianae	20.00	3.47	17	8.55	43	14.59	73	12.26	61	37.97	190	16.54	83	24.92	20	125	17.48	20	87	6.23	11.5	54%
Makua Rdg	43.40									74.20	171	57.36	132	60.64	43.4	140		43.4			25.8	
Hawaii Kai	28.00	10.95	39	11.33	40	21.70	78	25.48	91	46.74	167	27.48	98	28.55	28	102	26.11	28	93	3.47	16.4	21%
Lualualei	25.00	9.62	38			17.77	71	24.85	99	39.83	159	18.77	75	29.33	25	117	20.84	25	83	6.76	14.5	47%
Palolo Fs	40.00	24.59	61	25.90	65	24.27	61	26.85	67	62.59	156	39.68	99	40.91	40	102	37.11	40	93	11.98	24.1	50%
Waimanalo	50.00	19.46	39			23.73	55	32.62	76	65.95	154	43.08	86	50.63	42.8	118	37.98	42.8	89	9.92	24.5	40%
Waipio	30.00	16.17	54	17.83	59	21.07	70			45.75	153			29.60	30	99	21.49	30	72	9.3	17.5	53%
Luluku	80.00	56.84	71	53.79	67	71.55	89	91.22	114	119.69	150	86.83	109	122.42	80	153	72.82	80	91	29.12	47.5	61%
Schofield E	74.60									111.38	149											
Waianae BH	21.00									30.33	144	14.12	67	19.68	21	94	10.21	21	49	3.92	12.2	32%
Mililani	45.00	27.10	60	31.51	70	36.13	80	42.01	93	62.22	138	50.22	112	51.04	45	113	43.97	45	98	16.45	26.5	62%
Kunia Sub	28.00	10.90	39	9.81	35	15.05	54	20.98	75	38.07	136	16.75	60	27.08	28	97	15.48	28	55	4.5	16.1	28%
Wilson Tunnel	110.00	89.87	82			107.63	98	120.43	109	147.05	134	107.45	98	147.71	110	134	89.61	110	81		64.8	
Aloha Tower	25.00	8.66	35	11.85	47	13.45	54	15.07	60	32.66	131	17.3	69	27.33	25	109	3.44	12.6	27	4.39	14.4	30%
St. Stephens	80.10							77.66	97	104.68	131	76.00	95	108.38	80.1	135	64.82	80.1	81	21.2	47.3	45%
Olomana	50.00	29.12	58	30.46	61			35.71	71	65.58	131	39.85	80	56.59	50	113	42.41	50	85	12.57	29.4	43%
Waianae Val.	49.10									63.44	129	26.58	54		49.1		34.66	49.1	71	15.27	29.4	52%
Bellows	40.20									51.93	129	28.09	70	45.99	40.2	114	29.43	40.2	73		24.7	
Wheeler	50.00	24.87	50	36.33	73	37.17	74	45.54	91	63.10	126	42.85	86	49.90	50	100	42.42	50	85	17.65	29.5	60%
Hakipuu M	75.00									94.78	126			87.38	75	117	62.1	75	83	19.82	43	46%
Kahuku Tng	46.50									58.02	125	31.53	68	72.50	46.5	156	37.39	46.5	80	12.16	28.3	43%
Maunawili	80.00	54.22	68	52.78	66	59.93	75	74.46	93	99.78	125	78.94	99	111.35	80	139	72.68	80	91	22.64	47.2	48%
Waiawa	70.00			58.70	84	53.88	77	57.81	83	86.65	124	74.91	107	72.56	70	104	57.19	70	82	24.56	40.4	61%
Kahuku	45.00	22.19	49	32.65	73	32.11	71	34.33	76	52.51	117	28.35	63	58.04	45	129	29.98	45	67	7.54	26.3	29%
Kamehame	38.00	13.30	35	12.55	33	20.93	55	27.03	71	44.02	116	29.55	78	33.77	38	89	26.76	38	70	5.5	22.4	25%
Punaluu P	75.00	40.96	55	40.29	54	54.84	73	50.47	67	85.49	114	61.83	82	89.98	75	120	60.07	75	80	15.99	45.1	35%
Manoa Lyon	150.00	141.48	94	130.49	87	119.96	79	116.85	77	171.02	112	151.46	101	140.18	152.2	92	133.97	152.2	88	61.85	91.4	68%
Palisades	75.00	42.25	56	51.65	69	48.36	64	54.24	72	81.56	109	63.16	84	72.55	75	97	65.47	75	87	30.08	44	68%
Poamoho	45.00					24.78	55	29.23	65	48.66	108	30.29	67	25.37	28.8	88				12.85	27.1	47%
Ahuimanu	100.00					75.19	75	92.16	92	106.71	107			117.27	100	117	68.77	100	69	29.03	59.4	49%
Nuuanu Ws	130.00							101.91	78	138.94	107	124.56	96	117.99	130	91	108.4	130	83	47.77	76.8	62%
Moanalua	80.00	41.04	51	50.18	63	39.76	50	46.01	58	79.70	100	57.62	72	51.74	80	65	49.9	80	62	22.69	45.9	49%
Waihee P	115.00	50.40	44			80.51	70	98.57	86	105.80	94	80.00	70	124.53	112.5	111	75.99	112.5	68	30.98	62.2	50%
Kaneohe M.	39.90							18.07	45	31.27	78	22.69	57	44.39	39.9	111	28.28	39.9	71		23.9	
Kalaeloa	18.30							13.14	72					20.41	18.3	112	12.4	18.3	68	6.15	10.6	58%
Schofield B	41.80							37.32	89						41.8			41.8			24.8	
Makua Ran	33.90							20.43	60					29.22	33.9	86	21.05	33.9	62	2.92	20.9	14%
Waialua	33.80	12.48	37	13.21	39	21.33	71															
Kii	41.00											22.68	55	50.40	41	123	29.4	41	72	6.96	24.2	29%
Niu Valley	40.00	22.90	57			32.17	80	36.84	92					46.82	40	117	30.95	40	77	9	23.1	39%

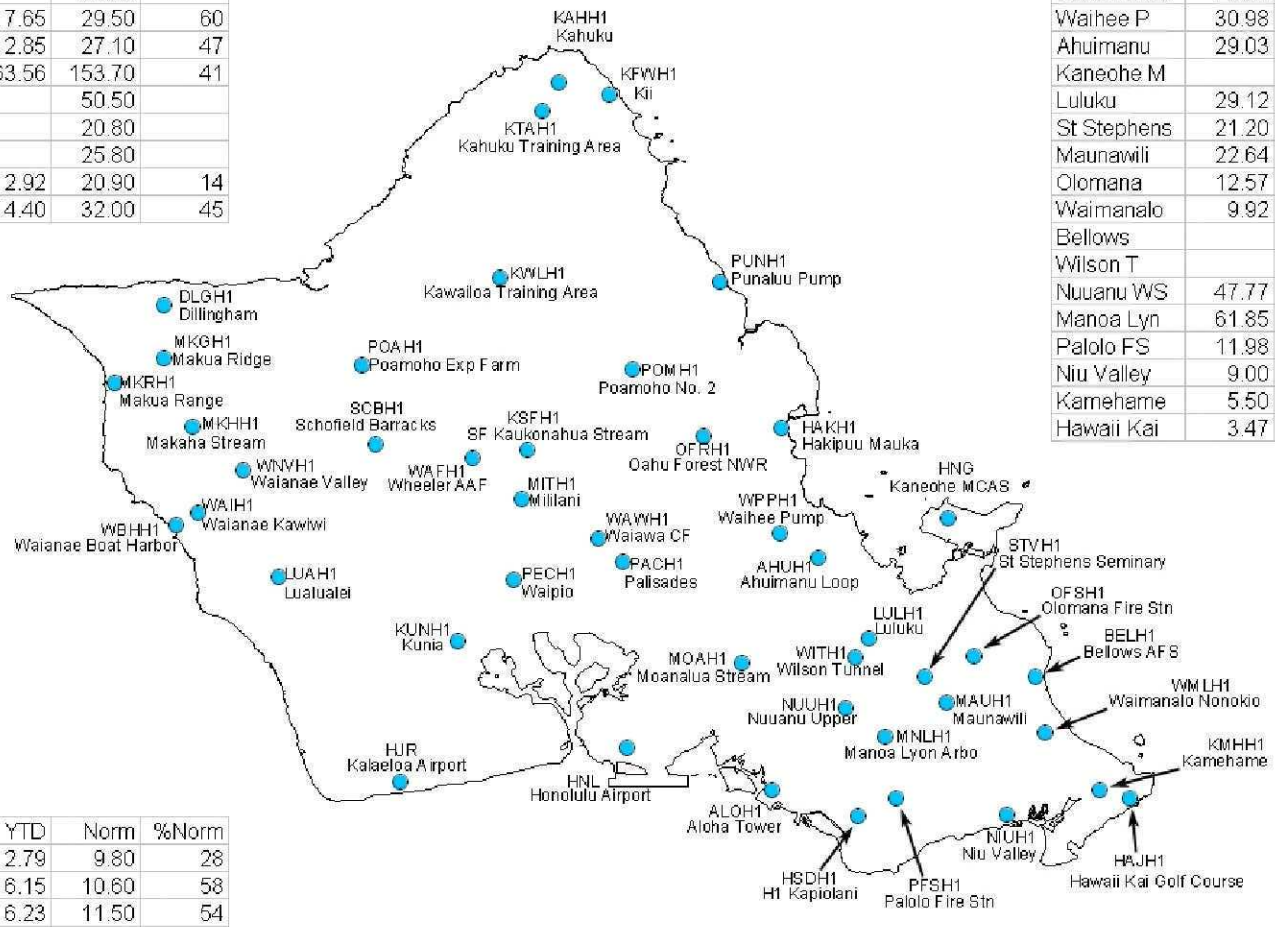
* YTD as of July 2008

** YTD normal rainfall for period ending July 2008

Source: National Oceanic & Atmospheric Administration (NOAA) Western Regional limate Center, Rain Gauge Data - www.prh.noaa.gov/hnl

Location	YTD	Norm	%Norm
Waiawa	24.56	40.40	61
Palisades	30.08	44.00	68
Moanalua	22.69	45.90	49
Mililani	16.45	26.50	62
SF Kaukona	38.30	43.80	87
Schofield B		24.80	
Wheeler	17.65	29.50	60
Poamoho	12.85	27.10	47
Poamoho 2	63.56	153.70	41
Kawailoa		50.50	
Dillingham		20.80	
Makua Rdg		25.80	
Makua Ran	2.92	20.90	14
Makaha Str	14.40	32.00	45

Location	YTD	Norm	%Norm
Kahuku	7.54	26.30	29
Kahuku Tng	12.16	28.30	43
Kii	6.96	24.20	29
Punaluu P	15.99	45.10	35
Hakipuu M	19.82	43.00	46
Oahu Forest	76.34	120.70	63
Waihee P	30.98	62.20	50
Ahuimanu	29.03	59.40	49
Kaneohe M		23.90	
Luluku	29.12	47.50	61
St Stephens	21.20	47.30	45
Maunawili	22.64	47.20	48
Olomana	12.57	29.40	43
Waimanalo	9.92	24.50	40
Bellows		24.70	
Wilson T		64.80	
Nuuanu WS	47.77	76.80	62
Manoa Lyn	61.85	91.40	68
Palolo FS	11.98	24.10	50
Niu Valley	9.00	23.10	39
Kamehame	5.50	22.40	25
Hawaii Kai	3.47	16.40	21



Location	YTD	Norm	%Norm
HNL AP	2.79	9.80	28
Kalaeloa	6.15	10.60	58
Waianae	6.23	11.50	54
Waianae BH	3.92	12.20	32
Waianae Vly	15.27	29.40	52
Lualualei	6.76	14.50	47
Kunia Sub	4.50	16.10	28
Waipio	9.30	17.50	53
Aloha Twr	4.39	14.40	30
H-1 Kapiolni	8.35	14.70	57

CA-IR-103

Ref: HECO T-8, pages 35 & 37 (Vegetation Management).

At page 35, HECO's vegetation management program is stated to consist of: (i) Roadside, (ii) Right-of-Way and (iii) Customer/Emergencies. Referring to page 37, line 24, HECO revised its roadside trimming priorities and techniques in January 2008. Please provide the following:

a. Does the revision to roadside trimming represent the only change to HECO's vegetation management program in 2008?

b. If not, please identify and describe the other material changes or revisions implemented in 2008.

c. Referring to part (a) of this information request, were the revisions to the vegetation management program implemented in 2008 based on any particular studies or analyses prepared by, or for, HECO?

d. If so, please identify and provide a copy of each such study.

HECO Response:

a. No. Other changes were made and are described below in our response part b.

b. As discussed in the testimony, the revisions implemented to HECO's vegetation management program in 2008 also include the following: 1) the hiring of a specialized ground clearing crews, 2) the hiring of a contractor to do Customer/Emergency work, 3) the hiring of another contractor to provide side trimming in the ROW's, 4) taking steps to increase productivity by decreasing contractor mobilization time, and 5) issuing the HECO Staff Arborists pruning tools to increase contractor productivity and reduce customer complaints (see HECO T-8, pages 38 and 39). These measures were implemented to increase the effectiveness of HECO's vegetation management program to address the growth in vegetation that began during the wet cycle, the effects of which are still being felt. These changes, in conjunction with the spending level planned in the 2009 test year estimate, will enhance the effectiveness of the Vegetation Management program.

c. The changes that were implemented were not the result of any formal studies. However, the changes were based on the experience and observations of HECO's Program Manager and Arborists as they oversee the Vegetation Management program.

d. Please refer to the response to part c., above.

CA-IR-104

Ref: HECO T-8, page 48 & HECO-WP-811 (OMS Amortization).

At line 18, HECO-WP-811 is identified as the support for the calculation of the $432,000 OMS Amortization included in the 2009 rate case forecast. Referring to HECO-WP-811, the beginning deferred balance of $4,256,425 as of August 2007 represents an input amount. Please provide the following:

a. Please provide the amount of OMS expenditures, HECO overhead charges (if any) and AFUDC by month that comprises this beginning deferred balance.

b. Referring to part (a) of this information request, please provide the requested information in spreadsheet file format, including the monthly AFUDC rates applied and all underlying algorithms.

<u>HECO Response:</u>

a. See Attachment 1 for the actual deferred costs by month for the OMS project through August 2007. The total of Attachment 1 equals the beginning August 2007 deferred balance of $4,256,425. Amounts are shown by expense element, which identifies the on-cost charges and the two components of AFUDC.

b. See Attachment 2 for the calculation of AFUDC by month, including the rates applied for each month.

5th_seg	ind	exp ele	EXP_ELE_DESC	200507	200508	200509	200510	200511	200512
P0000828	ND	150	Labor Cost	175.79	5,513.66	19,476.86	18,446.12	6,689.51	10,231.51
P0000828	ND	155	Labor True-up	43.48	-911.31	-391.74	171.78	108.18	2.52
P0000828	ND	201	Matl-Issues/Purchases			13.33	2,686.76	1,319.55	13,413.09
P0000828	ND	404	Energy Delivery on-cost	0.00	0.00	0.00	0.00	0.00	0.00
P0000828	ND	406	Corp Admin on-cost	10.00	0.00	0.00	0.00	0.00	-6.00
P0000828	ND	421	Non-Prod Wages on-cost	19.25	0.00	0.00	4,221.65	712.29	1,099.23
P0000828	ND	422	Employee Benefits on-cost	39.40	0.00	0.00	8,907.69	1,544.79	2,383.97
P0000828	ND	423	Payroll Taxes - on-cost	18.46	0.00	0.00	3,206.47	454.74	684.53
P0000828	ND	430	AFUDC-Debt		5.54	225.43	705.00	1,018.48	1,225.24
P0000828	ND	431	AFUDC-Equity		13.90	565.27	1,767.82	2,553.88	3,072.33
P0000828	ND	461	IS Exp-Consultants						
P0000828	ND	462	IS Exp-PC Sftw Purch						45,251.97
P0000828	ND	463	IS Exp-MF Sftw Purch			87,379.00	65,152.16	2,466.28	37,381.76
P0000828	ND	501	Outside Svcs-General						15,543.68
P0000828	ND	505	Outside Svcs-Constr			108,258.00	4,330.32	26,418.71	26,984.66
P0000828	ND	506	Outside Svcs-Engr				154,249.51	6,169.98	
P0000828	ND	520	Mainland Travel						26.61
P0000828	ND	521	Meals & Entertainment			69.81	186.87	24.49	
				306.38	4,621.79	215,595.96	264,032.15	49,480.88	157,295.10
			AFUDC amount for month		19.44	790.70	2,472.82	3,572.36	4,297.57
			Charges for month w/o AFUDC		4,602.35	214,805.26	261,559.33	45,908.52	152,997.53

5th_seg	ind	exp ele	EXP_ELE_DESC	200601	200602	200603	200604	200605	200606
P0000828	ND	150	Labor Cost	11,516.09	9,680.69	8,336.88	30,331.17	21,718.99	22,459.70
P0000828	ND	155	Labor True-up	-1,018.81	-1,068.77	-540.11	-1,109.25	-1,109.49	-494.17
P0000828	ND	201	Matl-Issues/Purchases	132.60			46,099.02	1,575.60	238,091.59
P0000828	ND	404	Energy Delivery on-cost	0.00	0.00	0.00	0.00	0.00	0.00
P0000828	ND	406	Corp Admin on-cost	0.00	0.00	0.00	0.00	0.00	0.00
P0000828	ND	421	Non-Prod Wages on-cost	1,191.55	1,037.20	978.40	3,224.02	2,590.15	2,587.81
P0000828	ND	422	Employee Benefits on-cost	3,390.05	2,606.07	2,458.38	8,101.17	6,004.46	5,999.07
P0000828	ND	423	Payroll Taxes - on-cost	834.49	684.55	619.72	2,323.24	1,700.38	1,812.17
P0000828	ND	430	AFUDC-Debt	1,538.00	1,780.57	2,060.94	2,410.38	2,675.08	3,600.67
P0000828	ND	431	AFUDC-Equity	3,439.34	3,981.78	4,608.76	5,390.20	5,982.14	8,051.97
P0000828	ND	461	IS Exp-Consultants				7,499.96	937.49	
P0000828	ND	462	IS Exp-PC Sftw Purch	30,875.74	1,029.67		23,217.79		92,203.76
P0000828	ND	463	IS Exp-MF Sftw Purch			61,657.00			158,630.00
P0000828	ND	501	Outside Svcs-General	10,815.50	432.62		68,341.66	-12,057.51	48.56
P0000828	ND	505	Outside Svcs-Constr	12,623.76	15,250.44	28,013.83	3,518.48		216,516.00
P0000828	ND	506	Outside Svcs-Engr		119,197.28	2,984.26	20,739.92	829.60	90,892.98
P0000828	ND	520	Mainland Travel						6,195.60
P0000828	ND	521	Meals & Entertainment						
				75,338.31	154,612.10	111,178.06	220,087.76	30,846.89	846,595.71
			AFUDC amount for month	4,977.34	5,762.35	6,669.70	7,800.58	8,657.22	11,652.64
			Charges for month w/o AFUDC	70,360.97	148,849.75	104,508.36	212,287.18	22,189.67	834,943.07

5th_seg	ind	exp ele	EXP_ELE_DESC	200607	200608	200609	200610	200611	200612
P0000828	ND	150	Labor Cost	24,013.43	34,042.62	51,659.13	29,035.70	28,180.47	50,359.21
P0000828	ND	155	Labor True-up	-1,867.48	-3,527.74	-3,447.99	-1,661.92	-1,076.86	-1,698.42
P0000828	ND	201	Matl-Issues/Purchases	22,357.24	-224,846.89	3,684.14		-3,718.73	
P0000828	ND	404	Energy Delivery on-cost	0.00	0.00	0.00	0.00	0.00	0.00
P0000828	ND	406	Corp Admin on-cost	0.00	0.00	0.00	0.00	0.00	0.00
P0000828	ND	421	Non-Prod Wages on-cost	2,834.30	4,143.28	6,350.94	3,513.12	3,605.02	6,532.63
P0000828	ND	422	Employee Benefits on-cost	6,570.41	9,956.79	15,269.11	8,446.51	9,349.52	16,942.41
P0000828	ND	423	Payroll Taxes - on-cost	1,827.18	2,583.67	4,083.43	2,318.52	2,414.95	4,335.59
P0000828	ND	430	AFUDC-Debt	4,744.04	4,844.55	4,962.31	5,444.78	5,836.22	6,401.83
P0000828	ND	431	AFUDC-Equity	10,608.83	10,833.60	11,096.95	12,175.85	13,051.21	14,316.05
P0000828	ND	461	IS Exp-Consultants		3,250.00	13,000.00	9,750.00	13,000.00	13,000.00
P0000828	ND	462	IS Exp-PC Sftw Purch	24,720.79	5,224.16	38,619.30	10,508.85	8,731.76	
P0000828	ND	463	IS Exp-MF Sftw Purch	-149.00			61,657.00		
P0000828	ND	501	Outside Svcs-General	80,696.91		123.20	1,202.21	15,772.96	26,431.40
P0000828	ND	505	Outside Svcs-Constr	13,000.00		108,258.00	34,561.96	7,094.73	185,759.30
P0000828	ND	506	Outside Svcs-Engr	43,275.61	11,473.08		26,758.68	65,128.63	46,438.78
P0000828	ND	520	Mainland Travel	4,184.11					
P0000828	ND	521	Meals & Entertainment	491.12					
				237,307.49	-142,022.88	253,658.52	203,711.26	167,369.88	368,818.78
			AFUDC amount for month	15,352.87	15,678.15	16,059.26	17,620.63	18,887.43	20,717.88
			Charges for month w/o AFUDC	221,954.62	-157,701.03	237,599.26	186,090.63	148,482.45	348,100.90

5th_seg	ind	exp ele	EXP_ELE_DESC	200701	200702	200703	200704	200705	200706
P0000828	ND	150	Labor Cost	54,714.39	25,331.08	46,077.55	33,592.60	37,644.45	29,761.94
P0000828	ND	155	Labor True-up	-2,704.34	-3,012.92	-3,544.22	-2,071.58	483.98	1,174.46
P0000828	ND	201	Matl-Issues/Purchases	2,582.12					
P0000828	ND	404	Energy Delivery on-cost	0.00	0.00	0.00	0.00	0.00	0.00
P0000828	ND	406	Corp Admin on-cost	0.00	0.00	0.00	0.00	0.00	0.00
P0000828	ND	421	Non-Prod Wages on-cost	6,173.17	2,993.76	5,267.86	3,883.68	4,418.28	4,303.80
P0000828	ND	422	Employee Benefits on-cost	17,925.49	8,572.53	15,027.67	10,797.04	12,187.25	8,740.35
P0000828	ND	423	Payroll Taxes - on-cost	4,254.16	1,825.42	3,439.81	2,307.57	2,791.15	2,264.77
P0000828	ND	430	AFUDC-Debt	7,292.98	7,623.07	8,026.87	8,440.05	8,708.59	8,972.97
P0000828	ND	431	AFUDC-Equity	14,996.10	15,674.85	16,505.15	17,354.74	17,906.92	18,450.55
P0000828	ND	461	IS Exp-Consultants	13,000.00	6,531.25	19,593.75			
P0000828	ND	462	IS Exp-PC Sftw Purch				7,675.05		14,107.50
P0000828	ND	463	IS Exp-MF Sftw Purch			61,657.00			
P0000828	ND	501	Outside Svcs-General	302.12	83.72	13,396.47	40,471.60	13,540.35	15,967.72
P0000828	ND	505	Outside Svcs-Constr	48,330.24	32,291.67	18,361.80			
P0000828	ND	506	Outside Svcs-Engr	18,993.50	16,016.88	48,989.27		23,756.40	14,933.41
P0000828	ND	520	Mainland Travel						
P0000828	ND	521	Meals & Entertainment						
				185,859.93	113,931.31	252,798.98	122,450.75	121,437.37	118,677.47
			AFUDC amount for month	22,289.08	23,297.92	24,532.02	25,794.79	26,615.51	27,423.52
			Charges for month w/o AFUDC	163,570.85	90,633.39	228,266.96	96,655.96	94,821.86	91,253.95

5th_seg	ind	exp ele	EXP_ELE_DESC	200707	
P0000828	ND	150	Labor Cost	40,273.15	
P0000828	ND	155	Labor True-up	-491.29	
P0000828	ND	201	Matl-Issues/Purchases		
P0000828	ND	404	Energy Delivery on-cost	0.00	
P0000828	ND	406	Corp Admin on-cost	0.00	
P0000828	ND	421	Non-Prod Wages on-cost	5,477.76	
P0000828	ND	422	Employee Benefits on-cost	11,775.98	
P0000828	ND	423	Payroll Taxes - on-cost	2,912.18	
P0000828	ND	430	AFUDC-Debt	9,238.45	
P0000828	ND	431	AFUDC-Equity	18,996.45	
P0000828	ND	461	IS Exp-Consultants		
P0000828	ND	462	IS Exp-PC Sftw Purch		
P0000828	ND	463	IS Exp-MF Sftw Purch		
P0000828	ND	501	Outside Svcs-General	34,251.97	
P0000828	ND	505	Outside Svcs-Constr		
P0000828	ND	506	Outside Svcs-Engr		
P0000828	ND	520	Mainland Travel		
P0000828	ND	521	Meals & Entertainment		
				122,434.65	4,256,424.60
			AFUDC amount for month	28,234.90	
			Charges for month w/o AFUDC	94,199.75	

HECO
Computation of monthly AFUDC on deferred OMS system development project costs
2005

	OMS Def Cost (Account 186070)	AFUDC Equity Dr. EE010802 (431) Cr. 42002000	AFUDC Debt Dr. EE010802 (430) Cr. 42004000
G.L. balance 12/31/04	0.00		
Costs incurred in 1/05			
Add AFUDC @ .7039%	0.00	0.00	0.00
G.L. balance 1/31/05	0.00		
Costs incurred in 2/05			
Add AFUDC @ .7039%	0.00	0.00	0.00
G.L. balance 2/28/05	0.00		
Costs incurred in 3/05			
Add AFUDC @ .7039%	0.00	0.00	0.00
G.L. balance 3/31/05	0.00		
Costs incurred in 4/05			
Add AFUDC @ .7039%	0.00	0.00	0.00
G.L. balance 4/30/05	0.00		
Costs incurred in 5/05			
Add AFUDC @ .7039%	0.00	0.00	0.00
G.L. balance 5/31/05	0.00		
Costs incurred in 6/05			
Add AFUDC @ .7039%	0.00	0.00	0.00
G.L. balance 6/30/05	0.00		
Costs incurred in 7/05	306.38		
Add AFUDC @ .7039%	1.08	0.77	0.31
G.L. balance 7/31/05	307.46		
Costs incurred in 8/05	4,602.35		
Add AFUDC @ .7039%	18.36	13.13	5.24
G.L. balance 8/31/05	4,928.17		
Costs incurred in 9/05	214,805.26		
Add AFUDC @ .7039%	790.70	565.27	225.43
G.L. balance 9/30/05	220,524.13		
Costs incurred in 10/05	261,559.33		
Add AFUDC @ .7039%	2,472.83	1,767.82	705.00
G.L. balance 10/31/05	484,556.28		
Costs incurred in 11/05	45,908.52		
Add AFUDC @ .7039%	3,572.37	2,553.88	1,018.48
G.L. balance 11/30/05	534,037.17		
Costs incurred in 12/05	152,997.53		
Add AFUDC @ .7039%	4,297.56	3,072.33	1,225.24
G.L. balance 12/31/05	691,332.26	7,973.20	3,179.69

2005 AFUDC Debt rate	0.00200682	= rate in ELLIPSE table
2005 AFUDC Equity rate	0.00503218	= rate in ELLIPSE table
	0.00703900	

Notes:

o AFUDC rate is 0.7039% per month in 2005. Budgets reviews rate quarterly.

o AFUDC amount for current month is computed on prior end-of-month balance plus 1/2 of current month's additions

o AFUDC is added on AFUDC -- 0.7039% rate is reduced to reflect this compounding

HECO
Computation of monthly AFUDC on deferred OMS system development project costs
2006
(Expected completion date is May 2007)

	OMS Def Cost (Account 186070)	AFUDC Equity Dr. EE010802 (431) Cr. 42002000	AFUDC Debt Dr. EE010802 (430) Cr. 42004000
G.L. balance 12/31/05	691,332.26	7,973.20	3,179.69
Costs incurred in 1/06	70,360.97		
Add AFUDC @ .6851%	4,977.34	3,439.34	1,538.00
G.L. balance 1/31/06	766,670.57		
Costs incurred in 2/06	148,849.75		
Add AFUDC @ .6851%	5,762.34	3,981.78	1,780.57
G.L. balance 2/28/06	921,282.66		
Costs incurred in 3/06	104,508.36		
Add AFUDC @ .6851%	6,669.70	4,608.76	2,060.94
G.L. balance 3/31/06	1,032,460.72		
Costs incurred in 4/06	212,287.18		
Add AFUDC @ .6851%	7,800.58	5,390.20	2,410.38
G.L. balance 4/30/06	1,252,548.48		
Costs incurred in 5/06	22,189.67		
Add AFUDC @ .6851%	8,657.22	5,982.14	2,675.08
G.L. balance 5/31/06	1,283,395.37		
Costs incurred in 6/06	834,943.07		
Add AFUDC @ .6851%	11,652.64	8,051.97	3,600.67
G.L. balance 6/30/06	2,129,991.08		
Costs incurred in 7/06	221,954.62		
Add AFUDC @ .6851%	15,352.87	10,608.83	4,744.04
G.L. balance 7/31/06	2,367,298.58		
Costs incurred in 8/06	(157,701.03)		
Add AFUDC @ .6851%	15,678.16	10,833.60	4,844.55
G.L. balance 8/31/06	2,225,275.70		
Costs incurred in 9/06	237,599.26		
Add AFUDC @ .6851%	16,059.26	11,096.95	4,962.31
G.L. balance 9/30/06	2,478,934.22		
Costs incurred in 10/06	186,090.63		
Add AFUDC @ .6851%	17,620.63	12,175.85	5,444.78
G.L. balance 10/31/06	2,682,645.49		
Costs incurred in 11/06	148,482.45		
Add AFUDC @ .6851%	18,887.43	13,051.21	5,836.22
G.L. balance 11/30/06	2,850,015.37		
Costs incurred in 12/06	348,100.90		
Add AFUDC @ .6851%	20,717.87	14,316.05	6,401.83
G.L. balance 12/31/06	3,218,834.14	103,536.69	46,299.36

Monthly 2006 AFUDC Debt rate	0.00211696	= rate in ELLIPSE table
Monthly 2006 AFUDC Equity rate	0.00473404	= rate in ELLIPSE table
	0.00685100	

Notes:

o AFUDC rate is 0.6851% per month in 2006. Budgets reviews rate quarterly.

o AFUDC amount for current month is computed on prior end-of-month balance plus 1/2 of current month's additions

o AFUDC is added on AFUDC -- 0.6851% rate has been reduced to reflect this compounding

HECO
Computation of monthly AFUDC on deferred OMS system development project costs
2007
(Project went live on July 28, 2007)

	OMS Def Cost (Account 186070)	AFUDC Equity Dr. EE010802 (431) Cr. 42002000	AFUDC Debt Dr. EE010802 (430) Cr. 42004000
G.L. balance 12/31/06	3,218,834.14		
Costs incurred in 1/07	163,570.85		
Add AFUDC @ .6753%	22,289.08	14,996.10	7,292.98
G.L. balance 1/31/07	3,404,694.07		
Costs incurred in 2/07	90,633.39		
Add AFUDC @ .6753%	23,297.92	15,674.85	7,623.07
G.L. balance 2/28/07	3,518,625.39		
Costs incurred in 3/07	228,266.96		
Add AFUDC @ .6753%	24,532.02	16,505.15	8,026.87
G.L. balance 3/31/07	3,771,424.37		
Costs incurred in 4/07	96,655.96		
Add AFUDC @ .6753%	25,794.79	17,354.74	8,440.05
G.L. balance 4/30/07	3,893,875.11		
Costs incurred in 5/07	94,821.86		
Add AFUDC @ .6753%	26,615.50	17,906.92	8,708.59
G.L. balance 5/31/07	4,015,312.48		
Costs incurred in 6/07	91,253.95		
Add AFUDC @ .6753%	27,423.52	18,450.55	8,972.97
G.L. balance 6/30/07	4,133,989.95		
Costs incurred in 7/07	94,199.75		
Add AFUDC @ .6753%	28,234.90	18,996.45	9,238.45
G.L. balance 7/31/07	4,256,424.60		

OMS project go-live 7/28/07

Monthly 2007 AFUDC Debt rate	0.00220958	= rate in ELLIPSE table
Monthly 2007 AFUDC Equity rate	0.00454342	= rate in ELLIPSE table
	0.00675300	

Notes:
o AFUDC rate is 0.6753% per month in 2007. Budgets reviews rate quarterly.
(Annual rate = 8.1036%)

o AFUDC amount for current month is computed on prior end-of-month balance plus
1/2 of current month's additions

o AFUDC is added on AFUDC -- 0.6753% rate has been reduced to reflect this compounding

CA-IR-105

Ref: HECO T-8, pages 52-54 (AMI Project).

a. Have any cost/benefit studies been prepared by, or for, HECO for purposes of comparing the cost savings or other benefits HECO's customers might expect to realize from AMI deployment with the costs of implementing and rolling out AMI to the customers of HECO, HELCO and/or MECO?
b. If so, please identify and provide a copy of each such study or analysis.

HECO Response:

a. No. As in the case of HECO's Customer Information System (CIS), HECO's deployment plans for AMI include a central Meter Data Management System (MDMS) and a Regional Network Interface (RNI), which will be shared by HECO, MECO, and HELCO. Costs for the MDMS and RNI will be allocated to each utility based on customer counts.

b. See response to subpart a. above.

CA-IR-106

Ref: HECO T-8, pages 57-58 (T&D Training Costs).

The referenced testimony discusses additional CIS training costs in the amount of $526,000. Please provide the following:

a. Please provide additional documentation supporting the derivation of the $526,000 forecast amount. If the requested information has already been provided by the Company (e.g., in response to CA-IR-2), please provide a pinpoint reference to the specific pages containing the requested information.

b. If not provided in response to part (a) of this information request, please provide a breakdown of the $526,000 by type of cost (e.g., training materials, outside trainer fees, travel, in-house labor, etc.).

c. Please provide a monthly breakdown of the actual T&D training costs incurred by HECO during 2007 and 2008, to date, showing labor costs by position and non-labor costs by payee.

HECO Response:

a. In reviewing the 2009 test year expenses to respond to this information request, it was discovered that the identification of the total $526,000 as CIS T&D training costs was incorrect. The $526,000 figure is composed of the following:

Training Costs	$293,341
Reclassed On-costs	$232,418
Total	$525,759

The on-costs included in the CIS expenses are those that are calculated as part of the normal overhead calculation process in the Ellipse system, but as agreed to by the parties in Docket No. 04-0268, such on-costs will be expensed in accordance with SOP-98-1 (see Decision and Order No. 21798, issued May 3, 2005, in Docket No. 04-2068). Please refer to Attachment 1 for documentation of the $525,759 CIS expense amount. Documentation of the labor hours associated with the CIS training was also submitted in the response to

CA-IR-1, HECO T-8, Attachment 4D, page 1, and identified as "NE" in the column labeled "*Ind #".

b. As indicated in Attachment 1, the CIS training expenses are primarily a result of labor costs associated with employees' training hours and related overheads. The RAs and employee positions identified for training on the new CIS in 2009 were based on the departments and end-users that presently have access to and utilize the existing customer information system, ACCESS, in their normal course of business.

c. A monthly breakdown, of the actual T&D training costs incurred by HECO during 2007 and 2008 to date, showing labor costs by position and non-labor costs by payee can be found in Attachment 2.

TRAINING

Project	_RA	Line item	Cost Category	Labor Class	Location	_Ind	_EE	Forecast '09 $	Forecast '09 Hours	01/09 $	02/09 $	03/09 $	04/09 $	05/09 $	05/09 Hours	06/09 $	07/09 $	08/09 $	09/09 $	10/09 $	11/09 $	12/09 $
P0000571	PDA	Heco Trainee (DA-TC)-Ph5	LABOR	__TC-ED	OAH	NE	150	$ 540.16	16.00	$ -	$ -	$ -	$ -	$ 540.16	16	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDA		OVERHEADS			NE	404	$ 608.64	-	$ -	$ -	$ -	$ -	$ 608.64	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDA		OVERHEADS			NE	406	$ 63.52	-	$ -	$ -	$ -	$ -	$ 63.52	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDA		OVERHEADS			NE	421	$ 80.00	-	$ -	$ -	$ -	$ -	$ 80.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDA		OVERHEADS			NE	422	$ 173.28	-	$ -	$ -	$ -	$ -	$ 173.28	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDA		OVERHEADS			NE	423	$ 44.78	-	$ -	$ -	$ -	$ -	$ 44.78	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDC	Heco Trainee (DC-BUOC)-Ph5	LABOR	__BUOCED	OAH	NE	150	$ 2,424.00	96.00	$ -	$ -	$ -	$ -	$ 2,424.00	96	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDC		OVERHEADS			NE	404	$ 3,651.84	-	$ -	$ -	$ -	$ -	$ 3,651.84	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDC		OVERHEADS			NE	406	$ 381.12	-	$ -	$ -	$ -	$ -	$ 381.12	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDC		OVERHEADS			NE	421	$ 480.00	-	$ -	$ -	$ -	$ -	$ 480.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDC		OVERHEADS			NE	422	$ 1,039.68	-	$ -	$ -	$ -	$ -	$ 1,039.68	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDC		OVERHEADS			NE	423	$ 200.95	-	$ -	$ -	$ -	$ -	$ 200.95	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDD	Heco Trainee (DD-TC)-Ph5	LABOR	__TC-ED	OAH	NE	150	$ 540.16	16.00	$ -	$ -	$ -	$ -	$ 540.16	16	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDD		OVERHEADS			NE	404	$ 608.64	-	$ -	$ -	$ -	$ -	$ 608.64	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDD		OVERHEADS			NE	406	$ 63.52	-	$ -	$ -	$ -	$ -	$ 63.52	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDD		OVERHEADS			NE	421	$ 80.00	-	$ -	$ -	$ -	$ -	$ 80.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDD		OVERHEADS			NE	422	$ 173.28	-	$ -	$ -	$ -	$ -	$ 173.28	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDD		OVERHEADS			NE	423	$ 44.78	-	$ -	$ -	$ -	$ -	$ 44.78	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDF	Heco Trainee (DF-BUTC)-Ph5	LABOR	D_PTM	OAH	NE	150	$ 2,072.16	48.00	$ -	$ -	$ -	$ -	$ 2,072.16	48	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDF	Heco Trainee (DS-BUTC)-Ph5	LABOR	D_PTM	OAH	NE	150	$ 690.72	16.00	$ -	$ -	$ -	$ -	$ 690.72	16	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDF		OVERHEADS			NE	404	$ 2,434.56	-	$ -	$ -	$ -	$ -	$ 2,434.56	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDF		OVERHEADS			NE	406	$ 254.08	-	$ -	$ -	$ -	$ -	$ 254.08	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDF		OVERHEADS			NE	421	$ 320.00	-	$ -	$ -	$ -	$ -	$ 320.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDF		OVERHEADS			NE	422	$ 693.12	-	$ -	$ -	$ -	$ -	$ 693.12	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDF		OVERHEADS			NE	423	$ 229.04	-	$ -	$ -	$ -	$ -	$ 229.04	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDH	Heco Trainee (DZ-TCS)-Ph5	LABOR	__TCS-ED	OAH	NE	150	$ 1,260.16	32.00	$ -	$ -	$ -	$ -	$ 1,260.16	32	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDH		OVERHEADS			NE	404	$ 1,217.28	-	$ -	$ -	$ -	$ -	$ 1,217.28	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDH		OVERHEADS			NE	406	$ 127.04	-	$ -	$ -	$ -	$ -	$ 127.04	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDH		OVERHEADS			NE	421	$ 160.00	-	$ -	$ -	$ -	$ -	$ 160.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDH		OVERHEADS			NE	422	$ 346.56	-	$ -	$ -	$ -	$ -	$ 346.56	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDH		OVERHEADS			NE	423	$ 104.47	-	$ -	$ -	$ -	$ -	$ 104.47	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDM	Heco Trainee (DM-TCS)-Ph5	LABOR	__TCS-ED	OAH	NE	150	$ 1,260.16	32.00	$ -	$ -	$ -	$ -	$ 1,260.16	32	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDM		OVERHEADS			NE	404	$ 1,217.28	-	$ -	$ -	$ -	$ -	$ 1,217.28	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDM		OVERHEADS			NE	406	$ 127.04	-	$ -	$ -	$ -	$ -	$ 127.04	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDM		OVERHEADS			NE	421	$ 160.00	-	$ -	$ -	$ -	$ -	$ 160.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDM		OVERHEADS			NE	422	$ 346.56	-	$ -	$ -	$ -	$ -	$ 346.56	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDM		OVERHEADS			NE	423	$ 104.47	-	$ -	$ -	$ -	$ -	$ 104.47	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDP	Heco Trainee (DC-TC)-Ph5	LABOR	__TC-ED	OAH	NE	150	$ 540.16	16.00	$ -	$ -	$ -	$ -	$ 540.16	16	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDP	Heco Trainee (DP-FS)-Ph5	LABOR	__FS-ED	OAH	NE	150	$ 844.16	16.00	$ -	$ -	$ -	$ -	$ 844.16	16	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDP	Heco Trainee (DP-TC)-Ph5	LABOR	__TC-ED	OAH	NE	150	$ 1,620.48	48.00	$ -	$ -	$ -	$ -	$ 1,620.48	48	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDP	Heco Trainee (DT-TC)-Ph5	LABOR	__TC-ED	OAH	NE	150	$ 540.16	16.00	$ -	$ -	$ -	$ -	$ 540.16	16	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDP		OVERHEADS			NE	404	$ 608.64	-	$ -	$ -	$ -	$ -	$ 608.64	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDP		OVERHEADS			NE	404	$ 3,043.20	-	$ -	$ -	$ -	$ -	$ 3,043.20	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDP		OVERHEADS			NE	406	$ 63.52	-	$ -	$ -	$ -	$ -	$ 63.52	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDP		OVERHEADS			NE	406	$ 317.60	-	$ -	$ -	$ -	$ -	$ 317.60	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDP		OVERHEADS			NE	421	$ 80.00	-	$ -	$ -	$ -	$ -	$ 80.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDP		OVERHEADS			NE	421	$ 400.00	-	$ -	$ -	$ -	$ -	$ 400.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDP		OVERHEADS			NE	422	$ 173.28	-	$ -	$ -	$ -	$ -	$ 173.28	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDP		OVERHEADS			NE	422	$ 866.40	-	$ -	$ -	$ -	$ -	$ 866.40	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDP		OVERHEADS			NE	423	$ 69.98	-	$ -	$ -	$ -	$ -	$ 69.98	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDP		OVERHEADS			NE	423	$ 223.90	-	$ -	$ -	$ -	$ -	$ 223.90	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDS	Heco Trainee (DJ-BUTC)-Ph5	LABOR	D_OHCREW	OAH	NE	150	$ 2,523.52	64.00	$ -	$ -	$ -	$ -	$ 2,523.52	64	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDS	Heco Trainee (DK-BUOC)-Ph5	LABOR	D_OHCREW	OAH	NE	150	$ 630.88	16.00	$ -	$ -	$ -	$ -	$ 630.88	16	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDS	Heco Trainee (DL-BUTC)-Ph5	LABOR	D_OHCREW	OAH	NE	150	$ 1,892.64	48.00	$ -	$ -	$ -	$ -	$ 1,892.64	48	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDS	Heco Trainee (DS-FS)-Ph5	LABOR	__FS-ED	OAH	NE	150	$ 844.16	16.00	$ -	$ -	$ -	$ -	$ 844.16	16	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDS	Heco Trainee (DS-TCS)-Ph5	LABOR	__TCS-ED	OAH	NE	150	$ 2,520.32	64.00	$ -	$ -	$ -	$ -	$ 2,520.32	64	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDS	Heco Trainee (DU-BUTC)-Ph5	LABOR	D_UGCREW	OAH	NE	150	$ 674.88	16.00	$ -	$ -	$ -	$ -	$ 674.88	16	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDS	Heco Trainee (DZ-FS)-Ph5	LABOR	__FS-ED	OAH	NE	150	$ 844.16	16.00	$ -	$ -	$ -	$ -	$ 844.16	16	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDS		OVERHEADS			NE	404	$ 1,217.28	-	$ -	$ -	$ -	$ -	$ 1,217.28	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDS		OVERHEADS			NE	404	$ 2,434.56	-	$ -	$ -	$ -	$ -	$ 2,434.56	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDS		OVERHEADS			NE	404	$ 4,869.12	-	$ -	$ -	$ -	$ -	$ 4,869.12	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDS		OVERHEADS			NE	404	$ 608.64	-	$ -	$ -	$ -	$ -	$ 608.64	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDS		OVERHEADS			NE	406	$ 127.04	-	$ -	$ -	$ -	$ -	$ 127.04	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDS		OVERHEADS			NE	406	$ 254.08	-	$ -	$ -	$ -	$ -	$ 254.08	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDS		OVERHEADS			NE	406	$ 508.16	-	$ -	$ -	$ -	$ -	$ 508.16	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDS		OVERHEADS			NE	406	$ 63.52	-	$ -	$ -	$ -	$ -	$ 63.52	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDS		OVERHEADS			NE	421	$ 160.00	-	$ -	$ -	$ -	$ -	$ 160.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDS		OVERHEADS			NE	421	$ 320.00	-	$ -	$ -	$ -	$ -	$ 320.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDS		OVERHEADS			NE	421	$ 640.00	-	$ -	$ -	$ -	$ -	$ 640.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDS		OVERHEADS			NE	421	$ 80.00	-	$ -	$ -	$ -	$ -	$ 80.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -

TRAINING

Project	_RA	Line item	Cost Category	Labor Class	Location	_Ind	_EE	Forecast '09 $	Forecast '09 Hours	01/09 $	02/09 $	03/09 $	04/09 $	05/09 $	05/09 Hours	06/09 $	07/09 $	08/09 $	09/09 $	10/09 $	11/09 $	12/09 $
P0000571	PDS		OVERHEADS			NE	422	$ 346.56	-	$ -	$ -	$ -	$ -	$ 346.56	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDS		OVERHEADS			NE	422	$ 693.12	-	$ -	$ -	$ -	$ -	$ 693.12	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDS		OVERHEADS			NE	422	$ 1,386.24	-	$ -	$ -	$ -	$ -	$ 1,386.24	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDS		OVERHEADS			NE	422	$ 173.28	-	$ -	$ -	$ -	$ -	$ 173.28	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDS		OVERHEADS			NE	423	$ 139.96	-	$ -	$ -	$ -	$ -	$ 139.96	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDS		OVERHEADS			NE	423	$ 208.93	-	$ -	$ -	$ -	$ -	$ 208.93	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDS		OVERHEADS			NE	423	$ 418.40	-	$ -	$ -	$ -	$ -	$ 418.40	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDS		OVERHEADS			NE	423	$ 55.95	-	$ -	$ -	$ -	$ -	$ 55.95	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDU	Heco Trainee (DU-TCS)-Ph5	LABOR	__TCS-ED	OAH	NE	150	$ 1,260.16	32.00	$ -	$ -	$ -	$ -	$ 1,260.16	32	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDU		OVERHEADS			NE	404	$ 1,217.28	-	$ -	$ -	$ -	$ -	$ 1,217.28	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDU		OVERHEADS			NE	406	$ 127.04	-	$ -	$ -	$ -	$ -	$ 127.04	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDU		OVERHEADS			NE	421	$ 160.00	-	$ -	$ -	$ -	$ -	$ 160.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDU		OVERHEADS			NE	422	$ 346.56	-	$ -	$ -	$ -	$ -	$ 346.56	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PDU		OVERHEADS			NE	423	$ 104.47	-	$ -	$ -	$ -	$ -	$ 104.47	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRA	Heco Trainee (RA-BUOCED)-Ph5	LABOR	__BUOCED	OAH	NE	150	$ 2,424.00	96.00	$ -	$ -	$ -	$ -	$ 2,424.00	96	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRA	Heco Trainee (RA-TCS-ED)-Ph5	LABOR	__TCS-ED	OAH	NE	150	$ 1,260.16	32.00	$ -	$ -	$ -	$ -	$ 1,260.16	32	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRA		OVERHEADS			NE	404	$ 3,651.84	-	$ -	$ -	$ -	$ -	$ 3,651.84	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRA		OVERHEADS			NE	404	$ 1,217.28	-	$ -	$ -	$ -	$ -	$ 1,217.28	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRA		OVERHEADS			NE	406	$ 381.12	-	$ -	$ -	$ -	$ -	$ 381.12	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRA		OVERHEADS			NE	406	$ 127.04	-	$ -	$ -	$ -	$ -	$ 127.04	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRA		OVERHEADS			NE	421	$ 480.00	-	$ -	$ -	$ -	$ -	$ 480.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRA		OVERHEADS			NE	421	$ 160.00	-	$ -	$ -	$ -	$ -	$ 160.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRA		OVERHEADS			NE	422	$ 1,039.68	-	$ -	$ -	$ -	$ -	$ 1,039.68	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRA		OVERHEADS			NE	422	$ 346.56	-	$ -	$ -	$ -	$ -	$ 346.56	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRA		OVERHEADS			NE	423	$ 200.95	-	$ -	$ -	$ -	$ -	$ 200.95	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRA		OVERHEADS			NE	423	$ 104.47	-	$ -	$ -	$ -	$ -	$ 104.47	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRD	Heco Trainee (RD-R_OPEDIS)-Ph5	LABOR	R_OPEDIS	OAH	NE	150	$ 12,836.16	288.00	$ -	$ -	$ -	$ -	$ 12,836.16	288	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRD	Heco Trainee (RD-R_OPESTF)-Ph5	LABOR	R_OPESTF	OAH	NE	150	$ 4,256.64	96.00	$ -	$ -	$ -	$ -	$ 4,256.64	96	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRD	Heco Trainee (RD-R-OPESUP)-Ph5	LABOR	R_OPESUP	OAH	NE	150	$ 8,430.72	192.00	$ -	$ -	$ -	$ -	$ 8,430.72	192	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRD		OVERHEADS			NE	404	$ 10,955.52	-	$ -	$ -	$ -	$ -	$ 10,955.52	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRD		OVERHEADS			NE	404	$ 3,651.84	-	$ -	$ -	$ -	$ -	$ 3,651.84	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRD		OVERHEADS			NE	404	$ 7,303.68	-	$ -	$ -	$ -	$ -	$ 7,303.68	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRD		OVERHEADS			NE	406	$ 1,143.36	-	$ -	$ -	$ -	$ -	$ 1,143.36	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRD		OVERHEADS			NE	406	$ 381.12	-	$ -	$ -	$ -	$ -	$ 381.12	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRD		OVERHEADS			NE	406	$ 762.24	-	$ -	$ -	$ -	$ -	$ 762.24	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRD		OVERHEADS			NE	421	$ 1,440.00	-	$ -	$ -	$ -	$ -	$ 1,440.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRD		OVERHEADS			NE	421	$ 480.00	-	$ -	$ -	$ -	$ -	$ 480.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRD		OVERHEADS			NE	421	$ 960.00	-	$ -	$ -	$ -	$ -	$ 960.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRD		OVERHEADS			NE	422	$ 3,119.04	-	$ -	$ -	$ -	$ -	$ 3,119.04	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRD		OVERHEADS			NE	422	$ 1,039.68	-	$ -	$ -	$ -	$ -	$ 1,039.68	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRD		OVERHEADS			NE	422	$ 2,079.36	-	$ -	$ -	$ -	$ -	$ 2,079.36	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRD		OVERHEADS			NE	423	$ 1,064.12	-	$ -	$ -	$ -	$ -	$ 1,064.12	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRD		OVERHEADS			NE	423	$ 352.88	-	$ -	$ -	$ -	$ -	$ 352.88	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRD		OVERHEADS			NE	423	$ 698.91	-	$ -	$ -	$ -	$ -	$ 698.91	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRE	Heco Trainee (RE-R_ENGMAP)-Ph5	LABOR	R_ENGMAP	OAH	NE	150	$ 4,832.00	160.00	$ -	$ -	$ -	$ -	$ 4,832.00	160	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRE	Heco Trainee (RE-R_ENGSRE)-Ph5	LABOR	R_ENGSRE	OAH	NE	150	$ 1,536.32	32.00	$ -	$ -	$ -	$ -	$ 1,536.32	32	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRE	Heco Trainee (RE-R_ENGSTF)-Ph5	LABOR	R_ENGSTF	OAH	NE	150	$ 1,027.20	32.00	$ -	$ -	$ -	$ -	$ 1,027.20	32	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRE	Heco Trainee (RE-R_ENGSUP)-Ph5	LABOR	R_ENGSUP	OAH	NE	150	$ 1,016.96	32.00	$ -	$ -	$ -	$ -	$ 1,016.96	32	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRE		OVERHEADS			NE	404	$ 6,086.40	-	$ -	$ -	$ -	$ -	$ 6,086.40	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRE		OVERHEADS			NE	404	$ 1,217.28	-	$ -	$ -	$ -	$ -	$ 1,217.28	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRE		OVERHEADS			NE	404	$ 1,217.28	-	$ -	$ -	$ -	$ -	$ 1,217.28	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRE		OVERHEADS			NE	404	$ 1,217.28	-	$ -	$ -	$ -	$ -	$ 1,217.28	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRE		OVERHEADS			NE	406	$ 635.20	-	$ -	$ -	$ -	$ -	$ 635.20	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRE		OVERHEADS			NE	406	$ 127.04	-	$ -	$ -	$ -	$ -	$ 127.04	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRE		OVERHEADS			NE	406	$ 127.04	-	$ -	$ -	$ -	$ -	$ 127.04	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRE		OVERHEADS			NE	406	$ 127.04	-	$ -	$ -	$ -	$ -	$ 127.04	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRE		OVERHEADS			NE	421	$ 800.00	-	$ -	$ -	$ -	$ -	$ 800.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRE		OVERHEADS			NE	421	$ 160.00	-	$ -	$ -	$ -	$ -	$ 160.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRE		OVERHEADS			NE	421	$ 160.00	-	$ -	$ -	$ -	$ -	$ 160.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRE		OVERHEADS			NE	421	$ 160.00	-	$ -	$ -	$ -	$ -	$ 160.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRE		OVERHEADS			NE	422	$ 1,732.80	-	$ -	$ -	$ -	$ -	$ 1,732.80	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRE		OVERHEADS			NE	422	$ 346.56	-	$ -	$ -	$ -	$ -	$ 346.56	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRE		OVERHEADS			NE	422	$ 346.56	-	$ -	$ -	$ -	$ -	$ 346.56	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRE		OVERHEADS			NE	422	$ 346.56	-	$ -	$ -	$ -	$ -	$ 346.56	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRE		OVERHEADS			NE	423	$ 400.57	-	$ -	$ -	$ -	$ -	$ 400.57	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRE		OVERHEADS			NE	423	$ 127.36	-	$ -	$ -	$ -	$ -	$ 127.36	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRE		OVERHEADS			NE	423	$ 85.15	-	$ -	$ -	$ -	$ -	$ 85.15	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRE		OVERHEADS			NE	423	$ 84.31	-	$ -	$ -	$ -	$ -	$ 84.31	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRR	Heco Trainee (RR-TC)-Ph5	LABOR	R_RELENG	OAH	NE	150	$ 1,517.12	32.00	$ -	$ -	$ -	$ -	$ 1,517.12	32	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRR		OVERHEADS			NE	404	$ 1,217.28	-	$ -	$ -	$ -	$ -	$ 1,217.28	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRR		OVERHEADS			NE	406	$ 127.04	-	$ -	$ -	$ -	$ -	$ 127.04	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRR		OVERHEADS			NE	421	$ 160.00	-	$ -	$ -	$ -	$ -	$ 160.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRR		OVERHEADS			NE	422	$ 346.56	-	$ -	$ -	$ -	$ -	$ 346.56	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRR		OVERHEADS			NE	423	$ 125.77	-	$ -	$ -	$ -	$ -	$ 125.77	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -

TRAINING

Project	_RA	Line item	Cost Category	Labor Class	Location	_Ind	_EE	Forecast '09 $	Forecast '09 Hours	01/09 $	02/09 $	03/09 $	04/09 $	05/09 $	05/09 Hours	06/09 $	07/09 $	08/09 $	09/09 $	10/09 $	11/09 $	12/09 $
P0000571	PRS	Heco Trainee (RS-R_SUBENG)-Ph5	LABOR	R_SUBENG	OAH	NE	150	$ 1,372.48	32.00	$ -	$ -	$ -	$ -	$ 1,372.48	32	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRS		OVERHEADS			NE	404	$ 1,217.28	-	$ -	$ -	$ -	$ -	$ 1,217.28	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRS		OVERHEADS			NE	406	$ 127.04	-	$ -	$ -	$ -	$ -	$ 127.04	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRS		OVERHEADS			NE	421	$ 160.00	-	$ -	$ -	$ -	$ -	$ 160.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRS		OVERHEADS			NE	422	$ 346.56	-	$ -	$ -	$ -	$ -	$ 346.56	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PRS		OVERHEADS			NE	423	$ 113.78	-	$ -	$ -	$ -	$ -	$ 113.78	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PVL	Heco Trainee (VL-BUTCED)-Ph5	LABOR	__BUTCED	OAH	NE	150	$ 304.16	8.00	$ -	$ -	$ -	$ -	$ 304.16	8	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PVL		OVERHEADS			NE	404	$ 304.32	-	$ -	$ -	$ -	$ -	$ 304.32	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PVL		OVERHEADS			NE	406	$ 31.76	-	$ -	$ -	$ -	$ -	$ 31.76	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PVL		OVERHEADS			NE	421	$ 40.00	-	$ -	$ -	$ -	$ -	$ 40.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PVL		OVERHEADS			NE	422	$ 86.64	-	$ -	$ -	$ -	$ -	$ 86.64	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PVL		OVERHEADS			NE	423	$ 25.21	-	$ -	$ -	$ -	$ -	$ 25.21	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA	Heco Trainee (WA-BUOCW)-Ph5	LABOR	__BUOCW	OAH	NE	150	$ 2,578.56	96.00	$ -	$ -	$ -	$ -	$ 2,578.56	96	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA	Heco Trainee (WA-IW)-Ph5	LABOR	__I-W	OAH	NE	150	$ 510.96	24.00	$ -	$ -	$ -	$ -	$ 510.96	24	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA	Heco Trainee (WA-TCS-W)-Ph5	LABOR	__TCS-W	OAH	NE	150	$ 680.16	24.00	$ -	$ -	$ -	$ -	$ 680.16	24	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA	Heco Trainee (WA-TC-W)-Ph5	LABOR	__TC-W	OAH	NE	150	$ 1,521.60	48.00	$ -	$ -	$ -	$ -	$ 1,521.60	48	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA	Heco Trainee (WX-BUOC)-Ph5	LABOR	__BUOCW	OAH	NE	150	$ 644.64	24.00	$ -	$ -	$ -	$ -	$ 644.64	24	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA		OVERHEADS			NE	406	$ 476.40	-	$ -	$ -	$ -	$ -	$ 476.40	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA		OVERHEADS			NE	406	$ 95.28	-	$ -	$ -	$ -	$ -	$ 95.28	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA		OVERHEADS			NE	406	$ 190.56	-	$ -	$ -	$ -	$ -	$ 190.56	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA		OVERHEADS			NE	406	$ 95.28	-	$ -	$ -	$ -	$ -	$ 95.28	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA		OVERHEADS			NE	407	$ 11,545.20	-	$ -	$ -	$ -	$ -	$ 11,545.20	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA		OVERHEADS			NE	407	$ 2,309.04	-	$ -	$ -	$ -	$ -	$ 2,309.04	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA		OVERHEADS			NE	407	$ 4,618.08	-	$ -	$ -	$ -	$ -	$ 4,618.08	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA		OVERHEADS			NE	407	$ 2,309.04	-	$ -	$ -	$ -	$ -	$ 2,309.04	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA		OVERHEADS			NE	421	$ 600.00	-	$ -	$ -	$ -	$ -	$ 600.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA		OVERHEADS			NE	421	$ 120.00	-	$ -	$ -	$ -	$ -	$ 120.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA		OVERHEADS			NE	421	$ 240.00	-	$ -	$ -	$ -	$ -	$ 240.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA		OVERHEADS			NE	421	$ 120.00	-	$ -	$ -	$ -	$ -	$ 120.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA		OVERHEADS			NE	422	$ 1,299.60	-	$ -	$ -	$ -	$ -	$ 1,299.60	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA		OVERHEADS			NE	422	$ 259.92	-	$ -	$ -	$ -	$ -	$ 259.92	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA		OVERHEADS			NE	422	$ 519.84	-	$ -	$ -	$ -	$ -	$ 519.84	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA		OVERHEADS			NE	422	$ 259.92	-	$ -	$ -	$ -	$ -	$ 259.92	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA		OVERHEADS			NE	423	$ 267.20	-	$ -	$ -	$ -	$ -	$ 267.20	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA		OVERHEADS			NE	423	$ 42.36	-	$ -	$ -	$ -	$ -	$ 42.36	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA		OVERHEADS			NE	423	$ 126.14	-	$ -	$ -	$ -	$ -	$ 126.14	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA		OVERHEADS			NE	423	$ 56.39	-	$ -	$ -	$ -	$ -	$ 56.39	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP	Heco Trainee (WP-BUOC)-Ph5	LABOR	W_CUENGR	OAH	NE	150	$ 5,827.68	144.00	$ -	$ -	$ -	$ -	$ 5,827.68	144	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP	Heco Trainee (WP-FS)-Ph5	LABOR	__FS	OAH	NE	150	$ 1,062.96	24.00	$ -	$ -	$ -	$ -	$ 1,062.96	24	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP	Heco Trainee (WP-JRPLNR)-Ph5	LABOR	W_JRPLNR	OAH	NE	150	$ 3,452.40	120.00	$ -	$ -	$ -	$ -	$ 3,452.40	120	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP	Heco Trainee (WP-PDSUPV)-Ph5	LABOR	W_PDSUPV	OAH	NE	150	$ 3,047.76	72.00	$ -	$ -	$ -	$ -	$ 3,047.76	72	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP	Heco Trainee (WP-RESHER)-Ph5	LABOR	W_RESHER	OAH	NE	150	$ 1,527.84	48.00	$ -	$ -	$ -	$ -	$ 1,527.84	48	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP	Heco Trainee (WP-TC)-Ph5	LABOR	W_CUPLNR	OAH	NE	150	$ 3,194.88	96.00	$ -	$ -	$ -	$ -	$ 3,194.88	96	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP	Heco Trainee (WP-TCS)-Ph5	LABOR	W_DEPLNR	OAH	NE	150	$ 2,795.76	72.00	$ -	$ -	$ -	$ -	$ 2,795.76	72	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	406	$ 95.28	-	$ -	$ -	$ -	$ -	$ 95.28	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	406	$ 571.68	-	$ -	$ -	$ -	$ -	$ 571.68	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	406	$ 381.12	-	$ -	$ -	$ -	$ -	$ 381.12	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	406	$ 285.84	-	$ -	$ -	$ -	$ -	$ 285.84	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	406	$ 476.40	-	$ -	$ -	$ -	$ -	$ 476.40	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	406	$ 285.84	-	$ -	$ -	$ -	$ -	$ 285.84	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	406	$ 190.56	-	$ -	$ -	$ -	$ -	$ 190.56	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	407	$ 13,854.24	-	$ -	$ -	$ -	$ -	$ 13,854.24	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	407	$ 9,236.16	-	$ -	$ -	$ -	$ -	$ 9,236.16	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	407	$ 6,927.12	-	$ -	$ -	$ -	$ -	$ 6,927.12	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	407	$ 11,545.20	-	$ -	$ -	$ -	$ -	$ 11,545.20	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	407	$ 6,927.12	-	$ -	$ -	$ -	$ -	$ 6,927.12	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	421	$ 120.00	-	$ -	$ -	$ -	$ -	$ 120.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	421	$ 720.00	-	$ -	$ -	$ -	$ -	$ 720.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	421	$ 480.00	-	$ -	$ -	$ -	$ -	$ 480.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	421	$ 360.00	-	$ -	$ -	$ -	$ -	$ 360.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	421	$ 600.00	-	$ -	$ -	$ -	$ -	$ 600.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	421	$ 360.00	-	$ -	$ -	$ -	$ -	$ 360.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	421	$ 240.00	-	$ -	$ -	$ -	$ -	$ 240.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	422	$ 259.92	-	$ -	$ -	$ -	$ -	$ 259.92	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	422	$ 1,559.52	-	$ -	$ -	$ -	$ -	$ 1,559.52	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	422	$ 1,039.68	-	$ -	$ -	$ -	$ -	$ 1,039.68	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	422	$ 779.76	-	$ -	$ -	$ -	$ -	$ 779.76	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	422	$ 1,299.60	-	$ -	$ -	$ -	$ -	$ 1,299.60	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	422	$ 779.76	-	$ -	$ -	$ -	$ -	$ 779.76	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	422	$ 519.84	-	$ -	$ -	$ -	$ -	$ 519.84	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	423	$ 88.12	-	$ -	$ -	$ -	$ -	$ 88.12	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	423	$ 483.11	-	$ -	$ -	$ -	$ -	$ 483.11	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	423	$ 264.86	-	$ -	$ -	$ -	$ -	$ 264.86	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	423	$ 231.77	-	$ -	$ -	$ -	$ -	$ 231.77	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	423	$ 286.20	-	$ -	$ -	$ -	$ -	$ 286.20	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	423	$ 252.66	-	$ -	$ -	$ -	$ -	$ 252.66	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -

TRAINING

Project	_RA	Line item	Cost Category	Labor Class	Location	_Ind	_EE	Forecast '09 $	Forecast '09 Hours	01/09 $	02/09 $	03/09 $	04/09 $	05/09 $	05/09 Hours	06/09 $	07/09 $	08/09 $	09/09 $	10/09 $	11/09 $	12/09 $
P0000571	PWP		OVERHEADS			NE	423	$ 126.66	-	$ -	$ -	$ -	$ -	$ 126.66	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWX	Heco Trainee (WX-TC)-Ph5	LABOR	__TC	OAH	NE	150	$ 832.80	24.00	$ -	$ -	$ -	$ -	$ 832.80	24	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWX	Heco Trainee (WX-W_MTELEC)-Ph5	LABOR	W_MTELEC	OAH	NE	150	$ 6,620.16	192.00	$ -	$ -	$ -	$ -	$ 6,620.16	192	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWX	Heco Trainee (WX-W_MTSUPV)-Ph5	LABOR	W_MTSUPV	OAH	NE	150	$ 961.44	24.00	$ -	$ -	$ -	$ -	$ 961.44	24	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWX		OVERHEADS			NE	406	$ 95.28	-	$ -	$ -	$ -	$ -	$ 95.28	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWX		OVERHEADS			NE	406	$ 762.24	-	$ -	$ -	$ -	$ -	$ 762.24	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWX		OVERHEADS			NE	406	$ 95.28	-	$ -	$ -	$ -	$ -	$ 95.28	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWX		OVERHEADS			NE	421	$ 120.00	-	$ -	$ -	$ -	$ -	$ 120.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWX		OVERHEADS			NE	421	$ 960.00	-	$ -	$ -	$ -	$ -	$ 960.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWX		OVERHEADS			NE	421	$ 120.00	-	$ -	$ -	$ -	$ -	$ 120.00	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWX		OVERHEADS			NE	422	$ 259.92	-	$ -	$ -	$ -	$ -	$ 259.92	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWX		OVERHEADS			NE	422	$ 2,079.36	-	$ -	$ -	$ -	$ -	$ 2,079.36	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWX		OVERHEADS			NE	422	$ 259.92	-	$ -	$ -	$ -	$ -	$ 259.92	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWX		OVERHEADS			NE	423	$ 69.04	-	$ -	$ -	$ -	$ -	$ 69.04	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWX		OVERHEADS			NE	423	$ 548.81	-	$ -	$ -	$ -	$ -	$ 548.81	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWX		OVERHEADS			NE	423	$ 79.70	-	$ -	$ -	$ -	$ -	$ 79.70	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
								$ 293,341.14	2,688	$ -	$ -	$ -	$ -	$ 293,341.14	2,688	$ -	$ -	$ -	$ -	$ -	$ -	$ -

RECLASSED ON-COSTS

Project	_RA	Line item	Cost Category	Labor Class	Location	_Ind	_EE	Forecast '09 $	Forecast '09 Hours	01/09 $	02/09 $	03/09 $	04/09 $	05/09 $	05/09 Hours	06/09 $	07/09 $	08/09 $	09/09 $	10/09 $	11/09 $	12/09 $
P0000571	PWA		OVERHEADS			NE	406	$ 1,905.60	-	$ 476.40	$ 476.40	$ 476.40	$ 476.40	$ -	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA		OVERHEADS			NE	406	$ 2,223.20	-	$ 476.40	$ 476.40	$ 476.40	$ 476.40	$ 317.60	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA		OVERHEADS			NE	406	$ 635.20	-	$ -	$ -	$ -	$ -	$ 317.60	-	$ 317.60	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA		OVERHEADS			NE	407	$ 46,180.80	-	$ 11,545.20	$ 11,545.20	$ 11,545.20	$ 11,545.20	$ -	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA		OVERHEADS			NE	407	$ 53,877.60	-	$ 11,545.20	$ 11,545.20	$ 11,545.20	$ 11,545.20	$ 7,696.80	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWA		OVERHEADS			NE	407	$ 15,393.60	-	$ -	$ -	$ -	$ -	$ 7,696.80	-	$ 7,696.80	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	406	$ 3,176.00	-	$ 635.20	$ 635.20	$ 635.20	$ 635.20	$ 635.20	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	406	$ 1,270.40	-	$ -	$ -	$ -	$ -	$ 635.20	-	$ 635.20	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	407	$ 76,968.00	-	$ 15,393.60	$ 15,393.60	$ 15,393.60	$ 15,393.60	$ 15,393.60	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -
P0000571	PWP		OVERHEADS			NE	407	$ 30,787.20	-	$ -	$ -	$ -	$ -	$ 15,393.60	-	$ 15,393.60	$ -	$ -	$ -	$ -	$ -	$ -
								$ 232,417.60	-	$ 40,072.00	$ 40,072.00	$ 40,072.00	$ 40,072.00	$ 48,086.40	-	$ 24,043.20	$ -	$ -	$ -	$ -	$ -	$ -

TOTAL								$ 525,758.74	2,688	$ 40,072.00	$ 40,072.00	$ 40,072.00	$ 40,072.00	$ 341,427.54	2,688	$ 24,043.20	$ -	$ -	$ -	$ -	$ -	$ -

Hawaiian Electric Company, Inc.
2009 Test Year

Monthly Training Labor Costs - 2007 and August 2008 YTD Recorded

BLOCK	FULL_PERIOD	ACT	ACCOUNT_CODE	IND	EE	AMOUNT	# HOURS	LAB CLASS
B34	200701	789	PWX789PDONENPWZZZZZ150	NE	150	29.42	1	MTELEC
B34	200701	789	PWX789PDONENPWZZZZZ406	NE	406	3.74	0	MTELEC
B34	200701	789	PWX789PDONENPWZZZZZ421	NE	421	4.26	0	MTELEC
B34	200701	789	PWX789PDONENPWZZZZZ422	NE	422	12.37	0	MTELEC
B34	200701	789	PWX789PDONENPWZZZZZ423	NE	423	2.41	0	MTELEC
B34	200701	789	PWX789PDONENPWZZZZZ155	NE	155	6.14	0	MTELEC
B34	200701	789	PWX789PDONENPWZZZZZ423	NE	423	0.50	0	MTELEC
			Jan-07			58.84	1	
B32	200702	789	PRX789PTONENPRZZZZZ150	NE	150	330.96	8	CONCRW
B32	200702	789	PRX789PTONENPRZZZZZ150	NE	150	330.96	8	CONCRW
B32	200702	789	PRX789PTONENPRZZZZZ150	NE	150	316.40	8	CONSUP
B32	200702	789	PRX789PTONENPRZZZZZ404	NE	404	288.00	0	CONCRW
B32	200702	789	PRX789PTONENPRZZZZZ404	NE	404	288.00	0	CONCRW
B32	200702	789	PRX789PTONENPRZZZZZ404	NE	404	288.00	0	CONSUP
B32	200702	789	PRX789PTONENPRZZZZZ406	NE	406	29.92	0	CONCRW
B32	200702	789	PRX789PTONENPRZZZZZ406	NE	406	29.92	0	CONCRW
B32	200702	789	PRX789PTONENPRZZZZZ406	NE	406	29.92	0	CONSUP
B32	200702	789	PRX789PTONENPRZZZZZ421	NE	421	34.56	0	CONCRW
B32	200702	789	PRX789PTONENPRZZZZZ421	NE	421	34.56	0	CONCRW
B32	200702	789	PRX789PTONENPRZZZZZ421	NE	421	34.56	0	CONSUP
B32	200702	789	PRX789PTONENPRZZZZZ422	NE	422	98.96	0	CONCRW
B32	200702	789	PRX789PTONENPRZZZZZ422	NE	422	98.96	0	CONCRW
B32	200702	789	PRX789PTONENPRZZZZZ422	NE	422	98.96	0	CONSUP
B32	200702	789	PRX789PTONENPRZZZZZ423	NE	423	27.07	0	CONCRW
B32	200702	789	PRX789PTONENPRZZZZZ423	NE	423	27.07	0	CONCRW
B32	200702	789	PRX789PTONENPRZZZZZ423	NE	423	25.88	0	CONSUP
B34	200702	789	PWX789PDONENPWZZZZZ150	NE	150	22.07	0.75	MTELEC
B34	200702	789	PWX789PDONENPWZZZZZ155	NE	155	1.71	0	MTELEC
B34	200702	789	PWX789PDONENPWZZZZZ406	NE	406	2.81	0	MTELEC
B34	200702	789	PWX789PDONENPWZZZZZ421	NE	421	3.24	0	MTELEC
B34	200702	789	PWX789PDONENPWZZZZZ422	NE	422	9.28	0	MTELEC
B34	200702	789	PWX789PDONENPWZZZZZ423	NE	423	1.95	0	MTELEC
B32	200702	789	PRX789PTONENPRZZZZZ155	NE	155	(19.62)	0	CONCRW
B32	200702	789	PRX789PTONENPRZZZZZ155	NE	155	(35.73)	0	CONSUP
B32	200702	789	PRX789PTONENPRZZZZZ155	NE	155	(2.55)	0	CONCRW
B32	200702	789	PRX789PTONENPRZZZZZ423	NE	423	(1.60)	0	CONSUP
B32	200702	789	PRX789PTONENPRZZZZZ423	NE	423	(2.92)	0	CONCRW
B32	200702	789	PRX789PTONENPRZZZZZ423	NE	423	(0.21)	0	CONSUP
			Feb-07			2,391.09	24.75	
B32	200703	789	PRX789PTONENPRZZZZZ150	NE	150	330.96	8	CONCRW
B32	200703	789	PRX789PTONENPRZZZZZ150	NE	150	316.40	8	CONSUP
B32	200703	789	PRX789PTONENPRZZZZZ404	NE	404	288.00	0	CONCRW
B32	200703	789	PRX789PTONENPRZZZZZ404	NE	404	288.00	0	CONSUP
B32	200703	789	PRX789PTONENPRZZZZZ406	NE	406	29.92	0	CONCRW

B32	200703	789	PRX789PTONENPRZZZZZ406	NE	406	29.92	0	CONSUP
B32	200703	789	PRX789PTONENPRZZZZZ421	NE	421	34.56	0	CONCRW
B32	200703	789	PRX789PTONENPRZZZZZ421	NE	421	34.56	0	CONSUP
B32	200703	789	PRX789PTONENPRZZZZZ422	NE	422	98.96	0	CONCRW
B32	200703	789	PRX789PTONENPRZZZZZ422	NE	422	98.96	0	CONSUP
B34	200703	789	PRX789PTONENPRZZZZZ423	NE	423	27.07	0	MTELEC
B34	200703	789	PRX789PTONENPRZZZZZ423	NE	423	25.88	0	MTELEC
B34	200703	789	PRX789PTONENPRZZZZZ155	NE	155	(48.96)	0	MTELEC
B34	200703	789	PRX789PTONENPRZZZZZ155	NE	155	(2.55)	0	MTELEC
B34	200703	789	PRX789PTONENPRZZZZZ423	NE	423	(4.00)	0	MTELEC
B34	200703	789	PRX789PTONENPRZZZZZ423	NE	423	(0.21)	0	MTENGR
B34	200703	789	PWX789PDONENPWZZZZZ150	NE	150	36.78	1.25	MTENGR
B34	200703	789	PWX789PDONENPWZZZZZ406	NE	406	4.68	0	MTENGR
B34	200703	789	PWX789PDONENPWZZZZZ421	NE	421	5.40	0	MTENGR
B34	200703	789	PWX789PDONENPWZZZZZ422	NE	422	15.46	0	MTENGR
B34	200703	789	PWX789PDONENPWZZZZZ423	NE	423	3.01	0	MTELEC
B34	200703	789	PWX789PDONENPWZZZZZ150	NE	150	152.92	4	MTELEC
B34	200703	789	PWX789PDONENPWZZZZZ406	NE	406	14.96	0	MTENGR
B34	200703	789	PWX789PDONENPWZZZZZ421	NE	421	17.28	0	MTENGR
B34	200703	789	PWX789PDONENPWZZZZZ422	NE	422	49.48	0	MTELEC
B34	200703	789	PWX789PDONENPWZZZZZ423	NE	423	12.51	0	MTELEC
B34	200703	789	PWX789PDONENPWZZZZZ155	NE	155	2.86	0	MTELEC
B34	200703	789	PWX789PDONENPWZZZZZ423	NE	423	0.23	0	MTELEC
B34	200703	789	PWX789PDONENPWZZZZZ155	NE	155	(18.30)	0	MTELEC
B34	200703	789	PWX789PDONENPWZZZZZ423	NE	423	(1.50)	0	MTENGR
B34	200703	789	PWX789PDONENPWZZZZZ150	NE	150	22.07	0.75	MTENGR
B34	200703	789	PWX789PDONENPWZZZZZ406	NE	406	2.81	0	MTENGR
B34	200703	789	PWX789PDONENPWZZZZZ421	NE	421	3.24	0	MTENGR
B34	200703	789	PWX789PDONENPWZZZZZ422	NE	422	9.28	0	MTENGR
B34	200703	789	PWX789PDONENPWZZZZZ423	NE	423	1.81	0	MTSUPV
B34	200703	789	PWX789PDONENPWZZZZZ150	NE	150	152.92	4	MTSUPV
B34	200703	789	PWX789PDONENPWZZZZZ406	NE	406	14.96	0	MTSUPV
B34	200703	789	PWX789PDONENPWZZZZZ421	NE	421	17.28	0	MTSUPV
B34	200703	789	PWX789PDONENPWZZZZZ422	NE	422	49.48	0	MTSUPV
B34	200703	789	PWX789PDONENPWZZZZZ423	NE	423	12.51	0	MTENGR
B34	200703	789	PWX789PDONENPWZZZZZ150	NE	150	155.76	4	MTENGR
B34	200703	789	PWX789PDONENPWZZZZZ406	NE	406	14.96	0	MTELEC
B34	200703	789	PWX789PDONENPWZZZZZ421	NE	421	17.28	0	MTSUPV
B34	200703	789	PWX789PDONENPWZZZZZ422	NE	422	49.48	0	MTELEC
B34	200703	789	PWX789PDONENPWZZZZZ423	NE	423	12.74	0	MTSUPV
B32	200703	789	PWX789PDONENPWZZZZZ155	NE	155	(18.30)	0	SUMMER
B32	200703	789	PWX789PDONENPWZZZZZ423	NE	423	(1.34)	0	SUMMER
B32	200703	789	PWX789PDONENPWZZZZZ155	NE	155	2.68	0	SUMMER
B32	200703	789	PWX789PDONENPWZZZZZ155	NE	155	(2.30)	0	SUMMER
B32	200703	789	PWX789PDONENPWZZZZZ423	NE	423	0.20	0	SUMMER
B32	200703	789	PWX789PDONENPWZZZZZ423	NE	423	(0.17)	0	SUMMER
			Mar-07			2,360.59	30	
B32	200705	789	PRD789PTONENPRZZZZZ150	NE	150	24.00	2	SUMMER
B32	200705	789	PRD789PTONENPRZZZZZ406	NE	406	6.64	0	SUMMER
B32	200705	789	PRD789PTONENPRZZZZZ421	NE	421	8.64	0	SUMMER
B32	200705	789	PRD789PTONENPRZZZZZ423	NE	423	1.76	0	SUMMER

B32	200705	789	PRD789PTONENPRZZZZZ150	NE	150	12.00	1	SUMMER
B32	200705	789	PRD789PTONENPRZZZZZ406	NE	406	3.32	0	SUMMER
B32	200705	789	PRD789PTONENPRZZZZZ421	NE	421	4.32	0	SUMMER
B32	200705	789	PRD789PTONENPRZZZZZ423	NE	423	0.88	0	SUMMER
B32	200705	789	PRD789PTONENPRZZZZZ150	NE	150	48.00	4	SUMMER
B32	200705	789	PRD789PTONENPRZZZZZ406	NE	406	13.28	0	SUMMER
B34	200705	789	PRD789PTONENPRZZZZZ421	NE	421	17.28	0	MTELEC
B34	200705	789	PRD789PTONENPRZZZZZ423	NE	423	3.51	0	MTELEC
B34	200705	789	PRD789PTONENPRZZZZZ150	NE	150	12.00	1	MTELEC
B34	200705	789	PRD789PTONENPRZZZZZ406	NE	406	3.32	0	MTELEC
B34	200705	789	PRD789PTONENPRZZZZZ421	NE	421	4.32	0	MTELEC
B32	200705	789	PRD789PTONENPRZZZZZ423	NE	423	0.88	0	SUMMER
B32	200705	789	PWX789PDONENPWZZZZZ150	NE	150	58.84	2	SUMMER
B32	200705	789	PWX789PDONENPWZZZZZ406	NE	406	6.64	0	SUMMER
B32	200705	789	PWX789PDONENPWZZZZZ421	NE	421	8.64	0	SUMMER
B32	200705	789	PWX789PDONENPWZZZZZ422	NE	422	24.02	0	SUMMER
B32	200705	789	PWX789PDONENPWZZZZZ423	NE	423	4.31	0	SUMMER
B32	200705	789	PRD789PTONENPRZZZZZ155	NE	155	6.00	0	SUMMER
B32	200705	789	PRD789PTONENPRZZZZZ423	NE	423	0.44	0	SUMMER
B34	200705	789	PRD789PTONENPRZZZZZ155	NE	155	3.00	0	MTELEC
B34	200705	789	PRD789PTONENPRZZZZZ423	NE	423	0.22	0	MTELEC
B34	200705	789	PRD789PTONENPRZZZZZ155	NE	155	12.00	0	MTELEC
B34	200705	789	PRD789PTONENPRZZZZZ423	NE	423	0.88	0	MTELEC
B34	200705	789	PRD789PTONENPRZZZZZ155	NE	155	3.00	0	MTELEC
B34	200705	789	PRD789PTONENPRZZZZZ423	NE	423	0.22	0	MTELEC
B34	200705	789	PWX789PDONENPWZZZZZ155	NE	155	(6.71)	0	MTELEC
B32	200705	789	PWX789PDONENPWZZZZZ423	NE	423	(0.49)	0	SUMMER
B32	200705	789	PWX789PDONENPWZZZZZ150	NE	150	29.42	1	SUMMER
B32	200705	789	PWX789PDONENPWZZZZZ406	NE	406	3.32	0	SUMMER
B32	200705	789	PWX789PDONENPWZZZZZ421	NE	421	4.32	0	SUMMER
B32	200705	789	PWX789PDONENPWZZZZZ422	NE	422	12.01	0	SUMMER
B32	200705	789	PWX789PDONENPWZZZZZ423	NE	423	2.15	0	SUMMER
B34	200705	789	PRE789PTONENPRZZZZZ150	NE	150	36.00	3	MTELEC
B34	200705	789	PRE789PTONENPRZZZZZ406	NE	406	9.96	0	MTELEC
B34	200705	789	PRE789PTONENPRZZZZZ421	NE	421	12.96	0	MTELEC
B34	200705	789	PRE789PTONENPRZZZZZ423	NE	423	2.64	0	MTELEC
B34	200705	789	PRE789PTONENPRZZZZZ155	NE	155	9.00	0	MTELEC
B34	200705	789	PRE789PTONENPRZZZZZ423	NE	423	0.66	0	MTELEC
B34	200705	789	PWX789PDONENPWZZZZZ155	NE	155	2.29	0	MTELEC
B34	200705	789	PWX789PDONENPWZZZZZ423	NE	423	0.17	0	MTENGR
			May-07			410.06	14	
B34	200706	789	PWX789PDONENPWZZZZZ150	NE	150	29.42	1	MTENGR
B34	200706	789	PWX789PDONENPWZZZZZ406	NE	406	3.32	0	MTENGR
B34	200706	789	PWX789PDONENPWZZZZZ421	NE	421	4.32	0	MTENGR
B34	200706	789	PWX789PDONENPWZZZZZ422	NE	422	12.01	0	MTENGR
B34	200706	789	PWX789PDONENPWZZZZZ423	NE	423	2.15	0	MTELEC
B34	200706	789	PWX789PDONENPWZZZZZ150	NE	150	152.92	4	MTELEC
B34	200706	789	PWX789PDONENPWZZZZZ406	NE	406	13.28	0	MTENGR
B34	200706	789	PWX789PDONENPWZZZZZ421	NE	421	17.28	0	MTENGR
B34	200706	789	PWX789PDONENPWZZZZZ422	NE	422	48.04	0	MTELEC
B34	200706	789	PWX789PDONENPWZZZZZ423	NE	423	11.19	0	MTELEC

B34	200706	789	PWX789PDONENPWZZZZZ155	NE	155	(3.35)	0	MTELEC
B34	200706	789	PWX789PDONENPWZZZZZ423	NE	423	(0.25)	0	MTELEC
B34	200706	789	PWX789PDONENPWZZZZZ155	NE	155	(15.04)	0	MTELEC
B34	200706	789	PWX789PDONENPWZZZZZ423	NE	423	(1.10)	0	MTELEC
			Jun-07			274.19	5	
B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	228.01	7.75	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	25.73	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ421	NE	421	33.48	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ422	NE	422	93.08	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	16.69	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	228.01	7.75	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	25.73	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ421	NE	421	33.48	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ422	NE	422	93.08	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	16.69	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	228.01	7.75	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	25.73	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ421	NE	421	33.48	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ422	NE	422	93.08	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	16.69	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	228.01	7.75	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	25.73	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ421	NE	421	33.48	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ422	NE	422	93.08	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	16.69	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ155	NE	155	(18.29)	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	(1.34)	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ155	NE	155	(18.29)	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	(1.34)	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ155	NE	155	(18.29)	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	(1.34)	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ155	NE	155	(18.29)	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	(1.34)	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	228.01	7.75	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	228.01	7.75	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	25.73	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	25.73	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ421	NE	421	33.48	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ421	NE	421	33.48	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ422	NE	422	93.08	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ422	NE	422	93.08	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	16.69	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	16.69	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	228.01	7.75	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	25.73	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ421	NE	421	33.48	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ422	NE	422	93.08	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	16.69	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	228.01	7.75	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	25.73	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ421	NE	421	33.48	0	MTELEC

B34	200707	789	PWX789PDONENPWZZZZZ422	NE	422	93.08	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	16.69	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	228.01	7.75	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	25.73	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ421	NE	421	33.48	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ422	NE	422	93.08	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	16.69	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	228.01	7.75	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	228.01	7.75	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	25.73	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	25.73	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ421	NE	421	33.48	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ421	NE	421	33.48	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ422	NE	422	93.08	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ422	NE	422	93.08	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	16.69	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	16.69	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	228.01	7.75	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	228.01	7.75	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	25.73	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	25.73	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ421	NE	421	33.48	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ421	NE	421	33.48	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ422	NE	422	93.08	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ422	NE	422	93.08	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	16.69	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	16.69	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	228.01	7.75	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	228.01	7.75	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	25.73	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	25.73	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ421	NE	421	33.48	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ421	NE	421	33.48	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ422	NE	422	93.08	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ422	NE	422	93.08	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	16.69	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	16.69	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	228.01	7.75	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	228.01	7.75	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	25.73	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	25.73	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ421	NE	421	33.48	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ421	NE	421	33.48	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ422	NE	422	93.08	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ422	NE	422	93.08	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	16.69	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	16.69	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	228.01	7.75	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	228.01	7.75	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	25.73	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	25.73	0	MTELEC

B34	200707	789	PWX789PDONENPWZZZZZ421	NE	421	33.48	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ421	NE	421	33.48	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ422	NE	422	93.08	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ422	NE	422	93.08	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	16.69	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	16.69	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ155	NE	155	(18.29)	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ155	NE	155	42.88	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	(1.34)	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	3.14	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ155	NE	155	(18.29)	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	(1.34)	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ155	NE	155	42.88	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	3.14	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ155	NE	155	42.88	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	3.14	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ155	NE	155	(18.29)	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ155	NE	155	42.88	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	(1.34)	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	3.14	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ155	NE	155	(18.29)	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ155	NE	155	42.88	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	(1.34)	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	3.14	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ155	NE	155	31.36	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ155	NE	155	42.88	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	2.30	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	3.14	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ155	NE	155	31.36	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ155	NE	155	42.88	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	2.30	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	3.14	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	228.01	7.75	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	228.01	7.75	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	25.73	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	25.73	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ421	NE	421	33.48	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ421	NE	421	33.48	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ422	NE	422	93.08	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ422	NE	422	93.08	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	16.69	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	16.69	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	213.30	7.25	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	24.07	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ421	NE	421	31.32	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ422	NE	422	87.07	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	15.61	0	MTELEC

B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	228.01	7.75	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	25.73	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ421	NE	421	33.48	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ422	NE	422	93.08	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	16.69	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	228.01	7.75	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	25.73	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ421	NE	421	33.48	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ422	NE	422	93.08	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	16.69	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	228.01	7.75	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	25.73	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ421	NE	421	33.48	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ422	NE	422	93.08	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	16.69	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ155	NE	155	(18.29)	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ155	NE	155	(2.10)	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	(1.34)	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	(0.15)	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ155	NE	155	(17.11)	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	(1.25)	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ155	NE	155	(2.10)	0	MTSUPV
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	(0.15)	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ155	NE	155	(2.10)	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	(0.15)	0	MTSUPV
B34	200707	789	PWX789PDONENPWZZZZZ155	NE	155	(2.10)	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ423	NE	423	(0.15)	0	MTSUPV
B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	77.88	2	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ150	NE	150	235.36	8	MTSUPV
B34	200707	789	PWX789PDONENPWZZZZZ155	NE	155	(2.16)	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ155	NE	155	(19.80)	0	MTSUPV
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	26.56	0	MTELEC
B34	200707	789	PWX789PDONENPWZZZZZ406	NE	406	6.64	0	MTSUPV
B32	200707	789	PWX789PDONENPWZZZZZ421	NE	421	34.56	0	OPEDIS
B32	200707	789	PWX789PDONENPWZZZZZ421	NE	421	8.64	0	OPEDIS
B32	200707	789	PWX789PDONENPWZZZZZ422	NE	422	96.08	0	OPEDIS
B32	200707	789	PWX789PDONENPWZZZZZ422	NE	422	24.02	0	OPEDIS
B32	200707	789	PWX789PDONENPWZZZZZ423	NE	423	17.07	0	OPEDIS
B32	200707	789	PWX789PDONENPWZZZZZ423	NE	423	4.25	0	OPEDIS
			Jul-07			10,620.05	203.25	
B34	200708	789	PRD789PTONENPRZZZZZ155	NE	155	(0.54)	0	MTELEC
B34	200708	789	PRD789PTONENPRZZZZZ155	NE	155	0.77	0	MTELEC
B34	200708	789	PRD789PTONENPRZZZZZ155	NE	155	(7.17)	0	MTELEC
B34	200708	789	PRD789PTONENPRZZZZZ423	NE	423	(0.05)	0	MTELEC
B34	200708	789	PRD789PTONENPRZZZZZ423	NE	423	0.07	0	MTELEC
B34	200708	789	PRD789PTONENPRZZZZZ423	NE	423	(0.61)	0	MTELEC
B34	200708	789	PWX789PDONENPWZZZZZ155	NE	155	45.75	0	MTELEC
B34	200708	789	PWX789PDONENPWZZZZZ423	NE	423	3.89	0	MTELEC
B34	200708	789	PWX789PDONENPWZZZZZ155	NE	155	41.59	0	MTELEC
B34	200708	789	PWX789PDONENPWZZZZZ423	NE	423	3.54	0	MTELEC
B34	200708	789	PWX789PDONENPWZZZZZ155	NE	155	26.62	0	MTELEC

B34	200708	789	PWX789PDONENPWZZZZZ423	NE	423	2.26	0	MTELEC
B34	200708	789	PWX789PDONENPWZZZZZ155	NE	155	26.62	0	MTELEC
B34	200708	789	PWX789PDONENPWZZZZZ423	NE	423	2.26	0	MTELEC
B34	200708	789	PWX789PDONENPWZZZZZ155	NE	155	26.62	0	MTELEC
B34	200708	789	PWX789PDONENPWZZZZZ423	NE	423	2.26	0	MTELEC
B34	200708	789	PWX789PDONENPWZZZZZ155	NE	155	41.59	0	MTELEC
B34	200708	789	PWX789PDONENPWZZZZZ423	NE	423	3.54	0	MTELEC
B32	200708	789	PWX789PDONENPWZZZZZ155	NE	155	34.94	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ423	NE	423	2.97	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ155	NE	155	31.61	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ423	NE	423	2.69	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ155	NE	155	26.62	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ423	NE	423	2.26	0	OPEDIS
B34	200708	789	PRD789PTONENPRZZZZZ155	NE	155	(2.54)	0	MTELEC
B34	200708	789	PRD789PTONENPRZZZZZ155	NE	155	1.20	0	MTELEC
B34	200708	789	PRD789PTONENPRZZZZZ155	NE	155	(2.69)	0	MTENGR
B34	200708	789	PRD789PTONENPRZZZZZ423	NE	423	(0.22)	0	MTENGR
B34	200708	789	PRD789PTONENPRZZZZZ423	NE	423	0.10	0	MTENGR
B34	200708	789	PRD789PTONENPRZZZZZ423	NE	423	(0.23)	0	MTENGR
B34	200708	789	PWX789PDONENPWZZZZZ155	NE	155	(4.74)	0	MTENGR
B34	200708	789	PWX789PDONENPWZZZZZ423	NE	423	(0.40)	0	MTENGR
B32	200708	789	PWX789PDONENPWZZZZZ150	NE	150	305.84	8	CONCRW
B32	200708	789	PWX789PDONENPWZZZZZ155	NE	155	(28.92)	0	CONCRW
B32	200708	789	PWX789PDONENPWZZZZZ406	NE	406	36.16	0	CONSUP
B32	200708	789	PWX789PDONENPWZZZZZ421	NE	421	34.56	0	CONCRW
B32	200708	789	PWX789PDONENPWZZZZZ422	NE	422	98.64	0	CONCRW
B32	200708	789	PWX789PDONENPWZZZZZ423	NE	423	23.54	0	CONSUP
B32	200708	789	PRD789PTONENPRZZZZZ150	NE	150	41.29	1	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ150	NE	150	41.29	1	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ150	NE	150	41.29	1	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ404	NE	404	33.51	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ404	NE	404	33.51	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ404	NE	404	33.51	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ406	NE	406	4.52	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ406	NE	406	4.52	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ406	NE	406	4.52	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ421	NE	421	4.32	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ421	NE	421	4.32	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ421	NE	421	4.32	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ422	NE	422	12.33	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ422	NE	422	12.33	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ422	NE	422	12.33	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ423	NE	423	3.51	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ423	NE	423	3.51	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ423	NE	423	3.51	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ150	NE	150	20.65	0.5	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ150	NE	150	20.65	0.5	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ150	NE	150	20.65	0.5	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ404	NE	404	16.76	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ404	NE	404	16.76	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ404	NE	404	16.76	0	OPEDIS

B32	200708	789	PRD789PTONENPRZZZZZ406	NE	406	2.26	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ406	NE	406	2.26	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ406	NE	406	2.26	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ421	NE	421	2.16	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ421	NE	421	2.16	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ421	NE	421	2.16	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ422	NE	422	6.17	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ422	NE	422	6.17	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ422	NE	422	6.17	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ423	NE	423	1.76	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ423	NE	423	1.76	0	OPEDIS
B32	200708	789	PRD789PTONENPRZZZZZ423	NE	423	1.76	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ155	NE	155	6.80	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ423	NE	423	0.58	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ155	NE	155	6.80	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ423	NE	423	0.58	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ155	NE	155	6.80	0	OPESUP
B32	200708	789	PWX789PDONENPWZZZZZ423	NE	423	0.58	0	OPESUP
B32	200708	789	PWX789PDONENPWZZZZZ155	NE	155	6.80	0	OPESUP
B32	200708	789	PWX789PDONENPWZZZZZ423	NE	423	0.58	0	OPESUP
B32	200708	789	PWX789PDONENPWZZZZZ155	NE	155	7.01	0	OPESUP
B32	200708	789	PWX789PDONENPWZZZZZ155	NE	155	6.45	0	OPESUP
B32	200708	789	PWX789PDONENPWZZZZZ423	NE	423	0.60	0	OPESUP
B32	200708	789	PWX789PDONENPWZZZZZ423	NE	423	0.55	0	OPESUP
B32	200708	789	PWX789PDONENPWZZZZZ150	NE	150	169.17	5.75	OPESUP
B32	200708	789	PWX789PDONENPWZZZZZ150	NE	150	235.36	8	OPESUP
B32	200708	789	PWX789PDONENPWZZZZZ406	NE	406	62.15	0	OPESUP
B32	200708	789	PWX789PDONENPWZZZZZ421	NE	421	59.40	0	OPESUP
B32	200708	789	PWX789PDONENPWZZZZZ422	NE	422	169.54	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ423	NE	423	34.39	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ150	NE	150	132.39	4.5	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ150	NE	150	235.36	8	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ406	NE	406	56.50	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ421	NE	421	54.00	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ422	NE	422	154.13	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ423	NE	423	31.26	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ150	NE	150	235.36	8	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ406	NE	406	36.16	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ421	NE	421	34.56	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ422	NE	422	98.64	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ423	NE	423	20.01	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ150	NE	150	235.36	8	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ406	NE	406	36.16	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ421	NE	421	34.56	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ422	NE	422	98.64	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ423	NE	423	20.01	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ150	NE	150	235.36	8	OPESUP
B32	200708	789	PWX789PDONENPWZZZZZ406	NE	406	36.16	0	OPESUP
B32	200708	789	PWX789PDONENPWZZZZZ421	NE	421	34.56	0	OPESUP
B32	200708	789	PWX789PDONENPWZZZZZ422	NE	422	98.64	0	OPESUP
B32	200708	789	PWX789PDONENPWZZZZZ423	NE	423	20.01	0	OPEDIS

B32	200708	789	PWX789PDONENPWZZZZZ150	NE	150	367.75	12.5	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ406	NE	406	56.50	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ421	NE	421	54.00	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ422	NE	422	154.13	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ423	NE	423	31.26	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ150	NE	150	308.91	10.5	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ406	NE	406	47.46	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ421	NE	421	45.36	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ422	NE	422	129.47	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ423	NE	423	26.26	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ150	NE	150	279.49	9.5	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ406	NE	406	42.94	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ421	NE	421	41.04	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ422	NE	422	117.14	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ423	NE	423	23.76	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ150	NE	150	235.36	8	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ406	NE	406	36.16	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ421	NE	421	34.56	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ422	NE	422	98.64	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ423	NE	423	20.01	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ150	NE	150	58.84	2	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ406	NE	406	9.04	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ421	NE	421	8.64	0	OPEDIS
B32	200708	789	PWX789PDONENPWZZZZZ422	NE	422	24.66	0	OPESUP
B32	200708	789	PWX789PDONENPWZZZZZ423	NE	423	5.00	0	OPEDIS
			Aug-07			6,196.47	105.25	
B32	200709	789	PRD789PTONENPRZZZZZ155	NE	155	2.27	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ155	NE	155	(0.65)	0	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ423	NE	423	0.19	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ423	NE	423	(0.06)	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ150	NE	150	83.44	2	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ150	NE	150	83.44	2	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ404	NE	404	67.02	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ404	NE	404	67.02	0	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ406	NE	406	9.04	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ406	NE	406	9.04	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ421	NE	421	8.64	0	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ421	NE	421	8.64	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ422	NE	422	24.66	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ422	NE	422	24.66	0	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ423	NE	423	7.09	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ423	NE	423	7.09	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ150	NE	150	82.58	2	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ150	NE	150	82.58	2	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ150	NE	150	82.58	2	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ404	NE	404	67.02	0	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ404	NE	404	67.02	0	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ404	NE	404	67.02	0	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ406	NE	406	9.04	0	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ406	NE	406	9.04	0	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ406	NE	406	9.04	0	OPESUP

B32	200709	789	PRD789PTONENPRZZZZZ421	NE	421	8.64	0	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ421	NE	421	8.64	0	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ421	NE	421	8.64	0	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ422	NE	422	24.66	0	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ422	NE	422	24.66	0	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ422	NE	422	24.66	0	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ423	NE	423	7.02	0	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ423	NE	423	7.02	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ423	NE	423	7.02	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ155	NE	155	(0.64)	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ155	NE	155	(2.86)	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ423	NE	423	(0.05)	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ423	NE	423	(0.24)	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ155	NE	155	(2.06)	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ155	NE	155	9.75	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ155	NE	155	(11.65)	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ423	NE	423	(0.18)	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ423	NE	423	0.83	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ423	NE	423	(0.99)	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ150	NE	150	82.58	2	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ150	NE	150	82.58	2	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ404	NE	404	67.02	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ404	NE	404	67.02	0	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ406	NE	406	9.04	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ406	NE	406	9.04	0	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ421	NE	421	8.64	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ421	NE	421	8.64	0	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ422	NE	422	24.66	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ422	NE	422	24.66	0	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ423	NE	423	7.02	0	OPEDIS
B32	200709	789	PRD789PTONENPRZZZZZ423	NE	423	7.02	0	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ155	NE	155	0.54	0	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ155	NE	155	(9.51)	0	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ423	NE	423	0.05	0	OPESUP
B32	200709	789	PRD789PTONENPRZZZZZ423	NE	423	(0.81)	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ150	NE	150	58.84	2	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ406	NE	406	9.04	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ421	NE	421	8.64	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ422	NE	422	24.66	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	5.00	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ150	NE	150	305.84	8	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ406	NE	406	36.16	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ421	NE	421	34.56	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ422	NE	422	98.64	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	26.00	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ150	NE	150	229.38	6	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ406	NE	406	27.12	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ421	NE	421	25.92	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ422	NE	422	73.98	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	19.50	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ150	NE	150	229.38	6	OPESUP

B32	200709	789	PWX789PDONENPWZZZZZ406	NE	406	27.12	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ421	NE	421	25.92	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ422	NE	422	73.98	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	19.50	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ150	NE	150	305.84	8	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ406	NE	406	36.16	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ421	NE	421	34.56	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ422	NE	422	98.64	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	26.00	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ150	NE	150	229.38	6	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ406	NE	406	27.12	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ421	NE	421	25.92	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ422	NE	422	73.98	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	19.50	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ150	NE	150	76.46	2	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ406	NE	406	9.04	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ421	NE	421	8.64	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ422	NE	422	24.66	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	6.50	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ150	NE	150	267.61	7	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ406	NE	406	31.64	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ421	NE	421	30.24	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ422	NE	422	86.31	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	22.75	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ150	NE	150	267.61	7	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ406	NE	406	31.64	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ421	NE	421	30.24	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ422	NE	422	86.31	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	22.75	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ150	NE	150	267.61	7	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ406	NE	406	31.64	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ421	NE	421	30.24	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ422	NE	422	86.31	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	22.75	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ155	NE	155	(28.92)	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	(2.46)	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ155	NE	155	4.55	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ155	NE	155	(21.69)	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	0.39	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	(1.84)	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ155	NE	155	(21.69)	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	(1.84)	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ155	NE	155	(28.92)	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	(2.46)	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ155	NE	155	(21.69)	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	(1.84)	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ155	NE	155	(7.23)	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	(0.61)	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ155	NE	155	(25.30)	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	(2.15)	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ155	NE	155	(25.30)	0	OPEDIS

B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	(2.15)	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ155	NE	155	(25.30)	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	(2.15)	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ150	NE	150	88.26	3	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ406	NE	406	13.56	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ421	NE	421	12.96	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ422	NE	422	36.99	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	7.50	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ150	NE	150	305.84	8	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ406	NE	406	36.16	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ421	NE	421	34.56	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ422	NE	422	98.64	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	26.00	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ150	NE	150	267.61	7	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ406	NE	406	31.64	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ421	NE	421	30.24	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ422	NE	422	86.31	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	22.75	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ150	NE	150	305.84	8	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ406	NE	406	36.16	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ421	NE	421	34.56	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ422	NE	422	98.64	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	26.00	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ150	NE	150	38.23	1	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ150	NE	150	117.68	4	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ406	NE	406	18.08	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ406	NE	406	4.52	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ421	NE	421	17.28	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ421	NE	421	4.32	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ422	NE	422	49.32	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ422	NE	422	12.33	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	10.00	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	3.25	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ150	NE	150	(305.84)	-8	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ406	NE	406	(36.16)	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ421	NE	421	(34.56)	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ422	NE	422	(98.64)	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	(26.00)	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ150	NE	150	(267.61)	-7	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ406	NE	406	(31.64)	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ421	NE	421	(30.24)	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ422	NE	422	(86.31)	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	(22.75)	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ150	NE	150	(305.84)	-8	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ406	NE	406	(36.16)	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ421	NE	421	(34.56)	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ422	NE	422	(98.64)	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	(26.00)	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ150	NE	150	29.42	1	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ406	NE	406	4.52	0	OPEDIS
B32	200709	789	PWX789PDONENPWZZZZZ421	NE	421	4.32	0	OPESTF

B32	200709	789	PWX789PDONENPWZZZZZ422	NE	422	12.33	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	2.50	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ155	NE	155	6.87	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	0.58	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ155	NE	155	9.16	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ155	NE	155	(3.61)	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	0.78	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	(0.31)	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ155	NE	155	2.28	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	0.19	0	OPESUP
B32	200709	789	PWX789PDONENPWZZZZZ150	NE	150	267.61	7	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ155	NE	155	(25.30)	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ406	NE	406	31.64	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ421	NE	421	30.24	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ422	NE	422	86.31	0	OPESTF
B32	200709	789	PWX789PDONENPWZZZZZ423	NE	423	20.60	0	OPESTF
			Sep-07			5,751.55	89	
B32	200710	789	PRD789PTONENPRZZZZZ150	NE	150	20.65	0.5	OPESTF
B34	200710	789	PRD789PTONENPRZZZZZ150	NE	150	20.65	0.5	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ150	NE	150	41.72	1	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ404	NE	404	16.76	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ404	NE	404	16.76	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ404	NE	404	33.51	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ406	NE	406	1.94	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ406	NE	406	1.94	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ406	NE	406	3.87	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ421	NE	421	2.85	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ421	NE	421	2.85	0	MTSUPV
B34	200710	789	PRD789PTONENPRZZZZZ421	NE	421	5.70	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ422	NE	422	6.00	0	MTSUPV
B34	200710	789	PRD789PTONENPRZZZZZ422	NE	422	6.00	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ422	NE	422	12.00	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ423	NE	423	1.76	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ423	NE	423	1.76	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ423	NE	423	3.55	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ155	NE	155	0.90	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ155	NE	155	0.24	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ155	NE	155	(1.43)	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ423	NE	423	0.08	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ423	NE	423	0.02	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ423	NE	423	(0.12)	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ150	NE	150	41.72	1	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ150	NE	150	41.72	1	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ404	NE	404	33.51	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ404	NE	404	33.51	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ406	NE	406	3.87	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ406	NE	406	3.87	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ421	NE	421	5.70	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ421	NE	421	5.70	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ422	NE	422	12.00	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ422	NE	422	12.00	0	MTELEC

B34	200710	789	PRD789PTONENPRZZZZZ423	NE	423	3.55	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ423	NE	423	3.55	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ150	NE	150	20.65	0.5	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ404	NE	404	16.76	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ406	NE	406	1.94	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ421	NE	421	2.85	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ422	NE	422	6.00	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ423	NE	423	1.76	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ150	NE	150	20.65	0.5	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ404	NE	404	16.76	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ406	NE	406	1.94	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ421	NE	421	2.85	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ422	NE	422	6.00	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ423	NE	423	1.76	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ150	NE	150	20.65	0.5	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ150	NE	150	41.72	1	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ404	NE	404	16.76	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ404	NE	404	33.51	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ406	NE	406	1.94	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ406	NE	406	3.87	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ421	NE	421	2.85	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ421	NE	421	5.70	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ422	NE	422	6.00	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ422	NE	422	12.00	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ423	NE	423	1.76	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ423	NE	423	3.55	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ155	NE	155	(0.25)	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ155	NE	155	0.41	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ423	NE	423	(0.02)	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ423	NE	423	0.03	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ155	NE	155	2.52	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ155	NE	155	(1.61)	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ423	NE	423	0.21	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ423	NE	423	(0.14)	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ155	NE	155	3.56	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ155	NE	155	(1.86)	0	MTELEC
B34	200710	789	PRD789PTONENPRZZZZZ423	NE	423	0.30	0	MTENGR
B34	200710	789	PRD789PTONENPRZZZZZ423	NE	423	(0.16)	0	MTENGR
B34	200710	789	PWX789PDONENPWZZZZZ150	NE	150	22.07	0.75	MTENGR
B34	200710	789	PWX789PDONENPWZZZZZ406	NE	406	2.90	0	MTENGR
B34	200710	789	PWX789PDONENPWZZZZZ421	NE	421	4.28	0	MTENGR
B34	200710	789	PWX789PDONENPWZZZZZ422	NE	422	9.00	0	MTENGR
B34	200710	789	PWX789PDONENPWZZZZZ423	NE	423	1.88	0	MTENGR
B34	200710	789	PWX789PDONENPWZZZZZ155	NE	155	(1.05)	0	MTENGR
B34	200710	789	PWX789PDONENPWZZZZZ423	NE	423	(0.09)	0	MTENGR
			Oct-07			692.87	7.25	
B34	200711	789	PRD789PTONENPRZZZZZ150	NE	150	82.58	2	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ150	NE	150	82.58	2	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ150	NE	150	83.44	2	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ150	NE	150	83.44	2	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ404	NE	404	67.02	0	MTENGR

B34	200711	789	PRD789PTONENPRZZZZZ404	NE	404	67.02	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ404	NE	404	67.02	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ404	NE	404	67.02	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ406	NE	406	9.04	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ406	NE	406	9.04	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ406	NE	406	9.04	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ406	NE	406	9.04	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ421	NE	421	13.00	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ421	NE	421	13.00	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ421	NE	421	13.00	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ421	NE	421	13.00	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ422	NE	422	24.50	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ422	NE	422	24.50	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ422	NE	422	24.50	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ422	NE	422	24.50	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	7.43	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	7.43	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	7.51	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	7.51	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ150	NE	150	83.44	2	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ404	NE	404	67.02	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ406	NE	406	9.04	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ421	NE	421	13.00	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ422	NE	422	24.50	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	7.51	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ150	NE	150	351.20	8	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ404	NE	404	268.08	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ406	NE	406	36.16	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ421	NE	421	52.00	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ422	NE	422	98.00	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	31.61	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ150	NE	150	87.80	2	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ404	NE	404	67.02	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ406	NE	406	9.04	0	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ421	NE	421	13.00	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ422	NE	422	24.50	0	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	7.90	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ150	NE	150	82.58	2	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ150	NE	150	82.58	2	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ150	NE	150	87.80	2	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ404	NE	404	67.02	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ404	NE	404	67.02	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ404	NE	404	67.02	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ406	NE	406	9.04	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ406	NE	406	9.04	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ406	NE	406	9.04	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ421	NE	421	13.00	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ421	NE	421	13.00	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ421	NE	421	13.00	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ422	NE	422	24.50	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ422	NE	422	24.50	0	MTENGR

B34	200711	789	PRD789PTONENPRZZZZZ422	NE	422	24.50	0	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	7.43	0	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	7.43	0	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	7.90	0	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ150	NE	150	83.44	2	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ404	NE	404	67.02	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ406	NE	406	9.04	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ421	NE	421	13.00	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ422	NE	422	24.50	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	7.51	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ150	NE	150	87.80	2	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ404	NE	404	67.02	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ406	NE	406	9.04	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ421	NE	421	13.00	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ422	NE	422	24.50	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	7.90	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ150	NE	150	87.80	2	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ404	NE	404	67.02	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ406	NE	406	9.04	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ421	NE	421	13.00	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ422	NE	422	24.50	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	7.90	0	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ150	NE	150	87.80	2	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ150	NE	150	83.44	2	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ404	NE	404	67.02	0	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ404	NE	404	67.02	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ406	NE	406	9.04	0	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ406	NE	406	9.04	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ421	NE	421	13.00	0	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ421	NE	421	13.00	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ422	NE	422	24.50	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ422	NE	422	24.50	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	7.90	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	7.51	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ155	NE	155	(4.35)	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ155	NE	155	13.57	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ155	NE	155	(15.05)	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ155	NE	155	(0.69)	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ155	NE	155	(8.54)	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	(0.39)	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	1.22	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	(1.35)	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	(0.06)	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	(0.77)	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ155	NE	155	(3.76)	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ155	NE	155	(3.44)	0	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	(0.34)	0	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	(0.31)	0	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ155	NE	155	11.99	0	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ155	NE	155	5.15	0	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ155	NE	155	(3.76)	0	MTELEC

B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	1.08	0	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	0.46	0	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	(0.34)	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ155	NE	155	(3.76)	0	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	(0.34)	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ155	NE	155	(3.76)	0	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ155	NE	155	(0.59)	0	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	(0.34)	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	(0.05)	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ155	NE	155	(3.76)	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ155	NE	155	1.07	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	(0.34)	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	0.10	0	MTENGR
B34	200711	789	PRD789PTONENPRZZZZZ150	NE	150	87.80	2	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ155	NE	155	(3.76)	0	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ404	NE	404	67.02	0	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ406	NE	406	9.04	0	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ421	NE	421	13.00	0	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ422	NE	422	24.50	0	MTELEC
B34	200711	789	PRD789PTONENPRZZZZZ423	NE	423	7.56	0	MTELEC
B34	200711	789	PWX789PDONENPWZZZZZ155	NE	155	0.01	0	MTELEC
B34	200711	789	PWX789PDONENPWZZZZZ150	NE	150	7.36	0.25	MTELEC
B34	200711	789	PWX789PDONENPWZZZZZ406	NE	406	1.13	0	MTELEC
B34	200711	789	PWX789PDONENPWZZZZZ421	NE	421	1.63	0	MTELEC
B34	200711	789	PWX789PDONENPWZZZZZ422	NE	422	3.06	0	MTELEC
B34	200711	789	PWX789PDONENPWZZZZZ423	NE	423	0.66	0	MTELEC
B34	200711	789	PWX789PDONENPWZZZZZ155	NE	155	(0.35)	0	MTELEC
B34	200711	789	PWX789PDONENPWZZZZZ423	NE	423	(0.03)	0	MTELEC
			Nov-07			3,917.36	38.25	
B32	200712	789	PRD789PTONENPRZZZZZ155	NE	155	(4.94)	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ423	NE	423	(0.44)	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ150	NE	150	175.60	4	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ404	NE	404	134.04	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ406	NE	406	18.08	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ421	NE	421	26.00	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ422	NE	422	49.00	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ423	NE	423	15.80	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ150	NE	150	175.60	4	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ404	NE	404	134.04	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ406	NE	406	18.08	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ421	NE	421	26.00	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ422	NE	422	49.00	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ423	NE	423	15.80	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ150	NE	150	87.80	2	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ404	NE	404	67.02	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ406	NE	406	9.04	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ421	NE	421	13.00	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ422	NE	422	24.50	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ423	NE	423	7.90	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ150	NE	150	87.80	2	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ404	NE	404	67.02	0	OPESTF

B32	200712	789	PRD789PTONENPRZZZZZ406	NE	406	9.04	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ421	NE	421	13.00	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ422	NE	422	24.50	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ423	NE	423	7.90	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ150	NE	150	87.80	2	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ404	NE	404	67.02	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ406	NE	406	9.04	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ421	NE	421	13.00	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ422	NE	422	24.50	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ423	NE	423	7.90	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ155	NE	155	(0.22)	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ423	NE	423	(0.02)	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ155	NE	155	(0.22)	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ423	NE	423	(0.02)	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ155	NE	155	(0.11)	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ423	NE	423	(0.01)	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ155	NE	155	(0.11)	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ423	NE	423	(0.01)	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ155	NE	155	(0.11)	0	OPESTF
B32	200712	789	PRD789PTONENPRZZZZZ423	NE	423	(0.01)	0	OPESTF
B32	200712	789	PWX789PDONENPWZZZZZ150	NE	150	305.84	8	OPESUP
B32	200712	789	PWX789PDONENPWZZZZZ406	NE	406	36.16	0	OPESUP
B32	200712	789	PWX789PDONENPWZZZZZ421	NE	421	52.00	0	OPESUP
B32	200712	789	PWX789PDONENPWZZZZZ422	NE	422	98.00	0	OPESUP
B32	200712	789	PWX789PDONENPWZZZZZ423	NE	423	27.53	0	OPESUP
B32	200712	789	PWX789PDONENPWZZZZZ150	NE	150	152.92	4	OPESUP
B32	200712	789	PWX789PDONENPWZZZZZ406	NE	406	18.08	0	OPEDIS
B32	200712	789	PWX789PDONENPWZZZZZ421	NE	421	26.00	0	OPEDIS
B32	200712	789	PWX789PDONENPWZZZZZ422	NE	422	49.00	0	OPESUP
B32	200712	789	PWX789PDONENPWZZZZZ423	NE	423	13.76	0	OPESUP
B32	200712	789	PWX789PDONENPWZZZZZ150	NE	150	305.84	8	OPESUP
B32	200712	789	PWX789PDONENPWZZZZZ406	NE	406	36.16	0	OPESUP
B32	200712	789	PWX789PDONENPWZZZZZ421	NE	421	52.00	0	OPEDIS
B32	200712	789	PWX789PDONENPWZZZZZ422	NE	422	98.00	0	OPEDIS
B32	200712	789	PWX789PDONENPWZZZZZ423	NE	423	27.53	0	OPESUP
B32	200712	789	PWX789PDONENPWZZZZZ155	NE	155	(30.07)	0	OPESUP
B32	200712	789	PWX789PDONENPWZZZZZ423	NE	423	(2.71)	0	OPESUP
B32	200712	789	PWX789PDONENPWZZZZZ155	NE	155	(15.04)	0	OPESUP
B32	200712	789	PWX789PDONENPWZZZZZ423	NE	423	(1.35)	0	OPEDIS
B32	200712	789	PWX789PDONENPWZZZZZ155	NE	155	(30.07)	0	OPEDIS
B32	200712	789	PWX789PDONENPWZZZZZ423	NE	423	(2.71)	0	OPESUP
B32	200712	789	PWX789PDONENPWZZZZZ150	NE	150	36.78	1.25	OPESUP
B32	200712	789	PWX789PDONENPWZZZZZ406	NE	406	5.65	0	OPESUP
B32	200712	789	PWX789PDONENPWZZZZZ421	NE	421	8.13	0	OPESUP
B32	200712	789	PWX789PDONENPWZZZZZ422	NE	422	15.31	0	OPEDIS
B32	200712	789	PWX789PDONENPWZZZZZ423	NE	423	3.31	0	OPEDIS
B32	200712	789	PWX789PDONENPWZZZZZ150	NE	150	38.23	1	OPESUP
B32	200712	789	PWX789PDONENPWZZZZZ406	NE	406	4.52	0	OPESUP
B32	200712	789	PWX789PDONENPWZZZZZ421	NE	421	6.50	0	OPESUP
B32	200712	789	PWX789PDONENPWZZZZZ422	NE	422	12.25	0	OPESUP
B32	200712	789	PWX789PDONENPWZZZZZ423	NE	423	3.44	0	OPEDIS

B32	200712	789	PWX789PDONENPWZZZZZ155	NE	155	7.51	0	OPEDIS
B32	200712	789	PWX789PDONENPWZZZZZ155	NE	155	(3.76)	0	OPESUP
B32	200712	789	PWX789PDONENPWZZZZZ423	NE	423	0.68	0	OPESUP
B32	200712	789	PWX789PDONENPWZZZZZ423	NE	423	(0.34)	0	OPESUP
			Dec-07			2,813.68	36.25	
B32	200801	789	PWX789PDONENPWZZZZZ150	NE	150	56.30	1.5	OPESUP
B32	200801	789	PWX789PDONENPWZZZZZ155	NE	155	(4.38)	0	OPEDIS
B32	200801	789	PWX789PDONENPWZZZZZ406	NE	406	5.70	0	OPEDIS
B32	200801	789	PWX789PDONENPWZZZZZ421	NE	421	7.35	0	OPESUP
B32	200801	789	PWX789PDONENPWZZZZZ422	NE	422	18.42	0	OPESUP
B32	200801	789	PWX789PDONENPWZZZZZ423	NE	423	4.30	0	OPESUP
			Jan-08			87.69	1.5	
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	85.00	2	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	66.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	24.56	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	7.12	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	83.02	2	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	83.02	2	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	85.00	2	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	85.00	2	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	85.00	2	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	85.00	2	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	66.00	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	66.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	66.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	66.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	66.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	66.00	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	24.56	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	24.56	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	24.56	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	24.56	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	24.56	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	24.56	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	6.96	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	6.96	0	OPESTF
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	7.12	0	OPESTF

B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	7.12	0	OPESTF
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	7.12	0	OPESTF
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	7.12	0	OPESTF
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	83.02	2	OPESTF
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	83.02	2	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	83.02	2	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	83.02	2	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	85.00	2	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	85.00	2	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	66.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	66.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	66.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	66.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	66.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	66.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	OPESTF
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	24.56	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	24.56	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	24.56	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	24.56	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	24.56	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	24.56	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	6.96	0	OPESTF
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	6.96	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	6.96	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	6.96	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	7.12	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	7.12	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	87.02	2	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	66.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	24.56	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	7.29	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	83.02	2	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	83.02	2	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	66.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	66.00	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	OPEDIS

B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	24.56	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	24.56	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	6.96	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	6.96	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	332.08	8	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	264.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	30.40	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	40.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	98.24	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	27.83	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	(4.81)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	(0.40)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	(1.59)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	12.03	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	(9.35)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	(2.17)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	(10.10)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	(10.10)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	(0.68)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	(0.13)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	1.01	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	(0.78)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	(0.18)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	(0.85)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	(0.85)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	(0.06)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	(7.46)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	9.34	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	(10.63)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	9.74	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	(10.10)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	(2.37)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	(0.63)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	0.78	0	OPESTF
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	(0.89)	0	OPESTF
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	0.82	0	OPESTF
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	(0.85)	0	OPESTF
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	(0.20)	0	OPESTF
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	(7.89)	0	OPESTF
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	(14.78)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	(0.66)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	(1.24)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	(29.84)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	(2.50)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	332.08	8	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	332.08	8	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	264.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	264.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	30.40	0	OPEDIS

B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	30.40	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	40.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	40.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	98.24	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	98.24	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	27.83	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	27.83	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	332.08	8	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	332.08	8	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	264.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	264.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	30.40	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	30.40	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	40.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	40.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	98.24	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	98.24	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	27.83	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	27.83	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	83.02	2	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	66.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	24.56	0	OPESTF
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	6.96	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	87.02	2	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	66.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	OPESTF
B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	24.56	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	7.29	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	332.08	8	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	264.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	30.40	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	40.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	98.24	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	27.83	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	332.08	8	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	332.08	8	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	264.00	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	264.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	30.40	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	30.40	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	40.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	40.00	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	98.24	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	98.24	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	27.83	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	27.83	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ150	NE	150	332.08	8	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ404	NE	404	264.00	0	OPEDIS

B32	200802	789	PRD789PTONENPRZZZZZ406	NE	406	30.40	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ421	NE	421	40.00	0	CONCRW
B32	200802	789	PRD789PTONENPRZZZZZ422	NE	422	98.24	0	CONSUP
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	27.83	0	CONCRW
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	(59.12)	0	CONSUP
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	(52.19)	0	CONCRW
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	(59.12)	0	CONSUP
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	(4.95)	0	CONCRW
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	(4.37)	0	CONSUP
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	(4.95)	0	CONCRW
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	(59.12)	0	CONSUP
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	(13.05)	0	CONCRW
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	(59.12)	0	CONSUP
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	(2.98)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	(4.95)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	(1.09)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	(4.95)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	(0.25)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	(59.12)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	(52.19)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	(4.95)	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	(4.37)	0	OPESUP
B32	200802	789	PRD789PTONENPRZZZZZ155	NE	155	(52.19)	0	OPEDIS
B32	200802	789	PRD789PTONENPRZZZZZ423	NE	423	(4.37)	0	OPESUP
B32	200802	789	PWX789PDONENPWZZZZZ150	NE	150	126.48	4	OPESUP
B32	200802	789	PWX789PDONENPWZZZZZ406	NE	406	15.20	0	OPEDIS
B32	200802	789	PWX789PDONENPWZZZZZ421	NE	421	20.00	0	OPESUP
B32	200802	789	PWX789PDONENPWZZZZZ422	NE	422	49.12	0	OPESUP
B32	200802	789	PWX789PDONENPWZZZZZ423	NE	423	10.60	0	OPEDIS
B32	200802	789	PWX789PDONENPWZZZZZ155	NE	155	(14.28)	0	OPESUP
B32	200802	789	PWX789PDONENPWZZZZZ423	NE	423	(1.20)	0	OPESUP
			Feb-08			10,323.26	112	
B32	200803	789	PRD789PTONENPRZZZZZ150	NE	150	83.02	2	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ150	NE	150	85.00	2	OPESUP
B32	200803	789	PRD789PTONENPRZZZZZ150	NE	150	166.04	4	OPESUP
B32	200803	789	PRD789PTONENPRZZZZZ404	NE	404	132.00	0	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ404	NE	404	66.00	0	OPESUP
B32	200803	789	PRD789PTONENPRZZZZZ404	NE	404	66.00	0	OPESUP
B32	200803	789	PRD789PTONENPRZZZZZ406	NE	406	15.20	0	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ421	NE	421	20.00	0	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ422	NE	422	49.12	0	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ422	NE	422	24.56	0	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ422	NE	422	24.56	0	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ423	NE	423	13.91	0	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ423	NE	423	6.96	0	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ423	NE	423	7.12	0	OPEDIS
B32	200803	789	PRX789PTONENPRZZZZZ150	NE	150	334.24	8	CONCRW

B32	200803	789	PRX789PTONENPRZZZZZ150	NE	150	323.44	8	CONCRW
B32	200803	789	PRX789PTONENPRZZZZZ404	NE	404	264.00	0	CONSUP
B32	200803	789	PRX789PTONENPRZZZZZ404	NE	404	264.00	0	CONCRW
B32	200803	789	PRX789PTONENPRZZZZZ406	NE	406	30.40	0	CONCRW
B32	200803	789	PRX789PTONENPRZZZZZ406	NE	406	30.40	0	CONSUP
B32	200803	789	PRX789PTONENPRZZZZZ421	NE	421	40.00	0	CONCRW
B32	200803	789	PRX789PTONENPRZZZZZ421	NE	421	40.00	0	CONCRW
B32	200803	789	PRX789PTONENPRZZZZZ422	NE	422	98.24	0	CONSUP
B32	200803	789	PRX789PTONENPRZZZZZ422	NE	422	98.24	0	CONCRW
B32	200803	789	PRX789PTONENPRZZZZZ423	NE	423	28.01	0	CONCRW
B32	200803	789	PRX789PTONENPRZZZZZ423	NE	423	27.10	0	CONSUP
B32	200803	789	PRD789PTONENPRZZZZZ150	NE	150	83.02	2	CONCRW
B32	200803	789	PRD789PTONENPRZZZZZ404	NE	404	66.00	0	CONCRW
B32	200803	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	CONSUP
B32	200803	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	CONCRW
B32	200803	789	PRD789PTONENPRZZZZZ422	NE	422	24.56	0	CONCRW
B32	200803	789	PRD789PTONENPRZZZZZ423	NE	423	6.96	0	CONSUP
B32	200803	789	PRD789PTONENPRZZZZZ150	NE	150	83.02	2	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ150	NE	150	85.00	2	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ150	NE	150	85.00	2	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ404	NE	404	66.00	0	OPESUP
B32	200803	789	PRD789PTONENPRZZZZZ404	NE	404	66.00	0	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ404	NE	404	66.00	0	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	OPESUP
B32	200803	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	OPESUP
B32	200803	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	OPESUP
B32	200803	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ422	NE	422	24.56	0	OPESUP
B32	200803	789	PRD789PTONENPRZZZZZ422	NE	422	24.56	0	OPESUP
B32	200803	789	PRD789PTONENPRZZZZZ422	NE	422	24.56	0	CONCRW
B32	200803	789	PRD789PTONENPRZZZZZ423	NE	423	6.96	0	CONSUP
B32	200803	789	PRD789PTONENPRZZZZZ423	NE	423	7.12	0	CONCRW
B32	200803	789	PRD789PTONENPRZZZZZ423	NE	423	7.12	0	CONSUP
B32	200803	789	PRD789PTONENPRZZZZZ150	NE	150	166.04	4	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ404	NE	404	132.00	0	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ406	NE	406	15.20	0	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ421	NE	421	20.00	0	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ422	NE	422	49.12	0	CONCRW
B32	200803	789	PRD789PTONENPRZZZZZ423	NE	423	13.91	0	CONCRW
B32	200803	789	PRD789PTONENPRZZZZZ150	NE	150	83.02	2	CONSUP
B32	200803	789	PRD789PTONENPRZZZZZ404	NE	404	66.00	0	CONCRW
B32	200803	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	CONCRW
B32	200803	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	CONSUP
B32	200803	789	PRD789PTONENPRZZZZZ422	NE	422	24.56	0	RELCRW
B32	200803	789	PRD789PTONENPRZZZZZ423	NE	423	6.96	0	RELCRW
B32	200803	789	PRX789PTONENPRZZZZZ150	NE	150	334.24	8	RELCRW
B32	200803	789	PRX789PTONENPRZZZZZ150	NE	150	334.24	8	RELCRW
B32	200803	789	PRX789PTONENPRZZZZZ150	NE	150	323.44	8	RELCRW
B32	200803	789	PRX789PTONENPRZZZZZ404	NE	404	264.00	0	RELCRW

B32	200803	789	PRX789PTONENPRZZZZZ404	NE	404	264.00	0	RELCRW
B32	200803	789	PRX789PTONENPRZZZZZ404	NE	404	264.00	0	RELCRW
B32	200803	789	PRX789PTONENPRZZZZZ406	NE	406	30.40	0	RELCRW
B32	200803	789	PRX789PTONENPRZZZZZ406	NE	406	30.40	0	RELCRW
B32	200803	789	PRX789PTONENPRZZZZZ406	NE	406	30.40	0	RELCRW
B32	200803	789	PRX789PTONENPRZZZZZ421	NE	421	40.00	0	RELCRW
B32	200803	789	PRX789PTONENPRZZZZZ421	NE	421	40.00	0	RELCRW
B32	200803	789	PRX789PTONENPRZZZZZ421	NE	421	40.00	0	RELCRW
B32	200803	789	PRX789PTONENPRZZZZZ422	NE	422	98.24	0	RELCRW
B32	200803	789	PRX789PTONENPRZZZZZ422	NE	422	98.24	0	RELCRW
B32	200803	789	PRX789PTONENPRZZZZZ422	NE	422	98.24	0	OPESTF
B32	200803	789	PRX789PTONENPRZZZZZ423	NE	423	28.01	0	OPESTF
B32	200803	789	PRX789PTONENPRZZZZZ423	NE	423	28.01	0	OPESTF
B32	200803	789	PRX789PTONENPRZZZZZ423	NE	423	27.10	0	OPESTF
B32	200803	789	PRD789PTONENPRZZZZZ155	NE	155	24.52	0	OPESTF
B32	200803	789	PRD789PTONENPRZZZZZ155	NE	155	20.80	0	OPESTF
B32	200803	789	PRD789PTONENPRZZZZZ155	NE	155	28.70	0	OPESTF
B32	200803	789	PRD789PTONENPRZZZZZ155	NE	155	(10.10)	0	OPESTF
B32	200803	789	PRD789PTONENPRZZZZZ423	NE	423	2.05	0	OPESUP
B32	200803	789	PRD789PTONENPRZZZZZ423	NE	423	1.74	0	OPESUP
B32	200803	789	PRD789PTONENPRZZZZZ423	NE	423	2.41	0	OPESUP
B32	200803	789	PRD789PTONENPRZZZZZ423	NE	423	(0.85)	0	OPESUP
B32	200803	789	PRD789PTONENPRZZZZZ155	NE	155	12.26	0	OPESUP
B32	200803	789	PRD789PTONENPRZZZZZ155	NE	155	(0.24)	0	OPESUP
B32	200803	789	PRD789PTONENPRZZZZZ155	NE	155	(10.09)	0	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ423	NE	423	1.03	0	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ423	NE	423	(0.02)	0	OPESUP
B32	200803	789	PRD789PTONENPRZZZZZ423	NE	423	(0.85)	0	OPEDIS
B32	200803	789	PRX789PTONENPRZZZZZ155	NE	155	99.65	0	OPEDIS
B32	200803	789	PRX789PTONENPRZZZZZ155	NE	155	12.39	0	OPESUP
B32	200803	789	PRX789PTONENPRZZZZZ423	NE	423	8.35	0	OPEDIS
B32	200803	789	PRX789PTONENPRZZZZZ423	NE	423	1.04	0	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ155	NE	155	24.52	0	OPESUP
B32	200803	789	PRD789PTONENPRZZZZZ423	NE	423	2.05	0	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ155	NE	155	21.16	0	OPEDIS
B32	200803	789	PRD789PTONENPRZZZZZ423	NE	423	1.77	0	OPESUP
B32	200803	789	PRX789PTONENPRZZZZZ155	NE	155	99.65	0	OPEDIS
B32	200803	789	PRX789PTONENPRZZZZZ155	NE	155	153.98	0	OPEDIS
B32	200803	789	PRX789PTONENPRZZZZZ155	NE	155	12.39	0	OPESUP
B32	200803	789	PRX789PTONENPRZZZZZ423	NE	423	8.35	0	OPEDIS
B32	200803	789	PRX789PTONENPRZZZZZ423	NE	423	12.90	0	OPEDIS
B32	200803	789	PRX789PTONENPRZZZZZ423	NE	423	1.04	0	OPESUP
B32	200803	789	PRR789PTONENPRZZZZZ150	NE	150	305.60	8	OPEDIS
B32	200803	789	PRR789PTONENPRZZZZZ404	NE	404	264.00	0	OPESUP
B32	200803	789	PRR789PTONENPRZZZZZ406	NE	406	30.40	0	OPEDIS
B32	200803	789	PRR789PTONENPRZZZZZ421	NE	421	40.00	0	OPESUP
B32	200803	789	PRR789PTONENPRZZZZZ422	NE	422	98.24	0	OPEDIS
B32	200803	789	PRR789PTONENPRZZZZZ423	NE	423	25.61	0	OPESUP
B32	200803	789	PRR789PTONENPRZZZZZ150	NE	150	152.80	4	OPEDIS
B32	200803	789	PRR789PTONENPRZZZZZ404	NE	404	132.00	0	OPESUP
B32	200803	789	PRR789PTONENPRZZZZZ406	NE	406	15.20	0	OPEDIS

B32	200803	789	PRR789PTONENPRZZZZZ421	NE	421	20.00	0	OPESUP
B32	200803	789	PRR789PTONENPRZZZZZ422	NE	422	49.12	0	OPEDIS
B32	200803	789	PRR789PTONENPRZZZZZ423	NE	423	12.80	0	OPESUP
B32	200803	789	PRR789PTONENPRZZZZZ155	NE	155	(37.52)	0	OPESTF
B32	200803	789	PRR789PTONENPRZZZZZ423	NE	423	(3.14)	0	OPESTF
B32	200803	789	PRR789PTONENPRZZZZZ155	NE	155	(18.76)	0	OPESTF
B32	200803	789	PRR789PTONENPRZZZZZ423	NE	423	(1.57)	0	OPESTF
B32	200803	789	PWX789PDONENPWZZZZZ150	NE	150	75.06	2	OPESTF
B32	200803	789	PWX789PDONENPWZZZZZ406	NE	406	7.60	0	OPESTF
B32	200803	789	PWX789PDONENPWZZZZZ421	NE	421	10.00	0	OPESUP
B32	200803	789	PWX789PDONENPWZZZZZ422	NE	422	24.56	0	OPESUP
B32	200803	789	PWX789PDONENPWZZZZZ423	NE	423	6.29	0	OPEDIS
B32	200803	789	PWX789PDONENPWZZZZZ150	NE	150	37.53	1	OPEDIS
B32	200803	789	PWX789PDONENPWZZZZZ150	NE	150	150.12	4	OPESTF
B32	200803	789	PWX789PDONENPWZZZZZ406	NE	406	3.80	0	OPESUP
B32	200803	789	PWX789PDONENPWZZZZZ406	NE	406	15.20	0	OPEDIS
B32	200803	789	PWX789PDONENPWZZZZZ421	NE	421	5.00	0	OPEDIS
B32	200803	789	PWX789PDONENPWZZZZZ421	NE	421	20.00	0	OPESTF
B32	200803	789	PWX789PDONENPWZZZZZ422	NE	422	12.28	0	OPESUP
B32	200803	789	PWX789PDONENPWZZZZZ422	NE	422	49.12	0	OPEDIS
B32	200803	789	PWX789PDONENPWZZZZZ423	NE	423	3.15	0	OPESUP
B32	200803	789	PWX789PDONENPWZZZZZ423	NE	423	12.58	0	OPEDIS
B32	200803	789	PWX789PDONENPWZZZZZ155	NE	155	(6.12)	0	OPESUP
B32	200803	789	PWX789PDONENPWZZZZZ423	NE	423	(0.51)	0	OPEDIS
B32	200803	789	PWX789PDONENPWZZZZZ155	NE	155	(3.06)	0	OPESUP
B32	200803	789	PWX789PDONENPWZZZZZ155	NE	155	(11.66)	0	OPEDIS
B32	200803	789	PWX789PDONENPWZZZZZ423	NE	423	(0.26)	0	OPESUP
B32	200803	789	PWX789PDONENPWZZZZZ423	NE	423	(0.98)	0	OPEDIS
			Mar-08			8,162.05	81	
B32	200804	789	PRD789PTONENPRZZZZZ150	NE	150	87.02	2	OPESUP
B32	200804	789	PRD789PTONENPRZZZZZ404	NE	404	65.64	0	OPEDIS
B32	200804	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	OPESUP
B32	200804	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	OPEDIS
B32	200804	789	PRD789PTONENPRZZZZZ422	NE	422	24.30	0	OPESUP
B32	200804	789	PRD789PTONENPRZZZZZ423	NE	423	7.29	0	OPEDIS
B32	200804	789	PRD789PTONENPRZZZZZ155	NE	155	(21.73)	0	OPESUP
B32	200804	789	PRD789PTONENPRZZZZZ423	NE	423	(1.82)	0	OPEDIS
B32	200804	789	PWX789PDONENPWZZZZZ150	NE	150	7.91	0.25	OPESUP
B32	200804	789	PWX789PDONENPWZZZZZ406	NE	406	0.95	0	OPEDIS
B32	200804	789	PWX789PDONENPWZZZZZ421	NE	421	1.25	0	OPEDIS
B34	200804	789	PWX789PDONENPWZZZZZ422	NE	422	3.04	0	MTENGR
B34	200804	789	PWX789PDONENPWZZZZZ423	NE	423	0.66	0	MTENGR
B34	200804	789	PWX789PDONENPWZZZZZ155	NE	155	0.82	0	MTENGR
B34	200804	789	PWX789PDONENPWZZZZZ423	NE	423	0.07	0	MTENGR
			Apr-08			193.00	2.25	
B34	200805	789	PWX789PDONENPWZZZZZ150	NE	150	18.34	0.5833	MTENGR
B34	200805	789	PWX789PDONENPWZZZZZ406	NE	406	2.20	0	MTENGR
B34	200805	789	PWX789PDONENPWZZZZZ421	NE	421	2.90	0	MTENGR
B34	200805	789	PWX789PDONENPWZZZZZ422	NE	422	7.05	0	MTENGR
B34	200805	789	PWX789PDONENPWZZZZZ423	NE	423	1.54	0	MTENGR
B34	200805	789	PWX789PDONENPWZZZZZ155	NE	155	0.69	0	MTENGR

B34	200805	789	PWX789PDONENPWZZZZZ423	NE	423	0.06	0	MTENGR
			May-08			32.78	0.5833	
B34	200806	789	PRD789PTONENPRZZZZZ150	NE	150	42.50	1	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ404	NE	404	32.82	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ406	NE	406	3.80	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ421	NE	421	5.00	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ422	NE	422	12.15	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ423	NE	423	3.56	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ150	NE	150	62.27	1.5	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ150	NE	150	83.02	2	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ150	NE	150	85.00	2	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ404	NE	404	65.64	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ404	NE	404	49.23	0	MTELEC
B34	200806	789	PRD789PTONENPRZZZZZ404	NE	404	65.64	0	MTELEC
B34	200806	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	MTELEC
B34	200806	789	PRD789PTONENPRZZZZZ406	NE	406	5.70	0	MTELEC
B34	200806	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	MTELEC
B34	200806	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ421	NE	421	7.50	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ422	NE	422	24.30	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ422	NE	422	18.23	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ422	NE	422	24.30	0	MTELEC
B34	200806	789	PRD789PTONENPRZZZZZ423	NE	423	6.96	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ423	NE	423	5.22	0	MTELEC
B34	200806	789	PRD789PTONENPRZZZZZ423	NE	423	7.12	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ150	NE	150	83.02	2	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ150	NE	150	85.00	2	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ404	NE	404	65.64	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ404	NE	404	65.64	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	MTELEC
B34	200806	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	MTELEC
B34	200806	789	PRD789PTONENPRZZZZZ422	NE	422	24.30	0	MTELEC
B34	200806	789	PRD789PTONENPRZZZZZ422	NE	422	24.30	0	MTELEC
B34	200806	789	PRD789PTONENPRZZZZZ423	NE	423	6.96	0	MTELEC
B34	200806	789	PRD789PTONENPRZZZZZ423	NE	423	7.12	0	MTELEC
B34	200806	789	PRD789PTONENPRZZZZZ150	NE	150	87.02	2	MTELEC
B34	200806	789	PRD789PTONENPRZZZZZ404	NE	404	65.64	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ422	NE	422	24.30	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ423	NE	423	7.29	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ155	NE	155	0.26	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ423	NE	423	0.02	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ155	NE	155	3.51	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ155	NE	155	(8.37)	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ155	NE	155	(19.33)	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ155	NE	155	(7.40)	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ423	NE	423	0.29	0	MTENGR

B34	200806	789	PRD789PTONENPRZZZZZ423	NE	423	(0.70)	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ423	NE	423	(1.62)	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ423	NE	423	(0.62)	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ155	NE	155	(2.90)	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ155	NE	155	(7.40)	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ423	NE	423	(0.24)	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ423	NE	423	(0.62)	0	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ150	NE	150	83.02	2	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ150	NE	150	85.00	2	MTENGR
B34	200806	789	PRD789PTONENPRZZZZZ155	NE	155	(5.69)	0	MTELEC
B34	200806	789	PRD789PTONENPRZZZZZ155	NE	155	(7.40)	0	MTELEC
B34	200806	789	PRD789PTONENPRZZZZZ404	NE	404	65.64	0	MTELEC
B34	200806	789	PRD789PTONENPRZZZZZ404	NE	404	65.64	0	MTELEC
B34	200806	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	MTELEC
B34	200806	789	PRD789PTONENPRZZZZZ406	NE	406	7.60	0	MTELEC
B34	200806	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	MTELEC
B34	200806	789	PRD789PTONENPRZZZZZ421	NE	421	10.00	0	MTELEC
B34	200806	789	PRD789PTONENPRZZZZZ422	NE	422	24.30	0	MTELEC
B34	200806	789	PRD789PTONENPRZZZZZ422	NE	422	24.30	0	MTELEC
B34	200806	789	PRD789PTONENPRZZZZZ423	NE	423	6.48	0	MTELEC
B34	200806	789	PRD789PTONENPRZZZZZ423	NE	423	6.50	0	MTELEC
			Jun-08			1,582.06	16.5	
B34	200807	789	PRD789PTONENPRZZZZZ155	NE	155	2.56	0	MTELEC
B34	200807	789	PRD789PTONENPRZZZZZ423	NE	423	0.21	0	MTELEC
B34	200807	789	PWX789PDONENPWZZZZZ150	NE	150	7.91	0.25	MTELEC
B34	200807	789	PWX789PDONENPWZZZZZ406	NE	406	0.95	0	MTELEC
B34	200807	789	PWX789PDONENPWZZZZZ421	NE	421	1.25	0	MTELEC
B34	200807	789	PWX789PDONENPWZZZZZ422	NE	422	3.04	0	MTELEC
B34	200807	789	PWX789PDONENPWZZZZZ423	NE	423	0.66	0	MTELEC
B34	200807	789	PWX789PDONENPWZZZZZ150	NE	150	23.72	0.75	MTELEC
B34	200807	789	PWX789PDONENPWZZZZZ406	NE	406	2.85	0	MTELEC
B34	200807	789	PWX789PDONENPWZZZZZ421	NE	421	3.75	0	MTELEC
B34	200807	789	PWX789PDONENPWZZZZZ422	NE	422	9.11	0	MTELEC
B34	200807	789	PWX789PDONENPWZZZZZ423	NE	423	1.99	0	MTELEC
B34	200807	789	PWX789PDONENPWZZZZZ155	NE	155	0.38	0	MTELEC
B34	200807	789	PWX789PDONENPWZZZZZ423	NE	423	0.03	0	MTELEC
B34	200807	789	PWX789PDONENPWZZZZZ155	NE	155	1.97	0	MTELEC
B34	200807	789	PWX789PDONENPWZZZZZ423	NE	423	0.17	0	MTELEC
			Jul-08			60.55	1	
			TOTAL LABOR			55,928.14	768.83	

Hawaiian Electric Company, Inc.
2009 Test Year

Monthly Training Non-Labor Costs - 2007 and August 2008 YTD Recorded

BLOCK	FULL_PERIOD	ACT	ACCOUNT_CODE	IND	EE	AMOUNT	SUPPLIER_NAME
B32	200701	789	PRX789PTONENPRZZZZZ501	NE	501	1,000.00	ENVIROSERVICES & TRAINING CTR.
			Jan-07			1,000.00	
B32	200702	789	PRX789PTONENPRZZZZZ501	NE	501	324.00	BACKGROUND INFORMATION SERVICES,
B32	200702	789	PRX789PTONENPRZZZZZ501	NE	501	14.58	BACKGROUND INFORMATION SERVICES,
			Feb-07			338.58	
B32	200703	789	PRX789PTONENPRZZZZZ501	NE	501	1,390.94	R.J.'S ELECTRICAL AND
B32	200703	789	PRX789PTONENPRZZZZZ501	NE	501	175.50	BACKGROUND INFORMATION SERVICES,
B32	200703	789	PRX789PTONENPRZZZZZ501	NE	501	7.90	BACKGROUND INFORMATION SERVICES,
B32	200703	789	PRX789PTONENPRZZZZZ501	NE	501	1,154.45	ENVIROSERVICES & TRAINING CTR.
			Mar-07			2,728.79	
B32	200707	789	PRR789PTONENPRZZZZZ501	NE	501	381.15	ENOSERV, LLC
B34	200707	789	PRR789PDONENPRZZZZZ501	NE	501	8,470.00	ENOSERV, LLC
B34	200707	789	PWX789PDONENPWZZZZZ501	NE	501	324.61	COMPUSA, INC.
			Jul-07			9,175.76	
B32	200708	789	PRX789PTONENPRZZZZZ501	NE	501	502.62	R.J.'S ELECTRICAL AND
			Aug-07			502.62	
B32	200709	789	PRX789PTONENPRZZZZZ501	NE	501	1,793.14	R.J.'S ELECTRICAL AND
			Sep-07			1,793.14	
B32	200710	789	PRX789PTONENPRZZZZZ501	NE	501	833.87	R.J.'S ELECTRICAL AND
B32	200710	789	PRX789PTONENPRZZZZZ501	NE	501	1,413.61	R.J.'S ELECTRICAL AND
B32	200710	789	PRX789PTONENPRZZZZZ501	NE	501	180.00	R.J.'S ELECTRICAL AND
			Oct-07			2,427.48	
B32	200711	789	PRX789PTONENPRZZZZZ501	NE	501	121.00	BACKGROUND INFORMATION SERVICES,
B32	200711	789	PRX789PTONENPRZZZZZ501	NE	501	5.45	BACKGROUND INFORMATION SERVICES,
			Nov-07			126.45	
B32	200712	789	PRX789PTONENPRZZZZZ501	NE	501	589.01	R.J.'S ELECTRICAL AND
B32	200712	789	PRX789PTONENPRZZZZZ501	NE	501	3,123.27	R.J.'S ELECTRICAL AND
			Dec-07			3,712.28	
B32	200802	789	PRX789PTONENPRZZZZZ501	NE	501	234.50	BACKGROUND INFORMATION SERVICES,
B32	200802	789	PRX789PTONENPRZZZZZ501	NE	501	10.55	BACKGROUND INFORMATION SERVICES,
			Feb-08			245.05	
B32	200803	789	PRX789PTONENPRZZZZZ501	NE	501	360.00	MURANAKA ENVIRONMENTAL
B32	200803	789	PRX789PTONENPRZZZZZ501	NE	501	180.00	BACKGROUND INFORMATION SERVICES,
B32	200803	789	PRX789PTONENPRZZZZZ501	NE	501	7.20	BACKGROUND INFORMATION SERVICES,
B32	200803	789	PRX789PTONENPRZZZZZ501	NE	501	705.48	R.J.'S ELECTRICAL AND
B34	200803	795	PWX795PDONENPWZZZZZ205	NE	205	88.95	BANK ONE
			Mar-08			1,341.63	
B32	200804	789	PRX789PTONENPRZZZZZ501	NE	501	42.00	BACKGROUND INFORMATION SERVICES,
B32	200804	789	PRX789PTONENPRZZZZZ501	NE	501	1.89	BACKGROUND INFORMATION SERVICES,
B34	200804	789	PWX789PDONENPWZZZZZ501	NE	501	10.79	GWEN FUJIE KEYNOTES & SEMINARS
B34	200804	789	PWX789PDONENPWZZZZZ501	NE	501	13.97	GWEN FUJIE KEYNOTES & SEMINARS
			Apr-08			68.65	
B32	200805	789	PRX789PTONENPRZZZZZ501	NE	501	35.00	BACKGROUND INFORMATION SERVICES,
B32	200805	789	PRX789PTONENPRZZZZZ501	NE	501	1.58	BACKGROUND INFORMATION SERVICES,
			May-08			36.58	
B32	200807	789	PRX789PTONENPRZZZZZ501	NE	501	42.00	BACKGROUND INFORMATION SERVICES,
B32	200807	789	PRX789PTONENPRZZZZZ501	NE	501	1.89	BACKGROUND INFORMATION SERVICES,
			Jul-08			43.89	
			TOTAL OUTSIDE SERVICES			23,540.90	

Hawaiian Electric Company, Inc.
2009 Test Year

Monthly Training-Related Journal Entries - 2007 and August 2008 YTD Recorded

BLOCK	FULL_PERIOD	ACT	ACCOUNT_CODE	IND	EE	AMOUNT	JOURNAL_DESC_M
B32	200701	789	PRX789PTONENPRZZZZZ501	NE	501	(1,000.00)	accrue unpaid invoices at quarter end
			Jan-07			(1,000.00)	
B32	200706	789	PRI789PTONENPRZZZZZ201	NE	201	38.91	ON COST CHG TO: 127559/001
B34	200706	789	PRR789PDONENPRZZZZZ501	NE	501	8,470.00	accrue unpaid invoices at quarter end
B34	200706	789	PRR789PDONENPRZZZZZ501	NE	501	-	correct wrong location code
			Jun-07			8,508.91	
B32	200707	789	PRI789PTONENPRZZZZZ201	NE	201	33.13	ON COST CHG TO: 128365/001
B32	200707	789	PRI789PTONENPRZZZZZ201	NE	201	33.13	ON COST CHG TO: 128365/002
B32	200707	789	PRI789PTONENPRZZZZZ201	NE	201	33.13	ON COST CHG TO: 128365/003
B34	200707	789	PRR789PDONENPRZZZZZ501	NE	501	(8,470.00)	accrue unpaid invoices at quarter end
			Jul-07			(8,370.61)	
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	6.98	ON COST CHG TO: 132588/001
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	6.98	ON COST CHG TO: 132588/002
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	6.98	ON COST CHG TO: 132588/003
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	12.30	ON COST CHG TO: 132588/004
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	6.98	ON COST CHG TO: 132588/005
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	6.98	ON COST CHG TO: 132588/006
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	6.98	ON COST CHG TO: 132588/007
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	6.98	ON COST CHG TO: 132588/008
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	6.98	ON COST CHG TO: 132588/009
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	6.98	ON COST CHG TO: 132588/010
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	6.98	ON COST CHG TO: 132588/011
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	6.98	ON COST CHG TO: 132588/012
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	6.98	ON COST CHG TO: 132588/013
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	6.98	ON COST CHG TO: 132588/014
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	12.30	ON COST CHG TO: 132588/015
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	6.98	ON COST CHG TO: 132588/016
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	6.98	ON COST CHG TO: 132588/017
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	6.98	ON COST CHG TO: 132588/018
			Sep-07			136.28	
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	140.60	ON COST CHG TO: 132588/001
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(7.40)	ON COST CHG TO: 132588/002
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(7.40)	ON COST CHG TO: 132588/003
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(13.04)	ON COST CHG TO: 132588/004
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(7.40)	ON COST CHG TO: 132588/005
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(7.40)	ON COST CHG TO: 132588/006
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(7.40)	ON COST CHG TO: 132588/007
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(7.40)	ON COST CHG TO: 132588/008
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(7.40)	ON COST CHG TO: 132588/009
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(7.40)	ON COST CHG TO: 132588/010
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(7.40)	ON COST CHG TO: 132588/011
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(7.40)	ON COST CHG TO: 132588/012
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(7.40)	ON COST CHG TO: 132588/013
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(7.40)	ON COST CHG TO: 132588/014
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(13.04)	ON COST CHG TO: 132588/015
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(7.40)	ON COST CHG TO: 132588/016
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(7.40)	ON COST CHG TO: 132588/017
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(7.40)	ON COST CHG TO: 132588/018
			Oct-07			3.52	
B32	200803	789	PRX789PTONENPRZZZZZ501	NE	501	0.90	Accrue addtnl .5% tax-TLC 03/08
B32	200803	789	PRX789PTONENPRZZZZZ501	NE	501	42.00	accrue unpaid invoices at quarter end
B34	200803	789	PWX789PDONENPWZZZZZ501	NE	501	24.76	accrue unpaid invoices at quarter end
B34	200803	795	PWX795PDONENPWZZZZZ301	NE	301	14.19	HECO Pool Cost
			Mar-08			81.85	
B32	200804	789	PRX789PTONENPRZZZZZ501	NE	501	(42.00)	accrue unpaid invoices at quarter end
B34	200804	789	PWX789PDONENPWZZZZZ501	NE	501	(24.76)	accrue unpaid invoices at quarter end
			Apr-08			(66.76)	
B32	200806	789	PRX789PTONENPRZZZZZ501	NE	501	42.00	accrue unpaid invoices at quarter end
			Jun-08			42.00	
B32	200807	789	PRX789PTONENPRZZZZZ501	NE	501	(42.00)	accrue unpaid invoices at quarter end
			Jul-08			(42.00)	

TOTAL JOURNAL ENTRIES (706.81)

Hawaiian Electric Company, Inc.
2009 Test Year

Monthly Training-Related Purchase Receipts - 2007 and August 2008 YTD Recorded

BLOCK	FULL_PERIOD	ACT	ACCOUNT_CODE	IND	EE	AMOUNT	SUPPLIER_NAME	BOOK TITLES/SUBJECT MATTER
B32	200706	789	PRI789PTONENPRZZZZZ201	NE	201	309.32	EDUCATION DIRECT	Instrum & Control Electrician
			Jun-07			309.32		
B32	200707	789	PRI789PTONENPRZZZZZ201	NE	201	263.34	EDUCATION DIRECT	Instrum & Control Electrician
B32	200707	789	PRI789PTONENPRZZZZZ201	NE	201	263.34	EDUCATION DIRECT	Instrum & Control Electrician
B32	200707	789	PRI789PTONENPRZZZZZ201	NE	201	263.34	EDUCATION DIRECT	Instrum & Control Electrician
			Jul-07			790.02		
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	43.89	EDUCATION DIRECT	Not available
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	43.89	EDUCATION DIRECT	4018A Principles of AC C
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	43.89	EDUCATION DIRECT	4358 Transmission Lines
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	77.33	EDUCATION DIRECT	6590A-B Electric Power S
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	43.89	EDUCATION DIRECT	006038 Local Distribution
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	43.89	EDUCATION DIRECT	006039 Underground Power
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	43.89	EDUCATION DIRECT	006039 Principles of Mechanics
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	43.89	EDUCATION DIRECT	286007 Reading Electricals
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	43.89	EDUCATION DIRECT	4040 Transformers
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	43.89	EDUCATION DIRECT	4146A Electrical Measuring
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	43.89	EDUCATION DIRECT	4041 Transformer Operations
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	43.89	EDUCATION DIRECT	4042 Distribution and Power
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	43.89	EDUCATION DIRECT	4343 Storage Batteries
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	43.89	EDUCATION DIRECT	6613 Switchgear
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	77.33	EDUCATION DIRECT	6538A-B Protective Relay
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	43.89	EDUCATION DIRECT	6793 Instrument Transformer
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	43.89	EDUCATION DIRECT	4368 Voltage Regulators
B32	200709	789	PRS789PTONENPRZZZZZ201	NE	201	43.89	EDUCATION DIRECT	4033 Fractional Horsepower
			Sep-07			856.90		
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(43.89)	EDUCATION DIRECT	Not available
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(43.89)	EDUCATION DIRECT	4018A Principles of AC C
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(43.89)	EDUCATION DIRECT	4358 Transmission Lines
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(77.33)	EDUCATION DIRECT	6590A-B Electric Power S
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(43.89)	EDUCATION DIRECT	006038 Local Distribution
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(43.89)	EDUCATION DIRECT	006039 Underground Power
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(43.89)	EDUCATION DIRECT	006039 Principles of Mechanics
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(43.89)	EDUCATION DIRECT	286007 Reading Electricals
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(43.89)	EDUCATION DIRECT	4040 Transformers
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(43.89)	EDUCATION DIRECT	4146A Electrical Measuring
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(43.89)	EDUCATION DIRECT	4041 Transformer Operations
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(43.89)	EDUCATION DIRECT	4042 Distribution and Power
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(43.89)	EDUCATION DIRECT	4343 Storage Batteries
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(43.89)	EDUCATION DIRECT	6613 Switchgear
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(77.33)	EDUCATION DIRECT	6538A-B Protective Relay
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(43.89)	EDUCATION DIRECT	6793 Instrument Transformer
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(43.89)	EDUCATION DIRECT	4368 Voltage Regulators
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	(43.89)	EDUCATION DIRECT	4033 Fractional Horsepower
B32	200710	789	PRS789PTONENPRZZZZZ201	NE	201	877.80	PENN FOSTER CAREER SCH	Ultrasonic Training Level 1
			Oct-07			20.90		
			TOTAL RECEIPTS			1,977.14		

Hawaiian Electric Company, Inc.
2009 Test Year

Summary of Monthly T&D Training Costs
2007 and August 2008 YTD Recorded

	2007	2008 YTD	TOTAL
Labor	35,486.75	20,441.39	55,928.14
NonLabor (Outside Se	21,805.10	1,735.80	23,540.90
Receipts	1,977.14	-	1,977.14
Journal Entries	(721.90)	15.09	(706.81)
	58,547.09	22,192.28	80,739.37

CA-IR-107

Ref: HECO-WP-812 (T&D M&S).

HECO-WP-812, pages 3-4, contain monthly T&D stores issues and receipts. Please provide the following:

a. Please provide a monthly breakdown of actual receipts, issuances, adjustments (if any) and balances by location/storeroom for each month of 2007 and 2008, to date.
b. Please identify and describe any unusual adjustments, transfers or large transactions that significantly impact such balances in any particular month (e.g., large issues in May and December 2007; large receipts in February and May 2007).

HECO Response:

a. Monthly reports for each month of 2007 and 2008, through July, are provided as Attachment 1. These monthly reports are generated from data contained in HECO's materials management system. The data show receipts, issues, and adjustments by each warehouse location. Each monthly report represents combined data for both T&D and Power Supply inventories.

Monthly closing and opening inventory balances are included on the monthly reports, as shown on Attachment 1. HECO's materials management system captures opening and closing balances aggregated by Power Supply and T&D inventories. There are some catalog (stock) items that are common to both Power Supply and T&D work requirements; these common items may be stocked at both Power Supply and T&D warehouse locations. The materials management system requires that each stock code hold only one "stat type" designation: "TND" (T&D) or "PWR" (Power Supply). Therefore, some items are classified as PWR and are also stocked / issued at T&D warehouse locations, and some items are classified as TND and are also stocked / issued at Power Supply warehouse locations. This cross-issue activity is reflected in the inventory data by warehouse, as

shown on Attachment 1. For purposes of classifying closing and opening inventory balances for Power Supply and T&D, the materials management system aggregates the inventory value by "stat type" PWR and TND, as shown on Attachment 1.

b. The monthly data shown on Attachment 1 is combined on Attachment 2 to list ending inventory values, issues, receipts, and adjustments for each month of 2007 and 2008, through July. The months of February 2007 and May 2007 show higher than average amounts of receipts to the T&D inventory. Attachment 3 lists the largest dollar value items received into inventory during these two months. While items of this value are periodically received into inventory throughout the year, the variability of all items replenished and their associated values, coupled with the timing of receipts from month to month can cause the aggregate inventory receipts to vary from one month to another as shown on Attachment 2.

The months of May 2007 and December 2007 had higher than average amounts of issues from the T&D inventory, as shown on Attachment 2. In May 2007, $434,000 of various items were issued from T&D inventory for the Mamala project, including cable received in May 2007, as shown on Attachment 3. This resulted in higher than average issues in May, 2007. During December, 2007, Oahu experienced a wind storm that resulted in a high demand for materials during HECO's restoration effort. This is reflected in the higher than average inventory issues in the month of December, 2007.

2190 Stock Movement

Report Parameters

District: *HECO* *Period:* *200701* January 2007

Stat Type	Description	Warehouse	Opening Bal	Adjustments	Receipts	Stock Issues	Closing Bal
PWR			6,849,309.50	0.00	0.00	0.00	6,764,961.59
	POWER SUPPLY	HO21	0.00	81.17	72,344.04	97,789.69	0.00
		KA51	0.00	2,313.72	286,924.85	336,974.68	0.00
		TD01	0.00	0.00	0.00	182.00	0.00
		TD05	0.00	0.00	0.00	239.73	0.00
		TD06	0.00	0.00	0.00	199.82	0.00
		TOOL	0.00	31.12	697.81	3,286.25	0.00
		WA42	0.00	1,673.51	110,519.41	120,463.03	0.00
	Total PWR		6,849,309.50	4,099.52	470,486.11	559,135.20	6,764,961.59
TND			6,360,154.33	0.00	0.00	0.00	6,165,656.43
	TRANS AND DIST	HO21	0.00	0.00	0.00	1,945.91	0.00
		KA51	0.00	0.00	2,655.78	4,776.86	0.00
		POLE	0.00	0.00	60,736.00	76,525.30	0.00
		TD01	0.00	-4,780.35	374,725.39	366,761.53	0.00
		TD05	0.00	-2,603.10	66,489.93	207,680.04	0.00
		TD06	0.00	1,901.95	4,213.56	46,420.88	0.00
		TOOL	0.00	-669.64	54,556.36	48,765.71	0.00
		WA42	0.00	0.00	2,971.48	1,819.03	0.00
	Total TND		6,360,154.33	-6,151.14	566,348.50	754,695.26	6,165,656.43
	GRAND TOTAL		13,209,463.83	-2,051.62	1,036,834.61	1,313,830.46	12,930,618.02

2190 Stock Movement

Report Parameters

District: HECO Period: 200702 February 2007

Stat Type	Description	Warehouse	Opening Bal	Adjustments	Receipts	Stock Issues	Closing Bal
PWR			6,764,961.59	0.00	0.00	0.00	6,989,373.16
	POWER SUPPLY	HO21	0.00	-639.77	6,058.56	15,456.51	0.00
		KA51	0.00	2,687.78	344,070.03	198,722.66	0.00
		TD01	0.00	0.00	150.19	225.34	0.00
		TD05	0.00	0.00	45.06	241.16	0.00
		TD06	0.00	-97.06	0.00	273.99	0.00
		TOOL	0.00	641.34	995.76	2,666.05	0.00
		WA42	0.00	454.89	149,995.55	62,365.05	0.00
	Total PWR		6,764,961.59	3,047.18	501,315.15	279,950.76	6,989,373.16
TND			6,165,656.43	0.00	0.00	0.00	6,569,640.14
	TRANS AND DIST	HO21	0.00	0.00	0.00	1,152.90	0.00
		KA51	0.00	-10.21	2,448.20	5,944.19	0.00
		POLE	0.00	19,982.53	176,714.77	24,750.99	0.00
		TD01	0.00	3,593.10	564,553.63	383,617.47	0.00
		TD05	0.00	12,392.46	303,267.32	230,692.43	0.00
		TD06	0.00	-439.74	4,415.62	60,703.23	0.00
		TOOL	0.00	3,309.43	39,425.75	16,307.86	0.00
		WA42	0.00	0.00	191.71	2,691.79	0.00
	Total TND		6,165,656.43	38,827.57	1,091,017.00	725,860.86	6,569,640.14
	GRAND TOTAL		12,930,618.02	41,874.75	1,592,332.15	1,005,811.62	13,559,013.30

2190 Stock Movement

Report Parameters

District: *HECO* *Period:* *200703* March 2007

Stat Type	Description	Warehouse	Opening Bal	Adjustments	Receipts	Stock Issues	Closing Bal
PWR			6,989,373.16	0.00	0.00	0.00	7,041,746.05
	POWER SUPPLY	HO21	0.00	-375.71	4,180.41	14,742.13	0.00
		KA51	0.00	-248.33	337,076.94	283,608.84	0.00
		TD01	0.00	0.00	0.00	930.74	0.00
		TD05	0.00	0.00	0.00	996.87	0.00
		TD06	0.00	0.00	0.00	14.63	0.00
		TOOL	0.00	-58.53	4,413.15	3,243.88	0.00
		WA42	0.00	112.36	190,530.48	179,720.79	0.00
	Total PWR		6,989,373.16	-570.21	536,200.98	483,257.88	7,041,746.05
TND			6,569,640.14	0.00	0.00	0.00	6,689,267.16
	TRANS AND DIST	HO21	0.00	0.00	0.00	814.27	0.00
		KA51	0.00	0.00	1,203.00	1,118.28	0.00
		POLE	0.00	-2,672.24	20,866.56	109,972.74	0.00
		TD01	0.00	3,686.96	391,280.87	437,352.05	0.00
		TD05	0.00	-4,382.38	421,159.15	121,882.61	0.00
		TD06	0.00	4,226.29	0.00	56,360.73	0.00
		TOOL	0.00	-3,820.82	57,875.96	41,926.13	0.00
		WA42	0.00	6.85	5,654.88	5,258.25	0.00
	Total TND		6,569,640.14	-2,955.34	898,040.42	774,685.06	6,689,267.16
	GRAND TOTAL		13,559,013.30	-3,525.55	1,434,241.40	1,257,942.94	13,731,013.21

2190 Stock Movement

Report Parameters

District: HECO Period: 200704 April 2007

Stat Type	Description	Warehouse	Opening Bal	Adjustments	Receipts	Stock Issues	Closing Bal
PWR			7,041,746.05	0.00	0.00	0.00	7,263,047.31
	POWER SUPPLY	HO21	0.00	207.94	9,690.32	12,909.87	0.00
		KA51	0.00	-3,494.41	256,646.02	156,595.99	0.00
		TD01	0.00	0.00	0.00	292.26	0.00
		TD05	0.00	7.60	0.00	14.98	0.00
		TD06	0.00	7.60	0.00	265.02	0.00
		TOOL	0.00	-39.09	167.12	1,683.98	0.00
		WA42	0.00	-11,094.02	364,537.54	223,360.07	0.00
	Total PWR		7,041,746.05	-14,404.38	631,041.00	395,122.17	7,263,047.31
TND			6,689,267.16	0.00	0.00	0.00	6,524,390.48
	TRANS AND DIST	HO21	0.00	93.92	0.00	230.95	0.00
		KA51	0.00	0.00	1,415.00	3,313.23	0.00
		POLE	0.00	2,460.24	87,336.92	58,340.33	0.00
		TD01	0.00	2,647.15	401,639.90	384,972.69	0.00
		TD05	0.00	-13,412.67	47,071.33	199,518.13	0.00
		TD06	0.00	108.12	0.00	63,445.11	0.00
		TOOL	0.00	-571.86	32,106.37	13,762.83	0.00
		WA42	0.00	0.00	1,740.41	4,472.05	0.00
	Total TND		6,689,267.16	-8,675.10	571,309.93	728,055.32	6,524,390.48
	GRAND TOTAL		13,731,013.21	-23,079.48	1,202,350.93	1,123,177.49	13,787,437.79

2190 Stock Movement

Report Parameters

District: *HECO* *Period:* *200705* May 2007

Stat Type	Description	Warehouse	Opening Bal	Adjustments	Receipts	Stock Issues	Closing Bal
PWR			7,263,047.31	0.00	0.00	0.00	7,137,016.98
	POWER SUPPLY	HO21	0.00	-3.16	2,957.01	25,088.41	0.00
		KA51	0.00	-423.06	339,594.34	129,190.54	0.00
		TD01	0.00	0.00	0.00	65.38	0.00
		TD05	0.00	0.00	0.00	140.88	0.00
		TD06	0.00	0.00	0.00	63.72	0.00
		TOOL	0.00	0.00	6,088.67	4,608.54	0.00
		WA42	0.00	-309.95	182,626.23	497,616.13	0.00
	Total PWR		7,263,047.31	-736.17	531,266.25	656,773.60	7,137,016.98
TND			6,524,390.48	0.00	0.00	0.00	6,326,197.65
	TRANS AND DIST	HO21	0.00	-3.55	0.00	937.47	0.00
		KA51	0.00	0.00	1,125.63	1,623.95	0.00
		POLE	0.00	27,424.98	33,082.40	109,174.03	0.00
		TD01	0.00	18,188.26	508,359.26	671,653.68	0.00
		TD05	0.00	-5,747.08	650,637.60	585,954.69	0.00
		TD06	0.00	-101.34	0.00	69,491.08	0.00
		TOOL	0.00	-310.54	45,095.54	37,548.31	0.00
		WA42	0.00	-203.73	5,922.38	4,735.62	0.00
	Total TND		6,524,390.48	39,247.00	1,244,222.81	1,481,118.83	6,326,197.65
	GRAND TOTAL		13,787,437.79	38,510.83	1,775,489.06	2,137,892.43	13,463,214.63

2190 Stock Movement

Report Parameters

District: *HECO* *Period:* *200706* June 2007

Stat Type	Description	Warehouse	Opening Bal	Adjustments	Receipts	Stock Issues	Closing Bal
PWR			7,137,016.98	0.00	0.00	0.00	7,196,588.01
	POWER SUPPLY	HO21	0.00	-721.55	13,580.36	16,898.56	0.00
		KA51	0.00	-2,254.45	276,341.08	267,045.03	0.00
		TD01	0.00	0.00	0.00	0.00	0.00
		TD06	0.00	0.00	0.00	14.98	0.00
		TOOL	0.00	0.00	1,429.42	3,941.36	0.00
		WA42	0.00	1,031.39	229,250.08	171,459.72	0.00
	Total PWR		7,137,016.98	-1,944.61	520,600.94	459,359.65	7,196,588.01
TND			6,326,197.65	0.00	0.00	0.00	6,574,164.07
	TRANS AND DIST	HO21	0.00	0.00	0.00	810.50	0.00
		KA51	0.00	0.00	2,555.73	6,445.96	0.00
		POLE	0.00	-3,471.49	116,207.14	48,860.41	0.00
		TD01	0.00	375.28	539,765.50	379,717.29	0.00
		TD05	0.00	-6,636.52	238,241.36	129,206.41	0.00
		TD06	0.00	140.13	0.00	83,544.08	0.00
		TOOL	0.00	-801.84	44,579.65	35,220.86	0.00
		WA42	0.00	-8.65	3,094.07	2,268.43	0.00
	Total TND		6,326,197.65	-10,403.09	944,443.45	686,073.94	6,574,164.07
	GRAND TOTAL		13,463,214.63	-12,347.70	1,465,044.39	1,145,433.59	13,770,752.08

2190 Stock Movement

Report Parameters

District: *HECO* *Period:* *200707* July 2007

Stat Type	Description	Warehouse	Opening Bal	Adjustments	Receipts	Stock Issues	Closing Bal
PWR			7,196,588.01	0.00	0.00	0.00	6,953,315.17
	POWER SUPPLY	HO21	0.00	1,750.49	17,707.22	38,651.50	0.00
		KA51	0.00	-2,492.22	182,897.89	352,471.58	0.00
		TD01	0.00	0.00	1,070.35	297.61	0.00
		TD05	0.00	0.00	0.00	735.56	0.00
		TD06	0.00	0.00	0.00	1,734.79	0.00
		TOOL	0.00	0.00	3,978.56	2,159.59	0.00
		WA42	0.00	4,491.67	128,700.21	185,326.38	0.00
	Total PWR		7,196,588.01	3,749.94	334,354.23	581,377.01	6,953,315.17
TND			6,574,164.07	0.00	0.00	0.00	6,580,259.37
	TRANS AND DIST	HO21	0.00	0.00	0.00	1,561.77	0.00
		KA51	0.00	0.00	4,085.06	5,025.97	0.00
		POLE	0.00	2,837.47	0.00	92,273.88	0.00
		TD01	0.00	337.69	456,950.74	228,938.80	0.00
		TD05	0.00	18,585.54	99,108.76	233,490.03	0.00
		TD06	0.00	0.00	397.90	40,596.49	0.00
		TOOL	0.00	-794.40	55,447.45	27,771.28	0.00
		WA42	0.00	0.00	468.07	1,013.37	0.00
	Total TND		6,574,164.07	20,966.30	616,457.98	630,671.59	6,580,259.37
	GRAND TOTAL		13,770,752.08	24,716.24	950,812.21	1,212,048.60	13,533,574.54

2190 Stock Movement

Report Parameters

District: HECO Period: 200708 August 2007

Stat Type	Description	Warehouse	Opening Bal	Adjustments	Receipts	Stock Issues	Closing Bal
PWR			6,953,315.17	0.00	0.00	0.00	7,298,293.68
	POWER SUPPLY	HO21	0.00	-3,934.38	8,055.03	10,089.83	0.00
		KA51	0.00	-3,590.18	712,798.25	408,250.20	0.00
		TD01	0.00	0.00	281.46	238.25	0.00
		TD05	0.00	0.00	0.00	0.00	0.00
		TD06	0.00	0.00	0.00	25.93	0.00
		TOOL	0.00	0.00	3,556.40	2,687.88	0.00
		WA42	0.00	-1,654.62	147,463.02	96,430.03	0.00
	Total PWR		6,953,315.17	-9,179.18	872,154.16	517,722.12	7,298,293.68
TND			6,580,259.37	0.00	0.00	0.00	6,715,824.22
	TRANS AND DIST	HO21	0.00	-85.56	0.00	1,309.53	0.00
		KA51	0.00	438.37	1,713.44	5,573.63	0.00
		POLE	0.00	0.00	165,941.83	109,404.57	0.00
		TD01	0.00	-15,132.83	529,682.10	427,753.95	0.00
		TD05	0.00	-808.11	158,968.56	199,404.17	0.00
		TD06	0.00	661.92	5,047.85	-14,738.48	0.00
		TOOL	0.00	-517.63	43,331.17	24,989.76	0.00
		WA42	0.00	119.48	4,103.80	4,859.79	0.00
	Total TND		6,580,259.37	-15,324.36	908,788.75	758,556.92	6,715,824.22
	GRAND TOTAL		13,533,574.54	-24,503.54	1,780,942.91	1,276,279.04	14,014,117.90

2190 Stock Movement

Report Parameters

District: HECO Period: 200709 September 2007

Stat Type	Description	Warehouse	Opening Bal	Adjustments	Receipts	Stock Issues	Closing Bal
PWR			7,298,293.68	0.00	0.00	0.00	7,487,728.80
	POWER SUPPLY	HO21	0.00	37.82	6,903.69	17,244.17	0.00
		KA51	0.00	-894.15	413,192.09	238,447.03	0.00
		TD01	0.00	0.00	0.00	723.09	0.00
		TD05	0.00	0.00	0.00	615.34	0.00
		TOOL	0.00	0.00	1,638.70	2,238.84	0.00
		WA42	0.00	4,782.47	110,414.77	87,646.15	0.00
	Total PWR		7,298,293.68	3,926.14	532,149.25	346,914.62	7,487,728.80
TND			6,715,824.22	0.00	0.00	0.00	6,809,383.26
	TRANS AND DIST	HO21	0.00	0.00	0.00	64.77	0.00
		KA51	0.00	0.00	3,924.74	3,840.95	0.00
		POLE	0.00	0.00	45,257.91	98,633.58	0.00
		TD01	0.00	10,825.41	525,883.53	327,616.28	0.00
		TD05	0.00	-6,889.16	119,858.21	137,124.18	0.00
		TD06	0.00	661.51	0.00	45,263.02	0.00
		TOOL	0.00	-11.51	35,207.50	27,429.31	0.00
		WA42	0.00	0.00	2,753.65	3,940.66	0.00
	Total TND		6,715,824.22	4,586.25	732,885.54	643,912.75	6,809,383.26
	GRAND TOTAL		14,014,117.90	8,512.39	1,265,034.79	990,827.37	14,297,112.06

2190 Stock Movement

Report Parameters

District: HECO Period: 200710 October 2007

Stat Type	Description	Warehouse	Opening Bal	Adjustments	Receipts	Stock Issues	Closing Bal
PWR			7,487,728.80	0.00	0.00	0.00	7,754,435.35
	POWER SUPPLY	HO21	0.00	-448.63	7,776.53	51,917.43	0.00
		KA51	0.00	-6,011.32	201,229.94	140,388.58	0.00
		TD01	0.00	0.00	0.00	23.34	0.00
		TD06	0.00	0.00	0.00	72.66	0.00
		TOOL	0.00	-302.48	4,217.45	3,334.80	0.00
		WA42	0.00	917.52	347,439.63	92,392.43	0.00
	Total PWR		7,487,728.80	-5,844.91	560,663.55	288,129.24	7,754,435.35
TND			6,809,383.26	0.00	0.00	0.00	7,213,799.78
	TRANS AND DIST	HO21	0.00	10.57	0.00	2,133.26	0.00
		KA51	0.00	89.66	611.39	1,688.91	0.00
		POLE	0.00	0.00	145,664.64	72,410.17	0.00
		TD01	0.00	17,272.08	569,161.35	231,676.25	0.00
		TD05	0.00	2,373.05	230,702.69	201,614.41	0.00
		TD06	0.00	-89.77	0.00	62,094.27	0.00
		TOOL	0.00	-20.43	32,014.56	19,756.89	0.00
		WA42	0.00	20.50	195.70	1,934.20	0.00
	Total TND		6,809,383.26	19,655.66	978,350.33	593,308.36	7,213,799.78
	GRAND TOTAL		14,297,112.06	13,810.75	1,539,013.88	881,437.60	14,968,235.13

2190 Stock Movement

Report Parameters

District: HECO Period: 200711 November 2007

Stat Type	Description	Warehouse	Opening Bal	Adjustments	Receipts	Stock Issues	Closing Bal
PWR			7,754,435.35	0.00	0.00	0.00	7,883,236.10
	POWER SUPPLY	HO21	0.00	-1,107.98	6,598.40	62,469.62	0.00
		KA51	0.00	1,185.48	216,327.48	146,248.03	0.00
		TD01	0.00	0.00	0.00	182.83	0.00
		TD05	0.00	0.00	0.00	253.39	0.00
		TD06	0.00	0.00	0.00	206.56	0.00
		TOOL	0.00	0.00	3,353.66	1,907.59	0.00
		WA42	0.00	-13,863.90	214,059.81	86,484.18	0.00
	Total PWR		7,754,435.35	-13,786.40	440,339.35	297,752.20	7,883,236.10
TND			7,213,799.78	0.00	0.00	0.00	7,161,019.98
	TRANS AND DIST	HO21	0.00	0.00	0.00	2,120.93	0.00
		KA51	0.00	-35.59	1,151.05	1,379.97	0.00
		POLE	0.00	196.46	17,383.58	28,547.03	0.00
		TD01	0.00	23,600.74	431,771.74	346,238.97	0.00
		TD05	0.00	-1,981.75	291,198.82	401,668.87	0.00
		TD06	0.00	-18.69	0.00	52,421.45	0.00
		TOOL	0.00	-662.88	32,602.62	16,425.79	0.00
		WA42	0.00	-10.26	2,435.45	1,608.08	0.00
	Total TND		7,213,799.78	21,088.03	776,543.26	850,411.09	7,161,019.98
	GRAND TOTAL		14,968,235.13	7,301.63	1,216,882.61	1,148,163.29	15,044,256.08

2190 Stock Movement

Report Parameters

District: HECO Period: 200712 December 2007

Stat Type	Description	Warehouse	Opening Bal	Adjustments	Receipts	Stock Issues	Closing Bal
PWR			7,883,236.10	0.00	0.00	0.00	8,267,806.19
	POWER SUPPLY	HO21	0.00	332.13	6,704.75	19,199.95	0.00
		KA51	0.00	9,002.57	337,277.35	140,810.86	0.00
		TD01	0.00	0.00	0.00	336.22	0.00
		TD05	0.00	0.00	0.00	168.20	0.00
		TD06	0.00	0.00	0.00	372.10	0.00
		TOOL	0.00	0.00	2,599.99	3,198.67	0.00
		WA42	0.00	-15,008.28	274,701.82	66,954.24	0.00
	Total PWR		7,883,236.10	-5,673.58	621,283.91	231,040.24	8,267,806.19
TND			7,161,019.98	0.00	0.00	0.00	6,851,537.28
	TRANS AND DIST	HO21	0.00	-3.93	1,002.07	1,698.15	0.00
		KA51	0.00	3.56	2,317.86	4,732.65	0.00
		POLE	0.00	0.00	0.00	225,563.48	0.00
		TD01	0.00	30,148.10	510,386.18	328,775.06	0.00
		TD05	0.00	843.73	283,412.03	541,203.03	0.00
		TD06	0.00	226.00	0.00	46,768.02	0.00
		TOOL	0.00	-348.85	40,451.27	27,069.79	0.00
		WA42	0.00	0.00	1,553.30	3,663.84	0.00
	Total TND		7,161,019.98	30,868.61	839,122.71	1,179,474.02	6,851,537.28
	GRAND TOTAL		15,044,256.08	25,195.03	1,460,406.62	1,410,514.26	15,119,343.47

2190 Stock Movement

Report Parameters

District: *HECO* *Period:* *200801* January 2008

Stat Type	Description	Warehouse	Opening Bal	Adjustments	Receipts	Stock Issues	Closing Bal
PWR			8,267,806.19	0.00	0.00	0.00	8,226,640.08
	POWER SUPPLY	HO21	0.00	-177.28	10,357.85	21,294.07	0.00
		KA51	0.00	-3,213.20	234,578.87	182,903.11	0.00
		TD01	0.00	0.00	0.00	204.95	0.00
		TD05	0.00	0.00	0.00	1,095.74	0.00
		TD06	0.00	0.00	0.00	87.56	0.00
		TOOL	0.00	-30.25	3,118.18	4,272.60	0.00
		WA42	0.00	4,166.37	352,587.98	432,621.15	0.00
	Total PWR		8,267,806.19	745.64	600,642.88	642,479.18	8,226,640.08
TND			6,851,537.28	0.00	0.00	0.00	7,151,888.95
	TRANS AND DIST	HO21	0.00	0.00	0.00	1,875.85	0.00
		KA51	0.00	0.00	2,348.64	1,353.04	0.00
		POLE	0.00	-5,387.45	283,341.32	59,558.16	0.00
		TD01	0.00	-6,953.92	329,956.59	227,370.51	0.00
		TD05	0.00	-8,156.07	202,317.39	179,667.45	0.00
		TD06	0.00	197.92	3,076.22	52,821.80	0.00
		TOOL	0.00	191.71	57,867.00	31,958.86	0.00
		WA42	0.00	0.00	3,288.63	7,130.63	0.00
	Total TND		6,851,537.28	-20,107.81	882,195.79	561,736.30	7,151,888.95
	GRAND TOTAL		15,119,343.47	-19,362.17	1,482,838.67	1,204,215.48	15,378,529.03

2190 Stock Movement

Report Parameters

District: *HECO* *Period:* *200802* February 2008

Stat Type	Description	Warehouse	Opening Bal	Adjustments	Receipts	Stock Issues	Closing Bal
PWR			8,226,640.08	0.00	0.00	0.00	8,229,718.67
	POWER SUPPLY	HO21	0.00	-134.60	23,940.56	15,596.14	0.00
		KA51	0.00	-1,313.51	316,904.26	174,722.70	0.00
		TD01	0.00	0.00	0.00	0.00	0.00
		TD05	0.00	0.00	0.00	0.00	0.00
		TD06	0.00	106.83	0.00	0.00	0.00
		TOOL	0.00	0.00	4,322.83	3,789.53	0.00
		WA42	0.00	5,397.47	145,217.75	297,186.48	0.00
	Total PWR		8,226,640.08	4,056.19	490,385.40	491,294.85	8,229,718.67
TND			7,151,888.95	0.00	0.00	0.00	7,296,480.46
	TRANS AND DIST	HO21	0.00	0.00	0.00	1,638.52	0.00
		KA51	0.00	0.00	975.37	1,283.17	0.00
		POLE	0.00	342.76	111,539.12	29,156.23	0.00
		TD01	0.00	17,170.16	377,669.68	320,770.47	0.00
		TD05	0.00	1,546.39	153,625.30	152,519.09	0.00
		TD06	0.00	165.54	15,914.49	45,070.39	0.00
		TOOL	0.00	-2,353.93	39,047.13	18,842.26	0.00
		WA42	0.00	-660.50	9,134.45	5,339.10	0.00
	Total TND		7,151,888.95	16,210.42	707,905.54	574,619.23	7,296,480.46
	GRAND TOTAL		15,378,529.03	20,266.61	1,198,290.94	1,065,914.08	15,526,199.13

2190 Stock Movement

Report Parameters

District: HECO Period: 200803 March 2008

Stat Type	Description	Warehouse	Opening Bal	Adjustments	Receipts	Stock Issues	Closing Bal
PWR			8,229,718.67	0.00	0.00	0.00	8,222,902.29
	POWER SUPPLY	HO21	0.00	-16.32	6,797.16	13,286.52	0.00
		KA51	0.00	-5,633.44	162,775.80	219,722.15	0.00
		TD01	0.00	0.00	1,365.88	268.98	0.00
		TD05	0.00	0.00	0.00	15.26	0.00
		TD06	0.00	0.00	0.00	146.70	0.00
		TOOL	0.00	-36.86	3,364.59	1,735.09	0.00
		WA42	0.00	-4,089.34	200,604.05	136,629.17	0.00
	Total PWR		8,229,718.67	-9,775.96	374,907.48	371,803.87	8,222,902.29
TND			7,296,480.46	0.00	0.00	0.00	7,532,358.03
	TRANS AND DIST	HO21	0.00	0.00	0.00	1,263.52	0.00
		KA51	0.00	-59.48	2,008.42	3,500.70	0.00
		POLE	0.00	7,891.67	336,514.05	97,418.38	0.00
		TD01	0.00	14,653.73	379,132.74	358,730.07	0.00
		TD05	0.00	-2,180.09	144,125.09	149,485.77	0.00
		TD06	0.00	-857.62	11,776.41	49,469.55	0.00
		TOOL	0.00	-3,227.26	46,330.07	34,778.89	0.00
		WA42	0.00	26.18	-2.55	5,606.91	0.00
	Total TND		7,296,480.46	16,247.13	919,884.23	700,253.79	7,532,358.03
	GRAND TOTAL		15,526,199.13	6,471.17	1,294,791.71	1,072,057.66	15,755,260.32

2190 Stock Movement

Report Parameters

District: HECO Period: 200804 April 2008

Stat Type	Description	Warehouse	Opening Bal	Adjustments	Receipts	Stock Issues	Closing Bal
PWR			8,222,902.29	0.00	0.00	0.00	8,216,717.37
	POWER SUPPLY	HO21	0.00	-234.58	26,437.31	110,646.60	0.00
		KA51	0.00	-2,702.78	215,429.07	156,235.25	0.00
		TD01	0.00	0.00	366.49	1,073.05	0.00
		TD05	0.00	0.00	0.00	1,293.30	0.00
		TD06	0.00	0.00	0.00	350.45	0.00
		TOOL	0.00	0.00	4,101.04	3,840.58	0.00
		WA42	0.00	-151.70	180,425.73	156,416.27	0.00
	Total PWR		8,222,902.29	-3,089.06	426,759.64	429,855.50	8,216,717.37
TND			7,532,358.03	0.00	0.00	0.00	7,592,180.70
	TRANS AND DIST	HO21	0.00	0.00	829.30	5,372.75	0.00
		KA51	0.00	-329.30	3,240.14	6,306.33	0.00
		KA55	0.00	0.00	0.00	0.00	0.00
		POLE	0.00	0.00	51,105.73	116,850.77	0.00
		TD01	0.00	41,395.68	365,110.26	291,145.02	0.00
		TD05	0.00	-2,834.78	183,266.49	146,864.29	0.00
		TD06	0.00	-128.05	16,112.90	40,633.14	0.00
		TOOL	0.00	-1,559.30	26,860.95	18,216.05	0.00
		WA42	0.00	-1,459.59	7,325.29	3,724.70	0.00
	Total TND		7,532,358.03	35,084.66	653,851.06	629,113.05	7,592,180.70
	GRAND TOTAL		15,755,260.32	31,995.60	1,080,610.70	1,058,968.55	15,808,898.07

2190 Stock Movement

Report Parameters

District: HECO Period: 200805 May 2008

Stat Type	Description	Warehouse	Opening Bal	Adjustments	Receipts	Stock Issues	Closing Bal
PWR			8,216,717.37	0.00	0.00	0.00	8,118,612.88
	POWER SUPPLY	HO21	0.00	114.19	19,689.56	123,202.18	0.00
		KA51	0.00	4,127.57	148,861.43	258,162.27	0.00
		TD01	0.00	0.00	0.00	111.73	0.00
		TD05	0.00	0.00	0.00	424.79	0.00
		TD06	0.00	0.00	0.00	828.08	0.00
		TOOL	0.00	-52.78	620.34	1,925.73	0.00
		WA42	0.00	-230.03	240,927.41	127,507.40	0.00
	Total PWR		8,216,717.37	3,958.95	410,098.74	512,162.18	8,118,612.88
TND			7,592,180.70	0.00	0.00	0.00	7,672,074.36
	TRANS AND DIST	HO21	0.00	0.00	0.00	3,329.62	0.00
		KA51	0.00	0.45	84.16	1,608.83	0.00
		POLE	0.00	0.00	99,578.06	90,927.51	0.00
		TD01	0.00	30,403.76	473,518.02	357,012.31	0.00
		TD05	0.00	-445.87	106,323.46	142,397.23	0.00
		TD06	0.00	669.64	3,238.46	42,697.16	0.00
		TOOL	0.00	69.11	27,061.84	23,588.48	0.00
		WA42	0.00	0.00	3,747.48	2,793.77	0.00
	Total TND		7,592,180.70	30,697.09	713,551.48	664,354.91	7,672,074.36
	GRAND TOTAL		15,808,898.07	34,656.04	1,123,650.22	1,176,517.09	15,790,687.24

2190 Stock Movement

Report Parameters

District: HECO Period: 200806 June 2008

Stat Type	Description	Warehouse	Opening Bal	Adjustments	Receipts	Stock Issues	Closing Bal
PWR			8,118,612.88	0.00	0.00	0.00	8,310,223.40
	POWER SUPPLY	HO21	0.00	-17.64	15,865.99	89,704.62	0.00
		KA51	0.00	4,109.27	156,692.01	212,712.77	0.00
		TD01	0.00	0.00	1,173.38	680.90	0.00
		TD05	0.00	0.00	0.00	154.75	0.00
		TD06	0.00	0.00	0.00	150.88	0.00
		TOOL	0.00	0.00	1,815.41	3,449.86	0.00
		WA42	0.00	-989.99	398,922.52	79,106.65	0.00
	Total PWR		8,118,612.88	3,101.64	574,469.31	385,960.43	8,310,223.40
TND			7,672,074.36	0.00	0.00	0.00	7,787,694.33
	TRANS AND DIST	HO21	0.00	0.00	0.00	2,221.97	0.00
		KA51	0.00	0.00	1,535.31	2,649.33	0.00
		POLE	0.00	0.00	43,835.66	76,550.70	0.00
		TD01	0.00	11,648.27	321,611.99	261,191.07	0.00
		TD05	0.00	1,308.53	223,576.94	104,284.74	0.00
		TD06	0.00	-321.83	0.00	56,007.91	0.00
		TOOL	0.00	-1,919.01	45,328.76	25,509.86	0.00
		WA42	0.00	0.00	389.99	2,979.64	0.00
	Total TND		7,672,074.36	10,715.96	636,278.65	531,395.22	7,787,694.33
	GRAND TOTAL		15,790,687.24	13,817.60	1,210,747.96	917,355.65	16,097,917.73

2190 Stock Movement

Report Parameters

District: HECO Period: 200807 July 2008

Stat Type	Description	Warehouse	Opening Bal	Adjustments	Receipts	Stock Issues	Closing Bal
PWR			8,310,223.40	0.00	0.00	0.00	8,587,694.33
	POWER SUPPLY	HO21	0.00	-190.02	9,520.56	57,210.52	0.00
		KA51	0.00	3,663.45	423,854.13	195,872.22	0.00
		TD01	0.00	0.00	314.97	362.50	0.00
		TD05	0.00	0.00	0.00	30.47	0.00
		TD06	0.00	-38.75	0.00	151.59	0.00
		TOOL	0.00	0.00	128.48	2,793.56	0.00
		WA42	0.00	-15,064.79	269,858.12	158,154.36	0.00
	Total PWR		8,310,223.40	-11,630.11	703,676.26	414,575.22	8,587,694.33
TND			7,787,694.33	0.00	0.00	0.00	7,736,512.77
	TRANS AND DIST	HO21	0.00	-6.23	651.82	4,678.48	0.00
		KA51	0.00	0.00	1,036.63	1,886.31	0.00
		POLE	0.00	-12,354.97	24,634.83	89,949.86	0.00
		TD01	0.00	22,081.55	541,188.83	421,747.90	0.00
		TD05	0.00	3,016.42	79,434.30	144,396.59	0.00
		TD06	0.00	2,863.32	490.04	68,145.59	0.00
		TOOL	0.00	-498.26	48,179.93	28,545.36	0.00
		WA42	0.00	-18.58	205.86	2,736.96	0.00
	Total TND		7,787,694.33	15,083.25	695,822.24	762,087.05	7,736,512.77
	GRAND TOTAL		16,097,917.73	3,453.14	1,399,498.50	1,176,662.27	16,324,207.10

Hawaiian Electric Company, Inc.
2009 Test Year

HECO INVENTORY REPORT

MONTH END	ENDING INVENTORY $			ISSUES $			RECEIPTS $			INVENTORY ADJUSTMENT $		
	T&D MAT'L	POWER SUPPLY	TOTAL	T&D MAT'L	POWER SUPPLY	TOTAL	T&D MAT'L	POWER SUPPLY	TOTAL	T&D MAT'L	POWER SUPPLY	T&D P/S TOTAL
Jan-07	6,166,038	6,764,579	12,930,617	754,695	559,135	1,313,830	566,348	470,486	1,036,834	-6,151	4,099	-2,052
Feb-07	6,570,022	6,988,990	13,559,012	725,860	279,950	1,005,810	***1,091,017***	501,315	1,592,332	38,827	3,047	41,874
Mar-07	6,689,649	7,041,363	13,731,012	774,685	483,257	1,257,942	898,040	536,200	1,434,240	-3,728	-570	-4,298
Apr-07	6,524,230	7,262,982	13,787,212	727,822	395,017	1,122,839	571,078	631,041	1,202,119	-8,675	-14,404	-23,079
May-07	6,326,484	7,136,730	13,463,214	***1,481,214***	656,677	2,137,891	***1,244,222***	531,266	1,775,488	39,247	-736	38,511
Jun-07	6,574,450	7,196,026	13,770,476	686,073	459,359	1,145,432	944,443	520,600	1,465,043	-10,403	-1,944	-12,347
Jul-07	6,581,090	6,952,801	13,533,891	630,126	581,329	1,211,455	616,457	334,354	950,811	20,966	3,749	24,715
Aug-07	6,716,063	7,298,054	14,014,117	758,566	517,722	1,276,288	908,788	872,154	1,780,942	-15,324	-9,179	-24,503
Sep-07	6,809,383	7,487,454	14,296,837	643,912	346,914	990,826	732,885	532,149	1,265,034	4,586	3,926	8,512
Oct-07	7,213,799	7,754,143	14,967,942	593,308	288,129	881,437	978,350	560,663	1,539,013	19,374	-5,844	13,530
Nov-07	7,161,019	7,882,944	15,043,963	850,411	297,752	1,148,163	776,543	440,339	1,216,882	21,088	-13,786	7,302
Dec-07	6,851,537	8,267,514	15,119,051	***1,179,474***	231,040	1,410,514	839,122	621,283	1,460,405	30,868	-5,673	25,195
Jan-08	7,151,888	8,226,424	15,378,312	561,736	642,479	1,204,215	882,195	600,642	1,482,837	-20,107	745	-19,362
Feb-08	7,296,480	8,229,574	15,526,054	574,619	491,294	1,065,913	707,905	490,385	1,198,290	11,305	4,056	15,361
Mar-08	7,532,358	8,222,902	15,755,260	700,253	371,803	1,072,056	919,884	374,907	1,294,791	15,247	-9,775	5,472
Apr-08	7,592,180	8,216,717	15,808,897	629,113	429,855	1,058,968	653,851	426,759	1,080,610	35,084	-3,089	31,995
May-08	7,672,074	8,118,612	15,790,686	664,354	512,162	1,176,516	713,551	410,098	1,123,649	30,697	3,958	34,655
Jun-08	7,787,694	8,310,223	16,097,917	531,395	385,960	917,355	636,278	574,469	1,210,747	10,736	3,101	13,837
Jul-08	7,736,512	8,587,694	16,324,206	762,087	414,575	1,176,662	695,822	703,676	1,399,498	15,083	-11,630	3,453

Receipts 2007

Warehouse	Date	Code	Item	Price
POLE	Feb-07	632851	STEEL POLE, 40 ea	$95,846.40
TD05		various	CONSIGNED CABLE (PO V00814)	$181,274.52
TD01		114603	CONSIGNED CABLE (PO P96028)	$166,400.63

TD05	May-07	various	CONSIGNED CABLE (PO V04389)	$151,924.00
		114603	CONSIGNED CABLE (PO P97917) *	$366,052.09

* issued to Mamala project in May 2007

CA-IR-108

Ref: HECO T-9, pages 10 and 14; (Temporary Positions for CIS).

Please provide a monthly breakdown by RA of the test year projected costs associated with the eleven temporary meter readers and three temporary customer service positions included by HECO and explain why such labor is necessary on a one-time basis for Phase 6 of CIS conversion, but not deferred as part of CIS program costs.

HECO Response:

Please see Attachment 1 for the monthly breakdown by RA of the test year projected costs associated with the eleven temporary meter readers and three temporary customer service positions included by HECO.

The labor costs for these temporary positions are to support the daily operations for the customer service area, and these positions have been and will be doing the work that were being done by the people who have been assigned to the CIS project. (The people assigned to the CIS project are charging their time to the project.) The work being performed by these temporary positions is the normal operating work for the customer service area, and charged to operating expenses. Such work is not related to the CIS project and would not be charged/included as deferred costs to the project. The labor for all of these temporary positions during Phase 6 (Post Go-Live) and the remainder of 2009 is required to support the daily operations, providing reliable service to our customers during this transition period in which the Company becomes accustomed to the new system. The labor cost to support the daily operations will be expensed accordingly.

Currently we have 12 HECO temps and are reviewing applicants for the two remaining vacancies. The duties being performed by them include:

- meter reading;
- processing of customer payments;
- processing of customer bills; and
- continued handling/processing of MV-90 accounts

2009 Projected Costs
HECO Temporary Customer Service Positions

ACCT #	Quan.	RA	Activity	Description	Stand. Labor Hrly Rate	Annual Hours	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2009 Total
						2088	176	160	176	176	168	176	184	168	176	176	168	184	2088
				TEMP METER READER															
902	11	PCM	610	Temp Mtr Rdr $	$14.75		$27,258	$24,662	$28,556	$27,258	$25,960	$27,258	$28,556	$25,960	$27,258	$27,258	$24,662	$27,258	$321,904
		PCM	610	Temp Mtr Rdr OT $			$0	$1,298	$1,298	$0	$0	$1,298	$0	$1,298	$0	$0	$5,192	$0	$10,384
		PCM	098	Temp Mtr Rdr Holiday $			$1,298	$1,298	$0	$1,298	$1,298	$1,298	$1,298	$1,298	$1,298	$1,298	$2,596	$2,596	$16,874
				Total Temp Mtr Rdr $			**$28,556**	**$27,258**	**$29,854**	**$28,556**	**$27,258**	**$29,854**	**$29,854**	**$28,556**	**$28,556**	**$28,556**	**$32,450**	**$29,854**	**$349,162**
		PCM	610	Temp Mtr Rdr Hr			1,848	1,672	1,936	1,848	1,760	1,848	1,936	1,760	1,848	1,848	1,672	1,848	21,824
		PCM	610	Temp Mtr Rdr OT Hr			0	88	88	0	0	88	0	88	0	0	352	0	704
		PCM	098	Temp Mtr Rdr Holiday Hr			88	88	0	88	88	88	88	88	88	88	176	176	1,144
				Total Temp Mtr Rdr Hr			**1,936**	**1,848**	**2,024**	**1,936**	**1,848**	**2,024**	**2,024**	**1,936**	**1,936**	**1,936**	**2,200**	**2,024**	**23,672**
				TEMP ACCT. SVC. CLK															
903	3	PCP	616	Temp Acct Svc Clk $	$14.75		$7,434	$6,726	$7,788	$7,434	$7,080	$7,434	$7,788	$7,080	$7,434	$7,434	$6,726	$7,434	$87,792
		PCP	098	Temp Acct Svc Clk Holiday $			$354	$354	$0	$354	$354	$354	$354	$354	$354	$354	$708	$708	$4,602
				Total Temp Acct Svc Clk $			$7,788	$7,080	$7,788	$7,788	$7,434	$7,788	$8,142	$7,434	$7,788	$7,788	$7,434	$8,142	$92,394
		PCP	616	Temp Acct Svc Clk Hr			504	456	528	504	480	504	528	480	504	504	456	504	5,952
		PCP	098	Temp Acct Svc Clk Holiday Hr			24	24	0	24	24	24	24	24	24	24	48	48	312
				Total Temp Acct Svc Clk Hr			**528**	**480**	**528**	**528**	**504**	**528**	**552**	**504**	**528**	**528**	**504**	**552**	**6,264**
				TOTAL TEMPS $															
				Total Temps $			$34,692	$31,388	$36,344	$34,692	$33,040	$34,692	$36,344	$33,040	$34,692	$34,692	$31,388	$34,692	**$409,696**
				Total Temps OT $			$0	$1,298	$1,298	$0	$0	$1,298	$0	$1,298	$0	$0	$5,192	$0	**$10,384**
				Total Temps Holiday $			$1,652	$1,652	$0	$1,652	$1,652	$1,652	$1,652	$1,652	$1,652	$1,652	$3,304	$3,304	**$21,476**
				Total Temp $			**$36,344**	**$34,338**	**$37,642**	**$36,344**	**$34,692**	**$37,642**	**$37,996**	**$35,990**	**$36,344**	**$36,344**	**$39,884**	**$37,996**	**$441,556**
				TOTAL TEMPS HR															
				Total Temp Hr			2,352	2,128	2,464	2,352	2,240	2,352	2,464	2,240	2,352	2,352	2,128	2,352	**27,776**
				Total Temp OT Hr			0	88	88	0	0	88	0	88	0	0	352	0	**704**
				Total Holiday Hr			112	112	0	112	112	112	112	112	112	112	224	224	**1,456**
				Total Temp Hr			**2,464**	**2,328**	**2,552**	**2,464**	**2,352**	**2,552**	**2,576**	**2,440**	**2,464**	**2,464**	**2,704**	**2,576**	**29,936**

CA-IR-109

Ref: HECO T-9, page 18; July 1, 2008 HECO Notice in Docket No. 04-0268 (PEACE CIS Agreements and Breach).

Please provide a complete copy of the March 2006 agreement with PEACE and all correspondence between HECO and PEACE regarding the contract, including al demand letters, breach notifications non-termination notices and all amendment(s) of the March 2006 contract

HECO Response:

Subject to the objections and clarifications below, HECO will provide the documents listed as Attachments 1 through 29 below. These attachments are confidential and voluminous and will be made available upon the issuance of a protective order. After the issuance of a protective order, please contact Mr. Dean Matsuura at 543-4622 to make arrangements to inspect the requested confidential information at HECO's Regulatory Affairs Division office, Suite 1301, Central Pacific Plaza, 220 South King Street, Honolulu, Hawaii.

The following is a listing of the attachments:

1. **Attachment 1 - March 2006 Agreement with PEACE**

   Includes set of 19 DVDs of CIS Vendor Presentations (last exhibit)

2. **Attachment 2 - Revised Contract**

   Amendment No. 1 To Implementation Services Agreement: HECO Customer Information System Between Hawaiian Electric Company, Inc. and Peace Software US, Inc.

   Statement of Work

   Attachment A – Project Change Request Form

   Attachment B – Product Modifications

   Attachment C – Interface Catalog

   Attachment D – Glossary

Attachment E 01 – Application Configuration – Parameter Tables List - Sample

Attachment E 02 – Parameters Tables Values Specification-Sample

Attachment E 03 – Data Conversion Approach - Sample

Attachment E 04 – Conversion Data Mapping - Sample

Attachment E 05 – Parameters Tables Values Specification-Sample

Attachment E – Initial Performance Risk Assessment

Attachment E – Interface Requirement Specification E.06 HECO Template IRS v1.2

Attachment F – Project Governance & Quality Control

Attachment G – Incident Level Definitions & Actions

Attachment H – HECO Performance Standards

Attachment J – Remote Access Guidelines

Attachment K - CIS Standard Reports

Attachment L – RFP

Attachment M – RFP Functional Catalog

Attachment N – HECO Appendix 3.1 Implementation Methodology

Attachment N – Peace-HECO Appendix 3.2 Mod-Reg

Attachment N – Peace-HECO Appendix 4.2 Mod-Reg

Attachment N – Peace-HECO Appendix 4.3 Sys-Arch

Attachment N – Peace-HECO Appendix 4.4 Data-Dic

Attachment N – Peace-HECO Appendix 7.1 Sample-Resumes

Attachment N – Peace-HECO Appendix 9.1 STD packaged software agreement

Attachment N – Peace-HECO Cover Letter

Attachment N – Peace-HECO RFP main

Attachment P – Amendments to Proposal

Attachment Q – HECO Computing Standards

Attachment R – Project Schedule

Attachment S – See set of 19 DVDs in Attachment 1 (CIS Vendor Presentations)

Attachment T – Product Pack Contents

3. **Attachment 3 – Change Requests/Change Orders**

4. **Attachments 4 through 29 - Correspondence between HECO and FDU**

Attachment 4 – Memo – FDU to HECO on 3/28/2007 RE: Performance Bond Annual Form Bond No. 104898503

Attachment 5 – Memo - HECO to FDU on 4/27/2007 RE: Issues requiring immediate resolution

Attachment 6 – Memo – HECO to FDU on 04/27/2007 RE: Project Schedule

Attachment 7 – Memo – FDU to HECO on 05/01/2007 RE: Reply to Project Schedule Memo

Attachment 8 – Memo – HECO to FDU on 06/27/2007 RE: Project Schedule

Attachment 9 – Memo – HECO to FDU on 07/19/2007 RE: SCW Invoice

Attachment 10 – Memo – FCU to HECO on 7/31/2007 RE: SCW Invoice Reply

Attachment 11 – Memo - HECO to FDU on 08/10/2007 RE: Testing

Attachment 12 – Memo – HECO to FDU on 09/11/2007 RE: Peace Standard Reports – Compensation for Reduction in Reports

Attachment 13 – Memo – HECO to FDU on 09/11/2007 RE: Web Services – Commercial Terms

Attachment 14 – Memo – HECO to FDU on 10/02/2007 RE: First Data Invoices

Attachment 15 – Letter – HECO to FDU on 12/19/2007 RE: Peace Schedule for June 2, 2008 Go-Live

Attachment 16 – Letter – HECO to FDU on 01/22/2008 RE: Milestone Invoices

Attachment 17 – Letter – FDU to HECO on 02/07/2008 RE: Peace Software Inc

Attachment 18 – Letter – HECO to FDU on 02/29/2008 RE: Change Request After Go-Live memo of 2/6/2008

Attachment 19 – Letter – Peace to HECO on 5/14/08 RE: ISA dated March 10, 2006

Attachment 20 – Letter – Peace to HECO on 05/29/2008 RE: ISA dated March 10, 2006

Attachment 21 – Letter – HECO to Peace on 06/09/2008 RE: ISA dated March 10, 2006

Attachment 22 – Letter – Peace to HECO on 07/03/2008 RE: ISA dated March 10, 2006

Attachment 23– Letter – HECO to FDU on 07/23/2008 RE: Your Reply to letter of July 3, 2008

Attachment 24 – Letter – HECO to FDU on 07/24/2008 RE: Change Request 148

Attachment 25 – Letter – Peace to HECO on 08/13/2008 RE: CR 148

Attachment 26 – Letter – HECO to Peace on 08/18/2008 RE: ISA dated March 10, 2006

Attachment 27 – Letter – Peace to HECO on 08/19/2008 RE: Coordinating Committee Meeting

Attachment 28 – Letter – HECO to FDU on 08/20/2008 RE: Coordinating Committee Meeting

Attachment 29 – Letter – HECO to FDU on 9/18/2008 RE: Wishbone Deferral – FDU Proposed Schedule and Plan

HECO respectfully objects that the request is vague, unduly burdensome, onerous and overly broad to the extent that it requests "all correspondence between HECO and PEACE

regarding the contract." To the extent that the request seeks "all correspondence between HECO and PEACE regarding the contract," the request could be construed to mean every communication between HECO and Peace since 2006, because every aspect of HECO's and Peace's relationship since the contract was signed could be interpreted to relate to the contract. The rest of the IR specifically references "all demand letters, breach notifications, non-termination notices and all amendment(s) of the March 2006 contract." Based on that focus, HECO is willing to provide the contract and all amendments thereto, as well as letters and memoranda between HECO and Peace concerning disputes regarding the party's respective rights and obligations under the contract, and allegations between them relating to performance of the contract.

"Correspondence" could also be interpreted to include hard copy and electronic forms of communications (i.e., e-mails) between the parties. However, the number of e-mails between the parties relating to performance of the contract is voluminous likely numbering in the thousands, and would be very difficult and time-consuming to locate, to the extent they can be retrieved. Communications between the HECO and Peace project staffs are generated by multiple people on each side; there is no single point of contact with respect to which a search could be limited. To capture all e-mail relating to the contract, each project team member would have to search and print out every e-mail to or from a Peace project team member since March 2006. Each e-mail would then have to be reviewed and evaluated. If project staff had to print and review e-mails, the project work would be stalled or significantly impeded while that effort was undertaken, and that could negatively affect the project schedule. Moreover, any e-mail that was deleted by a HECO employee more than 3 weeks ago could not be recovered as HECO's email

back-up would not be able to recover such deleted emails.. On this basis, locating and producing all e-mails would be unduly burdensome and time-consuming.

The responsive documents have been selected based on these objections.

In addition, on August 8, 2008, HECO and Peace executed a *Proposals Negotiation Non-Disclosure Agreement* (NDA) pursuant to which the parties agreed that they would explore options to potentially resolve disputes between them relating to payment disputes and other disputed matters relating to the contract, and that such negotiations would be kept strictly confidential and not disclosed to third parties. The NDA specifically sets forth that the parties agree that the discussions would be protected under Rule 408, Federal Rules of Evidence (inadmissibility of offers of compromise). HECO is not providing any correspondence that is the subject of this NDA.

The contract and all amendments are confidential because they contain sensitive pricing information, license terms and other proprietary information, as confirmed by section 8 of the contract (Confidentiality and Proprietary Rights). That section also provides that confidential information in and relating to the contract should not be disclosed directly or indirectly. The correspondence exchanged between the parties requested here both directly and indirectly discussed the contract provisions and obligations, including pricing in certain instances, and should be treated as confidential.

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Pursuant To Protective Order, Filed on
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CA-IR-109
DOCKET NO. 2008-0083
ATTACHMENTS 1-29

Attachments 1-29 contain confidential information and will be provided after a Protective Order is issued in this proceeding.

Attachments 1-29 are voluminous and available for inspection at HECO's Regulatory Affairs Division office, Suite 1301, Central Pacific Plaza, 220 South King Street, Honolulu, Hawaii. Please contact Dean Matsuura at 543-4622 to make arrangements to inspect the document. Electronic copies of the requested information will be provided.

CA-IR-110

Ref: HECO T-9, page 18; July 1, 2008 HECO Notice in Docket No. 04-0268 (PEACE CIS Agreements and Breach).

Please state whether HECO ever considered termination of Peace US or the overall CIS project and describe the analysis that was performed and conclusions reached in connection with all consideration given to termination. Provide complete copies of all reports, studies, workpapers, projections, analyses and other documents associated with your response.

HECO Response:

HECO has considered all of its options under the Peace US contract, including termination. HECO's position on its rights under the contract, including its position that Peace is in breach of the contract, has been discussed in correspondence to Peace, which will be produced in response to CA-IR-109.

However, HECO respectfully objects to describing "the analysis that was performed and conclusions reached in connection with all consideration given to termination." Much of that analysis and evaluation is protected by attorney-client privilege. Termination of the contract remains an option, and any termination could result in litigation. Therefore, to the extent the request seeks information that reflects the mental impressions, conclusions, opinions, or legal theories of HECO's attorneys and HECO, the information requested is also protected from disclosure by the attorney work product doctrine.

HECO also objects to the request, as unduly burdensome, onerous and overly broad to the extent that it requests "complete copies of all reports, studies, workpapers, projections, analyses and other documents associated with your response."

HECO further objects to disclosing documents that reveal internal deliberations regarding HECO's potential contractual rights and remedies on public policy grounds. Requiring that this

information be subject to review by parties in a regulatory proceeding would have a "chilling" effect on the self-analysis process. Subjecting such sensitive internal deliberations to review in a regulatory proceeding would inhibit robust and candid internal dialogue of this nature in the future. Disclosure could also compromise HECO's bargaining position and/or options in future contract or other business negotiations with Peace, or any other vendors.

This information request basically requests unlimited access to reports, studies, workpapers, projections, analyses, and other documents relating to termination of Peace US or the overall CIS project. This information request fails to balance the need for the information against HECO's need to manage. By analogy, for example, the Federal Freedom of Information Act ("FFIA"), codified at 5 U.S.C. §552, and the Uniform Information Practices Act (Modified), codified at H.R.S. Ch. 92F, contain broad disclosure requirements based on the public's interest in open government. However, the broad policy in favor of disclosure still allows for exceptions that are intended to permit the efficient and effective functioning of government by protecting the internal deliberative process. *See generally, Pennsylvania Public Utility Commission v. West Penn Power Company*, 73 PA PUC 122 (July 20, 1990), West Law Slip Op ("deliberative process privilege" recognized by the Pennsylvania Public Utility Commission with respect to its own internal staff reports).

HECO would also object to disclosure of such documents regarding considerations given to termination even under a protective order. The value of these documents will be diminished if HECO is required to provide the documents, even if the documents were provided pursuant to a protective order.

CA-IR-111

Ref: HECO T-9, page 18; July 1, 2008 HECO Notice in Docket No. 04-0268 (PEACE CIS Agreements and Breach).

Please provide the following information:

a. Summarize the rate base and operating expense costs that have been included in the Company's asserted revenue requirement in connection with the Peace CIS system and the related Bill-print, IVR and IWR services, by witness and HECO Exhibit.
b. Explain how HECO plans to manage and account for the remaining uncertainties associated with project completion within the test year, in terms of potential further delays or partial implementation as well as increased costs of implementation.
c. Explain whether and why HECO intends that the higher installed CIS system costs arising from problems with contractor performance should be charged fully to ratepayers?
d. Provide a spreadsheet analysis of invoiced charges from Peace US to HECO/MECO/HELCO, indicating separately the amounts billed under the initial contract by date and amounts billed under the "revised payment schedule" described at page 6 of the HECO July 1, 2008 CIS Notification Filing, also noting the amounts paid to-date by HECO and amounts for which payment has been withheld.
e. Describe HECO's proposed rate case accounting for any withheld payments and other recoveries from Peace in connection with HECO's asserted damage claims.

HECO Response:

a. Costs related to the CIS project are reflected in the rate case as follows:

Rate Base:

1. As part of the plant additions for 2009, HECO includes $587,081 for the capital costs for the project. The $587,081 includes capital expenditures to be incurred in 2009 of $30,948 as shown in HECO-907 (Darren Yamamoto, HECO T-9). In the assumptions used in the rate case, the project would be completed in May 2009, and the capital costs are assumed to be closed to plant in service at that time. Thus the $587,081 is included in plant in service as of the end of 2009.

2. Rate base also includes the unamortized deferred costs of $22,783,000 as of the end of 2009, as shown on HECO-1117 (Patsy Nanbu, HECO T-11).

Expenses:

As shown on HECO-907 (Darren Yamamoto, HECO T-9), the revenue requirement for the 2009 test year includes $2,831,204 in expenses, which includes $976,941 for the amortization of the deferred costs in 2009.

b. Mitigation measures have been initiated by the Company to deal with management of uncertainties as identified on Page 10 of the Customer Information System Notification Filing ("CIS Notification"), dated July 1, 2008, in Docket No. 04-0268. In addition, the Company will continually monitor project progress and assess the need to begin the implementation of contingency plans. The Company will if possible recruit external contractors (former First Data Utilities ("FDU") employees as much as possible) that are experienced with the Peace CIS software to assist in the remaining project implementation and to support the Company to operate and maintain the new CIS after its deployment. For instance, currently, there are key FDU personnel on site that are implementing the components of the CIS solution that the Company will be responsible to operate and maintain after the system is deployed. The Company would find it difficult to implement and operate the new CIS system if those key FDU personnel were to leave the project. New recruits and other Company staff can work with the key FDU personnel and obtain knowledge and gain experience with the new CIS, including the Company specific customizations, and will assist with completion of the project. This approach reduces project risk and prepares the Company to operate and maintain the system, post deployment and allows for more skilled resources to complete the project. The cost associated for this approach is reflected in the latest total project cost provided in the chart

on page 14 of the CIS Notification and is further described in item "13. External Support Cost Risk – variance" on page 17 of the CIS Notification.

c. The Company will seek to recover in rates all reasonable costs related to the project and associated project costs. The Company has appropriately managed the project, including engaging an outside consultant (i.e., Bass and Company) to manage the day-to-day activities of the CIS project that has over 25 years of experience with CIS projects, and was involved in lead roles in program and project management in 10 other CIS projects, including implementations for large and small energy companies. This consultant was involved from very early on in the project (e.g., the drafting of the RFP, and selection of the vendor) and continues on with the CIS project now. The Company also engaged an independent quality assurance consultant to conduct third-party oversight of the project from the early stages of the CIS project (i.e., the RFP stage) and continues to oversee the CIS project now. The quality assurance consultant assisted over 20 other utilities with the evaluation of their CIS replacement alternatives and has over 20 years of consulting experience in the public utility industry. Further, the Company has implemented additional management processes to increase oversight in an attempt to further mitigate risks to the project. See the CIS Notification, page 10.

The multiple changes in the ownership of the vendor and continued replacement of vendor on-site staff with less experienced staff has had a significant negative impact on the timeliness and quality of the deliverables. HECO and the vendor have had discussions regarding responsibility for additional costs that HECO expects to incur because of the delayed project schedule. The parties are not in agreement on that issue, but confidential discussions are on-going.

d. See Attachment 1 which is a confidential document that will be provided upon the issuance of the Protective Order in this proceeding..

e. HECO's estimated costs for the test year are based on the estimated costs HECO ultimately expects will be paid for the CIS project. HECO's estimate is based on the assumption that the Peace defects have been remediated, and no payments will have been withheld or remain to be recovered from Peace, at the time the project is completed.

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Attachment 1 is confidential and will be provided

after a Protective Order is issued in this proceeding.

CA-IR-112

Ref: HECO T-9, page 8, line 10; (Filling of vacant positions).

Please provide a detailed explanation of which elements of the company's "daily operations" it has been unable to adequately maintain at existing recent staffing levels that included several vacancies. Provide copies of all reports, analyses, workpapers, projections and other documents associated with your response.

HECO Response:

As identified in HECO T-9, page 7, lines 16-21, the vacancies are for the positions of a credit supervisor; a billing and account analyst; three HECO temps and a revenue protection investigator. The need to fill these positions to maintain daily operations is provided below:

1. Credit Supervisor - The credit supervisor manages the bad debt expense of the Company which includes residential as well as large commercial accounts. By filling this position the Company's bad debt expense should be minimized. With the anticipated increase in credit activity based on current economic conditions, the Company filled the credit supervisor position on June 9, 2008.
2. The billing and account analyst position provides critical support to the Customer Accounting & Billing Section for complex billing rate situations; researching information to implement recommended solutions; investigates, tests and implements new software technologies in support of continuous improvement of the billing process; coordinates, monitors and administers utility and non-utility billing function; and investigates, analyzes and resolves system application issues. The billing functionality is a key component of the Customer Information System. This position was filled on September 4, 2008.
3. Three HECO temp positions – See the response to CA-IR-108 for duties performed and HECO T-9, page 8, lines 11-15.

4. The Revenue Protection Investigator position - As the point position responsible for Company-wide efforts in special investigative work, this position will deter, detect, prevent, and recover revenue loss due to theft, unauthorized energy use, procedural weaknesses, or metering irregularities. The vacancy in this position limits HECO's ability to investigate, curtail, and recover loss revenue.

Since 2006, HECO has experienced an increase in meter tampering which has resulted in a greater demand for investigative work. The reported increase in 2006 resulted from a new program where meter readers report all unsealed meters. At the end of 2006 and 2007, HECO had outstanding case loads of 14,700 and 19,700 reports. As of July 31, 2008, the outstanding case load was 20,100.

Table 1: Revenue Protection New Case Loads by Year

Source: Revenue Protection Database	2003	2004	2005	2006	2007	2008 YTD
Reports Received	385	198	187	15921	5006	1220
Reports Completed	337	239	141	509	635	170
Bills Issued	60	34	40	74	83	55
FTE (Includes HECO personnel and Consultants)	.5	.56	.82	1.55	1.9	1.6

In the interim, a HECO employee is performing the work of this position but only as the work schedule and work load of the employee's regular position permits. While this has aided in reducing the backlog of cases and minimizing losses, it has been difficult to maintain a supply of regular resources to the program without negatively impacting other work areas because of the amount of training and knowledge required to adequately perform the job duties.

While the full magnitude of lost revenue can never be confirmed, for 2007, the Revenue Protection team has identified $720,000 in losses as reflected in the Table 2 below, resulting from unauthorized use, equipment failure/malfunction and process deficiency. Without this position, revenue losses would continue undetected and HECO would not have an established program to deter or curtail revenue losses.

Table 2: Revenue Protection Investigation Quantified

Source: Revenue Protection Database	2003	2004	2005	2006	2007	2008 YTD
Kwh losses	500,112	374,026	875,590	1,801,770	4,988,994	1,105,621
$ Revenue losses	$75,520	$52,107	$123,432	$268,643	$720,985	$344,483

CA-IR-113

Ref: HECO T-9, page 21; (Bill Print Outsourcing).

a. Please provide a monthly detailed breakdown of HECO test year bill print costs, before and after commencing outsourcing in June 2009, indicating and quantifying where the anticipated economic benefits of outsourcing can be observed in these amounts.
b. If existing equipment is to be retired/replaced, please identify the costs of that equipment and indicate where in the rate filing related retirements and/or avoided operating expenses are recognized.

HECO Response:

a. The following bill print costs are included in the ITS test year budget:

Expense Category	**Jan-May (Per Mo.)**	**Jun-Dec (Per Mo.)**	**Jan-May Total**	**Jun-Dec Total**	**2009 Total**
Labor – Machine Operators	$16,921	$0	$84,605	$0	$84,605
Labor – Computer Operators	12,691	0	63,455	0	63,455
Machine Room Supplies	40	0	200	0	200
Inserter Maintenance	1,301	0	6,505	0	6,505
Printer Lease Expenses	9,135	0	45,675	0	45,675
Total Expenses	$40,088	$0	$200,440	$0	$200,440

Labor relating to HECO bill printing and mailing includes 2 Machine Operators and 1.5 Computer operators and is estimated at $148,060 ($84,605 + $63,455) for the first five months of the test year. After May 2009, this labor will be repositioned in other key ITS functions. Throughout the test year, the 2 Machine Operators are reflected in HECO-WP-1115, page 156, as Info Storage Eq Clerk (responsibility area PEC) and Mail Clerk (responsibility area PEM) which are their new positions after outsourcing is completed. The 1.5 Computer Operator FTEs (responsibility are PEI) are included on HECO-WP-1115, page 21, among the 5 Senior Data Center Operator positions. The Info

Storage Clerk is needed to support increased requirements in the records center including printing requests. The additional Mail Clerk is needed to bolster the mail room staff which has been without a position that was reduced in 2006. The 1.5 computer operators are among a staff of 5 operators which provide 24-hour coverage weekdays for monitoring systems and operation of other print jobs in the Data Center.

Non-labor expenses relating to machine room supplies, inserter machine maintenance, and printer lease expenses will be discontinued after May 2009. No additional expense for these items have been included in the test year estimates.

The following bill print costs are included in the Customer Service test year budgets[1]:

Expense Category	**Jan-May (Per Mo.)**	**Jun-Dec (Per Mo.)**	**Jan-May Total**	**Jun-Dec Total**	**2009 Total**
Postage	$107,500	$107,500	$537,500	$752,500	$1,290,000
Bill Forms	10,078	10,078	50,390	10,078	60,468
Bill Envelopes	12,200	12,200	61,000	85,400	146,400
Payment Envelopes	6,450	6,450	32,250	45,150	77,400
Bill Print Outsourcing Fees	0	45,951	0	321,657	321,657
Total Expenses	$136,228	$182,179	$681,140	$1,214,785	$1,895,925

Although not included in the amounts noted in the ITS cost table and the Customer Service cost table given above, other economic benefits of outsourcing the bill printing function are noted in Attachment 1 which is confidential. Attachment 1 will be provided upon the issuance of the Protective Order by the Commission. These other benefits are the costs that are avoided by the Company by outsourcing the bill printing function and amount to roughly $28,450 per month, based on our most current estimates. As noted in

[1] The Customer Service Department's non-project and project support for its nonlabor expenses relating to print services were submitted with CA-IR-2, Attachment 2, pages 3 and 12.

Attachment 1, these "savings" include the avoided costs of replacement data center printers; new bill statement composition and archiving software and hardware; a replacement mail machine inserter and a disaster recovery solution (that presently does not exist) for printing and inserting.

b. Equipment used for bill printing will be retired and include a Bell & Howell mail insertion machine purchased for $219,497 in 1997. The net book value of this equipment as of December 31, 2007 for this asset is $78,655 with an annual depreciation rate of 8.334%. A Pitney Bowes Infinity DM16K Digital metering machine, which is attached to the Bell & Howell mail insertion machine will also be retired. This asset was purchased in 2006 for $17,859, has a net book value as of December 31, 2007 of $16,966, and is subject to an 5.0% annual depreciation rate. These assets are subject to vintage amortization accounting which require retirement of assets when fully depreciated. The maintenance costs of the equipment have been discontinued after May 2009. The inserter is at the end of its useful life, has been prone to reoccurring problems in 2007 and 2008, and would normally be replaced in 2009; however, the outsourced printing and mailing avoids the need for a new capital investment of approximately $330,000 to replace the inserter.

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Attachment 1 is confidential and will be provided

after a Protective Order is issued in this proceeding.

CA-IR-114

Ref: HECO T-9, pages 22-23; (IVR Outsourcing).

a. Please provide a monthly detailed breakdown of HECO test year call center and IVR costs, before and after commencing outsourcing in 2009, indicating and quantifying where the anticipated economic benefits of outsourcing can be observed in these amounts.
b. If existing equipment is to be retired/replaced, please identify the costs of that equipment and indicate where in the rate filing related retirements and/or avoided operating expenses are recognized.

HECO Response:

a. The following IVR costs are included in the ITS 2009 test year budget:

Expense Category	Jan-May (Per Mo.)	Jun-Dec (Per Mo.)	Jan-May Total	Jun-Dec Total	2009 Total
Avaya IVR Maintenance	$6,730	$0	$33,650	$0	$33,650
Server Maintenance	180	180	900	1,260	2,160
Avaya ASAI plus Maintenance	233	233	1,165	1,631	2,796
Total Expenses	$7,143	$413	$35,715	$2,891	$38,606

Expenses relating to the Avaya IVR maintenance, of approximately $80,000 on an annualized basis, will be discontinued after May 2009. No additional expenses for these items have been included in the test year estimates. The increased Server Maintenance cost from January to December is to maintain 3 servers to host the IVR software. The Avaya ASAI Plus maintenance is a right to use fee for interface software on the Avaya switch. While the outsourced IVR service will begin in May 2009, IVR testing began in

2008; therefore, maintenance applies to the pre-implementation period of January to May as well as the post implementation period of June to December.

As noted in HECO T-9 and CA-IR-2, HECO T-9, Attachment 2, Page 16, in the test year, the Company estimates that it will incur approximately $88,000 for the implementation of the First Data IVR solution in account 903. These costs represent service charges for the processing of customer phone calls through the vendor IVR solution.

The decision to implement the new IVR application was not based purely on costs. This IVR application, along with the IWR application discussed in the response to CA-IR-115, represents an integrated product package which fully integrates with the new Peace CIS as all products are provided by the same service provider, First Data Corp. This full integration was expected to benefit HECO by reducing system (CIS, IVR, IWR) implementation risk and providing increased IVR and IWR functionality which is expected to enrich customers' interactive experiences. The Decision Synopsis which is confidential provides further detail and discusses the basis for selecting the IVR and IWR Services was provided to the Commission under Protective Order No. 21444 of Docket No. 04-0268, as Attachment 4 in the Company's Notification Filing dated July 1, 2008. This Decision Synopsis compared the selected IVR and IWR service solution against the alternative of modifying the Peace CIS software and updating/modifying the soon to be phased out Avaya UCS1000 IVR system.

b. The Avaya Model UCS1000 IVR equipment, which is presently manufacturer discontinued, will be retired. This equipment and its applications, purchased for $183,670.33, were placed in-service in 2003 and 2004. The net book value as of December 31, 2007, for this asset is $143,974 with an annual depreciation rate of 5.94%.

In the test year, the retirement of this asset is included in the General Equipment retirement provision in Mr. Bruce Tamashiro's testimony (HECO T-14). This General Equipment retirement provision is estimated based on an average of 5-year historical retirements. The retirement of this asset does not affect rate base (entry will debit Accumulated Depreciation and credit Plant-in-Service for $183,670.33) and will reduce future years depreciation by $10,910 ($183,670.33 x 5.94%) per year.

CA-IR-115

Ref: HECO T-9, pages 22-23 (IWR Web Service Outsourcing).

a. Please provide a monthly detailed breakdown of HECO test year internet support and IWR costs, before and after commencing outsourcing in 2009, indicating and quantifying where the anticipated economic benefits of outsourcing can be observed in these amounts.
b. If existing equipment is to be retired/replaced, please identify the costs of that equipment and indicate where in the rate filing related retirements and/or avoided operating expenses are recognized.

HECO Response:

a. The following IWR costs are included in the ITS 2009 test year budget:

Expense Category	Jan-May (Per Mo.)	Jun-Dec (Per Mo.)	Jan-May Total	Jun-Dec Total	2009 Total
Server Maintenance	$60	$60	$300	$420	$720

The server maintenance cost from January to December is to maintain a server which will host the IWR software. Total server maintenance costs are budgeted in ITS costs included in the Infrastructure LAN workorder shown on HECO-WP-1115, page 51 (supplier name Insight Direct), provided by Ms. Patsy Nanbu (HECO T-11). While the outsourced IWR service will begin on May 2009, IWR testing was anticipated to begin in 2008 therefore, maintenance applies to the pre-implementation period of January to May as well as the post implementation period of June to December. As noted in HECO T-9 and CA-IR-2, Attachment 2, Page 16, in the test year, the Company estimates that it will incur approximately $31,000 for the implementation of the First Data IWR solution in account 903. These costs represent the estimated service charges based on First Data's flat monthly rate.

The decision to implement the new IWR application was not based purely on costs. This IWR application, along with the IVR application discussed in response to CA-IR-114, represents an integrated product package which would also fully integrate with the new CIS, as all products are provided by the same service provider, First Data Corp. This full integration is expected to benefit HECO by reducing system (CIS, IVR, IWR) implementation risk and providing increased IVR and IWR functionality which is expected to enrich customers' interactive experiences. The Decision Synopsis which provides further detail and discusses the basis for selecting the IVR and IWR Services was provided to the Commission under Protective Order No. 21444 of Docket No. 04-0268, as Attachment 4 in the Company's Notification Filing, dated July 1, 2008. This Decision Synopsis compared the selected IVR and IWR service solution against the alternative of modifying the Peace CIS software and updating/modifying the soon to be phased out Avaya UCS1000 IVR system.

b. No equipment will be retired or replaced. Equipment used to host HECO's current web site will remain in service. The IWR application will increase the electronic self service functions for HECO customers which are not presently available through HECO's current web site.

CA-IR-116

Ref: HECO-WP-905, Uncollectible Write-off Percentage.

Please provide the following information regarding the uncollectibles ratio proposed by HECO:

a. Provide an updated electronic spreadsheet including all available actual months subsequent to December 2007.
b. Explain all reasons why HECO believes that its uncollectible percentage has improved in 2004 through mid-2006 and then generally deteriorated, as shown on this table, indicating any changes in credit and collection policies or other initiative implemented to manage uncollectibles since September 2003.
c. Has HECO changed any of its account write-off or recovery processes or accounting procedures since January 2003?
d. If your response to part (c) of this information request is affirmative, please identify and describe each change and provide an estimate of the impact upon write-offs associated with each such change.

HECO Response:

a. Please refer to Attachment 1 for the uncollectible ratio for the period from January 2003 through July 2008. The July 2008 uncollectible ratio is confidential information and will be provided upon issuance of the protective order by the Commission.

b. As stated in T-9, page 27 line 4, write-offs fluctuate year to year due to a number of external factors including bankruptcy filings, the economy, and the cost of fuel oil. HECO believes the primary cause of the improved uncollectible percentage during the 2004 through mid-2006 period is the decrease in revenues lost to bankruptcy. During this period, the average annual revenue lost to bankruptcy was $67,096 compared to $350,046 in 2003 and $479,521 in 2007. Likewise, the deteriorating performance since 2007 is primarily attributed to the increase in revenue loss due to bankruptcy. In March 2007, HECO wrote-off the Kahuku Hospital bankruptcy which represented 89% or $424,663.25 of the 2007 bankruptcy amount. This single write-off deteriorated the uncollectible performance for the next 12 months through February 2008. During this period the

uncollectible percentage rose sharply from .0681% in February 2007 to .1000% in March 2007 and then dipped in March 2008 to .0504% when the Kahuku Hospital write-off no longer affected the uncollectible percentage (see Attachment 2 for more information on lost revenues due to bankruptcy).

HECO has not changed credit and collection policies since 2003. However, since 2003 the following initiatives have been implemented to manage uncollectibles:

1. Disconnection notices are sent to customers seven days earlier than under the previous procedure, allowing the customer more time to make a payment before a credit related field order is generated (electricity service is disconnected).
2. Credit related field orders are generated earlier by four days allowing field personnel four additional days to take collection action in the field.
3. Technology that will enable remote disconnection and reconnection of service is being researched, investigated, and piloted.
4. Manual outbound courtesy calls providing an additional step in the delinquent customer notification process.

In addition, the following initiatives are in the process of being implemented and will aid in managing uncollectibles:

5. Automated outbound courtesy calls to facilitate the provision of additional step(s) in the delinquent customer notification process.
6. A credit scoring tool to provide better risk predictions up front and better enable HECO to collect the appropriate security deposit (as allowed under HECO Tariff Rule No. 5, Establishment and Re-establishment of Credit) from customers.

7. An identification tool to provide better fraud detection up front when customers call HECO to open or change their electric account.

c. HECO has not changed any of its account write-off or recovery processes or accounting procedures since January 2003.

d. See response to subpart c. above.

NET WRITE-OFFS		SALES REVENUES		
Mo/Yr	12 Months Ending	Mo/Yr	12 Months Ending	% Write-off *
Jan-03	792,559	Sep-02	844,623.1	0.0938%
Feb-03	792,473	Oct-02	845,847.8	0.0937%
Mar-03	831,944	Nov-02	850,081.3	0.0979%
Apr-03	840,975	Dec-02	858,635.7	0.0979%
May-03	683,004	Jan-03	869,367.4	0.0786%
Jun-03	795,584	Feb-03	882,400.9	0.0902%
Jul-03	970,816	Mar-03	899,062.1	0.1080%
Aug-03	952,196	Apr-03	911,131.8	0.1045%
Sep-03	937,554	May-03	923,370.9	0.1015%
Oct-03	958,486	Jun-03	933,521.6	0.1027%
Nov-03	951,452	Jul-03	938,160.0	0.1014%
Dec-03	975,434	Aug-03	945,952.4	0.1031%
Jan-04	955,302	Sep-03	953,462.8	0.1002%
Feb-04	962,704	Oct-03	956,538.5	0.1006%
Mar-04	974,837	Nov-03	959,694.7	0.1016%
Apr-04	965,425	Dec-03	960,784.2	0.1005%
May-04	811,993	Jan-04	963,593.2	0.0843%
Jun-04	707,004	Feb-04	968,410.5	0.0730%
Jul-04	588,208	Mar-04	969,442.2	0.0607%
Aug-04	546,681	Apr-04	971,772.5	0.0563%
Sep-04	562,260	May-04	973,013.3	0.0578%
Oct-04	492,445	Jun-04	974,892.1	0.0505%
Nov-04	567,413	Jul-04	981,537.5	0.0578%
Dec-04	534,055	Aug-04	987,643.7	0.0541%
Jan-05	502,903	Sep-04	996,558.0	0.0505%
Feb-05	489,908	Oct-04	1,009,179.8	0.0485%
Mar-05	467,996	Nov-04	1,022,596.2	0.0458%
Apr-05	440,622	Dec-04	1,036,013.4	0.0425%
May-05	510,033	Jan-05	1,049,133.2	0.0486%
Jun-05	422,289	Feb-05	1,052,081.4	0.0401%
Jul-05	429,831	Mar-05	1,053,587.6	0.0408%
Aug-05	474,635	Apr-05	1,056,634.2	0.0449%
Sep-05	441,975	May-05	1,066,815.3	0.0414%
Oct-05	461,227	Jun-05	1,082,022.6	0.0426%
Nov-05	396,040	Jul-05	1,094,459.7	0.0362%
Dec-05	363,838	Aug-05	1,115,076.4	0.0326%

* Formula: net write-offs / sales revenue/1000*100

Confidential Information Deleted Pursuant To Protective Order, Filed on _____.

NET WRITE-OFFS		SALES REVENUES		
Mo/Yr	12 Months Ending	Mo/Yr	12 Months Ending	% Write-off *
Jan-06	476,683	Sep-05	1,132,603.5	0.0421%
Feb-06	526,614	Oct-05	1,152,725.6	0.0457%
Mar-06	537,946	Nov-05	1,175,402.6	0.0458%
Apr-06	607,739	Dec-05	1,194,052.4	0.0509%
May-06	670,901	Jan-06	1,212,561.8	0.0553%
Jun-06	774,884	Feb-06	1,237,755.6	0.0626%
Jul-06	805,193	Mar-06	1,262,525.3	0.0638%
Aug-06	764,398	Apr-06	1,285,917.3	0.0594%
Sep-06	834,697	May-06	1,304,153.2	0.0640%
Oct-06	917,004	Jun-06	1,321,190.5	0.0694%
Nov-06	978,511	Jul-06	1,343,448.9	0.0728%
Dec-06	999,378	Aug-06	1,356,117.0	0.0737%
Jan-07	981,265	Sep-06	1,368,261.4	0.0717%
Feb-07	936,020	Oct-06	1,375,487.1	0.0681%
Mar-07	1,368,528	Nov-06	1,368,611.9	0.1000%
Apr-07	1,311,603	Dec-06	1,360,004.9	0.0964%
May-07	1,250,936	Jan-07	1,353,765.5	0.0924%
Jun-07	1,214,436	Feb-07	1,343,828.3	0.0904%
Jul-07	1,224,528	Mar-07	1,336,521.7	0.0916%
Aug-07	1,243,159	Apr-07	1,326,759.7	0.0937%
Sep-07	1,178,164	May-07	1,322,953.1	0.0891%
Oct-07	1,133,862	Jun-07	1,317,873.3	0.0860%
Nov-07	1,103,643	Jul-07	1,309,434.1	0.0843%
Dec-07	1,067,804	Aug-07	1,310,948.8	0.0815%
Jan-08	1,054,175	Sep-07	1,303,229.7	0.0809%
Feb-08	1,073,685	Oct-07	1,316,767.2	0.0815%
Mar-08	674,604	Nov-07	1,337,338.1	0.0504%
Apr-08	835,916	Dec-07	1,362,491.2	0.0614%
May-08	855,503	Jan-08	1,399,316.3	0.0611%
Jun-08	934,869	Feb-08	1,438,785.0	0.0650%
Jul-08		Mar-08		

Jan '03 - Dec '07

* Formula: net write-offs / sales revenue/1000*100

HECO Annual Bankruptcy Data

Year	Dollars	No. of Accts.
2003	$ 350,046	110
2004	$ 81,823	100
2005	$ 77,298	66
2006	$ 42,167	48
2007	$ 479,521	36
YTD June 2008	$ 121,949	27

Individual Bankruptcies over $50,000

Date	Customer	Claim Amt
3/21/2003	Hawaiian Airlines	$ 65,192
4/1/2003	Fleming Companies Inc	$ 112,728
4/9/2003	Palama Meat	$ 92,157
2/23/2007	Kahuku Hospital	$ 424,664
3/20/2008	Aloha Airlines	$ 101,290

CA-IR-117

Ref: HECO-WP-902; (Customer Deposits).

Please provide the actual amounts of Customer Deposit balances by month for the period December 2007 to-date, for all available additional months.

HECO Response:

The Customer Deposit balances by month for the period December 2007 to July 2008 is as follows:

December 2007	$6,800,761
January 2008	$6,897,836
February 2008	$6,958,955
March 2008	$7,437,645
April 2008	$7,141,140
May 2008	$7,217,302
June 2008	$7,330,189
July 2008	$[redacted]

The July 2008 customer deposit balance is confidential information and will be provided upon the issuance of the protective order by the Commission.

CA-IR-118

Ref: HECO-WP-904; (Revenue Lag Days).

Please explain whether replacement of ACCESS with the new CIS system is expected to have any impact upon the Company's experienced billing or bill collection intervals, with an estimated of such impacts upon the Revenue Lag Day calculations set forth on this workpaper.

HECO Response:

At this time, it is not anticipated that the replacement of ACCESS with the new CIS will

significantly impact the Company's billing or bill collection intervals.

CA-IR-119

Ref: HECO T-10, page 18; HECO-1018 through HECO-1019 (HECO Administered DSM).

a. Please provide, for all periods since inception of the program, a monthly detailed breakdown of installation volumes and costs incurred by HECO for each of the three programs SolarSaver ("SSP"), Commercial and Industrial Direct Load Control ("CIDLC"), and Residential Direct Load Control ("RDLC"), indicating HECO's average installed cost per participant historically, and the comparable average installed cost per participant in the projected test year.
b. Explain any individually significant changes in program scope or cost evident upon comparing this data from year to year.

HECO Response:

a. Please see attached pages 6 to7 for RDLC, pages 8 to 9 for CIDLC, and page 10 for SSP program data. Costs include base and incremental expenses.

b. When comparing the average installed cost per participant in the three programs it's important to recognize some underlying assumptions relative to each program's expenses and participation rates. First, when looking at a mass marketed and implemented program like the RDLC program, cost per participant is a valid metric for evaluating the program, with the understanding that as time goes on costs will rise as attracting new participants becomes harder due to market saturation. Secondly, unlike other incentive based programs that provide for a one-time rebate upon the installation of an energy efficient measure, the RDLC and CIDLC programs provide ongoing incentives in order to maintain the customers' participation in the program and the associated curtailable load. The cumulative effect of continuing to pay incentives to previous years' participants while at the same time adding incentives for new participants tends to make the cost per incremental additional participants appear more costly over time.

RDLC Program

Average cost per incremental participant in the RDLC program in 2005 was approximately $318. This increased to $376 in 2006, and $414 in 2007. Note that year-to-date expenses per participant do not necessarily correspond with year-end expenses per participant because expenses in the latter months of the year tend to be higher than earlier months reflecting late year equipment orders and the timing of invoices. This results in an apparent decrease in incremental cost per participant of $384 through July 2008 year-to-date data. Therefore, when total annual 2008 costs are accounted for, the increasing cost trend seen in the previous years is expected to continue.

By 2009, the cost per incremental participant will increase to $510 per incremental additional customer when incentives for previous years' participants are subtracted. This is due to the fact that in 2009 the number of incremental participants in the RDLC Program is expected to decrease significantly and marketing costs are expected to increase. By 2009, over 30,000 of the estimated 70,000 to 100,000 electric resistance water heaters on the island of Oahu will already be participating in the program. Thus, as the program approaches saturation, the number of new participants will decrease from previous years.

In addition, marketing costs to attract new participants will increase significantly. This increase in marketing costs results from the fact that by 2009 the entire pool of qualified participants has already been offered participation in the program on multiple occasions and either through no action or by conscious decision has previously declined the offer. Therefore, a new, more compelling marketing approach has to be developed in 2009.

Furthermore, by 2009, the program will be maintaining a very large pool of participants, which benefit the system with more than 20 MW of under-frequency controlled curtailable load. These participants will continue to be paid incentives to remain in the program and those costs are included in the 2009 program budget. The large number of program participants will also result in a significantly higher number of service calls than in previous years when the pool of participants were smaller.

CIDLC

In the case of the CIDLC program, the cost per incremental participant may not be the best metric for unitizing cost since participating customers come in a variety of sizes from just over 100 kW to nearly 3 MW per customer. In this case it may be more appropriate to look at cost per incremental curtailable kW. But even when comparing monthly cost per incremental curtailable kW, the differences between months can vary greatly because of the sales cycle time involved with getting customers comfortable with the prospect of participation and the controllable load sizes of enrolled customers. Therefore, in some months, no customers may agree to participate resulting in an infinite cost per incremental kW, whereas in other months very large loads sign up based on many months of previous work. An annual cost per incremental curtailable kW is probably a better way to evaluate the program, again recognizing that cost per curtailable kW will increase over time as continuing monthly credits paid to previous years' participants inflates the calculated metric.

The "erratic" characteristics of CIDLC program participation makes analyzing the cost trends difficult. In general we saw a reluctance to participate early in the program, which improved somewhat in early 2007. This customer reluctance was addressed when

the Commission approved HECO's request for program modifications (including more flexible participation rules and contractual terms, and an increase in monthly incentive payments) in Decision and Order 23605 issued on August 15, 2007. This resulted in the enrollment of a number of customers with large curtailable loads and a reduction in the cost per curtailable kW in 2007 and the first half of 2008.

The cost per incremental curtailable kW in the 2009 test year increases substantially due to expenses necessary to pay incentives to maintain the enrollment of previous years' participants, to enroll new customers with smaller load reduction potential, and to expand the program into the small business load control program.

Incentives paid to previous years' participants to maintain program enrollment increases the 2009 cost per incremental participant and per incremental curtailable load. In addition, the opportunities to enroll large individual demand reductions from large customers through the Direct Load Control and Voluntary Load Control program elements are less than in previous years as indicated in HECO T-10, pages, 27 and 28. The remaining demand reduction potential now resides with smaller customers who have smaller loads available for interruption. Therefore, to attain the same MW level of demand reduction equivalent to a large customer, many small customers must be enrolled. The time and resources to enroll small customers are greater than enrolling large customers.

HECO also expects to begin full implementation of the Small Business Direct Load Control ("SBDLC") program element in 2009, pending the results of the SBLDC pilot in 2008. While offering load control options to small businesses via the SBDLC program element increases the amount of controllable load, it tends to be more costly on

a per incremental curtailable kW basis than the large commercial and industrial programs. The reason for this is, unlike the residential sector, the small business sector is heterogeneous, i.e., there are many different businesses types with different end-uses. Therefore, direct mailing followed up by one-on-one customer sales is required to attain participation in the program. Thus, program cost per participant or per curtailable kW is relatively high.

SSP

In the SSP program it is difficult to say if there is enough data to annualize the cost per participant trend. The pilot program was rolled out around July 1, 2007 and much of the costs were related to the start up of the program. However, it appears that the cost per participant, while fluctuating to some degree, is averaging around $6,000 for 2008 installation costs excluding startup costs incurred in 2007.

RDLC Installations and Expenses by Month
Since Program Inception in November 2004

2004	Monthly Installations	Monthly Program Expense	Monthy Cost Per Participant
Nov-04		$17,529	N/A
Dec-04		$22,780	N/A
Total 2004		**$40,309**	**N/A**

2005	Monthly Installations	Monthly Program Expense	Monthy Cost Per Participant
Jan-05	21	$124,402	$5,924
Feb-05	313	$6,118	$20
Mar-05	461	$100,965	$219
Apr-05	475	$115,224	$243
May-05	520	$242,323	$466
Jun-05	530	$110,083	$208
Jul-05	573	$567,597	$991
Aug-05	813	$39,576	$49
Sep-05	724	$146,088	$202
Oct-05	709	$203,964	$288
Nov-05	543	$181,523	$334
Dec-05	267	$55,765	$209
Total 2005	**5,949**	**$1,893,628**	**$318**

2006	Monthly Installations	Monthly Program Expense	Monthy Cost Per Participant
Jan-06	282	$654,629	$2,321
Feb-06	561	$134,731	$240
Mar-06	750	$125,732	$168
Apr-06	592	$27,484	$46
May-06	905	$257,864	$285
Jun-06	1298	$195,049	$150
Jul-06	732	$393,412	$537
Aug-06	716	$508,579	$710
Sep-06	854	$58,833	$69
Oct-06	1196	$270,037	$226
Nov-06	999	$603,862	$604
Dec-06	685	$372,222	$543
Total 2006	**9,570**	**$3,602,434**	**$376**

RDLC Installations and Expenses by Month
Since Program Inception in November 2004

2007	Monthly Installations	Monthly Program Expense	Monthy Cost Per Participant
Jan-07	1253	$303,969	$243
Feb-07	1029	$523,320	$509
Mar-07	1009	$78,506	$78
Apr-07	855	$400,379	$468
May-07	717	$355,660	$496
Jun-07	467	$306,688	$657
Jul-07	387	$224,583	$580
Aug-07	749	$155,657	$208
Sep-07	900	$227,464	$253
Oct-07	1119	$714,651	$639
Nov-07	1232	$430,874	$350
Dec-07	908	$672,919	$741
Total 2007	**10,625**	**$4,394,670**	**$414**

2008	Monthly Installations	Monthly Program Expense	Monthy Cost Per Participant
Jan-08	1011	$164,831	$163
Feb-08	803	$288,636	$359
Mar-08	1015	$390,535	$385
Apr-08	535	$353,474	$661
May-08	844	$412,490	$489
Jun-08	865	$253,468	$293
Jul-08	989	$465,382	$471
Total YTD 2008	**6,062**	**$2,328,816**	**$384**
Program Total	**32,206**	**$12,259,857**	**$381**

2009 Test Year	Total Installations	Total Expenses	Cost Per Perticipant
	5,000	**$3,738,000**	**$748**
Incentives for previous years' Participants		**$1,188,607**	
	5000	**$2,549,393**	**$510**

CIDLC Installations and Expenses by Month
Since Program Inception in November 2004

2004	Number of Participating Customers	Monthly Program Expense	Cost Per Participating Customer	Gross Curtailable Load (kW)	Monthly Cost Per Curtailable kW
Nov-04		$11,036	N/A		N/A
Dec-04		$20,449	N/A		N/A
Total 2004		**$31,485**	**N/A**		**N/A**

2005	Number of Participating Customers	Monthly Program Expense	Cost Per Participating Customer	Gross Curtailable Load (kW)	Monthly Cost Per Curtailable kW
Jan-05		$19,251	N/A		N/A
Feb-05		$10,941	N/A		N/A
Mar-05		$18,119	N/A		N/A
Apr-05		$15,724	N/A		N/A
May-05	1	$23,839	$23,839	1,948	$12
Jun-05		$41,473	N/A		N/A
Jul-05		$22,837	N/A		N/A
Aug-05		$28,419	N/A		N/A
Sep-05		$98,372	N/A		N/A
Oct-05	1	$34,695	$34,695	231	$150
Nov-05		$51,367	N/A		N/A
Dec-05		$113,184	N/A		N/A
Total 2005	**2**	**$478,221**	**$239,111**	**2,178**	**$220**

2006	Number of Participating Customers	Monthly Program Expense	Cost Per Participating Customer	Gross Curtailable Load (kW)	Monthly Cost Per Curtailable kW
Jan-06	1	$54,013	$54,013	280	$193
Feb-06		$33,475	N/A		N/A
Mar-06		$81,382	N/A		N/A
Apr-06	1	$55,555	$55,555	281	$197
May-06	1	$52,308	$52,308	1,560	$34
Jun-06		$36,363	N/A		N/A
Jul-06		$50,758	N/A		N/A
Aug-06		$43,585	N/A		N/A
Sep-06		$56,487	N/A		N/A
Oct-06	2	$51,650	$25,825	574	$90
Nov-06		$44,612	N/A		N/A
Dec-06		$54,359	N/A		N/A
Total 2006	**5**	**$614,547**	**$122,909**	**2,696**	**$228**

CIDLC Installations and Expenses by Month
Since Program Inception in November 2004

2007	Number of Participating Customers	Monthly Program Expense	Cost Per Participating Customer	Gross Curtailable Load (kW)	Monthly Cost Per Curtailable kW
Jan-07		$54,766	N/A		N/A
Feb-07		$91,857	N/A		N/A
Mar-07	1	$123,213	$123,213	225	$547
Apr-07		$115,878	N/A		N/A
May-07	3	$58,854	$19,618	827	$71
Jun-07	3	$41,195	$13,732	6,458	$6
Jul-07		$67,588	N/A		N/A
Aug-07		$22,449	N/A		N/A
Sep-07	1	$68,225	$68,225	385	$177
Oct-07	3	$78,603	$26,201	2,445	$32
Nov-07	1	$81,457	$81,457	467	$174
Dec-07	1	$85,480	$85,480	929	$92
Total 2007	**13**	**$889,565**	**$68,428**	**11,737**	**$76**

2008	Number of Participating Customers	Monthly Program Expense	Cost Per Participating Customer	Gross Curtailable Load (kW)	Monthly Cost Per Curtailable kW
Jan-08	1	$85,337	$85,337	159	$538
Feb-08	2	$112,324	$56,162	743	$151
Mar-08	3	$173,455	$57,818	850	$204
Apr-08		$164,931	N/A		N/A
May-08	1	$162,037	$162,037	165	$979
Jun-08	3	$45,711	$15,237	1,576	$29
Jul-08	3	$298,648	$99,549	1,275	$234
Total YTD 2008	**13**	**$1,042,443**	**$80,188**	**4,769**	**$219**
Total	**33**	**$3,056,261**	**$92,614**	**21,380**	**$143**

2009 Test Year		**Total Expenses**		**Gross Curtailable Load (kW)**	
Total Program	**678**	**$4,085,000**	**$6,025**	**7,768**	**$526**
SBDLC Only	**600**	**$895,544**	**1,493**	**465**	**$1,926**
DLC/VLC	**78**	**$3,189,456**	**40,890**	**7,303**	**$437**
Incentives Paid to Prior Years' Participants		**$2,159,125**			
Incremental New Participants	**78**	**$1,030,331**	**13,209**	**7,303**	**$141**

SSP Installations and Expenses by Month Since Program Inception in June 2007

2007	Monthly Installations	Monthly Program Expenses	Monthy Cost Per Participant
Jun-07		$28,028	N/A
Jul-07		$10,622	N/A
Aug-07		$4,879	N/A
Sep-07		$14,599	N/A
Oct-07		$12,197	N/A
Nov-07	3	$19,687	$6,562
Dec-07	11	$54,303	$4,937
Total 2007	**14**	**$144,315**	**$10,308**

2008	Monthly Installations	Monthly Program Expenses	Monthy Cost Per Participant
Jan-08	6	$29,844	$4,974
Feb-08	6	$32,754	$5,459
Mar-08	3	$20,185	$6,728
Apr-08	7	$45,123	$6,446
May-08	8	$56,606	$7,076
Jun-08	9	$54,351	$6,039
Jul-08	10	$55,436	$5,544
Total YTD 2008	**49**	**$294,299**	**$6,006**

Average Historical Installed Cost per Participant **$6,962**

	Total Installations	Total Expenses	Cost Per Participant
2009 Test Year	**100**	**$585,000**	**$5,850**

CA-IR-120

Ref: HECO T-10, page 18 (Dynamic Pricing Pilot DPP).
Please provide a detailed discussion and complete copies of the studies, reports, analyses, workpapers, projections and other data prepared by or for HECO to evaluate the scope and anticipated labor and non-labor costs of the proposed new DPP program.

HECO Response:

Please refer to the DPP program application filed with the Commission on April 24, 2008, Docket No. 2008-0074, for further details of the scope and anticipated labor and non-labor costs of the program. HECO is proposing to recover only base labor (and related overhead) expenses in base rates. Customer incentives and contract services are "non-labor" incremental costs and HECO has proposed that these non-labor incremental costs be recovered through the DSM Surcharge. Please also see HECO's responses to CA-IRs 1 through 25 in that docket, filed on July 18, 2008.

Attached as page 2 of this response is the DPP program budget that was submitted in the April 24, 2008 application as Exhibit B. Pages 3 through 8 provide calculations of labor and non-labor costs for the three program years.

The test year 2009 labor and non-labor estimates for the DPP program were $15K and $7K, respectively, as shown in HECO-1007, line 23. The calculations on page 9 of this response shows the detailed calculations for these two figures, and are consistent with Exhibit B of the DPP application in that test year expense element 150 (wages and salaries) are approximately the same as included as direct labor (base). Also included in the test year estimate of base expenses as shown on page 9, but not included in Exhibit B of the DPP application are expense elements 421 (vacation and holidays), 406 (corporate administration), 422 (employee benefits), and 423 (payroll taxes).

CPP pilot budget 03-28-08 app.xls

Dynamic Pricing Pilot Program
Incremental Budget ($)

	Year 1	Year 2	Year 3	Total $
Customer Incentives	0	11,000	0	11,000
Outside Services				
Thermostats/pagers	50,000	15,000		65,000
Administration/Installation	26,000	20,000		46,000
Software Hosting	16,500	9,000		25,500
Event Communications	0	20,000		20,000
Evaluation				
Recruit/Educate/Surveys/Analysis	40,000	10,000	30,000	80,000
Evaluation Meters	90,000			90,000
Total Outside Services	222,500	74,000	30,000	326,500
Total	222,500	85,000	30,000	337,500

Budget does not include the following Base direct labor:

	Year 1	Year 2	Year 3	Total $
Direct Labor (base)	10,589	13,899	11,728	36,216

Exh B - Summary 3/28/2008

Critical Peak Pricing Pilot Budget

		Year 1				Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		Year 1	
		Labor			Nonlab																										
Item No.		hours	std cost	total		hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost
	Customer Incentives																														
	CPP Program Admin																														
	Labor (ESD mgr)																														
	Manager	16	54.67	875		0	0	0	0	0	0	0	0	0	0	0	0	8	437	0	0	0	0	0	0	0	0	8	437	16	875
	Director	32	42.34	1,355		0	0	0	0	0	0	0	0	0	0	0	0	8	339	0	0	8	339	8	339	0	0	8	339	32	1,355
	T/C	96	33.38	3,204		0	0	0	0	0	0	0	0	0	0	0	0	16	534	16	534	16	534	16	534	16	534	16	534	96	3,204
	Nonlabor																														0
	YUKON Software – Install/config/maintain																														
	Labor (CTA Div)																														
	Manager	0	54.67	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Director	0	42.34	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	T/C - CTAD	40	33.38	1,335		0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	1,068	8	267	0	0	0	0	0	0	40	1,335
	YUKON Software – for thermostat control																														
	Nonlabor: system configuration, training				16,500																16,500										16,500
	Thermostats																														
	Cannon T-Stat thermostats -- purchase, install, administer 200																														
	Labor (CTA Div)																														
	Manager	0	54.67	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Director	12	42.34	508		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	508	0	0	0	0	12	508
	T/C - CTAD	16	33.38	534		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	534	0	0	0	0	16	534
	Nonlabor - Cannon T-Stats (@ $250 ea) purchase				50,000																						50,000				50,000
	Nonlabor - T-Stat install (@ $130 ea)				26,000																						13,000		13,000		26,000
	Pagers for non-central a/c participants (lease 100)																														
	Cannon T-Stat thermostats -- Pre-Deployment Testing/Maint Communications - '08: 40hrs																														
	Maintain T-Stat Communications - '09: 12 mos @ 16 hrs/mo = 192 hrs																														
	Labor (CTAD Div)																														
	Manager	0	54.67	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Director	8	42.34	339		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	169	4	169	8	339
	T/C - CTAD	32	33.38	1,068		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	534	16	534	32	1,068
	Customer Event Communication (3rd party)																														
	Collect billing data -- None (AMI Flexnet - no incremental cost)																														
	Develop Manual bill calculation spreadsheet																														
	Labor (Pricing Div, Cust Svc)																														
	Manager	0	54.67	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Director	4	42.34	169		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	169	0	0	4	169
	T/C Pricing	24	33.38	801		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	801	0	0	24	801
	T/C Cust Svc	4	33.38	134		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	134	0	0	4	134

Critical Peak Pricing Pilot Budget

						Year 1					Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		Year 1	
						Labor			Nonlab																											
Item No.						hours	std cost	total			hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost
	Manual bill calculations																																			
	Labor (Cust Svc)																																			
			Manager			0	54.67	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Director			0	42.34	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			T/C			8	33.38	267			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	267	8	267
	Validate/organize meter data																																			
	Labor (Fcsts/Research Div)																																			
			Manager			0	54.67	0																												
			Director			0	42.34	0																												
			T/C			0	33.38	0																												
	Evaluation (third party)																																			
	Recruitment/Education/Surveys/Analysis/Report								40,000																		20,000		10,000		10,000					40,000
	Approx 600 AMI 10 watthour meters @$150 ea (purchase and install)								90,000																						45,000		45,000			90,000
	Write CPP Pilot report																																			
	Labor (Fcsts/Research, Pricing Div)																																			
			Manager			0	54.67	0																												
			Director	Pricing		0	42.34	0																												
			Director	Fcsts/Res		0	42.34	0																												
			T/C	Pricing		0	33.38	0																												
			T/C	Fcsts/Res		0	33.38	0																												
	Miscellaneous								0																											
	Total					292		10,589	222,500																											
	Base Labor								10,589																											
	Incremental non-labor								222,500																											
	Total								233,089																											233,089

Critical Peak Pricing Pilot Budget

Item No.		Year 2				Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		Year 2	
		Labor			Nonlab																										
		hours	std cost	total		hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost
	Customer Incentives				11,000		1,100		1,100				1,100		1,100		1,100		1,100		1,100		1,100		1,100		1,100				11,000
	CPP Program Admin																														
	Labor (ESD mgr)																														
	Manager	8	56.72	454		4	227	0	0	0	0	0	0	0	0	0	0	4	227	0	0	0	0	0	0	0	0	0	0	8	454
	Director	8	43.93	351		4	176	0	0	0	0	0	0	0	0	0	0	4	176	0	0	0	0	0	0	0	0	0	0	8	351
	T/C	16	34.63	554		8	277	0	0	0	0	0	0	0	0	0	0	8	277	0	0	0	0	0	0	0	0	0	0	16	554
	Nonlabor																														
	YUKON Software – Install/config/maintain																														
	Labor (CTA Div)																														
	Manager	0	56.72	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Director	0	43.93	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	T/C - CTAD	40	34.63	1,385		8	277	8	277	0	0	8	277	0	0	0	0	8	277	0	0	0	0	8	277	0	0	0	0	40	1,385
	YUKON Software – for thermostat control																														
	Nonlabor (remote hosting from Minnesota, software fees)				9,000		750		750		750		750		750		750		750		750		750		750		750		750		9,000
	Thermostats																														
	Cannon T-Stat thermostats -- purchase, install, administer 200																														
	Labor (CTA Div)																														
	Manager	0	56.72	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Director	0	43.93	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	T/C - CTAD	0	34.63	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Nonlabor - Cannon T-Stats (@ $250 ea) purchase																													0	0
	Nonlabor - T-Stat administer (@ $100 ea)				20,000		1,667		1,667		1,667		1,667		1,667		1,667		1,667		1,667		1,667		1,667		1,667		1,663		20,000
	Pagers for non-central a/c participants (lease 100)				15,000		1,250		1,250		1,250		1,250		1,250		1,250		1,250		1,250		1,250		1,250		1,250		1,250		15,000
	Cannon T-Stat thermostats -- Pre-Deployment Testing/Maint Communications - '08: 40hrs																														
	Maintain T-Stat Communications - '09: 12 mos @ 16 hrs/mo = 192 hrs																														
	Labor (CTAD Div)																														
	Manager	0	56.72	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Director	0	43.93	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	T/C - CTAD	192	34.63	6,649		16	554	16	554	16	554	16	554	16	554	16	554	16	554	16	554	16	554	16	554	16	554	16	554	192	6,649
	Customer Event Communication (3rd party)				20,000		1,667		1,667		1,667		1,667		1,667		1,667		1,667		1,667		1,667		1,667		1,667		1,663		20,000
	Collect billing data -- None (AMI Flexnet - no incremental cost)																														
	Develop Manual bill calculation spreadsheet																														
	Labor (Pricing Div, Cust Svc)																														
	Manager	0	56.72	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Director	0	43.93	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	T/C Pricing	0	34.63	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	T/C Cust Svc	0	34.63	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Critical Peak Pricing Pilot Budget

						Year 2					Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		Year 2	
						Labor			Nonlab																												
Item No.						hours	std cost	total			hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost
	Manual bill calculations																																				
		Labor (Cust Svc)																																			
			Manager			0	56.72	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Director			8	43.93	351			0	0	0	0	4	176	0	0	0	0	0	0	4	176	0	0	0	0	0	0	0	0	0	0	8	351
			T/C			80	34.63	2,770			0	0	0	0	8	277	8	277	8	277	8	277	8	277	8	277	8	277	8	277	8	277	8	277	80	2,770
	Validate/organize meter data																																				
		Labor (Fcsts/Research Div)																																			
			Manager			0	56.72	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Director			0	43.93	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			T/C			40	34.63	1,385			8	277	8	277	0	0	8	277	0	0	0	0	8	277	0	0	0	0	8	277	0	0	0	0	40	1,385
	Evaluation (third party)																																				
		Recruitment/Education/Surveys/Analysis/Report							10,000															5,000										5,000		10,000
		Approx 600 AMI 10 watthour meters @$150 ea (purchase and install)																																			
	Write CPP Pilot report																																				
		Labor (Fcsts/Research, Pricing Div)																																			
			Manager			0	56.72	0																													
			Director	Pricing		0	43.93	0																													
			Director	Fcsts/Res		0	43.93	0																													
			T/C	Pricing		0	34.63	0																													
			T/C	Fcsts/Res		0	34.63	0																													
	Miscellaneous																																				
	Total					392		13,899	85,000																												
	Base Labor								13,899																												
	Incremental non-labor								85,000																												
	Total								98,899																												98,900

Critical Peak Pricing Pilot Budget

Item No.		Year 2				Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		Year 2	
		Labor			Nonlab																										
		hours	std cost	total		hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost
	Customer Incentives				11,000		1,100		1,100				1,100		1,100		1,100		1,100		1,100		1,100		1,100		1,100				11,000
	CPP Program Admin																														
	Labor (ESD mgr)																														
	Manager	8	56.72	454		4	227	0	0	0	0	0	0	0	0	0	0	4	227	0	0	0	0	0	0	0	0	0	0	8	454
	Director	8	43.93	351		4	176	0	0	0	0	0	0	0	0	0	0	4	176	0	0	0	0	0	0	0	0	0	0	8	351
	T/C	16	34.63	554		8	277	0	0	0	0	0	0	0	0	0	0	8	277	0	0	0	0	0	0	0	0	0	0	16	554
	Nonlabor																														
	YUKON Software – Install/config/maintain																														
	Labor (CTA Div)																														
	Manager	0	56.72	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Director	0	43.93	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	T/C - CTAD	40	34.63	1,385		8	277	8	277	0	0	8	277	0	0	0	0	8	277	0	0	0	0	8	277	0	0	0	0	40	1,385
	YUKON Software – for thermostat control																														
	Nonlabor (remote hosting from Minnesota, software fees)				9,000		750		750		750		750		750		750		750		750		750		750		750		750		9,000
	Thermostats																														
	Cannon T-Stat thermostats -- purchase, install, administer 200																														
	Labor (CTA Div)																														
	Manager	0	56.72	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Director	0	43.93	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	T/C - CTAD	0	34.63	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Nonlabor - Cannon T-Stats (@ $250 ea) purchase																													0	0
	Nonlabor - T-Stat administer (@ $100 ea)				20,000		1,667		1,667		1,667		1,667		1,667		1,667		1,667		1,667		1,667		1,667		1,667		1,663		20,000
	Pagers for non-central a/c participants (lease 100)				15,000		1,250		1,250		1,250		1,250		1,250		1,250		1,250		1,250		1,250		1,250		1,250		1,250		15,000
	Cannon T-Stat thermostats -- Pre-Deployment Testing/Maint Communications - '08: 40hrs																														
	Maintain T-Stat Communications - '09: 12 mos @ 16 hrs/mo = 192 hrs																														
	Labor (CTAD Div)																														
	Manager	0	56.72	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Director	0	43.93	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	T/C - CTAD	192	34.63	6,649		16	554	16	554	16	554	16	554	16	554	16	554	16	554	16	554	16	554	16	554	16	554	16	554	192	6,649
	Customer Event Communication (3rd party)				20,000		1,667		1,667		1,667		1,667		1,667		1,667		1,667		1,667		1,667		1,667		1,667		1,663		20,000
	Collect billing data -- None (AMI Flexnet - no incremental cost)																														
	Develop Manual bill calculation spreadsheet																														
	Labor (Pricing Div, Cust Svc)																														
	Manager	0	56.72	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Director	0	43.93	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	T/C Pricing	0	34.63	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	T/C Cust Svc	0	34.63	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Critical Peak Pricing Pilot Budget

						Year 2					Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		Year 2	
						Labor			Nonlab																												
Item No.						hours	std cost	total			hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost	hours	std cost
	Manual bill calculations																																				
		Labor (Cust Svc)																																			
			Manager			0	56.72	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Director			8	43.93	351			0	0	0	0	4	176	0	0	0	0	0	0	4	176	0	0	0	0	0	0	0	0	0	0	8	351
			T/C			80	34.63	2,770			0	0	0	0	8	277	8	277	8	277	8	277	8	277	8	277	8	277	8	277	8	277	8	277	80	2,770
	Validate/organize meter data																																				
		Labor (Fcsts/Research Div)																																			
			Manager			0	56.72	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Director			0	43.93	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			T/C			40	34.63	1,385			8	277	8	277	0	0	8	277	0	0	0	0	8	277	0	0	0	0	8	277	0	0	0	0	40	1,385
	Evaluation (third party)																																				
		Recruitment/Education/Surveys/Analysis/Report							10,000															5,000										5,000		10,000
		Approx 600 AMI 10 watthour meters @$150 ea (purchase and install)																																			
	Write CPP Pilot report																																				
		Labor (Fcsts/Research, Pricing Div)																																			
			Manager			0	56.72	0																													
			Director	Pricing		0	43.93	0																													
			Director	Fcsts/Res		0	43.93	0																													
			T/C	Pricing		0	34.63	0																													
			T/C	Fcsts/Res		0	34.63	0																													
	Miscellaneous																																				
	Total					392		13,899	85,000																												
	Base Labor								13,899																												
	Incremental non-labor								85,000																												
	Total								98,899																												98,900

DPP Base Costs
2009 Test Year

Non labor expense		
406	1,642	
422	4,328	
423	1,096	
	7,066	

Labor expense		
150	13,226	(See Exhibit B)
421	1,960	
	15,186	

See HECO-1007, Line 23

Based on Exhibit B, DPP Program Application
for Direct Labor (base), Year 2 = Test Year

CA-IR-121

Ref: HECO T-10, page 26; HECO-1016 (HECO Labor Needed for Retained DSM).

Please provide complete copies of all studies, reports, analyses, workpapers, projections and other documents relied upon by HECO to conclude that all of the existing "base" DSM positions will continue to be needed to support DSM programs not being transferred to third party administration.

HECO Response:

The existing DSM base positions consist of five positions identified in HECO-1016. As shown on page 4 of this response, of the five positions, the CIDLC Program Manager and the Load Management Engineer have no hours associated with any of the energy efficiency DSM programs being transferred to the third party administrator. Therefore, it is clear that these two positions should be in base rates.

The information on page 4 reflects labor input sheets used to derive the test year labor allocation of these positions that were developed before the schedule for the transition of the energy efficiency DSM programs became clear. Due to the uncertainty regarding the timing of the transition, the labor input sheets were developed on a "business-as-usual" basis, i.e., it assumed that the programs remained with the utility in 2009.[1] However, when the energy efficiency DSM programs are transferred to the PBF Administrator, the resources originally assigned in the 2009 O&M Expense Budget to the administration of specific energy efficiency DSM programs will be used to develop, plan, and design new demand response programs. The test year base labor estimates reflect this new focus (see HECO T-10, page 21).

[1] On July 3, 2008, the Commission issued an "Order to Initiate the Collection of Funds for the Third Party Administrator of Energy Efficiency Programs" ("Order"). In the Order, the Commission "establishe[d] a six month transition period from January 1, 2009 to June 30, 2009, to allow the HECO Companies to continue to offer their energy efficiency programs during the establishment of the [Third Party Administrator]." This order confirms the discussions at the Commission's May 12, 2008 status conference referenced in HECO T-10, page 16, line 19 through page 17, line 7.

Based on the labor allocations on page 4, the Director CEP Division has 186 hours allocated to the CIEE and REWH programs, which will transfer to the third party administrator. The 186 hours represent just slightly more than 10 percent of the productive hours for the Director, and thus, are small relative to the entirety of the test year hours worked by this position. Nevertheless, for test year purposes these hours were allocated to general DSM program administration. The Director CEP Division should, therefore, also remain in base rates.

Also based on the labor allocations on page 4, the RDLC Program Manager (894 hours) and Clerk, CEP division (876 hours) do have hours related to DSM programs that will transfer to the third party administrator. However, due to the current emphasis on demand response programs, the load management programs (including the RDLC's increased emphasis on enrolling central and split air conditioning households and CIDLC's expansion to include the new SBDLC element) and dynamic pricing programs will require more attention from these two positions. For test year purposes these hours were also allocated to general DSM program administration.

The demand response work to be conducted by the RDLC Program Manager includes identifying other ways to use customer response and end-use consumption to reduce peak demand and defer resource additions. The effort would also involve exploring the use of demand response to ameliorate the short-term frequency fluctuations from intermittent renewable energy sources and identifying: current programs of this type used by utilities on the mainland, the software and hardware needed to implement such a program in Hawaii, the issues associated with integration with existing HECO enterprise systems, and how such programs should be included in future IRP plans.

The Clerk position currently serves both the CEP and Pricing Divisions. With the expansion of the CIDLC program to include a new SBDLC element, and additional effort in time-of-use rates and rate design identified in HECO T-10, pages 9-11, the Clerk's work effort will be also shifted more towards the demand response programs (e.g., time-of-use, inclined block rates, CIDLC, and dynamic pricing) than is currently represented in the labor input sheet for this position. Therefore, both the RDLC Program Manager and the Clerk should remain in base rates.

HECO Base Positions

Test Year Labor Hours By DSM Program (Before Transition to Third Party Administrator)

			Energy Efficiency Programs											
	Pricing	IRP	CIEE	CINC	CICR	REWH	RNC	CIDLC	RDLC	SSP	DPP	Other	DSM Admin	Total
Position														
Director, CEP Division		371	93			93		93			8	32	1,134	1,824
CIDLC Program Manager								1,848				16		1,864
RDLC Program Manager						447	447		447	452	16	15		1,824
Load Management Engr.								912	908			4		1,824
Clerk	24		480	108	288							128	836	1,864
Total	24	371	573	108	288	540	447	2,853	1,355	452	24	195	1,970	9,200
			Total labor hours for EE pgrms=				1,956							

Reference: CA-IR-1, HECO T-10, Attachment C, pp. 9-13.

For test year purposes hours originally allocated to energy efficiency DSM programs were allocated to DSM Admin. See HECO T-10, p. 21.

CA-IR-122

Ref: HECO T-10, page 19 (CEP Analyst Position to Base Rates).

Please provide a detailed discussion and complete copies of any studies, reports, analyses, workpapers, projections and other data prepared by or for HECO to determine that the CEP Analyst position is "needed to support and perform budget analysis, regulatory reporting, and contract administration tasks for the DSM programs that remain with the utility."

HECO Response:

Please see HECO's response to CA-IR-3, HECO T-10, page 5 of 11, for the labor input sheet of the CEP Analyst once the energy efficiency DSM programs are transitioned to the third party administrator.

Currently this analyst provides support for all 11 DSM programs, including: budget analysis, regulatory and management reporting, contract administration, and rate case support tasks. Budget analysis activities involve consolidation of program budgets received from the program managers, comparison of current budgets with past budgets, submission of those budgets to upper management, tracking actual expenditures against forecast, explaining budget variances, and adjusting budgets for PUC approvals. Regulatory and management reporting include: preparing management reports on the budgets, writing portions of the annual DSM Modifications and Evaluations ("M&E") and Accomplishments and Surcharge ("A&S") Reports, and producing ad hoc management and regulatory reports as the needs arise. Contract administration tasks encompass activities such as ensuring that all documentation has been received from the selected vendor, creating purchase requisitions and purchase orders, and accumulating and tracking invoices. Finally, the analyst also participates in rate case development and support, as in the instant proceeding. No other employee in the ESD

department performs these budgeting, regulatory support, management reporting, and contract administration functions on a normal basis.

With the transition of the CIEE, CINC, CICR, REWH, RNC, ESH, RLI DSM programs to the third party administrator, the SSP, CIDLC, and RDLC would still remain with the utility. The Company also anticipates CIDLC to be expanded to include the new SBDLC program, and to introduce the DPP program once approval is received from the Commission.

The functions mentioned above will still need to continue even after the energy efficiency DSM programs transition to the third party administrator, both for programs which remain under the utility's control and management, as well as programs transitioned to the third party administrator. This position will also serve as a liaison with the third party administrator to provide management and reporting support for those programs transitioned as well as any new DSM programs which the third party administrator will implement in the future. Therefore, this position should be considered a base, rather than an incremental position.

CA-IR-123

Ref: HECO T-10, page 28; lines 12-24 (SBDLC Proposal).

Please provide a complete copy of the proposal received and provide the calculations indicating how "HECO has used the second vendor proposal as the basis for the Company's estimates for SBDLC base non-labor expenses," stating all assumptions made in this process.

HECO Response:

Please see page 2 for the development of the basis for HECO's test year estimate of third party SBDLC costs shown in HECO-1019. The third party SBDLC costs are based on the Honeywell Utility Solutions proposal, dated April 30, 2008, made in response to HECO's April 2008 RFP.

A complete copy of the April 30, 2008 Honeywell Utility Solutions proposal is also provided as Attachment 1. (Honeywell Utility Solutions's proposal is confidential and will be provided after a Protective Order is issued in this proceeding.)

Confidential Information Deleted Pursuant To Protective Order, Filed on _____.

HECO Small Business Direct Load Control Program

2009 Test Year

		Per Month	Annual	Cost type*	Base	
1	Administration **			Base		(see below)
2	Sales and Enrollment			Incremental		
3	Equipment Installation (overhead)			Incremental		
4	Tracking and Reporting			Base		
5	Equipment Pricing			Incremental		
6	Per vendor of equipment					
7	Additional Contractor Fee Schedule					
8	Equipment Installation					
9	Water Heater			Incremental		
10	Air Conditioning Unit			Incremental		
11	After-Hours Support Fee					
12	Installation or service Call			Incremental		
13	(Hourly rate)					
14	Total Base Costs					

Source: Section 5.0 of Honeywell's 4/30/08 Proposal

* The classification of costs as base or incremental follows the RDLC program classification, upon which the SBDLC program is based. Equipment, equipment installation, after-hours support, are incremental costs. Administration and tracking/reporting are base costs. A significant difference with the RDLC program is that the SBDLC program requires substantial one-on-one customer sales, which is a variable cost. Sales and enrollment costs are a function of the customer adoption of this program, which is unknown. Due to the uncertainty and significant magnitude of this cost, HECO is proposing that this cost be incremental and recovered through the DSM surcharge mechanism.

** Honeywell's proposal does not categorize costs in the same manner as the CIDLC program costs. However, from the description of cost categories included in the proposal, it appears that Honeywell's administration category encompasses fixed costs related to advertising/marketing and materials/miscellaneous, and includes: program management, day-to-day oversight, fixed labor costs for call center and after-hours infrastructure, use of tracking and reporting systems, provision of status reports/information, integration with HECO's enterprise systems, documentation for audit and evaluations, insurance and other administrative requirements (see pages 29-30 of the 4/30/08 proposal).

HECO used an allocation of 20% advertising/marketing (for call center/after hours infrastructure) and 80% materials/miscellaneous (for all other administrative activities).

Administration:		
Advertising/Marketing	20%	
Materials/Miscellaneous	80%	

Confidential Information Deleted
Pursuant To Protective Order, Filed on
_____.

Attachment 1 is confidential and will be provided

after a Protective Order is issued in this proceeding.

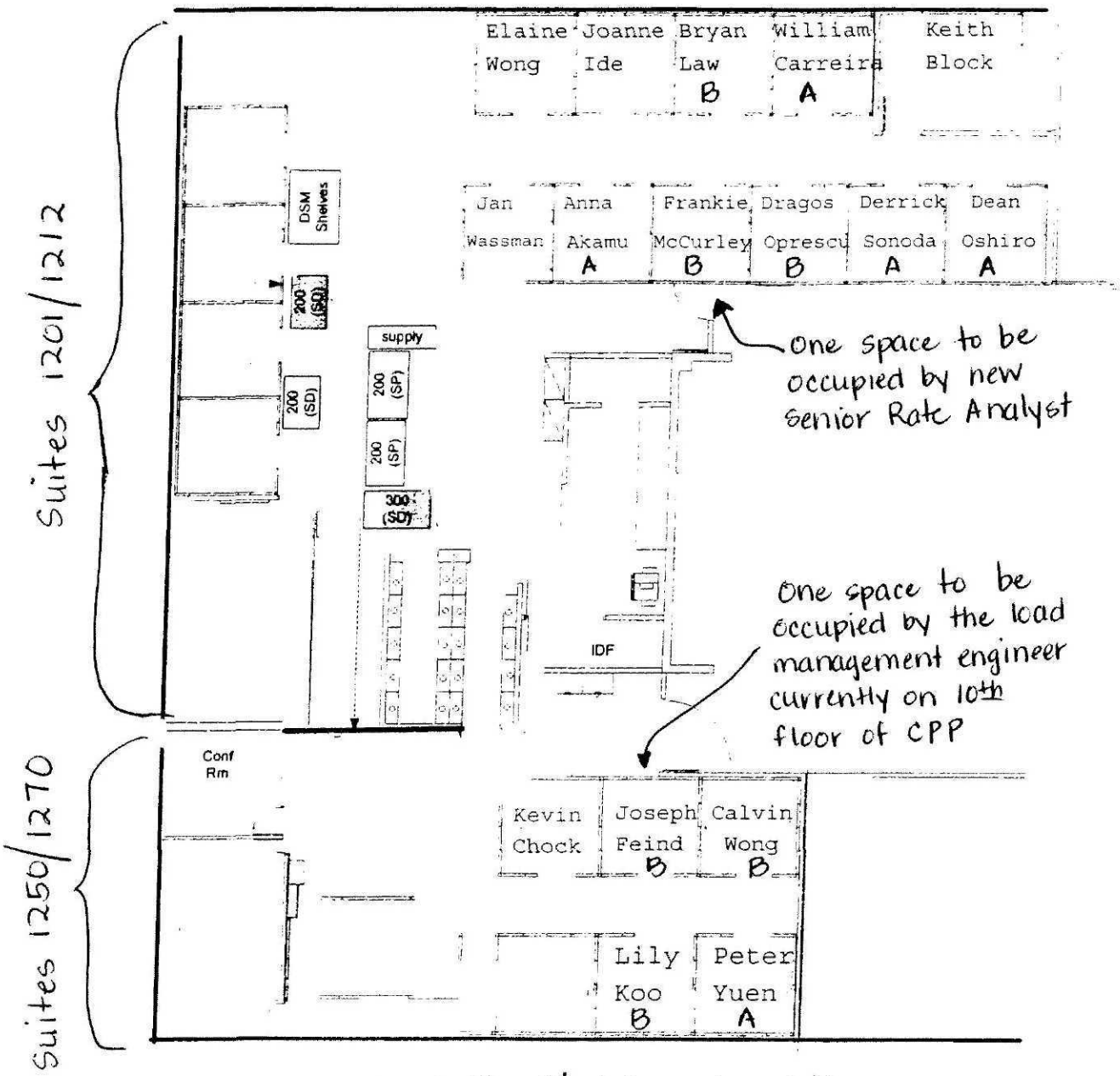
CA-IR-124

Ref: HECO T-10, page 20; (Reclassified DSM Office Space).
Please provide a floor plan diagram of the office space proposed to be reclassified into base rates when DSM administration is moved to third party administration, indicating the specific employees presently housed in such space and marked up to indicate specific planned utility position utilization of such space in 2009 (who will be moved in to perform what functions in January 2009?).

HECO Response:

See attached floor plan. The lease for majority of the office space, Central Pacific Plaza, 225 South King Street, consists of suites 1201/1212, expired on August 31, 2008. A new lease was entered into for the period September 1, 2008 to August 31, 2013. The lease for suites 1250/1270 expires on January 31, 2010. The suites 1201/1212 lease had to be extended because the final transition date to the third party administrator has not yet been determined and HECO's employees and contract hires continue to administer and implement the DSM programs. After the transition, there will still be five HECO employees who will be migrating from the DSM programs to other positions and office spaces for these employees will still be required. Additional spaces will be used for the new Senior Rate Analyst and the relocation of the load management engineer from the 10th floor to the 12th floor. Although there will be four workstations that will be vacant after the transition to the third party administrator, it will only be a portion of the office lease and leased space cannot be returned to the landlord piecemeal. These vacant workstations would allow for future overflow from other departments such as for future expansion of the Pricing Division, or possible use by the third party contractor to implement the Small Business Direct Load Control Program element.

Central Pacific Plaza 12th Floor



EE DSM staff affected by transition:

HECO employees	=	5	(A)
Contract staff	=	6	(B)
Total		11	

CA-IR-125

Ref: HECO T-10, pages 54 and 55 (Energy Efficiency Advertising).

a. Please explain all reasons why "[t]he Company still has a responsibility to continue to aggressively increase customer awareness of energy efficiency and conservation measures" after DSM administration is transferred and any continuation of RCEA program funding is separately considered under third party administration.
b. In addition, provide all available information to conclude that historical base rate allowanced spending for energy efficiency advertising by HECO has been inadequate and should be increased.

HECO Response:

a. The Company's responsibility for aggressively communicating with our customers about energy efficiency and related issues does not end with the transfer of responsibility for the DSM energy efficiency programs to a third party. As stated in the referenced testimony, encouraging customers to make energy efficiency part of their everyday lives serves many purposes. When customers are aware of ways to reduce their usage, they are more likely to adopt energy efficient practices and technologies, which in turn drives reductions in demand. If customers receive energy conservation and efficiency information via multiple sources, including the electric utility, it helps increase credibility, reinforces the messages and increases penetration. This is especially so because the utility already has an established mass marketing campaign with built-up credibility.

In addition, as a locally owned and operated company with over 100 years of history, Hawaiian Electric is a well recognized brand name and respected as a valuable and trustworthy source of energy information. Messages that come from commercial suppliers and/or unknown third parties, no matter how well intended or correct, may receive less recognition and less resulting action. Indeed, when customers have questions about their

bills and seek advice on managing them, they will look to the utility no matter who has titular responsibility for energy efficiency programs. There is a customer expectation that a responsible utility will actively promote energy efficiency and conservation.

This is especially the case because electricity prices have risen substantially in the last year as the price of fuel has increased. Customers have an expectation that the Company will provide information and choices that will help them manage these rising costs. The Company has a responsibility to meet this expectation. The customer awareness efforts discussed here focus on energy efficiency and conservation measures that can provide exactly the kinds of information and choices customers are looking for. Indeed, the national recognition of the effectiveness of Hawaiian Electric's energy efficiency, solar water heating and other popular programs is testimony to the respect the utility still maintains in the public's perception.

The utility is also held accountable, directly or indirectly, for achieving energy efficiency results. And reductions in demand are particularly important since the Company continues to operate under tight generating reserve margins. The Company is looked to as having the ultimate responsibility for reliable service.

Energy efficiency also contributes to achieving the Company's required goals under the Renewable Portfolio Standards law, as well as those promulgated by the State of Hawaii Global Warming Solutions Act of 2007. Substantial energy efficiency results will also play a major role in meeting the ambitious and important goals of the Hawaii Clean Energy Initiative. If the utility is obligated to meet these requirements, it is reasonable that it should be allowed to recover resources expended to help it meet those obligations.

As a public utility, the Company also has an obligation to actively support State policy efforts. As discussed in the referenced testimony, these educational efforts directly support the State's energy policy by increasing awareness of the importance of energy conservation from the standpoint of consumer savings and environmental benefits. The messages reinforce the importance of conservation by promoting specific action steps customers can take to achieve conservation. Under the Hawaii Clean Energy Initiative, the expectation for the Company to take an active role in promoting these messages will only increase. Further, it should be noted that energy conservation is recognized as the most effective way to reduce greenhouse gas emissions and thus help achieve the requirements of the State's greenhouse gas law.

b. Meeting the expectations of our customers as described above requires a program of sustained, ongoing, and consistent mass market messaging. Since 1996, HECO's promotion of energy efficiency and awareness through paid advertising has been almost completely by the energy awareness and conservation messages developed and funded in support of the Company's DSM programs, including the Residential Customer Energy Awareness program. Thus, because such supplemental resources for energy efficiency advertising have long been in existence, isolating the historical ineffectiveness of any remaining base rate funding by itself is extremely difficult.

The $174,000 of funding currently in base rates represents only a small fraction of the current total amount spent on such advertising ($2,411,000 spent in 2007 for customer informational and RCEA advertising plus $1,106,000 for other DSM marketing costs). Much of the advertising funding in base rates is already committed for programs

such as the required Rule 16 notification about customer rights to submit damage claims, metallic balloon outage prevention and other safety education, the Arbor Day "Right Tree, Right Place" program, and the Sun Power for Schools program. In order to provide the kind of information about energy efficiency that our customers expect and that is needed to help achieve the results for which the Company will ultimately bear some accountability, the Company needs to produce and deliver mass market messages with broader reach and higher frequency.

The current level of base rate funding will not support any sustained mass market campaign, especially as advertising rates continue to climb. In the last two years, due in large part to the shrinking supply of commercial time availability, the cost for television has increased significantly. Two years ago, $100,000 bought two four-week television schedules each reaching at least 98% of all Adults 25-64 at least 4.5 times. That same $100,000 today buys only 50% of that air time. And these costs do not even include the costs to produce the TV spot. Radio air time, like Television, has incurred double digit increases.

Finally, as mass market vehicles proliferate (internet and on-line advertising being added to the traditional print vehicles --general circulation, community and specialty publications, television (broadcast and cable) and radio, the extreme clutter of communications venues in the market place and segmentation of the audience require spending more, not less, on mass market communications to reach all parts of the customer base.

CA-IR-126

Ref: T-10, page 57, HECO-1027 (Staffing Counts).
According to the testimony,"The test year employee count is 48, which is 3 more than the count as of March 31, 2008." Please provide the following:

a. Please provide a monthly breakdown of actual staffing in each major area shown on HECO-1027, for each month of 2007 and 2008, to-date.
b. Explain whether full employment (no vacancies) are assumed for the entire proposed staffing at 48 employees or state the specific vacancy assumptions that are used in the Company's rate filing.
c. Provide the amounts of any temporary labor or contractor charges that were incurred by HECO to meet work requirement caused by any vacant Customer Solutions Area positions in 2006, 2007 or 2008, to-date.

HECO Response:

a. See Page 2 for a monthly breakdown of actual Customer Solutions staffing. As indicated per HECO T-10, page 9 of 79 and HECO-1006 exhibit, it is HECO's intention to add an existing HECO regular incremental DSM employee position into base rates. This position is included in the 2009 TY employee counts per Page 2 [refer to Note (B)] but is not reflected in the actual staffing counts since this position is still being treated as an incremental DSM position.

b. Full employment was assumed for the entire proposed staffing at 48 employees. A HECO employee currently in the Systems Planning Department accepted the Senior Rate Analyst position on August 26, 2008. In addition, a regular HECO incremental employee will be moved into base rates per HECO T-10, pages 19-20.

c. Refer to response to CA-IR-127 (c), Docket No. 2006-0386 for consultant and temporary hire resources that were needed for the Pricing Division in 2006 and 2007. Other than the 2007 items noted, no further 2007 expenditures or 2008 expenditures thru August 27, 2008 were incurred by the Pricing Division.

CA-IR-126 (a)
9/3/2008

Customer Solutions Employee Count

Actual Staffing - Base Employees (A)

(Excludes Incremental DSM Program Employee Positions)

		ACTUAL STAFFING (A)																		
	2009 TY	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08
Cust. Technology Applications Division	9	8	8	8	9	9	8	8	9	9	9	9	9	9	9	9	9	9	9	9
Forecasts & Research Division	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Marketing Services Division	12	12	12	12	12	12	11	11	11	12	12	12	11	11	11	11	11	11	11	11
Customer Solutions - VP Office	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Energy Services	15	12	12	12	12	12	12	12	12	12	13	13	12	12	12	13	13	13	13	13
--Admin.	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
--Pricing	6	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5
--Cust. Eff Prgm (B)	6	5	5	5	5	5	5	5	5	5	5	5	4	4	4	5	5	5	5	5
TOTAL CUSSOL	48	44	44	44	45	45	43	43	44	45	46	46	44	44	44	45	45	45	45	45

(A) Source: DARS Report 636-2: Employee Count by Department/Division within VP Function (Excludes Incremental DSM Positions)

(B) In the HECO TY 09 Rate Case, a rate case adjustment was proposed to move an incremental DSM position to base.
Refer to HECO T-10, page 9 of 79 and to HECO-1006 exhibit. Note that this incremental DSM position was staffed in 2007 and 2008
This position is included in the 2009 TY counts but not reflected in the actual staffing counts since it is still being treated as an incremental DSM position.

CA-IR-127

Ref: HECO-WP-1601, page 2 (Payroll Tax Distribution).

Please provide the following:

a. Copies of underlying reports and documentation supportive of the "Allocation of Payroll Taxes Based on Labor Dollars Charged."

b. A comparative analysis of actual total payroll distribution percentages between Capital, Operations and Other, by NARUC Account, for calendar years 2006 and 2007.

c. An explanation of significant changes in the payroll distribution between years, as set forth in your response to part (b) of this information request.

HECO Response:

a. See attached page 2-3 of this response. Note that Other Payroll Tax is calculated as follows:

($ Thousands)	Total	Adjustment	Adjusted	
Total Payroll tax	10,142	(32)	10,110	CA-IR-127, page 2
Less: Capital	(1,374)		(1,374)	CA-IR-127, page 2
Less: Operations	(7,364)	32	(7,332)	CA-IR-127, page 3
Other Payroll tax	1,404	-	1,404	

The adjustment of $32 relates to the removal of incremental DSM program costs, which is explained at HECO T-10, page 8.

b. See CA-IR-127, page 4 of this response.

c. There are no significant differences.

6/5/2008 ***EE423 - PR Taxes in O&M** 11:39AM

_EE	Exp Element	Acct Grp	Acct Grp Descr	FY09
423	Payroll Taxes	G10	Operating Revenues	$345.20
		G20	Fuel & Purch Pwr	$0.00
		G30	O&M	$0.00
		G40	Oth Income State...	$6,269,457.02
		G50	Capital	$1,373,985.92
		G60	Billable	$423,993.12
		G70	Deferred Debit	$66,374.17
		G80	Charges to Clearing	$2,007,795.06
				$10,141,950.49

6/5/2008 *NARUC 4081 - PR Taxes in O&M 11:40AM

_EE	Exp Element	Acct Grp	Acct Grp Descr	FY09
_	_	G40	Oth Income Statement	$0.00
301	Vehicles	G40	Oth Income Statement	$34,736.77
401	Stores	G40	Oth Income Statement	$37,711.29
404	Energy Delivery	G40	Oth Income Statement	$438,507.29
405	Power Supply	G40	Oth Income Statement	$303,022.25
423	Payroll Taxes	G40	Oth Income Statement	$6,264,078.27
451	IS Exp-Production	G40	Oth Income Statement	$285,845.75
				$7,363,901.62

Allocation of Payroll Taxes Based on Labor Dollars Charged:

	2005		2006		2007	
Capital	1,086	15%	1,146	15%	1,166	14%
Operations	5,240	70%	5,645	71%	5,878	72%
Others	1,127	15%	1,108	14%	1,109	14%
Total Payroll Taxes	7,453	100%	7,899	100%	8,153	100%

CA-IR-128

Ref: HECO-1601 (Revenue Taxes).

Please provide calculations of the proposed test year PSC tax, PUC fee and Franchise Royalty revenue tax items at present, current and proposed rates, since supporting calculations of such amounts are not set forth in WP-1601.

HECO Response:

The requested information is provided on the attached pages 2 and 3 of this response.

HAWAIIAN ELECTRIC COMPANY, INC.
SUPPORT FOR PUBLIC SERVICE COMPANY (PSC) TAX,
PUBLIC UTILITY COMMISSION (PUC) FEES AND FRANCHISE ROYALTY TAXES

PRESENT RATES
TEST YEAR 2009
(in 000s)

	BASE CASE		INTERIM INCREASE		CIP CT-1 STEP		
PSC Tax Calculation	**At Present Rates**	**At Proposed Rates**	**At Present Rates**	**At Proposed Rates**	**At Present Rates**	**At Proposed Rates**	**References**
Electric Sales Revenues	1,785,019	1,947,368	1,785,019	1,935,254	1,785,019	1,959,179	NOTE 1
Other Operating Revenues	4,419	4,596	4,419	4,585	4,419	4,607	NOTE 1
Less: Bad Debt Deduction	(1,283)	(1,400)	(1,283)	(1,391)	(1,283)	(1,408)	NOTE 2
PSC Tax Base	1,788,155	1,950,564	1,788,155	1,938,448	1,788,155	1,962,378	
PSC Tax Rate	5.885%	5.885%	5.885%	5.885%	5.885%	5.885%	HECO-WP-1601
PSC Taxes	105,233	114,791	105,233	114,078	105,233	115,486	HECO-1601

PUC Fee Calculation	**At Present Rates**	**At Proposed Rates**	**At Present Rates**	**At Proposed Rates**	**At Present Rates**	**At Proposed Rates**	**References**
Electric Sales Revenues	1,785,019	1,947,368	1,785,019	1,935,254	1,785,019	1,959,179	NOTE 1
Other Operating Revenues	4,419	4,596	4,419	4,585	4,419	4,607	NOTE 1
Less: Bad Debt Deduction	(1,283)	(1,400)	(1,283)	(1,391)	(1,283)	(1,408)	NOTE 2
PUC Fees Base	1,788,155	1,950,564	1,788,155	1,938,448	1,788,155	1,962,378	
PUC Fees Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	HECO-WP-1601
PUC Fees	8,941	9,753	8,941	9,692	8,941	9,812	HECO-1601

Franchise Royalty Taxes	**At Present Rates**	**At Proposed Rates**	**At Present Rates**	**At Proposed Rates**	**At Present Rates**	**At Proposed Rates**	**References**
Electric Sales Revenue	1,785,019	1,947,368	1,785,019	1,935,254	1,785,019	1,959,179	NOTE 1
Less: Bad Debt Deduction	(1,283)	(1,400)	(1,283)	(1,391)	(1,283)	(1,408)	NOTE 2
Franchise Royalty Tax Base	1,783,736	1,945,968	1,783,736	1,933,863	1,783,736	1,957,771	
Franchise Royalty Tax Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	HECO-WP-1601
Franchise Royalty Taxes	44,593	48,649	44,593	48,346	44,593	48,944	HECO-1601
Total Revenue Taxes	158,767	173,193	158,767	172,116	158,767	174,242	HECO-1601

NOTE 1: The reference for the base case is HECO-2306, the interim increase is HECO-2305, the CIP CT-1 STEP is HECO-2304.
NOTE 2: The references for the Bad Debt Deduction are as follows:

	BASE CASE		INTERIM INCREASE		CIP CT-1 STEP	
	Amt	Ref.	Amt	Ref.	Amt	Ref.
At Presents Rates	(1,283)	HECO-WP-2306, P. 11-12	(1,283)	HECO-WP-2305, P. 11-12	(1,283)	HECO-WP-2304, P. 11-12
Increase in Bad Debt Expense	(117)	HECO-WP-2306, P. 8	(108)	HECO-WP-2305, P. 8	(125)	HECO-WP-2304, P. 8
At Proposed Rates	(1,400)		(1,391)		(1,408)	

HAWAIIAN ELECTRIC COMPANY, INC.
SUPPORT FOR PUBLIC SERVICE COMPANY (PSC) TAX,
PUBLIC UTILITY COMMISSION (PUC) FEES AND FRANCHISE ROYALTY TAXES

CURRENT EFFECTIVE RATES
TEST YEAR 2009
(in 000s)

	BASE CASE		INTERIM INCREASE		CIP CT-1 STEP		
PSC Tax Calculation	**At Current Effective Rates**	**At Proposed Rates**	**At Current Effective**	**At Proposed Rates**	**At Current Effective**	**At Proposed Rates**	**References**
Electric Sales Revenues	1,862,288	1,947,368	1,862,288	1,935,254	1,862,288	1,959,179	NOTE 1
Other Operating Revenues	4,487	4,596	4,487	4,585	4,487	4,607	NOTE 1
Less: Bad Debt Deduction	(1,339)	(1,400)	(1,339)	(1,391)	(1,339)	(1,409)	NOTE 2
PSC Tax Base	1,865,436	1,950,564	1,865,436	1,938,448	1,865,436	1,962,377	
PSC Tax Rate	5.885%	5.885%	5.885%	5.885%	5.885%	5.885%	HECO-WP-1601
PSC Taxes	109,781	114,791	109,781	114,078	109,781	115,486	HECO-1601

PUC Fee Calculation	**At Current Effective Rates**	**At Proposed Rates**	**At Current Effective**	**At Proposed Rates**	**At Current Effective**	**At Proposed Rates**	**References**
Electric Sales Revenues	1,862,288	1,947,368	1,862,288	1,935,254	1,862,288	1,959,179	NOTE 1
Other Operating Revenues	4,487	4,596	4,487	4,585	4,487	4,607	NOTE 1
Less: Bad Debt Deduction	(1,339)	(1,400)	(1,339)	(1,391)	(1,339)	(1,409)	NOTE 2
PUC Fees Base	1,865,436	1,950,564	1,865,436	1,938,448	1,865,436	1,962,377	
PUC Fees Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	HECO-WP-1601
PUC Fees	9,327	9,753	9,327	9,692	9,327	9,812	HECO-1601

Franchise Royalty Taxes	**At Current Effective Rates**	**At Proposed Rates**	**At Current Effective**	**At Proposed Rates**	**At Current Effective**	**At Proposed Rates**	**References**
Electric Sales Revenue	1,862,288	1,947,368	1,862,288	1,935,254	1,862,288	1,959,179	NOTE 1
Less: Bad Debt Deduction	(1,339)	(1,400)	(1,339)	(1,391)	(1,339)	(1,409)	NOTE 2
Franchise Royalty Tax Base	1,860,949	1,945,968	1,860,949	1,933,863	1,860,949	1,957,770	
Franchise Royalty Tax Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	HECO-WP-1601
Franchise Royalty Taxes	46,524	48,649	46,524	48,346	46,524	48,944	HECO-1601
Total Revenue Taxes	165,632	173,193	165,632	172,116	165,632	174,242	HECO-1601

NOTE 1: The reference for the base case is HECO-2303, the interim increase is HECO-2302, the CIP CT-1 STEP is HECO-2301.
NOTE 2: The references for the Bad Debt Deduction are as follows:

	BASE CASE		INTERIM INCREASE		CIP CT-1 STEP	
	Amt.	Ref.	Amt.	Ref.	Amt.	Ref.
At Current Effective Rates	(1,339)	HECO-WP-2303, P. 11-12	(1,339)	HECO-WP-2302, P. 11-12	(1,339)	HECO-WP-2301, P. 11-12
Increase in Bad Debt Expense	(61)	HECO-WP-2303, P. 8	(52)	HECO-WP-2302, P. 8	(70)	HECO-WP-2301, P. 8
At Proposed Rates	(1,400)		(1,391)		(1,409)	

CA-IR-129

Ref: HECO-WP-1602, page 8 (DPAD Calculation).

a. Please state whether the calculation of DPAD proposed for ratemaking conforms completely to the methodology employed by HECO to calculate DPAD in its Federal tax return most recently filed.

b. If any differences exist between ratemaking and tax return methodologies, please describe and quantify the impact of each such difference and explain why the ratemaking method is appropriate.

HECO Response:

a. There are 3 differences between the 2006 tax return DPAD and the rate case DPAD calculations.

1. Interest Allocation

On the consolidated tax return, HECO was required to reduce DPAD by its share of the parent company's (HEI) interest expense. HECO's portion of HEI's interest was $14,074,475.54. HEI interest is not included in the ratemaking calculation since the calculation is made on a stand alone basis for ratemaking purposes.

2. State ITC addition

In the 2006 tax return and the last rate case filing (HECO Docket Nos. 2006-0386), the state ITC was incorrectly calculated on the basis of the unadjusted production tax asset additions. In calculating the base for the state ITC, the production tax additions should have been multiplied by the factor representing the average outside services and materials percentage. The discovery of the error was made in the process of preparing HECO's 2007 tax return. The correction of this error in HECO's 2007 rate case filing would have resulted in a decrease in the DPAD deduction of $14,000 and a

corresponding decrease in income tax benefit of $6,000. Due to the immateriality of this impact, the Company will not adjust the revenue requirement calculation for the test year 2007 rate case.

($ Thousands)	* Motion to Adjust Interim Increase filed May 21, 2008		Adjusted for State ITC base	Difference
DPAD	1,647		1,633	14
Tax Effect	577	*	571	6

In the current docket, HECO reflected the correct base upon which state ITC is calculated for production tax assets. The state ITC on production tax assets is $3,723,000. See Note 4 on HECO-WP-1602, page 4.

3. Expanded Affiliated Group (EAG) limitation

On the consolidated tax return, the DPAD is computed at HECO's consolidated utility group level (HECO, HELCO and MECO), not on a stand alone basis. If an includable affiliate generates negative qualified production activities income (QPAI), the consolidated DPAD is calculated on the net consolidated QPAI, thus producing an EAG limitation. In this situation, the limited consolidated DPAD is allocated based on the ratio of each member's positive QPAI to total positive QPAI of the EAG. If a member has negative QPAI, no amount of DPAD is allocated to that member. In 2006, HELCO had negative QPAI. As a result, HECO's DPAD was reduced by the EAG limitation of $176,283.

For ratemaking purposes, DPAD is computed on a stand alone basis and the EAG limitation does not apply.

4. In the 2007 tax return that will be filed shortly, we changed the DPAD calculation to

add tax adjustments for pension and OPEB. For the test year 2009 rate case, the Company will adjust the DPAD calculation at the next opportunity.

b. See response to a above.

CA-IR-130

Ref: HECO-WP-1604 (Development & Amortization of State Capital Goods Excise Tax Credit).

Please provide a schedule showing the following actual data for all vintages through 2007 and estimated for 2008 and 2009:

a. Capital expenditures generating the state capital goods excise tax credit;

b. State capital goods excise tax credits generated in each year applying the four percent rate to the data provided in response to part (a) of this information request, indicating any adjustments made; and

c. Calculations or bases for the amortization period chosen for each vintage.

HECO Response:

a. For the requested information, see pages 8 through 45 of the response to CA-IR-88, Docket No. 04-0113 for 2003 and prior years. See attached pages 2 through 12 of this response for 2004 – 2009. Note that the detail of the state ITC additions by account number (pages 3, 4, 6, 8 and 10 of the attached) includes the costs for outside services and materials only.

b. See response to part a.

c. The Company adopted the Federal ITC amortization period of 30 years, which was based on the depreciable life of the associated asset. The amortization schedules were provided at HECO-WP-1604, pages 1 through 3.

HAWAIIAN ELECTRIC CO., INC.
State ITC - Summary 2004 - FINAL

Total Unadjusted	100,641,982.16
Deduct: Record Type M - 201 and 223 Expense Elements	(4,147,634.84)
Deduct: Stores On-Cost on Record Type S - 201 and 505, and Record Type W - 201	(1,087,950.91)
Deduct: Exp Elements 5XX - Others	(31,750.86)
Deduct: Real Property Items	(6,707,849.94)
Add: Software Purchases	1,346,859.52
Add: Ellipse relicensing cost	401,039.00
Add: nonutility assets	-
Add: DSM assets	10,569.56
Adjusted Base for ITC Calculation	90,425,263.69
% Credit Applied	4.0%
Total State ITC	3,617,010.55
Less: recapture	(969.00)
Net State ITC	3,616,041.55

HAWAIIAN ELECTRIC CO., INC.
STATE ITC
2004

COMPANY_ID	MaxOfUTILITY_ACCOUNT_ID	SumOfSumOfAMOUNT	
	3110 TOTAL	4,478,817.50	RP
	3111 TOTAL	1,161,872.01	
	3112 TOTAL	484,473.92	
	3120 TOTAL	9,167,099.10	
	3121 TOTAL	3,023,247.49	
	3140 TOTAL	4,606,920.46	
	3150 TOTAL	125,581.20	
	3160 TOTAL	1,590,754.18	
	3165 TOTAL	39,824.09	
	3503 TOTAL	15,863.00	RP
	3523 TOTAL	293,093.91	RP
	3530 TOTAL	3,132,393.76	
	3550 TOTAL	2,560,106.00	
	3560 TOTAL	874,757.28	
	3570 TOTAL	195,531.74	
	3580 TOTAL	74,836.91	
	3602 TOTAL	33,860.00	RP
	3610 TOTAL	852,462.90	RP
	3620 TOTAL	6,653,843.06	
	3640 TOTAL	1,193,292.03	
	3650 TOTAL	2,489,398.32	
	3660 TOTAL	122,280.10	
	3670 TOTAL	4,220,100.97	
	3680 TOTAL	942,056.12	

HAWAIIAN ELECTRIC CO., INC.
STATE ITC
2004

COMPANY_ID	MaxOfUTILITY_ACCOUNT_ID	SumOfSumOfAMOUNT	
	3691 TOTAL	215,501.02	
	3692 TOTAL	9,979,714.52	
	3700 TOTAL	581,842.93	
	3730 TOTAL	152.00	
	3900 TOTAL	1,199,331.46	RP
	3911 TOTAL	1,365,191.15	
	3913 TOTAL	55,958.96	
	3915 TOTAL	177,939.19	
	3916 TOTAL	100,703.68	
	3920 TOTAL	297,134.95	
	3941 TOTAL	1,020.41	
	3942 TOTAL	1,963,336.12	
	3970 TOTAL	34,707,828.48	
	3980 TOTAL	1,656,250.85	
	3985 TOTAL	7,610.39	
	TOTAL	100,641,982.16	
	Less: Real Property (RP)	(6,873,428.77)	
	Personal Prop reclass from #3900	165,578.83	
	Subtotal Real Property	(6,707,849.94)	

HAWAIIAN ELECTRIC CO., INC.
State ITC - Summary 2005 - FINAL

Total Unadjusted	72,200,070.59
Deduct: Record Type M - 201 and 223 Expense Elements	(1,803,695.36)
Deduct: Stores On-Cost on Record Type S - 201 and 505, and Record Type W - 201	(1,073,544.63)
Deduct: Exp Elements 5XX - Others	(10,631.45)
Deduct: Real Property Items	(7,490,985.49)
Add: Software Purchases	1,119,880.30
Add: nonutility assets	-
Add: DSM assets	86,738.28
Adjusted Base for ITC Calculation	63,027,832.24
% Credit Applied	4.0%
Total State ITC	2,521,113.29
Less: recapture	(1,480.00)
Net State ITC	2,519,633.29

HAWAIIAN ELECTRIC CO., INC.		
STATE ITC		
2005		
Sum of SumOfSumOfAMOUNT		
MaxOfUTILITY_ACCOUNT_ID	Total	
3110	2,138,149.15	RP
3111	343,655.20	
3112	7,381,837.61	
3120	1,942,644.22	
3121	212,815.96	
3140	2,442,230.90	
3150	371.77	
3160	282,615.34	
3420	22,890.66	
3430	67,250.11	
3503	55.00	RP
3523	34,960.41	RP
3530	383,805.82	
3550	681,213.34	
3560	4,565,073.45	
3570	109,541.38	
3580	114,731.10	
3602	53,931.18	RP
3610	43,393.73	RP
3620	6,379,729.34	
3640	867,316.06	
3650	1,706,329.58	
3660	39,066.19	
3670	9,942,237.78	
3680	854,936.25	
3691	352,288.91	
3692	13,827,756.81	
3700	679,401.04	
3730	11,417.98	
3900	5,610,546.79	RP
3911	1,081,058.64	
3913	91,729.48	
3915	41,353.89	
3920	184,783.33	
3942	1,824,092.29	
3952	1,671.46	
3970	6,634,987.26	
3980	1,248,201.18	
(blank)		
Grand Total	72,200,070.59	
Sum of Real Property (RP)	7,881,036.26	
Deduct: Personal Prop reclass from #3900	(390,050.77)	
Total Real Property	7,490,985.49	

HAWAIIAN ELECTRIC CO., INC.
State ITC - Summary 2006 - FINAL

Total Unadjusted	92,225,983.04
Deduct: Record Type M - 201, 205 and 223 Expense Elements	(3,184,700.22)
Deduct: Stores On-Cost on Record Type S - 201 and 505, and Record Type W - 201	(1,303,484.21)
Deduct: Exp Elements 5XX - Others	(436,404.40)
Deduct: Real Property Items	(9,031,865.97)
Add: nonutility assets	-
Add: DSM assets	23,141.28
Deduct: PRA Adjustment	(3,194,718.89)
Adjusted Base for ITC Calculation	75,097,950.63
% Credit Applied	4.0%
Total State ITC	3,003,918.03
Less: recapture	(3,178.00)
Net State ITC	3,000,740.03

HAWAIIAN ELECTRIC CO., INC.		
STATE ITC		
2006		
Sum of SumOfSumOfAMOUNT		
MaxOfUTILITY_ACCOUNT_ID	Total	
3110	166,227.10	RP
3111	274,348.43	
3112	8,946,335.29	
3120	936,729.46	
3121	121,888.95	
3140	1,037,457.98	
3160	31,347.64	
3430	1,522,269.51	
3440	1,730,867.40	
3450	14,571.90	
3502	69,731.68	RP
3503	17,455.00	RP
3530	1,713,040.07	
3550	1,020,574.30	
3560	2,077,890.28	
3580	17,166,996.52	
3602	285,343.30	RP
3610	9.38	RP
3620	8,292,388.37	
3640	1,356,246.00	
3650	1,662,374.93	
3660	115,533.70	
3670	3,938,523.62	
3680	874,502.19	
3691	160,257.36	
3692	8,923,378.26	
3700	1,536,268.82	
3730	16,738.19	
3900	16,088,728.13	RP
3911	1,932,468.49	
3913	19,833.73	
3915	9,706.36	
3920	82,713.08	
3942	510,701.65	
3970	8,389,783.22	
3980	909,131.15	
3985	273,621.60	
(blank)	-	
Grand Total	92,225,983.04	
Sum of Real Property	16,627,494.59	
Deduct: Personal Prop reclass from #3900	(2,981,707.41)	
Deduct: Add'l reclass from #3900 for dispatch ctr	(4,613,921.21)	
Total Real Property	9,031,865.97	

HAWAIIAN ELECTRIC CO., INC.
State ITC - Summary 2007

	Tax Return
Total Unadjusted	68,742,021.15
Deduct: Record Type M - 201, 205 and 223 Expense Elements	(3,422,971.29)
Deduct: Stores On-Cost on Record Type S - 201 and 505, and Record Type W - 201	(1,199,584.23)
Deduct: Non Vendor (EE 515 - 570)	(15,546.41)
Deduct: Real Property Items	(3,759,298.23)
Add: Personal Property in #3900	821,812.06
Add: nonutility assets	-
Add: DSM assets	10,104.18
Deduct: PRA Adjustment	(3,329,567.00)
Adjusted Base for ITC Calculation	57,846,970.23
% Credit Applied	4.0%
Total State ITC	2,313,878.81
Less: recapture	(874.00)
Net State ITC	2,313,004.81

HAWAIIAN ELECTRIC CO., INC.
STATE ITC
2007

Sum of SumOfSumOfAMOUNT		
MaxOfUTILITY_ACCOUNT_ID	Total	
3110	684,511.37	RP
3111	484,149.89	
3112	738,042.55	
3120	6,951,927.08	
3121	(10,112.63)	
3140	7,222,359.98	
3150	4,685,010.34	
3160	30,137.59	
3165	55,212.87	
3430	23,665.64	
3440	(112,937.62)	
3501	13,360.45	
3503	525.01	RP
3530	550,534.49	
3550	457,072.97	
3560	748,302.81	
3570	618,913.74	
3580	277,733.39	
3590	1,132.16	
3602	3,205.00	RP
3610	9,945.89	RP
3620	5,282,291.88	
3640	2,055,201.67	
3650	1,686,676.37	
3660	480,104.53	
3670	5,945,073.81	
3680	650,467.68	
3691	180,737.19	
3692	12,752,089.27	
3700	2,895,298.36	
3730	11,691.26	
3900	3,061,110.96	RP
3911	2,257,267.97	
3913	27,827.93	
3915	196,539.73	
3916	16,694.20	
3917	358,522.20	
3920	644,988.90	
3942	3,087,477.21	
3945	133,550.13	
3970	1,940,291.81	
3980	1,645,425.12	
(blank)		
Grand Total	68,742,021.15	

Sum of Real Property (RP) 3,759,298.23

Hawaiian Electric Company, Inc
State Investment Tax Credit

	2008	2009
Total Depr Plant Adds	102,383.1	262,248.6
5Yr Ave% O/S & Matl	0.577762	0.577762
Calc SITC Basis	59,153.1	151,517.4
% Cap Goods Excise Tax	0.04	0.04
Capital Goods Excise Credit	2,366.1	6,060.7

2008 to 2009 based on updated historical 5 year average % o/s and material

FILE: STAFF\STITC

Hawaiian Electric Company, Inc
Date: 21-Aug-08
5 Year Historical Indications

	2003	2004	2005	2006	2007	Total
O/S Matl & Srvcs	36,076.5	88,666.8	61,821.2	78,269.5	59,244.6	324,078.6
Total Depr Plant	70,566.5	143,894.9	109,475.9	131,294.0	105,689.0	560,920.3
% Cap Goods Excise Tax	0.511241	0.616191	0.564701	0.596139	0.560556	0.577762

CA-IR-131

Ref: HECO T-16, page 27, lines 5-8 (Excluded ADIT Items).

According to Mr. Okada's testimony, ADIT items excluded in the Commission's D&O 24171 were again excluded in the Company's filing. Please explain whether this treatment is any different from the items excluded in settlement of Docket No. 2006-0386 and list and quantify the effect of each such difference.

HECO Response:

ADIT items excluded in the Commission's D&O 24171 were treated consistently in Docket No. 2006-0386 and this current docket except for IRP & DSM. It was determined in Docket No. 2006-0386 that deferred taxes on IRP & DSM should be excluded from rate base. This was inadvertently included in this current docket. The correction will be made at the next opportunity. The 2009 average deferred taxes on IRP & DSM is a credit balance of $2,450 and the calculation is provided as follows:

	Reference	2008	2009	Average
Federal	HECO-WP-1605, page 1	(122)	3,663	1,771
State	HECO-WP-1605, page 3	314	1,043	679
Total		192	4,706	2,450

CA-IR-132

Ref: HECO T-16, page 28, lines 17-20 (Simplified Service Cost Method).

According to Mr. Okada's testimony, "The IRS examination team reviewed HECO's mixed service costs, and they have denied HECO's refund claims related to the SSCM change in accounting method." Please provide copies of the correspondence and other documents associated with this "review" and "denial" and explain HECO's understanding of the potential for resolution of the disputed issues.

HECO Response:

See Attachment 1 for a copy of the relevant portions of the IRS' "30 day letter", which is the taxpayer's notice of its right to appeal adjustments proposed by the IRS examination team. Attachment 1 contains confidential information and is provided subject to Protective Order.

Although the IRS denied essentially all of the refund claims related to the SSCM deduction (see Attachment 1, page 3, column (d) for the total claims disallowed), they agreed with HECO's SSCM calculation in its Notice of Proposed Adjustment (see Attachment 1, pages 5 – 34). On the other hand, the IRS presented alternative positions which questioned the validity of the SSCM deduction.

In addition, the IRS has taken the position that if the SSCM calculation is accepted in whole or in part, and a net operating loss (NOL) is generated, any NOL carry over deduction is not allowed. See Attachment 1, pages 35 – 51.

Based on the foregoing information received, HECO believes the IRS denied the SSCM claims to pass this issue up to their appeals office for final determination and disposition.

On appeal, HECO believes it should prevail on the calculation of the SSCM deduction in 2001, based on the previously settled IRS guidelines. It is not clear whether any benefit from the NOL generated in 2001 will be realized. Note that any deductions allowed in 2001 through 2004 must be recaptured in 2005 and 2006, under the regulations issued by Treasury.

Confidential Information Deleted
Pursuant To Protective Order, Filed on
_____.

CA-IR-132
DOCKET NO. 2008-0083
ATTACHMENT 1
PAGES 1-51 OF 51

Attachment 1 contains confidential information and will be provided after a Protective Order is issued in this proceeding.

Attachment 1 is voluminous and available for inspection at HECO's Regulatory Affairs Division office, Suite 1301, Central Pacific Plaza, 220 South King Street, Honolulu, Hawaii. Please contact Dean Matsuura at 543-4622 to make arrangements to inspect the document. An electronic copy of the requested information is being provided.

CA-IR-133

Ref: HECO T-22, page 2, lines 13-22, (Cost of Service Changes).

a. Aside from the agreements mentioned in testimony to present alternative distribution system classifications and to isolate production fixed/variable O&M, did HECO modify its approach to any other cost of service functionalization, classification or allocation methodologies relative to the approaches employed in the 2007 test year rate case?
b. If affirmative, please identify and describe each changed approach and reference the exhibits where such changes can be observed.

HECO Response:

a. No, HECO did not modify its approach to cost of service functionalization, classification, or allocation methodologies relative to the 2007 test year rate case. HECO also modified its cost of service study at proposed rates to reflect six rate classes instead of the eight rate classes at current effective rates, in accordance with agreements in the 2007 test year rate case to eliminate Schedule H and to propose a separate rate schedule for customers directly served from a substation. In addition, HECO combined the remaining Schedules PP and Schedule PS customers into one rate schedule (all Schedule PT customers moved to Schedule DS at proposed rates). HECO re-calculated class load factors and class allocation factors for the six rate classes at proposed rates, as shown in HECO-2211.

b. Not applicable.

CA-IR-134

Ref: HECO T-22, pages 16-17 (FERC Predominance Method).
According to the testimony, HECO did not perform a study of non fuel production O&M expenses, but instead classified such costs using the FERC predominance method that was presented by the Consumer Advocate. Does HECO believe that the FERC predominance method is a more reasonable basis for classification of non-fuel production O&M expenses than HECO's previously applied 100% demand approach, in the absence of any more specific analysis of such expenses?

HECO Response:

HECO classified non-fuel production O&M expenses using the FERC predominance method that was presented by the Consumer Advocate in the HECO 2007 test year rate case. HECO views the FERC predominance method as a reasonable substitute study method for more specific studies of fixed and variable non-fuel production O&M expenses for the HECO 2009 test year rate case. HECO may conduct other studies of fixed and variable non-fuel production O&M expenses in the future, and use such study results as the basis for classification of non-fuel production O&M expenses between demand-related expenses and energy-related expenses in a future HECO rate case.

CA-IR-135

Ref: HECO T-22, page 18; HECO-2211 page 3 (2003 Load Study).

Please state whether the 2003 HECO Class Load Study is the most current available class load information for use in development of the cost of service allocation factors being used and explain HECO's plans for updating the Class Load Study.

HECO Response:

The 2003 HECO Class Load Study is the most current available class load information. Data gathering for HECO's next class load study commenced January 1, 2008 and is expected to conclude December 31, 2008. Completion of a draft class load study report is expected in the third quarter 2009.

CA-IR-136

Ref: HECO WP-2212 (Marginal Energy Cost Study).

Please provide a complete statement of all assumptions and supportive data underlying the Company's marginal energy cost analysis, as summarized on this workpaper.

HECO Response:

The Company's Marginal Cost Study was revised only for changes in the marginal energy cost. The Marginal energy cost calculation was based on the Marginal 2009 Running Cost by time of use period, excluding variable O&M. The running cost was adjusted for variable O&M expenses, A&G loading factor, incremental cost of fuel stock, cash working capital requirements, revenue requirement for working cash and the marginal energy loss factor for transmission, secondary and primary service. HECO applied the test year fuel inventory, gross annual generation, purchased power, working cash and system losses to its 2009 marginal energy cost calculation.

See the attached electronic file for the marginal energy cost study's supportive data.

CA-IR-137

Ref: HECO T-22, page 23 (New Schedule DS – Directly Served Commercial Customers).

In its last rate case, HECO agreed to, "design a separate rate class for customers who are directly served from a dedicated substation." Please provide the following information regarding this proposal:

a. A listing of these customers and their 2007 actual MWH sales.
b. For each customer listed in your response to part (a) of this information request, state whether the substation from which the customer is served is dedicated solely to that customer.
c. Explain whether/why the HECO cost of service study has (or has not) isolated and directly assigned substation investment costs for the new Schedule DS class.
d. Provide the Company's best estimate of the gross and net plant investment that should be directly assigned to the Schedule DS customer class.

HECO Response:

a. A listing of the customers' 2007 MWH sales is shown on Attachment 1 of this response. The information is confidential and provided subject to protective order.

b. The substation for the customers listed in the response to part a above are dedicated solely to each customer.

c. HECO's cost of service study method does not assign distribution substation costs to the proposed Schedule DS class, as shown in HECO-WP-2203, page 61. The D2 allocation factor at proposed rates for Schedule DS is 0%, so it does not allocate distribution substation costs and primary line costs to Schedule DS. This is similar to the D2 allocation factor at present rates for Schedule PT (see HECO-2211, pages 1-2; the Schedule PT customers at present rates are included in the proposed Schedule DS at proposed rates). HECO has not directly assigned substation investment costs for the proposed Schedule DS because cost of service data is not available for individual substation locations.

d. HECO's estimate of gross and net plant investment assigned to Schedule DS is shown in HECO-WP-2203, pages 32-34.

Confidential Information Deleted
Pursuant To Protective Order, Filed on
_____.

Attachment 1 is confidential and will be provided

after a Protective Order is issued in this proceeding.

CA-IR-138

Ref: HECO T-22, page 23 (Commercial Customer Rate Options).

a. The referenced testimony lists the rate options that remain available for commercial customers. Please provide copies of illustrative printed materials that are used by HECO to present and explain the various rate options that are available for commercial customers.
b. If consultation with customers is also used as the primary tool to describe rate options, explain the approach taken by HECO and the analytic tools that are employed to present and explain the Company's remaining commercial rate options.

HECO Response:

a. The printed materials that are used by HECO to present rate options to customers are the existing rate sheets and the proposed rate sheets from an open rate case, such as the rate sheets in HECO-105 and HECO-106.

b. HECO account managers and representatives review the rate options with customers and discuss generally how customer energy use might be modified to take advantage of the provisions offered in the rate options. If the customer decides that a billing analysis of rate options is appropriate, the HECO account managers and representatives work with the customer and the Pricing Division to perform that analysis and present the analysis results and recommendations.

CA-IR-139

Ref: HECO T-22, pages 25 & 42 (Residential Time of Use Periods).

According to the testimony, HECO proposes to modify the Schedule TOU-R to employ only two daily use periods – with on peak from 3pm to 8pm daily. Please provide the following information:

a. Explain whether HECO considers this peak TOU period to be cost based.
b. Provide copies of, or reference to, all studies, reports, analyses, workpapers, projections and other data relied upon in your response to part (a) of this information request.
c. Describe how the estimated marginal energy costs on HECO-WP-2212 have been interpreted and applied in HECO's proposed price spread between on-peak and off peak service periods under the proposed TOU-R (as stated by HECO T-22 on page 42).
d. Explain the reasons why HECO believes it reasonable to "widen opportunities for residential customers to shift energy consumption to off-peak hours to create bill savings", particularly if the peak / off-peak pricing differentials are not entirely cost based.

<u>HECO Response:</u>

a. Yes, the proposed TOU-R on-peak period is considered to be cost-based to the extent that it includes the system peak hours for the HECO system, as shown in the HECO 2003 Class Load study.

b. The HECO 2003 Class Load study is voluminous, and was previously provided in response to CA-IR-222 in Docket No. 04-0113, the HECO 2005 test year rate case.

c. The marginal energy costs are not used to derive the proposed price spread between on-peak and off-peak rates under the proposed Schedule TOU-R.

d. The proposed TOU-R rate design, which offers more off-peak hours into which customers can shift energy consumption (8pm to 3pm the following day), will be easier for customers to use than the existing TOU-R rates that have priority peak rates and mid-peak rates in the 5pm to 9pm evening period and off-peak periods that are 9pm to 7am every day. Given the bill challenges brought on by current effective rates, the proposed TOU-R rate design gives residential customers a more flexible tool with which to manage electric bills if they are

willing to alter their lifestyle and their patterns of electricity usage. Times of use rate options are just part of the assistance that HECO provides to residential customers to manage their bills, along with energy tips (see Residential Services at heco.com) and energy efficiency options.

CA-IR-140

Ref: HECO T-22, page 42 (Schedule TOU-R).
Please describe the Company's experience to-date with residential time of use rate offerings, including a discussion of promotional efforts, customer participation rates, customer impacts (savings), billing and administrative issues (if any) and HECO's expectations regarding future customer acceptance levels after CIS limitations are removed. Provide copies of any reports, analyses, projections and other documents prepared by or for HECO to evaluate its residential TOU rate offerings.

HECO Response:

The Company's experience to-date respecting residential time-of-use rate offerings consists of operating a Residential Time-of-Use Pilot program (TOU-R Pilot) from May 12, 2003 to May 12, 2006. The TOU-R pilot consisted of testing two rate options with different rate spreads between Priority Peak hours (5pm to 9pm weekdays) and Off Peak hours (9pm to 7am the following day, daily). Both options had a Mid Peak period consisting of all hours not identified as Priority Peak or Off Peak. Each option TOU period pricing structure was a delta from the Schedule R rate Base Fuel Energy Charge and Non-Fuel Energy Charge (11.2954 ¢/kWh). The low-spread option tested a seven (7) ¢/kWh spread between Priority Peak and Off Peak hours (+4, -3). The high-spread option tested a ten (10) ¢/kWh spread between Priority Peak and Off Peak hours (+5, -5). The Mid Peak hours had a two (2) ¢/kWh premium from Schedule R base energy charge.

The TOU-R Pilot was limited to 200 participants and was offered to participants of the 2002 Residential Appliance Saturation Survey to eliminate the need for extensive pre-program sample design and allowed for concentration on behavioral survey questions focusing on how customers may alter consumption patterns. A total of 1550 invitations to participate in the TOU-R pilot were mailed resulting in a peak participation of 171 customers, representing an

11% subscription rate. The Company only marketed the TOU-R Pilot through informational brochures to the target group.

The TOU-R pilot was designed to provide the "typical" residential customer (i.e. the average residential customer profile from HECO's 1998 Class Load Study) that shifts energy (load) from the Priority Peak to Off Peak hours a bill savings. Otherwise, a "typical" residential customer would experience a bill increase. That is, the Pilot was not revenue neutral in design.

Results of HECO's TOU-R pilot program were presented in HECO-2236, HECO-2237, and HECO-2238 in Docket No. 04-0113, HECO's 2005 test year rate case. These exhibits are attached to this response.

Respecting billing issues, the Company's current billing system, ACCESS, is not capable of billing multiple time periods so a module was built in Excel to calculate the TOU-R Pilot bills. This module has primitive error checking routines which necessitates manual oversight to ensure the data input process is correct. Administratively, the amount of time to process each bill is increased in relation to a typical Schedule R bill. i.e. the bill is calculated, entered manually into ACCESS, a second informational page is produced, and the bill is sent to the customer. With the implementation of the new CIS system, the process of calculating and processing the bill will be fully automated along the lines of other rate schedules.

At this time HECO has not estimated customer acceptance levels after CIS limitations are removed

Hawaiian Electric Company, Inc.
SCHEDULE TOU-R - Residential Time-of-Use Pilot Program
Summary of Average TOU-R kWh, (Post vs. Pre) – Preliminary Results
OPTION 1 Participants

	Meter	TOU-R	Average Pre TOU-R kWh				Average Post TOU-R kWh				Difference (Post less Pre)			
ID NO.	Install date	Start date	Priority Peak	Mid-Peak	Off-Peak	Total	Priority Peak	Mid-Peak	Off-Peak	Total	Priority Peak	Mid-Peak	Off-Peak	Total
1	9/10/2003	01/12/04	51	189	194	434	61	219	192	472	10	30	-2	38
2	9/12/2003	01/21/04	22	85	68	175	30	114	88	232	8	29	20	57
3	7/22/2003	12/04/03	217	704	315	1236	201	616	274	1091	-16	-88	-41	-145
4	9/29/2003	01/08/04	82	265	233	580	73	248	380	701	11	-17	147	141
5	9/4/2003	01/06/04	74	232	213	519	54	172	175	401	-20	-60	-38	-118
6	9/12/2003	01/21/04	72	152	180	404	85	177	226	488	13	25	46	84
7	9/2/2003	01/07/04	76	204	301	581	64	205	284	553	-12	1	-17	-28
8	9/2/2003	01/12/04	73	273	170	516	62	250	240	552	-11	-23	70	36
9	9/10/2003	01/07/04	114	306	230	650	133	321	274	728	19	15	44	78
10	8/29/2003	01/19/04	76	249	240	565	56	187	238	481	-18	-62	-4	-84
11	8/8/2003	12/04/03	283	876	309	1448	287	940	284	1501	4	64	-15	53
12	10/14/2003	01/19/04	240	400	560	1200	107	547	760	1414	-133	147	200	214
13	9/8/2003	01/07/04	59	246	137	442	64	267	148	479	5	21	11	37
14	8/21/2003	01/12/04	133	499	313	945	80	314	235	629	-53	-185	-78	-316
15	9/10/2003	01/09/04	58	163	147	368	72	171	171	414	16	8	24	48
16	8/28/2003	01/12/04	55	199	204	458	64	216	274	554	9	17	70	96
17	9/8/2003	01/08/04	63	144	88	295	63	136	91	290	0	-8	3	-5
18	9/3/2003	01/09/04	97	342	290	729	119	436	392	947	22	94	102	218
19	8/23/2003	01/06/04	58	175	141	374	59	213	180	452	1	38	39	78
20	8/8/2003	01/06/04	94	188	127	389	88	186	150	424	-6	18	23	35
21	9/11/2003	01/06/04	115	341	182	638	93	288	275	656	-22	-53	93	18
22	9/10/2003	01/12/04	105	367	199	671	97	329	205	631	-8	-38	6	-40
23	9/21/2003	01/12/04	132	643	197	972	144	661	196	1001	12	18	-1	29
24	9/10/2003	01/06/04	90	243	492	825	94	283	398	775	4	40	-94	-50
25	9/12/2003	01/02/04	136	375	239	750	120	325	214	659	-16	-50	-25	-91
26	8/29/2003	01/02/04	184	428	423	1013	152	328	420	898	-12	-100	-3	-115
27	9/2/2003	01/02/04	82	180	192	454	79	207	193	479	-3	27	1	25
28	9/2/2003	01/06/04	113	418	175	706	137	406	206	749	24	-12	31	43
29	9/8/2003	12/03/03	85	296	221	602	74	202	164	440	-11	-94	-57	-162
30	9/11/2003	01/08/04	60	200	127	387	59	207	132	398	-1	7	5	11
31	7/23/2003	12/05/03	256	751	603	1610	228	699	559	1484	-30	-52	-44	-126
32	9/8/2003	01/06/04	198	620	346	1164	191	586	321	1097	-7	-35	-25	-67
33	9/4/2003	01/06/04	127	273	253	653	111	276	264	651	-16	3	11	-2
34	9/4/2003	01/09/04	155	338	324	817	224	437	429	1090	69	99	105	273
35	9/11/2003	01/09/04	177	415	219	811	217	453	230	900	40	38	11	89
36	9/11/2003	01/09/04	80	200	131	411	88	212	136	436	8	12	7	25
37	9/10/2003	01/10/04	92	318	119	529	83	292	127	502	-9	-26	8	-27
38	9/4/2003	01/10/04	104	288	195	587	123	305	235	663	19	17	40	76
39	9/4/2003	01/09/04	91	183	197	471	86	259	341	686	-5	76	144	215
40	9/19/2003	01/09/04	147	315	226	688	147	378	286	811	0	63	60	123
41	9/19/2003	01/12/04	232	425	264	921	242	437	283	962	10	12	19	41
42	9/15/2003	01/12/04	101	226	198	525	73	240	302	615	-28	14	104	90
43	9/11/2003	01/13/04	71	195	170	436	63	229	303	595	-8	34	133	159
44	7/23/2003	12/11/03	157	485	411	1053	182	510	436	1128	25	25	25	75
45	9/11/2003	01/13/04	38	119	127	285	72	193	192	457	33	74	65	172
46	9/4/2003	01/14/04	86	238	145	469	77	223	174	474	-9	-15	29	5
47	9/10/2003	01/14/04	63	297	291	671	152	511	521	1184	89	214	230	513
48	9/11/2003	01/15/04	57	171	90	318	59	201	91	351	2	30	1	33
49	8/28/2003	01/14/04	135	609	420	1164	173	782	400	1355	38	173	-20	191
50	8/28/2003	01/16/04	96	301	510	897	119	418	652	1189	23	117	142	282
51	9/8/2003	01/17/04	33	107	75	215	41	119	98	258	8	12	21	41
52	9/8/2003	01/18/04	78	157	105	340	103	228	124	455	25	71	19	115
53	9/11/2003	01/16/04	47	168	126	341	59	208	159	427	12	41	33	86

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	Meter	TOU-R	Average Pre TOU-R kWh				Average Post TOU-R kWh				Difference (Post less Pre)			
ID NO.	install date	Start date	Priority Peak	Mid-Peak	Off-Peak	Total	Priority Peak	Mid-Peak	Off-Peak	Total	Priority Peak	Mid-Peak	Off-Peak	Total
54	9/9/2003	01/15/04	112	243	156	511	116	257	202	575	4	14	46	64
55	8/28/2003	01/15/04	36	149	130	317	42	170	148	360	4	21	18	43
56	8/28/2003	01/15/04	99	338	208	645	144	628	332	1102	45	288	124	457
57	9/16/2003	01/17/04	70	174	227	471	63	172	223	458	-7	-2	-4	-13
58	9/16/2003	01/19/04	53	124	197	374	79	195	235	509	26	71	38	135
59	8/28/2003	01/20/04	128	239	201	568	122	272	229	623	-6	33	28	55
60	9/15/2003	01/20/04	139	456	376	971	164	547	440	1151	25	91	64	180
61	9/10/2003	01/21/04	138	288	225	651	155	388	302	845	17	100	77	194
62	9/17/2003	01/21/04	68	193	225	486	51	215	291	557	-17	22	66	71
63	9/19/2003	01/24/04	31	85	98	214	33	96	138	267	2	11	40	53
64	8/28/2003	01/24/04	38	180	58	276	50	198	61	307	12	16	3	31
65	9/8/2003	01/23/04	128	380	264	770	193	487	327	1007	67	107	63	237
66	7/22/2003	11/22/03	144	393	307	844	146	456	329	931	2	63	22	87
67	7/22/2003	11/22/03	210	471	380	1061	306	627	507	1440	96	156	127	379
68	8/28/2003	01/24/04	64	149	110	323	65	153	119	337	1	4	9	14
69	9/15/2003	01/23/04	44	87	109	240	42	88	129	259	-2	2	19	19
70	9/15/2003	01/24/04	40	96	52	188	44	106	62	212	4	10	10	24
71	8/7/2003	12/23/03	33	68	57	158	32	67	60	159	-1	-1	3	1
72	7/21/2003	11/24/03	80	148	142	350	84	134	185	383	4	-14	43	33
73	9/8/2003	01/26/04	82	228	298	608	119	366	379	864	37	138	81	256
74	9/11/2003	01/26/04	123	357	234	714	150	450	308	908	27	93	74	194
75	9/4/2003	01/28/04	138	397	230	765	192	533	309	1034	54	136	79	269
76	9/4/2003	01/27/04	153	452	231	836	162	454	259	875	9	2	28	39
77	7/22/2003	12/01/03	363	1128	596	2087	506	1595	933	3034	143	467	337	947
78	9/2/2003	01/30/04	212	608	298	1118	205	561	295	1061	-7	-47	-3	-57
79	9/2/2003	01/29/04	283	663	569	1515	296	681	517	1494	13	18	-52	-21
80	9/4/2003	01/08/04	127	365	146	638	136	318	213	667	9	-47	67	29
81	7/15/2003	11/28/03	168	499	411	1078	206	632	473	1311	38	133	62	233
82	9/4/2003	01/08/04	132	428	465	1025	143	497	492	1132	11	69	27	107
83	9/4/2003	01/05/04	208	486	314	1008	189	442	308	939	-19	-44	-6	-69
84	9/10/2003	01/06/04	209	596	238	1043	184	484	274	942	-25	-112	36	-101
	Total		10084	28254	21040	59378	10161	29631	23208	63000	659	2604	3204	6467
	Average		113	317	236	667	121	353	276	750	8	31	38	77
	Max		363	1128	603	2087	506	1595	933	3034	143	467	337	947
	Min		22	68	52	158	30	67	60	159	-133	-186	-94	-316

Data Based on Pilot Program Participant billing database as of July 15, 2004.
Pre TOU-R period covers July 2003 - December 2003 and is the average TOU usage for months before TOU-R begins.
Post TOU-R period covers November 2003 - July 2004 and is the average for TOU usage for months after TOU-R begins.

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	Meter	TOU-R	Average Pre TOU-R kWh				Average Post TOU-R kWh				Difference (Post less Pre)			
ID No.	Install date	Start date	Priority Peak	Mid-Peak	Off-Peak	Total	Priority Peak	Mid-Peak	Off-Peak	Total	Priority Peak	Mid-Peak	Off-Peak	Total
1	9/10/2003	01/06/04	111	405	271	787	81	311	266	658	-30	-94	-5	-129
2	7/23/2003	12/04/03	239	562	359	1160	246	566	382	1196	7	6	23	36
3	9/8/2003	01/06/04	75	404	117	596	60	232	128	420	-15	-172	11	-176
4	8/22/2003	01/19/04	199	680	453	1332	199	497	604	1300	0	-183	151	-32
5	8/6/2003	12/08/03	198	1113	353	1662	112	548	311	971	-84	-566	-42	-691
6	9/10/2003	01/07/04	149	275	264	688	119	345	309	773	-30	70	45	85
7	7/29/2003	12/04/03	196	794	543	1533	180	720	596	1496	-16	-74	53	-37
8	9/2/2003	01/06/04	166	361	249	778	239	566	412	1216	71	204	163	438
9	8/26/2003	01/09/04	56	196	158	408	63	220	198	481	7	24	42	73
10	9/11/2003	01/15/04	152	307	327	786	169	356	400	924	17	48	73	138
11	9/10/2003	01/06/04	62	143	150	355	68	159	149	376	6	16	-1	21
12	9/2/2003	01/07/04	26	167	116	309	33	137	172	342	7	-30	56	33
13	9/12/2003	01/17/04	161	370	317	848	168	387	495	1050	7	17	178	202
14	2/25/1915	03/09/04	60	201	266	527	46	175	189	410	-14	-26	-77	-117
15	9/4/2003	01/06/04	91	480	138	709	93	421	149	663	2	-59	11	-46
16	9/10/2003	01/07/04	200	605	484	1289	216	624	546	1386	16	19	62	97
17	9/10/2003	01/08/04	90	224	176	490	76	214	133	423	-14	-10	-43	-67
18	8/6/2003	12/04/03	220	578	342	1140	166	525	268	959	-54	-53	-74	-181
19	7/23/2003		242	611	380	1233	203	645	367	1215	-39	34	-13	-18
20	7/22/2003	12/04/03	185	742	386	1313	200	758	513	1471	15	16	127	158
21	9/4/2003	01/09/04	106	211	272	589	132	247	351	730	26	36	79	141
22	9/8/2003	01/07/04	96	195	155	446	101	220	179	500	5	25	24	54
23	7/16/2003	11/19/03	186	561	332	1079	265	654	526	1445	79	93	194	366
24	9/10/2003	01/17/04	60	139	112	311	81	159	134	374	21	20	22	63
25	9/8/2003	01/08/04	64	172	256	492	62	175	272	509	-2	3	16	17
26	9/3/2003	01/08/04	80	247	231	558	101	350	283	734	21	103	52	176
27	9/2/2003	01/06/04	203	716	280	1199	161	557	265	983	-42	-159	-15	-216
28	9/10/2003	01/12/04	31	131	138	300	32	154	139	325	1	23	1	25
29	8/28/2003	01/02/04	154	388	174	716	186	357	251	794	32	-31	77	78
30	9/12/2003	01/02/04	275	730	531	1536	298	727	522	1547	23	-3	-9	11
31	9/2/2003	01/02/04	106	233	151	490	107	282	267	656	1	49	116	166
32	7/22/2003	12/03/03	208	530	403	1141	262	615	634	1511	54	85	231	370
33	8/6/2003	12/03/03	228	734	652	1614	256	817	723	1796	28	83	71	182
34	8/28/2003	01/03/04	112	318	203	633	114	348	332	792	2	28	129	159
35	8/28/2003	01/02/04	112	280	240	632	135	344	302	781	23	64	62	149
36	9/2/2003	01/02/04	57	176	236	469	72	139	218	429	15	-37	-18	-40
37	9/23/2003	01/06/04	70	138	106	314	115	214	169	498	45	76	63	184
38	9/2/2003	01/06/04	65	228	157	450	67	285	194	546	2	57	37	96
39	9/4/2003	01/05/04	141	392	388	921	129	353	470	952	-12	-39	82	31
40	9/15/2003	01/08/04	126	240	302	668	96	230	295	621	-30	-10	-7	-47
41	9/10/2003	01/07/04	125	188	248	562	117	177	263	557	-8	-12	15	-5
42	9/11/2003	01/10/04	165	443	323	931	174	468	318	960	9	25	-5	29
43	9/11/2003	01/10/04	157	397	298	852	169	384	340	903	12	-3	42	51
44	9/11/2003	01/08/04	128	380	290	798	124	338	277	737	-4	-44	-13	-61
45	2/24/2004	04/08/04					114	324	522	960				
46	9/10/2003	01/12/04	78	194	90	362	28	64	25	117	-50	-130	-65	-245
47	9/19/2003	01/10/04	238	382	392	1010	182	388	446	1016	-54	6	54	6
48	9/3/2003	01/12/04	160	263	279	702	153	314	353	820	-7	51	74	118
49	9/2/2003	01/10/04	105	188	265	558	106	279	362	747	1	91	97	189
50	1/30/2004	04/08/04					66	179	137	382	66	179	137	382
51	9/10/2003	01/08/04	156	566	424	1166	143	547	356	1046	-13	-42	-68	-123
52	7/22/2003	12/10/03	172	637	531	1340	247	815	609	1671	75	178	78	331
53	3/31/2004	05/13/04					72	228	278	578				

Hawaiian Electric Company, Inc.
SCHEDULE TOU-R - Residential Time-of-Use Pilot Program
Summary of Average TOU-R kWh, (Post vs. Pre) – Preliminary Results
OPTION 2 Participants

	Meter	TOU-R	Average Pre TOU-R kWh				Average Post TOU-R kWh				Difference (Post less Pre)			
ID No.	Install date	Start date	Priority Peak	Mid-Peak	Off-Peak	Total	Priority Peak	Mid-Peak	Off-Peak	Total	Priority Peak	Mid-Peak	Off-Peak	Total
54	9/11/2003	01/15/04	76	206	226	507	106	241	308	655	30	36	82	148
55	8/28/2003	01/14/04	119	319	271	709	147	486	405	1038	28	167	134	329
56	7/18/2003	12/15/03	147	531	468	1146	131	540	495	1166	-16	9	27	20
57	8/28/2003	01/15/04	165	447	249	861	177	427	373	977	12	-20	124	116
58	9/11/2003	01/15/04	83	436	126	645	92	598	182	872	9	162	56	227
59	8/28/2003	01/16/04	96	210	358	664	93	231	336	660	-3	21	-22	-4
60	8/27/2003	01/15/04	108	333	266	707	237	582	433	1252	129	249	167	545
61	7/14/2003	11/17/03	161	547	297	1005	215	671	368	1254	54	124	71	249
62	9/16/2003	01/16/04	267	747	1147	2161	227	707	1173	2107	-40	-40	26	-54
63	7/23/2003	12/17/03	717	2296	1631	4644	705	2100	1529	4334	-12	-196	-102	-310
64	9/8/2003	01/19/04	119	289	210	618	127	329	246	702	8	40	36	84
65	7/29/2003	12/17/03	147	864	583	1594	156	465	1327	1948	9	-399	744	354
66	7/23/2003	12/17/03	260	828	765	1853	265	836	726	1828	5	8	-39	-25
67	9/8/2003	01/19/04	169	792	360	1321	177	476	924	1577	8	-316	564	256
68	8/26/2003	01/20/04	103	376	388	867	122	403	458	983	19	25	72	116
69	9/5/2003	01/20/04	112	307	214	633	157	422	286	865	45	115	72	232
70	7/29/2003	11/19/03	237	1033	365	1635	144	1368	437	1949	-93	336	72	314
71	8/28/2003	01/20/04	89	168	168	425	56	146	298	500	-33	-22	130	75
72	9/10/2003	01/20/04	170	184	181	535	199	256	228	683	29	72	47	148
73	9/17/2003	01/21/04	84	177	111	372	97	254	112	463	13	77	1	91
74	9/12/2003	01/21/04	186	492	441	1119	180	505	466	1151	-6	13	25	32
75	9/15/2003	01/21/04	56	192	138	386	75	263	182	520	17	71	46	134
76	9/10/2003	01/21/04	57	180	236	473	65	167	273	505	8	-13	37	32
77	9/15/2003	01/22/04	24	112	124	260	31	136	130	298	7	23	6	36
78	9/15/2003	01/22/04	81	257	240	578	104	311	320	735	23	54	80	157
79	9/10/2003	01/26/04	128	388	519	1035	148	423	368	939	20	35	-151	-96
80	9/17/2003	01/24/04	31	121	114	266	43	148	124	315	12	27	10	49
81	9/8/2003	12/26/03	117	182	220	519	76	151	180	407	-41	-31	-40	-112
82	9/16/2003	12/26/03	68	114	75	257	72	142	96	309	4	28	20	52
83	9/10/2003	01/29/04	124	356	261	740	108	303	237	648	-16	-52	-24	-92
84	9/4/2003	01/28/04	252	611	583	1446	193	486	582	1231	-59	-125	-31	-215
85	9/8/2003	01/27/04	66	147	266	479	94	240	324	658	28	93	58	179
86	9/2/2003	01/30/04	138	371	430	939	128	354	382	864	-10	-17	-48	-75
87	7/23/2003	11/25/03	56	136	149	339	70	166	175	410	15	30	26	71
88	9/2/2003	01/29/04	39	146	166	351	29	118	143	290	-10	-28	-23	-61
89	9/2/2003	12/30/03	82	232	176	490	114	305	247	666	32	73	71	176
90	9/4/2003	01/06/04	27	99	86	212	30	107	84	221	3	8	-2	9
91	6/1/2004	06/03/04					121	434	199	754				
92	9/9/2003	01/12/04	131	563	373	1067	140	532	316	988	9	-31	-57	-79
93	7/23/2003	12/06/03	306	842	654	1802	198	712	567	1477	-108	-130	-87	-325
	Total		12383	36662	28204	77129	13281	39244	34730	87256	307	429	4471	5207
	Average		136	402	310	848	141	417	369	928	3	5	50	58
	Max		717	2296	1631	4644	705	2100	1529	4334	129	336	744	545
	Min		24	97	75	212	28	64	26	117	-108	-566	-151	-891

Data Based on Pilot Program Participant billing database as of July 15, 2004.
Pre TOU-R period covers July 2003 - December 2003 and is the average TOU usage for months before TOU-R begins.
Post TOU-R period covers November 2003 - July 2004 and is the average for TOU usage for months after TOU-R begins.

HAWAIIAN ELECTRIC COMPANY, INC.
SCHEDULE TOU-R - RESIDENTIAL TIME-OF-USE SERVICE PILOT PROGRAM
PRELIMINARY RESULTS

	OPTION 1			OPTION 2			TOTAL		
Billing Period	No. Billed Under TOU-R	No. with Lower Bill Under TOU-R	Percent with Lower Bill Under TOU-R	No. Billed Under TOU-R	No. with Lower Bill Under TOU-R	Percent with Lower Bill Under TOU-R	No. Billed Under TOU-R	No. with Lower Bill Under TOU-R	Percent with Lower Bill Under TOU-R
Nov-03	4	0	0.0%	4	1	25.0%	8	1	12.5%
Dec-03	10	0	0.0%	21	12	57.1%	31	12	38.7%
Jan-04	83	9	10.8%	88	43	48.9%	171	52	30.4%
Feb-04	74	12	16.2%	77	46	59.7%	151	58	38.4%
Mar-04	79	10	12.7%	85	51	60.0%	164	61	37.2%
Apr-04	76	13	17.1%	83	50	60.2%	159	63	39.6%
May-04	77	12	15.6%	84	46	54.8%	161	58	36.0%
Jun-04	76	9	11.8%	85	52	61.2%	161	61	37.9%
Jul-04	41	4	9.8%	50	32	64.0%	91	36	39.6%
Total	520	69	13.3%	577	333	57.7%	1,097	402	36.6%
Average	58	8	13.8%	64	37	57.8%	122	45	36.9%

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HAWAIIAN ELECTRIC COMPANY, INC.
SCHEDULE TOU-R - RESIDENTIAL TIME-OF-USE SERVICE PILOT PROGRAM
PRELIMINARY RESULTS

	OPTION 1 - Customer Savings			OPTION 2 - Customer Savings		
Billing Period	Average ($/month)	Maximum ($/month)	Minimum ($.month)	Average ($/month)	Maximum ($/month)	Minimum ($.month)
Nov-03	$0.00	$0.00	$0.00	$0.35	$0.35	$0.35
Dec-03	$0.00	$0.00	$0.00	$7.40	$40.74	$0.43
Jan-04	$2.53	$13.34	$0.15	$6.09	$44.37	$0.67
Feb-04	$2.17	$9.36	$0.15	$6.91	$40.62	$0.51
Mar-04	$1.88	$5.21	$0.36	$5.92	$42.95	$0.31
Apr-04	$2.12	$8.56	$0.24	$6.39	$91.10	$0.35
May-04	$2.03	$6.83	$0.29	$6.21	$39.05	$0.36
Jun-04	$2.32	$5.36	$0.28	$6.19	$38.98	$0.23
Jul-04	$3.25	$8.91	$0.13	$4.62	$19.37	$0.15
Total	$16.30	$57.57	$3.53	$50.08	$357.53	$7.14
Average	$2.00	$6.00	$3.00	$6.00	$40.00	$6.67

Hawaiian Electric Company, Inc.
DOCKET NO. 04-0113, TEST-YEAR 2005
SCHEDULE TOU-R - RESIDENTIAL TIME-OF-USE SERVICE PILOT PROGRAM
SUMMARY OF RESPONSES TO PRE-PROGRAM SURVEY

	Description of question	Yes	No	NA	Blank	% Yes	% No	% NA	% Blank
	Do you plan to:								
1	Turn lights off or down.	138	12	1	3	89.61%	7.79%	0.65%	1.95%
2	Run only full loads of laundry.	135	16	1	2	87.66%	10.39%	0.65%	1.30%
3	Wash clothes in cold water.	129	22	1	2	83.77%	14.29%	0.65%	1.30%
4	Wash clothes before 5PM or after 9PM.	124	25	1	4	80.52%	16.23%	0.65%	2.60%
5	Dry all or most clothes before 5PM or after 9PM on weekdays.	113	31	3	7	73.38%	20.13%	1.95%	4.55%
6	Bathe or shower before 5PM or after 9PM on weekdays.	113	33	0	8	73.38%	21.43%	0.00%	5.19%
7	Wash dishes before 5PM or after 9PM on weekdays.	100	49	0	5	64.94%	31.82%	0.00%	3.25%
8	Replace incandescent light bulbs with compact florescent light bulbs.	94	49	2	9	61.04%	31.82%	1.30%	5.84%
9	Wash clothes in warm water.	80	65	2	7	51.95%	42.21%	1.30%	4.55%
10	Run the dishwasher only when fully loaded.	78	38	30	8	50.65%	24.68%	19.48%	5.19%
11	Wash all or most clothes on the weekend.	76	72	1	5	49.35%	46.75%	0.65%	3.25%
12	Install ceiling fans to reduce air conditioner use between 5PM and 9PM.	71	58	9	16	46.10%	37.66%	5.84%	10.39%
13	Dry all or most clothes on the weekend.	70	70	4	10	45.45%	45.45%	2.60%	6.49%
14	Install a timer on your electric water heater.	68	73	4	9	44.16%	47.40%	2.60%	5.84%
15	Install low-flow showerheads.	65	75	1	13	42.21%	48.70%	0.65%	8.44%
16	Cool rooms before 5PM to reduce air conditioner use between 5PM and 9PM.	57	59	22	16	37.01%	38.31%	14.29%	10.39%
17	Purchase a more energy-efficient refrigerator.	57	77	6	14	37.01%	50.00%	3.90%	9.09%
18	Dry all or most clothes on a clothesline.	45	104	1	4	29.22%	67.53%	0.65%	2.60%
19	Install window tinting.	41	97	1	15	26.62%	62.99%	0.65%	9.74%
20	Install flow restictors on faucets.	40	107	0	7	25.97%	69.48%	0.00%	4.55%
21	Install a high efficiency electric water heater.	35	107	2	10	22.73%	69.48%	1.30%	6.49%
22	Purchase a more energy-efficient freezer.	34	91	12	17	22.08%	59.09%	7.79%	11.04%
23	Install solar water heating.	32	104	3	15	20.78%	67.53%	1.95%	9.74%
24	Purchase a more energy efficient air conditioner(s).	31	96	12	15	20.13%	62.34%	7.79%	9.74%
25	Better insulate your water heater and pipes.	28	111	3	12	18.18%	72.08%	1.95%	7.79%
26	Install ceiling and/or wall insulation.	24	111	2	17	15.58%	72.08%	1.30%	11.04%
27	Put timers on lights.	24	119	1	10	15.58%	77.27%	0.65%	6.49%
28	Raise the temperature setting on my air conditioner(s).	21	87	22	24	13.64%	56.49%	14.29%	15.58%
29	Install timer on swimming pool pump.	11	74	49	20	7.14%	48.05%	31.82%	12.99%
30	Install cover on spac/Jacuzzi/hot tub.	6	75	52	21	3.90%	48.70%	33.77%	13.64%
31	Install timer on spac/Jacuzzi/hot tub.	5	76	52	21	3.25%	49.35%	33.77%	13.64%
32	Install cover on swimming pool.	5	78	49	22	3.25%	50.65%	31.82%	14.29%
TOTAL		1,950	2,261	349	368				

CA-IR-141

Ref: HECO T-22, page 42 (Proposed Schedule TOU-R Rates).
According to Mr. Young's testimony, "The proposed time-of-use charges are designed to create a greater cost differential and therefore a greater incentive for customers to move energy consumption off-peak." Please explain and provide copies of all studies, reports, analyses, projections and documents prepared by or for HECO to evaluate the TOU-R pricing options that were considered and that were relied upon to determine that greater cost differentials and a simplified rate structure are necessary and appropriate.

HECO Response:

There are no studies or reports relied upon to determine that greater cost differentials and a simplified rate structure are necessary and appropriate. See also HECO's response to CA-IR-139, part d. in this docket.

CA-IR-142

Ref: HECO T-22, page 42 (Schedule TOU-C).
Please describe the Company's experience to-date with commercial time of use rate offerings, including a discussion of promotional efforts, customer participation rates, customer impacts (savings), billing and administrative issues (if any) and HECO's expectations regarding future customer acceptance levels after CIS limitations are removed. Provide copies of any reports, analyses, projections and other documents prepared by or for HECO to evaluate its commercial TOU rate offerings.

HECO Response:

HECO does not promote commercial time of use rate offerings except through discussions directly with potential customers; see HECO's response to CA-IR-138. Customer participation and customer impact for commercial time of use rates is summarized by rate schedule in HECO-WP-2214, pages 60, 103, and 110. Billing of commercial time of use rate customers is performed manually, and will be automated upon the implementation of the new CIS system. There are no CIS limitations proposed for commercial time of use customers on Schedules TOU-G, TOU-J, and U. There are no reports or analyses prepared to evaluate the new HECO commercial TOU rate offerings; the proposed rate designs for Schedules TOU-G, TOU-J, and U are based on the same methodology or the settlement agreement terms used to define the rate design for these rates in HECO's 2007 test year rate case, Docket No. 2006-0386.

CA-IR-143

Ref: HECO T-22, page 42 (Proposed Schedule TOU-G and TOU-J).

Please respond to the following regarding HECO's proposed TOU G and TOU-J rates:

a. Explain why the proposed TOU customer charges are no higher than proposed Schedule G and Schedule J rate customer charge levels, given the additional costs for TOU metering and billing.
b. Explain why a simplified two-period TOU-R schedule is appropriate, while the commercial TOU rates retain the current three-period structure.
c. Explain why the TOU-R schedule is believed to need "a greater incentive for customers to move energy consumption off-peak" which is contained in broadened price differences between periods, while the proposed commercial TOU rates have not been modified to provide such a "greater incentive."
d. Regarding the TOU-J demand charge, how does HECO propose to avoid customer gaming of this provision, by intentionally establishing measured peak monthly maximum demands in the off-peak or mid-peak periods?
e. Please explain and provide copies of all studies, reports, analyses, projections and documents prepared by or for HECO to evaluate TOU-G and TOU-J pricing options that were considered and ultimately adopted within proposed rates.

<u>HECO Response:</u>

a. The proposed TOU customer charges for TOU-G and TOU-J are identical to the proposed Schedule G and Schedule J rate customer charge levels, which is the same as how they were originally proposed in Schedule TOU-C in HECO's 2005 test year rate case and again in the proposed Schedule TOU-C in HECO's 2007 test year rate case. This is a rate design simplification for Schedule TOU-G and Schedule TOU-J that has been retained.

b. The reasons for the proposed Schedule TOU-R are discussed in HECO's response to CA-IR-139. Residential customer uses of electricity are, generally speaking, more common in type of use and in timing of use, than commercial customer uses of electricity. Thus it is easier to simplify the residential TOU rate structure than the commercial TOU rate structure. Also, there are existing "two period" TOU rate options for commercial customers that are already in place: Rider T and Rider M with Option B.

c. As indicated in the response to part b. above, because residential customer electricity use has more common characteristics between customers, it is easier to design a greater incentive for residential time-of-use customers that balances more off-peak hours into which customers can shift energy consumption (8pm to 3pm the following day) with assigning higher on-peak rates to those on-peak hours.

d. The Schedule TOU-J customer will be billed a demand charge based on the maximum measured kW demand in the priority peak hours or the maximum measured kW demand in the mid-peak hours, whichever is higher. The off-peak demand is not considered in assessing the Schedule TOU-J demand charge, so a Schedule TOU-J customer does not save demand charges by artificially setting an overall peak measured maximum demand during the off-peak hours. The Schedule TOU-J customer could save demand charges by artificially setting an overall peak measured demand during the mid-peak hours if in fact the customer's normal peak occurred during priority peak hours. However, based on the data in the HECO 2003 Class Load study, Schedule J and Schedule P customers typically peak during the mid-peak hours, so the risk of such "gaming" is expected to be very small.

e. There are no reports or analyses prepared to evaluate the new HECO commercial TOU rate offerings; the proposed rate designs for Schedules TOU-G and TOU-J are based on the same methodology or the settlement agreement terms used to define the rate design for these rates (as Schedule TOU-C) in HECO's 2007 test year rate case, Docket No. 2006-0386.

CA-IR-144

Ref: HECO T-22, page 54 (Net Energy Metering Lost Margins).

According to Mr. Young's testimony, "There is no bill impact on non-NEM customers until HECO proposes and receives Commission approval to adjust rates upward to cover the NEM lost contribution to fixed cost." Please describe HECO's plan with regard to such a rate adjustment, indicating the authority for such rate adjustments, HECO's financial need for such incremental revenues and the basis upon which such adjustments would be calculated.

HECO Response:

Any rate adjustment related to NEM will be proposed within the context of a future HECO general rate case. The impact of NEM will be reflected in the test year sales estimate (sales estimates will be lower than they would have been absent NEM). HECO does not anticipate any separate proposed rate adjustments for NEM. Because test year sales estimates are made by rate class, any impact of NEM will be limited to the rate classes of the NEM participants. For rate classes that have test year sales estimates that are lower than they would have been due to NEM, all ratepayers in those rate classes, including NEM customers and non-NEM customers, will be assigned higher rates per kWh that they would have been, absent NEM, to achieve the same amount of revenue requirement recovery.

CA-IR-145

Ref: HECO-WP-901 (Customer Accounts Expense Variances).

Most of the variances on this workpaper are explained as related to the CIS project. Please provide a complete copy of the most detailed available recent/current business case analysis of the CIS project, indicating by year the incurred and anticipated expenses and capital investments, retirements, staffing changes, deferrals, amortizations and expected cost savings, as employed by the Company to evaluate the economics of the project. Include all available narrative reports and explanations associated with such calculations.

HECO Response:

For a copy of the most detailed available recent/current business case analysis of the CIS project, please refer to Exhibit A, "Customer Information System Assessment and Recommendation for Hawaiian Electric Company", of the Company's Application in Docket No. 04-0268, filed August 26, 2004. The CIS Notification Letter, filed on July 1, 2008, in Docket No. 04-0268, contains the most recent financial information relating to the CIS project. It describes the incurred and anticipated expenses and capital investments, retirements, staffing changes, deferrals, amortizations and expected cost savings that had been recorded up to March 31, 2008, forecasted for the months of April through December 2008, and for year 2009.

CA-IR-146

Provide complete copies of all of the documents prepared for or associated with presentations made to HECO for HEI senior management in 2007 or 2008, to-date, addressing the progress, status, cost or problems with new CIS system.

HECO Response:

Without waiving any of the objections stated below, in response to this information request HECO will provide copies of quality assurance review reports on the CIS Project which were prepared by a third party and submitted to HECO generally on a monthly basis starting in April 2006.[1] Due to the sensitive nature of the information contained in these reports, these reports will be submitted pursuant to the protective order in this docket.

These reports were prepared by a third party - Alliance Data at the outset, which was subsequently acquired by another entity and renamed Vertex. While the company's name changed, the individual conducting the quality assurance review remained the same. The third party drafted the quality assurance review reports and submitted the reports to HECO. As noted in the reports, in some instances, the first draft of the report was subsequently revised based on input received from HECO. HECO shared quality assurance reports with Peace/First Data during meetings with Peace/First Data to discuss the reports. At the end of these meetings, Peace/First Data returned the reports to HECO. The following is a list of the quality assurance reports that are provided as Attachment 1 of this response under the terms of the protective order:

1. April 2006 Quality Assurance Review;
2. May 2006 Quality Assurance Review;
3. July 2006 Quality Assurance Review;
4. August 2006 Quality Assurance Review;

[1] See the Company's CIS Interim Supplemental Report, page 12, filed on May 12, 2006 in Docket No. 04-0268.

5. September 2006 Quality Assurance Review;

6. October 2006 Quality Assurance Review;

7. November 2006 Quality Assurance Review;

8. January 2007 Quality Assurance Review;

9. February 2007 Quality Assurance Review;

10. February 2007 Technical / Development Assessment & QA;

11. March 2007 Quality Assurance Review;

12. April 2007 Quality Assurance Review;

13. May 2007 Technical / Development Assessment & QA;

14. June 2007 Quality Assurance Review;

15. July 2007 Quality Assurance Review;

16. August 2007 Quality Assurance Review;

17. September 2007 Quality Assurance Review;

18. October 2007 Quality Assurance Review;

19. November 2007 Quality Assurance Review;

20. January 2008 Quality Assurance Review;

21. February 2008 Quality Assurance Review;

22. March 2008 Quality Assurance Review;

23. April 2008 Quality Assurance Review;

24. June 2008 Quality Assurance Review;

25. July 2008 Quality Assurance Review;

26. August 2008 Quality Assurance Review;

27. October 2008 Quality Assurance Review.

HECO respectfully objects to providing "all of the documents prepared for or associated with presentations made to HECO for HEI senior management [or "to HECO or HEI Board of Directors"] in 2007 or 2008, to-date, addressing the progress, status, cost or problems with the new CIS system." Some of that analysis and evaluation is protected by the attorney-client privilege. To the extent the request seeks information that reflects the mental impressions, conclusions, opinions, or legal theories of HECO's attorneys and HECO, the information requested is also protected from disclosure by the attorney work product doctrine.

HECO also objects to the request, as unduly burdensome, onerous and overly broad to the extent that it requests "complete copies of all of the documents prepared for or associated with presentations made" to the HECO or HEI board of directors or senior management.

HECO further objects to disclosing documents that reveal internal deliberations regarding the progress, status, cost or problems with the new CIS system. Requiring that this information be subject to review by parties in a regulatory proceeding would have a "chilling" effect on the self-analysis process. For example, HECO's Internal Audit Division conducted an audit in 2008 of the CIS Project, that focused on technical progress and key project risks factors that impact technical delivery, and prepared a report for the HECO Board of Directors Audit Committee, dated August 22, 2008, entitled Technical Progress Evaluation of CIS Implementation. The report addressed the status of the project plan, testing, vendor relationship, and technical quality. Subjecting such sensitive internal deliberations to review in a regulatory proceeding would inhibit robust and candid internal dialogue of this nature in the future.

This information request fails to balance the need for the information against HECO's need to manage. By analogy, for example, the Federal Freedom of Information Act ("FFIA"), codified at 5 U.S.C. §552, and the Uniform Information Practices Act (Modified), codified at

H.R.S. Ch. 92F, contain broad disclosure requirements based on the public's interest in open government. However, the broad policy in favor of disclosure still allows for exceptions that are intended to permit the efficient and effective functioning of government by protecting the internal deliberative process. *See generally, Pennsylvania Public Utility Commission v. West Penn Power Company*, 73 PA PUC 122 (July 20, 1990), West Law Slip Op ("deliberative process privilege" recognized by the Pennsylvania Public Utility Commission with respect to its own internal staff reports).

HECO would also object to disclosure of such documents even under a protective order. The value of these documents will be diminished if HECO is required to provide the documents, even if the documents were provided pursuant to a protective order.

Confidential Information Deleted Pursuant To Protective Order, Filed on November 21, 2008.

CA-IR-146
DOCKET NO. 2008-0083
ATTACHMENT 1
PAGES 1-610 OF 610

Attachment 1 contains confidential information and is being provided subject to Protective Order, filed on November 21, 2008.

Attachments 1 is voluminous and available for inspection at HECO's Regulatory Affairs Division office, Suite 1301, Central Pacific Plaza, 220 South King Street, Honolulu, Hawaii. Please contact Dean Matsuura at 543-4622 to make arrangements to inspect the document. An electronic copy of the requested information is being provided.

CA-IR-147

Provide complete copies of all of the documents prepared for or associated with presentations made to the HECO or HEI Board of Directors in 2007 or 2008, to-date, addressing the progress, status, cost or problems with new CIS system.

HECO Response:

See HECO's response and objection to CA-IR-146.

CA-IR-148

What metrics are utilized by HECO management to measure and monitor the effectiveness and efficiency of customer service department processes and systems? Please provide specimen copies of each form of management report that is regularly prepared in the normal course of business to track and analyze performance in the customer accounting business area (meter reading, billing, remittance processing, call centers, etc.)

HECO Response:

The metrics utilized by HECO management to measure and monitor the effectiveness and efficiency of customer service department processes and systems are identified below and specimen copies of reports that are regularly prepared are included below or in specific attachments.

1. Customer Transaction Survey – This survey is conducted quarterly by an external company to measure customers' ratings of HECO's service by type of transaction (i.e., customers calling to start, stop, or change their electric service or initiating a billing field investigation). The gathered data enables historical tracking of key customer satisfaction measures and provides information to management on ways to improve satisfaction through management of how the calls made by customers are being handled. See Attachment 1.

2. Meter Reading Accuracy Rate – The percentage of meter reading errors identified prior to billing and after billing that is processed for each month. See report below which is provided by the Customer Field Services Division via an email every month.

YEAR	MONTH	READINGS PROCESSED	TOTAL METER COUNT	BILLED ERRORS	OTHER ERRORS	TOTAL ERRORS	ERROR %
2008	Jan	294,132	302,176	2	390	392	0.13%
	Feb	306,223	302,156	3	610	613	0.20%
	Mar	303,368	302,250	3	648	651	0.21%
	Apr	303,063	302,345	2	550	552	0.18%
	May	302,978	302,345	1	457	458	0.15%
	Jun	302,863	302,809	1	444	445	0.15%
	July	302,665	302,904	1	450	451	0.15%
	Aug	302,045	302,970	1	597	598	0.20%
	Sept					0	#DIV/0!
	Oct					0	#DIV/0!
	Nov					0	#DIV/0!
	Dec					0	#DIV/0!
TOTAL		2,417,337	2,419,955	14	4,146	4,160	0.17%

3. The Customer Assistance Call Center performance metrics report is shown below. The report is provided every week via email and consists of statistics on the following:

   a. Service Level – Percentage of customer calls answered within 30 seconds;

   b. Lost Calls (abandoned rate) – Percentage of calls that are disconnected (i.e., callers who hang up) prior to being answered by Company agents;

   c. Average Speed of Answer (seconds) - Average amount of elapsed time between the time a customer call leaves the call queue and is and answered by a Company agent;

   d. Average Call Handling Time (minutes) –The average time agents spend on a call with a customer, including time spent after the call, finalizing notes and updating a customer's account record before taking the next customer call.

   e. Call Count – Number of calls received compared to number of calls planned.

From: Carlson, Jodi
Sent: Monday, October 06, 2008 2:44 PM
To: zz$CustSvc-CH
Cc: Chock, Sylvia
Subject: Call Center Statistics - 9-29-08 to 10-3-08.doc

Statistic Measured	Goal	Call Center's Performance (9/29)	Call Center's Performance (9/30)	Call Center's Performance (10/1)	Call Center's Performance (10/2)	Call Center's Performance (10/3)
Service Level	80% Or Greater	8%	8%	10%	6%	8%
Lost Calls	Less Than 5%	23.9%	27.6%	27.3%	23.3%	29.8%
Avg. Speed Of Answer	Less Than 45 Seconds	337 Seconds	399 Seconds	439 Seconds	318 Seconds	398 Seconds
Avg. Call Handle Time	3.5 Minutes Or Less	5.1 Minutes	5.0 Minutes	5.2 Minutes	5.2 Minutes	5.1 Minutes
Call Count	Planned Equal To Actual	2505 Versus 2306	2201 Versus 2148	2115 Versus 2152	2114 Versus 2228	2166 Versus 2133

Hi Gang -

Here are the statistics from last week...

Have a great day ☺

Jodi Carlson
Hawaiian Electric Company
Customer Assistance Center Supervisor
Phone: (808) 543-7830
Fax: (808) 543-7799
Email: jodi.carlson@heco.com

4. Same Day Payment Processing – The monthly report provided by the Payment Processing and Support Center reflects the percentage of payments that are processed within a day of receipt. See report below.

HAWAIIAN ELECTRIC COMPANY, INC.
Customer Service Dept. - Payment Processing & Support Center

Schedule D. Same Day Processing

Same Day Processing Calculations

$$\frac{\text{Mail \$ - \$Amount Held Over}}{\text{Mail \$}} = \frac{\$\ 150{,}349{,}490}{\$\ 155{,}935{,}809} = 96\%$$

Monthly Totals			
	Same Day %	Goal %	
Sep '07	94%	99%	
Oct '07	93%	99%	
Nov '07	92%	99%	
Dec '07	89%	99%	
Jan '08	100%	99%	
Feb '08	99%	99%	
Mar '08	99%	99%	
Apr '08	99%	99%	
May '08	99%	99%	
June '08	100%	99%	
July '08	99%	99%	
Aug '08	96%	99%	

Date of Holdover		Amt Held Over	Explanation (All holdovers processed the next business day)
Mon	08/04/08	$ 2,109,581	18.75 trays and transport machine#1 down for entire day
Mon	08/18/08	$ 3,476,738	22.50 trays
		$ 5,586,319	

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EMAIL: info@markettrendspacific.com www.markettrendspacific.com

2008 HAWAIIAN ELECTRIC TRANSACTION SATISFACTION SURVEY

Quarter 1 Report

June 2008

Quarter 1 2008 Results of HECO's Transaction Satisfaction Survey
June 20, 2008

Background and Methodology

Hawaiian Electric Company (HECO) has conducted the Transaction Satisfaction Survey among the following groups since 1994: Customers who have called the utility to start, stop, or change their electric service from one location to another (the TRAN sample); customers who have called the utility and initiated a billing field investigation (the HBI sample); and customers who have called the utility to report trouble, such as an electrical outage, with their service (the TRBL sample). Maui Electric Company (MECO) and the Hawaii Electric Light Company (HELCO) began this survey in 1999.

An analysis of the Customer Service Access System records during the sample period for this survey indicates that of the 15,712 transactions, 12, 269 were for starting, stopping, or changing service; 260 were billing field investigations; and 3,183 were trouble calls.

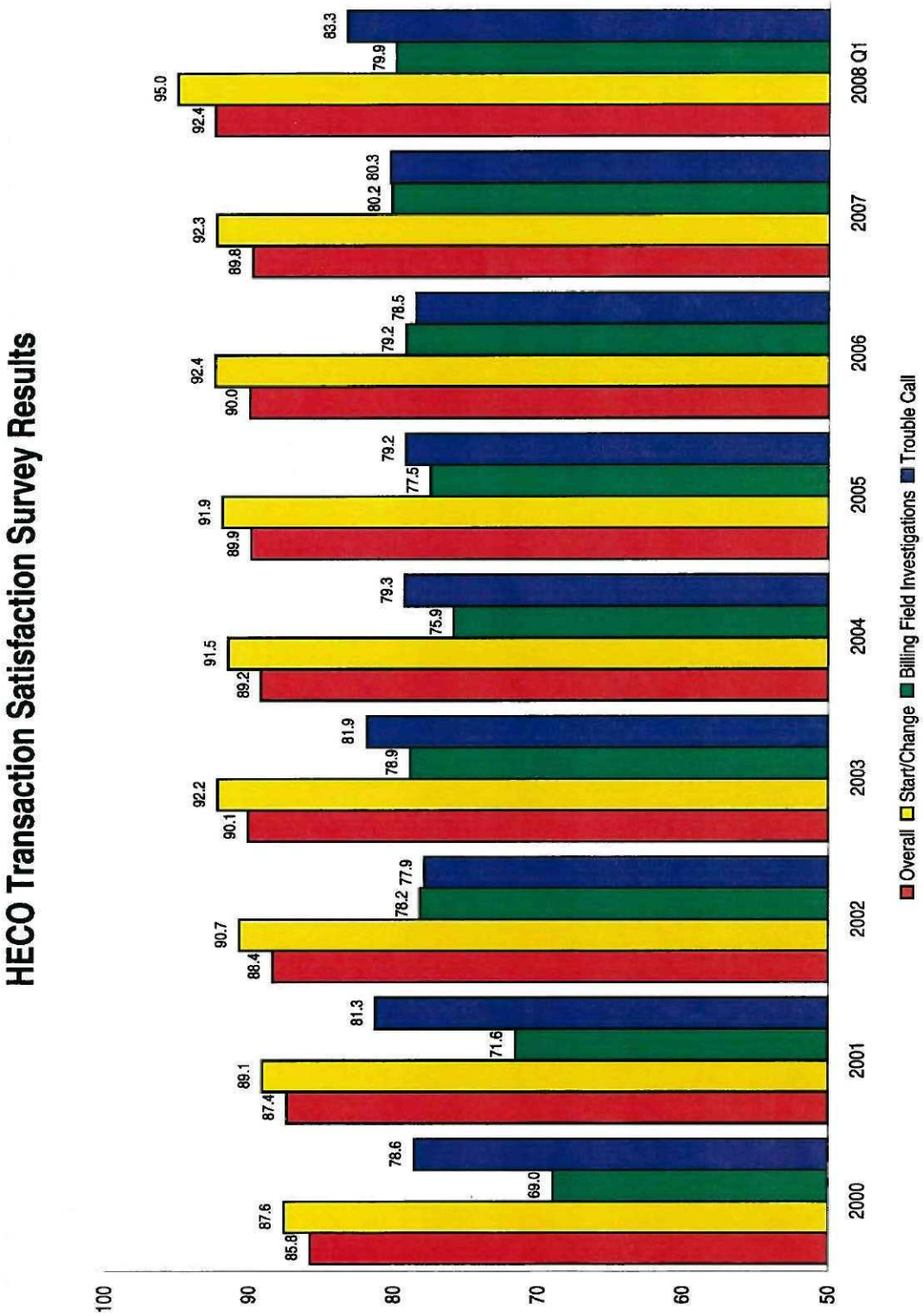
Interviewing for the first quarter of HECO's 2008 Transaction Satisfaction Survey took place from February 8 through May 6, 2008, and included 300 customers who called to start, stop, or change the location of service, 100 customers who called to ask about their bill, and 100 who called to report trouble with their service, for a total of 500 interviews.

Findings

The results of the survey for Quarter 1 2008 are summarized in the following tables and charts. The results are weighted.

HECO's overall satisfaction rating rose 4.2 points to 92.4% in comparison with Quarter 4 2007. Contributing to this was an increase of 6.4 points in the satisfaction of customers requesting billing field investigations, a gain of 3.1 points in the satisfaction of customers wanting new or changed service, and a rise of 1.9 points in the satisfaction rating from customers who reported having trouble with their service. The ratings exceeded or matched the highest quarter 1 ratings in the history of the Hawaiian Electric Transaction Satisfaction Survey for overall satisfaction and for the satisfaction of customers requesting new or changed service.

In comparison with 2007 year to date (Quarter 1 2007) HECO's overall satisfaction for Quarter 1 year to date increased 5.4 points to 92.4%. An increase of 11.2 points in the satisfaction of customers having trouble with their service and a 4.0 point rise in the satisfaction of customers requesting new or changed service offset a decrease of 5.7 points in the rating of those requesting billing field investigations.


HECO Transaction Satisfaction Survey Results
100
90
80
70
60
50
2000
2001
2002
2003
2004
2005
2006
2007
2008 Q1
85.8
87.6
69.0
78.6
87.4
89.1
71.6
81.3
88.4
90.7
78.2
77.9
90.1
92.2
78.9
81.9
89.2
91.5
75.9
79.3
89.9
91.9
77.5
79.2
90.0
92.4
79.2
78.5
89.8
92.3
80.2
80.3
92.4
95.0
79.9
83.3
Overall
Start/Change
Billing Field Investigations
Trouble Call

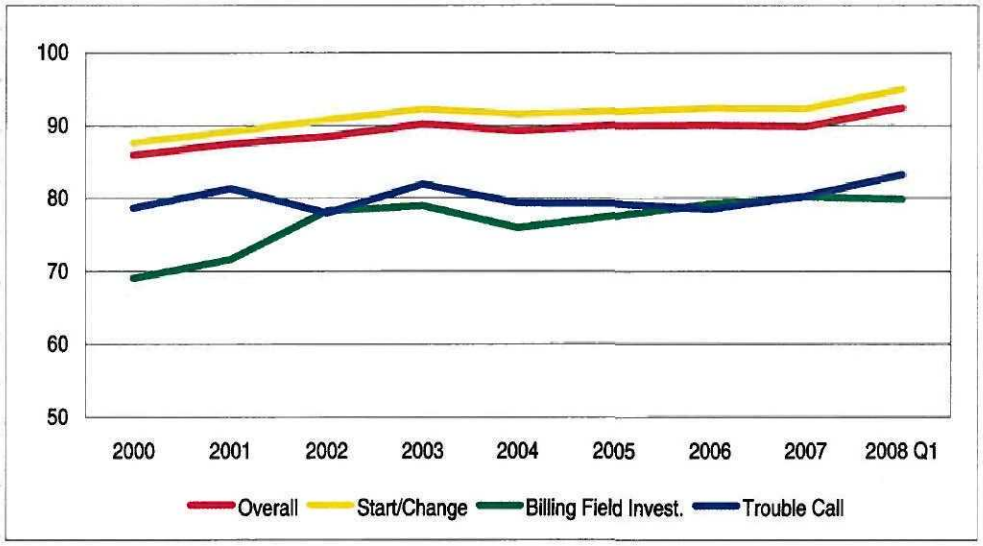
Satisfaction with Service on Request *

	2007 Q4	2008 Q1	Change	2008 YTD	2007 YTD	Change
Overall	88.2	92.4	4.2	92.4	87.0	5.4
Start/Change	91.9	95.0	3.1	95.0	91.0	4.0
Billing Field Investigations	73.5	79.9	6.4	79.9	85.6	-5.7
Trouble Call	81.4	83.3	1.9	83.3	72.1	11.2

* For 2002 and later, this is Q27, rating of the service received on the request or inquiry

Summary of Satisfaction

	2000	2001	2002	2003	2004	2005	2006	2007	2008 Q1
Overall	85.8	87.4	88.4	90.1	89.2	89.9	90.0	89.8	92.4
Start/Change	87.6	89.1	90.7	92.2	91.5	91.9	92.4	92.3	95.0
Billing Field Invest.	69.0	71.6	78.2	78.9	75.9	77.5	79.2	80.2	79.9
Trouble Call	78.6	81.3	77.9	81.9	79.3	79.2	78.5	80.3	83.3



Rating of Representative Handling of Request

	2007 Q4	2008 Q1	Change	2008 YTD	2007 YTD	Change
Overall	88.5	91.5	3.0	91.5	89.5	2.0
Start/Change	91.9	93.9	2.0	93.9	91.3	2.6
Billing Field Investigations	77.8	80.1	2.3	80.1	87.5	-7.4
Trouble Call	82.0	82.7	0.7	82.7	82.4	0.3

Rating of Representative Attitude

	2007 Q4	2008 Q1	Change	2008 YTD	2007 YTD	Change
Overall	91.8	93.1	1.3	93.1	91.6	1.5
Start/Change	93.2	95.4	2.2	95.4	92.9	2.5
Billing Field Investigations	81.7	85.6	3.9	85.6	90.2	-4.6
Trouble Call	89.1	84.9	-4.2	84.9	86.3	-1.4

Representative Performance Ratings

	2007 Q4	2008 Q1	Change	2008 YTD	2007 YTD	Change
Knowledge to answer all your questions						
Overall	90.0	92.6	2.6	92.6	91.0	1.6
Start/Change	93.0	95.4	2.4	95.4	93.0	2.4
Billing Field Investigations	77.3	81.4	4.1	81.4	88.9	-7.5
Trouble Call	84.2	82.3	-1.9	82.3	83.4	-1.1
Willingness to work with you to satisfy needs						
Overall	89.9	92.4	2.5	92.4	91.1	1.3
Start/Change	92.7	95.2	2.5	95.2	92.9	2.3
Billing Field Investigations	78.9	82.0	3.1	82.0	86.6	-4.6
Trouble Call	84.6	82.5	-2.1	82.5	83.6	-1.1
Taking enough time to handle your request						
Overall	90.1	93.0	2.9	93.0	91.8	1.2
Start/Change	93.0	95.8	2.8	95.8	93.2	2.6
Billing Field Investigations	80.4	83.2	2.8	83.2	88.9	-5.7
Trouble Call	84.7	83.2	-1.5	83.2	86.3	-3.1

CA-IR-149

Ref: HECO-907 (Customer Information System Costs).

Please provide the following additional information regarding the projected CIS System Costs:

a. A monthly breakdown of each line item amount on this Exhibit for 2009, isolating the labor and non-labor elements by RA.
b. Projected monthly expenses in 2010 and all available periods thereafter for each line item by RA and expense element.
c. Explain and quantify the Company's current and best view of how the monthly amounts shown in your response to parts (a) and (b) above may be impacted by problems being experienced with CIS completion and implementation.

HECO Response:

a. While reviewing data to respond to this information request, it was discovered that more specific descriptions of the test year CIS expenses were required for HECO-907 and the column heading of HECO-908 was incorrect. As a result, revised exhibits HECO-907 and 908 are submitted as Attachments 1 and 2 to this response. The monthly breakdown of each line item amount reflected in Attachment 1 (revised HECO-907) is provided in Attachment 3. The details for the Amortization of Deferred Expense (Non-Labor), HECO-907, line 7 for $976,941 may be found in HECO-WP-908.

b. There are no expenses in 2010 and beyond for any line items listed in HECO 907, except for line item 7, Amortization of Deferred Expenses. Please see HECO WP-908 for the monthly amortization of deferred expenses for 2010 and beyond.

c. The monthly amounts displayed in response to parts (a) and (b) above have been developed in consideration of the problems previously experienced and any potential risks of implementing the CIS System. Also, as noted on page 17 of the CIS Notification Letter filed on July 1, 2008, in Docket No. 04-0268, the estimated deferred expenses for the project include an amount for external support cost risk which will be amortized over the twelve year period, after the implementation of the CIS system (HECO-WP-908).

Customer Information Service ("CIS")
2009 Test Year

Line No.	NARUC Account	PROJECT	Account Description	Line Item Description	2009 TY YEAR
			POWER PRODUCTION OPERATION		
1	506	P0000571	Miscellaneous Steam Power Expenses	Training	$8,790
			DISTRIBUTION EXPENSE OPERATION		
2	581	P0000571	Load Dispatching	Training	$103,096
3	587	P0000571	Customer Installations Expenses	Training	$127,887
4	587	P0000571	Customer Installations Expenses	Reclassed On-Costs	$232,418
5	588	P0000571	Miscellaneous Distribution Expenses	Training	$62,358
6			**Subtotal Distribution Exp. Operation**		**$525,759**
			CUSTOMER ACCOUNTS EXPENSE		
7	903	P0000571	Customer Records & Collection Expense	Training/Post Go-Live	$579,142
8	903	P0000571	Customer Records & Collection Expense	Outside Services	$517,464
9	903	P0000571	Customer Records & Collection Expense	Software	$2,774
10	903	P0000571	Customer Records & Collection Expense	Reclassed On-Costs	$49,336
11			**Subtotal Proj. P0000571 Cust Acct Exp**		**$1,148,716**
12	903	NPCZZZZZ	Subtotal NonProj Cust Acct Exp	Amortization of Deferred Expenses	$976,941
13			**Total Proj & NonProj Cust Accts Exp**		**$2,125,657**
			CUSTOMER SERVICE EXP. OPERATION		
14	910	P0000571	Customer Assistance Expenses	Training	$67,440
15	910	P0000571	Customer Assistance Expenses	Reclassed On-Costs	$1,270
16			**Subtotal Cust. Service Exp. Operation**		**$68,710**
			ADMINISTRATIVE & GENERAL EXP.		
17	920	P0000571	Administrative & General Expenses	Training	$ 41,006
18	921	P0000571	Office Supplies & Expenses	Training	$ 24,783
19	921	P0000571	Office Supplies & Expenses	Reclassed On-Costs	$ 23,078
20	921	P0000571	Office Supplies & Expenses	Software	$ 12,283
21	921	P0000571	Office Supplies & Expenses	Outside Services	$ 679
22	925	P0000571	Injuries & Damages	Training	$ 459
23			**Subtotal Admin. & Gen. Expenses**		**$ 102,288**
24		P0000571	Total NARUC Project Expense		$1,854,263
25		NPCZZZZZ	Total NARUC Amortization Expense		$976,941
26			**Total NARUC Project & Amortize. Exp.**		**$2,831,204**
27		P000571	Capital	Upgrade in computer / server storage capacity	$30,948
28			**Total TY 2009: CIS Exp., Capital & Amortization Exp.**		**$2,862,152**

Note: Test Year $ include oncosts $ for expense elements: 404 Energy Delivery, 405 Power Supply, 406 Corp Admin., 421 Non-productive wages, 422 employee benefits, 423 payroll taxes.

CIS
NARUC ACCOUNT 903 ONLY - All areas of the Company
PROJECT & POST GO-LIVE NON PROJECT
2009 Test Year

Line No.	NARUC Account	Account Description	Line Item Description	DIRECT * Labor Amount Exp. Ele. 150 & 421	DIRECT * Non Labor Amount Exp. Ele. 501 & 462	DIRECT * Total NARUC
1		**PROJECT P0000571 EXPENSES**				
2	903	Customer Records & Collection Expense	Training	$265,113	$0	$265,113
3	903	Customer Records & Collection Expense	Post Go-Live Deployment	$99,123	$520,238	$619,361
4		**sub total P0000571 Direct Expenses**		**$364,236**	**$520,238**	**$884,474**
5		**NON-PROJECT EXPENSES NPCZZZZZ**	**POST GO-LIVE PROJECT**			
6	**903**	**Customer Records & Collection Expense**	**Amortization**		**$976,941**	**$976,941**
7	903	Customer Records & Collection Expense	Maintenance of CIS system		$438,000	$438,000
8	903	Customer Records & Collection Expense	Report Design & Development		$172,534	$172,534
9	903	Customer Records & Collection Expense	Consultant Services for new functionalities		$198,042	$198,042
10	903	Customer Records & Collection Expense	Outsourcing of bill printing functions		$321,657	$321,657
11	903	Customer Records & Collection Expense	Outsourcing of IVR		$88,314	$88,314
12	903	Customer Records & Collection Expense	Outsourcing of IWR		$31,126	$31,126
13		sub total NPC Non Proj. Exp.	Post Go-Live Project	**$0**	**$2,226,614**	**$2,226,614**
14	**903**	**Total Labor & Non Labor**	**Project & Non Proj CIS**	**$364,236**	**$2,746,852**	**$ 3,111,088**

Reconciliation of Account 903, HECO-908 to Account 903 HECO-907 "CIS"

15	903	PROJECT P0000571 CIS Customer Records & Collection Expense	Exp. Elements On-costs/direct labor			$214,906
16	903	PROJECT P0000571 CIS Customer Records & Collection Expense	Exp. Elements Reclassed On-costs 404,406			$49,336
17		sub total On-Cost (direct & reclassed)				**$264,242**
18	903	Total Proj., line 4, + Non Proj, Line 6 Amortization & Line 17 On-Cost direct & reclassed.	See HECO-907, Revised 9/17/08, Line 13 as cross reference			**$2,125,657**

Note: Costs for Direct Labor (incl. non prod. wages) & Direct Non Labor (excl. on-costs).
Reconciliation includes on-costs to cross reference to revised HECO-907.

TRAINING

NARUC #	*RA #	*Act #	*Loc #	*Ind #	*EE #	Line item	9-Jan	9-Feb	9-Mar	9-Apr	9-May	9-Jun	9-Jul	9-Aug	9-Sep	9-Oct	9-Nov	9-Dec
506	PIC	600	OAH	NE	150	Heco Trainee	$0.00	$0.00	$0.00	$0.00	$2,042.24	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PIC	600	OAH	NE	405	Pwr Sup OH	$0.00	$0.00	$0.00	$0.00	$652.16	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PIC	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$254.08	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PIC	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$320.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PIC	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$693.12	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PIC	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$169.30	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PIP	600	OAH	NE	150	Heco Trainee	$0.00	$0.00	$0.00	$0.00	$1,083.52	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PIP	600	OAH	NE	405	Pwr Sup OH	$0.00	$0.00	$0.00	$0.00	$326.08	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PIP	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$127.04	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PIP	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$160.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PIP	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$346.56	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PIP	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$89.82	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PIW	600	OAH	NE	150	Heco Trainee	$0.00	$0.00	$0.00	$0.00	$585.44	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PIW	600	OAH	NE	405	Pwr Sup OH	$0.00	$0.00	$0.00	$0.00	$163.04	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PIW	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$63.52	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PIW	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$80.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PIW	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$173.28	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PIW	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$48.53	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PYB	600	OAH	NE	150	Heco Trainee	$0.00	$0.00	$0.00	$0.00	$331.28	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PYB	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$31.76	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PYB	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$40.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PYB	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$86.64	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PYB	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$27.46	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PYC	600	OAH	NE	150	Heco Trainee	$0.00	$0.00	$0.00	$0.00	$383.36	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PYC	600	OAH	NE	405	Pwr Sup OH	$0.00	$0.00	$0.00	$0.00	$163.04	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PYC	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$63.52	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PYC	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$80.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PYC	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$173.28	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
506	PYC	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$31.78	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
					Total:	**$8,789.85**	$0.00	$0.00	$0.00	$0.00	$8,789.85	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

TRAINING

NARUC #	*RA #	*Act #	*Loc #	*Ind #	*EE #	Line item	9-Jan	9-Feb	9-Mar	9-Apr	9-May	9-Jun	9-Jul	9-Aug	9-Sep	9-Oct	9-Nov	9-Dec
581	PRA	600	OAH	NE	150	Heco Trainee	$0.00	$0.00	$0.00	$0.00	$3,684.16	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRA	600	OAH	NE	404	En Del OH	$0.00	$0.00	$0.00	$0.00	$4,869.12	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRA	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$508.16	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRA	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$640.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRA	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$1,386.24	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRA	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$305.42	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRD	600	OAH	NE	150	Heco Trainee	$0.00	$0.00	$0.00	$0.00	$25,523.52	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRD	600	OAH	NE	404	En Del OH	$0.00	$0.00	$0.00	$0.00	$21,911.04	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRD	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$2,286.72	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRD	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$2,880.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRD	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$6,238.08	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRD	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$2,115.90	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRE	600	OAH	NE	150	Heco Trainee	$0.00	$0.00	$0.00	$0.00	$8,412.48	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRE	600	OAH	NE	404	En Del OH	$0.00	$0.00	$0.00	$0.00	$9,738.24	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRE	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$1,016.32	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRE	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$1,280.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRE	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$2,772.48	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRE	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$697.39	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRR	600	OAH	NE	150	Heco Trainee (RR-TC)-Ph5	$0.00	$0.00	$0.00	$0.00	$1,517.12	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRR	600	OAH	NE	404	En Del OH	$0.00	$0.00	$0.00	$0.00	$1,217.28	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRR	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$127.04	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRR	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$160.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRR	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$346.56	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRR	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$125.77	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRS	600	OAH	NE	150	Heco Trainee (RS-R_SUBENG)-Ph5	$0.00	$0.00	$0.00	$0.00	$1,372.48	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRS	600	OAH	NE	404	En Del OH	$0.00	$0.00	$0.00	$0.00	$1,217.28	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRS	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$127.04	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRS	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$160.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRS	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$346.56	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
581	PRS	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$113.78	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
						Total: **$103,096.18**	$0.00	$0.00	$0.00	$0.00	$103,096.18	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

TRAINING

NARUC #	*RA #	*Act #	*Loc #	*Ind #	*EE #	Line item	9-Jan	9-Feb	9-Mar	9-Apr	9-May	9-Jun	9-Jul	9-Aug	9-Sep	9-Oct	9-Nov	9-Dec
587	PWA	600	OAH	NE	150	Heco Trainee	$0.00	$0.00	$0.00	$0.00	$5,935.92	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
587	PWA	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$857.52	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
587	PWA	600	OAH	NE	407	Cust Install OH	$0.00	$0.00	$0.00	$0.00	$20,781.36	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
587	PWA	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$1,080.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
587	PWA	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$2,339.28	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
587	PWA	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$492.09	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
587	PWP	600	OAH	NE	150	Heco Trainee	$0.00	$0.00	$0.00	$0.00	$20,909.28	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
587	PWP	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$2,286.72	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
587	PWP	600	OAH	NE	407	Cust Install OH	$0.00	$0.00	$0.00	$0.00	$48,489.84	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
587	PWP	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$2,880.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
587	PWP	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$6,238.08	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
587	PWP	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$1,733.38	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
587	PWX	600	OAH	NE	150	Heco Trainee	$0.00	$0.00	$0.00	$0.00	$8,414.40	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
587	PWX	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$952.80	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
587	PWX	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$1,200.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
587	PWX	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$2,599.20	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
587	PWX	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$697.55	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
					Total:	**$127,887.42**	$0.00	$0.00	$0.00	$0.00	$127,887.42	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

RECLASSED ON-COST

587	PWA	600	OAH	NE	406	Admin Tfr to Constr OH	$952.80	$952.80	$952.80	$952.80	$635.20	$317.60	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
587	PWA	600	OAH	NE	407	Cust Install OH	$23,090.40	$23,090.40	$23,090.40	$23,090.40	$15,393.60	$7,696.80	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
587	PWP	600	OAH	NE	406	Admin Tfr to Constr OH	$635.20	$635.20	$635.20	$635.20	$1,270.40	$635.20	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
587	PWP	600	OAH	NE	407	Cust Install OH	$15,393.60	$15,393.60	$15,393.60	$15,393.60	$30,787.20	$15,393.60	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
					Total:	**$232,417.60**	$40,072.00	$40,072.00	$40,072.00	$40,072.00	$48,086.40	$24,043.20	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

TRAINING

NARUC #	*RA #	*Act #	*Loc #	*Ind #	*EE #	Line item	9-Jan	9-Feb	9-Mar	9-Apr	9-May	9-Jun	9-Jul	9-Aug	9-Sep	9-Oct	9-Nov	9-Dec
588	PDA	600	OAH	NE	150	Heco Trainee	$0.00	$0.00	$0.00	$0.00	$540.16	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDA	600	OAH	NE	404	En Del OH	$0.00	$0.00	$0.00	$0.00	$608.64	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDA	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$63.52	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDA	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$80.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDA	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$173.28	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDA	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$44.78	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDC	600	OAH	NE	150	Heco Trainee	$0.00	$0.00	$0.00	$0.00	$2,424.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDC	600	OAH	NE	404	En Del OH	$0.00	$0.00	$0.00	$0.00	$3,651.84	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDC	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$381.12	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDC	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$480.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDC	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$1,039.68	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDC	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$200.95	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDD	600	OAH	NE	150	Heco Trainee	$0.00	$0.00	$0.00	$0.00	$540.16	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDD	600	OAH	NE	404	En Del OH	$0.00	$0.00	$0.00	$0.00	$608.64	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDD	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$63.52	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDD	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$80.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDD	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$173.28	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDD	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$44.78	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDF	600	OAH	NE	150	Heco Trainee	$0.00	$0.00	$0.00	$0.00	$2,762.88	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDF	600	OAH	NE	404	En Del OH	$0.00	$0.00	$0.00	$0.00	$2,434.56	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDF	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$254.08	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDF	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$320.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDF	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$693.12	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDF	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$229.04	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDS	600	OAH	NE	150	Heco Trainee	$0.00	$0.00	$0.00	$0.00	$9,930.56	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDS	600	OAH	NE	404	En Del OH	$0.00	$0.00	$0.00	$0.00	$9,129.60	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDS	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$952.80	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDS	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$1,200.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDS	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$2,599.20	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDS	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$823.24	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDH	600	OAH	NE	150	Heco Trainee	$0.00	$0.00	$0.00	$0.00	$1,260.16	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDH	600	OAH	NE	404	En Del OH	$0.00	$0.00	$0.00	$0.00	$1,217.28	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDH	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$127.04	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDH	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$160.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDH	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$346.56	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDH	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$104.47	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDM	600	OAH	NE	150	Heco Trainee	$0.00	$0.00	$0.00	$0.00	$1,260.16	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDM	600	OAH	NE	404	En Del OH	$0.00	$0.00	$0.00	$0.00	$1,217.28	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDM	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$127.04	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDM	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$160.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDM	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$346.56	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDM	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$104.47	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDP	600	OAH	NE	150	Heco Trainee	$0.00	$0.00	$0.00	$0.00	$3,544.96	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDP	600	OAH	NE	404	En Del OH	$0.00	$0.00	$0.00	$0.00	$3,651.84	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDP	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$381.12	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDP	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$480.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDP	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$1,039.68	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDP	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$293.88	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDU	600	OAH	NE	150	Heco Trainee	$0.00	$0.00	$0.00	$0.00	$1,260.16	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDU	600	OAH	NE	404	En Del OH	$0.00	$0.00	$0.00	$0.00	$1,217.28	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDU	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$127.04	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDU	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$160.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDU	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$346.56	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PDU	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$104.47	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PVL	600	OAH	NE	150	Heco Trainee	$0.00	$0.00	$0.00	$0.00	$304.16	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PVL	600	OAH	NE	404	En Del OH	$0.00	$0.00	$0.00	$0.00	$304.32	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PVL	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$31.76	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PVL	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$40.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PVL	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$86.64	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
588	PVL	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$25.21	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
					Total:	**$62,357.53**	$0.00	$0.00	$0.00	$0.00	$62,357.53	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

TRAINING

NARUC #	*RA #	*Act #	*Loc #	*Ind #	*EE #	Line item	9-Jan	9-Feb	9-Mar	9-Apr	9-May	9-Jun	9-Jul	9-Aug	9-Sep	9-Oct	9-Nov	9-Dec
903	PBA	600	OAH	NE	150	Heco Trainee	$0.00	$0.00	$0.00	$0.00	$1,112.96	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PBA	600	OAH	NE	404	En Del OH	$0.00	$0.00	$0.00	$0.00	$912.96	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PBA	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$95.28	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PBA	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$120.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PBA	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$259.92	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PBA	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$92.26	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PBE	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$0.00	$10,890.56	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PBE	600	OAH	NE	404	En Del OH	$0.00	$0.00	$0.00	$0.00	$11,564.16	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PBE	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$1,206.88	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PBE	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$1,520.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PBE	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$3,292.32	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PBE	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$902.83	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PBP	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$7,345.12	$8,460.96	$7,345.12	$7,345.12	$0.00	$0.00	$0.00	$0.00	$0.00
903	PBP	600	OAH	NE	404	En Del OH	$0.00	$0.00	$0.00	$6,695.04	$7,912.32	$6,695.04	$6,695.04	$0.00	$0.00	$0.00	$0.00	$0.00
903	PBP	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$698.72	$825.76	$698.72	$698.72	$0.00	$0.00	$0.00	$0.00	$0.00
903	PBP	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$880.00	$1,040.00	$880.00	$880.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PBP	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$1,906.08	$2,252.64	$1,906.08	$1,906.08	$0.00	$0.00	$0.00	$0.00	$0.00
903	PBP	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$608.91	$701.41	$608.91	$608.91	$0.00	$0.00	$0.00	$0.00	$0.00
903	PBZ	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$0.00	$5,093.92	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PBZ	600	OAH	NE	404	En Del OH	$0.00	$0.00	$0.00	$0.00	$4,869.12	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PBZ	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$508.16	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PBZ	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$640.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PBZ	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$1,386.24	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PBZ	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$422.29	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCA	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$0.00	$2,755.36	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCA	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$285.84	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCA	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$360.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCA	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$779.76	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCA	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$228.42	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCB	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$9,576.00	$17,094.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCB	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$1,270.40	$2,382.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCB	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$1,600.00	$3,000.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCB	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$3,465.60	$6,498.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCB	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$793.85	$1,417.09	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCD	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$4,056.00	$6,137.40	$4,056.00	$4,056.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCD	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$635.20	$921.04	$635.20	$635.20	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCD	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$800.00	$1,160.00	$800.00	$800.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCD	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$1,732.80	$2,512.56	$1,732.80	$1,732.80	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCD	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$336.24	$508.79	$336.24	$336.24	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCF	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$11,104.00	$13,558.04	$5,552.00	$5,552.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCF	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$1,270.40	$1,572.12	$635.20	$635.20	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCF	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$1,600.00	$1,980.00	$800.00	$800.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCF	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$3,465.60	$4,288.68	$1,732.80	$1,732.80	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCF	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$920.52	$1,123.96	$460.26	$460.26	$0.00	$0.00	$0.00	$0.00	$0.00

903	PCG	600 OAH	NE	150 Heco Labor		$0.00	$0.00	$0.00	$2,760.00	$20,162.40	$2,760.00	$2,760.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCG	600 OAH	NE	406 Admin Tfr to Constr OH		$0.00	$0.00	$0.00	$317.60	$2,826.64	$317.60	$317.60	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCG	600 OAH	NE	421 NPW OH		$0.00	$0.00	$0.00	$400.00	$3,560.00	$400.00	$400.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCG	600 OAH	NE	422 Empl Benefits OH		$0.00	$0.00	$0.00	$866.40	$7,710.96	$866.40	$866.40	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCG	600 OAH	NE	423 Payroll Tax OH		$0.00	$0.00	$0.00	$228.80	$1,671.46	$228.80	$228.80	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCH	600 OAH	NE	150 Heco Labor		$0.00	$0.00	$0.00	$0.00	$27,033.60	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCH	600 OAH	NE	406 Admin Tfr to Constr OH		$0.00	$0.00	$0.00	$0.00	$3,970.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCH	600 OAH	NE	421 NPW OH		$0.00	$0.00	$0.00	$0.00	$5,000.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCH	600 OAH	NE	422 Empl Benefits OH		$0.00	$0.00	$0.00	$0.00	$10,830.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCH	600 OAH	NE	423 Payroll Tax OH		$0.00	$0.00	$0.00	$0.00	$2,241.09	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCM	600 OAH	NE	150 Heco Labor		$0.00	$0.00	$0.00	$2,760.00	$17,227.80	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCM	600 OAH	NE	406 Admin Tfr to Constr OH		$0.00	$0.00	$0.00	$317.60	$2,429.64	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCM	600 OAH	NE	421 NPW OH		$0.00	$0.00	$0.00	$400.00	$3,060.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCM	600 OAH	NE	422 Empl Benefits OH		$0.00	$0.00	$0.00	$866.40	$6,627.96	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCM	600 OAH	NE	423 Payroll Tax OH		$0.00	$0.00	$0.00	$228.80	$1,428.18	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCP	600 OAH	NE	150 Heco Labor		$0.00	$0.00	$0.00	$7,056.00	$20,481.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCP	600 OAH	NE	406 Admin Tfr to Constr OH		$0.00	$0.00	$0.00	$952.80	$2,937.80	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCP	600 OAH	NE	421 NPW OH		$0.00	$0.00	$0.00	$1,200.00	$3,700.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCP	600 OAH	NE	422 Empl Benefits OH		$0.00	$0.00	$0.00	$2,599.20	$8,014.20	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCP	600 OAH	NE	423 Payroll Tax OH		$0.00	$0.00	$0.00	$584.94	$1,697.87	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCS	600 OAH	NE	150 Heco Labor		$0.00	$0.00	$0.00	$12,017.60	$13,818.44	$23,678.40	$23,678.40	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCS	600 OAH	NE	406 Admin Tfr to Constr OH		$0.00	$0.00	$0.00	$1,111.60	$1,318.04	$2,540.80	$2,540.80	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCS	600 OAH	NE	421 NPW OH		$0.00	$0.00	$0.00	$1,400.00	$1,660.00	$3,200.00	$3,200.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCS	600 OAH	NE	422 Empl Benefits OH		$0.00	$0.00	$0.00	$3,032.40	$3,595.56	$6,931.20	$6,931.20	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCS	600 OAH	NE	423 Payroll Tax OH		$0.00	$0.00	$0.00	$996.26	$1,145.55	$1,962.94	$1,962.94	$0.00	$0.00	$0.00	$0.00	$0.00
903	PNC	600 OAH	NE	150 Heco Labor		$0.00	$0.00	$0.00	$0.00	$3,577.92	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PNC	600 OAH	NE	406 Admin Tfr to Constr OH		$0.00	$0.00	$0.00	$0.00	$381.12	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PNC	600 OAH	NE	421 NPW OH		$0.00	$0.00	$0.00	$0.00	$480.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PNC	600 OAH	NE	422 Empl Benefits OH		$0.00	$0.00	$0.00	$0.00	$1,039.68	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PNC	600 OAH	NE	423 Payroll Tax OH		$0.00	$0.00	$0.00	$0.00	$296.61	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PNL	600 OAH	NE	150 Heco Labor		$0.00	$0.00	$0.00	$0.00	$3,331.20	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PNL	600 OAH	NE	406 Admin Tfr to Constr OH		$0.00	$0.00	$0.00	$0.00	$381.12	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PNL	600 OAH	NE	421 NPW OH		$0.00	$0.00	$0.00	$0.00	$480.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PNL	600 OAH	NE	422 Empl Benefits OH		$0.00	$0.00	$0.00	$0.00	$1,039.68	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PNL	600 OAH	NE	423 Payroll Tax OH		$0.00	$0.00	$0.00	$0.00	$276.16	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PQE	600 OAH	NE	150 Heco Labor		$0.00	$0.00	$0.00	$0.00	$1,602.80	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PQE	600 OAH	NE	406 Admin Tfr to Constr OH		$0.00	$0.00	$0.00	$0.00	$190.56	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PQE	600 OAH	NE	421 NPW OH		$0.00	$0.00	$0.00	$0.00	$240.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PQE	600 OAH	NE	422 Empl Benefits OH		$0.00	$0.00	$0.00	$0.00	$519.84	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PQE	600 OAH	NE	423 Payroll Tax OH		$0.00	$0.00	$0.00	$0.00	$132.87	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
				TOTAL	**$579,141.66**	$0.00	$0.00	$0.00	$100,856.88	$322,763.76	$77,760.51	$77,760.51	$0.00	$0.00	$0.00	$0.00	$0.00

OUTSIDE SERVICES

NARUC #	*RA #	*Act #	*Loc #	*Ind #	*EE #	Line item		9-Jan	9-Feb	9-Mar	9-Apr	9-May	9-Jun	9-Jul	9-Aug	9-Sep	9-Oct	9-Nov	9-Dec
903	PCA	600	OAH	NE	501	VENDOR IMPLEMENTATION-(PEACE)		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$47,778.83	$0.00	$0.00	$0.00	$0.00
903	PCA	600	OAH	NE	501	USER PROCEDURE DEV-(MOSAIC)		$0.00	$0.00	$0.00	$106,990.71	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCA	600	OAH	NE	501	VENDOR IMPLEMENTATION-(PEACE)		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$23,889.41	$0.00	$0.00	$0.00	$0.00
903	PCA	600	OAH	NE	501	CONVERSION LEAD-(TYC/T.Hull)		$0.00	$0.00	$0.00	$0.00	$0.00	$3,395.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCA	600	OAH	NE	501	VENDOR IMPLEMENTATION-(PEACE)		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$61,428.86	$0.00	$0.00	$0.00	$0.00
903	PCA	600	OAH	NE	501	CONVERSION LEAD-(TYC/T.Hull)		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$13,580.00	$13,580.00	$0.00	$0.00	$0.00	$0.00
903	PCA	600	OAH	NE	501	CUTOVER MGR-(BASS/H. Spanke)		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$34,059.00	$17,030.00	$0.00	$0.00	$0.00	$0.00
903	PCA	600	OAH	NE	501	PROJ MGR-(BASS/C.Calvo)		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$37,464.00	$37,464.00	$0.00	$0.00	$0.00	$0.00
903	PCA	600	OAH	NE	501	QUALITY ASSURANCE-(ADS/Goldblatt)		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$6,366.00	$6,366.00	$0.00	$0.00	$0.00	$0.00
903	PCA	600	OAH	NE	501	VENDOR EXPENSES-(PEACE)		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$1.00	$0.00	$0.00	$0.00	$0.00
903	PCA	600	OAH	NE	501	VENDOR IMPLEMENTATION-(PEACE)		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$108,071.16	$0.00	$0.00	$0.00	$0.00
						TOTAL:	**$517,463.97**	$0.00	$0.00	$0.00	$106,990.71	$0.00	$3,395.00	$91,469.00	$315,609.26	$0.00	$0.00	$0.00	$0.00

RECLASSED ON-COST

NARUC #	*RA #	*Act #	*Loc #	*Ind #	*EE #	Line item		9-Jan	9-Feb	9-Mar	9-Apr	9-May	9-Jun	9-Jul	9-Aug	9-Sep	9-Oct	9-Nov	9-Dec
903	PBP	600	OAH	NE	404	En Del OH		$6,695.04	$6,695.04	$6,695.04	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PBP	600	OAH	NE	406	Admin Tfr to Constr OH		$698.72	$698.72	$698.72	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCB	600	OAH	NE	406	Admin Tfr to Constr OH		$1,270.40	$1,270.40	$1,270.40	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCD	600	OAH	NE	406	Admin Tfr to Constr OH		$635.20	$635.20	$635.20	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCF	600	OAH	NE	406	Admin Tfr to Constr OH		$1,270.40	$1,270.40	$1,270.40	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCG	600	OAH	NE	406	Admin Tfr to Constr OH		$317.60	$317.60	$317.60	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCM	600	OAH	NE	406	Admin Tfr to Constr OH		$317.60	$317.60	$317.60	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCP	600	OAH	NE	406	Admin Tfr to Constr OH		$952.80	$952.80	$952.80	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903	PCS	600	OAH	NE	406	Admin Tfr to Constr OH		$3,017.20	$3,017.20	$3,017.20	$1,905.60	$1,905.60	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
						TOTAL	**$49,336.08**	$15,174.96	$15,174.96	$15,174.96	$1,905.60	$1,905.60	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

SOFTWARE

NARUC #	*RA #	*Act #	*Loc #	*Ind #	*EE #	Line item		9-Jan	9-Feb	9-Mar	9-Apr	9-May	9-Jun	9-Jul	9-Aug	9-Sep	9-Oct	9-Nov	9-Dec
903	PCA	600	OAH	NE	462	SAR Repl, Toad License, Centrify		$0.00	$0.00	$2,774.13	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
						TOTAL	**$2,774.13**	$0.00	$0.00	$2,774.13	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

TRAINING

NARUC #	*RA #	*Act #	*Loc #	*Ind #	*EE #	Line item	9-Jan	9-Feb	9-Mar	9-Apr	9-May	9-Jun	9-Jul	9-Aug	9-Sep	9-Oct	9-Nov	9-Dec
910	PSA	600	OAH	NE	150	Heco Trainee	$0.00	$0.00	$0.00	$0.00	$1,923.52	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
910	PSA	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$127.04	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
910	PSA	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$160.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
910	PSA	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$346.56	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
910	PSA	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$159.46	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
910	PSD	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$0.00	$6,718.08	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
910	PSD	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$762.24	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
910	PSD	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$960.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
910	PSD	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$2,079.36	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
910	PSD	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$556.93	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
910	PSM	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$0.00	$11,410.88	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
910	PSM	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$1,270.40	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
910	PSM	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$1,600.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
910	PSM	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$3,465.60	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
910	PSM	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$945.96	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
910	PSN	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$0.00	$11,111.68	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
910	PSN	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$1,270.40	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
910	PSN	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$1,600.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
910	PSN	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$3,465.60	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
910	PSN	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$921.16	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
910	PSR	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$0.00	$10,049.28	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
910	PSR	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$1,143.36	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
910	PSR	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$1,440.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
910	PSR	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$3,119.04	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
910	PSR	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$833.09	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
					TOTAL	**$67,439.64**	$0.00	$0.00	$0.00	$0.00	$67,439.64	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

RECLASSED ON-COST

NARUC #	*RA #	*Act #	*Loc #	*Ind #	*EE #	Line item	9-Jan	9-Feb	9-Mar	9-Apr	9-May	9-Jun	9-Jul	9-Aug	9-Sep	9-Oct	9-Nov	9-Dec
910	PSM	600	OAH	NE	406	Admin Tfr to Constr OH	$158.80	$158.80	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
910	PSN	600	OAH	NE	406	Admin Tfr to Constr OH	$238.20	$238.20	$238.20	$238.20	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
					TOTAL	**$1,270.40**	$397.00	$397.00	$238.20	$238.20	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

TRAINING

NARUC #	*RA #	*Act #	*Loc #	*Ind #	*EE #	Line item	9-Jan	9-Feb	9-Mar	9-Apr	9-May	9-Jun	9-Jul	9-Aug	9-Sep	9-Oct	9-Nov	9-Dec
920	P2V	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$0.00	$3,852.16	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
920	P3V	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$0.00	$1,441.20	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
920	PAA	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$0.00	$277.60	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
920	PAC	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$0.00	$277.60	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
920	PAD	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$0.00	$214.80	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
920	PFD	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$2,776.00	$2,776.00	$2,776.00	$2,776.00	$0.00	$0.00	$0.00	$0.00	$0.00
920	PJA	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$0.00	$961.76	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
920	PJB	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$0.00	$654.40	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
920	PJC	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$0.00	$1,628.16	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
920	PJW	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$0.00	$3,126.40	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
920	PKI	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$0.00	$2,020.40	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
920	PNP	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$0.00	$4,169.76	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
920	PQC	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$0.00	$1,388.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
920	PSP	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$0.00	$5,858.88	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
920	PVF	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$0.00	$354.32	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
920	PVM	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$0.00	$2,613.36	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
920	PVP	600	OAH	NE	150	Heco Labor	$0.00	$0.00	$0.00	$0.00	$1,062.96	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
					Total	**$41,005.76**	$0.00	$0.00	$0.00	$2,776.00	$32,677.76	$2,776.00	$2,776.00	$0.00	$0.00	$0.00	$0.00	$0.00

TRAINING

NARUC #	*RA #	*Act #	*Loc #	*Ind #	*EE #	Line item	9-Jan	9-Feb	9-Mar	9-Apr	9-May	9-Jun	9-Jul	9-Aug	9-Sep	9-Oct	9-Nov	9-Dec
921	P2V	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$127.04	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	P2V	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$160.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	P2V	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$346.56	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	P2V	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$319.34	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	P3V	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$190.56	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	P3V	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$240.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	P3V	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$519.84	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	P3V	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$119.48	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PAA	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$31.76	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PAA	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$40.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PAA	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$86.64	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PAA	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$23.01	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PAC	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$31.76	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PAC	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$40.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PAC	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$86.64	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PAC	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$23.01	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PAD	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$31.76	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PAD	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$40.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PAD	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$86.64	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PAD	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$17.81	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PFD	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$317.60	$317.60	$317.60	$317.60	$0.00	$0.00	$0.00	$0.00	$0.00
921	PFD	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$400.00	$400.00	$400.00	$400.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PFD	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$866.40	$866.40	$866.40	$866.40	$0.00	$0.00	$0.00	$0.00	$0.00
921	PFD	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$230.13	$230.13	$230.13	$230.13	$0.00	$0.00	$0.00	$0.00	$0.00
921	PJA	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$63.52	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PJA	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$80.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PJA	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$173.28	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PJA	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$79.73	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PJB	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$63.52	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PJB	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$80.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PJB	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$173.28	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PJB	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$54.25	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PJC	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$190.56	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PJC	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$240.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PJC	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$519.84	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PJC	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$134.97	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PJW	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$317.60	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PJW	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$400.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PJW	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$866.40	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PJW	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$259.18	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PKI	600	OAH	NE	406	Admin Tfr to Constr OH	$0.00	$0.00	$0.00	$0.00	$254.08	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PKI	600	OAH	NE	421	NPW OH	$0.00	$0.00	$0.00	$0.00	$320.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PKI	600	OAH	NE	422	Empl Benefits OH	$0.00	$0.00	$0.00	$0.00	$693.12	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PKI	600	OAH	NE	423	Payroll Tax OH	$0.00	$0.00	$0.00	$0.00	$167.49	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

921	PNP	600	OAH	NE	406	Admin Tfr to Constr OH		$0.00	$0.00	$0.00	$0.00	$476.40	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PNP	600	OAH	NE	421	NPW OH		$0.00	$0.00	$0.00	$0.00	$600.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PNP	600	OAH	NE	422	Empl Benefits OH		$0.00	$0.00	$0.00	$0.00	$1,299.60	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PNP	600	OAH	NE	423	Payroll Tax OH		$0.00	$0.00	$0.00	$0.00	$345.67	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PQC	600	OAH	NE	406	Admin Tfr to Constr OH		$0.00	$0.00	$0.00	$0.00	$158.80	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PQC	600	OAH	NE	421	NPW OH		$0.00	$0.00	$0.00	$0.00	$200.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PQC	600	OAH	NE	422	Empl Benefits OH		$0.00	$0.00	$0.00	$0.00	$433.20	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PQC	600	OAH	NE	423	Payroll Tax OH		$0.00	$0.00	$0.00	$0.00	$115.07	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PSP	600	OAH	NE	406	Admin Tfr to Constr OH		$0.00	$0.00	$0.00	$0.00	$635.20	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PSP	600	OAH	NE	421	NPW OH		$0.00	$0.00	$0.00	$0.00	$800.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PSP	600	OAH	NE	422	Empl Benefits OH		$0.00	$0.00	$0.00	$0.00	$1,732.80	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PSP	600	OAH	NE	423	Payroll Tax OH		$0.00	$0.00	$0.00	$0.00	$485.70	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PVF	600	OAH	NE	406	Admin Tfr to Constr OH		$0.00	$0.00	$0.00	$0.00	$31.76	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PVF	600	OAH	NE	421	NPW OH		$0.00	$0.00	$0.00	$0.00	$40.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PVF	600	OAH	NE	422	Empl Benefits OH		$0.00	$0.00	$0.00	$0.00	$86.64	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PVF	600	OAH	NE	423	Payroll Tax OH		$0.00	$0.00	$0.00	$0.00	$29.37	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PVM	600	OAH	NE	406	Admin Tfr to Constr OH		$0.00	$0.00	$0.00	$0.00	$317.60	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PVM	600	OAH	NE	421	NPW OH		$0.00	$0.00	$0.00	$0.00	$400.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PVM	600	OAH	NE	422	Empl Benefits OH		$0.00	$0.00	$0.00	$0.00	$866.40	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PVM	600	OAH	NE	423	Payroll Tax OH		$0.00	$0.00	$0.00	$0.00	$216.65	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PVP	600	OAH	NE	406	Admin Tfr to Constr OH		$0.00	$0.00	$0.00	$0.00	$95.28	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PVP	600	OAH	NE	421	NPW OH		$0.00	$0.00	$0.00	$0.00	$120.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PVP	600	OAH	NE	422	Empl Benefits OH		$0.00	$0.00	$0.00	$0.00	$259.92	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PVP	600	OAH	NE	423	Payroll Tax OH		$0.00	$0.00	$0.00	$0.00	$88.12	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
						TOTAL	**$24,783.37**	$0.00	$0.00	$0.00	$1,814.13	$19,340.98	$1,814.13	$1,814.13	$0.00	$0.00	$0.00	$0.00	$0.00

RECLASSED ON-COST

NARUC #	*RA #	*Act #	*Loc #	*Ind #	*EE #	Line item		9-Jan	9-Feb	9-Mar	9-Apr	9-May	9-Jun	9-Jul	9-Aug	9-Sep	9-Oct	9-Nov	9-Dec
921	PED	600	OAH	NE	406	Admin Tfr to Constr OH		$2,596.38	$2,596.38	$2,596.38	$2,596.38	$2,596.38	$865.46	$865.46	$0.00	$0.00	$0.00	$0.00	$0.00
921	PAC	600	OAH	NE	406	Admin Tfr to Constr OH		$539.92	$539.92	$158.80	$158.80	$158.80	$158.80	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PEC	600	OAH	NE	406	Admin Tfr to Constr OH		$432.73	$432.73	$432.73	$432.73	$432.73	$432.73	$432.73	$0.00	$0.00	$0.00	$0.00	$0.00
921	PFD	600	OAH	NE	406	Admin Tfr to Constr OH		$317.60	$317.60	$317.60	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PNA	600	OAH	NE	406	Admin Tfr to Constr OH		$539.92	$539.92	$158.80	$158.80	$158.80	$158.80	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921	PSP	600	OAH	NE	406	Admin Tfr to Constr OH		$158.80	$158.80	$158.80	$158.80	$158.80	$158.80	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
						TOTAL	**$23,077.61**	$4,585.35	$4,585.35	$3,823.11	$3,505.51	$3,505.51	$1,774.59	$1,298.19	$0.00	$0.00	$0.00	$0.00	$0.00

Software

NARUC #	*RA #	*Act #	*Loc #	*Ind #	*EE #	Line item		9-Jan	9-Feb	9-Mar	9-Apr	9-May	9-Jun	9-Jul	9-Aug	9-Sep	9-Oct	9-Nov	9-Dec
921	PEI	600	OAH	NE	463	Oracle, Svc Gd, Weblogic Lic, Unix		$0.00	$0.00	$12,283.46	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
						TOTAL	**$12,283.46**	$0.00	$0.00	$12,283.46	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

OUTSIDE SERVICES

NARUC #	*RA #	*Act #	*Loc #	*Ind #	*EE #	Line item		9-Jan	9-Feb	9-Mar	9-Apr	9-May	9-Jun	9-Jul	9-Aug	9-Sep	9-Oct	9-Nov	9-Dec
921	PEZ	600	OAH	NE	502	Legal Services-Ph6		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$679.00	$0.00	$0.00	$0.00	$0.00	$0.00
						TOTAL	**$679.00**	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$679.00	$0.00	$0.00	$0.00	$0.00	$0.00

TRAINING

NARUC #	*RA #	*Act #	*Loc #	*Ind #	*EE #	Line item		9-Jan	9-Feb	9-Mar	9-Apr	9-May	9-Jun	9-Jul	9-Aug	9-Sep	9-Oct	9-Nov	9-Dec
925	PFS	600	OAH	NE	150	Heco Labor		$0.00	$0.00	$0.00	$0.00	$277.60	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
925	PFS	600	OAH	NE	406	Admin Tfr to Constr OH		$0.00	$0.00	$0.00	$0.00	$31.76	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
925	PFS	600	OAH	NE	421	NPW OH		$0.00	$0.00	$0.00	$0.00	$40.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
925	PFS	600	OAH	NE	422	Empl Benefits OH		$0.00	$0.00	$0.00	$0.00	$86.64	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
925	PFS	600	OAH	NE	423	Payroll Tax OH		$0.00	$0.00	$0.00	$0.00	$23.01	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
					TOTAL		**$459.01**	$0.00	$0.00	$0.00	$0.00	$459.01	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

CA-IR-150

Ref: HECO T-9, page 17 (CIS System Benefits).

At page 17 of his testimony, Mr. Yamamoto describes the "expected benefits" from the new CIS system. Please provide the following information:

a. Describe each of the customer accounting processes that are "currently performed manually," indicating the approximate number of employees by RA and annual labor hours involved in each of such manual efforts.
b. Explain in detail and quantify where possible how improved integration with other new systems, such as Outage Management, ELLIPSE and HR Suite will simplify operations and save costs.
c. Provide the Company's best estimate of the numbers of customer self-service transactions that are anticipated via the internet, indicating and quantifying, as possible, whether any significant employee headcounts and labor hour savings may be enabled by such self-service.
d. Provide the approximate actual labor hours and non-labor expenses incurred by HECO in each of the years 2006, 2007 and 2008, to-date, by NARUC account associated with licensing, operation, maintenance and enhancement of the existing ACCESS system.
e. Provide an analysis of the projected test year Customer Accounts expenses, illustrating how each of the anticipated CIS benefits and terminating ACCESS system costs have been quantified within proposed test year amounts.

<u>HECO Response:</u>

a. Customer accounting processes "currently performed manually" include the following:

- Manual Billing – Includes calculating charges on external spreadsheets and manually inputting calculated results into the legacy CIS to generate customer statements. Currently, there are four Billing Representatives who share in the responsibilities of performing such manual processes. It is estimated that approximately 1,500 hours are spent annually to complete these tasks under RA PCB, Customer Accounting & Billing. Manual billing currently performed in ACCESS are Net Metering and any Time of Use rates, which includes Rider T, M and I as well as HECO's recently approved TOU-R and TOU-C rates. It is anticipated that the migration to these optional rates will become more popular.

- Trouble Tickets – Includes the manual completion and entry of trouble tickets into the Outage Management System and obtaining the status of the recorded events.

b. The new CIS is being integrated with the HECO's Ellipse ("ERP"), HR Suite ("HR"), and Outage Management System ("OMS") systems. The integration with each of these systems is as follows:

- CIS and ERP – The CIS will be the primary system for entry of payments for work orders. Work orders are used to account for activities performed by HECO for its customers. The CIS will allow the validation of work order numbers when payments are received. This will reduce the number of transactions that are incorrectly posted and reduce the number of corrections caused by erroneous posting.
- CIS and HR – The CIS will validate that customers assigned an employee rate correctly qualify for the rate. This will improve accuracy and reduce the number of customers erroneously receiving an employee rate. The integration will ensure that a change in employment status will also appropriately be reflected in the customers' rates, e.g., employee rates for qualified retirees.
- CIS and OMS – The integration of CIS and OMS will allow a customer service representative ("CSR") to record trouble events in the CIS which will immediately pass the information to the OMS. Also, because of this integration, as trouble orders are processed, the information will then be passed from the OMS to the CIS, ensuring that up-to-the-minute status of the work is reflected in the CIS. As a result CSRs or customers who use the Interactive Voice Response system or HECO's online service, HECO.COM, will also have access to real-time status of trouble

work. Also, scheduled outages that are initiated in the OMS will update customer and premise records in the CIS. By so doing, customers will have access to accurate and timely information about scheduled work that may affect their service. The batch integration of the CIS and OMS systems will provide a daily synchronization of customer and premises data between these two systems. This will ensure that the customer and premises information used by the CSRs and Operations, e.g., outage information, are identical which will reduce errors and confusion currently attributable to conflicting information.

c. The number of e-service requests received has steadily increased from the inception of the Company's website in December 2001. Over the past two calendar years the number of transactions have increased from 352 in January 2007 to 509 in August 2008. It is anticipated that this trend will continue in the future. However, significant savings are not expected in employee headcounts and labor hour savings in the near-term periods, although the Company is hopeful that the growth in the use of e-service requests will decrease the need for additional labor resources in the future.

d. The HECO ITS-related ACCESS system costs include the following:

	2006	**2007**	**2008**
Labor hours	4,879	4,530	3,890
Labor Expense	$262,254	$256,518	$218,778
Non-Labor Expense	$740,698	$691,402	$710,147
Total Expense	$1,002,952	$947,920	$928,925

Attachment 1, pages 4 and 5, provides the supporting data and calculation for these estimated costs.

ITS-related ACCESS system costs include direct Development Services Division labor and non-labor application support costs and allocated Infrastructure & Operations Division labor and non-labor mainframe operations costs. Mainframe costs are allocated as three applications, Ellipse, ACCESS, and Tesseract reside on the mainframe.

The costs shown above are charged to the ITS Clearing Account which are subsequently distributed to multiple NARUC accounts as shown on HECO-WP-1115, pages 1 through 5. The NARUC accounts receiving the majority of the clearing account distributions include: 921, 903, 588, 902, and 910.

e. As noted in the Company's response to CA-IR-145, a copy of the business case analysis of the CIS project was filed as Exhibit A, "Customer Information System Assessment and Recommendation for Hawaiian Electric Company", of the Company's Application in Docket No. 04-0268 ("CIS Docket"), filed August 26, 2004.

ITS related ACCESS system costs included in the 2009 Test year are as follows:

	2009 Test Year
Labor Expense	$81,508
Non-Labor Expense	$458,095
Total Expense	$539,603

Attachment 1, page 1 through 3, provides the supporting data and calculation for these estimated 2009 costs. ITS-related ACCESS system costs of $539,603 noted above are a subset of total ITS Development Services and Infrastructure and Operations costs of $1,935,812, shown on Attachment 1, which are included in Exhibit HECO-WP-1115. Total ITS Costs are subdivided among systems running on the Mainframe as well as among companies using ACCESS to derive ITS-related ACCESS system costs.

Attachment 1 shows both the proration of total Mainframe (Infrastructure and Operations) costs to the ACCESS system as well as the proration of CIS costs among HECO, HELCO and MECO.

In addition to ITS-related ACCESS costs, there will be a cost of $438,000 in 2009 for software maintenance and support payable to the vendor (see the Company's response to CA-IR-2, HECO T-9, Attachment 2, page 3 of 36).

Hawaiian Electric Company, Inc.
ITS Department
Billing System (Legacy CIS) Operating Costs - 2009 Budget

		2009 Budget			2009 CIS Budget		
Source: Workorder Number/Name		NonLabor Expense HECO-WP-1115 Reference	Att. 1 Ref.	Amount	Att. 1 Ref.	WO Alloca-tion to CIS	Amount
I. Development Services (PED)							
A. **Consultants**							
IT000014	Outsource Support - CB profile	Page 85		235,000		100.0%	235,000
	Total PED			235,000			235,000
II. Infrastructure & Operations (PEI) - Mainframe							
A. Labor							
IT000069	HECO ITS Labor - Data Ctr Spvr, operators, tech	N/A	***Page 2***	360,663	***Page 3***	34.2%	123,397
							-
B. Outside Services							-
IT000004/501	Outside Svcs - Eq Main, support	Page 46		367,182	***Page 3***	34.2%	125,627
IT900002/501	Software Maintenance	Page 144		709,010	***Page 3***	34.2%	242,580
IT900002/462	Software	Page 144		60,187	***Page 3***	34.2%	20,592
IT000004/570	Mainframe (hardware) lease	Page 46		62,342	***Page 3***	34.2%	21,330
IT900012/461	Outsourced Support	Page 153		112,000	***Page 3***	34.2%	38,319
							-
C. Materials							-
IT000004/205	ProCard Supplies - Paper	Page 44		17,540	***Page 3***	34.2%	6,001
IT000004/201	Supplies, parts	Page 43		11,888	***Page 3***	34.2%	4,067
	Total PEI			1,700,812			581,913
D. Total Costs				**1,935,812**			**816,913**

III. HECO Portion of Total

	CB Percentage of total		CB Pro-portion		
HECO	22.6%	***Page 3***	0.66	1,278,680	539,603
HELCO	6.7%		0.19	377,199	159,178
MECO	4.9%		0.14	279,934	118,132
	34.2%		1.00	1,935,812	816,913

IV. Labor/Non-Labor Breakdown - Total

Labor	(ref: II. A.)	Total Costs	360,663	123,397
Non-Labor	(ref: I. A.+ II B. + II C.)	Total Costs	1,575,149	693,516
Total			1,935,812	816,913

V. Labor/Non-Labor Breakdown - HECO Portion

		CB Pro-portion	
Labor	HECO	0.66	**81,508**
Non-Labor	HECO	0.66	**458,095**
Total			**539,603**

Hawaiian Electric Company, Inc.
ITS Department
Labor - 2009 Budget

	FTE	Std Labor Rate	Annual hours	Months	Labor $	CIS %	
Data Center Supv	1	56.78	2080	5	49,209	34.2%	16,830
Computer Operators	5	49.07	2080	5	212,637	34.2%	72,722
Technician	1	57.01	2080	5	49,409	34.2%	16,898
I/O Analyst	1	57.01	2080	5	49,409	34.2%	16,898
					360,663		123,347

Page 1

Hawaiian Electric Company, Inc.
ITS Department
Mainframe Allocation Percentages based on System Users

System	Total	Ellipse SU	Tesseract FB	ACCESS CB	
Total System Users	2385	1497	72	816	
System Allocation	100.0%	62.8%	3.0%	34.2%	***Page 1***
HECO	1624	1037	48	539	
	68.1%	43.5%	2.0%	22.6%	
HELCO	432	261	12	159	
	18.1%	10.9%	0.5%	6.7%	
MECO	329	199	12	118	
	13.8%	8.3%	0.5%	4.9%	
Proportions with in Systems					
HECO		0.69	0.67	0.66	***Page 1***
HELCO		0.17	0.17	0.19	
MECO		0.13	0.17	0.14	

Hawaiian Electric Company, Inc.
ITS Department
Billing System (CIS) Operating Costs - Mainframe 2006-2008

		Total charges into clearing			WO Allocation to CIS	CIS Allocation			
Source: Workorder Number/Name		2006	2007	2008	% (Note 1)	2006	2007	2008	
Development Services (PED)									
Labor									
IT000093-013	Develop Apps - ACCESS	165	-	-	100.0%	165	-	-	CB
IT000093-051	Develop Apps - New CIS Planning	18,102	35,704	25,853	100.0%	18,102	35,704	25,853	CB
IT000093-052	Develop Apps - New CIS Support	14,214	31,028	14,733	100.0%	14,214	31,028	14,733	CB
IT000093-058	Develop Apps - AMI Planning	-	759	7,977	100.0%	-	759	7,977	CB
IT000093-059	Develop Apps - AMI Support	-	-	-	100.0%	-	-	-	CB
IT000100-001	Maintain Apps - ACCESS - BSC	-	233	-	100.0%	-	233	-	CB
IT000101-001	Maintain Apps - ACCESS - I/O	-	-	-	100.0%	-	-	-	CB
IT000102-001	Maintain Apps - ACCESS - DS	16,191	246	1,218	100.0%	16,191	246	1,218	CB
IT000102-002	Maintain Apps - ACCESS - Rate Case Support - DS	-	-	-	100.0%	-	-	-	CB
IT000102-020	Maintain Apps - ACCESS - Prod Prob Res - DS	2,961	-	-	100.0%	2,961	-	-	CB
IT000102-035	Maintain Apps - CB (ED)	-	-	-	100.0%	-	-	-	
Consultants									
IT000014	Outsource Support - CB profile	719,760	561,820	573,835	100.0%	719,760	561,820	573,835	CB
IT900008	Enterprise system and Lifecycle Support for CB	48,175	-	-		-	-	-	CB
	Total PED	819,568	629,790	623,615		771,393	629,790	623,615	
Infrastructure & Operations (PEI) - Mainframe									
Labor									
IT000069	HECO ITS Labor - Data Ctr Spvr, operators, tech	1,009,527	936,392	822,566	34.2%	345,398	320,376	281,431	All Dsktop -HECO
Outside Services									
IT000004/501	Outside Services - Equipment Maint, support	258,415	348,504	332,568	34.2%	88,414	119,236	113,784	User Prof
IT900002/501	Software Maintenance	798,400	854,010	832,887	34.2%	273,163	292,190	284,963	SU
IT900002/462	Software	-	60,187	-	34.2%	-	20,592	-	SU
IT000004/570	Mainframe (hardware) lease	74,559	64,657	69,461	34.2%	25,509	22,122	23,765	User Prof
IT900012/461	Outsourced Support	-	60,489	193,600	34.2%	-	20,696	66,238	User Prof
Materials									
IT000004/205	ProCard Supplies - Paper	42,401	29,428	36,583	34.2%	14,507	10,069	12,516	User Prof
IT000004/201	Supplies, parts		0		34.2%	-	0	-	User Prof
	Total PEI	2,183,302	2,353,667	2,287,665		746,991	805,280	782,698	
Total CIS-Before costs		**3,002,870**	**2,983,457**	**2,911,281**		**1,518,384**	**1,435,070**	**1,406,314**	
Labor		**1,061,160**	**1,004,362**	**872,347**		**397,031**	**388,346**	**331,212**	
Non-Labor		**1,941,710**	**1,979,095**	**2,038,934**		**1,121,353**	**1,046,724**	**1,075,102**	
Total		**3,002,870**	**2,983,457**	**2,911,281**		**1,518,384**	**1,435,070**	**1,406,314**	

	CB Percentage of total	CB Proportion						
HECO	22.6%	0.66	1,983,513	1,970,691	1,923,015	1,002,952	947,920	928,925
HELCO	6.7%	0.19	585,118	581,335	567,272	295,862	279,628	274,024
MECO	4.9%	0.14	434,238	431,431	420,994	219,570	207,522	203,364
	34.2%	1.00	3,002,870	2,983,457	2,911,281	1,518,384	1,435,070	1,406,314

Labor	**262,254**	**256,518**	**218,778**
Non-Labor	**740,698**	**691,402**	**710,147**
Total	**1,002,952**	**947,920**	**928,925**
Actual weighted labor rate	53.75	56.63	56.25
Estimated hours	4,879	4,530	3,890

Notes
1) Mainframe Allocation Percentages (CB Percentage) based on System Users shown on "MF Allocations" page
2) Estimated Labor hours based on actual weighted labor rate shown on the "Labor Rates" page

Hawaiian Electric Company, Inc.
ITS Department
Weighted ITS Labor Rates for ACCESS charges 2006-2008

	Dollars			Hours			Dollars/Hour		
	2006	2007	2008	2006	2007	2008	2006	2007	2008
IT000069	1,009,527	936,392	822,566	18,812.63	16,582.84	14,677.29	53.66	56.47	56.04
IT000093-013	165	-	-	3.00		-	55.10	-	-
IT000093-051	18,102	35,704	25,853	316.00	591.50	433.00	57.28	60.36	59.71
IT000093-052	14,214	31,028	14,733	256.50	537.50	253.50	55.42	57.73	58.12
IT000093-058	-	759	7,977		14.00	124.00	-	54.21	64.33
IT000093-059	-	-	-			-	-	-	-
IT000100-001	-	233	-		4.50	-	-	51.73	-
IT000101-001	-	-	-			-	-	-	-
IT000102-001	16,191	246	1,218	296.90	4.50	21.50	54.53	54.73	56.65
IT000102-002	-	-	-			-	-	-	-
IT000102-020	2,961	-	-	56.50		-	52.40	-	-
IT000102-035	-	-	-			-	-	-	-
Total	1,061,160	1,004,362	872,346	19,742	17,735	15,509	53.75	56.63	56.25

CA-IR-151

Ref: HECO T-14 page 8, & HECO-1404, page 2 (Community Service).

Please provide a detailed breakdown of the $361,000 of test year community service by activity.

HECO Response:

See Attachment 1.

HECO TY 2009 Rate Case
Community Service Activities
Labor and Nonlabor

RA	RA desc	PROJ	EE	EE desc	Total Community Service Activities	Adjustments: AUW/ CAG	Adjustments: Budget Error	Adjustments: Environ-mental Programs Reclass	TY 2009	Reference - HECO T-14
PEZ	ISD Chargeback	NPQEZZZZ	451	IS Exp-Prod & Dev	43,646				43,646	Includes $7,342 of on-cost reversal (Refer to P. Nanbu's direct testimony at HECO T-11, pages 26-32). CA-IR-2, Attachment 1, Page 2.
PQC	Corp Communications	NPQCZZZZ	150	Labor Cost	20,943				20,943	CA-IR-1, Attachment 1, Page 3.
PQC	Corp Communications	NPQCZZZZ	205	Matl-Purchasing Card	500				500	CA-IR-2, Attachment 1, Page 4.
PQC	Corp Communications	NPQCZZZZ	301	Vehicles	14,224				14,224	Includes $1,958 of on-cost reversal (Refer to P. Nanbu's direct testimony at HECO T-11, pages 26-32). CA-IR-2, Attachment 1, Page 4.
PQC	Corp Communications	NPQCZZZZ	501	Outside Svcs-General	1,200				1,200	CA-IR-2, Attachment 1, Page 4.
PQC	Corp Communications	NPQCZZZZ	421	Non-Productive Wages	3,325				3,325	HECO-WP-101(H), Page 1175.
PQE	Educ & Cons Affairs	NPQEZZZZ	150	Labor Cost	128,884		(6,662)		122,222	CA-IR-1, Attachment 1, Page 3.
PQE	Educ & Cons Affairs	NPQEZZZZ	201	Matl-Issues/Purchases	60,457				60,457	CA-IR-2, Attachment 1, Page 4.
PQE	Educ & Cons Affairs	NPQEZZZZ	205	Matl-Purchasing Card	781				781	CA-IR-2, Attachment 1, Page 4.
PQE	Educ & Cons Affairs	NPQEZZZZ	501	Outside Svcs-General	71,197				71,197	CA-IR-2, Attachment 1, Page 4.
PQE	Educ & Cons Affairs	NPQEZZZZ	521	Meals & Entertainment	29				29	CA-IR-2, Attachment 1, Page 4.
PQE	Educ & Cons Affairs	NPQEZZZZ	401	Stores	5,347				5,347	Includes $1,019 of on-cost reversal (Refer to P. Nanbu's direct testimony at HECO T-11, pages 26-32). HECO-WP-101(I), Page 1503.
PQE	Educ & Cons Affairs	NPQEZZZZ	421	Non-Productive Wages	17,960		(960)		17,000	HECO-WP-101(H), Page 1175.
PJW	Water & Haz Mat	P0001168	401	Stores	71			(71)	-	Note (3) at HECO-1404.
PJW	Water & Haz Mat	P0001168	421	Non-Productive Wages	480			(480)	-	Note (3) at HECO-1404.
PJB	Air Quality & Noise	P0001170	401	Stores	5,829			(5,829)	-	Note (3) at HECO-1404.
PJB	Air Quality & Noise	P0001170	421	Non-Productive Wages	9,000			(9,000)	-	Note (3) at HECO-1404.
PJW	Water & Haz Mat	P0001168	150	Labor Cost	3,752			(3,752)	-	Note (3) at HECO-1404.
PJW	Water & Haz Mat	P0001168	201	Matl-Issues/Purchases	800			(800)	-	Note (3) at HECO-1404.
PJW	Water & Haz Mat	P0001168	508	Outside Svcs-Environ	22,550			(22,550)	-	Note (3) at HECO-1404.
PJB	Air Quality & Noise	P0001170	150	Labor Cost	73,620			(73,620)	-	Note (3) at HECO-1404.
PJB	Air Quality & Noise	P0001170	201	Matl-Issues/Purchases	65,906			(65,906)	-	Note (3) at HECO-1404.
PFA	Admin-WFS & Dev	NPFZZZZZ	150	Labor Cost	69	(69)			-	Note (1) at HECO-1404.
PFA	Admin-WFS & Dev	NPFZZZZZ	421	Non-Productive Wages	10	(10)			-	Note (1) at HECO-1404.
PFB	Employee Benefits	NPFZZZZZ	150	Labor Cost	801	(801)			-	Note (1) at HECO-1404.
PFB	Employee Benefits	NPFZZZZZ	421	Non-Productive Wages	110	(110)			-	Note (1) at HECO-1404.
PFC	Compensation	NPFZZZZZ	150	Labor Cost	44	(44)			-	Note (1) at HECO-1404.
PFC	Compensation	NPFZZZZZ	421	Non-Productive Wages	5	(5)			-	Note (1) at HECO-1404.
PFI	Org Development	NPFZZZZZ	150	Labor Cost	158	(158)			-	Note (1) at HECO-1404.
PFI	Org Development	NPFZZZZZ	421	Non-Productive Wages	20	(20)			-	Note (1) at HECO-1404.
PPA	Admin-Ind Rel	NPPZZZZZ	150	Labor Cost	4,715	(4,715)			-	Note (1) at HECO-1404.
PPA	Admin-Ind Rel	NPPZZZZZ	521	Meals & Entertainment	500	(500)			-	Note (1) at HECO-1404.
PPA	Admin-Ind Rel	NPPZZZZZ	421	Non-Productive Wages	930	(930)			-	Note (1) at HECO-1404.
					557,862	(7,363)	(7,622)	(182,007)	360,870	

CA-IR-152

Ref: HECO T-14, page 9 (Corporate Sustainability Report).

Beginning at page 9, the referenced testimony discusses the Corporate Sustainability Report, indicating that the work commenced in 2008. Please provide the following:

a. Please provide a copy of the 2007 report.
b. When does the Company expect that the current or next version of the report will be completed and available for distribution?
c. Please provide the total cost to prepare, print and distribute the updated report and specifically identify the amount included in the 2009 forecast test year.
d. Referring to the response to part (c) above, please breakout the amount of internal Company labor included therein, if any.
e. Is this report the result of a regulatory requirement, legislative request or agreement to which the Company was a party? Please explain.
f. Please explain the basis for the representation that this report will be an annual activity.

HECO Response:

a. Please see Attachment 1.

b. The Company expects to have the 2008 Corporate Sustainability Report completed and available for distribution by the end of the first quarter of 2009.

c. The total direct cost included in the 2009 forecast test year to prepare, print, and distribute the 2008 Corporate Sustainability Report is $83,519.

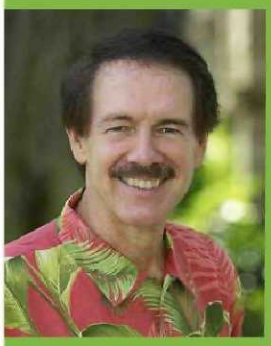
d. The total direct internal labor cost to prepare the 2008 Corporate Sustainability Report is $6,597.

e. The Corporate Sustainability Report is not the result of a regulatory requirement, a legislative request, or an agreement to which the Company was a party. The Company's Corporate Sustainability Report was published to present the Company's strategic decisions and energy policies transparently and to describe the potential impact of our business decisions and operations on the environment to our customers, local communities, government, and elected officials. The report highlights the Company's

renewable energy projects, communicates our efforts to decrease our state's dependence upon fossil fuel, emphasizes energy efficiency and energy conservation, and educates our customers about electricity use in the State of Hawaii.

f. The Company believes that the annual Corporate Sustainability Report is a necessary part of doing business as heightened awareness, expectations of good corporate environmental stewardship, and a desire for increased renewable energy resources from our customers, the communities, and government continues to grow.

Hawaiian Electric Company
2007 Corporate Sustainability Report



Aloha

We are pleased to share with you the first Corporate Sustainability Report from Hawaiian Electric Company and our subsidiaries, Maui Electric Company and Hawaii Electric Light Company.

Though there are many definitions of "sustainability," the one adopted by the Hawaii 2050 Sustainability Task Force is quite encompassing. It means a present and future Hawaii that:

- Respects the culture, character, beauty and history of our state's island communities;
- Strikes a balance between economic, social and community, and environmental priorities;
- Meets the needs of the present without compromising the ability of future generations to meet their own needs.

In reading this report, you can decide for yourself how the electric utilities that serve you are doing and find a baseline to compare how we do in the future. It is also clear that achieving a more sustainable Hawaii will take all of us – utilities, government, communities, businesses, and individuals – working together.

For our part, the Hawaiian Electric companies are committed to working collaboratively with our communities to make the best choices for our future. Too much is at stake to do otherwise.

Put simply, a commitment to sustainable operations and development is a new "bottom line" for all of us.

We hope you find this report useful as you think about energy use, climate change, and how each of us can help to make Hawaii a better place to live, and a better place to pass on to future generations.

T. Michael May
President and Chief Executive Officer
Hawaiian Electric Company, Inc.

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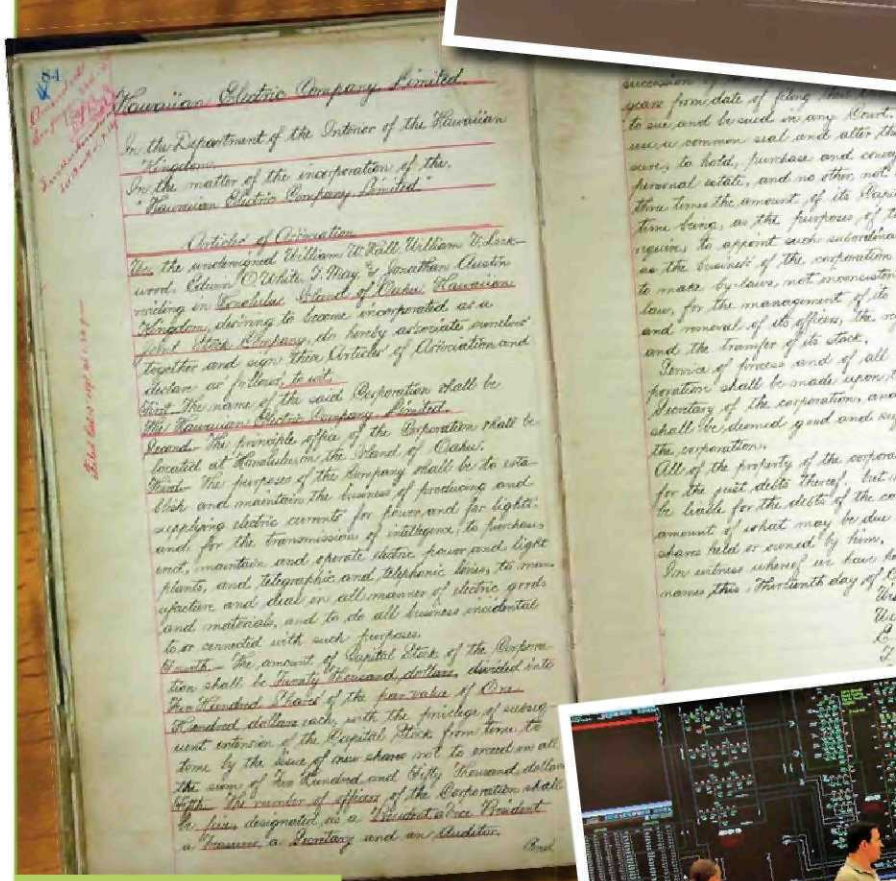
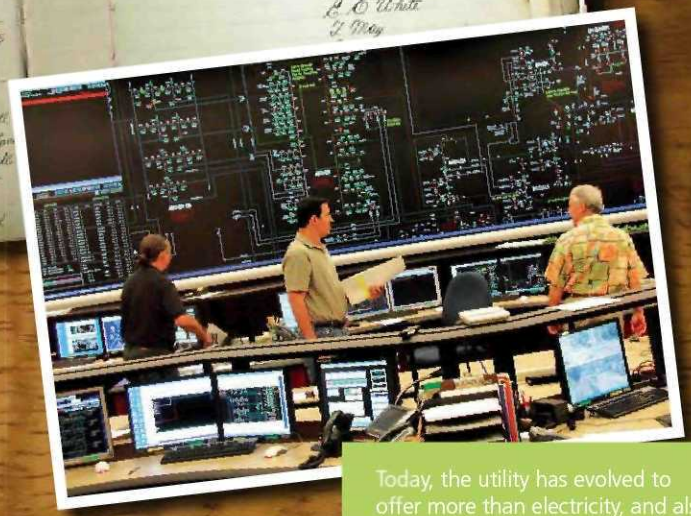
Pictured on the cover are the leaves of the kukui, or candlenut tree. Traditionally used for light or lamps, the kukui is also a symbol for enlightenment in Hawaiian culture.

King David Kalakaua sanctioned the first demonstration of electricity on Oahu on July 21, 1886 on the grounds of the Iolani Palace.



Hawaiian Electric Company Articles of Incorporation by the Kingdom of Hawaii, October 13, 1891



Today, the utility has evolved to offer more than electricity, and also pursues the use of renewable energy alternatives to help ensure a sustainable future for our islands.

Introduction

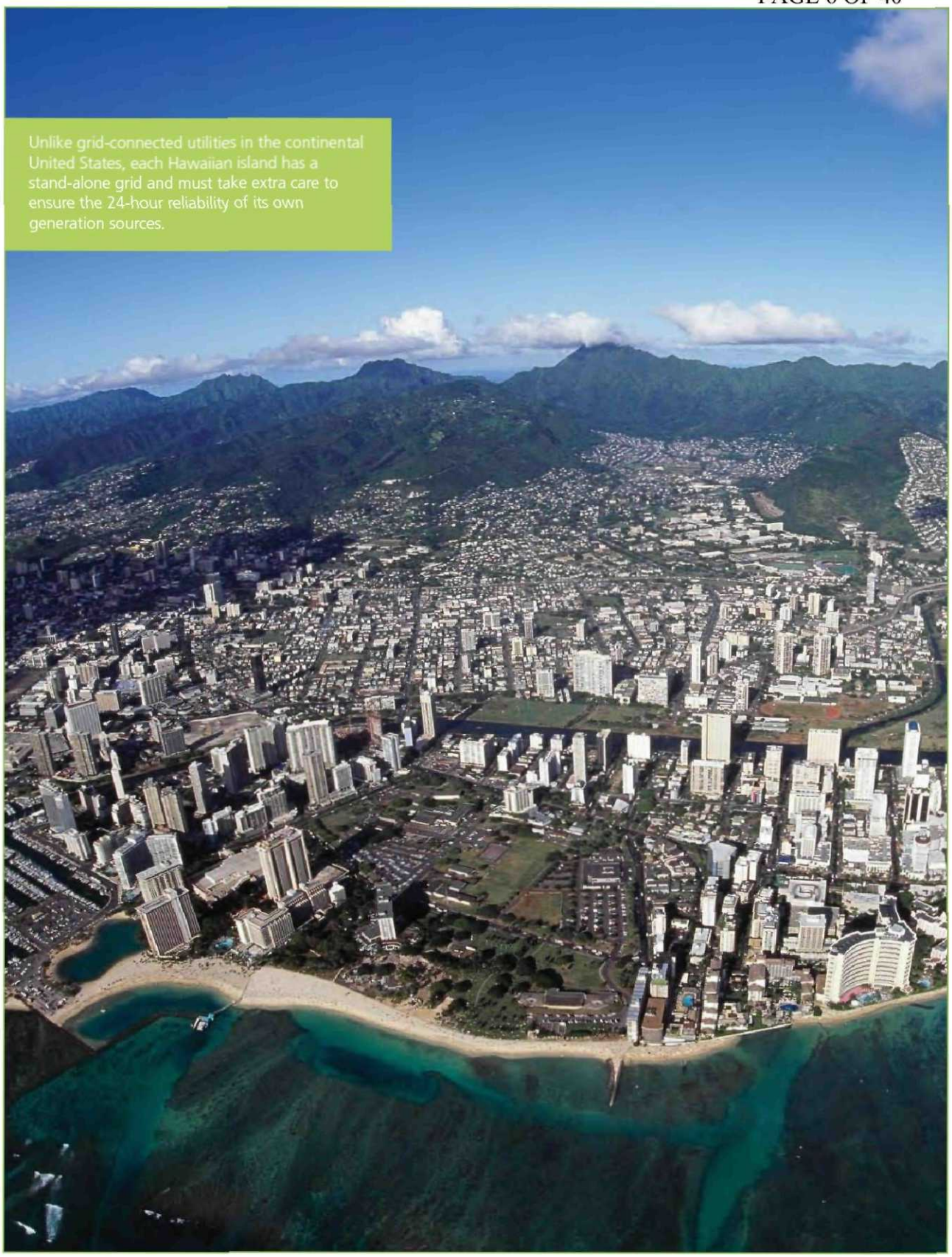
Royally chartered by King David Kalakaua in 1886, Hawaiian Electric Company has been a vital part of Hawaii for more than 120 years. Our company and employees have deep roots in these islands. Together we share a commitment to work closely with the community as we face the challenge of meeting growing electricity needs and balancing issues such as dependence on imported fossil fuel and climate change.

Hawaiian Electric Company, with its subsidiaries, Hawaii Electric Light Company and Maui Electric Company, collectively referred to as "Hawaiian Electric" or the "Hawaiian Electric utilities," provide electric services to about 95 percent of the people of Hawaii. Unlike grid-connected utilities in the continental United States, each island has a stand-alone grid and must take extra care to ensure the 24-hour reliability of its own generation sources. If an island's system fails to provide adequate generation, there is no other source of electricity to supplement the shortfall. As we energize our grids with electricity from renewable sources, our challenge will be to maintain the reliability and quality of service Hawaii's residents depend on.

HAWAIIAN ELECTRIC COMPANY'S MISSION STATEMENT

We are engaged in a competitive business in a changing world where energy is an essential but limited resource necessary to maintaining the quality of life we enjoy. Therefore, we are committed to:

- Produce and deliver reliable sources of energy to our customers
- Provide a range of energy products and services that meet our customers' needs and that are unmatched by any competitor, and
- Achieve success through partnership, teamwork, continuous improvement, and innovation to help employees, stockholders, customers, and our communities grow and prosper.



Unlike grid-connected utilities in the continental United States, each Hawaiian island has a stand-alone grid and must take extra care to ensure the 24-hour reliability of its own generation sources.

Position On Global Warming

Hawaiian Electric Company shares the very serious concerns of many regarding the potential effects of global warming and human contributions to this phenomenon, including the burning of fossil fuels for electricity production, transportation, manufacturing, agricultural activities and deforestation.

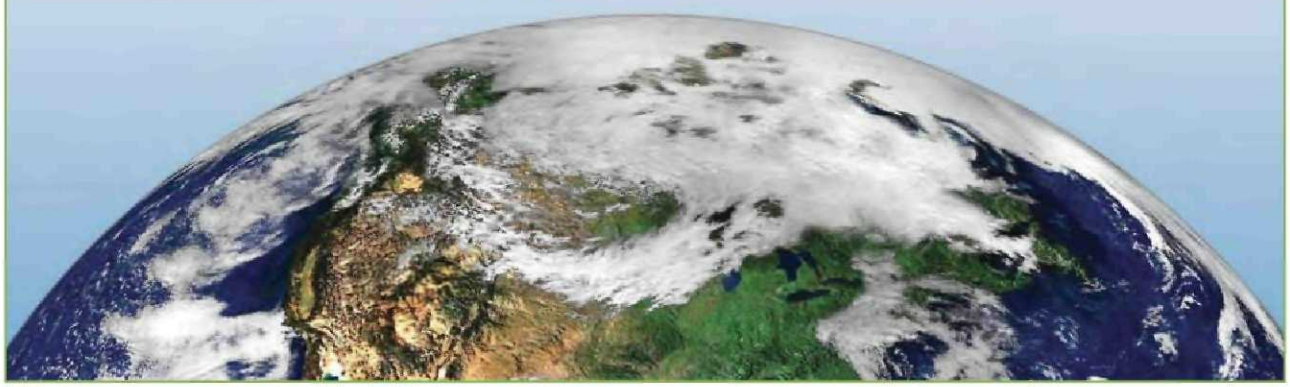
To effectively address global warming, actions addressing all contributing sources must be taken with priority given to those which provide the greatest benefit for the costs involved. To be successful, the response to global warming requires commitment by private sector businesses, all levels of government, and every member of the public.

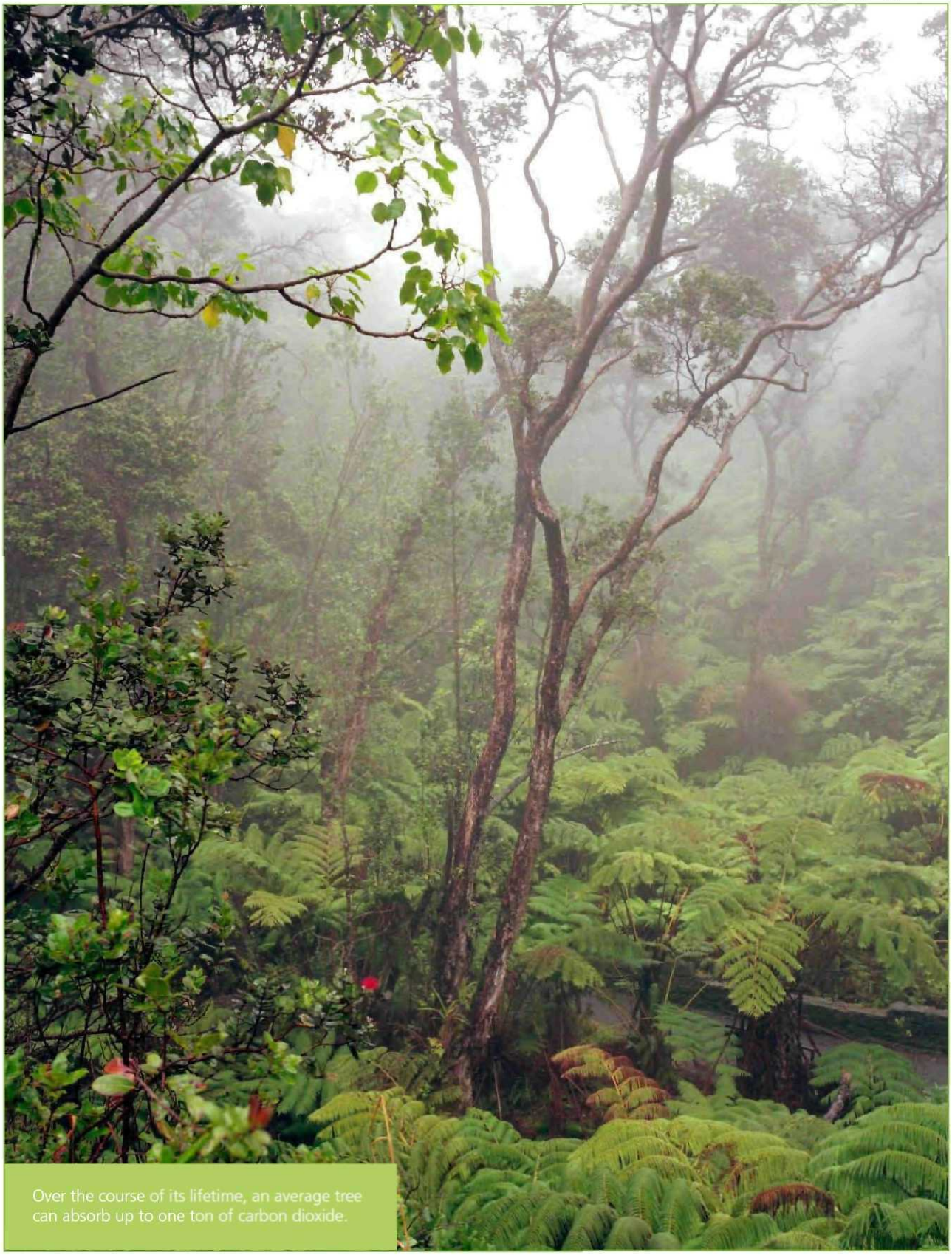
At Hawaiian Electric, we remain committed to taking direct action to mitigate the contributions to global warming from electricity production. Such action has and will continue to include promoting aggressive energy conservation and transitioning to clean, efficient and eco-effective energy production in all markets that we serve.

— Approved by the Hawaiian Electric Company
Board of Directors, January 2007

"Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level."

— Intergovernmental Panel on Climate Change
First Assessment Report: Climate Change 2007





Over the course of its lifetime, an average tree can absorb up to one ton of carbon dioxide.

Greenhouse Gases and Global Warming

Greenhouse Gases and their Sources

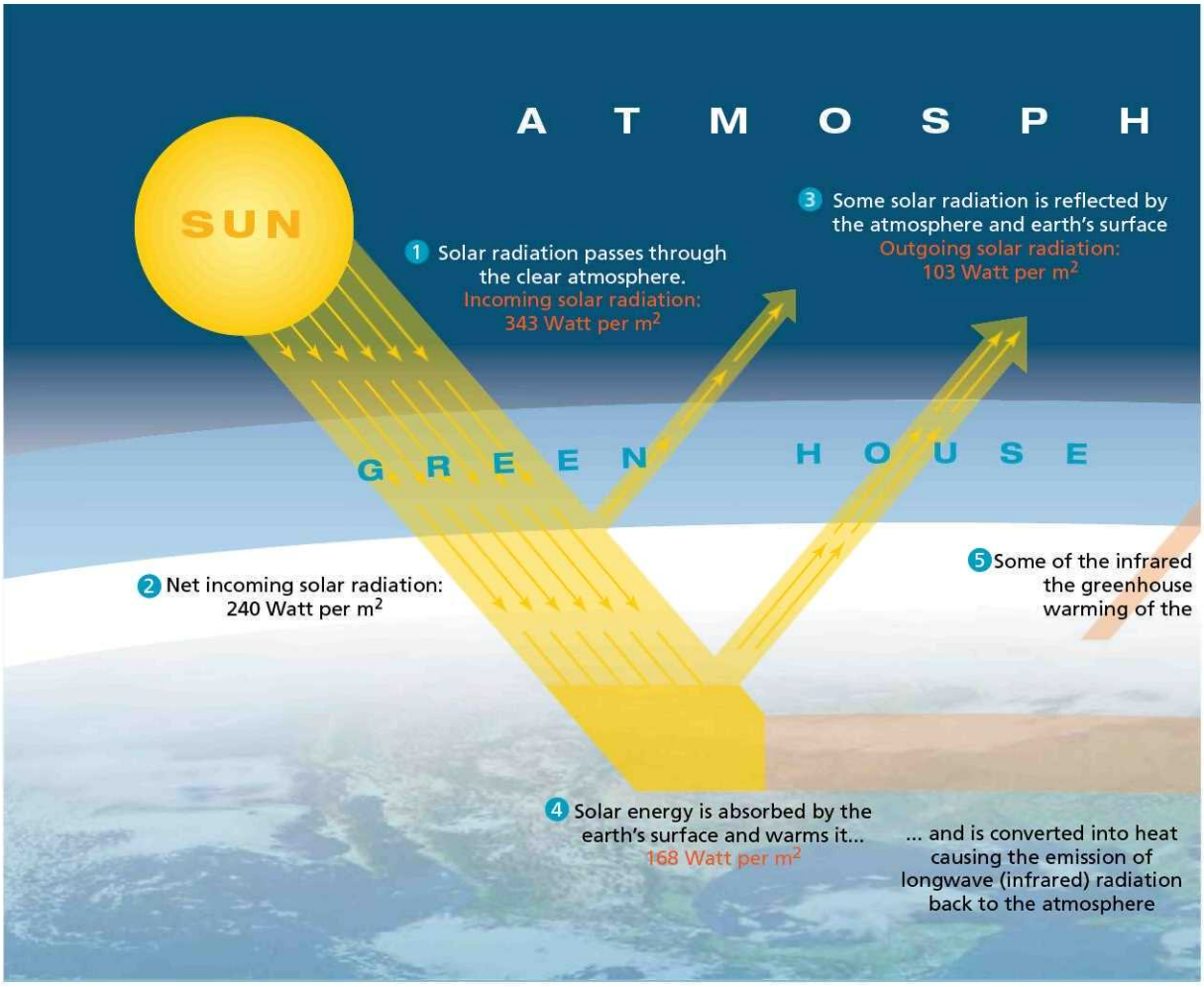
Gases that trap heat in the atmosphere are often called greenhouse gases (GHGs). Some greenhouse gases such as carbon dioxide occur naturally and are emitted to the atmosphere through natural processes and human activities. Other greenhouse gases (e.g., fluorinated gases) are created and emitted solely through human activities. The table below shows the principal greenhouse gases emitted through human activities.

Principal Greenhouse Gases and their Sources

Symbol	Name	Common Sources
CO_2	Carbon Dioxide	Burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and also as a result of other chemical reactions (e.g., manufacture of cement). Can be removed from the atmosphere (or "sequestered") when absorbed by plants as part of the biological carbon cycle.
CH_4	Methane	Production and transport of coal, natural gas, and oil. Livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills.
N_2O	Nitrous Oxide	Agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.
CFCs 11 and 12, HFCs, PFCs and SF_6	Chlorofluorocarbons, Hydrofluorocarbons, Perfluorocarbons and Sulfur Hexaflouride	A variety of industrial processes as well as refrigeration, air conditioning, aerosols, foam blowing, solvents.
O_3	Ozone and other trace gases	Photochemical processes, cars, power plants, solvents

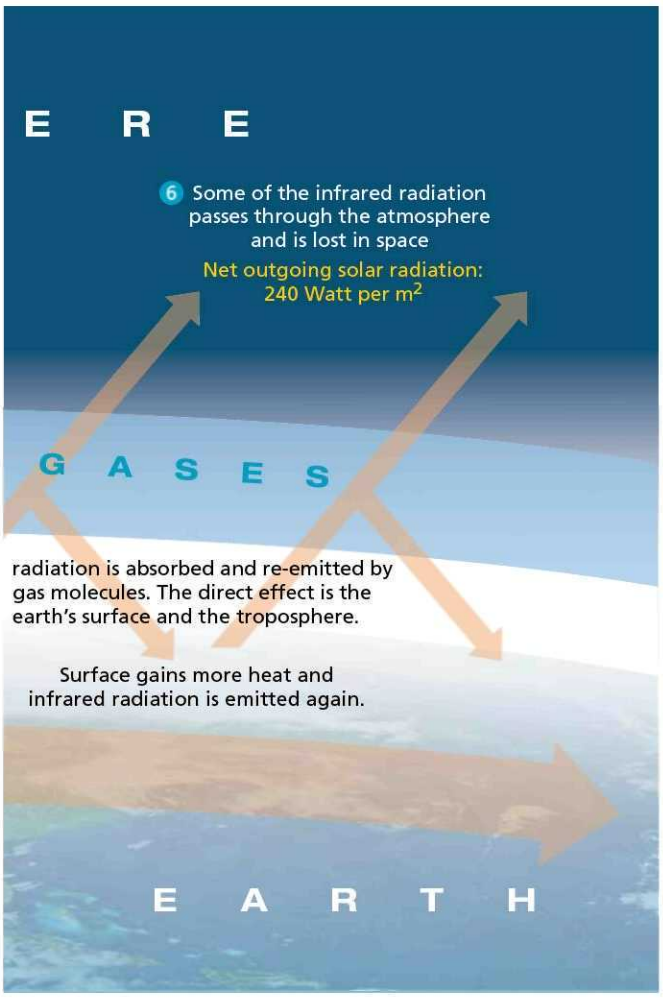
The Greenhouse Effect and Climate Change

The 'greenhouse effect' is a natural process in the earth's atmosphere that helps retain solar heat, keeping the Earth's temperature warm enough to support life. Energy from the sun is absorbed by the Earth's surface. Some of this energy is then radiated back into the atmosphere, heating up the air. Some of the greenhouse gases interact with that energy and 'trap" the radiated heat, helping to further raise the temperature of the atmosphere and the Earth's surface. Increases in these greenhouse gases increase the amount of heat trapped by the atmosphere and cause overall warming of the planet. This warming is referred to as global warming. The various impacts of global warming are referred to as climate change. Below is a graphic representation of how the 'greenhouse effect' is generated.



Source: Okanagan University College in Canada, Department of Geography, University of Oxford, school of geography, United States Environmental of climate change, contribution of working group 1 to the second assessment report of the Intergovernmental Panel on Climate Change, UNEP and are randomly found in the atmosphere. This picture depicts them as a layer to better illustrate the concepts of the greenhouse effect.

Global Warming - the progressive gradual rise of the Earth's average surface temperature thought to be caused in part by increased concentrations of greenhouse gases in the atmosphere.
Climate Change - changes in long-term trends in the average climate, such as changes in average temperatures.



Protection Agency (EPA), Washington; Climate change 1995. The science WMO, Cambridge University Press. 1996. Note: Naturally, greenhouse gases

National Greenhouse Gas Emissions

Below are the states which produced the most carbon dioxide emissions in 2004, with Hawaii included for comparison.

Top Ten States for CO_2 Emissions, 2004 (million metric tons)

Rank	State	2004 CO_2 Emissions (mmt)
1	TX	659.0
2	CA	385.4
3	PA	276.6
4	OH	261.8
5	FL	255.4
6	IN	236.2
7	IL	233.8
8	NY	212.8
9	LA	190.0
10	MI	185.8
44	**HI**	**22.3**

U.S. PIRG Education Fund (April 2007). The Carbon Boom: State and National Trends in Carbon Dioxide Emissions Since 1990.

Hawaii ranked 44th in the nation in the amount of total CO_2 emissions, including those produced by the electricity and transportation sectors. Some states, ranked lower than Hawaii, either purchase electricity from other states, or rely on large-scale hydro or nuclear power which do not generate greenhouse gases.

Hawaii's Greenhouse Gas Emissions Inventory

In 1990 and 2005 (Preliminary Estimate)

Largest Increase by Sector of Greenhouse Gas Emissions, 1990 – 2005

Residential, Commercial, Industrial	+118.7%
Municipal Solid Waste Management	+46.5%
Ground Transportation	+28.2%
Electric Utilities and Independent Power Producers	+14.7%

Expressed as Global Warming Potential Tons Carbon Dioxide Equivalent (Tons CO_2E)

ENERGY SECTOR	1990	2005	% Change 1990-2005
Residential Commercial Industrial	1,038,657	2,271,802	118.7%
Electric Utilities (and Independent Power Producers)	7,884,515	9,039,871	14.7%
Stationary Subtotal	8,923,172	11,311,673	26.8%
Ground Transportation	3,895,698	4,992,807	28.2%
Domestic Aviation and Marine	3,880,691	3,717,036	-4.2%
International Aviation and Marine	6,432,255	4,722,044	-26.6%
Transportation Subtotal	14,208,644	13,431,887	-5.5%
ENERGY TOTAL	23,131,816	24,743,560	7.0%

NON-ENERGY SECTOR	1990	2005	% Change 1990-2005
Industrial Processes: Oil/Gas Transportation	4,977	5,157	3.6%
Industrial Processes: Cement Manufacturing	109,274	Ended 1995	
Municipal Solid Waste Management	1,161,291	1,701,100	46.5%
Wastewater Treatment	21,563	23,923	10.9%
Domestic Animals	273,879	192,119	-29.9%
Manure Management	129,768	56,774	-56.2%
Sugarcane Burning	31,958	10,797	-66.2%
Fertilizer Use	60,850	62,310	2.4%
NON-ENERGY TOTAL	1,793,560	2,052,180	14.4%
TOTAL	24,925,375	26,795,740	7.5%

From Hawaii's Greenhouse Gas Emissions Inventory Presentation by Dr. John Tantlinger, June 8, 2007
http://www.hawaii.gov/dbedt/info/energy/publications/ghg07ppt.pdf

Residential, Commercial and Industrial Energy Sectors – include the use of utility and non-utility gas, self-generation of electricity, non-highway mobile sources such as agricultural and construction vehicles, and a relatively small amount of oil-fired water heating, kiln heating, and steam production.

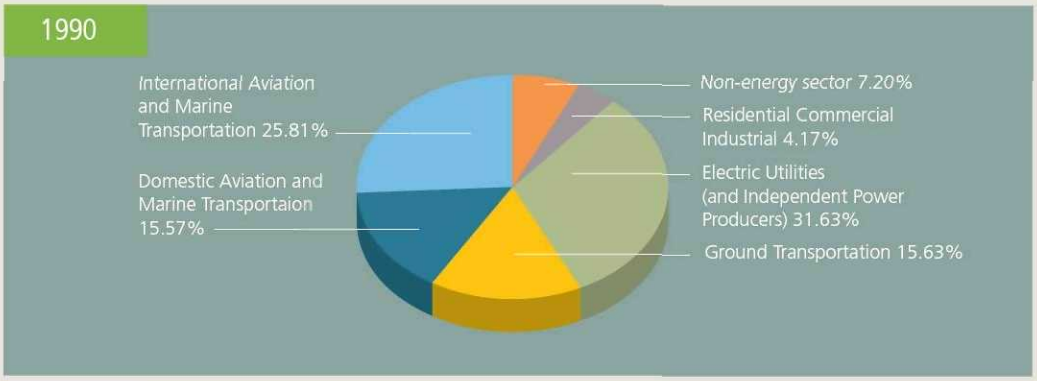
Hawaii's Greenhouse Gas Emissions by Sector

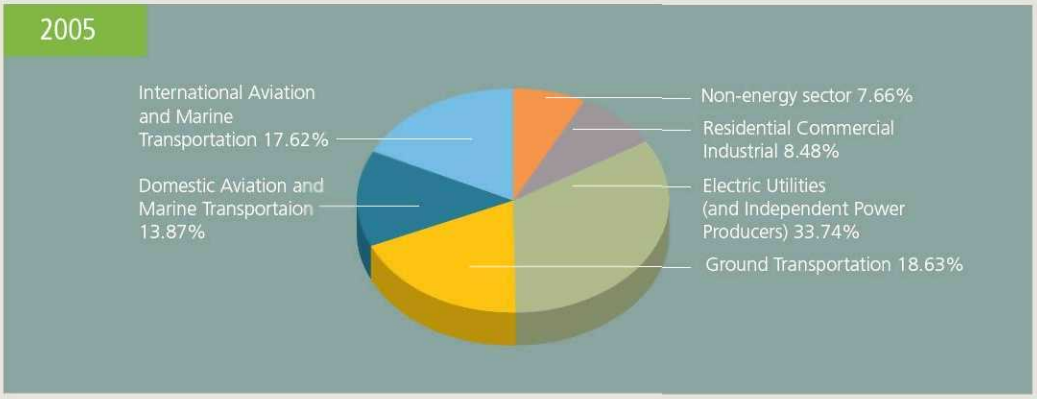
2005 Hawaii Greenhouse Gas Emissions by Sector

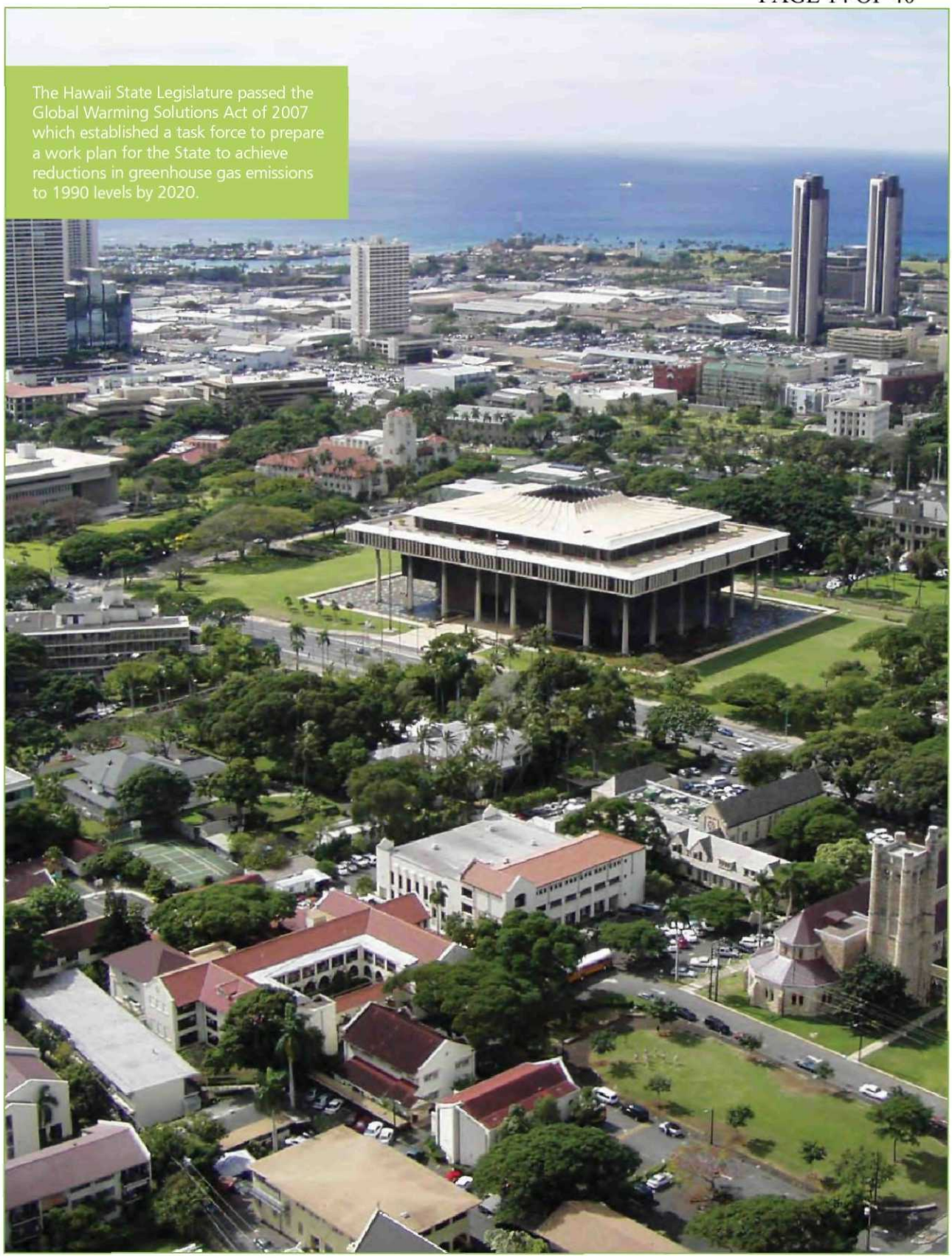
Transportation	50.12%
Electric Utilities & Independent Power Producers	33.74%
Residential, Commercial, Industrial	8.48%
Non-Energy Sector	7.66%

In 2005, transportation contributed more than half of the total greenhouse gas emissions in Hawaii, including ground, domestic and international aviation and marine transportation.

Hawaii Greenhouse Gas Emissions by Sector







The Hawaii State Legislature passed the Global Warming Solutions Act of 2007 which established a task force to prepare a work plan for the State to achieve reductions in greenhouse gas emissions to 1990 levels by 2020.

Background on Greenhouse Gas Legislation

Discussions on regulating greenhouse gas emissions have taken place for over a decade at the international and federal levels. The United States signed but did not ratify the international agreement, known as the international Kyoto Protocol, to reduce greenhouse gas emissions. In 2007, Hawaii became the second state to adopt laws regulating greenhouse gas emissions when it passed the Global Warming Solutions Act of 2007, adopting the goal of reducing emissions to 1990 levels. The law provides for a ten-member task force to create a plan, due by the end of 2009, recommending specific ways Hawaii can reduce emissions. The Hawaii State Department of Health will then establish emissions limits to be met by each emission source, with rules and penalties to take effect in 2012.

Sampling of Existing and Proposed Greenhouse Gas (GHG) Regulations

Timeline	Policy	Coverage		Targets		
		Geographic	Gases	Start Date	Levels*	Deadline
1997 opened for signature; 2005 effective date	Kyoto Protocol	Annex I Countries	All	2008	1990	2012
2005 MOU signed by 7 states	Regional Greenhouse Gas Initiative (RGGI)	Northeast States	CO_2	2009	2005	2018
2006 signed into law	California - Assembly Bill 32	California	All	2010	1990	2020
2007 signed into law	Hawaii (Global Warming Solutions Act)	Hawaii	All	2012	1990	2020
2007 legislative proposal, not passed by Congress	McCain-Lieberman	U.S.	All	2010	2004	2012

*"Levels" refers to historical year emissions against which targets are set. For example, the Kyoto Protocol emission targets for Annex I countries range from 92 percent to 100 percent of their 1990 level.

- **Definition of GHGs** – The Kyoto Protocol and California and Hawaii laws cover all the major greenhouse gases. From both an environmental and economic standpoint, effective climate change strategies must address CO_2 as well as other greenhouse gases.
- **Industry Coverage** – The Kyoto Protocol and California and Hawaii laws effectively cover all sectors (i.e., industrial, commercial and residential), while RGGI focuses only on the electrical industry.
- **Emissions Date to be Targeted** – The Kyoto Protocol and the California and Hawaii laws all set the target to reduce emissions to 1990 levels.

Other items to consider include:

- **Penalties** – Most climate change proposals include provisions for civil or criminal penalties under state or federal environmental statutes. In addition, some proposals, such as the Kyoto Protocol and RGGI, contain provisions for reductions in future emissions allowances.
- **Carbon Offsets** – Enables emitters to reduce their emissions by displacing emissions at another place, outside the cap and trade program.

Kyoto Protocol - an agreement made under the United Nations Framework Convention on Climate Change (UNFCCC). Countries that ratify this protocol commit to reduce their emissions of carbon dioxide and five other greenhouse gases, or engage in emissions trading if they maintain or increase emissions of these gases.

McCain-Lieberman – representing one of the most analyzed domestic proposals to date, this legislation proposed by Senators John McCain (R-AZ) and Joseph Lieberman (D-CT) focuses on cap and trade emissions of greenhouse gases. This approach is based on a broad, flexible trading framework.

RGGI - the Regional Greenhouse Gas Initiative (RGGI or "ReGGIe") is a cooperative effort by nine Northeast and Mid-Atlantic states to discuss the design of a regional cap and trade program initially covering carbon dioxide emissions from power plants in the region. In the future, RGGI may be extended to include other sources of greenhouse gas emissions and greenhouse gases other than carbon dioxide.

Annex I Parties - the 40 countries plus the European Economic Community listed in Annex I of the UNFCCC that agreed to try to limit their GHG emissions: Australia, Austria, Belarus, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, European Economic Community, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Japan, Latvia, Liechtenstein, Lithuania, Luxembourg, Monaco, The Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United States.

Options for Hawaii's Greenhouse Gas Regulation

A key policy choice is between a regulatory approach (such as appliance efficiency standards or vehicle mileage standards) and market-based mechanisms, which fall into two categories: carbon taxes and cap and trade.

Carbon Tax - A carbon tax is a special levy based on the carbon content of fossil fuels. It would be collected at the primary energy production level (e.g. at the coal mine or oil field, or at the refinery or import level) but will eventually be passed on to final consumers through retail energy prices. Over time, as the tax increases, the rising retail prices for energy would encourage additional efficiency or conservation.

Cap and Trade - Under this approach, emission permits would be issued annually to major emitters. In total, these permits would equal the annual emission goal determined by government. At the end of the year, the emitter must have a permit for each ton of greenhouse gas released or will face a stiff fine. To avoid the fine, the emitter may 1) take remedial actions internally to reduce emissions; 2) purchase permits from other emitters who have a surplus; or 3) buy carbon offsets from projects that sequester carbon, such as forests. By issuing fewer and fewer permits each year, the overall release of greenhouse gases would be reduced.

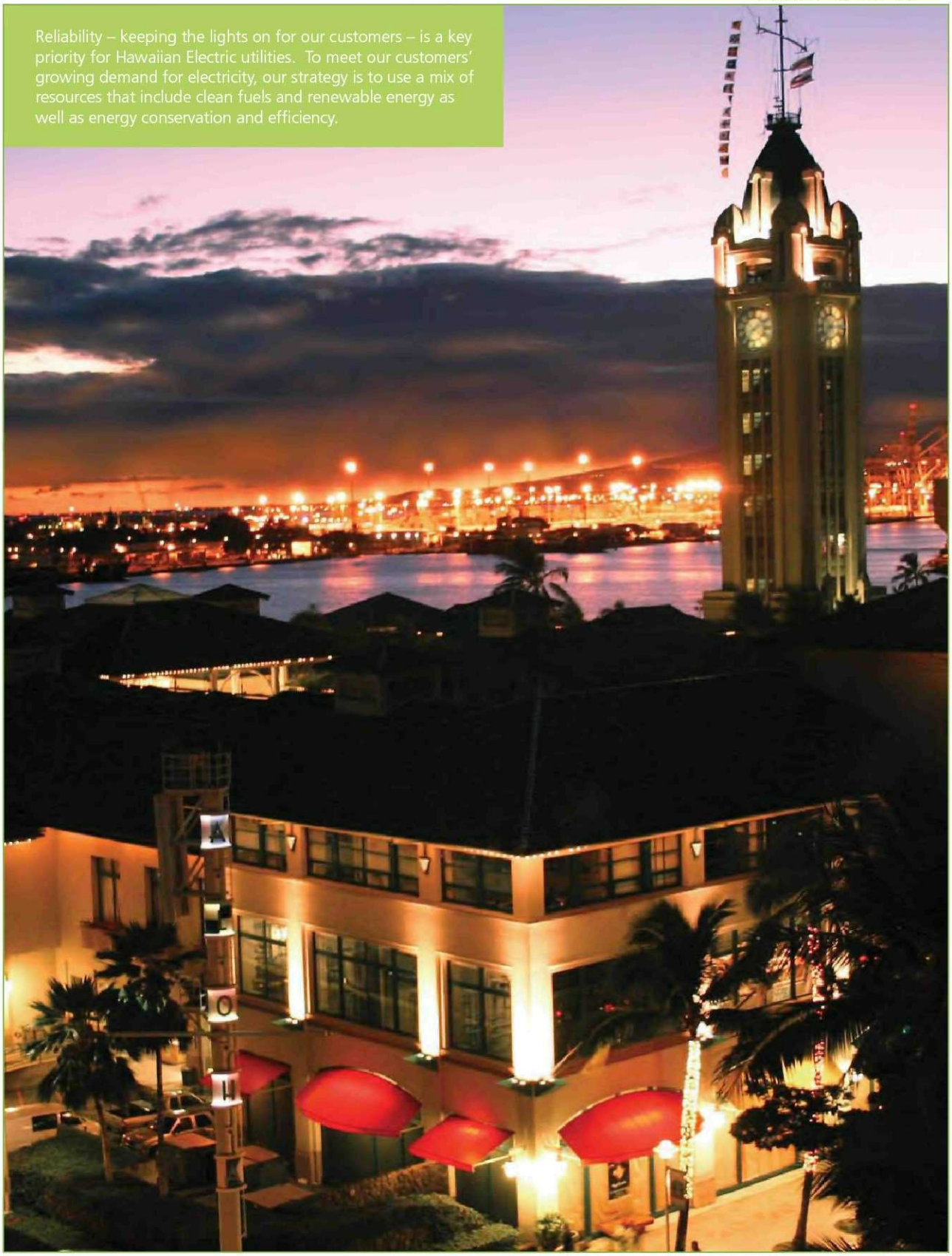
The distinction between a carbon tax on emissions and a cap and trade system is that the tax assures a price, and cost, for greenhouse gas emissions but does not ensure that the emission target will actually be achieved in a given year. A cap and trade system ensures that the target will be met, but compliance costs cannot be estimated in advance. The important distinction between these market-based mechanisms, versus a regulatory approach, is that emitters have flexibility in how they choose to meet their emission targets.

While a cap and trade system makes sense for certain states or regions, its application to Hawaii may be problematic. Hawaii's size, isolation and relatively simple energy economy means that local emissions permit trading opportunities are extremely limited. The result of these limited trading opportunities could be that financial resources from Hawaii's energy consumers leave the state to purchase emissions permits elsewhere. This could be a severe economic blow for a capital poor state that already spends billions of dollars externally for food and fuel.

"Continued greenhouse gas emissions at or above current rates would cause further warming and induce many changes in the global climate system during the 21st century that would very likely be larger than those observed during the 20th century."

- Intergovernmental Panel on Climate Change
First Assessment Report: Climate Change 2007

Reliability – keeping the lights on for our customers – is a key priority for Hawaiian Electric utilities. To meet our customers' growing demand for electricity, our strategy is to use a mix of resources that include clean fuels and renewable energy as well as energy conservation and efficiency.



Energy and Electricity Use in Hawaii

Energy Use in Hawaii

Per capita energy consumption in Hawaii is among the lowest in the nation. Due in large part to heavy jet fuel use by military installations and commercial airlines, the transportation sector is the leading energy-consuming sector, accounting for over one-half of the state's total energy consumption.[1] Our mild tropical climate also allows us to forgo electricity for home heating.

Total Consumption per Capita

State	Million Btu
1. Alaska	1,193.9
2. Wyoming	911.9
3. Louisiana	803.7
4. North Dakota	648.1
5. Texas	506.0
6. Kentucky	472.3
7. Alabama	466.8
8. Indiana	464.2
9. Montana	448.2
10. West Virginia	439.7
43. Hawaii	**263.0**

Energy Information Administration, State Energy Data 2005: Consumption, 2005 Rankings

Hawaii ranks 43rd in the nation in per capita energy use.

[1] Energy Information Administration, Office Energy Statistics, found at http://tonto.eia.doe.gov/state/state_energy_profiles.cfm?sid=HI

Electricity Production in Hawaii

The table below shows electricity produced in Hawaii by company and fuel source. In addition to electricity produced by Hawaiian Electric Company (HECO), Hawaii Electric Light Company (HELCO), and Maui Electric Company (MECO), other companies known as Independent Power Producers (IPPs) produce electricity and sell it to the utility to be distributed to its customers.

Historically, since the utility companies' generators were installed decades ago, the focus has been on purchasing renewable energy from independent power producers. Going forward, however, Hawaiian Electric and its subsidiary companies are actively planning to convert as much of its generation to renewable fuels and purchase even more renewable energy from IPPs.

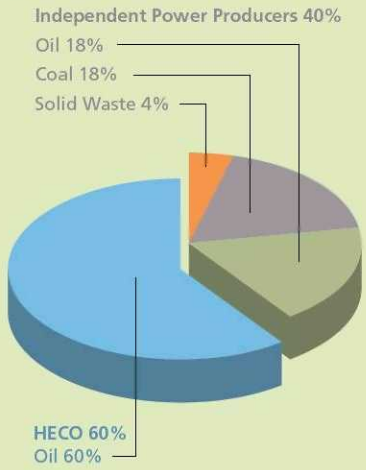
Independent Power Producer -
A company other than a utility that generates electricity.

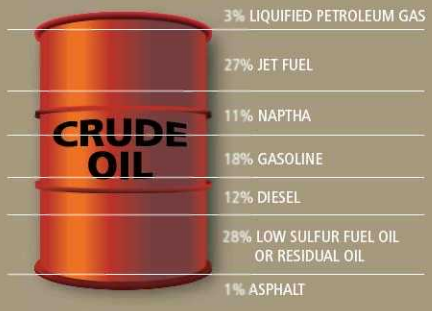
Electricity Produced in Hawaii by Fuel Source
(Gigawatt Hours) as of 12/31/07

	HECO	HELCO	MECO
Hawaiian Electric Companies			
Biofuel			1.43
Hydro		14.73	
Oil	4,850.64	474.70	1,136.73
Wind		0.44	
Total Internal	4,850.64	489.87	1,138.16
	60%	39%	84%
Independent Power Producers			
Biomass			57.47
Coal	1,418.12		25.22
Geothermal		229.89	
Hydro		27.59	9.70
Oil	1,429.30	395.56	0.28
Solid Waste	326.05		2.26
Wind		115.79	125.75
Total IPP	3,238.47	768.83	220.68
	40%	61%	16%
TOTAL (GWH)	8,089.11	1,258.70	1,358.84

Photovoltaic panels on Building 54, Ford Island, Pearl Harbor

Electricity by Fuel Source on Oahu, as of 12/31/07

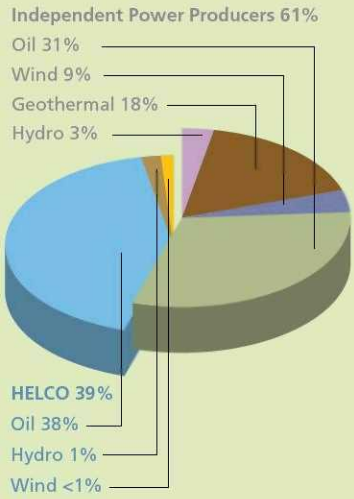




Crude oil is refined in Hawaii for many uses, including fuel for transportation, electricity generation, commercial and industrial use. While some power plants use diesel fuel, most on Oahu use LSFO – low sulfur fuel oil. It is often called residual oil because it is the last part of the refining process, what is leftover after other petroleum products such as gasoline and jet fuel are refined from imported crude oil.

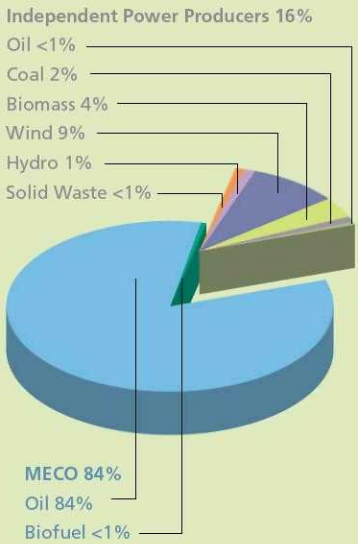
Puueo Hydroelectric Plant

Electricity by Fuel Source on Hawaii Island, as of 12/31/07



Kaheawa Wind Farm

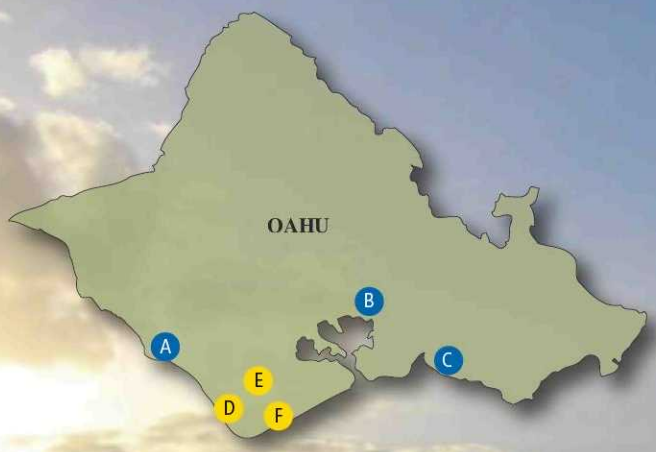
Electricity by Fuel Source for Maui County, as of 12/31/07



Electricity Generation in Hawaii, as of 12/31/07

Firm Generation – electricity from a source that is available and reliable on demand, whenever needed.

As Available Generation – electricity from a source that is not accessible all the time. Renewable energy sources such as solar and wind are good examples of "as available" power since they only provide electricity when the sun shines or the wind blows.



Electricity Generation on Oahu

Hawaiian Electric Company

A	Kahe Power Plant	Firm Generation	650 MW (Oil)
B	Waiau Power Plant	Firm Generation	500 MW (Oil)
C	Honolulu Power Plant	Firm Generation	113 MW (Oil)

** Hawaiian Electric also has 30 MW of distributed generation.*

Independent Power Producers

D	H-POWER	Firm Generation	46 MW (Municipal Solid Waste)
E	AES-Hawaii	Firm Generation	180 MW (Coal)
F	Kalaeloa Partners, L.P.	Firm Generation	208 MW (Oil)

Electricity Generation in the

Maui Electric Company

A	Kahului Power Plant	Firm
B	Maalaea Power Plant	Firm
C	Hana Substation	Stan

** Maui Electric also has 4.0 MW of*

Independent Power Producers

D	Makila Hydro	As
E	Kaheawa Wind Power	As
F	HC&S	Firm

Molokai

G	Palaau Power Plant	Firm

Lanai

H	Miki Basin Power Plant	Firm

Hawaiian Electric Company, Maui Electric Company, Hawaii Electric Light Company

Independent Power Producer

*Distributed generation - small power generators at utility sites across the community

Electricity Generation on Hawaii Island

Hawaii Electric Light Company

A	Waimea Plant	Firm Generation	8.25 MW (Oil)
B	Lalamilo Windfarm	As Available Generation	2.3 MW (Wind)
C	Waiau Hydro	As Available Generation	1.1 MW (Hydro)
D	Puueo Hydro	As Available Generation	3.25 MW (Hydro)
E	Puna Plant	Firm Generation	36.3 MW (Oil)
F	Shipman Plant	Firm Generation	15.2 MW (Oil)
G	Kanoelehua/Hill Plant	Firm Generation	57.25 MW (Oil)
H	Keahole Plant	Firm Generation	65.25 MW (Oil)

Independent Power Producers

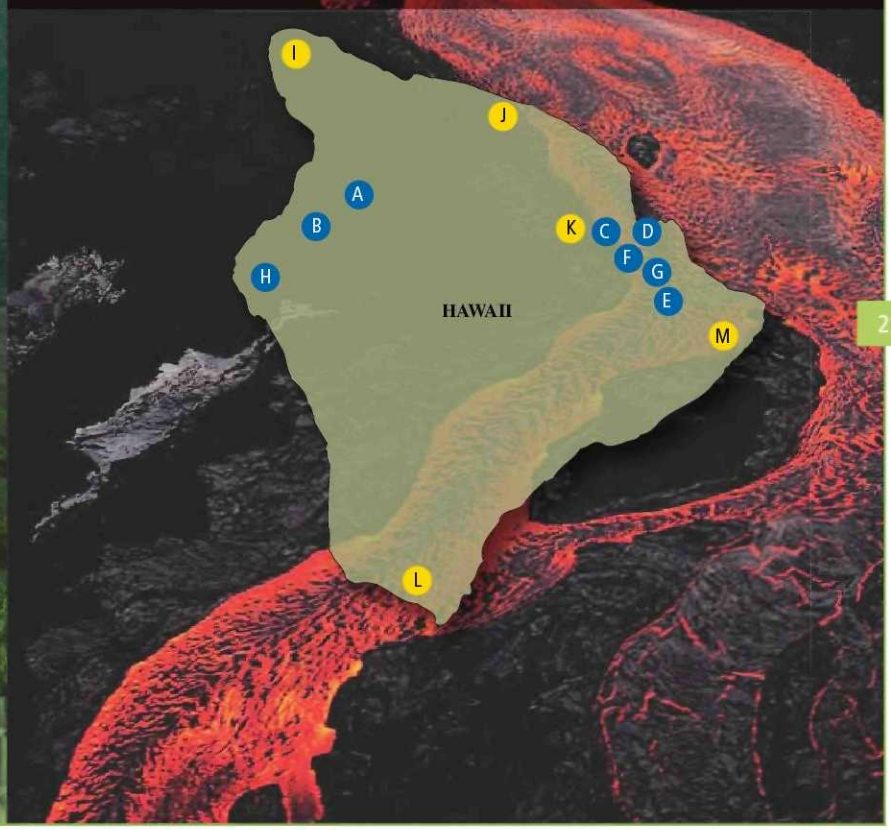
I	Hawi Renewable Development	As Available Generation	10.56 MW (Wind)
J	Hamakua Energy Partners	Firm Generation	60 MW (Oil)
K	Wailuku River Hydroelectric	As Available Generation	12.1 MW (Hydro)
L	Apollo Energy (Pakini Nui)	As Available Generation	20 MW (Wind)
M	Puna Geothermal Venture	Firm Generation	30 MW (Geothermal)

County of Maui

Generation	37.6 MW (Oil)
Generation	212.1 MW (Oil)
dby Generation	2.0 MW (Oil)

distributed generation.

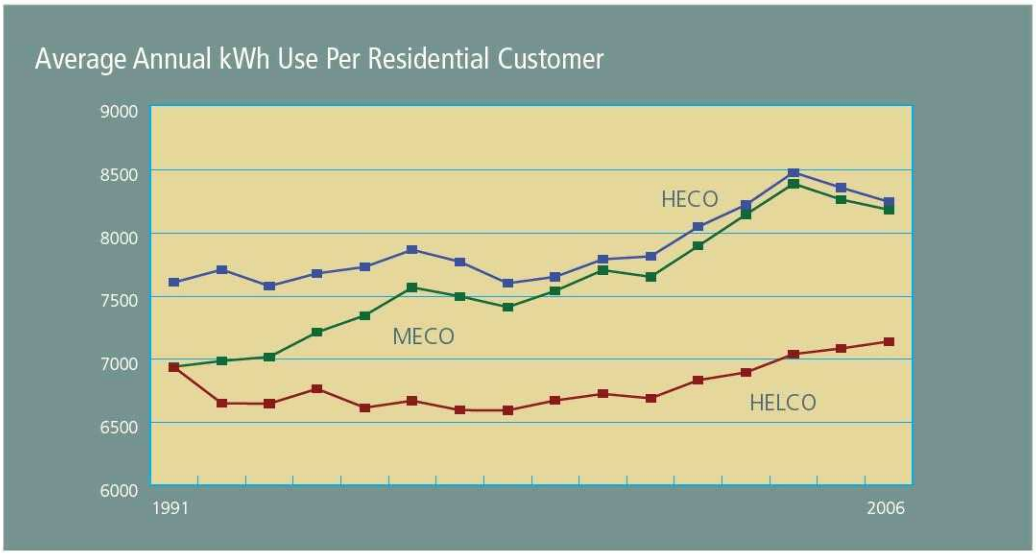
Available Generation	500 KW (Hydro)
Available Generation	30 MW (Wind)
Generation	16 MW (Hydro, bagasse, coal, recycled oil and oil)
Generation	12.01 MW (Oil)
Generation	9.4 MW (Oil)

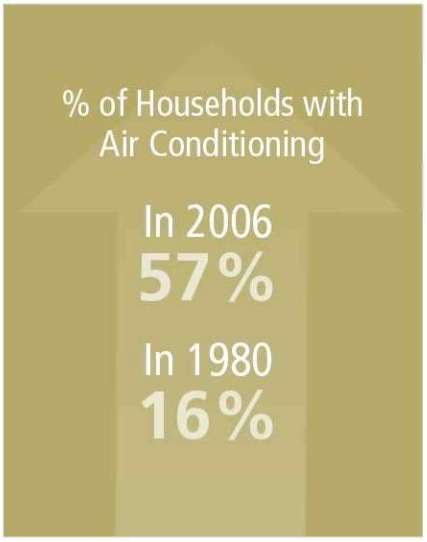


Electricity Use in Hawaii

The charts below show average household electricity use since 1991, as well as the increase of air conditioning in residential households across Oahu.

While Hawaiian Electric meets growing demand by adding more clean, renewable sources of energy, it will continue to work with its customers to encourage greater energy efficiency and conservation.



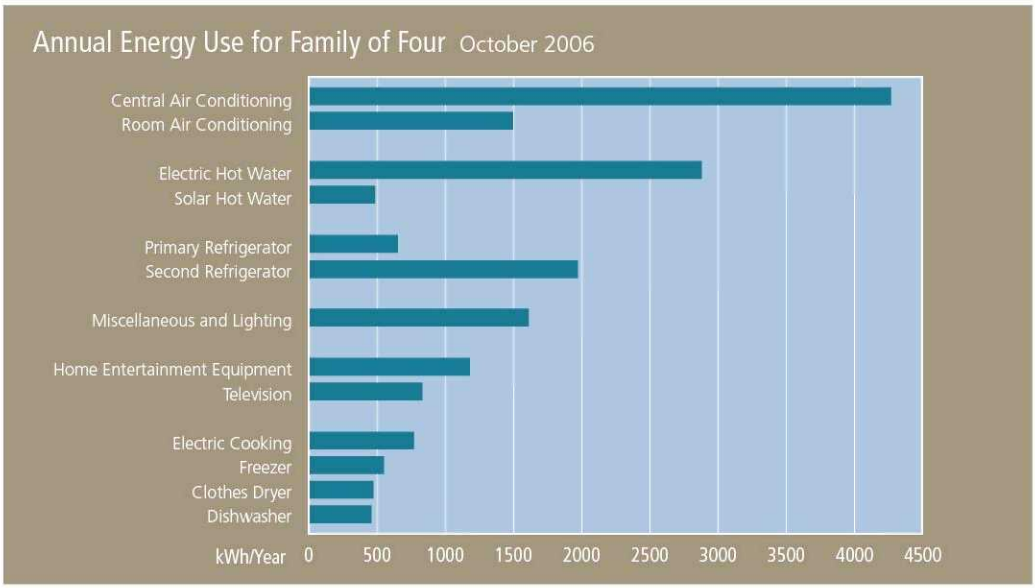


Source: HECO Biennial Appliance Penetration Study. Refers to central, split, and room air conditioners (Oahu only).

Household Use and Conservation

The bar graph below shows typical annual energy use by a family of four. While individual usage may differ due to specific household activities and the type, number and age of appliances, this chart serves as a general guide to help our customers make wise choices about their energy use.

As you'll see, second refrigerators usually cost more to run because they tend to be older and less energy efficient. Electricity use also significantly increases if you should have central air conditioning versus a room air conditioner or an electric water heater versus a solar water heater.



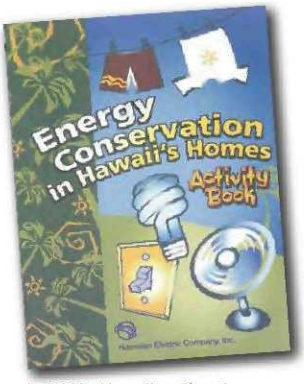
Notes:

Water Heating – energy use for both electric water heater and solar water are listed here to illustrate the difference in energy use. Solar water heaters that are well-designed and properly sized can reduce water heating costs by 80 to 90%.

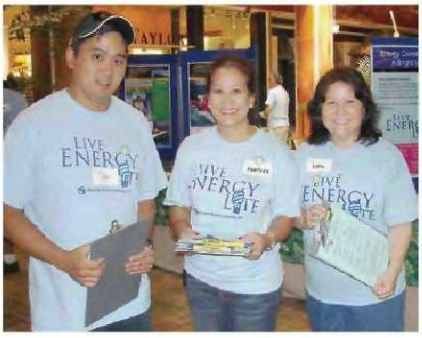
Primary and Second Refrigerator – assumes that the primary refrigerator is a newer, more energy efficient model and the second refrigerator is older and less energy efficient.

Home Entertainment Equipment – includes large televisions, cable boxes, VCR/DVD players, stereos, game boxes, and computers and peripheral equipment.

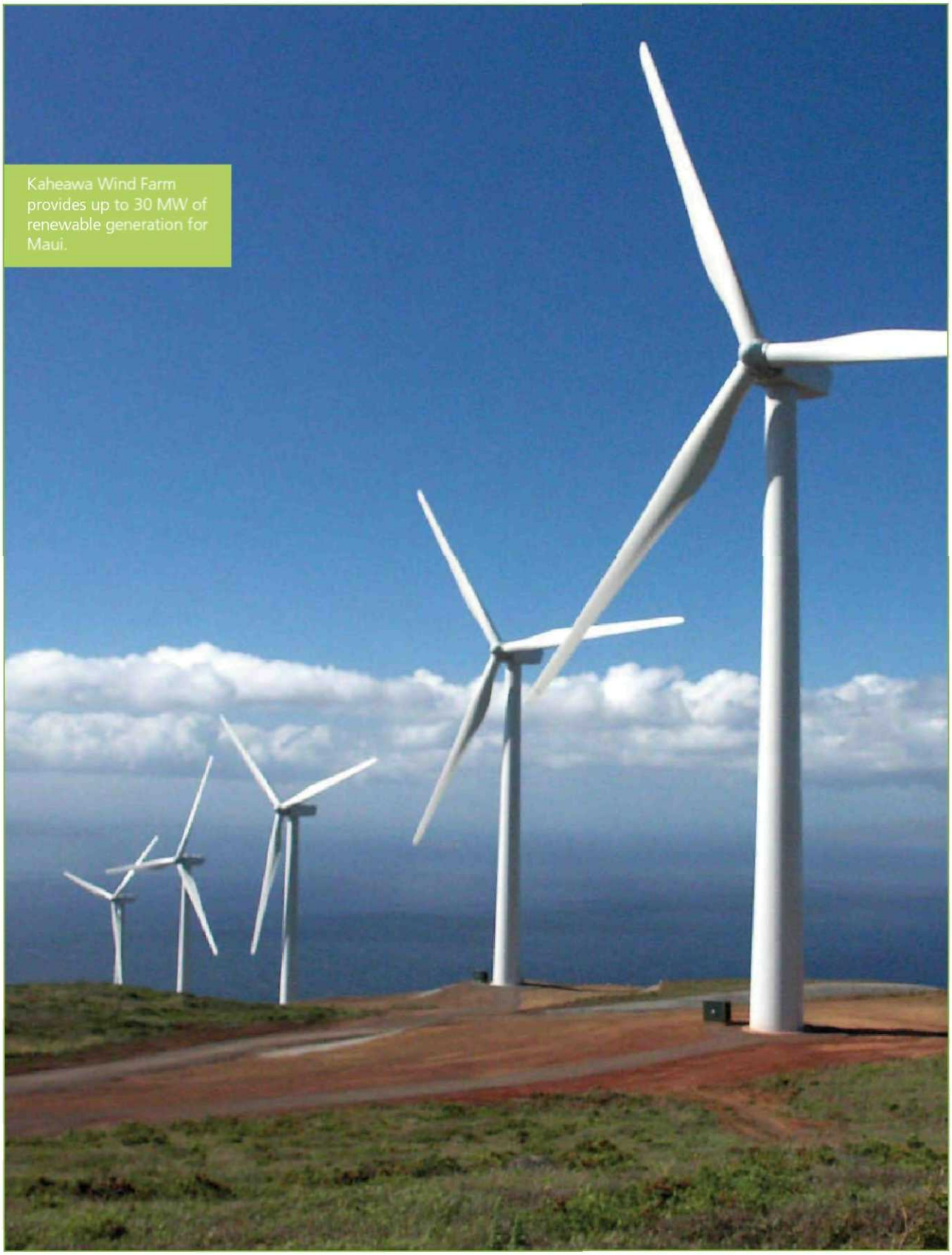
Television – includes 36-inch or smaller color TVs.



In 2007, Hawaiian Electric partnered with the state Department of Education to launch its new Home Energy Challenge, working with students to make energy conservation an everyday habit at home.



Every year, in honor of National Energy Awareness month in October, Hawaiian Electric sponsors Live Energy Lite, an educational event focused on helping its customers to make smart energy choices through energy efficiency and conservation.



Kaheawa Wind Farm provides up to 30 MW of renewable generation for Maui.

Renewable Energy For Hawaii

Hawaiian Electric's overall strategic plan centers on diversifying energy resources to ensure reliable electric service at the lowest reasonable cost to its customers while decreasing our dependence on fossil fuel, particularly oil. To meet this objective, Hawaiian Electric has a broad-based energy plan with heavy emphasis on energy efficiency and conservation as well as more renewable energy to supplement 24-hour-available central station generation and distributed generation.

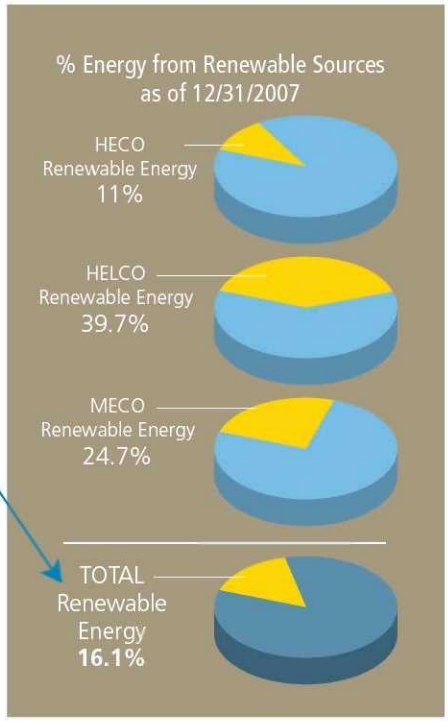
Renewable Energy's Role in Reducing Greenhouse Gas Emissions

Hawaiian Electric is committed to meeting the State's Renewable Portfolio Standard (RPS) which sets the following targets for electricity sales from renewable and energy efficiency sources.

Year	Mandated % from renewable energy sources	Hawaiian Electric RPS	Exceeds Goal
2005	8%	11%	3%
2006	8%	13.8%	5.8%
2007	8%	16.1%	8.1%
2010	10%		
2015	15%		
2020	20%		

In 2005, Hawaiian Electric recorded an RPS of over 11 percent and in 2006, exceeded a 13 percent renewable portfolio standard. Currently, based on 2007 data, 16.1 percent of Hawaiian Electric's electricity came from renewable energy sources.

Hawaii is
4TH IN THE NATION
in renewable energy use[1]



[1] Relative to the state's total electricity production, excluding large-scale hydro, according to the Energy Information Administration, Electric Power Annual 2005, 1990-2005 Net Generation by State by Type of Energy Producer by Energy Source (EIA-906).

The report below shows the Hawaiian Electric companies use of renewable energy in providing electricity.

2007 Renewable Portfolio Standard Status Report
(in Gigawatt Hours) as of 12/31/07

	HECO	HELCO	MECO	TOTAL	Percent
Electrical Energy Generated Using Renewable Energy Sources					
Biodiesel			1.4	1.4	
Biomass	326			326	
Biomass & Hydro-HC&S[2]			69	69	
Geothermal		230		230	
Hydro		42		42	
Photovoltaic Systems	1.6	4	1.3	6.9	
Wind		116	126	242	
Subtotal	327.6	392	197.7	917.3	56.5%
Electrical Energy Savings Using Renewable Displacement Technologies					
Solar Water Heating[3]	66	13	30	109	
Subtotal	66	13	30	109	6.7%
Electrical Energy Savings Using Energy Efficiency Technologies					
Pre-2007 Participants	340	54	82	476	
2007 Participants	113	3	6	122	
Subtotal	453	57	88	598	36.8%
TOTAL	874	462	316	1624	100.0%
TOTAL SALES (GWh)	7,675	1,163	1,280	10,118	
RPS PERCENTAGE	**11.0%**	**39.7%**	**24.7%**	**16.1%**	

Importance of Demand-Side Management Programs

Impact of Energy Efficiency Programs
HECO, HELCO, MECO

- Reduces demand by more than 152 MW, the size of a power plant
- Saves over 1.2 million barrels of oil each year
- Reduces CO_2 emissions by over 664,700 tons a year

Demand-side management programs help customers use energy wisely and efficiently, and are also critical in helping the Hawaiian Electric companies achieve its renewable portfolio standards. Over the past 11 years, the Hawaiian Electric companies have paid out nearly $75 million for energy efficiency projects for businesses and residents, reducing demand by more than 152 MW and avoiding the use of more than 1.2 million barrels of oil each year.

Demand-Side Management Programs Energy & Environmental Impacts 1996-2007

	HECO	HELCO	MECO	TOTAL
Customer Rebates Paid	$52,115,318	$8,270,374	$14,455,711	$74,841,403
Demand Avoided (MW)	125.2	10.6	17.2	152.9
Annual Energy Savings (MWh)	558,271	61,614	102,916	722,802
Annual Barrels of Oil Avoided (kWh/barrel)	930,452	102,689	171,529	1,204,670
Annual Emissions Avoided (tons)				
Carbon Dioxide (CO_2)	515,284	69,839	79,607	664,730
Sulfur Dioxide (SO_2)	1,116.5	585.3	308.8	2,011
Nitrogen Oxides (NO_X)	837.4	123.2	411.7	1,372
Particulate Matter 10 (PM_{10})	111.7	30.8	36.0	178

Impact of Solar Water Heating Programs
HECO, HELCO, MECO

- Reduces CO_2 emissions by almost 89,000 tons a year
- Avoids the use of almost 164,000 barrels of oil per year

* Preliminary estimate.

Solar Water Heating Success

Hawaiian Electric's solar water heating rebate program is one of the largest and most successful in the nation. The Hawaiian Electric companies combined, have paid out nearly $35 million in rebates to support the installation of more than 39,000 systems since the program's inception in 1996.

Compact Fluorescent Lights Campaign

Since 2005, Hawaiian Electric Company has provided rebates to Oahu residential customers for more than 800,000 ENERGY STAR® CFLs (compact fluorescent lights) and helped to promote the use of the energy-saving bulbs throughout the state. A year of aggressive promotional efforts in 2007 resulted in more than 700,000 CFLs sold on Oahu alone.

Direct Load Control Program

More than 25,000 Oahu residential customers receive a $3 monthly discount on their electric bill while helping Hawaiian Electric respond to system emergencies. Customers who participate in the ENERGYSCOUT program allow the utility to remotely turn off equipment such as water heaters for up to a few hours during a power emergency. The result is 17 MW when demand reduction is needed most. A similar program for businesses now garners 11.5 MW of potential demand reduction.

CHARTING OUR PROGRESS TOWARD A **RENEWABLE FUTURE.**

In 2006, we announced a goal of achieving at least 500 megawatts from new renewable sources in the next 5 to 10 years. Here is an UPDATE on just some of what we are accomplishing by working together.

RENEWABLE ENERGY SOURCES

100 MW	Wind Energy
80 MW	Pumped Storage Hydro
50 MW	Biofuel in New Plant
83 MW	Biofuel or Biodiesel in Existing Plants
85 MW	Solar Energy
40 MW	Garbage-to-Energy
30 MW	Geothermal
25 MW	Biomass
7 MW	Landfill Gas
Future Potential: Ocean Thermal Energy Conversion (OTEC), Wave Power, Hydrogen	
500 MW	Total Clean, Renewable, LOCAL energy

Renewable Energy

Oahu: Hawaiian Electric requesting proposals for 100 MW of additional renewable energy.

Wind Energy

Hawaii Island: Pakini Nui wind farm expanded from 7 to 21 MW in 2007.

Maui: Shell Wind Energy proposing 20 MW wind farm at Ulupalakua Ranch.

Maui: UPC Wind proposing expansion of existing 30 MW Kaheawa wind farm.

Oahu: UPC Wind and other developers proposing North Shore wind farms.

Molokai & Lanai: UPC Wind and Castle & Cooke proposing large-scale wind farms.

Biodiesel in New Plant

Oahu: New 110 MW all-biodiesel Campbell Industrial Park Generating Station scheduled for operation in 2009.

Biodiesel in Existing Plants

Maui: Biodiesel use being tested in Maalaea units. Potential for over 200 MW generated from biodiesel starting in 2009.

Seawater Air Conditioning

Oahu: Honolulu Seawater Air Conditioning proposing downtown plant to save 17 MW. Half the customers needed have already committed, including Hawaiian Electric.

Solar Energy

All islands: 9,700 more solar water heating units added in 2006 & 2007, reducing demand by an additional 6 MW.

Lanai: Castle & Cooke planning 1.5 MW photovoltaic project in 2008.

Oahu: Large-scale photovoltaic projects installed and others planned by State of Hawaii, Walmart, Costco, James Campbell Company and others.

Oahu: 10 MW concentrated solar project proposed by Sopogy Inc.

Hawaii Island: Sopogy Inc. planning 1 MW concentrated solar power demo at Natural Energy Laboratory in Kona.

Garbage-to-Energy

Oahu: City & County of Honolulu expects to add a third boiler to increase power of H-Power plant.

Hawaii Island: 3.5 MW Hilo project proposed by Hawaii County.

Geothermal

Hawaii Island: Puna Geothermal Venture proposing 8 MW expansion.

Biomass

Hawaii Island: Tradewinds Forest Products LLC signs agreement with Hawaii Electric Light Company to supply 3.6 MW.

Hawaii Island: 30 MW biomass plant proposed by Hamakua Biomass.

Wave Energy

Maui: Oceanlinx planning 2.7 MW wave energy project to sell power to Maui Electric.

Hawaiian Electric Company

To learn more, visit hawaiisenergyfuture.com

Sustainability and Hawaiian Electric Company

Hawaii's Energy Future

In 2006, Hawaiian Electric launched an advertising campaign to share our potential to achieve 500 megawatts of added electricity from renewable sources – three times more than the amount we had then. The campaign aimed to raise the awareness of customers, policymakers, landowners, and other stakeholders to help us achieve this goal. We wanted to show that by working together we could reduce our dependence on imported oil and develop our renewable energy sources.

The following highlights select renewable energy initiatives and efforts on each island:

Oahu

- Hawaiian Electric Company's new 110-megawatt generating unit at Campbell Industrial Park, planned to come online in 2009, will be run 100% on renewable biodiesel.
- An application has been filed with the Hawaii Public Utilities Commission to enter a contract with Hoku Solar, Inc. to purchase electricity generated by a 167 kW photovoltaic system at Hawaiian Electric's Ward Avenue facility. The system will be one of the largest single-site PV systems on Oahu to date when it begins service at the end of 2008 or early 2009.
- Hawaiian Electric Company also was among the first to sign on with Honolulu Sea Water Air Conditioning to incorporate sea water air conditioning in its historic headquarters building at 900 Richards Street. HSWAC expects to start construction on the system in 2009.
- The City and County of Honolulu announced plans in January 2008 to expand the HPower garbage-to-energy plant with the addition of a third boiler to be in service by 2011.
- Hawaiian Electric Company is issuing an RFP in 2008 seeking bids for projects that can provide up to 100 MW of non-firm renewable energy by 2010-2014 to complement existing renewable energy sources on Oahu.

Hawaii Island

- In 2007, the use of renewable energy on the Big Island moved further forward with the installation of the Pakini Nui wind farm at South Point by Apollo Energy Corporation. Operated by Tawhiri Power, LLC, in April the wind farm began providing up to 20.5 MW of renewable electrical energy to the island's grid.
- More geothermal, wind, solar, biomass and other projects also are planned.

Maui

- A biodiesel processing plant, jointly owned by Blue Earth Biofuels Maui, LLC and a Hawaiian Electric Company subsidiary, is being planned for completion in 2009 to supply biodiesel for use at our Maalaea Power Plant. About 85 percent of Maui Electric's generation capacity could potentially be converted from petroleum diesel to renewable biodiesel.
- Maui Electric Company is negotiating an agreement with Shell Wind Energy to purchase power from a 20 megawatt wind farm on lands at Ulupalakua Ranch in upcountry Maui.
- Oceanlinx, an Australian-based high-tech company, announced plans to provide up to 2.7 MW of electricity to Maui Electric Company from Hawaii's first wave energy project expected to be operational by the end of 2009.

In 2007, Hawaiian Electric gathered a broad spectrum of stakeholders to develop a proactive set of guidelines to assist ocean energy developers in dealing with anticipated community concerns. A copy of the guidelines can be found at hawaiisenergyfuture.com.

Hawaiian Electric's 'Green' Practices

In addition to promoting energy conservation and efficiency, and adding more clean, renewable sources of energy to its systems, Hawaiian Electric is "walking the talk" by actively incorporating the following "green" practices:

Heating, Cooling and Technology

Hawaiian Electric installed energy efficient air conditioning at its Ward Avenue facility, and new elevator cabs and high efficiency motors at its King Street offices. Higher-efficiency lighting replaced incandescent bulbs, and the computer network was reconfigured to reduce electricity consumption.

Selection criteria for future purchases of computer hardware and software includes a request for a vendor's "green" strategies, policies, and practices. Due consideration is given to sustained business relationships with companies that have made strong commitments to address global warming, consistent with our company's position on the issue.

Transportation

Acknowledging the role of transportation on greenhouse gas emissions, the Hawaiian Electric companies have reduced their transportation emissions by:

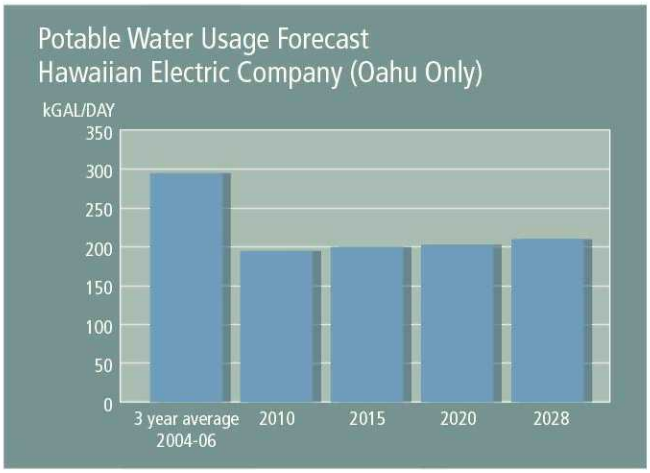
- Converting its entire fleet of diesel-fueled trucks and associated refueling stations to use B20 fuel (20 percent biodiesel-80 percent diesel); and
- Reducing the number of cars on Oahu's streets and highways through a carpool and bus pass program. Currently 176 employees receive complimentary bus passes from the company, and another 33 employees carpool, eliminating more than 200 cars on the road each day.

Hawaiian Electric also goes green at community events by using generators powered by a mix of biodiesel.

Recycling, Waste Reduction and Water Conservation

Hawaiian Electric has policies in place to ensure waste reduction and recycling of paper, beverage containers, electronic waste, lead, and iron. In addition, Hawaiian Electric's power plants and offices incorporate water-saving measures such as automatic faucets and flushing systems in restrooms and landscaping with low-maintenance plants that require less water.

Hawaiian Electric will also reduce its use of potable water by connecting to the Honouliuli Wastewater Treatment facility. By using reclaimed water for the next twenty years, usage of potable water at Hawaiian Electric's power plants on Oahu, including the new power plant due to be online in 2009, will never reach the amount we've been averaging for the last three years.



* Preliminary estimate from Hawaiian Electric's Integrated Resource Planning Update (IRP-4) Report. Forecasted reduction is based on installation of reclaimed reverse osmosis water line to Kahe Power Plant.

Potable water – Water of a quality that is suitable for drinking and cooking.

Reclaimed water - Treated, recycled waste-water not safe for consumption. Also known as non-potable.

Environmental Monitoring

Since the early 1970's, Hawaiian Electric has monitored its impact on the coral reefs off the shores of Kahe Power Plant. Believed to be the longest continuously running study of coral reefs in the world, the program confirms that the coral reefs in the area are thriving.

As part of a community benefits program for Hawaiian Electric's new Campbell Industrial Park (CIP) generating unit, additional fish and air monitoring stations are being planned to provide a baseline on the conditions of the area as well as an ongoing environmental profile.

CLEAN

Hawaiian Electric is a founding member of the Campbell Local Emergency Action Network (CLEAN), a nonprofit organization formed by businesses, emergency responders and community members to facilitate emergency preparedness and response in Campbell Industrial Park on Oahu. CLEAN is involved in a number of activities to promote the welfare of Campbell Industrial Park and its surroundings. Included among these are:

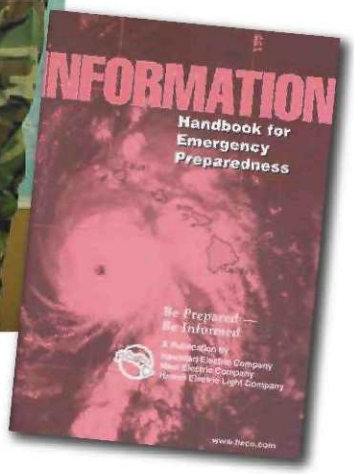
- community education programs;
- environmental protection;
- emergency response exercises;
- support of community organizations and the families they represent; and
- the enhancement of emergency warning systems – just to name a few.

Preparation for Emergencies and Natural Disasters

The Hawaiian Electric companies place heavy emphasis on emergency response planning. At least twice a year, the company trains and drills for emergencies, and maintains and updates emergency response plans to ensure responsible and rapid response to emergencies and natural disasters including oil spills, hurricanes, and storms.

Hawaiian Electric executives, alongside state and federal officials, prepare for emergencies through annual drill training.

Free copies of the Handbook for Emergency Preparedness are available at Hawaiian Electric utilities' customer service offices, and public libraries and Civil Defense offices on all islands.



Every month, Hawaiian Electric employees volunteer at community events and walk, run or provide manpower to dozens of non-profits throughout the State.

Environmental Stewardship and Corporate Giving

Through its charitable foundation, the Hawaiian Electric companies support a variety of efforts and programs that foster strong communities and support educational and environmental initiatives. Below are a handful of the exciting examples of Hawaiian Electric's community giving partnerships.

Ka Papa o Kakuhihewa

In 2006, Hawaiian Electric pledged $1 million over ten years to support Ka Papa o Kakuhihewa, an organization designed to promote education and resource conservation within the Waianae, Makakilo and Kapolei communities.

Malama Learning Center

Hawaiian Electric has been a founding supporter of the Malama Learning Center, a 501(c)(3) nonprofit organization with a vision to create a place in West Oahu that brings art, science, conservation and culture together to promote sustainable living throughout Hawaii.

Employee Volunteerism

Hawaiian Electric employees regularly volunteer at a variety of community events. For more than 20 years, Hawaiian Electric employees have cleaned up the beach around Kahe Power Plant as part of the Annual International Coastal Cleanup effort known as "Get the Drift & Bag It!" and more recently, have also participated in Sunset on the Beach and similar public events across the island. Hawaiian Electric employees have volunteered at numerous environmental events such as:

- Aloha Aina Recycling Event/Fundraiser at Kapolei High School
- City & County of Honolulu's Recycling Fair
- The Kokua Festival in support of the Kokua Hawaii Foundation
- University of Hawaii's Earth Day Festival

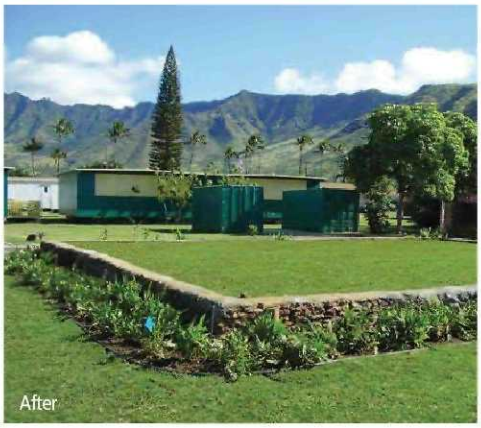
Arbor Day and Other Planting Events

Since 1993, the Hawaiian Electric companies have given away more than 20,000 trees and shrubs in honor of Arbor Day in Hawaii. Recognizing that trees play an important role in our environment both by reducing the need for air-conditioning and by absorbing carbon dioxide, Hawaiian Electric began a program to encourage native landscaping with indigenous plants in our public schools. A sampling of schools Hawaiian Electric has assisted with larger landscaping projects include:

- Ka Waihona o Ka Naauao Public Charter School in Nanakuli – Hawaiian Electric helped restore a hula mound with over 700 native hula plants.
- Seagull Schools – Hawaiian Electric donated hundreds of trees and employees volunteered to help landscape the new preschool in Ewa designed to take advantage of naturally cooling methods instead of air conditioning.

Supporting Hawaii's Wildlife

- Hawaiian Electric Company donated $25,000 to The Wildlife Society of Hawaii Chapter to fund its Offshore Islands Seabird Management Program to protect nesting areas and restore native vegetation.
- Maui Electric Company helped to develop Maui's Save our Seabirds (S.O.S.) Program, developing an educational outreach program and coordinating with county and state personnel to establish drop off points for injured birds.
- Hawaiian Electric Light Company donated $10,000 to the Hawaii Wildlife Center for bird and wildlife care, education and volunteer recruitment.



Before and after photos of a hula mound at Ka Waihona o Ka Naauao Public Charter School, restored through the help of a Hawaii 3Rs grant and Hawaiian Electric employee, school and community volunteers.

From implementing more energy efficiency and conservation programs, to incorporating more renewable resources into our portfolio, Hawaiian Electric is committed to reduce the contributions toward global warming from electricity generation. Beyond our initiatives and activities, we must all recognize the role that each of us as individuals plays in addressing this all-important issue. From reconsidering our transportation options, to limiting our use of electricity, we must all do our part to reduce the impact that our lifestyle has on our surrounding environment.

We recognize that this report, while serving as a first step, is only the beginning of a long journey. Over time, it is our desire that this report will show that the Hawaiian Electric companies are making strides in reducing our greenhouse gas output, and significant contributions to maintaining the paradise that we call home.

'A'ohe hana nui ke alu 'ia.
No task is too big when done together by all.

Hawaiian Electric Company
www.heco.com

Environmental Benefits Statement

This report is printed on 100 percent postconsumer waste material. It is Forest Stewardship Council™ certified, processed chlorine free, alkaline pH, and meets the credibility of American National Standards Institute (ANSI) for longevity.

By using this paper, Hawaiian Electric Company saved the following resources:

Trees	Water	Energy	Solid Waste	Greenhouse Gases
23 fully grown*	**8,310** gallons	**16** million BTU	**1,375** pounds	**2,535** pounds

The savings are based on a quantity of 3000 reports.
Environmental impact estimates were made using the Environmental Defense Paper calculator.
For more information, visit http://www.papercalculator.org.

* Fully matured at 25 years.

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4/2008-3M

CA-IR-153

Ref: HECO T-14, page 11 (EEI Dues).

Please provide a copy of the actual 2008 EEI invoice information, including all attachments, which served as the basis for the 2009 test year estimate.

HECO Response:

a. Please see Attachment 1.

EDISON ELECTRIC INSTITUTE

INVOICE FOR MEMBERSHIP DUES

701 PENNSYLVANIA AVENUE, NW
WASHINGTON, DC 20004-2696
PHONE (202) 508-5000

Date	Invoice Number
03/18/2008	1-000065462

MR. T. MICHAEL MAY
PRESIDENT AND CEO
HAWAIIAN ELECTRIC CO INC
PO BOX 2750
HONOLULU, HI 96840-0001

Payment Due on or before 04/15/08
(Interest charges will accrue after due date)

Description	Total
2008 Membership Dues for 1st Quarter:	
Regular Activities of Edison Electric Institute[1]	$101,274
Industry Issues[2]	10,128
Mutual Assistance Program[3]	1,250
2008 Contribution to The Thomas Alva Edison Foundation (Edison Foundation), including the Institute for Electric Efficiency[4]	3,750
Total	$116,402

1- The portion of membership dues allocable during 2008 relating to influencing legislation not deductible for federal income tax purposes is estimated to be 20%.
2- The portion of the voluntary industry issues allocable during 2008 relating to influencing legislation is estimated to be 40%.
3- Voluntary assessment approved by EEI Executive Committee relating to improvements for the rapid response to disasters. No portion of this assessment is allocable to influencing legislation.
4- The Edison Foundation is an IRC 501(c)(3) educational and charitable organization. The Institute for Electric Efficiency (IEE) is a program of the Edison Foundation.

PLEASE NOTE INFORMATION FOR WIRING.

The following is instruction for transferring funds electronically to Edison Electric Institute's account at the Wachovia Bank N.A. in Washington, DC:

Beneficiary's Bank:	**Wachovia Bank, N.A.**
Bank's Address:	**Washington, DC**
Bank's ABA Number:	**0 5 4 0 0 1 2 2 0**
Beneficiary:	**Edison Electric Institute**
Beneficiary's Acct No:	**2 0 0 0 0 1 3 8 4 2 8 9 7**
Beneficiary's Address:	**701 Pennsylvania Avenue, NW Washington, DC 20004-2696 USA**
Beneficiary Reference:	**2008 Membership Dues**

Please refer any questions to Ed Milad at: phone-(202) 508-5430; fax-(202) 508-5037; *or* e-mail-emilad@eei.org.

EDISON ELECTRIC INSTITUTE

INVOICE FOR MEMBERSHIP DUES

701 PENNSYLVANIA AVENUE, NW
WASHINGTON, DC 20004-2696
PHONE (202) 508-5000

Date	Invoice Number
03/18/2008	1-000065462

MR. T. MICHAEL MAY
PRESIDENT AND CEO
HAWAIIAN ELECTRIC CO INC
PO BOX 2750
HONOLULU, HI 96840-0001

Payment Due on or before 06/01/08
(Interest charges will accrue after due date)

Description	Total
2008 Membership Dues for 2nd Quarter:	
Regular Activities of Edison Electric Institute[1]	$101,274
Industry Issues[2]	10,128
Mutual Assistance Program[3]	1,250
2008 Contribution to The Thomas Alva Edison Foundation (Edison Foundation), including the Institute for Electric Efficiency[4]	3,750
Total	$116,402

1- The portion of membership dues allocable during 2008 relating to influencing legislation not deductible for federal income tax purposes is estimated to be 20%.
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Bank's Address:	**Washington, DC**
Bank's ABA Number:	**0 5 4 0 0 1 2 2 0**
Beneficiary:	**Edison Electric Institute**
Beneficiary's Acct No:	**2 0 0 0 0 1 3 8 4 2 8 9 7**
Beneficiary's Address:	**701 Pennsylvania Avenue, NW Washington, DC 20004-2696 USA**
Beneficiary Reference:	**2008 Membership Dues**

Please refer any questions to Ed Milad at: phone-(202) 508-5430; fax-(202) 508-5037; *or* e-mail-emilad@eei.org.

EDISON ELECTRIC INSTITUTE

INVOICE FOR MEMBERSHIP DUES

701 PENNSYLVANIA AVENUE, NW
WASHINGTON, DC 20004-2696
PHONE (202) 508-5000

Date	Invoice Number
03/18/2008	1-000065462

MR. T. MICHAEL MAY
PRESIDENT AND CEO
HAWAIIAN ELECTRIC CO INC
PO BOX 2750
HONOLULU, HI 96840-0001

Payment Due on or before 09/01/08
(Interest charges will accrue after due date)

Description	Total
2008 Membership Dues for 3rd Quarter:	
Regular Activities of Edison Electric Institute[1]	$101,274
Industry Issues[2]	10,128
Mutual Assistance Program[3]	1,250
2008 Contribution to The Thomas Alva Edison Foundation (Edison Foundation), including the Institute for Electric Efficiency[4]	3,750
Total	$116,402

1- The portion of membership dues allocable during 2008 relating to influencing legislation not deductible for federal income tax purposes is estimated to be 20%.
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Bank's Address:	**Washington, DC**
Bank's ABA Number:	**0 5 4 0 0 1 2 2 0**
Beneficiary:	**Edison Electric Institute**
Beneficiary's Acct No:	**2 0 0 0 0 1 3 8 4 2 8 9 7**
Beneficiary's Address:	**701 Pennsylvania Avenue, NW Washington, DC 20004-2696 USA**
Beneficiary Reference:	**2008 Membership Dues**

Please refer any questions to Ed Milad at: phone-(202) 508-5430; fax-(202) 508-5037; *or* e-mail-emilad@eei.org.

EDISON ELECTRIC INSTITUTE

INVOICE FOR MEMBERSHIP DUES

701 PENNSYLVANIA AVENUE, NW
WASHINGTON, DC 20004-2696
PHONE (202) 508-5000

Date	Invoice Number
03/18/2008	1-000065462

MR. T. MICHAEL MAY
PRESIDENT AND CEO
HAWAIIAN ELECTRIC CO INC
PO BOX 2750
HONOLULU, HI 96840-0001

Payment Due on or before 12/01/08
(Interest charges will accrue after due date)

Description	Total
2008 Membership Dues for 4th Quarter:	
Regular Activities of Edison Electric Institute[1]	$101,274
Industry Issues[2]	10,128
Mutual Assistance Program[3]	1,250
2008 Contribution to The Thomas Alva Edison Foundation (Edison Foundation), including the Institute for Electric Efficiency[4]	3,750
Total	$116,402

1- The portion of membership dues allocable during 2008 relating to influencing legislation not deductible for federal income tax purposes is estimated to be 20%.
2- The portion of the voluntary industry issues allocable during 2008 relating to influencing legislation is estimated to be 40%.
3- Voluntary assessment approved by EEI Executive Committee relating to improvements for the rapid response to disasters. No portion of this assessment is allocable to influencing legislation.
4- The Edison Foundation is an IRC 501(c)(3) educational and charitable organization. The Institute for Electric Efficiency (IEE) is a program of the Edison Foundation.

PLEASE NOTE INFORMATION FOR WIRING.

The following is instruction for transferring funds electronically to Edison Electric Institute's account at the Wachovia Bank N.A. in Washington, DC:

Beneficiary's Bank:	**Wachovia Bank, N.A.**
Bank's Address:	**Washington, DC**
Bank's ABA Number:	**0 5 4 0 0 1 2 2 0**
Beneficiary:	**Edison Electric Institute**
Beneficiary's Acct No:	**2 0 0 0 0 1 3 8 4 2 8 9 7**
Beneficiary's Address:	**701 Pennsylvania Avenue, NW Washington, DC 20004-2696 USA**
Beneficiary Reference:	**2008 Membership Dues**

Please refer any questions to Ed Milad at: phone-(202) 508-5430; fax-(202) 508-5037; *or* e-mail-emilad@eei.org.

CA-IR-154

Ref: HECO T-14, page 12, & HECO-1404, page 5 (Elllipse Maintenance Fees).

Referring to HECO-1404, page 5, please provide the following:

a. Please supplement HECO-1404, page 5, to reflect actual and budget amounts for calendar year 2008, clearly identifying budget values.
b. Please explain and clarify whether the 2.5% increase in June 2009 is fixed by contractual commitment or represents HECO's estimate of the increase that might be imposed.
c. For each listed amendment, please provide the following:
    1. A detailed description of the purpose and scope of the amendment.
    2. An explanation as to why the scope covered by the amendment is beyond the Software Maintenance Fee (core business) or the BSI (payroll tax) software maintenance fee.
    3. The amendment start and termination date, if known (otherwise provide the estimated termination date).
d. Amendment 34 is identified as a "proposed amendment for the projected additional maintenance costs beginning in 2008" in the amount of $750,000 per month. Please provide the current status of this amendment and provide a copy of the amendment documentation.

<u>HECO Response:</u>

a. Please see Attachment 1. Based on the attached, the updated 2009 Ellipse maintenance fee amount for HECO is approximately $3,000 more than the Test Year 2009 estimate.

b. The 2.5% increase in June 2009 represents HECO's estimate of the increase that might be proposed.

c. <u>Amendment 22:</u>

    1. This amendment was for the purchase of a 10-pack software license bundle of Ellipse Enterprise Adapters.

    2. This software is needed to build interfaces utilizing the web services architecture not included in the base software maintenance fees.

    3. This amendment started July 2005 and has no end date.

Amendment 23:

1. This amendment was for the purchase of a software license for the Websphere Application Server, TX Series, CICS Transaction gateway, and CICS universal client.
2. This software is needed to build interfaces utilizing the web services architecture not included in the base software maintenance fees.
3. This amendment started July 2005 and has no end date.

Amendment 30:

1. This amendment is for the purchase of a software license for the IBM Websphere Bundle Software.
2. This software is needed to build interfaces utilizing the web services architecture not included in the base software maintenance fees.
3. This amendment started July 2005 and has no end date.

Amendment 33:

1. This amendment is for the purchase of software licenses for Microfocus Server Express.
2. This software is the COBOL complier needed to run Ellipse on a Unix Platform.
3. This amendment started March 2007 and has no end date.

Estimated Amendment 34:

1. Same as Amendment 22. However, HECO will require additional software licenses for the Ellipse Enterprise Adapters in 2009 with the Customer Information System and Human Resource Management System projects to be implemented.

2. Same as Amendement 22.

3. The proposed amendment will have no end date.

d. To clarify, the proposed Amendment 34 is approximately $9,000 in the test year (or approximately $750 per month). The Amendment has not been entered into as of the end of August 2008.

Hawaiian Electric Company, Inc.
Ellipse Maintenance Fees
Test Year 2009 Estimate

Month	Software Maintenance Fee	Amend 22	Amend 23	Amend 30	Amend 33	Estimate - Amend 34	BSI	Total (HECO/ HELCO/ MECO)	Est Escalation
	Note (1)								
Invoice #	I0010207	I0010242	I0010292	I0010209	I0010058		I0010207		Actual
Jan-08	17,865	1,808	1,114	293	369	-	1,323	22,772	
Feb-08	17,865	1,808	1,114	293	369	-	1,323	22,772	
Mar-08	17,865	1,808	1,114	293	369	-	1,323	22,772	
Apr-08	17,865	1,808	1,114	293	369	-	1,323	22,772	
May-08	17,865	1,808	1,114	293	369	-	1,323	22,772	
Invoice #	I0011339	I0011340	I0011341	I0011342	I0011343		I0011344		Actual
Jun-08	18,597	1,882	1,160	305	384	-	1,356	23,685	
Jul-08	18,597	1,882	1,160	305	384	-	1,356	23,685	
Aug-08	18,597	1,882	1,160	305	384	-	1,356	23,685	
Sep-08	18,597	1,882	1,160	305	384	-	1,356	23,685	
Oct-08	18,597	1,882	1,160	305	384	-	1,356	23,685	
Nov-08	18,597	1,882	1,160	305	384	-	1,356	23,685	
Dec-08	18,597	1,882	1,160	305	384	-	1,356	23,685	
Jan-09	$ 18,597	$ 1,882	$ 1,160	$ 305	$ 384	$ 750	$ 1,356	$ 24,435	
Feb-09	18,597	1,882	1,160	305	384	750	1,356	24,435	
Mar-09	18,597	1,882	1,160	305	384	750	1,356	24,435	
Apr-09	18,597	1,882	1,160	305	384	750	1,356	24,435	
May-09	18,597	1,882	1,160	305	384	750	1,356	24,435	
Jun-09	19,062	1,929	1,189	313	394	751	1,390	25,028	2.5%
Jul-09	19,062	1,929	1,189	313	394	751	1,390	25,028	
Aug-09	19,062	1,929	1,189	313	394	751	1,390	25,028	
Sep-09	19,062	1,929	1,189	313	394	751	1,390	25,028	
Oct-09	19,062	1,929	1,189	313	394	751	1,390	25,028	
Nov-09	19,062	1,929	1,189	313	394	751	1,390	25,028	
Dec-09	19,062	1,929	1,189	313	394	751	1,390	25,028	
Total Ellipse Maintenance Fees - **UPDATED**								$ 297,372	
HECO's % Share (Based on total users of HECO/HELCO/MECO)								70%	
Total Test Year 2009 Estimated HECO's Share of Ellipse Maintenance Fees - **UPDATED**								$ 208,160	
Test Year 2009 Estimate filed in direct testimony								$ 205,235	

Note: Numbers may not total exactly due to rounding.

Note (1): Monthly expense amounts for 1/08-5/08 are based on actual invoices for the 6/2007-5/2008 term and the monthly expense amounts for 6/08-5/09 are based on actual invoices for the 6/2008-5/2009 term. The monthly expense amounts for 6/09-12/09 are based on a 6/2009-5/2010 term which is estimated to be 2.5% above the actual 6/2008-5/2009 term.

Note (2): Amendment 34 is a proposed amendment for the projected additional maintenance costs beginning in 2009.

Hawaiian Electric Company, Inc.
Allocation of Ellipse Software Maintenance Fees
Test Year 2009 Estimate

		% Alloc	% Alloc	% Alloc	% Alloc	Result Alloc	Allocated Amount		NARUC Acct
HECO's portion of Ellipse software maintenance fees per HECO-1404, pg. 5							$ 208,160		
Work Management Amortization		0.1836							
	Capital Expenditures		0.559						
212	212 Constr Proj - Prod			0.072		0.007390	1,538		514
320	320 Manage Trans Construction Proj			0.214		0.021963	4,572		566
420	420 Manage Distri Construction Proj			0.714		0.073280	15,254		598
	Production		0.248						
	Prod Operation			0.475					
245	245 Monitor Plt Oper Perf - Boiler				0.546	0.011809	2,458		502
246	246 Monitor Plt Oper Perf - Turbo Gen				0.454	0.009819	2,044		505
	Prod Maint			0.525					
258	258 Maint Blr Plt & Rel Equip - Predictive				0.625	0.014940	3,110		512
261	261 Maint Stm Turbo Gen & Rel Equip Predictive				0.375	0.008964	1,866		513
	Transmission and Distribution		0.193						
	Transmission								
	Transmission Operation			0.147					
331	331 Oper Trans Fac - OH Line				0.492	0.002563	533		563
333	333 Oper Trans Fac - Substation				0.508	0.002646	551		562
	Transmission Maint								
343	343 Maint Trans OH Line - Predictive			0.145	0.682	0.003504	729		571
349	349 Maint Subst Trans Equip - Predictive				0.318	0.001634	340		570
	Distribution								
	Distribution Operation								
461	461 Oper Distri Fac - OH Line			0.313	0.309	0.003427	713		583
462	462 Oper Distri Fac - UG Line				0.341	0.003782	787		584
463	463 Oper Distri Fac - Substation				0.350	0.003882	808		582
	Distribution Maint								
474	474 Maint Distri OH Line - Predictive			0.395	0.437	0.006117	1,273		593
477	477 Maint Distri UG Line - Predictive				0.422	0.005907	1,230		594
486	486 Maint Subst Distrbution Equip - Predictive				0.141	0.001974	411		592
Accounting/Finance		0.3757							
818	818 Maintain General Ledger, Subledgers, & Statistical Information					0.375700	78,206	[a]	9302
HR/Payroll		0.2466							
766	766 Maintain Employee Records		0.031			0.007645	1,591		921
777	777 Process Payroll		0.969			0.238955	49,741		921
Materials		0.1941							
842	842 Order Materials, Equip., Supplies		0.1			0.019410	4,040	[a]	9302
843	843 Process Invoice & Other Payments		0.649			0.125971	26,222	[a]	9302
850	850 Process Materials & Transaction		0.251			0.048719	10,141	[a]	9302
TOTAL (HECO's portion of Ellipse software maintenance fees)							$ 208,160		
		Sum of [a] - Amt allocated to acct 9302					$ 118,610		

CA-IR-155

Ref: HECO T-14, page 16, & HECO-1412 (Account 932 Maintenance).

Referring to HECO-1412, please provide the following:

a. Please provide a detailed breakdown of the annual recurring maintenance estimate of $681,000.

b. Please provide a historical breakdown of Account 932 maintenance expense between "recurring" and "non recurring" comparable to HECO-1412 by year for the period 2006, 2007 and 2008 to-date.

HECO Response:

a. See Attachment 1.

b. See Attachment 2.

Account 932 - Maintenance of General Plant
Estimated Annual Recurring Maintenance
Test Year 2009 Estimate

RA	RA desc	LOC	IND	PROJ	EE	EE desc	2009 TY	Reference - HECO T-14
P6V	VP-Corp Excellence	PHE	NE	NPAVP6ZZ	600	Gen Plt Equip Maint	$ 3,237	CA-IR-2, Attachment 1, Page 6.
PHF	Facilities Planning	PHE	NE	NPHZZZZZ	150	Labor Cost	20,852	CA-IR-1, Attachment 1, Page 3.
PHF	Facilities Planning	KNG	NE	NPHZZZZZ	150	Labor Cost	49,468	CA-IR-1, Attachment 1, Page 3.
PHF	Facilities Planning	WRD	NE	NPHZZZZZ	150	Labor Cost	58,572	CA-IR-1, Attachment 1, Page 4.
PHF	Facilities Planning	PHE	NE	P0000346	501	Outside Svcs-General	30,780	CA-IR-2, Attachment 1, Page 6.
PHF	Facilities Planning	KNG	NE	P0000346	501	Outside Svcs-General	42,336	CA-IR-2, Attachment 1, Page 6.
PHF	Facilities Planning	WRD	NE	P0000346	501	Outside Svcs-General	195,468	CA-IR-2, Attachment 1, Page 7.
PNC	Legal	PHE	NE	NPNCZZZZ	600	Gen Plt Equip Maint	200	CA-IR-2, Attachment 1, Page 7.
PQC	Corp Communications	PHE	NE	NPQCZZZZ	600	Gen Plt Equip Maint	400	CA-IR-2, Attachment 1, Page 7.
PQC	Corp Communications	PHE	NE	NPQCZZZZ	600	Gen Plt Equip Maint	3,000	CA-IR-2, Attachment 1, Page 7.
PRX	Construction Mgt	WRD	NE	NPRZZZZZ	150	Labor Cost	42	CA-IR-1, Attachment 1, Page 4.
PVL	Electric & Welding Svcs	KNG	NE	NPVZZZZZ	150	Labor Cost	6,551	CA-IR-1, Attachment 1, Page 4.
PVL	Electric & Welding Svcs	WRD	NE	NPVZZZZZ	150	Labor Cost	7,463	CA-IR-1, Attachment 1, Page 4.
PVL	Electric & Welding Svcs	WRD	NE	NPVZZZZZ	150	Labor Cost	27,641	CA-IR-1, Attachment 1, Page 4.
PVL	Electric & Welding Svcs	WRD	NE	NPVZZZZZ	205	Matl-Purchasing Card	18,450	CA-IR-2, Attachment 1, Page 7.
PVL	Electric & Welding Svcs	WRD	NE	NPVZZZZZ	301	Vehicles	48,360	CA-IR-2, Attachment 1, Page 7.
PVL	Electric & Welding Svcs	WRD	NE	NPVZZZZZ	501	Outside Svcs-General	6,000	CA-IR-2, Attachment 1, Page 7.
PVL	Electric & Welding Svcs	WRD	NE	NPVZZZZZ	501	Outside Svcs-General	22,056	CA-IR-2, Attachment 1, Page 7.
Misc Labor Oncost							24,410	HECO-WP-101(H), Page 1177
Misc Nonlabor Oncost							27,795	HECO-WP-101(I), Page 1506
Misc labor reclassed from NARUC 920							2,801	HECO-1412, Note (1)
Misc nonlabor reclassed from NARUC 921							85,230	HECO-1412, Note (1)
Total Recurring Maintenance							$ 681,111	

Account 932 - Maintenance of General Plant
Recorded Recurring and Nonrecurring Maintenance Costs
2006 to July 2008 YTD

	2006 Actual	2007 Actual	7/2008 YTD	
Recurring O&M:	500,056	598,369	275,325	
NonRecurring O&M:				
Ward parking deck - P0001115	92,500			
Ward parking roof level - P0001291 (originally NARUC 920/921)		327,000		
Ward covd level - P0001286 (originally NARUC 920/921)		-	1,527	Note (1)
Ward ramp walls - P0001343 (originally NARUC 920/921)		36,470	485,380	
Ward ramp - DH - P0001571 (originally NARUC 920/921)		-	568	Note (1)
NonRecurring O&M	92,500	363,470	487,475	
Estimated GL Code reversals - Note (2)	(55,803)	(53,921)	(40,062)	
Total Recurring and NonRecurring O&M	536,753	907,918	722,738	

Note (1): Ward projects P0001286 and P0001571 commenced in June 2008 and July 2008, respectively.

Note (2): Refer to Ms. Patsy Nanbu's testimony at HECO T-11 for information related to GL code reversed amounts under account 922 - Administrative Expenses Transferred discussion.

CA-IR-156

Ref: HECO T-14, page 16, & HECO-1412 (Account 932 Maintenance).

Referring to HECO-1412, please provide the following:

a. Please explain the circumstances surrounding the Ward parking structure ramp repairs, including when the needed repairs were first identified and whether/why the repairs were scheduled for 2009.
b. Please explain why the 2009 budgeted repair costs for the Ward parking structure ramp should not be considered capital projects.

HECO Response:

a. In the last quarter of 2006, HECO Facilities Division explored the replacement of the "expansion-joint material" on the Ward parking structure ramp due to on-going leaking problems during rain periods. The joint is situated midway downstream of the ramp which served as a collection point for rain water. Upon initial inspection, it was thought to be a simple "remove and replace project," but further investigation in the immediate area surrounding the deteriorated expansion joint, the Facilities Division discovered "delaminated concrete patching" on both sides of the expansion-joint material. There were visible signs of deteriorated concrete (spalling) surrounding the expansion joint and cracking on the ramp deck.

The Facilities Division consulted with the Structural Engineering Division to confirm its findings and to determine whether further repair work was needed before the expansion joint was replaced. Reviews of the original construction drawings raised serious concerns regarding the use of 1970's post-tensioned concrete construction system for both the Ward parking structure and the attached ramp. Since we did not have anyone employed at HECO with a background in this type of construction, an outside consultant, Wilson Okamoto &

Associates, Inc., a structural engineering firm familiar with this type of work, was contracted to investigate possible structural problems.

Several problems were identified during initial inspections by the consultant: 1) cracking in the ramp deck, 2) no redundancy in the quantity of post-tensioned cables for the Diamond Head section (Phase 2) of the ramp, 3) numerous cracks in the concrete ramp walls, and 4) evidence revealing that moisture had reached the reinforcing steel within the supporting large girders holding up the ramp. Due to the severity of the problems and the criticalness of the ramp, a plan of action was determined to make these repairs as soon as possible. After discussions with the consultant, construction management, and HECO project management staff, it was decided that repair work to the ramp would have to be done in phases due to the size of the ramp and how it was originally built, and to ensure: 1) the safety of the construction crew and HECO employees during construction, 2) minimize disruptions in operations, and 3) maximize curing time of the concrete to reduce any likelihood of experiencing future possible structural defects and failures. Plans and designs were reviewed and initiated by Facilities and Structural Divisions, and a contractor was selected to proceed with the repair work.

In August 2007, construction on Phase 1 (project P0001343) of the Ward parking ramp repair work commenced. Shortly after commencing construction, additional problems were uncovered which were not visible from the exterior surfaces of the concrete which resulted in revising construction plans and designs to address these concerns. These problems included: 1) the post-tensioned tendon anchors were situated in the wrong place within the concrete ramp walls which caused the concrete within the ramp walls to crack, and 2) questionable structural strength due to concrete cracking surrounding the termination

points of the post-tensioned tendons above the expansion joint. According to original plans/drawings of the Ward facility, another building and an adjacent parking ramp connecting the new building and the parking structure were to have been built. However, the building and parking ramp were not built. Therefore, the existing ramp continues to be used. Phase 1 of the Ward parking ramp repair work is almost fully completed with only minor finishing items to be performed.

In August 2008, construction on Phase 2 (project P0001571) of the Ward parking ramp repair work commenced. Phase 2 construction on the Diamond Head end of the ramp has already uncovered some concerns in which changes to the design will have to be done. It is anticipated that the majority of the work will be completed in 2008. This phase of the Ward parking ramp repairs was originally scheduled for 2009 and therefore, its costs are included in the 2009 test year. Due to the severity of the ramp problems and the criticalness of the ramp, this project was re-prioritized and moved up to 2008. Phase 3 (project P0001570) of the Ward parking ramp repair work is still scheduled to start and finish in 2009. For the purposes of the test year 2009 cost estimates, the Company will review its remaining projects that have been identified, as well as those still materializing, and will re-prioritize and move up to 2009 other project(s) accordingly.

b. NARUC defines Operating Expense under Maintenance (Section 2.C.3) as "Work performed specifically for the purpose of preventing failure, restoring serviceability or maintaining life of plant." The work performed on the Ward parking ramp meets this definition since we are not replacing the ramp but repairing it in order to maintain the life of the facility.

CA-IR-157

Ref: HECO T-14, page 24 (EPRI Dues).

The 2009 estimate of EPRI dues employs a reallocation of the HECO-EPRI multi-year agreement based on the total R&D estimate in the most recent rate cases of HECO, HELCO and MECO. Please provide the following:

a. Please provide a copy of the multi-year EPRI agreement.
b. Please provide a copy of the documentation supporting the reallocation that result in the HECO 2009 estimate of $1,657,000.

HECO Response:

a. Please see Attachment 1, originally filed as Attachment 7 to B. Tamashiro's response to CA-IR-2 in HECO's 2007 Test Year Rate Case (Docket No. 2006-0386).

b. The reallocation calculation, including references, is shown on page 1 of HECO-1406.

EPRI | ELECTRIC POWER RESEARCH INSTITUTE

2007 Research Participation and Membership Agreement

between

Electric Power Research Institute, Inc. ("EPRI")

and

Hawaiian Electric Company, Inc. ("Member")

1. TERM: This Agreement is effective from January 1, 2007 through December 31, 2011 and applies to selections made by Member from EPRI's Research Portfolio and supplemental projects during these years. The terms and conditions of the Master Agreement between the Parties executed on 1/2/07 are incorporated herein and govern all research selected hereunder.

2. The Parties agree that Member shall have access to the EPRI products resulting from their selections from the Research Portfolio as identified in Attachment 1 (the EPRI Price Sheet for 2007), incorporated herein by this reference, and delivered as part of EPRI's 2007 research calendar year. Similarly, Member shall also have access to the EPRI products resulting from their selections from the Research Portfolio delivered as part of EPRI's 2008, 2009, 2010 and 2011 research calendar years; Member shall provide EPRI with Price Sheets identifying their selections for each of these years. Access to the results of supplemental projects in which Member participates will be described in specific supplemental project agreements.

3. Member agrees to pay the Annual Payment Amounts to EPRI for the years identified below. The Parties intend to use all funding for scientific research and to demonstrate the application of EPRI developed technology consistent with EPRI's charter as an IRS 501(c)(3) nonprofit scientific research consortium. To this end, in each of the years identified below, a minimum of $1,200,000 must be applied to selections from EPRI's annual Research Portfolio. The remainder must be applied to supplemental projects, except that up to $75,000 each year may be designated for travel by Member's staff to participate in EPRI events, EPRI sponsored events or meetings, related to technical research advisory responsibilities, or technology transfer of the research in which Member is participating.

Year	Annual Payment Amount
2007	$2,085,457
2008	$2,085,457
2009	$2,085,457
2010	$2,085,457
2011	$2,085,457

4. Member agrees that $1,200,000 of its Annual Payment Amount shall be committed to Research Portfolio selections in each of years 2007, 2008, 2009, 2010 and 2011, and shall receive a 25% price reduction from the posted prices for each EPRI Research Portfolio selection. This does not apply to EPRI's Nuclear Program, EPRI's Supplemental Projects, EPRI's services or any other purchase from EPRI.

5. Member has full Research Portfolio program selectability for the term of the Agreement and is not locked in to the same Research Portfolio selections each year. Member agrees to submit a new selection form (EPRI Price Sheet) to EPRI no later than December 1 of each calendar year for the upcoming year.

   a. Member agrees that for each year, Member shall apply the remaining amount from its Annual Payment Amount (subject to the requirements of paragraph 4, above) less the designated amount for travel (subject to limitations in paragraphs 3 and 5c), to supplemental projects by executing separate contracts.

   b. Each year the Annual Payment Amount shall be invoiced quarterly with that portion designated for Research Portfolio selections applied directly to EPRI's Research Portfolio program and the remainder placed in and accounted for in a Deposit Account (Appendix A) until applied pursuant to paragraph 5a, above. Member agrees to the terms and conditions of Appendix A when utilizing such funds, and such terms and conditions are hereby incorporated by this reference.

EPRI | ELECTRIC POWER RESEARCH INSTITUTE

c. Funds designated for travel by Member shall be identified each funding year by Member and such specific amounts will be placed in a Deposit Account and accounted for each funding year. Member may request disbursements of specific amounts directly to Member to be used for this purpose as specifically described in paragraph 3 above, through invoices to EPRI supported by Member's normal applicable policy governing travel expenses. EPRI's standard overhead rate will be applied to any funding disbursed to Member for such use. The annual balance of this Deposit Account may be carried forward to each succeeding year of this Agreement; however, notwithstanding section 5b above, and the terms and conditions of Appendix A, any balance remaining on September 30, 2011 may be used by Member for EPRI research opportunities, which shall include calendar year 2011 Research Portfolio programs and supplemental projects; in the event EPRI and Member are unable to execute separate contracts for use of this balance by December 31, 2011, then any remaining balance that has been designated but not used for travel purposes will be forfeited to EPRI for use at EPRI's sole discretion.

6. Member may purchase additional Research Portfolio selections during each year, which will have an effective beginning date of January 1 for the year the purchase is made. Such additional purchases will be available at then-current posted prices plus any applicable pricing incentives determined with the policies in effect in the year of addition plus the purchase incentive described in Paragraph 4 above.

7. This Agreement provides Member with an Existing Products (defined herein as EPRI research results from its Research Portfolio programs developed prior to each then-current calendar year of this Agreement) credit pool in the amount of $900,000 for the purchase of Existing Products to which Member does not already have access. This credit may be used at any time during the term of this original Agreement and not in any extensions thereof to purchase Existing Products from EPRI subject to the Existing Products pricing and purchasing policies in effect at the time of purchase and expires on December 31, 2011 or upon notification of termination of this Agreement. It may not be applied to EPRI products already purchased by Member prior to execution of this Agreement, and may not be extended, transferred or used for anything except the purchase of Existing Products.

8. If Member reduces its annual Research Portfolio commitment below $1,200,000 in any year this Agreement is in effect, Member agrees to pay EPRI a fee of ten percent (10%) of the Annual Payment Amount for each year of reduction. In addition, if Member fails to execute the balance of its annual Payment Amount with specific supplemental project agreements with EPRI by December 31 of each calendar year pursuant to 5a above, Member agrees to pay EPRI the difference between $2,010,457 and the total funding actually placed under executed contract including Portfolio commitments and supplemental projects. EPRI will apply this fee and any such funding difference at EPRI's sole discretion and these funds will not be used as an offset or credit against any other payments to EPRI by Member during the term of this Agreement.

9. If Member decides to terminate this Agreement, Member agrees to notify EPRI of its decision in writing at least thirty (30) days prior to termination. Member agrees to pay EPRI Member's total Annual Payment Amount for the year in which notification was given plus a fee of ten percent (10%) of the Annual Payment Amount for each remaining year of the Agreement. Any funding designated for travel by Member and carried over from a prior year will be forfeited to EPRI for use at EPRI's sole discretion. Such payments to EPRI shall terminate the multi-year commitment as set forth in this Agreement.

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IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their duly authorized representatives.

Hawaiian Electric Company, Inc. ("Member") Printed Business Name of Member	EPRI ("EPRI") Electric Power Research Institute
P.O. Box 2750, Honolulu, HI 96840 Business Address City, State, Zip	Post Office Box 10412 3420 Hillview Ave. Palo Alto, CA 94304-1338 Telephone 650-855-1088 Fax 650-855-2166
(808) 543-4400 / (808) 543-4445 Telephone Number / Fax Number	
12/19/06 Authorized Signature for Member / Date	1/3/07 Authorized Signature for EPRI / Date
T. Michael May/ President and CEO Printed Name of Member's Authorized Signatory / Title	Henry A. Courtright, Senior Vice President / Member Services / Environment Printed Name of EPRI's Authorized Signatory / Title

December 11, 2006 HECO07RPAm121106

NS
EM1

12/14/06
Authorized Signature of Member / Date

Karl E. Stahlkopf / Sr. Vice President, Energy Solutions and CTO
Printed Name of Member's Authorized Signatory / Title

(808) 543-7655 / (808) 543-7657
Telephone Number / Fax Number

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Appendix A: DEPOSIT ACCOUNT TERMS AND CONDITIONS

EPRI and Member agree to the following terms and conditions for use of a Deposit Account:

1. EPRI will establish a non-interest bearing account ("Deposit Account") for and on behalf of Member to provide Member funds for the timely purchase of EPRI products and services (the "Work") by the Member. Use of the funds will be governed in accordance with the EPRI agreement in place for the products or services being obtained with the funds. Deposit Account funds may be used by Member to fund supplemental projects, including satisfying any obligations to provide cash match in a Tailored Collaboration project, or cofunding to a project.
2. Member shall deposit funds into the Deposit Account, in accordance with its obligations in the applicable EPRI/Member Research Portfolio Agreement ("RPA"). The minimum amount(s) deposited by the Member shall be as articulated in the applicable RPA. Deposit Account funds are and shall remain the sole property of Member and their disbursement shall be governed by the Member to purchase EPRI products and/or services.
3. Upon Member's request, EPRI will provide Member's primary contact with a financial statement of the Deposit Account status and activity.
4. Member personnel authorized by an officer of Member to purchase products and services using the Deposit Account funds are listed in this agreement. Member may add to or delete individuals from this list at any time by completing the Deposit Account Authorization Amendment form, which shall be executed by an authorized officer of Member.
5. This agreement for the use of a Deposit Account may be terminated by Member at any time by providing written notice to EPRI. Upon such notice, and after determining the funds required to fulfill Member's open purchase commitments, EPRI will refund the remaining funds in the Deposit Account to Member; any refunds shall be sent to Member's Chief Financial Officer. All notices under this Agreement are to be sent to the addresses indicated below, or as the parties may otherwise indicate from time to time in writing.
6. The Deposit Account will not be activated until the payment is received.

Attachment to Deposit Account Agreement

Member:	Hawaiian Electric Company, Inc.
Opening Deposit:	$
Address:	P.O. Box 2750 Honolulu, HI 96840
Primary Contact:	Arthur Seki
Title:	Director, Technology (EPRI METT)
Department:	Technology
Phone Number:	(808) 543-7987
Fax Number:	(808) 543-7099

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Member's Personnel Authorized to Order EPRI Products and Services Utilizing Deposit Account Funds:

Arthur Seki

Notice Address for Participant:

Hawaiian Electric Company, Inc.

P.O. Box 2750, Honolulu, HI 96840

Notice Address for EPRI:

Electric Power Research Institute, Inc.

3420 Hillview Avenue

Palo Alto, CA 94304

Attention: Finance Department, **David Tsukimura**

Tel: 650-855-2669 Fax: 650-855-2809

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MASTER AGREEMENT FOR EPRI MEMBER PARTICIPATION

This Master Agreement for EPRI Participation ("Master Agreement") is effective on the last date executed (the "Effective Date") between the Electric Power Research Institute, Inc., a nonprofit corporation organized under the laws of the District of Columbia ("EPRI") with principal headquarters at 3420 Hillview Avenue, Palo Alto, California 94304, andHawaiian Electric Company, Inc., a corporation organized under the laws of Hawaii, with offices at P.O. Box 2750, Honolulu, HI 96840 ("Member"). EPRI and Member (collectively referred to as the "Parties" and individually as the "Party") agree as follows:

RECITALS

WHEREAS, EPRI is a nonprofit corporation organized to promote, conduct and sponsor scientific research, and demonstrate the Application of EPRI-developed technology, and whereby the Parties intend this Agreement and the activities hereunder to further the public benefit purposes of EPRI;

WHEREAS, it is the intention of EPRI and the Member to utilize one Master Agreement for EPRI Member participation to cover:

(i) Participation in EPRI's Annual Research Portfolio
(ii) Participation in EPRI's Supplemental Projects, and
(iii) The internal use license rights for the EPRI Materials.

NOW, THEREFORE, in consideration of the foregoing and the mutual covenants and agreements set forth below, the Parties agree as follows:

Article 1. Definitions

1.01 "Affiliate(s)" means either (i) legal entities in which Member has an ownership interest of equal to or less than fifty percent (50%), or (ii) legal entities in which Member has no ownership interest but is under the common ownership or control of a parent company, which Member designates to have use rights to the EPRI Materials pursuant to this Master Agreement, any subsequent Research Portfolio Agreement and/or Supplemental Project Agreement.

1.02 "Annual Research Portfolio" means Programs, Project Sets or Projects that are included as part of EPRI's annual offering for collaborative research and development.

1.03 "Applications" are those projects applying EPRI research with the primary purpose of providing results to become part of EPRI's ongoing research, as may be identified in a particular Supplemental Project Agreement.

1.04 "Confidential Information" means information that is proprietary and/or confidential to the discloser, and shall include trade secrets, as further set forth in Subarticle 5.09, below.

1.05 "Deliverables" means the version of EPRI Materials to be delivered as described in each Research Portfolio Agreement, or each Supplemental Project Agreement.

1.06 "Deposit Account" shall mean a non-interest bearing account established by EPRI to hold funds received from Member to acquire EPRI products, services or research at a future date. These funds are not classified or associated with either the Annual Research Portfolio or Supplemental Projects. The

intent of establishing such a program is to allow Member the flexibility of directing monies to EPRI without immediately committing them for any particular purpose.

1.07 "Derivative Works" means any form into which Deliverables may be recast, transformed or adapted including the modification, revision, condensation, translation, abridgment and/or expansion thereof.

1.08 "EPRI Intellectual Property Rights" means any patent, copyright, trademark, trade secret, know-how, or other intellectual property rights of EPRI.

1.09 "EPRI Materials" means all tangible and intangible results including data, reports, documentation, and machine readable and human readable software otherwise know as "Object Code" and "Source Code" respectively (collectively "Software"), generated, developed, conceived, or first reduced to practice in any EPRI Program or Project, which is owned by EPRI and provided to Member from time to time under this Master Agreement, including without limitation Deliverables and EPRI Intellectual Property Rights.

1.10 "Funding," "Funded" or "Funds" shall mean the Member's monetary support to be provided in support of the Annual Research Portfolio and/or Supplemental Projects.

1.11 "License" means the non-exclusive internal use license granted Member under Subarticle 5.01 of this Master Agreement.

1.12 "Member" means any funding entity that qualifies for membership under EPRI's Bylaws, purchases from the Annual Research Portfolio and elects to utilize the benefits of EPRI Membership. Members may also fund one or more Supplemental Projects and may participate in the Tailored Collaboration (TC) program.

1.13 "Program" means a general segment of the Annual Research Portfolio as identified in each Portfolio offering.

1.14 "Project" means a more specific segment of the Annual Research Portfolio as identified in each Portfolio offering, or a Supplemental Project.

1.15 "Supplemental Project(s)" means a Project, Major Field Test or Demonstration (large scale, collaborative, multi-year project that focuses on full scale testing of EPRI intellectual property to show its functionality and viability in real time), Technology Transfer activities and Application activities that are introduced outside of the Annual Research Portfolio.

1.16 "Supplemental Project Agreement" means the document containing the individual cost, scope, term and Deliverables agreed upon by the Parties for the conduct of a Supplemental Project that Member will support with Funding.

1.17 "Research Portfolio Agreement" means document containing the selected Programs and Projects from the Annual Research Portfolio that Member will support with Funding.

1.18 "Subsidiary(ies)" means legal entities in which Member has an ownership interest of greater than fifty percent (50%), and which Member designates to have use rights to the EPRI Materials pursuant to this Master Agreement, any subsequent Research Portfolio Agreement and/or Supplemental Project Agreement.

1.19 "Technology Innovation" means the strategic long term research program conducted by EPRI (formerly known as SS&T).

1.20 "Technology Transfer" means the various forums used to inform and solicit feedback from Member on experiences in using EPRI technical information. Such forums include projects that apply EPRI technology, interest groups, training and workshops, and user groups.

1.21 "TC" or "TC Program" shall mean EPRI's Tailored Collaboration Program.

Article 2. Funding and Rights: Annual Research Portfolio

2.01 Funding.

The Parties agree that for each year (or for multiple years committed at one time) a part of the Annual Research Portfolio is Funded by Member, the Parties shall execute a separate Research Portfolio Agreement that incorporates the terms and conditions of this Master Agreement. Each separate Research Portfolio Agreement shall specifically identify the selections made from the Annual Research Portfolio, the duration of such engagement, and the associated Funding for such period. Unless explicitly stated otherwise, each Research Portfolio Agreement incorporates the terms and conditions of this Agreement.

2.02 Member Subsidiary(ies) and/or Affiliate(s) Participation.

(A) Subsidiaries explicitly listed in each Research Portfolio Agreement shall receive access to the EPRI Materials as set forth herein for the time period covered by the applicable Research Portfolio Agreement. Member is responsible for ensuring the compliance of its Subsidiaries with the provisions of this Master Agreement, and shall indemnify EPRI for any lack of performance thereunder pursuant to Subarticle 5.11. In the event such Subsidiaries are incorporated or domiciled in a different country than Member, or Member is unable to legally bind such Subsidiaries to the terms of this Agreement, the Parties agree that a separate license agreement shall be entered into by EPRI and said Subsidiaries before access to EPRI Materials will be granted. Notwithstanding the above, h the event Member identifies qualified Subsidiaries in a Research Portfolio Agreement, any reference to "Member" hereinafter shall include and apply to all identified Subsidiaries, unless otherwise stated.

(B) Member acknowledges that its Affiliates explicitly listed in each Research Portfolio Agreement shall receive access to the EPRI Materials for the time period covered by the applicable Research Portfolio Agreement, provided that such Affiliates agree in a written agreement between itself and Member, to be bound by the terms and conditions of this Master Agreement. Member is responsible for ensuring the compliance of its Affiliates with the provisions of this Master Agreement, and shall indemnify EPRI for any lack of performance thereunder pursuant to Subarticle 5.11. In the event such Affiliates are incorporated or domiciled in a different country than Member, or Member is unable to obtain a separate written agreement between itself and Affiliates, the Parties agree that a separate license agreement shall be entered into by EPRI and said Affiliates before access to EPRI Materials will be granted. Notwithstanding the foregoing, in the event Member identifies qualified Affiliates in a Research Portfolio Agreement any reference to "Member" hereinafter shall include and apply to all identified Affiliates, unless otherwise stated.

2.03 Program Selection. Member hereby allocates its payment to the selections identified in the Research Portfolio Agreement.

2.04 Rights for Member. In consideration of Member's Funding in support of the Annual Research Portfolio, Member shall be entitled to the benefits listed below, consistent with EPRI's then-current Bylaws:

(a) Certain governance rights, including voting for the election of members of EPRI's Board of Directors by the Membership class to which Member belongs, as further set out in EPRI's current Bylaws at the time of an election, however, the inclusion of any participating Subsidiaries and/or Affiliates shall not increase or otherwise alter the voting rights for election of the Directors or matters which are determined on a one-vote-per-member basis;

(b) Access to and use of EPRI Materials from the Technology Innovation program in accordance with the terms of this Master Agreement;

(c) Participation in EPRI's TC Program, provided however the inclusion of any participating Subsidiaries and/or Affiliates shall not afford them the right to directly utilize Member's TC pool;

(d) The right to participate in EPRI's advisory structure, subject to the restrictions in Subarticle 2.04(a), above; and

(e) Access to and use of EPRI Materials from the selections made from the Annual Research Portfolio in accordance with the terms of this Master Agreement.

Article 3. Funding and Rights: Supplemental Projects.

3.01 Scope. The Parties agree that each time a Supplemental Project is Funded by Member, the specific scope of work, term, and Funding for each Project shall be recorded and executed in a separate Supplemental Project Agreement that incorporates the terms and conditions of this Master Agreement. A Member Funding Projects pursuant to a Supplemental Project Agreement is entitled to participate in the relevant project management team(s) and to receive access to the relevant EPRI Materials pursuant to the license granted herein.

3.02 Funding. Member may fund Supplemental Projects. In addition, Member may fund Supplemental Projects pursuant to EPRI's TC Program, as may be specified in a Supplemental Project Agreement. In the event a Supplemental Projects is Funded via the TC Program, the Parties agree such work must be consistent with EPRI's then-current TC Program rules. Regardless of the method of Funding, the Parties agree EPRI shall not be obligated to share any royalties received from its commercialization, if any, of the EPRI Materials.

3.03 Commencement of Work. EPRI shall not commence work unless duly authorized representatives from both Parties have signed a Supplemental Project Agreement.

Article 4. [Reserved]

Article 5. General Provisions Governing Participation in the Annual Research Portfolio and Supplemental Projects

5.01 Internal Use License. In consideration for the Funding made by Member pursuant to each Research Portfolio Agreement or separate Supplemental Project Agreement, and subject to the terms and conditions of this Master Agreement, EPRI hereby grants Member a paid-up, nonexclusive, nontransferable, perpetual (unless terminated as set forth herein) license to use the EPRI Materials from those activities, on a worldwide basis (subject to export control restrictions), solely for Member's internal business purposes and not for the direct benefit of any third party. No commercial (including make or sell) or consulting license is granted herein. In the event Member desires to obtain a commercial or consulting license, the parties shall enter into good faith negotiations to determine exact royalty payments, if any, that would be due EPRI.

5.02 License Restrictions.

(A) Except as set forth below, Member shall not, directly or indirectly, without EPRI's prior written consent: (i) disclose to or allow the use of EPRI Materials by any third party, unless otherwise provided for herein; (ii)

use any method to obtain the human readable computer program source code version of EPRI Materials through decompilation, reverse-engineering or otherwise; (iii) use any EPRI Materials or EPRI Confidential Information to create materials which are substantially similar to EPRI Materials; (iv) remove or alter EPRI's proprietary rights, limitation of liability, restricted rights and other notices in EPRI Materials or copies thereof; (v) translate any EPRI reports or software into a foreign language; (vi) sublicense, encumber, time-share, rent, or lease the EPRI Materials; or (vii) use the EPRI Materials for third party consulting or commercial purposes.

(B) Member may create Derivative Works and translations of the Deliverables, ***excluding software,*** provided the following shall apply:

(i) Member's preparation and use of any Derivative Works shall be limited to the conditions set forth in Subarticle 5.01, above, and the terms of this Master Agreement unless otherwise provided below; and

(ii) Member's preparation and use of Derivative Works shall be at Member's own risk, and such preparation and use shall specifically ***exclude*** any EPRI Representation, Warranties and Indemnity provided in Subarticle 5.10 below.

5.03 Title to EPRI Materials. Except for rights expressly granted in this Article, EPRI shall retain all right, title and interest in EPRI Materials, and Member hereby waives any ownership right therein. Except for the license granted to Member in 5.01 above, EPRI reserves all rights and remedies under copyright, trademark, patent, service mark, trade secret, unfair competition and other applicable laws.

5.04 EPRI License Support. EPRI shall have no obligation to provide support or maintenance to Member in connection with any license granted hereunder, unless specifically provided for in the particular Research Portfolio Agreement or Supplemental Project Agreement.

5.05 Member License Grant. Member hereby grants EPRI an unrestricted license to publish a summary report regarding the results of EPRI's Annual Research Portfolio and/or Supplemental Projects, provided that such report does not contain Confidential Information of Member.

5.06 Ordering EPRI Materials. Member may only order Deliverables released by EPRI during any term of participation. Research Results may be ordered from the EPRI Distribution Center or downloaded from EPRI's website.

5.07 Nature of Research. EPRI agrees to use commercially reasonable efforts to perform and manage (or cause to be performed by outside contractors) the activities described in each Research Portfolio Agreement or Supplemental Project Agreement, and to provide Member with the Deliverables. Member understands that the conduct of scientific research is inherently uncertain; thus, EPRI, in its sole discretion and after consultation with all Funding Members, may modify the scope of work, its anticipated results, and the anticipated Deliverables at any time.

5.08 Payment.

(A) Payment is due Net 30 calendar days from receipt of EPRI's invoice. All payments shall be made in U. S. Dollars, and shall not be reduced by charges, taxes, duties or offsets of any kind or nature imposed by any governmental agency or authority of Member's domiciliary country or of any country other than the United States of America, for which Member has sole payment responsibility (including any transportation and insurance costs related to shipment of physical items). Any purchase order or other ancillary document issued by Member pursuant to a Research Portfolio Agreement and/or a Supplemental Project Agreement is solely for Member's internal accounting requirements and, as such, the terms and conditions of such purchase order or ancillary document are hereby superseded in their entirety by the terms and conditions set forth in this Master Agreement.

(B) For Member's support of the Annual Research Portfolio, EPRI shall invoice and Member shall pay the fees in quarterly installments, with the first payment due on or before the last day of the first month for the calendar year covered by the Research Portfolio Agreement, and subsequent quarterly payments due

on or before the last day of the first month of each succeeding quarter. All installments must be paid by the end of the calendar year.

(C) For Member's support of Supplemental Projects, if any, EPRI shall invoice the entire amount for the first year identified in such agreements upon execution thereof. Payment of such invoices shall be pursuant to Subarticle 5.08(A) above. All future annual Funding for Supplemental Projects, if any, shall be due and payable no later than January 31st of each succeeding year.

5.09 Confidential Information.

(A) Each Party to this Master Agreement may provide to one another information that is Confidential Information. The Parties agree that all EPRI Materials and EPRI Intellectual Property Rights that are not publicly known are EPRI Confidential Information. All other information which is considered Confidential Information by either Party must, prior to its disclosure: (a) be labeled as "Confidential" or otherwise clearly identified as confidential; or (b) if disclosed orally or visually, be identified as confidential when disclosed, and be reduced to writing, marked as "Confidential" and delivered to the receiving Party within twenty (20) calendar days of such oral or visual disclosure. Confidential Information shall not include information which: (i) is or becomes generally available to the public through no act or omission of the receiving Party; (ii) was in the receiving Party's lawful possession prior to the disclosure thereto and had not been obtained by the receiving Party either directly or indirectly from the disclosing Party; (iii) is lawfully disclosed to the receiving Party by a third party without restriction on disclosure; (iv) is independently developed by the receiving Party; or (v) is disclosed by operation of law, provided that, the recipient promptly notifies the discloser of its obligation to disclose.

(B) Protection of Confidential Information. The Parties agree to hold the other's Confidential Information in confidence in perpetuity. Disclosure of EPRI Materials shall be strictly limited to Member's employees, consultants, contractors, and governmental agencies for regulatory compliance purposes, on a need to know basis only and subject to a written agreement which protects the EPRI Materials at least as well as this Master Agreement. Member shall provide EPRI with an English language copy or translation of each such nondisclosure agreement upon EPRI's request.

(C) All third party proprietary information shall be treated as the Confidential Information of the owner hereunder. The Parties acknowledge that special terms may be required before any such third party disclosure from EPRI is provided to Member.

5.10 EPRI Representations, Warranties and Indemnity.

(A) EPRI represents and warrants that it has the right to grant the license and other rights in this Master Agreement. EPRI does not warrant that the EPRI Materials do not infringe third party intellectual property rights. EPRI does not guarantee or warrant the outcome of the research or the anticipated Deliverables to Member. EPRI hereby represents and warrants that it has the full right and authority to enter into this Master Agreement with Member.

(B) DISCLAIMER OF OTHER WARRANTIES. EXCEPT FOR THE FOREGOING EXPRESS LIMITED WARRANTIES, MEMBER ACCEPTS THE EPRI MATERIALS "AS IS," WITH NO OTHER WARRANTIES OR CONDITIONS OF ANY KIND, EXPRESS OR IMPLIED INCLUDING, WITHOUT LIMITATION, WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THE LIABILITY OF EPRI, ITS SUBSIDIARIES, SUPPLIERS OR SUBCONTRACTORS TO MEMBER OR ANY THIRD PARTY FOR A CLAIM OF ANY KIND RELATED TO THIS MASTER AGREEMENT, ANY EPRI MATERIALS OR ANY EPRI SERVICE, WHETHER FOR BREACH OF CONTRACT OR WARRANTY, STRICT LIABILITY, NEGLIGENCE OR OTHERWISE, SHALL NOT EXCEED $500,000. IN NO EVENT WILL EITHER PARTY, OR ANY SUBSIDIARY, SUPPLIER, OR SUBCONTRACTOR OF EPRI BE LIABLE FOR INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING, WITHOUT LIMITATION, LOST REVENUES OR PROFITS, LOST DATA, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION), EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

(C) Indemnification by EPRI. EPRI shall indemnify, defend and save Member harmless from and against any damages, costs, fees, claims, loss, expense (including reasonable attorney fees) or judgment related to unmodified Deliverables arising as the result of a third party claim for U.S. copyright infringement or U.S. trade secret misappropriation to the extent such claim does not arise in whole or in part, due to Member's use of the EPRI Materials in contravention of this Master Agreement, if Member promptly gives EPRI written notice of the claim, Member provides all reasonable assistance to EPRI requests, and EPRI controls the defense or settlement of the claim.

5.11 Member Representations, Warranties and Indemnity.

(A) Member represents and warrants that its participating Subsidiaries and/or Affiliates, if any, qualify for EPRI participation. Member understands and agrees that EPRI shall have no responsibility for any inter-company cost allocation of the EPRI participation payments between the Member and its participating Subsidiaries and/or Affiliates that may be required of them under applicable law or regulation.

(B) Member hereby represents and warrants that it has the full right and authority to enter into this Master Agreement with EPRI for itself and its Subsidiaries, and bind them to the terms and conditions contained herein as if they were original signatories hereto, including but not limited to all export restrictions, applicable governing law and any dispute resolution provisions. Member further represents and warrants that its signature herein below does bind such Subsidiaries to this Master Agreement. Member agrees to provide copies of this Master Agreement to each individual Subsidiary identified in each Research Portfolio Agreement including written notice of their obligations to EPRI. In the event Member is unable to bind its Subsidiaries or if such Subsidiaries are incorporated or domiciled in a different country than Member, the Parties agree that a separate license agreement shall be entered into by EPRI and said Subsidiaries before access to EPRI Materials will be granted. Member agrees to make EPRI whole and pay for any and all damages, costs and expenses that result from a breach of this Article by it or its Subsidiaries.

(C) Member hereby represents and warrants that either (i) Member has or will flow down and bind its Affiliates in a signed written agreement between themselves, the terms and conditions of this Agreement, any subsequent Research Portfolio Agreement or any Supplemental Project Agreement, and a copy of such writing will be made available to EPRI upon request, or (ii) in the event Member is unable to obtain such written agreement from its Affiliates or said Affiliates are incorporated or domiciled in a different country than Member, then said Affiliates shall be required to enter into a separate license agreement with EPRI prior to having access to or use of any EPRI Materials. Member agrees to make EPRI whole and pay for any and all damages, costs and expenses that result from a breach of this Article by it or its Affiliates.

(D) Member represents and warrants that before it provides any third party proprietary or confidential information to EPRI for use in connection with any research activity, it will secure all necessary rights and licenses on behalf of EPRI.

(E) Indemnification by Member. Member agrees to indemnify, defend and hold EPRI, EPRI's subsidiaries, and EPRI's suppliers of every type and tier harmless from and against all damages, costs, fees, claims, loss, expense (including reasonable attorney fees) or judgment arising from Member's use of EPRI Materials and/or breach of Member's obligations hereunder.

5.12 Termination of Supplemental Projects.

(A) Termination for Cause of Supplemental Projects. EPRI may, on written notice, terminate a Supplemental Project Agreement including the License, if: (i) Member breaches the Funding, confidentiality, proprietary rights or license provisions hereof, (ii) insolvency or bankruptcy proceedings are voluntarily or involuntarily instituted against Member (Member shall give immediate written notice to EPRI of Member's knowledge of such proceedings), (iii) Member attempts to assign this Master Agreement or individual Supplemental Project Agreements without EPRI's written approval, or (iv)

Member substantially discontinues its business. EPRI may take such action in any instance above, if Member fails to cure the breach within sixty (60) calendar days after being notified by EPRI of such breach. Member may terminate individual Supplemental Project Agreements, including the License itself, should EPRI fail to cure a breach by EPRI of the Master Agreement within sixty (60) calendar days of written notification by Member.

(B) Effect of Termination for Cause of Supplemental Projects. If individual Supplemental Project Agreements are terminated pursuant to Subarticle 5.12(a) due to a breach by Member, then Member shall cease use of the EPRI Materials from the Project, and within thirty (30) calendar days of termination, Member shall return all EPRI Materials from the project and any reproductions thereof, and uninstall or otherwise permanently delete all EPRI Materials from the project from Member's computer systems, and provide EPRI with written certification of such actions signed by a duly authorized representative of Member.

(C) Termination for Convenience of Supplemental Projects.

(i) For Supplemental Projects in which Member is the sole funder, either Party may terminate its participation at any time upon at least sixty (60) calendar days prior written notice to the other party. EPRI shall refund any excess Funds received from Member after deducting Project costs incurred up to the effective date of termination (including but not limited to non-cancelable commitments based on Member's Funding), and reasonable termination costs, if any.

(ii) For Supplemental Projects in which there are multiple funders, Member may terminate its participation at any time upon at least sixty (60) calendar days prior written notice to EPRI, however, the effective date of such termination shall be December 31 of the year in which notice is given. Member shall not be entitled to a refund of any portion of its Funding provided through the date of termination, nor shall it be entitled to receive Deliverables produced after the effective date of termination.

5.13 Unspent Funds Following Completion of Supplemental Projects. The Parties agree upon completion of work in a Supplemental Project, EPRI shall notify Member of any unspent Funds attributable to Member, via email communication to the designated Manager of EPRI Technology Transfer (METT). Member shall have 30 days from the date of the email communication to respond and indicate its desire on how the remaining Funds can be better utilized. In the event Member opts not to respond within 30 days, and if Member's share of unspent Funds is less than two thousand five hundred dollars ($2500), EPRI shall not be required to refund said amount to Member, and EPRI shall be free to reallocate such Funds to EPRI's Technology Innovation program. In the event Member opts not to respond within 30 days, and if Member's share of unspent Funds is equal to or greater than two thousand five hundred dollars ($2500), Member's share shall be allocated into a Deposit Account held by EPRI on behalf of Member. Member shall authorize one person to control said Deposit Account which shall be the Manager of EPRI Technology Transfer unless otherwise identified in writing by Member. For Tailored Collaboration Projects, the corresponding EPRI TC matching amount shall be returned to the TC pool for the original TC pool year. In the event Member responds to the email communication with suggestions on how to better utilize the remaining Funds, and if EPRI is in agreement with such recommendation, EPRI shall initiate the necessary paperwork to move such Funds accordingly.

5.14 Survival. The provisions of Subarticle 2.02 (Member Subsidiary(ies) and/or Affiliate(s) Participation), Subarticles 5.01 through 5.02 (Internal Use License and License Restrictions), Subarticle 5.08 (Member License Grant), Subarticle 5.08 (Payment), Subarticle 5.09 (Confidentiality), Subarticles 5.10 and 5.11 (Representations, Warranties and Indemnity), Subarticle 5.15 (Dispute Resolution) and Subarticle 5.16 (Miscellaneous) shall survive the termination of any Research Portfolio Agreement, any Supplemental Project Agreement, or this Master Agreement.

5.15 Dispute Resolution. If a dispute arises between the Parties which cannot be settled through direct negotiation or mediation if agreed to by the Parties, the Parties shall submit the dispute to binding arbitration by a single arbitrator, conducted in San Francisco, California, USA, in accordance with the Commercial Arbitration Rules of the American Arbitration Association (or if the Member is located in a non-U.S. territory, the International Chamber for Commerce) then in effect. The arbitrator shall be entitled

to award injunctive relief and declaratory judgment, but shall not be entitled to award punitive damages. Proceedings shall be conducted in English. The United Nations Convention Contracts for the International Sales of Goods (1980) is excluded. The award rendered under said rules shall be final and binding. The award shall be payable in U. S. Dollars through a bank in the United States. Notwithstanding the foregoing, the Parties may apply to any court of competent jurisdiction for a temporary restraining order, preliminary injunction, or other interim or conservatory relief, as necessary, without breach of this arbitration agreement and without any abridgment of the powers of the arbitrator. The Parties consent to venue in and jurisdiction of the state and federal courts located in San Francisco County, for matters related to the arbitration or the seeking of any injunctive relief as described below. Each Party shall bear its own expense (including attorneys' fees) of such mediation or arbitration proceeding, unless otherwise agreed to in writing by the Parties.

5.16 Miscellaneous

(A) Governing Law. This Master Agreement, each Research Portfolio Agreement and any Supplemental Project Agreement shall be governed by and construed in accordance with the laws of the State of California, without reference to its conflict of law principles. In the event of any discrepancies between the English and any foreign language version of this Master Agreement, any Research Portfolio Agreement, and/or any Supplemental Projects Agreement, the English version shall prevail.

(B) Export Laws. Member shall comply with all laws, rules and regulations including, without limitation, all U. S. and foreign export laws and regulations. The Parties acknowledge and agree that compliance with such U.S. and foreign export laws and regulations may delay or in rare cases prevent the delivery to Member of EPRI Materials. The Parties agree that access to the EPRI Materials is hereby granted with the specific understanding and requirement that Member is solely responsible after delivery for compliance with all applicable U. S. and foreign export laws and regulations. This responsibility includes an obligation to ensure that any individual receiving access hereunder who is not a U. S. citizen or permanent U. S resident is permitted access under applicable U.S. and foreign export laws and regulations. Although EPRI may make an informal assessment of the applicable U. S. export classification for specific EPRI Materials, Member acknowledges that this assessment is solely for informational purposes and not for reliance purposes. Member acknowledges that it is still the obligation of the Member to make its own assessment of the applicable U. S. export classification and to ensure compliance accordingly.

(C) Assignment. This Master Agreement, any Research Portfolio Agreement, and any Supplemental Project Agreement may not be assigned, in whole or in part, by either Party without the prior written consent of the other Party; and such consent shall not be unreasonably withheld. The terms of this Master Agreement, any Research Portfolio Agreement, and any Supplemental Project Agreement shall bind and inure to the benefit of permitted assigns. If a requested assignment is permitted, the assignor shall ensure that the assignee shall agree in writing to assume the assignor's obligations contained in this Agreement, to make the representations, warranties and covenants set forth herein, and otherwise be bound by the provisions of this Agreement. Any attempted assignment in contravention of this Subarticle shall be deemed null and void.

(D) Waiver. No failure or successive failures on the part of either Party, its successors, or assigns, to enforce any covenant or agreement, and no waiver or successive waivers on its or their part of any condition of this Master Agreement, any Research Portfolio Agreement, and any Project Opportunity Agreement, shall operate as a discharge of such covenant, agreement, or condition, or render the same invalid, or impair the right of either Party, its successors and assigns, to enforce the same in the event of any subsequent breach or breaches by the other Party, its successors, or assigns.

(E) Notices. Any notice, demand, request, or other communication or document to be provided under this Master Agreement to a Party to this Master Agreement ("Notice") shall be in writing, and shall be given to the Party at that Party's address or telecopy number set forth in the signature block in each EPRI Research Portfolio Agreement or any Supplemental Project Agreement, or to such other address or telecopy number as the Party may later specify for that purpose by notice to the other Party. Each Notice

shall be deemed given and received: (i) if given by telecopy, when the telecopy is transmitted and confirmation of complete receipt is received by that transmitting Party during normal business hours or on the next business day if not confirmed during normal business hours; (ii) if hand delivered or given by overnight delivery service, the day on which the notice is actually delivered to the address listed herein (whether or not delivered to the Party); (iii) if delivered by international courier, the day on which the notice is actually delivered to the address listed herein or subsequently provided as set forth above, or (iv) if given by normal or certified U.S. mail, two (2) business days after it is posted with the U.S. Postal Service. A copy of legal notices shall be sent to the attention of EPRI's Legal Department.

(F) Entire Agreement. This Master Agreement, including each concurrent or subsequent Research Portfolio Agreement, and/or any Supplemental Project Agreement, constitutes the entire agreement between the Parties and supersedes all previous agreements and understandings. This Master Agreement, any Research Portfolio Agreement, and any Supplemental Project Agreement may not be altered, amended, or modified except by a written instrument signed by the duly authorized representatives of both Parties. If any provision of this Master Agreement, any Research Portfolio Agreement, and any Supplemental Project Agreement is held to be invalid or unenforceable, the remaining provisions of this Master Agreement, any Research Portfolio Agreement, and any Supplemental Project Agreement shall remain in full force.

(G) Independent Contractor. Nothing contained herein shall be construed to imply a joint venture, partnership, or principal and agent relationship between the Parties and neither Party shall have any right, power, or authority to create any obligation, express or implied, on behalf of the other in connection with the performance hereunder.

(H) Restricted Rights. To the extent EPRI Materials were developed with United States Government Funding, such EPRI Materials are provided hereunder with Restricted Rights regarding its use, duplication, or disclosure by Member and/or the United States Government, and is subject to restrictions as set forth in subparagraph (g)(3)(i) of the Rights in Technical Data and Computer Software clause at FAR 52.227-14, Alternate III, as amended.

(I) Force Majeure. Any delay in the performance of any duties or obligations of either Party (except the payment of money owed) will not be considered a breach if such delay is caused by a labor dispute, shortage of materials, fire, earthquake, flood, or any other event beyond the control of such Party, provided that such Party uses reasonable efforts, under the circumstances, to notify the other Party of the circumstances causing the delay and to resume performance as soon as practicably possible.

(J) Order of Precedence. In the event of any conflict between this Master Agreement, any Research Portfolio Agreement, and any Supplemental Project Agreement, the terms and conditions of individual Research Portfolio Agreement or any Supplemental Project Agreement shall prevail and take precedence unless otherwise expressly superseded by the Parties.

(K) Interpretation of Agreement. The Article and other headings in this Master Agreement are inserted solely as a matter of convenience and for reference, and shall be given no effect in the construction or interpretation of this Master Agreement. Unless the context of this Master Agreement otherwise clearly requires, references in the plural form include the singular and vice versa. This Master Agreement has been freely negotiated by both Parties and in the event there is any controversy, dispute, or claim involving the meaning, interpretation, validity, or enforceability of this Master Agreement or any of its terms or conditions, there shall be no inference, presumption, or conclusion drawn against a Party by virtue of such Party having drafted this Master Agreement or any portion thereof. When used herein, the words "include" and "including" shall be construed as "include, without limitation" and "including, without limitation."

IN WITNESS WHEREOF, the Parties hereto have caused this Master Agreement to be executed by their duly authorized representatives.

Hawaiian Electric Company, Inc. ("Member")	**Electric Power Research Institute, Inc.**
P.O. Box 2750, Honolulu, HI 96840 *Business Address City, State, Zip*	Post Office Box 10412 3420 Hillview Ave. Palo Alto, CA 94303
Telephone: (808) 543-4400 Fax: (808) 543-4445	Telephone 650-855-1088 Fax 650-855-2166
[signature] / 12/18/06 Authorized Signature for Member / Date	[signature] / 1/3/07 Authorized Signature for EPRI / Date
T. Michael May / President and CEO Printed Name of Member's Authorized Signatory / Title	~~Norma Formanek / Senior Vice President and General Counsel~~ Samuel Carter Director, Legal Service

[signature] 12/14/06
Authorized Signature of Member / Date

Karl E. Stahlkopf / Sr. Vice President, Energy Solutions and CTO
Printed Name of Member's Authorized Signatory / Title

(808) 543-7655 / (808) 543-7657
Telephone Number / Fax Number

CA-IR-158

Ref: HECO T-14, page 27 (R&D – New Technology – AMI).

The 2009 test year estimate for the AMI project of $414,000 is comprised of $291,000 for vendor/consultant fees and $123,000 for base station leases. Please provide the following:

a. The vendor/consultant fee estimates are based on prior vendor proposals and 2009 work scope cost estimates.
   1. Please identify and provide a copy of the "prior vendor proposals" relied upon for purposes of preparing the 2009 forecast.
   2. Has HECO actually contracted with the vendors and/or consultants that submitted the proposals reference in subpart (a)(1) above? Please explain.
   3. Please describe the current (August 2008) status and 2009 expected status of the vendor/consultant work envisioned by the referenced prior proposals.

b. The lease rent estimate represents 2009 unit pricing for four Tower Gateway Base Stations in the test year.
   1. Has the Company actually executed a lease agreement and commenced making lease payments for these base stations? Please explain.
   2. Please provide a copy of the lease agreement.
   3. When did (or will) the Company take possession of the base stations? Please explain.

c. Does the 2009 test year estimate of $414,000 include an assumed escalation factor for the vendor/consultant or lease rental components? If so, please provide and explain the origin of the escalation rate, showing how such rate was employed in preparing the test year forecast estimate.

<u>HECO Response</u>

<u>(Attachments 1 to 4 to this IR response contain confidential information and will be provided upon the issuance of a Protective Order in the instant docket.)</u>

a. The Company estimated its vendor/consultant cost by reviewing the following contracts: (1) eMeter Corp. ("eMeter") contract (Attachment 1) to research and test the capability of eMeter's EnergyIP™ software platform to support the advanced functionality of smart metering technology from Sensus; (2) Itron, Inc. ("Itron") contract (Attachment 2) as a second vendor, in addition to eMeter, to test Itron's Enterprise Edition (IEE) meter data management system ("MDMS") software platform; and (3) three separate contracts (Attachment 3, pages 1-9, 10-17, and 18-25) with Luminant Consulting Group, LLC

("Luminant") for information technology ("IT") support to integrate the Sensus AMI system with eMeter's and Itron's software platforms.

The Company's current plan is to extend the eMeter contract into the first quarter of 2009, select either eMeter or Itron for Phase 2 for the remaining nine months in 2009, and contract with Luminant to continue information technology support. Based on the Company's review of the project, the current 2009 vendor/consultant cost estimate is $487,700, which is $196,700 higher than the $291,000 submitted in HECO T-14's response to CA-IR-2, Attachment 12 (see also HECO T-14, page 27, line 21). The breakdown of this new 2009 cost estimate is as follows:

Extend current eMeter contract into first quarter 2009	$ 21,750[1]
Select either eMeter or Itron for Phase 2 testing	65,250[2]
IT support and development service	325,700[3]
IT support for a New RD&D objective resulting from HCEI	75,000[4]
Current 2009 vendor/consultant estimate	$487,700

The Company will submit its updated cost estimate at the next opportunity.

1. See Attachments 1, 2, and 3 referenced above.
2. The contract effective dates are: June 2008 for eMeter, August 2008 for Itron, and June 2008 for the three Luminant contracts.

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[1] eMeter systems monitoring and administration services, part-time support @ 50%, 3 months x $7,250 = $21,750 (See Attachment 1, page 11)

[2] For Phase 2 testing, the eMeter contract's monthly charge is used, 9 months x $7,250 = $65,250 (See Attachment 1, page 11)

[3] IT services are needed to support the functional demonstration of the MDMS to include support for the C&I FlexNet meters and customer presentation options for the Dynamic Pricing Pilot program, demand response programs, and AMR interfaces to the new customer information system. The three Luminant contracts total to $190,000 ($41,000 + $75,000 + $74,000) to support Phase 1 over a 7 months period from June to December 2008. (See Attachment 3, pages 2, 11, and 19) The current 2009 estimate is derived as: $190,000 / 7 months x 12 months = $325,714, say $325,700.

[4] IT support for the new RD&D objective resulting from the HCEI includes additional customer presentation options (i.e. web services, in home display, and thermostat control displays). The Company is still in the process of finalizing this statement of work to obtain a firm cost estimate. Preliminary estimates have ranged from $70,000 to $225,000.

3. The current status of the eMeter and Itron pilots includes the on-going activities to install and configure the MDMS software, provide basic user functional training, implement interfaces with the Sensus AMI system, and provide systems monitoring and administrative support services. The 2009 cost estimate for MDMS work assumes the following: 1) the selection of a preferred MDMS vendor in the second quarter of 2009 time frame, 2) a contract extension through all of 2009 of Phase 2 – Back End Data Exchange and 2-Way Communications, of the preferred MDMS vendor's software system, which will include demonstration of 2-way on-demand communications for remote connect/disconnect services and on-demand reads, and testing of key utility applications for automated meter reading ("AMR") billing, time of use and dynamic pricing, and 3) continued systems monitoring and administrative services.

   For Luminant, the 2009 estimate for IT consulting services assumes a contract extension in 2009 for programming development work to produce interfaces between the Sensus AMI system and the selected vendor's MDMS to demonstrate the utility application benefits such as: AMR billing, dynamic pricing, time of use, load research, and demand load control.

b. The lease rent estimate represents 2009 unit pricing for four[5] Tower Gateway Base ("TGB") Stations in the test year.

[5] In January 2007, another TGB Station was installed at Mauna Kapu to support the Ocean Pointe subdivision to test the automated meter reading (AMR) technology to bill residential and commercial customers in that subdivision. With completion of the pilot and start of actual AMR billing services in July 2007, this TGB was placed into production. Hence, this unit is not included as part of the 2009 test year R&D expense. See HECO's response to CA-IR-182, page 2, in Docket No. 2006-0386. This TGB's lease rental ($3,000 per month x 12 months) is included in the T&D area. See HECO T-8, pages 53-54 and HECO T-8's response to CA-IR-2, Attachment 7A, project P0001559, and Attachment 7B, page 3, note 4.

1. Yes. Refer to Attachment 12 of B. Tamashiro's HECO T-14 response to CA-IR-2 for a detailed calculation of the test year amount of $123,000 in TGB lease expense. The monthly lease cost is $3,000 per TGB per month. The executed lease agreements are: 1) Five Regents and Hawaii Prince Hotel (Prince Kuhio) TGBs – started in September 2006 and filed as Attachment 1 in HECO's response to CA-IR-182, Docket No. 2006-0386; 2) Puu Papaa and Koko Head TGBs (Attachment 4) – started in November and August 2007, respectively, due to difference in commission dates for these two TGB sites. The Puu Papaa and Koko Head TGBs are currently being used to collect baseline electricity profiles from approximately 400 residential advanced meters to support the proposed Dynamic Pricing Pilot ("DPP") program.

   For the 2009 estimate, HECO included 41 months of lease rent payments at $3,000 per month, amounting to $123,000 to coincide with the estimated timing of the contract renewals and commissioning dates of the four TGBs used in R&D projects.[6]

2. See response to b.1 above.

3. The agreements do not transfer title of the TGBs from Sensus to HECO. The current (and future) lease agreements for these TGBs are accounted for as operating leases. There are no current plans to obtain ownership of the TGBs or other AMI System components not already owned by HECO. However, HECO plans to file an application for approval of a full-scale AMI project in the fourth quarter of 2008 at

[6] The Puu Papaa and Koko Head TBGs lease, signed in July 2007, required prepayment of the entire 18-month lease rental upfront. Hence, Puu Papaa's January to May 2009 lease rent and Koko Head's January to February 2009 lease rent, were already prepaid in July 2007.

which time HECO will determine the final business ownership model for the AMI System.

c. The original 2009 estimate of $414,000 does not include an assumed escalation factor for vendor/consultant or lease rental components.[7]

Based on the foregoing, the total 2009 R&D cost estimate for the AMI project will increase from $414,000 to $610,700 as a result of the latest cost estimate for vendor/consultant services. The $610,700 consists of $487,700 in vendor/consultant cost and $123,000 in TGB lease rental. The Company will submit this update at the next opportunity.

[7] The Sensus lease does contain a provision that "all pricing and fees escalate annually at CPI." See Attachment 1, page 13 of HECO T-13 response to CA-IR-182, Docket No. 2006-0386. However, for the pilot and trial period, Sensus has not applied this provision. The Company does not anticipate Sensus will exercise this clause for the remaining duration of the trial and testing period.

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Pursuant To Protective Order, Filed on
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CA-IR-158
DOCKET NO. 2008-0083
ATTACHMENTS 1-4

Attachments 1-4 contain confidential information and will be provided after a Protective Order is issued in this proceeding.

Attachments 1-4 are voluminous and available for inspection at HECO's Regulatory Affairs Division office, Suite 1301, Central Pacific Plaza, 220 South King Street, Honolulu, Hawaii. Please contact Dean Matsuura at 543-4622 to make arrangements to inspect the document. An electronic copy of the requested information is being provided.

CA-IR-159

Ref: HECO T-14, pages 27-30 (R&D – New Technology – AMI).

The referenced testimony identifies the current status of eight (8) "project objectives" of the AMI R&D study. For each project objective which is identified as "on-going" or occurring in 2009, please provide the Company's best estimate of the test year cost.

HECO Response:

As stated in HECO T-14, page 27, the Company's 2009 test year estimate for the AMI R&D project is $414,000, consisting of $291,000 in vendor and consulting fees, and $123,000 in lease rentals for the four Tower Gateway Base Stations ("TGBs").

Two of the eight objectives described in HECO T-14, pages 29-30 are either "accomplished" or "discontinued." Hence, the question is if the $414,000 can be allocated to the four "on-going" and two "new" objectives.

The Company's position is that the AMI R&D project should be viewed in total rather than in parts. It is not feasible to estimate the costs of each AMI Pilot project objective since the project's on-going and new activities are inter-related, mutually dependent upon each other to validate and analyze the functionalities of the primary support systems of the AMI pilot project, and might require additional work to fully develop the feasibility of each objective. The primary support systems of the AMI pilot project are the Meter Data Management Systems ("MDMS") and the AMI System. The AMI System includes the fixed-radio Tower Gateway Base Stations ("TGBs") and the Regional Network Interface ("RNI") data collection head end system.

The costs of these systems and related activities cannot be "assigned" solely to a single project objective or allocate among the objectives. For example, to research and demonstrate AMI's benefits on dynamic pricing (objective #7), and time of use, load research and demand

load control (objective #2), HECO would require implementation and system support services, including IT consulting services, of an integrated MDMS and AMI System with a Customer Information System (objective #4). Because of these types of relationships, it is not feasible to allocate the TGB lease rent payments, the on-going maintenance and support services expense of the MDMS, or the IT consulting services to demonstrate the utility applications benefits of automated meter reading, dynamic pricing (i.e., peak time rebate), time of use, load research, demand load control, and Smart Grid services available within the AMI System.

CA-IR-160

Ref: HECO T-14, pages 32-34 (R&D – Maui Electric System Analysis).

At page 33, the Phase 1 work is expected to be completed in late 2008 with Phase 2 to commence in late 2008 and finished in 2009. Please provide the following:

a. Does the Company expect to incur any of the $75,000 Phase 2 costs in calendar year 2008? Please explain.
b. Did the 2008 budget include any Phase 2 costs? If so, please explain and provide the amount thereof.
c. Is there a "Phase 3" that is expected to commence after 2009? Please explain.

HECO Response:

a. No. Because of a development that occurred in another proceeding before the Commission after the submission of direct testimony in the instant docket, the Phase 2 study will not take place. In Docket No. 2008-0021, an agreement ("Agreement") was reached that resolved the issues raised in the Verified Complaint and Petition of UPC Hawaii Holdings, LLC and Kaheawa Wind Power II, LLC filed on February 6, 2008. A wind integration study will be done pursuant to the Agreement, the terms of which are confidential pursuant to Protective Order No. 24233 (filed May 16, 2008). GE, MECO, HECO, and HNEI will complete all outstanding work activities and products related to Tasks 1-5 of Phase 1. The work products (models) developed by GE in Phase 1 will be applied to the analytical work and applications as provided in the confidential Agreement. HNEI will not be participating in the study conducted pursuant to the confidential Agreement.

The Company plans to reallocate the $75,000 of the Maui Electric System Analysis Phase 2 study to its Oahu Electric System Analysis Phase 1 study in 2009. As mentioned on page 21 of HECO T-14, flexibility in the use of R&D funds is required due to changes

in projects and their priorities. Refer to the Company's response to CA-IR-161 for more information regarding this reallocation.

b. No. However, see response to part a above.

c. No. However, see response to part a above.

CA-IR-161

Ref: HECO T-14, pages 34-37 (R&D – Oahu Electric System Analysis).

At page 35, HECO T-14 indicates that the Oahu analysis will benefit from the Maui analysis, but the Oahu study will need to be tailored to the unique characteristics of HECO's electric system. At page 36, HECO T-14 states that "the current test year 2009 estimate of $352,000 is primarily based on the Company's estimated Phase 1 costs of the Maui Electric System Analysis that I described earlier in my testimony." Please provide the following:

a. As stated at page 34, please confirm that MECO's share of the Maui Electric System analysis was "in-kind" costs, as the technical lead, with HECO funding out-of-pocket costs of the Maui project. If this cannot be confirmed, please explain.
b. Please confirm that HECO expects the entire $352,000 estimate of the Oahu Electric System Analysis to be incurred during the 2009 forecast test year. If this cannot be confirmed, please explain.
c. Please confirm that neither MECO or HELCO are participating in the funding of the Oahu Electric System Analysis, even through HECO will serve as the technical lead and MECO/HELCO will likely benefit from the findings of the Oahu study. If this cannot be confirmed, please explain.
d. Please explain why neither MECO nor HELCO are participating in the cost of the Oahu Electric System Analysis.

<u>HECO Response:</u>

a. MECO's share of the Maui Electric System Analysis study was for "in-kind" costs only. MECO acted as the technical lead, coordinating and collaborating with General Electric ("GE"), Hawaii Natural Energy Institute ("HNEI") and HECO in the various work activities and HECO provided funding of out-of-pocket costs.

b. As mentioned on Attachment 1, page 2, of the Company's T-14 response to CA-IR-2, after the submission of HECO's direct testimony in the instant proceeding, HECO received a rough order-of-magnitude ("ROM") estimate for the Oahu Electrical System Analysis study from GE (see Attachment 1). Attachment 1 is a confidential document and will be provided upon the issuance of a protective order in this docket and the execution of the required nondisclosure agreements. GE's ROM cost estimate for Phase 1 work is approximately $949,000 with a proposed work schedule that starts in late 2008 and ends in

2009. GE had also provided, at the Company's request, reasons for the substantial cost differences between the Maui and Oahu Phase 1 studies, which is provided as Attachment 2. Attachment 2 is a confidential document and will be provided upon the issuance of a protective order in this docket and the execution of the required nondisclosure agreements. The Company is continuing to negotiate a Phase 1 agreement with GE.

Based on the ROM estimate, HECO will be updating its test year estimate for the study from the original $352,000 to $702,000 which incorporates and assumes the following: 1) $72,000 to be incurred in 2008 (based on the expected timing of finalizing an agreement with GE in the fourth quarter of 2008 and commencing the project shortly thereafter), 2) $75,000 reallocated from the Maui Wind Study Phase 2 (See response to part "a" of CA-IR-160 in this proceeding), 3) $176,000 of cost-share funds from HNEI and the U. S. Department of Energy ("USDOE"), and 4) a proposed $275,000 test year upward adjustment, at the next available opportunity, to increase the Oahu study 2009 test year estimate. Funding of the Oahu study is summarized below:

Source of Funds	Year	Amount
HECO	2008	$ 72,000
HECO – original estimate	2009	352,000
HECO – reallocation	2009	75,000
HNEI/USDOE cost share	2009	176,000
HECO – TY 2009 Adj	2009	275,000
Total Oahu Wind Study Phase 1		$ 950,000

The Oahu study budget amount is subject to securing cost-share funds from a final agreement with HNEI and USDOE.

The work products from Phase 1 (model development) will be applied to analytical work activities and real applications related to the large scale wind effort at HECO. The large scale wind effort at HECO supports the key objective of the Hawaii Clean Energy Initiative ("HCEI") to integrate the maximum attainable amount of wind energy on HECO's and its subsidiaries' systems in order to facilitate a future in which the wind resources of our islands supply a significant portion of the total energy demand on Oahu. To achieve substantially greater use of wind power on Oahu where most of the electric power in the state is consumed, it may be beneficial to transmit wind power produced on the wind resource rich neighbor islands (e.g., Lanai or Molokai) by undersea cable systems to Oahu. Several developers proposing large-scale wind farm projects located on the islands of Lanai and Molokai, ranging in size up to roughly 400 MW each, have notified HECO of their intent to submit a proposal in response to the ongoing HECO Renewable RFP. A more detailed description of the large scale wind effort and the implementation planning studies may be found in the Company's response to CA-IR-84.

c. MECO and HELCO will be participating in the Oahu Electric System Analysis study and will be contributing in-kind labor to the study by serving as internal utility study team members. HECO will serve as the technical lead, coordinating and collaborating with the consultant and HNEI on the various work activities and is responsible for the total funding of the study.

d. As noted above in response to part "c," HELCO and MECO will contribute in-kind labor to the study through the participation of their engineers as internal utility study team members.

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Pursuant To Protective Order, Filed on
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CA-IR-161
DOCKET NO. 2008-0083
ATTACHMENTS 1-2

Attachments 1-2 are confidential and will be provided

after a Protective Order is issued in this proceeding.

CA-IR-162

Ref: HECO T-14, pages 34-37 (R&D – Oahu Electric System Analysis).

At page 36, HECO T-14 states that HNEI and USDOE cost sharing, which could be as high as 50%, will be available for this project. However, actual cost share will not be known until an agreement is finalized with HNEI. Please provide the following:

a. Please describe the current status of the HNEI agreement discussions and indicate the anticipated time table for finalizing an agreement.
b. Please confirm that HECO's 2009 forecast assumes 0% sharing from HNEI and USDOE. If this cannot be confirmed, please explain.

HECO Response:

a. Currently, the Company is waiting for the consultant to provide a formal budget quote and an expedited schedule as requested by the Company. As mentioned in the Company's response to part b of CA-IR-161, HECO received a Rough Order of Magnitude ("ROM") estimate for the Oahu Electrical System Analysis study from GE amounting to approximately $950,000 with a proposed work schedule that starts in late 2008 and ends in 2009 with the completion of the project. The Company plans to fund this project assuming that HNEI and USDOE will cost-share $176,000 of the project. Once the statement of work and the work schedule are agreed upon and finalized, HECO will discuss and enter into an agreement with HNEI which would reflect the final USDOE cost-share amount. The signing of the agreement is anticipated to take place in the 4th quarter of 2008.

b. As mentioned on page 36 of B. Tamashiro's direct testimony at HECO T-14, HECO's original estimate of $352,000 for the test year 2009 was based on HECO's costs of Phase 1 of the Maui Wind Study, excluding cost-sharing funds. The Maui Wind Study had obtained cost-sharing from HNEI and USDOE.

Also as mentioned on page 36 of B. Tamashiro's direct testimony at HECO T-14, HECO had preliminary communication with HNEI personnel who indicated that cost-sharing as high as 50% will be available. The preliminary communication with HNEI took place under the premise that the Oahu Wind Study's cost would be similar to the Phase 1 cost of the Maui Wind Study. Therefore, HECO assumes only $176,000 (50% of $352,000) of cost-share will be provided by HNEI and USDOE at this time. HECO will not know the actual cost share until an agreement with HNEI is finalized.

CA-IR-163

Ref: HECO T-14, pages 41-48 (R&D – Biofuel Co-Firing Project).

The 2009 test year projected cost of this project is $649,000. At page 47, HECO T-14 states that this estimate was based on production engineering estimates. Please provide the following:

a. Please provide a copy of the referenced production engineering estimates, including narrative discussions and underlying analyses.

b. If not provided in response to part (a) above, please provide a detailed breakdown of the $649,000 between work tasks, type costs or activities.

HECO Response:

a. As mentioned in Mr. B. Tamashiro's (HECO T-14) direct testimony, the Biofuel Co-Firing Project is a multi-year project, originally started in 2007, which will culminate in the field testing planned in 2009 subject to approvals. The K3 biofuel test is an important first step to collecting meaningful technical information on using biofuels in HECO's existing generation facilities to support a key component of the Hawaii Clean Energy Initiative ("HCEI"). In the historic HCEI agreement[1] signed by Governor Lingle, the Consumer Advocate, the Department of Business, Economic Development and Tourism, and HECO on October 20, 2008, the testing and use of biofuel, and conversion of existing fossil fuel generators to renewable biofuels are highlighted on pages 14 to 16. Due to the importance of this project, the Company has committed a total of approximately $892,000 (detailed on page 46 of HECO T-14) towards this project, which includes a commitment of $649,000 in the test year 2009. The Company has secured over $200,000 of EPRI cost-sharing funds to

[1] The HCEI agreement was signed on October 20, 2008. The Company filed an SEC Form 8-K report on October 21, 2008 summarizing the key highlights of the HCEI agreement and states that a copy of the HCEI agreement will be attached as an exhibit to the Company's third quarter 2008 Form 10-Q filing. A copy of the HCEI agreement is available at the State of Hawaii, Department of Business Economic Development & Tourism website: http://hawaii.gov/dbedt/info/energy/agreement, and the Department of Commerce & Consumer Affairs website: http://hawaii.gov/dcca/areas/dca/HCEI

date, and will also seek additional cost-sharing funds from EPRI in 2009 in the amount of the Company's 2009 commitment.

To clarify, to date, the Biofuel Co-Firing Project estimate for the test year 2009 is not based on production engineering estimates. Rather, it is the Company's 2009 funding commitment towards the project which is expected to cost well in excess of HECO's total commitment of $892,000 based on the Company's estimate of planned tasks and underlying activities to be performed. Refer to Attachment 1 for an estimate of the Company's planned tasks and underlying activities of the Biofuel Co-Firing Project. As discussed above and in CA-IR-164, HECO will seek EPRI's cost-share in 2009 to help fund this project. The Company expects to firm its estimated cost of the project when it receives vendor estimates/bids in late 2008 and in 2009.

HECO T-14, pages 44-46 discusses the five major tasks (i.e., Task 1-fuel compatibility evaluation, Task 2-biofuel co-firing test plan, Task 3-procurement and installation, Task 4-shakedown and testing, and Task 5-test data reduction and analysis) for this project. The following is a summary of activities to date

Task 1-Fuel Compatibility Evaluation

Due to differences in fuel properties of biofuel (e.g., palm oil and refined palm oil products) and low sulfur fuel oil ("LSFO"), comprehensive analyses of candidate biofuels and blends are being conducted. Another potential biofuel fuel sample (refined, bleached, and de-odorized palm stearin) and blends with LSFO have been sent to the laboratory for fuel analyses and viscosity-temperature tests. The resultant fuel analyses data received to date are being reviewed and evaluated by HECO engineers and its consultant. The information gained from the laboratory results helped to provide information on how the

biofuels will affect combustion and emissions. This information is being folded in the test plan development in Task 2. This task is on-going.

Task 2: Biofuel Co-firing Test Plan

HECO has contracted a consultant to assist in the early stages of this biofuel test development. A test plan which includes fuel requirements, equipment requirements, test parameters, data monitoring needs, project schedule, and other project-related items has been developed and is undergoing review and evaluation. A testing RFP is being developed for activities related in Tasks 3, 4 and 5. This task is on-going.

Task 3: Procurement and Installation

In Task 3, the procurement of biofuel, equipment, instrumentation, and technical services (e.g., fuel receipt operations, controls, data monitoring, etc.) will be conducted. Hardware for the tests will be installed. Biofuel specifications for procurement have been developed. A request for proposals to supply the biofuel based on the specifications will be issued in early November for procurement and delivery of the test fuel to Kahe #3 generating station. Bids will be due in December 2008. PUC application for approval will be developed for submission in January 2009. See HECO T-14, pages 47-48 for a summary of major approvals needed for the Biofuel Co-Firing Project . This task is on-going.

Task 4: Shakedown and Testing

In Task 4, equipment, controls, and instrumentation will be tested prior to conducting co-firing tests. Once all hardware and fuel delivery systems are operational, co-firing tests with biofuel will commence along with data collection. At the conclusion of the tests, demobilization and cleanup activities will be conducted. There is no major activity in this area at this time.

Task 5: Test Data Reduction and Analysis

Data collected during the co-firing tests will be analyzed to evaluate the long-term viability of co-firing biofuel with low sulfur fuel oil in a boiler. The observations and conclusions from the tests will be documented in a report. There is no major activity in this area at this time.

b. At this time, the Company has not determined which specific work tasks and activities the $649,000 is expected to fund on Attachment 1, since the Company is still in the process of determining the final cost estimates of the work tasks and activities and has not definitively secured EPRI cost-shared funds for 2009. The Company expects to obtain vendor estimates/bids toward the end of 2008.

ESTIMATED TASKS AND ACTIVITIES BIO-FUEL CO-FIRING TEST	
	Type Cost/Activity
Task 1: Fuel Compatibility Evaluation	
Test various fuels	Outside Services
90-day corrosion test	Outside Services
Testing after fuel is selected	Outside Services
Testing during test run	Outside Services
Task 2: Biofuel Cofiring Test Plan	
Initial design (Combustion Engineer)	Outside Services
Conduct site hazard survey	Outside Services
Task 3: Procurement and Installation	
Burner tip redesign	Outside Services
Survey materials for fuel compatibility	Testing RFP
Air emissions set-up	Testing RFP
Heat transfer monitoring	Testing RFP
Procure/install new burner tips	Outside Services
Develop Operating Manual	Outside Services
Provide Operator training	Outside Services
Miscellaneous consumables	Material
Stand-by fuel barge	Outside Services
Task 4: Shakedown and Testing	
During test (Combustion Engineer)	Outside Services
During test (Controls Engineer)	Outside Services
Field test mobilization & execution	Testing RFP
Flush Biofuel from fuel lines	Outside Services
Data collection	Outside Services
Task 5: Test Data Reduction and Analysis	
Evaluate and analyze data	Outside Services
Develop final report	Outside Services

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Ref: HECO T-14, pages 41-48 (R&D – Biofuel Co-Firing Project).

At page 46, HECO T-14 provides a breakdown of the costs of this project by calendar year, indicating that HECO has received over $200,000 cost sharing from EPRI to-date. Further, additional cost sharing will be sought "from EPRI in 2009 in the amount of the Company's contribution." Please provide the following:

a. Is the $200,000 amount received to-date associated with the costs incurred in 2007 and 2008?
b. Please explain the statement that HECO will seek additional cost-sharing from EPRI in 2009 "in the amount of the Company's contribution."
c. Referring to part (b) above, is it possible that HECO could receive 50% or 100% cost-sharing from EPRI? Please explain.
d. When does HECO plan to commence the process of seeking additional cost-sharing from HECO? Please explain.
e. Please confirm that HECO's 2009 forecast assumes 0% cost-sharing from EPRI. If this cannot be confirmed, please explain.

<u>HECO Response:</u>

a. To clarify, the $200,000 cost-share amount received from EPRI has been "secured" by HECO to fund the project.

b. HECO requires additional funding, above what has already been committed in existing EPRI Supplemental Project Agreement (see HECO-WP-1409), to complete the biofuel co-firing tests in 2009. To acquire these EPRI cost-sharing funds, HECO plans to execute an amendment to the existing EPRI Supplemental Project Agreement in 2009 to commit both HECO and EPRI funds towards this project.

c. Although EPRI cost-sharing of 100% is possible, due to the importance of this project, the Company has commited $649,000 in 2009 towards this project. The final availability of EPRI's cost sharing funds could be more than 50%; however the Company will not know until early 2009.

d. HECO has committed $649,000 in its 2009 budget towards this project. For the remainder of the project costs, HECO plans to seek additional EPRI cost-sharing funds in early 2009, subsequent to amending the existing Supplemental Project Agreement.

e. HECO's forecast of $649,000 (see HECO T-14, page 46) assumed some level of cost-sharing from EPRI in 2009. However, the availability of funds will not be known until early 2009. See responses to parts (b) and (c) for HECO's plan for project funding.