Hawaiian Electric Company, Inc. • PO Box 2750 • Honolulu, HI 96840

JUN 2 3 2005

January 11, 2005

William A. Bonnet
Vice President
Government and Community Affairs

Ms. Cheryl Kikuta
Utilities Administrator
Division of Consumer Advocacy
Department of Commerce and
Consumer Affairs
335 Merchant Street, Room 326
Honolulu, Hawaii 96813

Dear Ms. Kikuta:

Subject: Docket No. 04-0113
HECO 2005 Test Year Rate Case
CA-IR-1 and CA-IR-2

[illegible] with an informal agreement with the Consumer Advocate, attached are

12/29/2004

Standard Labor Rates

Global Name	Jan 05
__BUOC Prod Rate (BU - Off & Clerical)	$23.07
__BUOCB Prod Rate (BU - Off & Clerical (Bs))	$22.28
__BUOCED Prod Rate (BU - Off & Clerical (ED))	$21.62
__BUOCI Prod Rate (BU - Off & Clerical (Is))	$21.75
__BUOCW Prod Rate (BU - Off & Clerical (WA&WP))	$24.01
__BUOCY Prod Rate (BU - Off & Clerical YA,YC,YF,YG,Y...	$19.37
__BUTC Prod Rate (BU - Trade & Crft)	$26.39
__BUTCB Prod Rate (BU - Trade & Crft (Bs))	$26.39
__BUTCED Prod Rate (BU - Trade & Crft (ED))	$31.51
__BUTCI Prod Rate (BU - Trade & Crft (Is))	$33.05
__BUTCW Prod Rate (BU - Trade & Crft (WA&WP))	$26.39
__BUTCY Prod Rate (BU - Trade & Crft (YA,YC,YF,YG,YJ...	$26.39
__E Prod Rate (Enabler)	$52.60
__E-B Prod Rate (Enabler - (Bs))	$49.82
__E-ED Prod Rate (Enabler - (ED))	$55.09
__E-I Prod Rate (Enabler - (Is))	$50.75
__E-W Prod Rate (Enabler - WA & WP)	$54.59
__EXEC Prod Rate (Executives - Pres/VPs)	$102.61
__EXEC2 Prod Rate (Executives - Other)	$60.64
__E-Y Prod Rate (Enabler - (YA,YF,YG,YJ,YM))	$64.60
__F Prod Rate (Facilitator)	$44.85
__F-B Prod Rate (Fac - (Bs))	$44.85
__F-ED Prod Rate (Fac - (ED))	$44.85
__F-I Prod Rate (Fac - (Is))	$44.85
__FS Prod Rate (Facilitator - Supv)	$39.81
__FS-B Prod Rate (Fac-Sup - (Bs))	$46.27
__FS-ED Prod Rate (Fac-Sup - (ED))	$38.92
__FS-I Prod Rate (Fac-Sup - (Is))	$45.63
__FS-W Prod Rate (Facilitator - Supv WA & WP)	$41.10
__FS-Y Prod Rate (Fac-Sup - (YA,YF,YG,YJ,YM))	$39.81
__F-W Prod Rate (Facilitator - WA & WP)	$38.92
__F-Y Prod Rate (Facilitator - (YA,YF,YG,YJ,YM))	$38.92
__I Prod Rate (Implementor)	$23.72
__I-B Prod Rate (Implementor - (Bs))	$20.39
__I-ED Prod Rate (Implementor - (ED))	$29.18
__I-I Prod Rate (Implementor - (Is))	$23.67
__I-W Prod Rate (Implementor - WA & WP)	$22.43
__I-Y Prod Rate (Implementor - (YA,YF,YG,YJ,YM))	$19.38
__POLICE Rate (Police work)	$23.72
__SUMMER Rate (Summer Hire)	$5.25
__TC Prod Rate (Teacher/Coach)	$30.67
__TC-B Prod Rate (Teacher/Coach - (Bs))	$29.55
__TC-ED Prod Rate (Teacher/Coach - (ED))	$29.92
__TC-I Prod Rate (Teacher/Coach - (Is))	$32.95
__TCS Prod Rate (Teacher/Coach - Supv)	$30.13
__TCS-B Prod Rate (Teacher/Coach - Supv - (Bs))	$30.83
__TCS-ED Prod Rate (Teacher/Coach - Supv - (ED))	$31.54
__TCS-I Prod Rate (Teacher/Coach - Supv - (Is))	$36.14
__TCS-W Prod Rate (Teacher/Coach - Supv - WA & WP)	$28.54
__TCS-Y Prod Rate (Teacher/Coach - Supv -(YA,YF,YG,...	$32.93
__TC-W Prod Rate (Teacher/Coach - WA & WP)	$31.56
__TC-Y Prod Rate (Teacher/Coach - (YA,YF,YG,YJ,YM))	$31.54
B_DISPLN Prod Rate (Distribution Planning)	$0.00
B_PRJMGT Prod Rate (Project Management)	$31.15
B_PRJSUP Prod Rate (Project Support)	$29.28
B_PROTEC Prod Rate (Protection)	$33.69
B_SSENG Prod Rate (Substation Engineering)	$33.98
B_STRDFT Prod Rate (Structural Drafting)	$31.48
B_STRENG Prod Rate (Civil Structural Engineering)	$33.47
B_SUBDFT Prod Rate (Substation Drafting)	$33.07
B_SURVBU Prod Rate (Surveyor - BU)	$26.16
B_SURVEY Prod Rate (Surveyor)	$29.75
B_TCENGR Prod Rate (Telecomm Engr)	$33.28

12/29/2004

Standard Labor Rates

Global Name	Jan 05
B_TCSENG Prod Rate (Sr Telecomm Engr)	$38.72
B_TECDFT Prod Rate (Tech Services Drafting)	$29.51
B_TECENG Prod Rate (Tech Services Engineering)	$39.46
B_TNDDFT Prod Rate (T&D Drafting)	$32.47
B_TNDENG Prod Rate (T&D Engineering)	$32.92
D_OHCREW Prod Rate (Overhead Crew)	$36.08
D_PTM Prod Rate (Switching (work))	$36.41
D_UGCREW Prod Rate (Underground Crew)	$37.61
I_HPPMNT Prod Rate (Honolulu Plant Maint)	$33.90
I_KPPMNT Prod Rate (Kah Plant Maint)	$34.95
I_PPENGR Prod Rate (Power Plant Engineer)	$30.80
I_PPPLAN Prod Rate (Project Coordinator)	$32.18
I_PPSPVR Prod Rate (Supv - Plant Maint)	$37.62
I_TVLBLR Prod Rate (Boiler Maint Tvl)	$34.04
I_TVLELC Prod Rate (Electrical Maint Tvl)	$37.88
I_TVLMCH Prod Rate (Machinist Maint Tvl)	$36.08
I_TVLSPV Prod Rate (Supv - Tvl Maint)	$37.91
I_TVLTCH Prod Rate (Technical Maint Tvl)	$36.05
I_WPPMNT Prod Rate (Waiau Plant Maint)	$35.07
J_AIRSCI Prod Rate (Air/Noise Scientist)	$36.00
J_AIRSPE Prod Rate (Air/Noise Specialist)	$25.59
J_CHEMST Prod Rate (Chemist)	$29.94
J_WHMAID Prod Rate (Water/Haz Mat Aide)	$31.10
J_WHMSCI Prod Rate (Water/Haz Mat Scientist)	$32.39
R_COMELE Prod Rate (Comm. - Electrician)	$31.33
R_COMENG Prod Rate (Comm. - Engr)	$35.18
R_COMSUP Prod Rate (Comm. - Supv)	$35.54
R_COMTEC Prod Rate (Comm. - Tech.)	$34.50
R_CONCRW Prod Rate (Construction - Crew)	$35.86
R_CONSUP Prod Rate (Construction - Supv)	$38.98
R_ENGMAP Prod Rate (Mapping - Tech)	$27.09
R_ENGSRE Prod Rate (EMS - Supv)	$38.48
R_ENGSTF Prod Rate (EMS - Staff)	$32.02
R_ENGSUP Prod Rate (Mapping - Supv)	$26.05
R_INSCRW Prod Rate (Instrument - Tech)	$32.19
R_INSENG Prod Rate (Instrument - Engr)	$37.21
R_INSSUP Prod Rate (Instrument - Supv)	$36.04
R_OPEDIS Prod Rate (Dispatch)	$34.96
R_OPESPT Prod Rate (Dispatch - Supt)	$41.17
R_OPESTF Prod Rate (Dispatch - Staff)	$34.74
R_OPESUP Prod Rate (Dispatch - Supv)	$38.56
R_RELCRW Prod Rate (Relay - Tech/Elec)	$32.54
R_RELENG Prod Rate (Relay - Engr)	$37.76
R_RELSUP Prod Rate (Relay - Supv)	$35.12
R_SUBCRW Prod Rate (Substation Crew)	$33.67
R_SUBENG Prod Rate (Substation - Engr)	$34.58
R_SUBPLN Prod Rate (Substation - Plnr)	$32.60
R_SUBSUP Prod Rate (Substation - Supv)	$34.27
R_TECSPT Prod Rate (Tech - Supt)	$47.54
W_CUDGNR Prod Rate (Customer Designer)	$36.86
W_CUENGR Prod Rate (Customer Engineer)	$34.85
W_CUPLNR Prod Rate (Customer Planner)	$29.24
W_DEPLNR Prod Rate (Design Planner)	$33.38
W_JPCORD Prod Rate (Joint Pole Coordinator)	$28.54
W_JRPLNR Prod Rate (Junior Customer Planner)	$25.59
W_MTELEC Prod Rate (Meter Electricians)	$30.63
W_MTENGR Prod Rate (Meter Engineers)	$34.23
W_MTSUPV Prod Rate (Meter Supv.)	$34.08
W_PDSUPV Prod Rate (Planning Supv)	$37.01
W_RECORD Prod Rate (Records Coordinator)	$38.77
W_RESHER Prod Rate (Technical Researcher)	$26.68
Y_GENPLN Prod Rate (Generation Plng Engineer)	$35.42

12/29/2004

Standard Labor Rates

Global Name	Jan 05
Y_PPDRAF Prod Rate (PP Drafting)	$31.66
Y_PPELEC Prod Rate (PP Electrical Engineer)	$30.10
Y_PPMECH Prod Rate (PP Mechanical Engineer)	$36.19
Y_PPPROJ Prod Rate (PP Project Management)	$39.36
Y_TECHSV Prod Rate (PP Technical Services)	$36.79
Y_TRNPLN Prod Rate (Transmission Planning)	$34.59

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January 25, 2005

William A. Bonnet
Vice President
Government and Community Affairs

Ms. Cheryl Kikuta
Utilities Administrator
Division of Consumer Advocacy
Department of Commerce and
Consumer Affairs
335 Merchant Street, Room 326
Honolulu, Hawaii 96813

RECEIVED
2005 JAN 25 P 3:43
DIV. OF CONSUMER ADVOCACY
DEPT. OF COMMERCE AND
CONSUMER AFFAIRS
STATE OF HAWAII

Dear Ms. Kikuta:

Subject: Docket No. 04-0113
HECO 2005 Test Year Rate Case
CA-IR-1 and CA-IR-2

Attached are the remaining HECO's responses to CA-IR-1 and CA-IR-2 which were not submitted with the Company's earlier responses filed on January 11, 2005:

1) HECO T-13, CA-IR-2, Attachment 13 – Legal
2) HECO T-13, CA-IR-2, Attachment 15 – President's Office, and
3) HECO T-16, CA-IR-2, for VP-Corp Excellence (RA: P6V).

In addition, HECO is providing responses to the following which were referenced with "Note A" in T-13, CA-IR-1, Attachment 1 and CA-IR-2, Attachment 1 and to be provided under separate cover but were not identified as being excluded on the January 11, 2005 transmittal letter:

4) HECO T-13, CA-IR-1, Attachment 32 – VP Corporate Excellence
5) HECO T-13, CA-IR-2, Attachment 29 – VP Corporate Excellence
6) HECO T-13, CA-IR-2, Attachment 30 – VP Power Supply

This completes HECO's filing of its responses to CA-IR-1 and CA-IR-2. Two copies are being provided to the Consumer Advocate (one for the Consumer Advocate's consultant).

If you have any questions, please contact Patsy Nanbu at 543-4702.

Sincerely,

Attachments

General Information Requests

For each of the HECO witnesses who sponsor test period budgeted labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted staffing and associated labor direct expense amounts included in the witnesses' portion of the rate case test period budget.

b. Provide complete copies of all calculations, spreadsheet files, "pencil" workpapers, surveys and other analyses performed by each of the employees identified in response to part (a), documenting all work done to determine required staffing levels and overtime hours by Department, RA, Activity and NARUC Account.

c. Describe the actual force level that existed at the date the budget was prepared or otherwise served as a base for purposes of preparing the budget level.

d. For each budgeted employee position that is added to existing actual force levels (as the date the budget was prepared), **explain** the analyses undertaken to determine that each added position was necessary and should be filled in order to meet present or anticipated work requirements. Also, please explain how the anticipated work requirements were defined and determined.

e. Describe and, to the extent possible, quantify the backlog of work, unfinished projects, deferred maintenance and other labor requirements unfulfilled at present staffing levels, that will be satisfied by adding the employee positions identified in your response to part (d).

f. Provide complete copies of all studies, analyses, workpapers, projections, notes, correspondence, assumptions and other documents associated with your responses to parts (d) and (e) above.

HECO Response:

The budgeted labor direct expense for Production Operation and Maintenance block of accounts is provided in HECO-WP-101(G), pages 767 to 793. It is important to note that the labor budget information provided in the responses below is separated into projects and non-projects, for both Operations and Maintenance blocks of accounts. Planned Outages (PO) described in HECO T-6, page 13, is budgeted as projects. This is distinguished from non-projects which capture the [illegible] of O&M labor expenses. Therefore responses to this information request are organized

into projects and non-projects. Attachment (1) breaks down the Operation and Maintenance direct labor totals in HECO-WP-101(G) pages 780 and 793 respectively, into hours and dollars for project and non-project labor direct expenses. This serves as the basis for responding to the various information requests below.

a. A list of employees involved in the preparation of budgeted labor direct expense included in the rate case test period budget and sponsored by HECO witness T-6 is provided in Attachment (2). Note that some of the budget preparers are no longer with the Company or has transferred to another area of the Company.

b. Attachment (3) provides a summary of the non-project labor direct expense based on estimated labor hours for the impacted RA's. Worksheets used to derive the non-project labor direct expense for the various RA's are provided in Attachments (3A) through (3I). Attachment (4) provides a summary of the project labor direct expense based on estimated labor hours for the impacted RA's. Worksheets used to derive the project labor direct expense for the various RA's are provided in Attachments (4A) through (4E).

c. Attachment (5) compares the actual force level by position that existed on April 30, 2004 when the budget was prepared, with the TY 2005 force level, and includes comments that explain the differences and hiring status. Also as a reference, the force level on 12/31/04 is included in Attachment (5) to provide a 2004 year-end status for each position.

d. Please refer to the explanations provided in Attachment (5) for positions identified as "Additions". Positions identified as a "Vacant" are positions that are staffed, but vacated for various reasons such as retirement, promotions, job transfers, resignations and terminations. The intent is to fill all "addition" and "vacant" positions in TY 2005 in order to continue to support safe, compliant, and reliable electric service in a low reserve margin environment

caused by significant load growth. Detailed justifications for filling "additional" positions are provided in HECO T-6, pages 8 – 12, and associated exhibits in this section. Although the number of existing generating units remain constant until the installation of the next generating unit in 2009, additional staffing is required now and into the foreseeable future to expand hours of operation of W3&4, H8&9 from the current 16hrs x 5days/wk, to 24x7. This addition of operators is required to increase availability of these cycling units and lower excessive overtime (T-6, HECO 620) to more reasonable levels. Also, a permanent night shift maintenance crew for Waiau and Kahe Stations is required to take advantage of off-peak periods to perform outage and other types of maintenance when the cycling and peaking units are off line, and base loaded units are operating at reduced loads. Maintenance overtime is also excessive as shown in (T-6, HECO 625). Other trades and craft positions and staff (Trainer and IT Specialist) are required to keep up with higher volumes of maintenance as the units continue to age, to manage the growing application of technology and develop the influx of new employees.

e. In addition to the case presented in T-6, generation shortfall conditions and criteria shown in Attachment (6) summarize the actual number of close calls experienced from 2002 through 2004. This trend is expected to worsen as system load continues to grow. Backlog of work continues to increase as the units and associated infrastructure ages.

f. Please refer to the attachments provided in (a) – (e) above.

Labor Hours and Direct Labor by RA

	Prod Oper Hours	Prod Oper Amount	Prod Maint Hours	Prod Maint Amount	Total Hours	Total Amount
Non-Projects	362,228	11,971,726	217,490	7,574,358	579,718	19,546,084
Projects	1,090	38,608	101,273	3,580,440	102,363	3,619,048
Total	363,318	12,010,334	318,763	11,154,798	682,081	23,165,132

Budget Preparer: Non-Projects – Labor

RA	Name	Title
PCB	Robb Tanaka	Budget Analyst
PHS	Eugene Uemura & Alan Cardoza	Director Security (E. Uemura) & Captain (A. Cardoz
PIA	Kelly Whalen (Left Co.)	Administrator
PIB	Victoria Marzano (transferred to Cust Svc Dept)	Budget Analyst
PIC	Kelly Whalen (Left Co.)	Administrator
PIF	Kelly Whalen (Left Co.)	Administrator
PIH	Victoria Marzano (transferred to Cust Svc Dept)	Budget Analyst
PIK	Victoria Marzano (transferred to Cust Svc Dept)	Budget Analyst
PIL	Victoria Marzano (transferred to Cust Svc Dept)	Budget Analyst
PIM	Victoria Marzano (transferred to Cust Svc Dept)	Budget Analyst
PIN	Victoria Marzano (transferred to Cust Svc Dept)	Budget Analyst
PIO	Victoria Marzano (transferred to Cust Svc Dept)	Budget Analyst
PIP	Victoria Marzano (transferred to Cust Svc Dept)	Budget Analyst
PIT	Victoria Marzano (transferred to Cust Svc Dept)	Budget Analyst
PIW	Victoria Marzano (transferred to Cust Svc Dept)	Budget Analyst
PIX	Victoria Marzano (transferred to Cust Svc Dept)	Budget Analyst
PJA	Sherri-Ann Loo	Environmental Department Manager
PJB	Barry Nakamoto	Air Quality/Noise Division Principal Engineer
PJC	[illegible]	Chemistry Division Laboratory Supervisor

PRE	Peter Okunami	Senior Engineer Operating Engineering Division
PRI	Richard Freitas	Supervisor Instrument and Control Division
PRR	Wayne Kawamata	Supervisor Relay Division
PRX	Kurt Anbe	Substation Engineer
PYA	Bert Morikuni	Administrator
PYB	Ross Sakuda	Generation Planning Director
PYC	Bert Morikuni	Administrator
PYE	Dean Arakawa	Superintendent Technical Services
PYF	Gary Yonamine (Retired)	Principal Engineer Power Plant Engineering
PYJ	Ken Fong	Project Manager
PYM	Gary Yonamine (Retired)	Principal Engineer Power Plant Engineering

Budget Preparer: Projects - Labor

Name	Title
Larry Ornellas	Superintendent, Maintenance Division

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Non-Projects - Labor Hours and Direct Labor by RA

RA	Prod Oper Hours	Prod Oper Amount	Prod Maint Hours	Prod Maint Amount	Total Hours	Total Amount
PIB	12,189	394,659	755	25,233	12,944	419,892
PIH	45,649	1,534,711	0	0	45,649	1,534,711
PIK	107,180	3,574,976	1,705	61,619	108,885	3,636,595
PIL	0	0	67,618	2,378,578	67,618	2,378,578
PIM	1,310	59,775	769	16,726	2,079	76,501
PIN	376	14,145	15,425	528,175	15,801	542,320
PIO	426	19,438	0	0	426	19,438
PIP	9,554	310,091	26,040	831,606	35,594	1,141,697
PIT	0	0	20,780	710,900	20,780	710,900
PIW	121,941	4,064,087	1,708	61,727	123,649	4,125,814
PIX	0	0	64,666	2,282,448	64,666	2,282,448
PIA	5,263	153,368	578	29,334	5,841	182,702
PIC	8,705	267,991	0	0	8,705	267,991
PIF	1,579	40,839	372	11,458	1,951	52,297
PJA	4,558	143,326	0	0	4,558	143,326
PJB	5,500	181,755	0	0	5,500	181,755
PJC	7,759	234,481	0	0	7,759	234,481
PJW	4,915	152,335	0	0	4,915	152,335
PYA	2,515	94,029	0	0	2,515	94,029
PYB	8,206	290,656	0	0	8,206	290,656
PYC	1,856	35,951	0	0	1,856	35,951

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Non-Projects - Labor Hours

RA	Prod Oper Hours	Prod Maint Hours	Total Hours
PIB	12,189	755	12,944
PIH	45,649	0	45,649
PIK	107,180	1,705	108,885
PIL	0	67,618	67,618
PIM	1,310	769	2,079
PIN	376	15,425	15,801
PIO	426	0	426
PIP	9,554	26,040	35,594
PIT	0	20,780	20,780
PIW	121,941	1,708	123,649
PIX	0	64,666	64,666
	298,625	199,466	498,091

4/07
Resource level

_RA	_LbrCla...	_Act	_Loc	_Ind	_Proj	_EE	Line item	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
PIB	__E-I	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Manager - labor Supply	2,080	168	160	184	168	176	176	168	184	176	168	176	176
PIB	__E-I	098	PHE	ND	NPIZZZZZ	107	Manager-Non Productive	-280	-8	-8	-48	-8	-56	-8	-16	-8	-16	-16	-32	-56
PIB	__E-I	240	HST	NE	NPIZZZZZ	150	Manager-Dvlp/Mnt Policies & Procedu...	-18	-1	-1	-2	-1	-1	-2	-1	-2	-2	-1	-2	-2
PIB	__E-I	240	KST	NE	NPIZZZZZ	150	Manager Dvlp/Mnt Policies & Procedu...	-37	-4	-3	-3	-3	-3	-3	-3	-4	-3	-3	-3	-2
PIB	__E-I	700	PHE	NC	NPIZZZZZ	150	Manager-Devlp & Adm Bus Plans	-93	-9	-8	-6	-8	-7	-8	-8	-9	-7	-9	-8	-6
PIB	__E-I	720	PHE	NC	NPIZZZZZ	150	Manager-Improve Bus Process	-659	-66	-55	-45	-59	-46	-59	-58	-63	-52	-61	-53	-42
PIB	__E-I	735	PHE	NC	P0000526	150	Power Supply Op & Maint Enabler Su...	-450	-80	-5	-5	-20	-60	-80	-80	-80	-20	-20	0	0
PIB	__E-I	753	PPM	NE	NPIZZZZZ	150	Maintain Community Relations-Maint ...	-20	-2	-2	-1	-2	-1	-2	-2	-2	-1	-2	-2	-1
PIB	__E-I	753	PPO	NE	NPIZZZZZ	150	Maintain Community Relations-Operat...	-20	-2	-2	-1	-2	-1	-2	-2	-2	-1	-2	-2	-1
PIB	__E-I	785	PHE	NC	NPIZZZZZ	150	Plan Empl Training & Development	-614	-70	-50	-36	-57	-38	-57	-55	-64	-47	-60	-49	-31
PIB	__E-I	787	PPO	NE	P0000128	150	TRNG: IB-E-V-I labor-Dev trng-NEO	0	0	0	0	0	0	0	0	0	0	0	0	0
PIB	__E-I	787	PPO	NE	P0000128	150	TRNG: IB-E-V-I labor-Dev trng-NEO (...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIB	__E-I	788	PPO	NE	P0000128	150	TRNG: IB-E-V-I labor-Conduct trng-...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIB	__E-I	788	PPO	NE	P0000128	150	TRNG: IB-E-V-I labor-Conduct trng-N...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIB	__E-I	789	PHE	NC	NPIZZZZZ	150	Manager-Attend Training	-54	0	-7	-8	-3	-5	-3	-7	-8	-5	-7	-1	0
PIB	__E-I	797	PHE	NC	NPIZZZZZ	150	Manager-Attend Safety Training	-24	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2
PIB	__E-I	891	PPO	NE	P0000318	150	AARON K FUJINAKA + MIMS Mana...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIB	__E-I							-189	-76	17	27	3	-44	-50	-66	-60	20	-15	22	33
PIB	__FS-I	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Principal Eng Glenn Miyashita	2,080	168	160	184	168	176	176	168	184	176	168	176	176
PIB	__FS-I	098	PHE	ND	NPIZZZZZ	107	Principal Eng.	-280	-8	-8	-48	-8	-56	-8	-16	-8	-16	-16	-32	-56
PIB	__FS-I	720	PHE	NC	NPIZZZZZ	150	Principal Eng. Improve Bus. Process	-1,822	-183	-151	-124	-163	-128	-163	-159	-175	-144	-168	-148	-116
PIB	__FS-I	789	PHE	NC	NPIZZZZZ	150	Principal Eng. Training	-54	0	-7	-8	-3	-5	-3	-7	-8	-5	-7	-1	0
PIB	__FS-I	797	PHE	NC	NPIZZZZZ	150	Principal Eng. Safety Train	-24	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2
PIB	__FS-I							-100	-25	-8	2	-8	-15	0	-16	-9	9	-25	-7	2
PIB	__I-I	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Sec/Admin-Labor Supply	2,080	168	160	184	168	176	176	168	184	176	168	176	176
PIB	__I-I	098	PHE	ND	NPIZZZZZ	107	Secretary/Admin-Nonproductive	-344	-8	-8	-48	-8	-8	-56	-48	-8	-56	-8	-24	-64
PIB	__I-I	720	PHE	NC	NPIZZZZZ	150	Secretary/Admin-Process Invoice/Pmts	-83	-9	-7	-5	-8	-8	-5	-6	-9	-5	-8	-8	-5
PIB	__I-I	766	HST	NE	NPIZZZZZ	150	Maintain Employee Records-Hon pp	-317	-33	-27	-22	-30	-32	-20	-23	-32	-18	-32	-28	-20
PIB	__I-I	766	KST	NE	NPIZZZZZ	150	Maintain Employee Records - Kahe PP	-634	-66	-54	-45	-59	-64	-41	-46	-66	-33	-64	-57	-39
PIB	__I-I	766	WST	NE	NPIZZZZZ	150	Maintain Employee Records-Waiau PP	-634	-66	-54	-45	-59	-64	-41	-45	-63	-37	-64	-57	-39
PIB	__I-I	789	PHE	NC	NPIZZZZZ	150	Secretary/Admin-Training	-54	0	-7	-8	-3	-5	-3	-7	-8	-5	-7	-1	0
PIB	__I-I	797	PHE	NC	NPIZZZZZ	150	Secretary/Admin-Safety training	-22	-2	-2	-1	-2	-2	-1	-2	-2	-2	-2	-2	-2
PIB	__I-I							-8	-16	1	10	-1	-7	9	-9	-4	20	-17	-1	7
PIB	__TC-I	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Bud. Analyst- Env. - Chem. (2)- Traine...	12,480	1,008	960	1,104	1,008	1,056	1,056	1,008	1,104	1,056	1,008	1,056	1,056
PIB	__TC-I	098	PHE	ND	NPIZZZZZ	107	Budget Analyst/Trainer-Nonproductive	-1,464	-54	-102	-94	-62	-141	-141	-149	-61	-149	-141	-213	-157
PIB	__TC-I	240	WST	NE	NPIZZZZZ	150	Develope/Maintain Policies & Procedu...	-93	-9	-8	-7	-8	-9	-6	-8	-9	-5	-9	-8	-7
PIB	__TC-I	245	HST	NE	NPIZZZZZ	150	Chemists	-740	-73	-52	-65	-65	-63	-60	-59	-73	-52	-62	-58	-58
PIB	__TC-I	245	KST	NE	NPIZZZZZ	150	Chemists	-1,483	-147	-104	-130	-131	-126	-121	-118	-147	-104	-124	-115	-116
PIB	__TC-I	245	WST	NE	NPIZZZZZ	150	Chemists	-1,483	-147	-104	-130	-131	-126	-121	-118	-147	-104	-124	-115	-116
PIB	__TC-I	701	PHE	NC	NPIZZZZZ	150	Budget Analyst-Dvlp&Mge Forecast	-1,036	-101	-83	-94	-89	-77	-83	-92	-101	-72	-97	-65	-82
PIB	__TC-I	720	PHE	NC	NPIZZZZZ	150	Improve Business Process	-186	-18	-15	-15	-16	-16	-14	-16	-18	-11	-18	-14	-15
PIB	__TC-I	721	PHE	NC	NPIZZZZZ	150	Budget Analyst-Dvlp Meas/Analz Perf	-850	-82	-68	-79	-73	-61	-70	-75	-79	-65	-79	-52	-67
PIB	__TC-I	787	PPM	NE	NPIZZZZZ	150	Develope Employee Training-Mainten...	-551	-55	-45	-40	-46	-53	-36	-48	-52	-31	-53	-47	-45
PIB	__TC-I	787	PPO	NE	NPIZZZZZ	150	Develop Employee Training- Operations	-644	-64	-53	-47	-54	-62	-43	-56	-64	-32	-62	-55	-52
PIB	__TC-I	787	PPO	NE	P0000128	150	TECH TRNG: IB-TC-I labor-Develop t...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIB	__TC-I	787	PPO	NE	P0000128	150	TECH TRNG: IB-TC-I labor-Develop tr...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIB	__TC-I	788	PPM	NE	NPIZZZZZ	150	Conduct Employee Training-Maintena...	-184	-18	-15	-12	-15	-18	-12	-16	-18	-10	-18	-16	-16
PIB	__TC-I	788	PPO	NE	NPIZZZZZ	150	Conduct Employee Training - Operati...	-184	-18	-15	-12	-15	-18	-12	-16	-18	-10	-18	-16	-16
PIB	__TC-I	788	PPO	NE	NPIZZZZZ	150	Conduct Ee Training Add Ee Count	-2,008	-169	-152	-178	-169	-171	-171	-162	-179	-171	-162	-162	-162
PIB	__TC-I	788	PPO	NE	P0000128	150	TRNG: IB-TC-I labor-Conduct trng (20...	-12	0	0	0	0	0	0	0	-12	0	0	0	0
PIB	__TC-I	788	PPO	NE	P0000128	150	TRNG: IB-TC-I labor-Conduct trng (7/...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIB	__TC-I	788	PPO	NE	P0000128	150	TRNG:IB-TC-I labor-Conduct trng (5/2...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIB	__TC-I	788	PPO	NE	P0000128	150	TRNG: IB-TC-I labor-Conduct trng (2/...	12	0	0	0	0	0	0	0	12	0	0	0	0

PIB SUM Σ(A) = 12,944 ✓

4/7/2004 » budget manager: 1b Resource Leveling Detail Code Blk(Mo) 1:14PM

_RA	_LbrCla...	_Act	_Loc	_Ind	_Proj	_EE	Line item	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
PIB	__TC-I	789	PHE	NC	NPIZZZZZ	150	Budget Analyst/trainer-Training	-272	0	-34	-41	-16	-25	-16	-34	-41	-25	-34	-6	0
PIB	__TC-I	797	PHE	NC	NPIZZZZZ	150	Budget Analyst/trainer-Safety Training	-112	-9	-9	-10	-9	-9	-10	-9	-9	-10	-9	-9	-10
PIB	__TC-I	875	HST	NE	NPIZZZZZ	150	On going Permit & Regulatory Requir...	-378	-37	-30	-33	-32	-35	-32	-25	-37	-29	-27	-32	-29
PIB	__TC-I	875	KST	NE	NPIZZZZZ	150	On going Permit & Regulatory Requir...	-752	-73	-59	-66	-65	-70	-62	-50	-73	-58	-54	-63	-59
PIB	__TC-I	877	WST	NE	NPIZZZZZ	150	On going Permit & Regulatory Requir...	-756	-73	-60	-67	-65	-71	-63	-50	-73	-58	-54	-63	-59
PIB	__TC-I	891	PPO	NE	P0000318	150	VICTORIA E MARZANO + Project C...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIB	__TC-I							-696	-139	-48	-16	-53	-95	-17	-93	-95	60	-137	-53	-10
PIB	__TCS-I	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Supv Environmental Complicance	2,080	168	160	184	168	176	176	168	184	176	168	176	176
PIB	__TCS-I	098	PHE	ND	NPIZZZZZ	107	Supv Environ Compliance Nonproduc...	-256	-14	-22	-22	-14	-21	-21	-21	-21	-21	-21	-29	-29
PIB	__TCS-I	877	WST	NE	NPIZZZZZ	150	Comply Permit Solid/Haz - Supv Env ...	-2,008	-169	-152	-178	-169	-171	-171	-162	-179	-171	-162	-162	-162
PIB	__TCS-I							-184	-15	-14	-16	-15	-16	-16	-15	-16	-16	-15	-15	-15
PIB								-1,177	-271	-52	7	-74	-177	-74	-199	-184	93	-209	-54	17
PIH	__BUOCI	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Clerk - Labor Supply	2,080	168	160	184	168	176	176	168	184	176	168	176	176
PIH	__BUOCI	098	PHE	ND	NPIZZZZZ	107	Non Productive Hrs - Clerk	-329	-27	-25	-19	-26	-27	-26	-26	-27	-25	-27	-41	-33
PIH	__BUOCI	240	HST	NE	NPIZZZZZ	150	Maint Blr Corr - Clerk	-799	-75	-62	-70	-61	-69	-67	-71	-71	-63	-66	-60	-64
PIH	__BUOCI	777	HST	NC	NPIZZZZZ	150	Clerk	-799	-75	-62	-70	-61	-69	-67	-71	-71	-63	-66	-60	-64
PIH	__BUOCI	789	HST	NC	NPIZZZZZ	150	Att Training	-144	-7	-9	-14	-21	-16	-7	-7	-13	-7	-22	-14	-7
								[illegible]	0	0	1	0	2	-1	0	-2	-1	-2	-1	0

CA-IR-1
DOCKET NO. 04-0113
HECO T-6
ATTACHMENT 3A
PAGE 4 OF 17

2005 Budget Recycle
4/15/04

Code Block PRODUCTION	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TTL	Comments
PIN 270 HST NE NPIZZZZ 501			80,000										80,000	Hon Pigging: Add $80K per CHiga via NYuen based on Geometry Pig Run.
PIB 795 PHE NE NPIZZZZZ 201	4,833	4,833	4,833	4,833	4,833	4,833	4,833	4,833	4,833	4,833	4,833	4,833	57,996	Safety Shoes/Coveralls: Add $58K per RHarris for Rate Case. 99Act=$47,783; 00Act=$63,325; 01Act=$69,036; 02Act=$54,821; 03 Act=$59,878
PIN 258 H09 NE NPIZZZZZ 201							200,000	200,000					✓ 400,000	H9 BlrChemCln: Add $400K Kmark.
PIH 242 HST NE NPIZZZ 150)_BUTCI													-111,000	Oper Staffing: Delete 1 Oper IH. -$111K
PIW 242 HST NE NPIZZZ 150)_BUTCI													623,000	Oper Staffing: Add 5 Oper IW. $623K
PIT 272 W09 NE P0000937 201	2,500	2,500											5,000	W9 Overhaul: Add $5K for Gas Turbine Matls. Sand Blast Grit. RKiyabu. From $5K to $10K.
PIT 272 W09 NE P0000937 501			30,000	30,000									60,000	W9 Overhaul: Add $60K for Gas Turbine O/S. Weld Rprs From $30K to $60K. Crane Rental from $20K to $50K. RKiyabu.
PIT 274 W09 NE P0000937 501			5,000	5,000									10,000	W9 Overhaul: Add $10K for Gas Turbine O/S. Welders. RKiyabu. From $10K to $20K.
PIT 273 W09 NE P0000937 501			12,500	12,500									25,000	W9 Overhaul: Add $25K for Gas Turbine O/S. Generator Testing. RKiyabu. From $0 to $25K.
PIT 272 W10 NE P0000937 201	2,500	2,500											5,000	W10 Overhaul: Add $5K for Gas Turbine Matls. Sand Blast Grit. RKiyabu. From $5K to $10K.
PIT 272 W10 NE P0000937 501			30,000	30,000									60,000	W10 Overhaul: Add $60K for Gas Turbine O/S. Weld Rprs From $30K to $60K. Crane Rental from $20K to $50K. RKiyabu.
PIT 274 W10 NE P0000937 501			5,000	5,000									10,000	W10 Overhaul: Add $10K for Gas Turbine O/S. Welders. RKiyabu. From $10K to $20K.
PIT 273 W10 NE P0000937 501			12,500	12,500									25,000	W10 Overhaul: Add $25K for Gas Turbine O/S. Generator Testing. RKiyabu. From $0 to $25K.
PIT 257 K01 NE P0000846 201								-5,000					-5,000	K1 Overhaul: Delete $5K. Boiler PM. DCS BattRAM. From $5K to $0
PIT 257 K01 NE P0000846 201								10,000					10,000	K1 OH: Add $10K. Boiler PM. DCS PwrSupMod/DCS cabinet Fans. From $20K to $30K.
PIT 258 K01 NE P0000846 501								-14,000					-14,000	K1 OH: Delete $14K. Boiler PDM. FWH ECT Contractor. From $20K to $6K.
PIT 259 K04 NE P0000845 201				12,000									12,000	K4 OH: Add $12K. Boiler CM. ERV Stop Valve Rpr. From $0 to $12K.
PIT 261 K04 NE P0000845 201				30,000									30,000	K4 OH: Add $30K. Turb PDM. Gen Stator Wedges. From $0 to $30K.
PIT 261 K04 NE P0000845 501													0	K4 OH: Add $80K. Turb PDM. Gen Field Specialist support. From $0 to $80K.
PIT 259 K06 NE P0000844 201		3,000											3,000	K06 OH: Add $3K. Boiler CM. APH Basket Repl. From $2K to $5K.

AB $285,000, Short $205,000

To J. Lee 12/21/04

PIH Labor

_RA	_LbrCla...	_Act	_Loc	_Ind	_Proj	_EE	Line item	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
PIK	__TCS-I	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Sr + Shift Supv: Labor Supply	16,640	1,344	1,280	1,472	1,344	1,408	1,408	1,344	1,472	1,408	1,344	1,408	1,408
PIK	__TCS-I	098	PHE	ND	NPIZZZZZ	107	Sr Supv + Shift Supv	-2,637	-219	-198	-155	-205	-219	-205	-212	-219	-198	-219	-326	-262
PIK	__TCS-I	240	KST	NE	NPIZZZZZ	150	dev/mnt plcy	-1,705	-158	-132	-150	-131	-149	-142	-150	-151	-134	-144	-129	-135
PIK	__TCS-I	242	KST	NE	NPIZZZZZ	150	1 Sr + 7 Supv	-5,896	-554	-450	-524	-449	-517	-489	-524	-529	-458	-499	-438	-465
PIK	__TCS-I	243	KST	NE	NPIZZZZZ	150	1 Sr + 7 Supv	-5,896	-554	-450	-524	-449	-517	-489	-524	-529	-458	-499	-438	-465
PIK	__TCS-I	256	KST	NE	NPIZZZZZ	150	1 Sr + 7 Supv	-1,705	-158	-132	-150	-131	-149	-142	-150	-151	-134	-144	-129	-135
PIK	__TCS-I	788	PPO	NE	P0000318	150	DENNIS P MORGAN + T&A conduct...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIK	__TCS-I	789	PHE	NC	NPIZZZZZ	150	att trng	-1,143	-52	-76	-115	-166	-130	-55	-52	-101	-59	-176	-109	-52
PIK	__TCS-I	797	PHE	NC	NPIZZZZZ	150	sfty tng	-96	0	-14	-10	0	-14	-10	0	-14	-10	-14	-10	0
PIK	__TCS-I	891	PPO	NE	P0000318	150	DENNIS P MORGAN + T&A 8.0 func...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIK	__TCS-I	891	PPO	NE	P0000318	150	DENNIS P MORGAN + T&A 8.x Par...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIK	__TCS-I	891	PPO	NE	P0000318	150	DENNIS P MORGAN + T&A Final Te...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIK	__TCS-I	891	PPO	NE	P0000318	150	DENNIS P MORGAN + T&A update ...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIK	__TCS-I							-2,438	-351	-172	-156	-187	-287	-124	-268	-222	-43	-351	-171	-106
PIK								-17,139	-2,435	-1,298	-1,037	-1,366	-1,969	-901	-1,898	-1,506	-167	-2,434	-1,296	-832
PIL	I_KPP...	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Kahe Mnt Bu-Avail Hours Supply	72,800	5,880	5,600	6,440	5,880	6,160	6,160	5,880	6,440	6,160	5,880	6,160	6,160
PIL	I_KPP...	098	PHE	ND	NPIZZZZZ	107	Kahe Mnt-Bu Nonproductive	-13,115	-1,026	-1,015	-882	-999	-1,142	-1,079	-1,076	-1,106	-1,015	-1,106	-1,350	-1,319
PIL	I_KPP...	212	K01	NI	P0000912	150	K12 Tvl Screen - Install Sta. Maint.	0	0	0	0	0	0	0	0	0	0	0	0	0
PIL	I_KPP...	212	K01	NI	P0000957	150	F. Construction - IL (Instll Insul/ St Blr ...	-350	0	0	0	0	0	0	0	-250	-100	0	0	0
PIL	I_KPP...	212	K01	NI	P0000965	150	K11 Tvl Screen - Install	0	0	0	0	0	0	0	0	0	0	0	0	0
PIL	I_KPP...	212	K01	NR	P0000912	150	K12 Tvl Screen - HECO Removal	0	0	0	0	0	0	0	0	0	0	0	0	0
PIL	I_KPP...	212	K01	NR	P0000957	150	F. Construction - IL (Re Insul/ St Blr C...	-300	0	0	0	0	0	-150	-150	0	0	0	0	0
PIL	I_KPP...	212	K01	NR	P0000965	150	K11 Tvl Screen - Removal	0	0	0	0	0	0	0	0	0	0	0	0	0
PIL	I_KPP...	212	K02	NI	P0000784	150	K22 Tvl Screen - Kahe Maint	0	0	0	0	0	0	0	0	0	0	0	0	0
PIL	I_KPP...	212	K02	NR	P0000784	150	K22 Tvl Screen - Kahe Maint	0	0	0	0	0	0	0	0	0	0	0	0	0
PIL	I_KPP...	212	K03	NI	P0000466	150	Kahe Sta. Maint - Install	0	0	0	0	0	0	0	0	0	0	0	0	0
PIL	I_KPP...	212	K03	NI	P0001002	150	K31 Tvl Screen - Install	0	0	0	0	0	0	0	0	0	0	0	0	0
PIL	I_KPP...	212	K03	NR	P0000808	150	K3 Annun Upgrade - Station Maint - R...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIL	I_KPP...	212	K04	NI	P0000995	150	F. Construction - IL (Instll Insul/ St Blr ...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIL	I_KPP...	212	K04	NR	P0000869	150	5. Station Maintenance - Removal	-217	0	0	0	-217	0	0	0	0	0	0	0	0
PIL	I_KPP...	212	K04	NR	P0000995	150	F. Construction - IL (Re Insul/ St Blr C...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIL	I_KPP...	212	K04	NR	P9454000	150	5. Station Maintenance - Removal	0	0	0	0	0	0	0	0	0	0	0	0	0
PIL	I_KPP...	212	K04	NR	P9541000	150	5. Station Maintenance - Removal	-80	0	0	-80	0	0	0	0	0	0	0	0	0
PIL	I_KPP...	212	K05	NI	P0000651	150	K5 AEH Limit Switch - Install/Tech	0	0	0	0	0	0	0	0	0	0	0	0	0
PIL	I_KPP...	212	K05	NI	P0000750	150	F. Construction - IL (Instll Insul/ St Blr ...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIL	I_KPP...	212	K05	NI	P0000963	150	K51 Tvl Screen - Install	0	0	0	0	0	0	0	0	0	0	0	0	0
PIL	I_KPP...	212	K05	NR	P0000812	150	K5 Annunciator - Remove/Tech	0	0	0	0	0	0	0	0	0	0	0	0	0
PIL	I_KPP...	212	K05	NR	P0000963	150	K51 Tvl Screen - Removal	0	0	0	0	0	0	0	0	0	0	0	0	0
PIL	I_KPP...	212	K06	NI	P0000641	150	K6 AEH Limit Switch - Install/Tech	-140	0	0	-140	0	0	0	0	0	0	0	0	0
PIL	I_KPP...	212	K06	NI	P0000958	150	F. Construction - IL (Instll Insul/ St Blr ...	-600	0	-400	-200	0	0	0	0	0	0	0	0	0
PIL	I_KPP...	212	K06	NI	P0000964	150	K62 Tvl Screen - Install	0	0	0	0	0	0	0	0	0	0	0	0	0
PIL	I_KPP...	212	K06	NR	P0000641	150	K6 AEH Limit Switch - Remove/Tech	-80	0	-80	0	0	0	0	0	0	0	0	0	0
PIL	I_KPP...	212	K06	NR	P0000809	150	K6 Annunciator - Remove/Tech	-150	-40	-40	-70	0	0	0	0	0	0	0	0	0
PIL	I_KPP...	212	K06	NR	P0000958	150	F. Construction - IL (Re Insul/ St Blr C...	-250	-250	0	0	0	0	0	0	0	0	0	0	0
PIL	I_KPP...	212	K06	NR	P0000964	150	K62 Tvl Screen - Removal	0	0	0	0	0	0	0	0	0	0	0	0	0
PIL	I_KPP...	257	KST	NE	NPIZZZZZ	150	Kahe Mnt Bu-Mnt Blr - PV	-2,081	-190	-150	-184	-174	-188	-178	-174	-183	-153	-176	-171	-160
PIL	I_KPP...	258	KST	NE	NPIZZZZZ	150	Kahe Mnt Bu-Mnt Blr -PD	-377	-34	-27	-33	-32	-34	-32	-32	-33	-28	-32	-31	-29
PIL	I_KPP...	259	KST	NE	NPIZZZZZ	150	Kahe Mnt Bu-Mnt Blr-CM	-16,462	-1,499	-1,190	-1,452	-1,377	-1,484	-1,408	-1,377	-1,451	-1,214	-1,396	-1,350	-1,264
PIL	I_KPP...	259	KST	NE	NPIZZZZZ	150	Maint Blr-Corr Kahe BU Add Ee Co...	-17,876	-1,519	-1,343	-1,607	-1,519	-1,519	-1,519	-1,431	-1,607	-1,519	-1,431	-1,431	-1,431
PIL	I_KPP...	260	KST	NE	NPIZZZZZ	150	Kahe Mnt Bu-Mnt Turb Gen-PV	-2,469	-225	-178	-218	-206	-223	-211	-207	-218	-182	-209	-202	-190
PIL	I_KPP...	261	KST	NE	NPIZZZZZ	150	Kahe Mnt Bu-Mnt Turb Gen-PD	-2,469	-225	-178	-218	-206	-223	-211	-207	-218	-182	-209	-202	-190
PIL	I_KPP...	262	KST	NE	NPIZZZZZ	150	Kahe Mnt Bu-Mnt Turb Gen-CM	-9,585	-873	-693	-845	-802	-864	-820	-802	-845	-707	-812	-786	-736
PIL	I_KPP...	263	KST	NE	NPIZZZZZ	150	Kahe Mnt Bu-Mnt Sta Com-PV	-1,901	-173	-137	-168	-159	-171	-163	-159	-168	-140	-161	-156	-146
PIL	I_KPP...	265	KST	NE	NPIZZZZZ	150	Kahe Mnt Bu-Mnt Sta Com-CM	-4,329	-394	-313	-382	-362	-390	-370	-362	-382	-319	-367	-355	-333

PIK -labor

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PIK Act 240 E(4) 2,604 (E) | PIK Act 242 E(5) 52,338 (E) | PIK Act 243 E(6) 52,338 (E)

4/7/2004 » budget manager: 1b Resource Leveling Detail Code Blk(Mo) 1:14PM

_RA	_LbrCla...	_Act	_Loc	_Ind	_Proj	_EE	Line item	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
PIL	I_KPP...	266	KST	NE	NPIZZZZZ	150	Kahe Mnt Bu-Mnt Sta Com-PV	-1,055	-96	-76	-93	-88	-95	-90	-88	-93	-78	-90	-87	-81
PIL	I_KPP...	268	KST	NE	NPIZZZZZ	150	Kahe Mnt Bu-Mnt Sta Com Msc-CM	-3,273	-298	-237	-289	-274	-295	-280	-274	-288	-241	-278	-268	-251
PIL	I_KPP...	700	PHE	NC	NPIZZZZZ	150	Kahe Mnt Bu-Info Sessions/Meetings	-200	0	-50	0	0	-50	0	0	0	-50	0	0	-50
PIL	I_KPP...	789	PHE	NC	NPIZZZZZ	150	Kahe Mnt Bu-Training	-1,727	-33	-250	-186	-135	-186	-50	-172	-163	-186	-310	-33	-23
PIL	I_KPP...	797	PHE	NC	NPIZZZZZ	150	Kahe Mnt BU-Safety Training	-444	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37
PIL	I_KPP...	908	PHE	NI	P9511000	150	6c2 - IL-Construction - PP Tech.	0	0	0	0	0	0	0	0	0	0	0	0	0
PIL	I_KPP...							-6,730	-1,032	-794	-644	-707	-741	-438	-668	-602	9	-734	-299	-80
PIL	I_PPS...	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Kahe Mnt Supv/Facil-Avail Hours - Su...	6,240	504	480	552	504	528	528	504	552	528	504	528	528
PIL	I_PPS...	098	PHE	ND	NPIZZZZZ	107	Kahe Mnt Supv/Facl-Nonproductive H...	-768	-30	-46	-70	-30	-45	-85	-77	-45	-85	-37	-109	-109
PIL	I_PPS...	256	KST	NE	NPIZZZZZ	150	Plan/Sched. Maint. & Construction	-3,733	-380	-290	-313	-325	-347	-288	-297	-337	-264	-337	-279	-276
PIL	I_PPS...	256	KST	NE	NPIZZZZZ	150	Plan/Schedule Kahe Supv Add to Ee...	-2,008	-169	-152	-178	-169	-171	-171	-162	-179	-171	-162	-162	-162
PIL	I_PPS...	700	PHE	NC	NPIZZZZZ	150	Kahe Mnt Supv/Facil-Info Sessions/M	-33	-3	-3	-3	-3	-3	-3	-3	-3	-3	-2	-2	-2
PIL	I_PPS...	789	PHE	NC	NPIZZZZZ	150	Kahe Mnt Supv/Facil-Training	-229	-2	-30	-15	-21	-25	-5	-24	-35	-12	-44	-15	-1
PIL	I_PPS...	797	PHE	NC	NPIZZZZZ	150	Kahe Mnt Supv/Facl-Safety Training	-33	-2	-2	-2	-3	-3	-3	-3	-3	-3	-3	-3	-3
PIL	I_PPS...							-564	-82	-43	-29	-47	-66	-27	-62	-50	-10	-81	-42	-25
PIL								-7,294	-1,114	-837	-673	-754	-807	-465	-730	-652	-1	-815	-341	-105
PIM	__BUOCI	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Bu Clerk-Avail Hrs - Supply	2,080	168	160	184	168	176	176	168	184	176	168	176	176
PIM	__BUOCI	098	PHE	ND	NPIZZZZZ	107	Bu Clerk-Nonproductive Hours	-264	-8	-8	-8	-8	-8	-56	-48	-48	-16	-8	-16	-32
PIM	__BUOCI	777	PHE	NC	NPIZZZZZ	150	Process Payroll	-464	-45	-39	-41	-41	-45	-29	-33	-35	-37	-45	-39	-35
PIM	__BUOCI	797	PHE	NC	NPIZZZZZ	150	Bu Clerk- Safety Training	-30	-2	-2	-3	-3	-3	-3	-2	-2	-3	-3	-2	-2
PIM	__BUOCI	843	PHE	NC	NPIZZZZZ	150	Bu Clerk-Process Invoice/Pmts	-561	-54	-47	-56	-49	-54	-34	-39	-42	-44	-54	-46	-42
PIM	__BUOCI	968	PPM	NE	NPIZZZZZ	150	Provide Word Proc Serv	-769	-74	-65	-71	-68	-74	-47	-54	-58	-61	-75	-64	-58
PIM	__BUOCI							-8	-15	-1	5	-1	-8	7	-8	-1	15	-17	9	7
PIM	__FS-I	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Supt Avail Hours-Supply	2,080	168	160	184	168	176	176	168	184	176	168	176	176
PIM	__FS-I	098	PHE	ND	NPIZZZZZ	107	Supt Nonproductive Hrs	-216	-8	-8	-8	-8	-8	-56	-8	-8	-16	-8	-16	-64
PIM	__FS-I	240	WST	NE	NPIZZZZZ	150	Supt-Devlp&Mnt Policies&Procedures...	-1,310	-128	-96	-106	-108	-128	-86	-117	-122	-106	-117	-111	-85
PIM	__FS-I	701	PHE	NC	NPIZZZZZ	150	Develope & Manage Forecast	-117	-11	-9	-9	-10	-11	-8	-10	-11	-10	-10	-10	-8
PIM	__FS-I	720	PHE	NC	NPIZZZZZ	150	Supt-Improve Bus Process	-568	-55	-41	-53	-46	-55	-37	-50	-52	-46	-50	-47	-36
PIM	__FS-I	765	PHE	NC	NPIZZZZZ	150	Empl Pol Prac	-140	-14	-10	-11	-12	-14	-9	-13	-13	-11	-12	-12	-9
PIM	__FS-I	785	PHE	NC	NPIZZZZZ	150	Provide Employee Develop & Training	-212	-21	-15	-17	-17	-21	-14	-19	-20	-17	-19	-18	-14
PIM	__FS-I	789	PHE	NC	NPIZZZZZ	150	Supt-Training	-120	0	-25	-30	-15	0	-5	-10	-10	0	-20	-5	0
PIM	__FS-I	797	PHE	NC	NPIZZZZZ	150	Supt-Safety Training	-30	-2	-3	-2	-3	-2	-3	-2	-3	-2	-3	-2	-3
PIM	__FS-I							-633	-71	-47	-52	-51	-63	-42	-61	-55	-32	-71	-45	-43
PIM								-641	-86	-48	-47	-52	-71	-35	-69	-56	-17	-88	-36	-36
PIN	I_HPP...	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Hon Mnt Bu- Avail Hours Supply	16,640	1,344	1,280	1,472	1,344	1,408	1,408	1,344	1,472	1,408	1,344	1,408	1,408
PIN	I_HPP...	098	PHE	ND	NPIZZZZZ	107	Hon Mnt Bu-Nonproductive Hrs	-2,823	-234	-212	-164	-219	-234	-219	-227	-234	-212	-234	-352	-282
PIN	I_HPP...	212	H08	NI		150	HPP Maint - construction coord/support	0	0	0	0	0	0	0	0	0	0	0	0	0
PIN	I_HPP...	212	H08	NI	P0000486	150	Install Instruments - Honolulu Station ...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIN	I_HPP...	212	H08	NI	P0000487	150	Install Instruments - Honolulu Station ...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIN	I_HPP...	212	H08	NR	P0000486	150	Remove FWH -Honolulu Station Maint	0	0	0	0	0	0	0	0	0	0	0	0	0
PIN	I_HPP...	212	H08	NR	P0000487	150	Remove FWH -Honolulu Station Maint	0	0	0	0	0	0	0	0	0	0	0	0	0
PIN	I_HPP...	212	H09	NI	P0000959	150	F. Construction - IN (Instll Insul/ St Blr...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIN	I_HPP...	212	H09	NR	P0000959	150	F. Construction - IN (Re Insul/ St Blr ...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIN	I_HPP...	257	HST	NE	NPIZZZZZ	150	Hon Mnt Bu-Mnt Blr -PV	-673	-63	-51	-62	-54	-58	-55	-56	-60	-53	-57	-51	-53
PIN	I_HPP...	259	HST	NE	NPIZZZZZ	150	Hon Mnt Bu-Mnt Blr - CM	-6,052	-563	-463	-554	-486	-522	-499	-505	-536	-473	-515	-457	-479
PIN	I_HPP...	260	HST	NE	NPIZZZZZ	150	Hon Mnt Bu-Mnt Turb Gen-PV	-808	-75	-62	-74	-65	-70	-67	-67	-71	-63	-69	-61	-64
PIN	I_HPP...	261	HST	NE	NPIZZZZZ	150	Hon Mnt Bu-Mnt turb Gen-PD	-251	-23	-19	-23	-20	-22	-21	-21	-22	-20	-21	-19	-20
PIN	I_HPP...	262	HST	NE	NPIZZZZZ	150	Hon Mnt Bu-Mnt Turb Gen-CM	-1,461	-136	-112	-134	-117	-126	-121	-122	-129	-114	-124	-110	-116
PIN	I_HPP...	265	HST	NE	NPIZZZZZ	150	Hon Mnt Bu-Mnt Sta Com-CM	-3,238	-301	-248	-297	-260	-279	-267	-270	-287	-253	-275	-245	-256
PIN	I_HPP...	268	HST	NE	NPIZZZZZ	150	Hon Mnt Bu-Mnt Sta Com Msc-CM	-1,526	-142	-117	-140	-122	-132	-126	-127	-135	-119	-130	-115	-121

PIL Labor

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_RA	_LbrCla...	_Act	_Loc	_Ind	_Proj	_EE	Line item	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05	
PIN	L_HPP...	700	PHE	NC	NPIZZZZZ	150	Hon Mnt Bu-Info Sessions/Meetings	-60	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	
PIN	L_HPP...	777	PHE	NC	NPIZZZZZ	150	Process Payroll - fill out time sheets	-432	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	
PIN	L_HPP...	789	PHE	NC	NPIZZZZZ	150	Hon Mnt Bu-Training	-606	-4	-49	-31	-58	-98	-27	-76	-67	-27	-116	-49	-4	
PIN	L_HPP...	797	PHE	NC	NPIZZZZZ	150	Hon Mnt Bu-Safety Training	-160	-13	-13	-14	-13	-13	-14	-13	-13	-14	-13	-13	-14	
PIN	L_HPP...	908	PHE	NI	P9511000	150	6c1 - IN-Construction - PP Tech.	0	0	0	0	0	0	0	0	0	0	0	0	0	000
PIN	L_HPP...							-1,450	-251	-107	-62	-111	-187	-49	-181	-123	19	-251	-105	-42	PIP Labor 0•G÷
PIN	L_PPS...	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Hon Mnt Supv/Facil-Avail Hrs Supply	2,080	168	160	184	168	176	176	168	184	176	168	176	176	
PIN	L_PPS...	098	PHE	ND	NPIZZZZZ	107	Hon Mnt Supv/Facil-Nonproductive Hrs	-304	-8	-8	-48	-8	-8	-16	-48	-8	-56	-8	-24	-64	
PIN	L_PPS...	240	HST	NE	NPIZZZZZ	150	Dvlp/Schd Policies & Process	-376	-39	-32	-27	-34	-36	-33	-26	-37	-22	-36	-32	-22	000 Σ (I)
PIN	L_PPS...	256	HST	NE	NPIZZZZZ	150	Plan/Schd Mnt/Construction	-1,416	-146	-121	-102	-127	-137	-123	-98	-140	-82	-135	-121	-84	0•G÷
PIN	L_PPS...	701	PHE	NC	NPIZZZZZ	150	Dev. & Mge. Forecast - Honolulu	-24	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	
PIN	L_PPS...	789	PHE	NC	NPIZZZZZ	150	Hon Mnt Supv/Facil-Training	-74	-1	-6	-4	-7	-12	-3	-9	-8	-3	-14	-6	-1	2•459• ÷
PIN	L_PPS...	797	PHE	NC	NPIZZZZZ	150	Hon Mnt Supv/Facil-Training	-20	-2	-1	-1	-2	-1	-2	-2	-2	-2	-2	-2	-1	256• ÷
PIN	L_PPS...	843	PHE	NC	NPIZZZZZ	150	Hon Supv/Facil-Approve Invoice/Pmts	-48	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	171• ÷
PIN	L_PPS...							-182	-34	-14	-4	-16	-24	-7	-21	-17	5	-33	-15	-2	339• ÷
PIN								-1,632	-285	-121	-66	-127	-211	-56	-202	-140	24	-284	-120	-44	100• ÷
PIO	__FS-I	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Supt-Labor Supply	2,080	168	160	184	168	176	176	168	184	176	168	176	176	24• ÷
PIO	__FS-I	098	PHE	ND	NPIZZZZZ	107	Superintendent	-329	-27	-25	-19	-26	-27	-26	-26	-27	-25	-27	-41	-33	1•529• ÷
PIO	__FS-I	240	HST	NE	NPIZZZZZ	150	dev/mnt plcy	-86	-10	-5	-7	-4	-9	-9	-8	-6	-6	-4	-9	-9	3•478• ÷
PIO	__FS-I	240	KST	NE	NPIZZZZZ	150	dev/mnt plcy	-170	-20	-11	-14	-7	-19	-17	-16	-12	-11	-9	-17	-17	3•478• ÷
PIO	__FS-I	240	WST	NE	NPIZZZZZ	150	dev/mnt plcy	-170	-20	-11	-14	-7	-19	-17	-16	-12	-11	-9	-17	-17	256• ÷
PIO	__FS-I	700	PHE	NC	NPIZZZZZ	150	Supt	-28	-3	-2	-2	-1	-3	-3	-3	-2	-2	-1	-3	-3	
PIO	__FS-I	720	PHE	NC	NPIZZZZZ	150	Supt	-495	-59	-31	-41	-22	-55	-50	-45	-34	-33	-25	-50	-50	
PIO	__FS-I	721	PHE	NC	NPIZZZZZ	150	Supt	-57	-7	-4	-5	-2	-6	-6	-5	-4	-3	-3	-6	-6	

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_RA	_LbrCla...	_Act	_Loc	_Ind	_Proj	_EE	Line item	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
PIP	__TCS-I	212	KST	NI	P0000667	150	Production Supervisory Proj Hrs	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	__TCS-I	240	HST	NE	NPIZZZZZ	150	Sr Spvsr - Devel & Maint Policy & Pro...	-171	-17	-11	-14	-13	-16	-15	-16	-14	-11	-14	-15	-15
PIP	__TCS-I	240	KST	NE	NPIZZZZZ	150	Sr Spvsr - Devel & Maint Policy & Pro...	-339	-34	-23	-29	-24	-31	-30	-31	-27	-24	-27	-30	-29
PIP	__TCS-I	240	WST	NE	NPIZZZZZ	150	Sr Spvsr - Devel & Maint Policy & Pro...	-339	-34	-23	-29	-24	-31	-30	-31	-27	-24	-27	-30	-29
PIP	__TCS-I	255	HST	NE	NPIZZZZZ	150	Sr Spvsr - Devel Outge & Proj Plans ...	-100	-10	-7	-9	-7	-9	-9	-9	-8	-7	-8	-9	-8
PIP	TCS-I	255	KST	NE	NPIZZZZZ	150	Sr Spvsr - Devel Outge & Proj Plans ...	-204	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17

_RA	_LbrCla...	_Act	_Loc	_Ind	_Proj	_EE	Line item	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
PIP	I_PPE...	212	K04	NI	P0000781	150	F. Construction - Power Plant Engineer	-40	0	0	0	0	0	-20	-20	0	0	0	0	0
PIP	I_PPE...	212	K04	NI	P0000782	150	F. Construction - Power Plant Engineer	-40	0	0	0	0	0	-20	-20	0	0	0	0	0
PIP	I_PPE...	212	K05	NI	P0000931	150	F. Construction - Power Plant Engineer	-39	-13	-13	-13	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	212	K05	NI	P0000981	150	O&M Engr	-16	0	0	0	-4	-8	-4	0	0	0	0	0	0
PIP	I_PPE...	212	K06	NI	P0000454	150	F. Construction - Power Plant Engineer	-80	-20	-20	-20	-20	0	0	0	0	0	0	0	0
PIP	I_PPE...	212	KST	NI	P0000273	150	Production Supervisory Proj Hrs	-140	0	0	0	-40	-60	-40	0	0	0	0	0	0
PIP	I_PPE...	212	KST	NI	P0000336	150	Production Supervisory Proj Hrs.	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	212	KST	NI	P0000338	150	Production Supervisory Proj Hrs.	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	212	KST	NI	P0000379	150	Maintenance Engineer	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	212	KST	NI	P0000451	150	Production Supervisory Proj Hrs.	-80	0	0	0	-40	-20	-20	0	0	0	0	0	0
PIP	I_PPE...	212	KST	NI	P0000620	150	F. Construction - Power Plant Engineer	-39	0	0	0	-13	-13	-13	0	0	0	0	0	0
PIP	I_PPE...	212	KST	NI	P0000630	150	Production Supervisory Proj Hrs.	-80	0	0	0	0	0	0	0	-40	-40	0	0	0
PIP	I_PPE...	212	KST	NI	P0000909	150	F. Construction - Power Plant Engineer	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	212	KST	NI	P0000910	150	F. Construction - Power Plant Engineer	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	212	KST	NI	P7060000	150	F. Construction - Power Plant Engineer	-228	-19	-19	-19	-19	-19	-19	-19	-19	-19	-19	-19	-19
PIP	I_PPE...	212	KWT	NI	P0001000	150	F. Construction - Power Plant Engineer	-120	0	0	0	0	0	0	-20	-20	-20	-20	-20	-20
PIP	I_PPE...	212	KWW	NE	P0000456	150	F. Construction - Power Plant Engineer	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	212	KWW	NS	P0000458	150	F. Construction - Power Plant Engineer	-204	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17
PIP	I_PPE...	212	W03	NI	P0000605	150	O&M Engineer	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	212	W03	NI	P0000698	150	Production Supervisory Proj Hrs	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	212	W03	NI	P0000982	150	O&M Engr	-16	0	0	0	0	0	0	0	0	-4	-8	-4	0
PIP	I_PPE...	212	W05	NI	P0000983	150	O&M Engr	-16	0	0	0	0	0	0	0	0	-4	-8	-4	0
PIP	I_PPE...	212	W06	NI	P0000225	150	O&M Engineer	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	212	W07	NI	P0000302	150	F. Construction - Power Plant Engineer	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	212	W07	NI	P0000497	150	Production Supervisory Proj Hrs	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	212	W07	NR	P0000497	150	Production Supervisory Proj Hrs	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	212	W08	NI	P0000303	150	F. Construction - Power Plant Engineer	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	212	WST	NI	P0000379	150	Maintenance Engineer	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	212	WST	NI	P0000453	150	Production Supervisory Proj Hrs.	-24	-24	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	212	WST	NI	P0000656	150	Production Supervisory Proj Hrs.	-72	0	0	0	0	0	0	0	0	-24	-24	-24	0
PIP	I_PPE...	212	WST	NI	P0000657	150	Production Supervisory Proj Hrs.	-48	0	0	0	0	-16	-16	-16	0	0	0	0	0
PIP	I_PPE...	212	WST	NI	P0000658	150	Production Supervisory Proj Hrs.	-48	-16	-16	-16	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	212	WST	NI	P0000666	150	Production Supervisory Proj Hrs	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	212	WST	NI	P0000680	150	F. Construction - Power Plant Engineer	-10	0	0	0	0	0	-10	0	0	0	0	0	0
PIP	I_PPE...	212	WST	NI	P0000688	150	F. Construction - Power Plant Engineer	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	212	WST	NI	P0000689	150	Production Supervisory Proj Hrs.	-48	-16	-16	-16	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	212	WST	NI	P0000691	150	Production Supervisory Proj Hrs.	-48	0	-16	-16	-16	0	0	0	0	0	0	0	0
PIP	I_PPE...	212	WST	NI	P0000969	150	Production Supervisory Proj Hrs	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	242	HST	NE	NPIZZZZZ	150	Pwr Plant Engineer-Devel&Maintain P...	(7) -256	-25	-17	-21	-19	-24	-22	-23	-22	-17	-21	-23	-22
PIP	I_PPE...	242	KST	NE	NPIZZZZZ	150	Pwr Plant Engineer-Devel & Maint Pol...	-1,146	-115	-77	-96	-82	-106	-101	-105	-92	-82	-92	-100	-98
PIP	I_PPE...	242	WST	NE	NPIZZZZZ	150	Pwr Plant Engineer-Devel & Maint Pol...	-1,146	-115	-77	-96	-82	-106	-101	-105	-92	-82	-92	-100	-98
PIP	I_PPE...	242	WST	NE	NPIZZZZZ	150	Oper & Monitor Equip - Boiler Add to ...	-4,013	-341	-306	-359	-341	-340	-340	-322	-358	-340	-322	-322	-322
PIP	I_PPE...	256	HST	NE	NPIZZZZZ	150	Pwr Plant Engnr-Maint Stm TurboGen...	(8) -933	(13) -93	-62	-79	-67	-86	-82	-86	-75	-67	-75	-81	-80
PIP	I_PPE...	256	KST	NE	NPIZZZZZ	150	Pwr Plant Engnr-Maint Stm TurboGen...	-4,202	(14) -421	-281	-354	-301	-388	-369	-387	-337	-301	-337	-366	-360
PIP	I_PPE...	256	WST	NE	NPIZZZZZ	150	Pwr Plant Engnr-Maint Stm TurboGen...	-4,202	(15) -421	-281	-354	-301	-388	-369	-387	-337	-301	-337	-366	-360
PIP	I_PPE...	258	HST	NE	NPIZZZZZ	150	Proj Engnr-Maint Blr Plnt & Equip - Pr...	(8) -171	-17	-11	-14	-13	-16	-15	-16	-14	-11	-14	-15	-15
PIP	I_PPE...	258	KST	NE	NPIZZZZZ	150	Proj Engnr-Maint Blr Plnt & Equip - Pr...	(9) -761	-76	-51	-64	-55	-70	-67	-70	-61	-55	-61	-66	-65
PIP	I_PPE...	258	W03	NI	P0000254	150	Production Supervisory Proj Hrs	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	258	WST	NE	NPIZZZZZ	150	Proj Engnr-Maint Blr Plnt & Equip - Pr...	(10) -761	-76	-51	-64	-55	-70	-67	-70	-61	-55	-61	-66	-65
PIP	I_PPE...	262	HST	NE	NPIZZZZZ	150	Pwr Plant Engnr-Maint Stm TurboGen...	-84	(7) -7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7
PIP	I_PPE...	262	KST	NE	NPIZZZZZ	150	Pwr Plant Engnr-Maint Stm TurboGen...	-382	-38	-26	-32	-28	-36	-34	-35	-32	-26	-32	-32	-31
PIP	I_PPE...	262	WST	NE	NPIZZZZZ	150	Pwr Plant Engnr-Maint Stm TurboGen...	-382	-38	-26	-32	-28	-36	-34	-35	-32	-26	-32	-32	-31
PIP	I_PPE...	265	HST	NE	NPIZZZZZ	150	Pwr Plant Engnr-Maint Stn Common ...	-256	-25	-17	-21	-19	-24	-22	-23	-22	-17	-21	-23	-22
PIP	I_PPE...	265	KST	NE	NPIZZZZZ	150	Pwr Plant Engnr-Maint Stn Common ...	-1,146	-115	-77	-96	-82	-106	-101	-105	-92	-82	-92	-100	-98
PIP	I_PPE...	265	WST	NE	NPIZZZZZ	150	Pwr Plant Engnr-Maint Stn Common ...	-1,146	-115	-77	-96	-82	-106	-101	-105	-92	-82	-92	-100	-98
PIP	I_PPE...	600	OAH	NE	P0000571	150	Heco Trainee (IP-BUTC)	0	0	0	0	0	0	0	0	0	0	0	0	0

HST PIP Act. 256 Σ (13) 1,137
KST ✓ ✓ ✓ Σ (14) 4,622
WST ✓ ✓ ✓ Σ (15) 4,622

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_RA	_LbrCla...	_Act	_Loc	_Ind	_Proj	_EE	Line item	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
PIP	I_PPE...	788	PPO	NE	P0000318	150	RONA J KIYABU+Project Controls Po...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	789	PHE	NC	NPIZZZZZ	150	Proj Engrs-Training	-2,162	0	-331	-281	-325	-133	-53	-58	-339	-250	-336	-56	0
PIP	I_PPE...	797	PHE	NC	NPIZZZZZ	150	Proj Engrs-Safety Training	-167	-14	-14	-14	-14	-14	-14	-14	-14	-14	-13	-14	-14
PIP	I_PPE...	891	PPO	NE	P0000318	150	OMAR C MANESS III + Materials Le...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	891	PPO	NE	P0000318	150	ROBERT M Y Q KAHAWAII + Materi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	891	PPO	NE	P0000318	150	RONA J KIYABU + Materials Level 3 ...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	891	PPO	NE	P0000318	150	OMAR C MANESS III + WM function...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	891	PPO	NE	P0000318	150	PAUL PEDRO JR + WM functional t...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	891	PPO	NE	P0000318	150	ROBERT M Y Q KAHAWAII + WM fu...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...	891	PPO	NE	P0000318	150	RONA J KIYABU + WM functional t...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPE...							-4,662	-564	-364	-285	-389	-470	-368	-486	-442	-270	-532	-318	-174
PIP	I_PPP...	*Sup...	*Sup...	*Sup...	NPIZZZZZ	*Sup...	Planning/Project Coord- labor Supply	10,400	840	800	920	840	880	880	840	920	880	840	880	880
PIP	I_PPP...	098	PHE	ND	NPIZZZZZ	107	Plan/Proj Coord - Nonproductive Hrs	-1,589	-127	-124	-99	-120	-134	-127	-130	-134	-123	-134	-170	-167
PIP	I_PPP...	210	HST	NE	NPIZZZZZ	150	Plan/Proj Coord-Plan/Approve Projs- ...	-36	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3
PIP	I_PPP...	210	KST	NE	NPIZZZZZ	150	Plan/Proj Coord- Plan/Approve Projs- ...	-72	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6
PIP	I_PPP...	210	WST	NE	NPIZZZZZ	150	Plan/Proj Coord-Plan/Approve Projs ...	-72	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6
PIP	I_PPP...	212	H08	NI	P0000486	150	PP Planner	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPP...	212	H08	NI	P0000487	150	PP Planner	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPP...	212	H09	NI	P9025000	150	T Field Construction--Power Plant Pla...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPP...	212	H09	NI	P9486000	150	T Field Construction--Power Plant Pla...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPP...	212	K01	NI	P0000465	150	Resource Planner	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPP...	212	K01	NI	P0000678	150	F. Construction - Power Plant Planner	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPP...	212	K01	NI	P0000681	150	F. Construction - Power Plant Planner	-40	0	0	0	-20	0	0	0	0	-20	0	0	0
PIP	I_PPP...	212	K02	NI	P0000646	150	F. Construction - Power Plant Planner	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPP...	212	K02	NI	P0000647	150	F. Construction - Power Plant Planner	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPP...	212	K02	NI	P0000659	150	F. Construction - Power Plant Planner	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPP...	212	K02	NI	P0000678	150	F. Construction - Power Plant Planner	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPP...	212	K03	NI	P0000678	150	F. Construction - Power Plant Planner	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPP...	212	K04	NI	P0000678	150	F. Construction - Power Plant Planner	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPP...	212	K04	NI	P0000781	150	F. Construction - Power Plant Planner	-15	0	0	0	0	-15	0	0	0	0	0	0	0
PIP	I_PPP...	212	K04	NI	P0000782	150	F. Construction - Power Plant Planner	-15	0	0	0	0	-15	0	0	0	0	0	0	0
PIP	I_PPP...	212	K05	NI		150	PP Planner	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPP...	212	K05	NI	P0000469	150	Resource Planner	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPP...	212	K05	NI	P0000678	150	F. Construction - Power Plant Planner	-10	0	0	0	0	0	0	0	0	0	0	-10	0
PIP	I_PPP...	212	K06	NI	P0000678	150	F. Construction - Power Plant Planner	-10	-10	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPP...	212	W03	NI	P0000459	150	PP Planner	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPP...	212	W03	NI	P0000485	150	PP Planner	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPP...	212	W03	NI	P0000679	150	F. Construction - Power Plant Planner	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPP...	212	W04	NI	P0000460	150	PP Planner	-24	0	0	0	-12	-12	0	0	0	0	0	0	0
PIP	I_PPP...	212	W04	NI	P0000679	150	F. Construction - Power Plant Planner	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPP...	212	W05	NI	P0000679	150	F. Construction - Power Plant Planner	-10	0	0	0	0	-10	0	0	0	0	0	0	0
PIP	I_PPP...	212	W06	NI	P0000679	150	F. Construction - Power Plant Planner	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPP...	212	W07	NI	P0000302	150	F. Construction - Power Plant Planner	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPP...	212	W07	NI	P0000462	150	PP Planner - W7 ERV Replacement	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPP...	212	W07	NI	P0000679	150	F. Construction - Power Plant Planner	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPP...	212	W07	NI	P7590000	150	F. Construction - Power Plant Planner	-40	0	0	0	0	0	0	0	-8	-8	-8	-8	-8
PIP	I_PPP...	212	W08	NI	P0000303	150	F. Construction - Power Plant Planner	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPP...	212	W08	NI	P0000679	150	F. Construction - Power Plant Planner	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPP...	212	W08	NI	P7650000	150	W8 Controls Upgd - Planner	-16	0	0	0	0	0	0	0	0	0	0	-8	-8
PIP	I_PPP...	212	WST	NI	P0000680	150	F. Construction - Power Plant Planner	-20	0	0	0	0	0	-20	0	0	0	0	0	0
PIP	I_PPP...	212	WST	NI	P0000688	150	F. Construction - Power Plant Planner	0	0	0	0	0	0	0	0	0	0	0	0	0
PIP	I_PPP...	255	HST	NE	NPIZZZZZ	150	Plan/Proj Coord-Dvlp Out/Proj Plans-...	-168	-14	-14	-14	-14	-14	-14	-14	-14	-14	-14	-14	-14
PIP	I_PPP...	255	HST	NE	NPIZZZZZ	150	Deve Outage Plans Add to Ee Count	-2,008	-169	-152	-178	-169	-171	-171	-162	-179	-171	-162	-162	-162
PIP	I_PPP...	255	KST	NE	NPIZZZZZ	150	Plan/Proj Coord-Dvlp Out/Proj Plans-...	-336	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28
PIP	I_PPP...	255	WST	NE	NPIZZZZZ	150	Plan/Proj Coord-Dvlp Out/Proj Plans-...	-336	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28

KST-PIP Act 255- Ee (11) 540
WST PIP Act 255- Ee (12) 540

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» budget manager: 1b Resource Leveling Detail Code Blk(Mo)

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_RA	_LbrCla...	_Act	_Loc	_Ind	_Proj	_EE	Line item	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
PIP	I_PPP...	256	HST	NE	NPIZZZZZ	150	Plan/Proj Coord-Plan/Schd Mnt&Cons...	13 -132	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11
PIP	I_PPP...	256	KST	NE	NPIZZZZZ	150	Plan/Proj Coord-Plan/Schd Mnt&Cons...	14 -276	-23	-23	-23	-23	-23	-23	-23	-23	-23	-23	-23	-23
PIP	I_PPP...	256	WST	NE	NPIZZZZZ	150	Plan/Proj Coord-Plan/Sch Mnt&Const ...	15 -276	-23	-23	-23	-23	-23	-23	-23	-23	-23	-23	-23	-23
PIP	I_PPP...	258	HST	NE	NPIZZZZZ	150	Pred Maint Spec - Maint Blr Plt Eq-Pr...	8 -1,019	-102	-68	-86	-73	-94	-89	-94	-82	-73	-82	-89	-87
PIP	I_PPP...	258	KST	NE	NPIZZZZZ	150	Pred Maint Spec-Maint Blr Plt Eq-Pre...	9 -2,037	-204	-136	-171	-146	-188	-179	-188	-163	-146	-164	-177	-175
PIP	I_PPP...	258	WST	NE	NPIZZZZZ	150	Pred Maint Spec-Maint Blr Plant Eq-P...	10 -2,037	-204	-136	-171	-146	-188	-179	-188	-163	-146	-164	-177	-175
PIP	I_PPP...	789	PHE	NC	NPIZZZZZ	150	Plan/Proj Coord-training	-863	0	-132	-112	-130	-53	-21	-23	-136	-100	-134	-22	0
PIP	I_PPP...	797	PHE	NC	NPIZZZZZ	150	Plan/Proj Coord-Safety	-72	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6
PIP	I_PPP...							-1,129	-124	-96	-45	-124	-148	-54	-93	-93	-55	-156	-91	-50
PIP								-6,562	-799	-529	-358	-579	-703	-442	-663	-612	-339	-822	-471	-245
PIT	I_TVL...	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Labor Supply Blr.	85,280	6,888	6,560	7,544	6,888	7,216	7,216	6,888	7,544	7,216	6,888	7,216	7,216
PIT	I_TVL...	098	PHE	ND	NPIZZZZZ	107	Travel Blr Non Prod. Time	-13,507	-1,107	-1,014	-761	-1,040	-1,114	-1,047	-1,080	-1,114	-1,013	-1,114	-1,728	-1,375
PIT	I_TVL...	211	K01	NI	P0000610	150	Traveling Boiler	-400	0	0	0	0	0	0	-200	-200	0	0	0	0
PIT	I_TVL...	211	K02	NI	P0000609	150	Traveling Boiler	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	211	K02	NR	P0000788	150	removal	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	211	K03	NR	P0000789	150	removal	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	211	K04	NR	P0000790	150	removal	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	211	K05	NR	P0000791	150	removal	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	211	K06	NR	P0000792	150	removal	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	211	KST	NR	P0000786	150	removal	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	211	KST	NR	P0000943	150	removal	-120	0	-60	-60	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NI	P0000486	150	Install FWH - Boiler Maint Tvl	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NI	P0000486	150	Install Insulation - Travel Maint	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NI	P0000487	150	Install FWH - Boiler Maint Tvl	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NI	P0000487	150	Install Insulation - Travel Maint	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NI	P0000490	150	Boiler Maint - Traveling	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NI	P0000807	150	H8 TSI - Construction - Boiler Crew	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NI	P0000875	150	Boiler--H8 S/B Controls	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NI	P0000935	150	Turbine Drain Program - TVL Boiler	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NR	P0000486	150	Remove FWH - Boiler Maint Tvl	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NR	P0000487	150	Remove FWH - Boiler Maint Tvl	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NR	P0000490	150	Boiler Maint Traveling - Removal	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NI	P0000957	150	Connection work	0	0	0	0	0	0	0	0	0	0	0	0	0

4/7/2004 » budget manager: 1b Resource Leveling Detail Code Blk(Mo) 1:14PM

_RA	_LbrCla...	_Act	_Loc	_Ind	_Proj	_EE	Line item	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
PIT	I_TVL...	212	W09	NI	P0000601	150	W9 Gen Relay - Boiler	-40	-40	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W10	NI	P0000601	150	W10 Gen Relay - Boiler	-40	0	0	-40	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	WST	NI		150	Labor - Boiler	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	WST	NI	P0000677	150	4. Boiler Maintenance	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	WWW	NI	P0000086	150	Construction - Boiler Crew	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	WWW	NI	P0000956	150	Traveling Boiler	-300	0	0	0	0	-300	0	0	0	0	0	0	0
PIT	I_TVL...	212	WWW	NR	P0000956	150	Traveling Boiler - Removal work	-40	0	0	0	-40	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	H08	NE	P0000523	150	H8 BLR PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	H08	NE	P0000523	150	Upd Blr. Lab. 6-26-03 Hrs=5440	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	H09	NE	P0000848	150	H9 OH 2005	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	K01	NE	P0000846	150	K1 OH 2005 (13)	-7,780	0	0	0	0	0	0	-1,160	-4,336	-2,284	0	0	0
PIT	I_TVL...	257	K02	NE	P0000650	150	K2 OH BLR	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	K03	NE	P0000649	150	K3 OH BLR	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	K04	NE	P0000655	150	K4 OH BLR	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	K04	NE	P0000655	150	Upd Blr. 6-26-03 Hrs. 5168 each No	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	K04	NE	P0000845	150	K4 OH 2005 (21)	-15,720	0	0	-928	-3,872	-4,104	-4,104	-2,712	0	0	0	0	0
PIT	I_TVL...	257	K05	NE	P0000519	150	K05 BLR PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	K06	NE	P0000250	150	K6 BLR	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	K06	NE	P0000844	150	K6 OH 2005 (19)	-10,912	-3,872	-3,640	-3,400	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	W03	NE	P0000249	150	W3 BLR	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	W04	NE	P0000847	150	W4 OH 2005 (20)	-12,100	0	0	0	0	0	0	0	0	-1,580	-3,368	-3,576	-3,576
PIT	I_TVL...	257	W05	NE	P0000252	150	W5 BLR	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	W06	NE	P0000654	150	W6 OH BLR	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	W07	NE	P0000522	150	W7 BLR PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	W08	NE	P0000521	150	W08 BLR PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	259	W03	NI	P0000459	150	Welders - fit new valve	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	259	W03	NI	P0000459	150	Welders - root/cover	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	259	W03	NI	P0000459	150	Welders - heat treat	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	259	W03	NI	P0000459	150	Insulators	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	259	W03	NR	P0000459	150	Welders - Remove old ERV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	259	W04	NI	P0000460	150	Welders - root/cover	-60	0	0	0	-30	-30	0	0	0	0	0	0	0
PIT	I_TVL...	259	W04	NI	P0000460	150	Welders - heat treat	-80	0	0	0	-40	-40	0	0	0	0	0	0	0
PIT	I_TVL...	259	W04	NI	P0000460	150	Welders - fit new valve	-33	0	0	0	0	0	0	-3	-30	0	0	0	0

PIT - Non Proj. Labor

000 Σ (1)

0.6+

3,480. +
2,765. +
5,535. +
7,260. +
1,740. +

005

20,780.6+

_RA	_LbrCla...	_Act	_Loc	_Ind	_Proj	_EE	Line item	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
PIT	I_TVL...	260	W06	NE	P0000654	150	W6 OH BLR	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	W07	NE	P0000522	150	W7 TURB PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	W08	NE	P0000521	150	W08 TURB PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	WST	NE	NPIZZZZZ	150	mnt turb/pv Cond. Clnr & Ldr	-7,260	-605	-605	-605	-605	-605	-605	-605	-605	-605	-605	-605	-605
PIT	I_TVL...	700	PHE	NC	NPIZZZZZ	150	Dev. & Admin Bus Plans	-320	0	-80	0	0	0	-80	0	0	-80	0	0	-80
PIT	I_TVL...	789	PHE	NC	NPIZZZZZ	150	attnd trng	-2,609	-17	-327	-189	-341	-299	-141	-192	-270	-214	-439	-163	-17
PIT	I_TVL...	797	PHE	NC	NPIZZZZZ	150	sfty trng	-708	-59	-59	-59	-59	-59	-59	-59	-59	-59	-59	-59	-59
PIT	I_TVL...							-16,952	-1,305	-1,442	-1,352	-1,271	-1,273	-1,935	-1,987	-1,073	-588	-1,066	-1,945	-1,715
PIT	I_TVL...	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Labor Supply	20,800	1,680	1,600	1,840	1,680	1,760	1,760	1,680	1,840	1,760	1,680	1,760	1,760
PIT	I_TVL...	098	PHE	ND	NPIZZZZZ	107	IT Tech's Non Prod. Time	-3,237	-260	-245	-188	-245	-267	-252	-259	-267	-244	-267	-411	-332
PIT	I_TVL...	211	K01	NI	P0000610	150	Traveling Elec	-20	0	0	0	0	0	0	-20	0	0	0	0	0
PIT	I_TVL...	211	K02	NI	P0000609	150	Traveling Elec	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NI	P0000490	150	Electrical Maint - Traveling	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NI	P0000807	150	H8 TSI - Construction - Electricians	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NI	P0000814	150	4. Electrician	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NI	P0000831	150	H8 Op Console - Electrician - Constru...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NI	P0000875	150	Electrical--H8 S/B Controls	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NI	P0000895	150	H8 Main Xfmr - Install/Travel Elect	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NI	P0000935	150	Turbine Drain Program - TVL Electrical	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NR	P0000807	150	H8 TSI - Removal - Electrician	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NR	P0000814	150	5. Electrician-Removal	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NR	P0000831	150	H8 Op Console - Electrician - Removal	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P0000217	150	IT - Traveling Electricians	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P0000772	150	H92 Tvl Scr - HECO Electrician	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P0000815	150	4. Electrician	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P0000870	150	H9 Field Rewind - Install/Travel Elect	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P0000876	150	Electrical--H9 S/B Controls	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P0000935	150	Turbine Drain Program - TVL Electrical	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P9025000	150	T Field Construction--Electricians	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P9025000	150	T Training & Start-Up--Electricians	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P9107000	150	F. Construction - Electricians	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P9486000	150	T Field Construction--Electricians	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P9486000	150	T Training & Start-Up--Electricians	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NR	P0000815	150	5. Electrician-Removal	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NR	P0000870	150	H9 Field Rewind - Remove/Travel Elect	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	HST	NI		150	Labor - Electrician	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	HST	NI	P0000858	150	F. Construction - Electricians	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	HST	NI	P0000859	150	F. Construction - Electricians	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	HST	NI	P0000968	150	Traveling Elec - HPP (Process Param...	-36	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3
PIT	I_TVL...	212	HST	NI	P0000980	150	F. Construction - Electrician	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K01	NI	P0000465	150	Elec Maint.- Traveling	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K01	NI	P0000511	150	F. Construct - Elect	-100	0	0	0	0	0	0	-20	-80	0	0	0	0
PIT	I_TVL...	212	K01	NI	P0000601	150	K1 Gen Relay - Electricans	-80	0	0	0	0	0	0	0	-80	0	0	0	0
PIT	I_TVL...	212	K01	NI	P0000800	150	K1 Op Console - Electrician - Constru...	-60	0	0	0	0	0	0	-20	-20	-20	0	0	0
PIT	I_TVL...	212	K01	NI	P0000820	150	4. Electrician	-48	0	0	0	0	0	0	-16	-16	-16	0	0	0
PIT	I_TVL...	212	K01	NI	P0000830	150	4. Electrician	-600	0	0	0	0	0	0	-200	-200	-200	0	0	0
PIT	I_TVL...	212	K01	NI	P0000861	150	F. Construction - Electricians	-200	0	0	0	0	0	-40	-120	-40	0	0	0	0
PIT	I_TVL...	212	K01	NI	P0000871	150	Electrical--K1 S/B Controls	-520	0	0	0	0	-120	-120	-160	-80	-40	0	0	0
PIT	I_TVL...	212	K01	NI	P0000934	150	Turbine Drain Program - TVL Electrical	-80	0	0	0	0	0	0	-80	0	0	0	0	0
PIT	I_TVL...	212	K01	NI	P0000953	150	Traveling Elec	-16	0	0	0	0	0	0	0	-16	0	0	0	0
PIT	I_TVL...	212	K01	NI	P0001009	150	K1 Batt Bank - Install/Travel Elect	-120	0	0	0	0	0	0	0	-40	-80	0	0	0
PIT	I_TVL...	212	K01	NR	P0000800	150	K1 Op Console - Electrician - Removal	-60	0	0	0	0	0	0	-60	0	0	0	0	0
PIT	I_TVL...	212	K01	NR	P0000820	150	5. Electrician-Removal	-200	0	0	0	0	0	-200	0	0	0	0	0	0
PIT	I_TVL...	212	K01	NR	P0000830	150	5. Electrician-Removal	-200	0	0	0	0	0	-200	0	0	0	0	0	0
PIT	I_TVL...	212	K01	NR	P0001009	150	K1 Batt Bank - Remove/Travel Elect	-80	0	0	0	0	0	0	0	-80	0	0	0	0

257 - W04 - 150 £ 25 16,100
260 - " - 150 £ 26 12,600

_RA	_LbrCla...	_Act	_Loc	_Ind	_Proj	_EE	Line item	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
PIT	I_TVL...	258	W08	NR	P0000955	150	Traveling Machinist - Removal work	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	259	W03	NI	P0000459	150	Machinist - end preps	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	259	W04	NI	P0000460	150	Machinist - End preps	-50	0	0	0	-50	0	0	0	0	0	0	0	0
PIT	I_TVL...	259	W07	NI	P0000462	150	Machinist - End preps - W7 ERV Repl...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	H08	NE	P0000523	150	H8 TURB PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	H09	NE	P0000848	150	H9 OH 2005	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	K01	NE	P0000846	150	K1 OH 2005 24	-2,880	0	0	0	0	0	0	-360	-1,656	-864	0	0	0
PIT	I_TVL...	260	K02	NE	P0000650	150	K02 OH MACH	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	K03	NE	P0000649	150	K03 OH MACH	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	K04	NE	P0000655	150	K4 OH MACH	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	K04	NE	P0000845	150	K4 OH 2005 22	-6,120	0	0	-288	-1,512	-1,584	-1,584	-1,152	0	0	0	0	0
PIT	I_TVL...	260	K05	NE	P0000519	150	K05 TURB PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	K06	NE	P0000250	150	K6 TURB	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	K06	NE	P0000844	150	K6 OH 2005 20	-4,320	-1,512	-1,440	-1,368	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	K06	NE	P0000844	150	K6 added hrs to hit res. level	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	W03	NE	P0000249	150	W3 TURB	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	W04	NE	P0000847	150	W4 OH 2005 26	-5,400	0	0	0	0	0	0	0	0	-720	-1,512	-1,584	-1,584
PIT	I_TVL...	260	W05	NE	P0000252	150	W5 TURB	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	W06	NE	P0000654	150	W06 OH MACH	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	W07	NE	P0000522	150	W7 TURB PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	W08	NE	P0000521	150	W08 TURB PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	268	WST	NE	NPIZZZZZ	150	Mobile Equipment Maintenance 3	-1,740	-145	-145	-145	-145	-145	-145	-145	-145	-145	-145	-145	-145
PIT	I_TVL...	275	PCG	NE	NPIZZZZZ	150	Recy 10 31 03 CHP TVLMCH 2004 a...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	700	PHE	NC	NPIZZZZZ	150	Dev. & Adm. Bus Plan Info Session	-88	0	-22	0	0	0	-22	0	0	-22	0	0	-22
PIT	I_TVL...	789	PHE	NC	NPIZZZZZ	150	attd tng	-719	-5	-90	-52	-94	-82	-39	-53	-74	-59	-121	-45	-5
PIT	I_TVL...	797	PHE	NC	NPIZZZZZ	150	sfty trng	-192	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16
PIT	I_TVL...							-5,095	-193	-288	-374	-553	-789	-629	-238	-277	-288	-388	-716	-362
PIT	I_TVL...	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Labor Supply Supvs	8,320	672	640	736	672	704	704	672	736	704	672	704	704
PIT	I_TVL...	098	PHE	ND	NPIZZZZZ	107	Holiday '00/ IT Super Non Prod Time '...	-1,325	-109	-99	-74	-103	-109	-103	-106	-109	-99	-109	-170	-135
PIT	I_TVL...	212	H08	NI	P0000814	150	4. Supervisor	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P0000815	150	4. Supervisor	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P0000959	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P9025000	150	T Field Construction--Travel Maint Su...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P9107000	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P9486000	150	T Field Construction--Travel Maint Su...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P9486000	150	T Training & Start-Up--Travel Maint S...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	HST	NI	P0000858	150	F. Construction - Travel Maint Supervi...	-52	0	0	0	0	0	0	0	0	-8	-24	-20	0
PIT	I_TVL...	212	HST	NI	P0000859	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K01	NI	P0000678	150	F. Construction - Travel Maint Supervi...	-5	0	0	-5	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K01	NI	P0000820	150	4. Supervisor	-24	0	0	0	0	0	0	-8	-8	-8	0	0	0
PIT	I_TVL...	212	K01	NI	P0000830	150	4. Supervisor	-24	0	0	0	0	0	0	-8	-8	-8	0	0	0
PIT	I_TVL...	212	K01	NI	P0000861	150	F. Construction - Travel Maint Supervi...	-70	0	0	0	0	0	-10	-20	-20	-20	0	0	0
PIT	I_TVL...	212	K01	NI	P0000957	150	F. Construction - Travel Maint Supervi...	-80	0	0	0	0	0	-20	-20	-20	-20	0	0	0
PIT	I_TVL...	212	K02	NI	P0000646	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K02	NI	P0000647	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K02	NI	P0000659	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K02	NI	P0000676	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K02	NI	P0000678	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K02	NI	P0000860	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K03	NI	P0000678	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K03	NI	P0000808	150	K3 Annun Upgrade - Tvl Maint Superv...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K03	NI	P9539000	150	G. Supervisor - Construction	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K04	NI	P0000678	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K04	NI	P0000781	150	F. Construction - Travel Maint Supervi...	-45	0	0	0	0	-15	-15	-15	0	0	0	0	0
PIT	I_TVL...	212	K04	NI	P0000782	150	F. Construction - Travel22 Maint Supe...	-45	0	0	0	0	-15	-15	-15	0	0	0	0	0

_RA	_LbrCla...	_Act	_Loc	_Ind	_Proj	_EE	Line item	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
PIW	__BUOCI	891	PPO	NE	P0000318	150	LORI L IGE + T&A update procedures	0	0	0	0	0	0	0	0	0	0	0	0	0
PIW	__BUOCI							-270	-39	-20	-14	-23	-31	-14	-30	-23	-5	-39	-19	-13
PIW	__BUTCI	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Labor Supply Oper.	99,840	8,064	7,680	8,832	8,064	8,448	8,448	8,064	8,832	8,448	8,064	8,448	8,448
PIW	__BUTCI	098	PHE	ND	NPIZZZZZ	107	Operators	-15,810	-1,313	-1,187	-929	-1,229	-1,313	-1,229	-1,271	-1,313	-1,187	-1,313	-1,955	-1,571
PIW	__BUTCI	242	WST	NE	NPIZZZZZ	150	blr rltd (16)	-48,280	-4,454	-3,749	-4,241	-3,720	-4,181	-4,016	-4,258	-4,270	-3,813	-4,049	-3,664	-3,865
PIW	__BUTCI	243	WST	NE	NPIZZZZZ	150	turb rltd (17)	-48,280	-4,454	-3,749	-4,241	-3,720	-4,181	-4,016	-4,258	-4,270	-3,813	-4,049	-3,664	-3,865
PIW	__BUTCI	600	OAH	NE	P0000571	150	Heco Trainee (IW-BUTC)	0	0	0	0	0	0	0	0	0	0	0	0	0
PIW	__BUTCI	789	PHE	NC	NPIZZZZZ	150	att tng	-6,757	-306	-455	-670	-989	-770	-335	-306	-592	-348	-1,034	-646	-306
PIW	__BUTCI	797	PHE	NC	NPIZZZZZ	150	sfty tng	-580	0	-83	-62	0	-83	-62	0	-83	-62	-83	-62	0
PIW	__BUTCI							-19,867	-2,463	-1,543	-1,311	-1,594	-2,080	-1,210	-2,029	-1,696	-775	-2,464	-1,543	-1,159
PIW	__TCS-I	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Sr. Super + Shift Supervisor Labor Su...	16,640	1,344	1,280	1,472	1,344	1,408	1,408	1,344	1,472	1,408	1,344	1,408	1,408
PIW	__TCS-I	098	PHE	ND	NPIZZZZZ	107	1 Sr Supv + 7 Supv	-2,635	-219	-198	-155	-205	-219	-205	-212	-219	-198	-219	-326	-260
PIW	__TCS-I	240	WST	NE	NPIZZZZZ	150	dev/mnt plcy	-1,708	-158	-132	-151	-132	-149	-141	-150	-152	-134	-144	-129	-136
PIW	__TCS-I	242	WST	NE	NPIZZZZZ	150	1 Sr Supv + 7 supv (16)	-6,347	-591	-487	-563	-486	-555	-526	-562	-567	-495	-537	-476	-502
PIW	__TCS-I	243	WST	NE	NPIZZZZZ	150	1 Sr Supv + 7 Supv (17)	-6,347	-591	-487	-563	-486	-555	-526	-562	-567	-495	-537	-476	-502
PIW	__TCS-I	256	WST	NE	NPIZZZZZ	150	1 Sr Supv + 7 Supv	-1,708	-158	-132	-151	-132	-149	-141	-150	-152	-134	-144	-129	-136
PIW	__TCS-I	787	PPO	NE	P0000128	150	TRNG: IW-TCS-I labor-Dev trng-1CTE	0	0	0	0	0	0	0	0	0	0	0	0	0
PIW	__TCS-I	787	PPO	NE	P0000128	150	TRNG: IW-TCS-I labor-Dev trng-1CT...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIW	__TCS-I	788	PPO	NE	P0000128	150	TRNG: IW-TCS-I labor-Conduct trng-...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIW	__TCS-I	788	PPO	NE	P0000128	150	TRNG: IW-TCS-I labor-Conduct trng-...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIW	__TCS-I	789	PHE	NC	NPIZZZZZ	150	att tng	-1,127	-51	-76	-112	-165	-128	-56	-51	-99	-58	-172	-108	-51
PIW	__TCS-I	797	PHE	NC	NPIZZZZZ	150	sfty tng	-96	0	-14	-10	0	-14	-10	0	-14	-10	-14	-10	0
PIW	__TCS-I	891	PPO	NE	P0000318	150	MARSHALL G COSTELLO+WM funct...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIW	__TCS-I							-3,328	-424	-246	-233	-262	-361	-197	-343	-298	-116	-423	-246	-179
PIW								-23,465	-2,926	-1,809	-1,558	-1,879	-2,472	-1,421	-2,402	-2,017	-896	-2,926	-1,808	-1,351
PIX	I_PPS...	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Mnt Spvr/Fac-Avail Hours Supply	6,240	504	480	552	504	528	528	504	552	528	504	528	528
PIX	I_PPS...	098	PHE	ND	NPIZZZZZ	107	Wai Supr/Proc Nonproductive Hrs	-768	-30	-46	-70	-30	-45	-125	-37	-45	-85	-37	-69	-149
PIX	I_PPS...	256	WST	NE	NPIZZZZZ	150	Plan/Sched. Maint. & Con (4)	-3,722	-379	-284	-308	-322	-340	-240	-353	-350	-251	-348	-321	-226
PIX	I_PPS...	256	WST	NE	NPIZZZZZ	150	Plan/Sched Supv Add to Ee Count	-2,008	-169	-152	-178	-169	-171	-171	-162	-179	-171	-162	-162	-162
PIX	I_PPS...	700	PHE	NC	NPIZZZZZ	150	Wai Supv/Proc-Info Sessions/Meetings	-64	-4	-4	-8	-4	-4	-8	-4	-4	-8	-4	-4	-8
PIX	I_PPS...	789	PHE	NC	NPIZZZZZ	150	Wai Supv/Proc-Training	-206	-1	-34	-15	-23	-31	-4	-9	-21	-20	-33	-15	0
PIX	I_PPS...	797	PHE	NC	NPIZZZZZ	150	Wai Supv/Proc-Safety Training	-36	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3
PIX	I_PPS...	891	PPO	NE	P0000318	150	ROBERT P MEYER + Materials Lev...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIX	I_PPS...							-564	-82	-43	-30	-47	-66	-23	-64	-50	-10	-83	-46	-20
PIX	I_WPP...	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Wai Mnt Bu-Avail Hours Supply	70,720	5,712	5,440	6,256	5,712	5,984	5,984	5,712	6,256	5,984	5,712	5,984	5,984
PIX	I_WPP...	098	PHE	ND	NPIZZZZZ	107	Wai Bu Maint-Nonproductive Hours	-11,226	-861	-863	-710	-814	-933	-886	-910	-963	-916	-993	-1,219	-1,158
PIX	I_WPP...	212	W03	NI	P0000485	150	Install Instruments - Waiau Station Ma...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIX	I_WPP...	212	W03	NI	P0000797	150	W3-4 Svc Air - Installation	-1,400	0	0	0	0	-400	-500	-500	0	0	0	0	0
PIX	I_WPP...	212	W03	NI	P0000999	150	Waiau Maint - construction coord/sup...	-40	0	0	0	0	0	0	-20	-20	0	0	0	0
PIX	I_WPP...	212	W03	NR	P0000797	150	W3-4 Svc Air - REMOVAL	-280	0	0	0	0	-100	-180	0	0	0	0	0	0
PIX	I_WPP...	212	W04	NI	P0000489	150	F. Install Instruments - Waiau Station ...	-250	0	0	0	0	0	0	0	0	0	-100	-150	0
PIX	I_WPP...	212	W05	NI	P0000741	150	Waiau Station Maint	0	0	0	0	0	0	0	0	0	0	0	0	0
PIX	I_WPP...	212	W05	NI	P0000970	150	W5 Polisher - Station Maint welder	0	0	0	0	0	0	0	0	0	0	0	0	0
PIX	I_WPP...	212	W05	NI	P0000970	150	W5 Polisher - Station Maint tech	0	0	0	0	0	0	0	0	0	0	0	0	0
PIX	I_WPP...	212	W06	NI	P0000798	150	W6 Svc Air Compr - Installation	-100	-100	0	0	0	0	0	0	0	0	0	0	0
PIX	I_WPP...	212	W06	NR	P0000675	150	Removal	0	0	0	0	0	0	0	0	0	0	0	0	0
PIX	I_WPP...	212	W06	NR	P0000798	150	W6 Svc Air Compr - REMOVAL	0	0	0	0	0	0	0	0	0	0	0	0	0
PIX	I_WPP...	212	W07	NI	P0000233	150	W7&8 Svc Air - Waiau Station Maint	0	0	0	0	0	0	0	0	0	0	0	0	0
PIX	I_WPP...	212	W07	NI	P0000634	150	W7 Blr Wash Sump Pump - Waiau M...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIX	I_WPP...	212	WST	NI	P0000661	150	Elec Maint.-Station	0	0	0	0	0	0	0	0	0	0	0	0	0
PIX	I_WPP...	212	WST	NR	P0000661	150	Elec Maint.-Station	0	0	0	0	0	0	0	0	0	0	0	0	0

Same as 2/26/04 run

✓ ✓ 2/13/04 mark-up

PIW - Labor

000 E(K) 0.6+

54,627. +
54,627. +

002

109,254. +

Add 5 Operators 14,395. + See Attached

003

123,649.00+

PIW 242 - WST - E(16) 54,627 (K) Adj. to add 5 Operators
PIW 243 WST E(17) 54,627] @ Waiau. See Attached

266 WST - E(4) 5,130 (L)

CA-IR-1
DOCKET NO. 04-0113
HECO T-6
ATTACHMENT 3A
PAGE 16 OF 17

05 Budget Recycle
5/04

de Block ODUCTION	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TTL	Comments
J 270 HST NE NPIZZZZ 501			80,000										80,000	Hon Pigging: Add $80K per CHiga via NYuen based on Geometry Pig Run.
1 795 PHE NE NPIZZZZZ 201	4,833	4,833	4,833	4,833	4,833	4,833	4,833	4,833	4,833	4,833	4,833	4,833	57,996	Safety Shoes/Coveralls: Add $58K per RHarris for Rate Case. 99Act=$47,783; 00Act=$63,325; 01Act=$69,036; 02Act=$54,821; 03 Act=$59,878
I 258 H09 NE NPIZZZZZ 201							200,000	200,000					✓ 400,000	H9 BlrChemCln: Add $400K Kmark.
I 242 HST NE NPIZZZ 150)_BUTCI													-111,000	Oper Staffing: Delete 1 Oper IH. -$111K
/ 242 HST NE NPIZZZ 150)_BUTCI													623,000	Oper Staffing: Add 5 Oper IW. $623K
272 W09 NE P0000937 201	2,500	2,500											5,000	W9 Overhaul: Add $5K for Gas Turbine Matls. Sand Blast Grit. RKiyabu. From $5K to $10K.
272 W09 NE P0000937 501			30,000	30,000									60,000	W9 Overhaul: Add $60K for Gas Turbine O/S. Weld Rprs From $30K to $60K. Crane Rental from $20K to $50K. RKiyabu.
274 W09 NE P0000937 501			5,000	5,000									10,000	W9 Overhaul: Add $10K for Gas Turbine O/S. Welders. RKiyabu. From $10K to $20K.
273 W09 NE P0000937 501			12,500	12,500									25,000	W9 Overhaul: Add $25K for Gas Turbine O/S. Generator Testing. RKiyabu. From $0 to $25K.
272 W10 NE P0000937 201	2,500	2,500											5,000	W10 Overhaul: Add $5K for Gas Turbine Matls. Sand Blast Grit. RKiyabu. From $5K to $10K.
272 W10 NE P0000937 501			30,000	30,000									60,000	W10 Overhaul: Add $60K for Gas Turbine O/S. Weld Rprs From $30K to $60K. Crane Rental from $20K to $50K. RKiyabu.
274 W10 NE P0000937 501			5,000	5,000									10,000	W10 Overhaul: Add $10K for Gas Turbine O/S. Welders. RKiyabu. From $10K to $20K.
273 W10 NE P0000937 501			12,500	12,500									25,000	W10 Overhaul: Add $25K for Gas Turbine O/S. Generator Testing. RKiyabu. From $0 to $25K.
257 K01 NE P0000846 201								-5,000					-5,000	K1 Overhaul: Delete $5K. Boiler PM. DCS BattRAM. From $5K to $0
257 K01 NE P0000846 201								10,000					10,000	K1 OH: Add $10K. Boiler PM. DCS PwrSupMod/DCS cabinet Fans. From $20K to $30K.
258 K01 NE P0000846 501								-14,000					-14,000	K1 OH: Delete $14K. Boiler PDM. FWH ECT Contractor. From $20K to $6K.
259 K04 NE P0000845 201				12,000									12,000	K4 OH: Add $12K. Boiler CM. ERV Stop Valve Rpr. From $0 to $12K.
261 K04 NE P0000845 201				30,000									30,000	K4 OH: Add $30K. Turb PDM. Gen Stator Wedges. From $0 to $30K.
261 K04 NE P0000845 501													0	K4 OH: Add $80K. Turb PDM. Gen Field Specialist support. From $0 to $80K.
259 K06 NE P0000844 201		3,000											3,000	K06 OH: Add $3K. Boiler CM. APH Basket Repl. From $2K to $5K.

4B $285,000, 8hoA $205,000

To J. Lee 12/21/04

→ PIW Labor

_RA	_LbrCla...	_Act	_Loc	_Ind	_Proj	_EE	Line item	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
PIX	I_WPP...	257	WST	NE	NPIZZZZZ	150	Wai Mnt Bu-Mnt Blr - Pv	-5,355	-495	-374	-478	-414	-443	-442	-458	-483	-424	-486	-442	-416
PIX	I_WPP...	258	WST	NE	NPIZZZZZ	150	Wai Mnt Bu-Mnt Blr-Pd	-398	-37	-28	-35	-31	-33	-33	-34	-36	-31	-36	-33	-31
PIX	I_WPP...	259	WST	NE	NPIZZZZZ	150	Wai Mnt Bu-Mnt Blr-Cm	-14,080	-1,301	-984	-1,256	-1,089	-1,165	-1,163	-1,204	-1,270	-1,114	-1,278	-1,162	-1,094
PIX	I_WPP...	259	WST	NE	NPIZZZZZ	150	Maint Blr.Corr. Wai BU Add to Ee Co...	-14,864	-1,265	-1,107	-1,344	-1,265	-1,265	-1,265	-1,186	-1,344	-1,265	-1,186	-1,186	-1,186
PIX	I_WPP...	260	WST	NE	NPIZZZZZ	150	Wai Mnt Bu-Mnt Turb Gen-Pv	-3,244	-300	-227	-289	-251	-268	-268	-277	-293	-257	-294	-268	-252
PIX	I_WPP...	261	WST	NE	NPIZZZZZ	150	Wai Mnt Bu-Mnt Turb Gen-Pd	-705	-65	-49	-63	-55	-58	-58	-60	-64	-56	-64	-58	-55
PIX	I_WPP...	262	WST	NE	NPIZZZZZ	150	Wai Mnt Bu-Mnt turb Gen-Cm	-10,153	-938	-709	-906	-785	-840	-839	-868	-916	-803	-922	-838	-789
PIX	I_WPP...	263	WST	NE	NPIZZZZZ	150	Wai Mnt Bu-Mnt Sta Com-Pv	-2,534	-234	-177	-226	-196	-210	-209	-217	-229	-200	-230	-209	-197
PIX	I_WPP...	265	WST	NE	NPIZZZZZ	150	Wai Mnt Bu-Mnt Sta Com-Cm	-6,589	-609	-460	-588	-510	-545	-544	-564	-594	-521	-598	-544	-512
PIX	I_WPP...	266	WST	NE	NPIZZZZZ	150	Wai Mnt Bu-Mnt Sta Com Msc-Pv	-203	-19	-14	-18	-16	-17	-17	-17	-18	-16	-18	-17	-16
PIX	I_WPP...	268	WST	NE	NPIZZZZZ	150	Wai Mnt Bu-Mnt Sta Com Msc-Cm	-811	-75	-57	-72	-63	-67	-67	-69	-73	-64	-74	-67	-63
PIX	I_WPP...	317	OAH	NI		150	7f1 - Construction - Power Plant - IX H...	-192	-12	-40	-40	-40	-40	-20	0	0	0	0	0	0
PIX	I_WPP...	700	PHE	NC	NPIZZZZZ	150	Wai Mnt Bu-Info Sessions/Meetings	-192	0	-48	0	0	-48	0	0	0	-48	0	0	-48
PIX	I_WPP...	777	PHE	NC	NPIZZZZZ	150	Process Payroll	-1,476	-123	-123	-123	-123	-123	-123	-123	-123	-123	-123	-123	-123
PIX	I_WPP...	789	PHE	NC	NPIZZZZZ	150	Wai Mnt Bu-Training	-2,575	-14	-376	-180	-287	-389	-56	-121	-279	-260	-423	-185	-5
PIX	I_WPP...	797	PHE	NC	NPIZZZZZ	150	Wai Maint Bu-Safety Training	-444	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37
PIX	I_WPP...	908	PHE	NI	P9511000	150	6c3 - IX-Construction - PP Tech.	-144	-44	-100	0	0	0	0	0	0	0	0	0	0
PIX	I_WPP...							-6,535	-817	-333	-109	-264	-997	-723	-953	-486	-151	-1,150	-554	2
PIX								-7,099	-899	-376	-139	-311	-1,063	-746	-1,017	-536	-161	-1,233	-600	-18
								-100,986	-11,354	-7,530	-6,332	-8,351	-11,503	-8,460	-11,060	-8,011	-3,065	-11,719	-8,393	-5,208

Σ (B) 28,944 ✓ (L)

PIX- Σ (L) 66,466 ✓

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Non-Projects - Labor Hours

RA	Prod Oper Hours	Prod Maint Hours	Total Hours
PIA	5,263	578	5,841
PIC	8,705	0	8,705
PIF	1,579	372	1,951
	15,547	950	16,497 ✓

Σ(A) = 16,491 hours (Prod oper & Prod maint) ✓

12/29/2004

» budget manager: 1b Resource Leveling Detail Code Blk(Mo)

7:49AM

_RA	_LbrCl...	_Act	_Loc	_Ind	_Proj	_EE	Line Item	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
PIA	__E-I	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Manager P...	2,080	168	160	184	168	176	176	168	184	176	168	176	176
PIA	__E-I	098	PHE	ND	NPIZZZZZ	107	Manager P...	-336	-21	-29	-29	-21	-28	-28	-28	-28	-27	-27	-35	-35
PIA	__E-I	122	PHE	NE	NPIZZZZZ	150	Manager P...	-483	-41	-36	-43	-41	-41	-41	-39	-43	-41	-39	-39	-39
PIA	__E-I	220	WST	NE	NPIZZZZZ	150	Manager P...	-287	-24	-22	-26	-24	-24	-24	-23	-26	-25	-23	-23	-23
PIA	__E-I	240	WST	NE	NPIZZZZZ	150	Manager (A)	-578	-49	-43	-51	-49	-49	-49	-46	-52	-49	-47	-47	-47
PIA	__E-I	259	WST	NE	NPIZZZZZ	150	Manager	-578	-49	-43	-51	-49	-49	-49	-46	-52	-49	-47	-47	-47
PIA	__E-I	700	PHE	NC	NPIZZZZZ	150	Manager P...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIA	__E-I	765	PHE	NC	NPIZZZZZ	150	Mgr PSSD	0	0	0	0	0	0	0	0	0	0	0	0	0
PIA	__E-I							-182	-16	-13	-16	-16	-15	-15	-14	-17	-15	-15	-15	-15
PIA	__I-I	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Secretary	2,080	168	160	184	168	176	176	168	184	176	168	176	176
PIA	__I-I	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Adm Asst	2,080	168	160	184	168	176	176	168	184	176	168	176	176
PIA	__I-I	098	PHE	ND	NPIZZZZZ	107	Secretary	-216	-11	-19	-19	-11	-18	-18	-18	-18	-17	-17	-25	-25
PIA	__I-I	098	PHE	ND	NPIZZZZZ	107	Adm Asst	-216	-10	-18	-18	-10	-18	-18	-18	-18	-18	-18	-26	-26
PIA	__I-I	240	WST	NS	NPIZZZZZ	150	Secretary (A)	1,677	-141	-127	-149	-141	-142	-142	-135	-149	-143	-136	-136	-136
PIA	__I-I	843	PHE	NC	NPIZZZZZ	150	Adm Asst	-472	-40	-36	-42	-40	-40	-40	-38	-42	-40	-38	-38	-38
PIA	__I-I	844	WST	NE	NPIZZZZZ	150	Adm Asst (A)	1,404	-119	-107	-125	-119	-119	-119	-113	-125	-119	-113	-113	-113
PIA	__I-I	966	PPO	NE	NPIZZZZZ	150	Secretary	-188	-16	-14	-17	-16	-16	-16	-15	-17	-16	-15	-15	-15
PIA	__I-I							-13	-1	-1	-2	-1	-1	-1	-1	-1	-1	-1	-1	-1
PIA	__TC-I	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Contract Ad...	2,080	168	160	184	168	176	176	168	184	176	168	176	176
PIA	__TC-I	098	PHE	ND	NPIZZZZZ	107	Contract Ad...	-216	-10	-18	-18	-10	-18	-18	-18	-18	-18	-18	-26	-26
PIA	__TC-I	843	PHE	NC	NPIZZZZZ	150	Contract Ad...	-448	-38	-34	-40	-38	-38	-38	-36	-40	-38	-36	-36	-36
PIA	__TC-I	844	WST	NE	NPIZZZZZ	150	Contract Ad (A)	1,380	-117	-105	-123	-117	-117	-117	-111	-123	-117	-111	-111	-111
PIA	__TC-I	853	WST	NE	NPIZZZZZ	150	Contract Ad...	-36	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3
PIA	__TC-I							0	0	0	0	0	0	0	0	0	0	0	0	0
PIA	__TCS-I	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Admin	2,080	168	160	184	168	176	176	168	184	176	168	176	176
PIA	__TCS-I	098	PHE	ND	NPIZZZZZ	107	Administrator	-256	-14	-22	-22	-14	-21	-21	-21	-21	-21	-21	-29	-29
PIA	__TCS-I	701	PHE	NC	NPIZZZZZ	150	Admin	1,808	-152	-137	-160	-152	-154	-154	-146	-161	-154	-146	-146	-146
PIA	__TCS-I	721	PHE	NC	NPIZZZZZ	150	Admin	-200	-17	-15	-18	-17	-17	-17	-16	-18	-17	-16	-16	-16
PIA	__TCS-I	788	PPO	NE	P0000128	150	TRNG: IA_T...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIA	__TCS-I	836	PHE	NC	P0000915	150	Administrato...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIA	__TCS-I							-184	-15	-14	-16	-15	-16	-16	-15	-16	-16	-15	-15	-15
PIA							40% OT	-379	-32	-28	-34	-32	-32	-32	-30	-34	-32	-31	-31	-31
PIC	__FS-I	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Director, Pwr...	2,080	168	160	184	168	176	176	168	184	176	168	176	176
PIC	__FS-I	098	PHE	ND	NPIZZZZZ	107	Director, Pwr...	-336	-21	-29	-29	-21	-28	-28	-28	-28	-27	-27	-35	-35
PIC	__FS-I	121	PHE	NE	NPIZZZZZ	150	Director Pwr (A)	1,119	-52	-113	-135	-112	-73	-53	-46	-60	-114	-107	-127	-127

ResLev-04-PSSvcs.PLN Σ(I) 2,784

Version: 04

7:49AM

05	Oct 05	Nov 05	Dec 05
25	-25	-25	-25
-6	-6	-5	-5
0	0	0	0
20	-20	0	0
16	-17	-16	-16
52	336	352	352
47	-47	-63	-63
56	-147	-147	-147
19	-108	-112	-111
-5	-5	-5	-5
-1	-1	-2	-2
27	-30	-24	-27
0	0	0	0
-3	-2	-1	-3
28	504	528	528
58	-68	-92	-92
23	-22	-22	-22
31	-266	-266	-266
35	-95	-95	-95
22	-22	-23	-23
37	-35	-35	-35
0	0	0	0
0	0	0	0
2	-4	-5	-5
17	-23	-22	-24
76	168	176	176
7	-17	-25	-25
0	0	0	0
0	0	0	0
0	0	0	0
8	-8	-8	-8
8	-8	-8	-8
2	-30	-30	-30
0	0	0	0
0	0	0	0
0	0	0	0

Version: 04

source Leveling Detail Code Blk(Mo)

7:49AM

r 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
0	0	0	0	0	0	0	0	0	0	0
99	-116	-110	-111	-111	-105	-116	-111	-106	-106	-106
0	0	0	-1	-1	-1	1	0	-1	-1	-1
60	184	168	176	176	168	184	176	168	176	176
22	-22	-14	-21	-21	-21	-21	-21	-21	-29	-29
-5	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6
-5	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6
14	-16	-15	-16	-16	-15	-16	-16	-15	-15	-15
-5	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6
-5	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6
41	-49	-46	-47	-47	-44	-49	-47	-44	-44	-44
-5	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6
-5	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6
-5	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6
-5	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6
0	0	0	0	0	0	0	0	0	0	0
21	-24	-23	-23	-23	-22	-24	-23	-22	-22	-22
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	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
21	-24	-23	-23	-23	-22	-24	-23	-22	-22	-22
0	0	0	0	0	0	0	0	0	0	0
1	1	-1	-2	-2	-4	2	-2	-4	-4	-4
0	368	336	352	352	336	368	352	336	352	352
1	-41	-25	-39	-39	-39	-39	-38	-38	-54	-54
4	-16	-16	-16	-16	-15	-16	-16	-15	-15	-15
4	-16	-16	-16	-16	-15	-16	-16	-15	-15	-15
8	-33	-31	-31	-31	-30	-33	-31	-30	-30	-30
4	-16	-16	-16	-16	-15	-16	-16	-15	-15	-15
4	-16	-16	-16	-16	-15	-16	-16	-15	-15	-15
8	-33	-31	-31	-31	-30	-33	-31	-30	-30	-30
4	-16	-16	-16	-16	-15	-16	-16	-15	-15	-15
4	-16	-16	-16	-16	-15	-16	-16	-15	-15	-15
2	-131	-124	-125	-125	-119	-132	-126	-119	-119	-119
4	-16	-16	-16	-16	-15	-16	-16	-15	-15	-15
4	-16	-16	-16	-16	-15	-16	-16	-15	-15	-15
0	0	0	0	0	0	0	0	0	0	0

_RA	_LbrCl...	_Act	_Loc	_Ind	_Proj	_EE	Line Item	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
PIF	__TC-I	816	PPO	NE	NPIZZZZZ	150	2 Fuels Adm...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIF	__TC-I							-13	-3	-1	2	-3	-2	-2	-2	3	-2	-1	-1	-1
PIF	I_PPE...	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	1 Mechanica...	2,080	168	160	184	168	176	176	168	184	176	168	176	176
PIF	I_PPE...	098	PHE	ND	NPIZZZZZ	107	1 Mechanica...	-216	-11	-19	-19	-11	-18	-18	-18	-18	-17	-17	-25	-25
PIF	I_PPE...	212	WFS	NI	P0000942	150	Mechanical ...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIF	I_PPE...	222	HEL	BE	NPIZZZZZ	150	HEL. 1 Mech...	-48	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4
PIF	I_PPE...	222	MAU	BE	NPIZZZZZ	150	MAU. 1 Mec...	-48	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4
PIF	I_PPE...	230	WST	NE	NPIZZZZZ	150	1 Mechanica...	1,120	-94	-85	-99	-94	-95	-95	-90	-100	-95	-91	-91	-91
PIF	I_PPE...	231	HEL	BE	NPIZZZZZ	150	HEL. 1 Mech...	-48	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4
PIF	I_PPE...	231	MAU	BE	NPIZZZZZ	150	MAU. 1 Mec...	-48	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4
PIF	I_PPE...	231	WST	NE	NPIZZZZZ	150	1 Mechanica...	-188	-16	-14	-17	-16	-16	-16	-15	-17	-16	-15	-15	-15
PIF	I_PPE...	270	WST	NE	NPIZZZZZ	150	1 Mechanica...	-372	-31	-28	-33	-31	-32	-32	-30	-33	-32	-30	-30	-30
PIF	I_PPE...						0.5% OT	-8	0	-2	0	0	-1	-1	-1	0	0	-1	-1	-1
PIF								-46	-4	-2	3	-4	-6	-6	-8	6	-4	-7	-7	-7
								-654	-57	-61	-42	-52	-53	-55	-63	-35	-53	-61	-60	-62

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Non-Projects - Labor Hours

RA	Prod Oper Hours	Prod Maint Hours	Total Hours
PJA	4,558	0	4,558 ✓
PJB	5,500	0	5,500 ✓
PJC	7,759	0	7,759 ✓
PJW	4,915	0	4,915 ✓
	22,732	0	22,732

Environmental

CA-IR-1

General Information Requests

For each of the HECO witnesses who sponsor test period budgeted labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted staffing and associated labor direct expense amounts included in the witnesses' portion of the rate case test period budget.

b. Provide complete copies of all calculations, spreadsheet files, "pencil" workpapers, surveys and other analyses performed by each of the employees identified in response to part (a), documenting all work done to determine required staffing levels and overtime hours by Department, RA, Activity and NARUC Account.

c. Describe the actual force level that existed at the date the budget was prepared or otherwise served as a base for purposes of preparing the budget level.

d. For each budgeted employee position that is added to existing actual force levels (as the date the budget was prepared), **explain** the analyses undertaken to determine that each added position was necessary and should be filled in order to meet present or anticipated work requirements. Also, please explain how the anticipated work requirements were defined and determined.

e. Describe and, to the extent possible, quantify the backlog of work, unfinished projects, deferred maintenance and other labor requirements unfulfilled at present staffing levels, that will be satisfied by adding the employee positions identified in your response to part (d).

f. Provide complete copies of all studies, analyses, workpapers, projections, notes, correspondence, assumptions and other documents associated with your responses to parts (d) and (e) above.

HECO Response:

a. For the Environmental Dept. the employees involved in the preparation of budgeted staffing and associated labor direct expense amounts included in the witnesses' portion of the rate

b. To be provided, workpapers will be sent via interoffice mail.

Environ

Paco, May
From: Morikuni, Bert
Sent: Wednesday, December 29, 2004 3:50 PM
To: Yim, Karen
Cc: Paco, May; Loo, Sherri-Ann; Rinehart, Douglas; Nakamoto, Barry; Fukuda, Donn
Subject: RE: Rate Case - Budget labor and nonlabor documentation needed (NARUC 500-557)

Attachments: CA-IR-1(Account #500-#577).doc; CA-IR-2(Account #500-#577).doc

Karen,

Here is Environmental Dept's CA-IR responses for the Heco Rate Case.

The back-up workpapers supporting the labor and non-labor forecast will be sent via interoffice mail.

Please let me know if you have any questions (x7549).

Thanks!

CA-IR-1(Account #500-#577).doc... CA-IR-2(Account #500-#577).doc...

From: Yim, Karen
Sent: Tuesday, December 21, 2004 5:54 PM
To: Takata, Valerie; Seki, Arthur; Ignacio, Lloyd; Koga, Kathy; Marzano, Victoria; Young, Patti; Chun, Joycelynn; Paco, May; Rinehart, Douglas; Tomita, Kirk; Nakamoto, Barry; Hirashima, Donna; Li, Susan; Hannigan, Carol; Anbe, Kurt; Morikuni, Bert; Yuen, Michael
Cc: Ornellas, Larry; Hiramoto, Lane; Mark, Karen; Fujinaka, Aaron
Subject: Rate Case - Budget labor and nonlabor documentation needed

Please send supporting documentation for NARUC 500 thru 557 to me since I am assisting Aaron Fujinaka, who is the Other Production O&M witness. Please note that support for all labor and nonlabor budget items are needed. If there is someone else who will be responsible for gathering the information, can you forward this e-mail to that person. Let me know if you have questions.

Karen Yim

HECO Production O&M

Mail Code: WP2-IB

(808) 543-4349

P9S VAL TAKATA, ART SEKI
PBA LLOYD IGNACIO, KATHY KOGA
PBT
PCB VICTORIA

	MARZANO
PEP	PATTI YOUNG
PEZ	
PHS	JOCELYNN CHUN
PIA	MAY PACO
PIC	
PIF	
PJA	DOUG RINEHART, KIRK TOMITA; BARRY NAKAMOTO
PJB	
PJC	
PJW	
PKM	DONNA HIRASHIMA
PNC	SUSAN LI
PNG	
PNL	
PNR	
PPA	CAROL HANNIGAN
PRC	KURT ANBE
PRD	
PRE	
PRI	
PRR	
PRX	
PYA	BERT MORIKUNI, MIKE YUEN
PYB	
PYC	
PYE	
PYF	
PYJ	
PYM	

Environmental Dept.

PJA

_RA	_LbrClass	_Proj	_Act	_Loc	Project	Line item	FY05	
PJA	__BUOC	*Supply	*Supply	*Supply	Labor Supp	Labor Supp	2,080	
PJA	__BUOC	NPJZZZZZ	98	PHE	Environme	Holidays -II	-96	
PJA	__BUOC	NPJZZZZZ	98	PHE	Environme	Vacation-Ik	-160	
PJA	__BUOC	NPJZZZZZ	777	PHE	Environme	HECO - Pr	-251	
PJA	__BUOC	NPJZZZZZ	875	CNS	Environme	HGA H137	-12	
PJA	__BUOC	NPJZZZZZ	875	GNS	Environme	MGT M112	-12	
PJA	__BUOC	NPJZZZZZ	875	LNS	Environme	MGL M112	-6	
PJA	__BUOC	NPJZZZZZ	875	MNS	Environme	MGM M11	-26	
PJA	__BUOC	NPJZZZZZ	875	NST	Environme	MGK M112	-6	
PJA	**__BUOC**	**NPJZZZZZ**	**875**	**PHE**	**Environme**	**General S**	**-584**	1
PJA	__BUOC	NPJZZZZZ	875	PST	Environme	HGA H137	-4	
PJA	__BUOC	NPJZZZZZ	876	CNS	Environme	HGA H137	-12	
PJA	__BUOC	NPJZZZZZ	876	NST	Environme	MGK M011	-8	
PJA	**__BUOC**	**NPJZZZZZ**	**876**	**PHE**	**Environme**	**Gen Supp**	**-707**	2
PJA	__BUOC	NPJZZZZZ	876	PST	Environme	HGA H137	-4	
PJA	__BUOC	NPJZZZZZ	876	RST	Environme	HGA H137	-7	
PJA	__BUOC	NPJZZZZZ	876	SST	Environme	HGA H137	-8	
PJA	__BUOC	NPJZZZZZ	877	MNS	Environme	MGM M11	-4	
PJA	__BUOC	NPJZZZZZ	877	RST	Environme	HGA H137	-4	
PJA	__BUOC	NPJZZZZZ	966	PHE	Environme	Handle & D	-168	
PJA	__BUOC	P9634000	865	T01	MECO Nev	MGA Air P	-12	
PJA	__BUOC						-11	
PJA	__E	*Supply	*Supply	*Supply	Labor Supp	Labor Supp	2,080	
PJA	__E	NPJZZZZZ	98	PHE	Environme	Holidays - S	-96	
PJA	__E	NPJZZZZZ	98	PHE	Environme	Vacation -	-120	
PJA	__E	NPJZZZZZ	720	PHE	Environme	Org Dev. M	-518	
PJA	__E	NPJZZZZZ	745	PHE	Environme	Maintain R	-229	
PJA	__E	NPJZZZZZ	789	PHE	Environme	Attend Trai	-80	
PJA	**__E**	**NPJZZZZZ**	**875**	**PHE**	**Environme**	**GEN AIR S**	**-352**	1
PJA	**__E**	**NPJZZZZZ**	**876**	**PHE**	**Environme**	**General W**	**-685**	2
PJA	__E						0	
PJA	__I	*Supply	*Supply	*Supply	Labor Supp	Labor Supp	2,080	
PJA	__I	NPJZZZZZ	98	PHE	Environme	Holidays -	-96	

Σ(A) = 4,558 hrs total Prod Oper PJA

_RA	_LbrClass	_Proj	_Act	_Loc	Project	Line item	FY05	
PJA	J_WHMSCI	*Supply	*Supply	*Supply	Labor Supp	Staff Scien	2,080	
PJA	J_WHMSCI	NPJZZZZZ	98	PHE	Environme	Staff Scien	-120	
PJA	J_WHMSCI	NPJZZZZZ	98	PHE	Environme	Staff Scien	-96	Diff.
PJA	**J_WHMSCI**	**NPJZZZZZ**	**875**	**KST**	**Environme**	**Staff Scier**	**-84**	-4 = 80 per Pillar (A)
PJA	J_WHMSCI	NPJZZZZZ	875	NST	Environme	MGK M112	-84	*
PJA	J_WHMSCI	NPJZZZZZ	875	RST	Environme	HGA H137	-36	
PJA	**J_WHMSCI**	**NPJZZZZZ**	**876**	**KST**	**Environme**	**Staff Scier**	**-84**	85 ✓ (A)
PJA	J_WHMSCI	NPJZZZZZ	876	NST	Environme	MGK M112	-84	
PJA	**J_WHMSCI**	**NPJZZZZZ**	**877**	**KST**	**Environme**	**Staff Scier**	**-120**	✓ (A)
PJA	J_WHMSCI	NPJZZZZZ	877	MAU	Environme	MDO M124	-84	
PJA	J_WHMSCI	NPJZZZZZ	877	MNS	Environme	MGM M112	-84	
PJA	J_WHMSCI	NPJZZZZZ	877	NST	Environme	MGK M112	-120	
PJA	J_WHMSCI	NPJZZZZZ	877	PST	Environme	HGA H137	-48	
PJA	J_WHMSCI	NPJZZZZZ	877	WRD	Environme	Staff Scien	-240	
PJA	J_WHMSCI	NPJZZZZZ	877	WRD	Environme	Add. hrs. fo	-19	Diff.
PJA	**J_WHMSCI**	**NPJZZZZZ**	**877**	**WST**	**Environme**	**Staff Scier**	**-180**	-5 = 175 per Pillar (A)
PJA	J_WHMSCI	NPJZZZZZ	878	HEL	Environme	HGA H136	-36	*
PJA	**J_WHMSCI**	**NPJZZZZZ**	**878**	**KST**	**Environme**	**Staff Scier**	**-144**	145 ✓ (A)
PJA	J_WHMSCI	NPJZZZZZ	878	MNS	Environme	MGM M112	-84	
PJA	J_WHMSCI	NPJZZZZZ	878	NST	Environme	MGK M112	-72	
PJA	J_WHMSCI	NPJZZZZZ	878	PST	Environme	HGA H137	-48	
PJA	J_WHMSCI	NPJZZZZZ	878	RST	Environme	HGA H137	-36	
PJA	J_WHMSCI	NPJZZZZZ	878	WRD	Environme	Staff Scien	-84	Diff.
PJA	**J_WHMSCI**	**NPJZZZZZ**	**878**	**WST**	**Environme**	**Staff Scier**	**-96**	+3 = 99 per Pillar (A)
PJA	J_WHMSCI						-3	*
PJA							-14	

* Difference between supporting doc (above) & Pillar is immaterial.

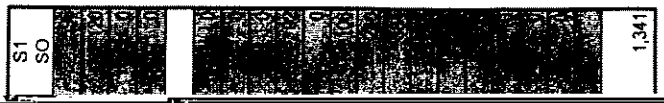
HECU ENVIRONMENTAL + P&E

HECO 2005 Rate Case
PJB Labor Summary

RA	NARUC		EE	ABM	Loc	Hours	PS	SS1	SS2	SS3	SS4	S1
PJB	506	Labor	150	865	HST	0	0	0	0	0	0	0
PJB	506	Labor	150	865	WST	64	0	64	0	0	0	0
PJB	506	Labor	150	875	HST	1440	240	480	0	0	480	240
PJB	506	Labor	150	875	KST	1308	240	480	0	0	204	384
PJB	506	Labor	150	875	PHE	1200	391	202	72	72	400	63
PJB	506	Labor	150	875	WST	1440	240	480	0	0	480	240
PJB	506	Labor	150	879	HST	16	0	0	0	0	16	0
PJB	506	Labor	150	879	KST	16	0	0	0	0	16	0
PJB	506	Labor	150	879	WST	16	0	0	0	0	16	0
PJB	920	Labor	150	701	PHE	61	61	0	0	0	0	0
PJB	920	Labor	150	720	PHE	140	140	0	0	0	0	0
PJB	920	Labor	150	745	PHE	100	100	0	0	0	0	0
PJB	920	Labor	150	747	PHE	0	0	0	0	0	0	0
PJB	920	Labor	150	749	PHE	0	0	0	0	0	0	0
PJB	920	Labor	150	789	PHE	460	0	92	92	92	92	92
PJB	920	Labor	150	865	PHE	824	412	106	0	0	200	106
PJB	920	Labor	150	885	PHE	40	40	0	0	0	0	0
						======	======	======	======	======	======	======
						7125	1864	1904	164	164	1904	1125

PS = Principal Scientist (1)
SS = Senior Scientist (4)
S = Scientist (1)

PJB



HECO TY 2005 Rate Case
Labor Input Workpapers
BMN 12/22/2004

JB Staffing Count 2005
- 1 Principal Scientist
- 4 Senior Scientists
- 1 Scientist

The vacant Environmental Specialist position created by the retirement of Roberto Knott in 2003 was converted to a Senior Scientist position in 2004. The position was filled in October 2004 and the new Senior Scientist will report to duty in 2005.

Available hours – Each staff member started with 2,080 available hours for 2005. This was adjusted for Company approved holidays in 2005 (96 hours) and earned vacation. Earned vacation was assumed as follows:
- Principal - 120 hours
- Senior Scientists – 80 hours
- Scientist - 120 hours

The differences between the forecasted work hours and the available hours are covered by Capital project work and Inter-company billable hours. Because capital and billable work demands can change over time, there may be adjustments required over the course of the test year.

_RA	_LbrClass	_Proj	_Act	_Loc	Project	Line item	FY05
PJC	J_CHEMST	*Supply	*Supply	*Supply	Labor Supp	Labor Supp	12,480
PJC	J_CHEMST	NPJZZZZZ	98	PHE	Environme	Holiday	-576
PJC	J_CHEMST	NPJZZZZZ	98	PHE	Environme	Vacation	-920
PJC	J_CHEMST	NPJZZZZZ	241	GNS	Environme	MGT M008	-24
PJC	**J_CHEMST**	**NPJZZZZZ**	**241**	**HST**	**Environme**	**HST FUEL**	**-120**
PJC	**J_CHEMST**	**NPJZZZZZ**	**241**	**KST**	**Environme**	**KST FUEL**	**-470**
PJC	**J_CHEMST**	**NPJZZZZZ**	**241**	**KST**	**Environme**	**Update Ju**	**-24**
PJC	J_CHEMST	NPJZZZZZ	241	LNS	Environme	MGL M008	-60
PJC	J_CHEMST	NPJZZZZZ	241	MNS	Environme	MGM M008	-300
PJC	J_CHEMST	NPJZZZZZ	241	NST	Environme	MGK M008	-120
PJC	J_CHEMST	NPJZZZZZ	241	RST	Environme	HGA H002	-300
PJC	**J_CHEMST**	**NPJZZZZZ**	**241**	**WST**	**Environme**	**WST FUEL**	**-470**
PJC	**J_CHEMST**	**NPJZZZZZ**	**245**	**HST**	**Environme**	**HST MAIN**	**-30**
PJC	**J_CHEMST**	**NPJZZZZZ**	**245**	**KST**	**Environme**	**KST MAIN**	**-120**
PJC	**J_CHEMST**	**NPJZZZZZ**	**245**	**WST**	**Environme**	**WST MAIN**	**-120**
PJC	J_CHEMST	NPJZZZZZ	344	OAH	Environme	HECO TSF	-300
PJC	J_CHEMST	NPJZZZZZ	349	HAH	Environme	HDC H006	-300
PJC	J_CHEMST	NPJZZZZZ	349	MAU	Environme	MDE M004	-120
PJC	J_CHEMST	NPJZZZZZ	349	OAH	Environme	HECO SS	-335
PJC	J_CHEMST	NPJZZZZZ	701	PHE	Environme	DEV & MA	-60
PJC	J_CHEMST	NPJZZZZZ	720	PHE	Environme	ORG DEV	-24
PJC	J_CHEMST	NPJZZZZZ	745	PHE	Environme	RELATION	-20
PJC	J_CHEMST	NPJZZZZZ	749	PHE	Environme	RELATION	-20
PJC	J_CHEMST	NPJZZZZZ	750	PHE	Environme	RELATION	-60
PJC	J_CHEMST	NPJZZZZZ	753	PHE	Environme	COMMUNI	-20
PJC	J_CHEMST	NPJZZZZZ	777	PHE	Environme	PROCESS	-48
PJC	J_CHEMST	NPJZZZZZ	785	PHE	Environme	PERFORM	-20
PJC	J_CHEMST	NPJZZZZZ	789	PHE	Environme	ATTEND T	-142
PJC	J_CHEMST	NPJZZZZZ	797	PHE	Environme	ATTEND S	-144
PJC	J_CHEMST	NPJZZZZZ	842	PHE	Environme	ORDER M	-48
PJC	J_CHEMST	NPJZZZZZ	843	PHE	Environme	PROCESS	-12
PJC	J_CHEMST	NPJZZZZZ	876	CNS	Environme	HGA H002	-180
PJC	**J_CHEMST**	**NPJZZZZZ**	**876**	**HST**	**Environme**	**HST WAST**	**-360**
PJC	**J_CHEMST**	**NPJZZZZZ**	**876**	**KST**	**Environme**	**KST WAST**	**-1,173**
PJC	J_CHEMST	NPJZZZZZ	876	MNS	Environme	MGM M008	-420
PJC	J_CHEMST	NPJZZZZZ	876	NST	Environme	MGK M008	-180
PJC	J_CHEMST	NPJZZZZZ	876	OUT	Environme	NON-UTIL	-60
PJC	**J_CHEMST**	**NPJZZZZZ**	**876**	**PHE**	**Environme**	**MISCELLA**	**-1,151**
PJC	**J_CHEMST**	**NPJZZZZZ**	**876**	**PHE**	**Environme**	**Update Ju**	**-300**
PJC	J_CHEMST	NPJZZZZZ	876	PST	Environme	HGA H002	-180
PJC	J_CHEMST	NPJZZZZZ	876	RST	Environme	HGA H002	-540
PJC	J_CHEMST	NPJZZZZZ	876	SST	Environme	HGA H002	-120
PJC	**J_CHEMST**	**NPJZZZZZ**	**876**	**WST**	**Environme**	**WST WAS**	**-1,173**
PJC	J_CHEMST	NPJZZZZZ	877	GNS	Environme	MGT M008	-24
PJC	**J_CHEMST**	**NPJZZZZZ**	**877**	**HST**	**Environme**	**HST OIL-R**	**-60**
PJC	**J_CHEMST**	**NPJZZZZZ**	**877**	**KST**	**Environme**	**KST OIL-R**	**-120**
PJC	J_CHEMST	NPJZZZZZ	877	LNS	Environme	MGL M008	-24
PJC	J_CHEMST	NPJZZZZZ	877	MAU	Environme	MDE M159	-360
PJC	J_CHEMST	NPJZZZZZ	877	MNS	Environme	MGM M008	-24
PJC	J_CHEMST	NPJZZZZZ	877	OUT	Environme	NON-UTIL	-24

494 ✓ ©

1,451 ✓ ©

Σ© = 7,759 hrs
Total PJC

_RA	_LbrClass	_Proj	_Act	_Loc	Project	Line item	FY05
PJC	J_CHEMST	NPJZZZZZ	877	RST	Environme	HGA H002	-24
PJC	**J_CHEMST**	**NPJZZZZZ**	**877**	**WST**	**Environme**	**WST OIL-F**	**-60**
PJC	J_CHEMST	NPJZZZZZ	878	CNS	Environme	HGA H003	-20
PJC	**J_CHEMST**	**NPJZZZZZ**	**878**	**HST**	**Environme**	**HST NON-**	**-24**
PJC	**J_CHEMST**	**NPJZZZZZ**	**878**	**KST**	**Environme**	**KST NON-**	**-60**
PJC	J_CHEMST	NPJZZZZZ	878	MNS	Environme	MGM M008	-180
PJC	J_CHEMST	NPJZZZZZ	878	NST	Environme	MGK M008	-60
PJC	J_CHEMST	NPJZZZZZ	878	PST	Environme	HGA H003	-60
PJC	J_CHEMST	NPJZZZZZ	878	RST	Environme	HGA H003	-120
PJC	J_CHEMST	NPJZZZZZ	878	SST	Environme	HGA H003	-24
PJC	J_CHEMST						48
PJC							48
PJW	J_AIRSPE	*Supply	*Supply	*Supply	Labor Supply		2,080
PJW	J_AIRSPE	NPJZZZZZ	98	PHE	Environme	Holidays	-96
PJW	J_AIRSPE	NPJZZZZZ	98	PHE	Environme	Vacation	-36

Difference due to additional entry during recycle (see last page)

PJC - Act 877

Per spreadsheet	60
Diff. - Bus Recycle	1,412
Per Pillar	1,512 ©

PJC - Act 878

Per spreadsheet	60
Diff. - Bus Recycle	412

_RA	_LbrClass	_Proj	_Act	_Loc	Project	Line item	FY05
PJW	J_WHMSCI	NPJZZZZZ	788	MAU	Environme	MDE M158	-36
PJW	J_WHMSCI	NPJZZZZZ	788	MPO	Environme	M11290 00	-60
PJW	J_WHMSCI	NPJZZZZZ	788	MPO	Environme	M15313 00	-60
PJW	J_WHMSCI	NPJZZZZZ	788	MPO	Environme	M15314 01	-60
PJW	J_WHMSCI	NPJZZZZZ	788	PDO	Environme	Conduct Tr	-84
PJW	J_WHMSCI	NPJZZZZZ	788	PHE	Environme	Conduct Tr	-12
PJW	J_WHMSCI	NPJZZZZZ	788	PST	Environme	HGA - Con	-12
PJW	J_WHMSCI	NPJZZZZZ	788	PTO	Environme	Conduct Tr	-36
PJW	J_WHMSCI	NPJZZZZZ	788	RST	Environme	HGA H188	-36
PJW	J_WHMSCI	NPJZZZZZ	788	SST	Environme	HGA H188	-60
PJW	J_WHMSCI	NPJZZZZZ	788	WRD	Environme	Conduct Tr	-12
PJW	**J_WHMSCI**	**NPJZZZZZ**	**788**	**WST**	**Environme**	**Conduct T**	**-36** 48 30 (W)
PJW	J_WHMSCI	NPJZZZZZ	789	PHE	Environme	Attend Trai	-120
PJW	J_WHMSCI	NPJZZZZZ	797	PHE	Environme	Attend Safe	-12
PJW	J_WHMSCI	NPJZZZZZ	866	CNS	Environme	HGA H188	-24
PJW	**J_WHMSCI**	**NPJZZZZZ**	**866**	**HST**	**Environme**	**Permitting**	**-120** ✓ (W)
PJW	**J_WHMSCI**	**NPJZZZZZ**	**866**	**KST**	**Environme**	**Permitting**	**-120** ✓
PJW	J_WHMSCI	NPJZZZZZ	866	MNS	Environme	MGM M15	-120
PJW	J_WHMSCI	NPJZZZZZ	866	NST	Environme	MGK 1531	-120
PJW	J_WHMSCI	NPJZZZZZ	866	RST	Environme	HGA H188	-84
PJW	J_WHMSCI	NPJZZZZZ	866	SST	Environme	HGA H188	-120
PJW	**J_WHMSCI**	**NPJZZZZZ**	**866**	**WST**	**Environme**	**Permitting**	**-120** ✓ (W)
PJW	J_WHMSCI	NPJZZZZZ	876	BNS	Environme	HGA H189	-24
PJW	J_WHMSCI	NPJZZZZZ	876	CNS	Environme	HGA H189	-72
PJW	J_WHMSCI	NPJZZZZZ	876	CNS	Environme	HGA H189	-156
PJW	J_WHMSCI	NPJZZZZZ	876	HEL	Environme	HDE H187	-24
PJW	**J_WHMSCI**	**NPJZZZZZ**	**876**	**HST**	**Environme**	**Compliance**	**-120** (1)
PJW	**J_WHMSCI**	**NPJZZZZZ**	**876**	**HST**	**Environme**	**Water Mor**	**-96** (1)
PJW	**J_WHMSCI**	**NPJZZZZZ**	**876**	**KST**	**Environme**	**Compliance**	**-156** (2)
PJW	**J_WHMSCI**	**NPJZZZZZ**	**876**	**KST**	**Environme**	**Water Mor**	**-96** (2)
PJW	J_WHMSCI	NPJZZZZZ	876	MAU	Environme	MDE M158	-24
PJW	J_WHMSCI	NPJZZZZZ	876	MNS	Environme	MGM M15	-120
PJW	J_WHMSCI	NPJZZZZZ	876	MNS	Environme	MGM M15	-72
PJW	J_WHMSCI	NPJZZZZZ	876	NST	Environme	MGK M153	-264
PJW	J_WHMSCI	NPJZZZZZ	876	NST	Environme	MGK M153	-72
PJW	J_WHMSCI	NPJZZZZZ	876	PDM	Environme	Compliance	-24
PJW	J_WHMSCI	NPJZZZZZ	876	PDO	Environme	Compliance	-24
PJW	J_WHMSCI	NPJZZZZZ	876	PST	Environme	HGA H189	-24
PJW	J_WHMSCI	NPJZZZZZ	876	PST	Environme	HGA H189	-24
PJW	J_WHMSCI	NPJZZZZZ	876	PTM	Environme	Compliance	-24
PJW	J_WHMSCI	NPJZZZZZ	876	PTO	Environme	Compliance	-24
PJW	J_WHMSCI	NPJZZZZZ	876	RST	Environme	HGA H188	-84
PJW	J_WHMSCI	NPJZZZZZ	876	RST	Environme	HGA H188	-60
PJW	J_WHMSCI	NPJZZZZZ	876	SST	Environme	HGA H189	-144
PJW	J_WHMSCI	NPJZZZZZ	876	SST	Environme	HGA H189	-120
PJW	**J_WHMSCI**	**NPJZZZZZ**	**876**	**WST**	**Environme**	**Compliance**	**-180** (3)
PJW	**J_WHMSCI**	**NPJZZZZZ**	**876**	**WST**	**Environme**	**Water Mor**	**-96**
PJW	J_WHMSCI	NPJZZZZZ	877	BNS	Environme	HGA H188	-12
PJW	J_WHMSCI	NPJZZZZZ	877	BPT	Environme	Compliance	-36
PJW	J_WHMSCI	NPJZZZZZ	877	BPT	Environme	New Body	-48
PJW	J_WHMSCI	NPJZZZZZ	877	CNS	Environme	HGA H188	-108

Σ(1) = 480 (include prev page)

Σ(2) = 516

Σ(3) = 612

_RA	_LbrClass	_Proj	_Act	_Loc	Project	Line item	FY05
PJW	J_WHMSCI	NPJZZZZZ	877	GNS	Environme	MGT M153	-24
PJW	**J_WHMSCI**	**NPJZZZZZ**	**877**	**HST**	**Environme**	**Complianc**	**-204**
PJW	**J_WHMSCI**	**NPJZZZZZ**	**877**	**HST**	**Environme**	**Honolulu I**	**-456**
PJW	J_WHMSCI	NPJZZZZZ	877	ITF	Environme	Complianc	-36
PJW	J_WHMSCI	NPJZZZZZ	877	ITF	Environme	New Body	-48
PJW	**J_WHMSCI**	**NPJZZZZZ**	**877**	**KST**	**Environme**	**Complianc**	**-240**
PJW	**J_WHMSCI**	**NPJZZZZZ**	**877**	**KST**	**Environme**	**New Body**	**-276**
PJW	J_WHMSCI	NPJZZZZZ	877	LNS	Environme	MGL M153	-12
PJW	J_WHMSCI	NPJZZZZZ	877	MAU	Environme	MDE M158	-300
PJW	J_WHMSCI	NPJZZZZZ	877	MNS	Environme	MGM M15	-228
PJW	J_WHMSCI	NPJZZZZZ	877	NST	Environme	MGK M153	-84
PJW	J_WHMSCI	NPJZZZZZ	877	PDM	Environme	Complianc	-132
PJW	J_WHMSCI	NPJZZZZZ	877	PDM	Environme	New Body	-60
PJW	J_WHMSCI	NPJZZZZZ	877	PDO	Environme	Complianc	-168
PJW	J_WHMSCI	NPJZZZZZ	877	PDO	Environme	New Body	-60
PJW	J_WHMSCI	NPJZZZZZ	877	PST	Environme	HGA H188	-48
PJW	J_WHMSCI	NPJZZZZZ	877	PTM	Environme	Complianc	-168
PJW	J_WHMSCI	NPJZZZZZ	877	PTM	Environme	New Body	-60
PJW	J_WHMSCI	NPJZZZZZ	877	PTO	Environme	Complianc	-168
PJW	J_WHMSCI	NPJZZZZZ	877	RST	Environme	HGA H188	-48
PJW	J_WHMSCI	NPJZZZZZ	877	SST	Environme	HGA H188	-60
PJW	**J_WHMSCI**	**NPJZZZZZ**	**877**	**WST**	**Environme**	**Complianc**	**-240**
PJW	**J_WHMSCI**	**NPJZZZZZ**	**877**	**WST**	**Environme**	**New Body**	**-276**
PJW	J_WHMSCI	NPJZZZZZ	878	ANS	Environme	HGA H188	-12
PJW	J_WHMSCI	NPJZZZZZ	878	BNS	Environme	HGA H188	-12
PJW	J_WHMSCI	NPJZZZZZ	878	CNS	Environme	HGA H188	-24
PJW	J_WHMSCI	NPJZZZZZ	878	GNS	Environme	MGT M153	-24
PJW	J_WHMSCI	NPJZZZZZ	878	HEL	Environme	HDE H187	-300
PJW	**J_WHMSCI**	**NPJZZZZZ**	**878**	**HST**	**Environme**	**Complianc**	**-204**
PJW	**J_WHMSCI**	**NPJZZZZZ**	**878**	**HST**	**Environme**	**New Body**	**-120**
PJW	**J_WHMSCI**	**NPJZZZZZ**	**878**	**KST**	**Environme**	**Complianc**	**-204**
PJW	**J_WHMSCI**	**NPJZZZZZ**	**878**	**KST**	**Environme**	**New Body**	**-153**
PJW	J_WHMSCI	NPJZZZZZ	878	LNS	Environme	MGL M153	-24
PJW	J_WHMSCI	NPJZZZZZ	878	MAU	Environme	MDE M158	-300
PJW	J_WHMSCI	NPJZZZZZ	878	MNS	Environme	MGM M15	-144
PJW	J_WHMSCI	NPJZZZZZ	878	NST	Environme	MGK M153	-108
PJW	J_WHMSCI	NPJZZZZZ	878	P01	Environme	HGA H884	-12
PJW	J_WHMSCI	NPJZZZZZ	878	PDM	Environme	Complianc	-120
PJW	J_WHMSCI	NPJZZZZZ	878	PDM	Environme	New Body	-84
PJW	J_WHMSCI	NPJZZZZZ	878	PDO	Environme	Complianc	-120
PJW	J_WHMSCI	NPJZZZZZ	878	PDO	Environme	New Body	-84
PJW	J_WHMSCI	NPJZZZZZ	878	PHE	Environme	Complianc	-120
PJW	J_WHMSCI	NPJZZZZZ	878	PST	Environme	HGA H188	-12
PJW	J_WHMSCI	NPJZZZZZ	878	PTM	Environme	Complianc	-120
PJW	J_WHMSCI	NPJZZZZZ	878	PTM	Environme	New Body	-84
PJW	J_WHMSCI	NPJZZZZZ	878	PTO	Environme	New Body	-84
PJW	J_WHMSCI	NPJZZZZZ	878	RST	Environme	HGA H188	-60
PJW	J_WHMSCI	NPJZZZZZ	878	SST	Environme	HGA H188	-36
PJW	**J_WHMSCI**	**NPJZZZZZ**	**878**	**WST**	**Environme**	**Complianc**	**-204**
PJW	**J_WHMSCI**	**NPJZZZZZ**	**878**	**WST**	**Environme**	**New Body**	**-153**
PJW	J_WHMSCI	NPJZZZZZ	885	PHE	Environme	Participate	-96

660 [illegible] (W)

516 [illegible] (W)

516 [illegible] (W)

324 [illegible] (W)

357 [illegible] (W)

357 [illegible] (W)

_RA	_LbrClass	_Proj	_Act	_Loc	Project	Line item	FY05
PJW	J_WHMSCI	P0000007	111	OAH	DOD Priva	Environme	-25
PJW	J_WHMSCI	P0000007	111	OAH	DOD Priva	Environme	-48
PJW	J_WHMSCI	P0000007	111	OAH	DOD Priva	Environme	-25
PJW	J_WHMSCI	P0000007	111	PHE	DOD Priva	Environme	-33
PJW	J_WHMSCI	P0000277	877	PHE	New Kuahu	Environme	-54
PJW	J_WHMSCI	P0000897	210	PCG	HECO CHI	CHP Progr	-170
PJW	J_WHMSCI	P9631000	866	M18	MECO Ma	MGA Wate	-112
PJW	J_WHMSCI						-289
PJW							-289

2005 Budget Recycle
4/15/04

Code Block	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TTL	Comments
PIX 260 WST NE NPIZZZZZ 201	-1,500	-40,000	-85,000				-22,500	-40,000	-25,000				-214,000	WAI Genl Trend, CWP OH, Cond Scrapers.
PIX 259 WST NE NPIZZZZZ 201		-10,000			-10,000			-10,000			-10,000		-40,000	WAI Genl Trend, Burner Tips.
PIX 262 WST NE NPIZZZZZ 201	-7,500						-7,500						-15,000	WAI Genl Trend
PIN 878 HST NE NPIZZZZZ 501		-2,000	-25,000		-2,000			-2,000	-25,000			-2,000	-58,000	HON Asb, Haz, Lead, Mercury Disposal
PIN 265 HST NE NPIZZZZZ 501												2,500	2,500	HON A/C Rprs
PIN 266 HST NE NPIZZZZ 501									-5,000				-5,000	HON H8/9 Crane Certification
PIN 262 HST NE NPIZZZZZ 501	-500	-500	-500	-500	-500	-500	-500	-500	-500	-500	-500	-500	-6,000	HON Con Clean
PIN 259 HST NE NPIZZZZZ 201					8,000		75,000						83,000	HON BFP OH, Burner Tips.
PIL 878 KST NE NPIZZZZZ 501			-6,000			4,000			-1,000			4,000	1,000	KAH Haz, Lead, Marcury, Asb, Waste Oil Disp
PIL 875 KST NE NPIZZZZZ 501	1,167	1,167	1,167	1,167	1,167	1,167	1,167	-23,833	11,167	1,167	1,167	1,167	-996	KAH K6 CEMS
PIL 265 KST NE NPIZZZZZ 501				-73,000	-15,000	-10,000		-10,000	-10,000		50,000		-68,000	KAH Struct Paintg, Turb Deck Rprs, Corr Ctrl, Culvert Drain, Intake Bar Grills, Demin Struct, A/C Duct Clean.
PIL 262 KST NE NPIZZZZZ 501				-13,000						25,000			12,000	KAH Basin Dredging.
PIL 260 KST NE NPIZZZZZ 501						-20,000							-20,000	KAH CWP OH.
PIL 266 KST NE NPIZZZZZ 501			-4,000							-4,000	-3,000		-11,000	KAH Drott Maint, Gantry Crane Inspect/Cert.
PIL 257 KST NE NPIZZZZZ 201							70,000						70,000	KAH BFP OH
PIL 260 KST NE NPIZZZZZ 201									-5,000				-5,000	KAH Cond Pump OH
PIL 259 KST NE NPIZZZZZ 201		-5,000			-5,000			-5,000			-5,000		-20,000	KAH Burner Tips
PIL 262 KST NE NPIZZZZZ 201			-23,000				20,000			-5,000			-8,000	KAH Tvl Screen OH, Cond Scrapers, Tvl Screen Wash.
Total PRODUCTION													**489,504**	
ENVIRONMENTAL														
PJC 878 WST NE NPJZZ 150 _WHMAID													100,000	Chem Lab Staffing: Add 1 Clerk JC. $100K
PJC 878 WST NE NPJZZZZZ 501													30,000	Chem Lab Renovation: Add $30K
Total ENVIRONMENTAL													**130,000**	

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Non-Projects - Labor Hours

RA	Prod Oper Hours	Prod Maint Hours	Total Hours
PYA	2,515	0	2,515 ✓
PYB	8,206	0	8,206 ✓
PYC	1,856	0	1,856 ✓
PYE	3,100	10,612	13,712 ✓
PYF	120	180	300 ✓
PYJ	0	1,376	1,376 ✓
PYM	240	960	1,200 ✓
	16,037	13,128	29,165

P&E

CA-IR-1

General Information Requests

For each of the HECO witnesses who sponsor test period budgeted labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted staffing and associated labor direct expense amounts included in the witnesses' portion of the rate case test period budget.

b. Provide complete copies of all calculations, spreadsheet files, "pencil" workpapers, surveys and other analyses performed by each of the employees identified in response to part (a), documenting all work done to determine required staffing levels and overtime hours by Department, RA, Activity and NARUC Account.

c. Describe the actual force level that existed at the date the budget was prepared or otherwise served as a base for purposes of preparing the budget level.

d. For each budgeted employee position that is added to existing actual force levels (as the date the budget was prepared), **explain** the analyses undertaken to determine that each added position was necessary and should be filled in order to meet present or anticipated work requirements. Also, please explain how the anticipated work requirements were defined and determined.

e. Describe and, to the extent possible, quantify the backlog of work, unfinished projects, deferred maintenance and other labor requirements unfulfilled at present staffing levels, that will be satisfied by adding the employee positions identified in your response to part (d).

f. Provide complete copies of all studies, analyses, workpapers, projections, notes, correspondence, assumptions and other documents associated with your responses to parts (d) and (e) above.

HECO Response:

a. For the Planning & Engineering Dept. (due to reorganization now known as the Power Supply Engineering Dept.) the employees involved in the preparation of budgeted staffing and associated labor direct expense amounts included in the witnesses' portion of the rate case test period budget are Bert Morikuni, Dept. Administrator, Ross Sakuda, Generation Planning Director, Dean Arakawa, Superintendent Technical Services Division, Mike Yuen, Principal Engineer Power Plant Engineering Division, and Ken Fong, Project Manager.

b. To be provided, workpapers will be sent via interoffice mail.

Labor Manhour Breakdown - 2005

	General Planning	Power Purchase Support	Regulatory Support	Capital Project Support	IRP Support (GAH - originator)	Rate Case Activities: HECO	Rate Case Activities: HELCO (Non-Billable)	Rate Case Activities: MECO (Non-Billable)	Vacation	Holidays	Subtotal	TOTAL
HECO	7,806	400	0	0	1,280	1,090	0	0	1,200	1,040	12,816	12,816
HELCO												
Production Activities (N. Uchida - originator)	0										0	
Engineering Activities (C. Nagata - originator)	1,762	100	220	120							2,202	
IRP Activities (G. Hashiro - originator)					2,228						2,228	
Subtotal HELCO												4,430
MECO												
Production Activities (S. Kiyonaga - originator)	1,900	120	80								2,100	
Engineering Activities (N. Shinyama - originator)				80							80	
IRP Activities (G. Hashiro - originator)					1,374						1,374	
Subtotal MECO												3,554
RHI												
RE RFPP (M. E. Nordyke-Grace)	0										0	0
GRAND TOTAL	11,468	620	300	200	4,882	1,090	0	0	1,200	1,040	20,800	20,800

8,206 Non-Projects

Projects

RHS
2/19/04

Forecasted YB Labor Hours
2004-2005
HECO

	2005		2006	
General Planning				
Data for Utility Analysts	80		80	
Adequacy of Supply	80		80	
Wall St Surveys	80		80	
PURPA	0		200	
Administrative (status rpts, staff mtgs, budget)	140		140	
Software/hardware support (pmonth, proscreen, etc)	120		120	
Proscreen/PMONTH Database Updates/Benchmarking	120		120	
Planning Analyses				
Intermittent Generation Assessment Protocol	0		0	
Honolulu Power Plant Retirement Scenarios	310		310	
Resource Plan Development	3,107		6,370	
General	249		250	
Rev. Req. for Electricity Price Forecast	60		60	
Fuel Consumption Forecasts	24		24	
Docket 7310 Monthly Avoided Energy Costs Calc.	0		0	
DSM Work Group support	300		100	
Forecast Planning Analyst Work	1,856		1,808	
Fuel Price Forecasting Work	400		400	
Competitive Bidding Docket	200		0	
PUC DG Docket	200		0	
Utility CHP Program	400		0	
Comments on Outside Studies	80		80	
Subtotal		7,806		10,222
Purchase Power Support				
Avoided Cost Calculations				
Proposal 1	200		0	
Proposal 2	200		0	
Other	0		0	
Subtotal		400		0
Regulatory - Rate Case	1,090	1,090	0	0
Regulatory - Other				
General	0		0	
Other	0		0	
Subtotal		0		0
Capital				
Barbers Point SCCT - PUC Application	0		0	
Misc	0		0	
Subtotal		0		0
IRP (See IRP Assumption tab)				
Misc IRP Activities	200		120	
DSM Avoided Cost Calculations	80		80	
IRP-3 (Filing, Regulatory Proceedings)	1,000		0	
IRP-3 Annual Evaluation Report	0		0	
Subtotal		1,280		200
TOTAL		10,576		10,422

Overview of Forecasted Labor Manhours
Generation Planning Division (YB)

	2005		2006	
SUPPLY				
Gross Available Manhours				
10 people		**20,800**		**20,800**
Non-Productive Manhours				
Vacation	-1,200		-1,400	
Holidays	-1,040		-1,120	
Leave	0		0	
Subtotal	-2,240	-2,240	-2,520	-2,520
Net Available Manhours		18,560		18,280
DEMAND				
HECO	10,576		10,422	
RHI	0		0	
HELCO	4,430		3,467	
MECO	3,554		4,391	
Subtotal	18,560	18,560	18,280	18,280
Total Surplus/Deficit		0		0
Net Avail Hours				
HECO Supply				
RHS (80%)	1,421		1,414	
CKC (100%)	1,856		1,808	
AJG (10%)	186		185	
NFR (10%)	186		181	
LKG (50%)	948		924	
HSH (10%)	182		181	
GRI (10%)	190		185	
MSN (100%)	1,856		1,848	
CTS (100%)	1,856		1,808	
New Planning Engr (100%)	1,896		1,888	
		10,575		10,422
HECO Demand		10,576		10,422
HECO Surplus/Deficit		-1		0
HELCO Supply				
RHS (10%)	178		177	
AJG (90%)	1,670		1,663	
HSH (90%)	1,634		1,627	
LKG (50% / 0%)	948		0	
		4,430		3,467
HELCO Demand		4,430		3,467
HELCO Surplus/Deficit		0		0
MECO Supply				
RHS (10%)	178		177	
NFR (90%)	1,670		1,627	
GRI (90%)	1,706		1,663	
LKG (0% / 50%)	0		924	
		3,554		4,391
MECO Demand		3,554		4,391
MECO Surplus/Deficit		0		0
RHI Supply				
CKC (HECO)	0		0	
AJG (HELCO)	0		0	
NFR (MECO)	0		0	
		0		0
RHI Demand		0		0
RHI Surplus/Deficit		0		0
TOTAL NET SUPPLY		18,560		18,280
TOTAL DEMAND		18,560		18,280
SURPLUS/DEFICIT		0		0

PYA

2005 Forecasted Labor Hours Administrative Division			
	2005		
	RBM	LNN	BYM
PROJECTS from			
From Pillar Project file	0	0	0
Projects, Total:	0	0	0
NON-PROJECTS (Act/Loc/Ind)			
Billables			
HELCO IRP (711/HEL/BE)			0
MECO IRP (712/MAU/BD)			0
Non-Project Billables, Total:	0	0	0
O&M			
Admin Support - YB, YP work (201/WST/NE)	711	928	836
IRP Base (711/PHE/NE)	157		72
Employee evalutations (785/PHE/NE)	40		
O&M, Total:	908	928	908
Clearing			
Admin Support - YA,YC,YF,YG,YJ,YM (211/WST/NC)	868	928	908
Employee evaluations (785/PHE/NC)	40		
Clearing, Total:	908	928	908
Non-Productive			
Holiday (098)	104	104	104
Vacation (098)	160	120	160
Non-Productive, Total:	264	224	264
Labor Hour Total:	2,080	2,080	2,080
Available labor resource hours	2,080	2,080	2,080
Contract labor support (RTY)			
Avail. Hours, Total:	2,080	2,080	2,080
Surplus/(Deficit) with contract labor support	0	0	0
Surplus/(Deficit) without contract support	0	0	0

=2415 (A)

(A)

Total = 2,515 (A)

PYC

2005	
Forecasted Labor Hours	
Admin Support Division	
	2005
	YC
PROJECTS from	
From Pillar Project file	138
Projects, Total:	138
NON-PROJECTS (Act/Loc/Ind)	
Billables	
Non-Project Billables, Total:	0
O&M	
Administrative (201/WST/NE)	1,856 ✓
O&M, Total:	1,856
Clearing	
Adminstrative (211/WST/NC)	1,856
Clearing, Total:	1,856
Non-Productive	
Holiday (098)	208
Vacation (098)	240
Non-Productive, Total:	448
Labor Hour Total:	4,298
Available labor resource hours	4,160
Contract labor support (RTY)	
Avail. Hours, Total:	4,160
Surplus/(Deficit) with contract labor support	-138
Surplus/(Deficit) without contract support	-138

PYE

2005				
Forecasted Labor Hours				
Technical Services Division	Prior Year		Current Year	
	2004	2005	2005	
	PYE	PYE	PYE	PYE
PROJECTS from				
From Jan. '04 Pillar Project File	0	0	3,404	0
From July '03 Pillar Project File (HECO Projects)-CAPITAL	3,032	2,272	0	0
From July '03 Pillar Project File (Billable Projects)	80	72	0	0
Projects, Total:	3,112	2,344	3,404	0
NON-PROJECTS (Act/Loc/Ind)				
Billables				
HELCO:				
Boiler Inspection (257/RST/BE)	120	104	104	0
Helco Pipeline Audits (877/RST/BE)	0	0	0	0
MECO:				
Boiler Inspection (257/MST/BE)	0	0	0	0
External Boiler Inspections - Kahalui (257/NST/BE)	56	32	32	0
Internal Boiler Inspection - Kahalui (257/NST/BE)	24	24	24	0
VR Stamp/Unscheduled Inspections - Maalaea (257/MNS/BE)	32	40	40	0
HRSG Inspection - Maalaea (257/MNS/BE)	8	16	16	0
Pressure Vessel Inspection-Maalaea (257/MNS/BE)	8	0	0	0
Pressure Vessel Inspection-Molokai (257/GNS/BE)	0	8	8	0
Pressure Vessel Inspection-Lanai (257/ENS/BE)	0	8	8	0
Non-Project Billables, Total:	248	232	232	0
O&M				
Develop Generation Forecasts (200/WST/NE)	0	0	0	0
Mnge Contract Service for Fuel Facilities (230/KST/NE)	0	0	0	0
Develop & Maintain Policies (240/WST/NS)	600	600	600	0
Monitor Plant Operational Perf-Boiler (245/WST/NE)	2,500	2,500	2,500	0
Develop Outage & Project Plans (255/WST/NE)	2,400	2,400	2,400	0

PYF & PYM

			Fore
			Power P
		2005	
	YF	YG	YM
PROJECTS from			
PLNENGR_Jan04 Pillar Update	14,012	5,258	10,428
Adjustments:			
HECO Unit Addition			0
P1870 Power Station Misc	0	0	0
RA corrections	0	0	0
Total Adjustments:	0	0	0
Projects, Total:	14,012	5,258	10,428
NON-PROJECTS (Act/Loc/Ind)			
Billables			
HELCO Misc PP Engineering Services (211/RST/BE)	**120**		**120**
HELCO IRP (712/HEL/BE)	0		0
HELCO GAM (211/SST/BI)	**200**		**200**
MECO Fire Protection Improv Project (211/RTF/BI)			
MECO Misc PP Engr Svcs-Maalaea (211/MST/BE)	**60**		**60**
MECO Misc PP Engr Svcs-Kahului (211/NST/BE)	**60**		**60**
MECO IRP (712/MAU/BE)	0		**80**
Non-Project Billables, Subtotal:	440	0	520
O&M			
O&M/PSS field support (259/WST/NE)	120 ✓ (A)	0	480 ✓ (B)
HECO fuel facility O&M support (269/WFS/NE)	60 ✓	0	480 ✓
Fuel additive program (730/PHE/NE)			
PSRO program (240/WST/NE)	120 ✓ ✓		240 ✓ ✓
SPS/Photovoltaic projects (731/PHE/NE)	120	60	
O&M, Subtotal:	420	60	1,200
Clearing			
CADDS/EFMS (211/WST/NC)	0		480
Update Dwgs (211/WST/NC)	120	480	480
RUL/GAM engineering assistance (210/WST/NC)	240	20	480
GAIM/Tech Master Plan (210/WST/NC)	120		
Boiler PDM program (240/WST/NC)			480
APPRISE support/training (720/PHE/NC)			
Training (789/PHE/NC)	480	160	640
Employee T&D planning/managing (785/PHE/NC)	104	8	128
Budget forecasting/managing (701/PHE/NC)	180		380
Admin, staff mtgs, misc studies, etc. (211/WST/NC)	1,150	100	2,100
Clearing, Subtotal:	2,394	768	5,168
Non-Project, Total:	**3,254**	**828**	**6,888**

PYF
Σ(A) = 300 hrs

PYM
Σ(B) = 1,200 hrs

PYJ

2005						
Forecasted Labor Hours						
Project Management Division						
		Prior Year		Prior Year		Current Year
	2002	2003	2004	2004	2005	2005
	KF	KF	KF	KF	KF	KF
Pillar Project File						
PLNENGR-JUN02_6-02	***1,644***	*1,980*	*2,397*	*0*	*0*	*0*
From July '03 Pillar Project file (KF)				2,565	2,232	
From Jan. '04 Pillar Project file (KF)						96
Projects, Total:	1,644	1,980	2,397	2,565	2,232	96
NON-PROJECTS (Act/Loc/Ind)						
Billables						
CHP Units - Grand Wailea Resort	0	200	400	0	0	0
Non-Project Billables, Total:	0	200	400	0	0	0
O&M						
Develop Business - DOD Partnershop (112/PHE/NE)	120	0	0	0	0	0
Develop & Administer Business Plans (700/PPO/NE)	120	0	0	0	0	0
IRP - Base (711/PHE/NE)	0	0	0	200	120	**240**
Research New Technology (730/PPO/NE)	80	0	0	0	0	0
O&M / PSS Field Support (259/WST/NE)	0	0	0	0	0	**1,376** ✓
O&M, Total:	320	0	0	200	120	1,616
Clearing						
Plan & Improve Projects (211/WST/NP)	80	0	0	0	0	0
Training (789/PHE/NC)	40	0	0	0	0	0
Adminstrative, staff meetings (211/WST/NC)	156	0	0	104	104	104
Clearing, Total:	276	0	0	104	104	104
Non-Productive						
Holiday (098)	112	104	112	104	112	104
Vacation (098)	120	120	120	120	160	160
Non-Productive, Total:	232	224	232	224	272	264
Labor Hour Total:	2,472	2,404	3,029	3,093	2,728	2,080
Available labor resource hours	2,088	2,096	2,080	2,096	2,080	2,080
Contract labor support (RTY)						
Avail. Hours, Total:	2,088	2,096	2,080	2,096	2,080	2,080
Surplus/(Deficit) with contract labor support	-384	-308	-949	-997	-648	0
Surplus/(Deficit) without contract support	-384	-308	-949	-997	-648	0

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Non-Projects - Labor Hours

RA	Prod Oper Hours	Prod Maint Hours	Total Hours
PCB	288	0	288

PCB

Paco, May
From: Yim, Karen
Sent: Wednesday, December 29, 2004 1:23 PM
To: Paco, May
Subject: FW: Rate Case - Budget labor and nonlabor documentation needed

Attachments: Budget Input Form - Labor2005 (RC).xls

Backup for RA PCB.....

From: Marzano, Victoria
Sent: Sunday, December 26, 2004 12:30 PM
To: Yim, Karen
Cc: Tanaka, Robb
Subject: FW: Rate Case - Budget labor and nonlabor documentation needed

Karen

Please see attached. Let me know if this satisfies your question on our RA, PCB that is charged to the Operations Production Account.

Victoria ext. 7507

From: Tanaka, Robb
Sent: Wednesday, December 22, 2004 2:08 PM
To: Marzano, Victoria; Yim, Karen
Cc: Shibata, Lloyd; Leung, Edgar
Subject: RE: Rate Case - Budget labor and nonlabor documentation needed

Karen,

Budget Input Form
- Labor2005 ...

In the above attachment, you will notice that we currently have one position (the Translation System Coordinator) in the Customer Accounting & Billing Section of the Customer Account Services Division who has 288 hours in 2005 (24 hours per month) allocated to NARUC account no. 557.

Per my discussion with Edgar, this has generally been determined as follows:
- On a daily basis, the Translation System Coordinator spends ~1 hour reviewing all IPP accounts to ensure the meters have been read and properly validated / processed. Thus, ~20 hours are charged per month (240 hours per year) for this function.

- At mid-month and at month-end, the Translation System Coordinator is required to generate various reports and create various excel files to facilitate the billing process with the IPP's. In general, ~4 hours are charged per month (48 hours per year) for this function.

Should you have any questions, please feel free to call me at x7382.
Robb

From: Marzano, Victoria
Sent: Wednesday, December 22, 2004 11:58 AM

Trans Sys Coord

abor Input Sheet - NonProject
2005

Prepared by L. Shibata
Date 7/28/2003

	Rates tab card	Units tab card												
Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
		(enter employee count in "Units tab card")												
	Available Hou	1	1	1	1	1	1	1	1	1	1	1	1	12
		(enter hours in "Units tab card")												
RN	MERN	-	8	8	-	8	8	8	8	8	8	16	16	96
RN	MERN		20		20	10	20		20		20	10		120
RN	MERN													-
RN	MERN													-
RN	MERN	24	24	24	24	24	24	24	24	24	24	24	24	288
RN	MERN	144	108	152	124	134	124	136	132	144	116	126	136	1,576
RN	MERN													-
RN	MERN													-
RN	MERN													-
RN	MERN													-
RN	MERN													-
RN	MERN													-
RN	MERN													-
RN	MERN													-
/Pgm Demand		168	160	184	168	176	176	168	184	176	168	176	176	2,080
		168	160	184	168	176	176	168	184	176	168	176	176	2,080
		-	8	8	-	8	8	8	8	8	8	16	16	96
		168	160	184	168	176	176	168	184	176	168	176	176	2,080

ars due to Project Demand hours (which are budgeted in the Project file)

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Non-Projects - Labor Hours

RA	Prod Oper Hours	Prod Maint Hours	Total Hours
PHS	1,001	0	1,001

INTEROFFICE CORRESPONDENCE

Hawaiian Electric Co., Inc.

December 29, 2004

To: Aaron Fujinaka
Manager, Power Supply

From: Eugene Uemura
Director, Security Division

Subject: HECO Rate Case – Request for Information
NARUC ACCOUNT: 506 – Production Operations

Per Patsy Nanbu's memo of December 21, attached are the responses required for Safety, Security & Facilities, Security Division (HS). Also attached are the supporting documents.

Should you have any questions concerning the attached information, please contact:

Eugene Uemura, Director
Alan Cardoza, Captain
Security Division
Safety, Security & Facilities Department
Phone: Geno: 543-7853
Alan: 543-4385

Mail Stop Code: WAG - HS

Thank you and Happy New Year!

GS:s
Attachment

cc: E. Uemura
A. Cardoza

DEC 30 2004

C ^ "R
urity Facilities

PHS - Secu' ' Division

Area IVISION	Acct Blk	Acct Blk Descr	NARUC	Exp Class	_Proj	_Act	_Loc	_EE	FY05	a	b	c	d	e	f	g
ty	B30	Prod Oper	**506**	Labor	NPHZZZZZ	**933**	HST	150	6,992.76	Eugene Uemura, Director & Alan Cardoza, Captain	Yes - See attached spread sheet	Hours were divided among the three areas of responsibility. Hours were calculated by time spent at each location	NA	NA	NA	NA
ty	B30	Prod Oper	**506**	Labor	NPHZZZZZ	**933**	KST	150	11,562.59	Eugene Uemura, Director & Alan Cardoza, Captain	Yes - See attached spread sheet	Hours were divided among the three areas of responsibility. Hours were calculated by time spent at each location	NA	NA	NA	NA
ty	B30	Prod Oper	**506**	Labor	NPHZZZZZ	**933**	WST	150	12,145.32	Eugene Uemura, Director & Alan Cardoza, Captain	Yes - See attached spread sheet	Hours were divided among the three areas of responsibility. Hours were calculated by time spent at each location	NA	NA	NA	NA
ty	B30	Prod Oper	**506**	Non-Labor	NPHZZZZZ	**933**	HST	501	69,999.96	Eugene Uemura, Director & Alan Cardoza, Captain	Yes - See attached spread sheet	Based on 168 hrs a week at the facility. Amount was from the bidding process	NA	NA	NA	NA
ty	B30	Prod Oper	**506**	Non-Labor	NPHZZZZZ	**933**	KST	501	251,808.00	Eugene Uemura, Director & Alan Cardoza, Captain	Yes - See attached spread sheet	Based on 208 hrs a week at the facility. Amount was from the bidding process	NA	NA	NA	NA
ty	B30	Prod Oper	**506**	Non-Labor	NPHZZZZZ	**933**	WST	501	262,608.00	Eugene Uemura, Director & Alan Cardoza, Captain	Yes - See attached spread sheet	Based on 248 hrs a week at the facility. Amount was from the bidding process	NA	NA	NA	NA
			~~506~~	~~NON LABOR COSTS~~		~~933~~			~~615,116.39~~							

CA-IR-1
DOCKET NO. 04-0113
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R-1 **LABOR**

NARUC: 506 ACTIVITY: 933

EXP ELEMENT: 150 Labor - HST

1.a. Employee involved in preparing the budget of both labor & direct expense amounts: Alan Cardoza

1.b. Are copies of calculations, spreadsheets workpapers, or other analyses for each employee identified above used to calculate required staffing levels & overtime hours by Department, RA, Activity & NARUC Accounts: yes - See spreadsheet attached

1.c. Describe the actual level that existed at the date the budget was prepared or otherwise served as a base for preparing the budget. estimated labor hours for Security coordinator to manage operations and supervise contract staff

1.d. For each budgeted employee position that is added to existing actual force levels (as of the date the budget was prepared) explain the analyses undertaken to determine that each added position was necessary and should be filled in order to meet present or anticipated work requirements. Explain how the anticipated work requirements were defined and determined.

1.e. Describe and to the extent possible; Quantify the backlog of work, unfinished projects, deferred maintenance and other labor requirements unfulfilled at present staffing levels, that will be satisfied by adding the employee positions identified in your response above.

1.f. Provide complete copies of all studies, analyses, workpapers, projections, notes, correspondence, assumptions and other documents associated with your responses to parts d and e above.

1 LABOR

NARUC: 506 ACTIVITY: 933

EXP ELEMENT: 150 Labor - KST

1.a. Employee involved in preparing the budget of both labor & direct expense amounts: Alan Cardoza

1.b. Are copies of calculations, spreadsheets workpapers, or other analyses for each employee identified above used to calculate required staffing levels & overtime hours by Department, RA, Activity & NARUC Accounts: See spreadsheet attached

1.c. Describe the actual level that existed at the date the budget was prepared or otherwise served as a base for preparing the budget. estimated labor hours for Security coordinator to manage operations and supervise contract staff

1.d. For each budgeted employee position that is added to existing actual force levels (as of the date the budget was prepared) explain the analyses undertaken to determine that each added position was necessary and should be filled in order to meet present or anticipated work requirements. Explain how the anticipated work requirements were defined and determined.

1.e. Describe and to the extent possible; Quantify the backlog of work, unfinished projects, deferred maintenance and other labor requirements unfulfilled at present staffing levels, that will be satisfied by adding the employee positions identified in your response above.

1.f. Provide complete copies of all studies, analyses, workpapers, projections, notes, correspondence, assumptions and other documents associated with your responses to parts d and e above.

'R-1 **LABOR**

NARUC: 506 ACTIVITY: 933

EXP ELEMENT: 160 Labor - WST

1.a. Employee involved in preparing the budget of both labor & direct expense amounts: Alan Cardoza

1.b. Are copies of calculations, spreadsheets workpapers, or other analyses for each employee identified above used to calculate required staffing levels & overtime hours by Department, RA, Activity & NARUC Accounts: See attached

1.c. Describe the actual level that existed at the date the budget was prepared or otherwise served as a base for preparing the budget. estimated labor hours for Security coordinator to manage operations and supervise staff

1.d. For each budgeted employee position that is added to existing actual force levels (as of the date the budget was prepared) explain the analyses undertaken to determine that each added position was necessary and should be filled in order to meet present or anticipated work requirements. Explain how the anticipated work requirements were defined and determined.

1.e. Describe and to the extent possible; Quantify the backlog of work, unfinished projects, deferred maintenance and other labor requirements unfulfilled at present staffing levels, that will be satisfied by adding the employee positions identified in your response above.

1.f. Provide complete copies of all studies, analyses, workpapers, projections, notes, correspondence, assumptions and other documents associated with your responses to parts d and e above.

Labor Input Sheet - NonProject
2005

Cardoza

Resp Area (RA) PHS

Labor Class HS

Prepared by Alan Cardoza

Date

Dimension tab card								Rates tab card	Units tab card												
Line Item	RA	Act	Loc	Ind	Proj	EE	Labor Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Labor Supply:									*(enter employee count in "Units tab card")*												
Labor Supply	PHS	*Supply	*Supply	*Supply	*Supply	*Supply	HS	_ Available Hours	1	1	1	1	1	1	1	1	1	1	1	1	12
Labor Demand:									*(enter hours in "Units tab card")*												
Holiday	PHS	098	PHE	ND		107	HS	HS	0	8	8	0	8	8	8	8	8	8	16	16	96
Vacation	PHS	098	PHE	ND		107	HS	HS	40	40	40										120
Other NPW	PHS	098	PHE	ND		107	HS	HS													0
Workers Comp	PHS	098	PHE	ND		108	HS	HS													0
Develop & Admin Bus Pl	PHS	700	PHE			150	HS	HS	10	10	10	10	15	15	15	15	15	15	15	15	160
Develop & Man Forecast	PHS	701	PHE			150	HS	HS	10	10	10	10	15	15	15	15	15	15	15	15	160
Process Inv & Other Pay	PHS	843	PHE			150	HS	HS	10	10	10	15	15	15	15	15	15	15	15	15	165
WAAIAU PP	PHS	933	WST			150	HS	HS	33	33	33	33	33	33	33	33	33	33	33	33	396
KAHE PP	PHS	933	KST			150	HS	HS	17	17	17	30	30	38	38	38	38	38	38	38	377
HONOLULU PP	PHS	933	HST			150	HS	HS	17	17	17	22	22	22	22	22	22	20	15	15	233
Plan for & Deter Emp Train	PHS	785	PHE			150	HS	HS	16	10	15	26	20	15	15	18	15	20	10	10	190
Maintain Relationship	PHS	749	PHE			150	HS	HS	15	5	24	22	18	15	7	20	15	4	19	19	183
	PHS					150	HS	HS													0
	PHS					150	HS	HS													0
								Total NonProj/Pgm Demand	168	160	184	168	176	176	168	184	176	168	176	176	2,080
								Total Supply	168	160	184	168	176	176	168	184	176	168	176	176	2,080
									0	0	0	0	0	0	0	0	0	0	0	0	0
Holidays - 2/21, 3/25, 5/30, 6/10, 7/4, 8/19, 9/5, 10/10, 11/11, 11/24, 12/23 (1/2), 12/26, 12/30 (1/2)									0	8	8	0	8	8	8	8	8	8	16	16	96
Available hours per employee									168	160	184	168	176	176	168	184	176	168	176	176	2080
									0	0	0	0	0	0	0	0	0	0	0	0	

Ⓐ = 1,001 hrs Total PHS

NOTE: Total NonProject Demand hours may *NOT* equal Total Supply hours due to Project Demand hours (which are budgeted in the Project file)

S/B 228 Ⓐ (5 diff, immaterial

S:\ManagementAccounting\MacctBud\Forecast\Forms\AI 2005 Labor Input Sheet.xls

12/27/2004

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Hawaiian Electric Company, Inc.
2005 Rate Case Data
Non-Projects - Labor Hours

RA	Prod Oper Hours	Prod Maint Hours	Total Hours
PNC	24	0	24

PNC

Paco, May
From: Yim, Karen
Sent: Wednesday, December 29, 2004 1:04 PM
To: Paco, May
Subject: FW: Rate Case - Budget labor and nonlabor documentation needed

Attachments: LABOR INPUT 2005 (2).xls

May - Legal's Labor backups.....

From: Li, Susan
Sent: Wednesday, December 29, 2004 11:36 AM
To: Yim, Karen
Cc: Iwanaga, Lorrie; Pruss, Rachelle
Subject: FW: Rate Case - Budget labor and nonlabor documentation needed

LABOR INPUT 2005 (2).xls (248 ...

Karen,

Legal's labor expenses are derived from the attached spreadsheet of estimated labor hours, which is based on an estimate by employee of projected hours for various activity codes (HECO's ABM codes, not the NARUC codes). The estimate comes from prior year labor hour projections, updated to include any forecasted new activities.

Susan A. Li
Hawaiian Electric Company
(808) 543-4791
susan.li@heco.com

From: Yim, Karen
Sent: Tuesday, December 21, 2004 5:54 PM
To: Takata, Valerie; Seki, Arthur; Ignacio, Lloyd; Koga, Kathy; Marzano, Victoria; Young, Patti; Chun, Joycelynn; Paco, May; Rinehart, Douglas; Tomita, Kirk; Nakamoto, Barry; Hirashima, Donna; Li, Susan; Hannigan, Carol; Anbe, Kurt; Morikuni, Bert; Yuen, Michael
Cc: Ornellas, Larry; Hiramoto, Lane; Mark, Karen; Fujinaka, Aaron
Subject: Rate Case - Budget labor and nonlabor documentation needed

Please send supporting documentation for NARUC 500 thru 557 to me since I am assisting Aaron Fujinaka, who is the Other Production O&M witness. Please note that support for all labor and nonlabor budget items are needed. If there is someone else who will be responsible for gathering the information, can you forward this e-mail to that person. Let me know if you have questions.

Karen Yim

HECO Production O&M

Mail Code: WP2-IB

Labor Input Sheet - NonProject/NonProgram

2005

Resp Area (RA) PNC
Labor Class Facilitator (LRR)

Prepared by CKF
Date 4/16/2003

Dimension tab card								Rates tab car	Units tab card													
Line Item	RA	Act	Loc	Ind	Proj	EE	Labor Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
Labor Supply:									*(enter employee count in "Units tab card")*													
Labor Supply	PNC	*Supply	*Supply	*Supply	*Supply	*Supply	Facilitator (LRR)	_ Available Ho	1	1	1	1	1	1	1	1	1	1	1	1	12	
Labor Demand:									*(enter hours in "Units tab card")*													
Holiday	PNC	098	PHE	ND		107	Facilitator (LRR)		0	8	8	0	8	8	8	8	8	8	16	16	96	4.6%
Vacation	PNC	098	PHE	ND		107	Facilitator (LRR)				40						40			40	120	5.8%
Other NPW	PNC	098	PHE	ND		107	Facilitator (LRR)														0	0.0%
Workers Comp	PNC	098	PHE	ND		108	Facilitator (LRR)														0	0.0%
Planning & Engineering-HEC	PNC	211	KST	NE	NPNCZZZZ	150	Facilitator (LRR)	AD000667	2	2	2	2	2	2	2	2	2	2	2	2	24	1.2%
Engineering-HECO	PNC	301	OAH	NE	NPNCZZZZ	150	Facilitator (LRR)	AD000666	68	66	57	48	46	47	29	27	28	29	27	28	500	24.0%
Project Mgmt.-HECO	PNC	307	OAH	NE	NPNCZZZZ	150	Facilitator (LRR)	AD000668	16	9	6	16	16	16	16	16	16	16	16	8	167	8.0%
Construction & Maint.-HECO	PNC	320	OAH	NE	NPNCZZZZ	150	Facilitator (LRR)	AD000664	4	4	4	4	4	4	4	4	4	4	4	4	48	2.3%
Customer Installations-HEC	PNC	600	OAH	NE	NPNCZZZZ	150	Facilitator (LRR)	AD000018	16	10	6	16	16	16	16	16	16	16	16	16	176	8.5%
Legislative-HECO	PNC	745	PHE	NE	NPNCZZZZ	150	Facilitator (LRR)	AD000051	15	10	5	15									45	2.2%
Emergency Response-HEC	PNC	795	PHE	NE	NPNCZZZZ	150	Facilitator (LRR)	AD000456	2	2	2	2	2	2	2	2	2	2	2	2	24	1.2%
Safety, Security, Fac.-HECO	PNC	795	PHE	NE	NPNCZZZZ	150	Facilitator (LRR)	AD000066	8	8	8	8	8	8	8	8	8	8	8	8	96	4.6%
System Operations-HECO	PNC	325	OAH	NE	NPNCZZZZ	150	Facilitator (LRR)	AD000674	2	2	2	2	2	2	2	2	2	2	2	2	24	1.2%
Contracts-HECO	PNC	844	PHE	NE	NPNCZZZZ	150	Facilitator (LRR)	AD000011	8	8	8	8	8	8	8	8	8	8	8	8	96	4.6%
Litigation-PI-HECO	PNC	950	PHE	NE	NPNCZZZZ	150	Facilitator (LRR)	AD000055	13	10	14	15	15	15	15	15	15	15	15	15	172	8.3%
Litigation-PD-HECO	PNC	951	PHE	NE	NPNCZZZZ	150	Facilitator (LRR)	AD000058	4	3	4	8	8	8	8	8	8	8	8	8	83	4.0%
HECO-Meetings/Reports	PNC	960	PHE	NE	NPNCZZZZ	150	Facilitator (LRR)	AD000340	5	5	5	5	5	5	5	5	5	5	5	5	60	2.9%
Legal-General-HECO	PNC	960	PHE	NE	NPNCZZZZ	150	Facilitator (LRR)	AD000047	13	13	13	19	36	35	45	63	14	45	47	14	357	17.2%
PROJECTS																						
HONOLULU CITY LINE	PNC	307	OAH	NI	P4850000	150	Facilitator (LRR)	EE000139	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
EMS REVITALIZATION	PNC	306	OAH	NI	P0000717	150	Facilitator (LRR)														0	0.0%
																					0	
																					0	
							Total NonProj/Pgm Demand		176	160	184	168	176	176	168	184	176	168	176	176	2,088	100.4%
							Total Supply		168	160	184	168	176	176	168	184	176	168	176	176	2,080	
								LEGAL-GENER/	-8	0	0	0	0	0	0	0	0	0	0	0	-8	
Holidays - 2/21, 3/25, 5/30, 6/10, 7/4, 6/19, 9/5, 10/10, 11/11, 11/24, 12/23 (1/2), 12/26, 12/30 (1/2)									0	8	8	0	8	8	8	8	8	8	16	16	96	
Available hours per employee									168	160	184	168	176	176	168	184	176	168	176	176	2080	

NOTE: Total NonProject/NonProgram Demand hours may *NOT* equal Total Supply hours due to Project/Program Demand hours (which are budgeted in the Project model)

S:\Management\Accounting\MacctBud\Forecast\Forms\LABOR INPUT 2005 (2).xls

12/29/2004 1:07 PM

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Hawaiian Electric Company, Inc.
2005 Rate Case Data
Non-Projects - Labor Hours

RA	Prod Oper Hours	Prod Maint Hours	Total Hours
PNG	5,754	912	6,666

Paco, May

From: Motoki, Rosella
Sent: Tuesday, January 04, 2005 3:16 PM
To: Paco, May; Yim, Karen
Subject: Rate Case Supports to be provided to Production Witness
Attachments: 2005 O&M Explanations.xls

Hi May,

Here is the revised spreadsheet that includes labor hours and standard labor rates. As we discussed on the phone, there are no Pillar input sheets as Energy Projects is a small, new department and the forecast numbers were estimated and entered informally.

Rosella Motoki
rosella.motoki@heco.com
(808) 543-4808

Paco, May
From: Motoki, Rosella
Sent: Monday, January 03, 2005 3:40 PM
To: Paco, May; Yim, Karen
Cc: Yamashita, Dana; Seu, Scott
Subject: FW: Rate Case Supports to be provided to Production Witness

Importance: High

Attachments: 2005 O&M Explanations.xls; HECO Rate Case - Request for Information; RE: HECO Rate Case - Request for Information; EngProj.pdf

Hi May,

The attached spreadsheet contains the explanations for the Energy Projects O&M expenses, please let me know if more detailed explanations are required. The employees involved in preparing the labor and non-labor expense amounts were Scott Seu (Manager, Energy Projects) and Dana Yamashita (Secretary, Energy Projects),

2005 O&M
xplanations.xls (22 .

From: Paco, May
Sent: Thursday, December 30, 2004 8:09 AM
To: Motoki, Rosella
Cc: Yim, Karen
Subject: RE: Rate Case Supports to be provided to Production Witness
Importance: High

Rosella,
Per our telephone discussion, attached are the e-mails that Patsy Nanbu (Regulatory Affairs) sent regarding the CA IRs 1 & 2 and the Pillar pdf file for your department mentioned in Pat's e-mail (obtained from H:\OPEN2ALL\RegAff\2005 TY Rate Case\Pillar Reports\Direct O&M\Non-Project (Dept) folder).

HECO Rate Case - Request for I... | RE: HECO Rate Case - Request f... | EngProj.pdf (173 KB)

For NARUC 500 thru 557 (Prod Oper & Prod Maint), please send me the following:

1. Labor
   a. Supporting documentation for EACH line item (each code block).
   b. Identify employee(s) involved in preparation of the labor budget – provide Position Title (i.e., Energy Projects Mgr).

2. Non-Labor
   a. Supporting documentation for EACH line item (each code block).
      * Noted there's no non-labor items > $50K.
   b. Identify employee(s) involved in preparation of the non-labor budget – provide Position Title (i.e., Energy Projects Mgr).

Dept	RA	Resp Area	Acct Blk	Acct Blk Descr	NARUC	Exp Class	Proj	Act	Loc	EE	FY05 - $	FY05-Hours	Std Rate	Explanation
Engy Proj	PNG	EnergyProjects	B30	Prod Oper	546	Labor	NPASVP7Z	211	PCG	150	$118,386.20	3,860	$30.67	TC - Senior Technical Services Engineer (5)
Engy Proj	PNG	EnergyProjects	B30	Prod Oper	549	Labor	NPASVP7Z	701	PCG	150	$22,107.04	932	$23.72	I - Budget/Statistical Analyst
Engy Proj	PNG	EnergyProjects	B30	Prod Oper	549	Labor	NPASVP7Z	711	PCG	150	$1,578.00	30	$52.60	E - Manager, HECO IRP
Engy Proj	PNG	EnergyProjects	B30	Prod Oper	549	Labor	NPASVP7Z	720	PCG	150	$22,107.04	932	$23.72	I - Secretary
Engy Proj	PNG	EnergyProjects	B30	Prod Oper	549	Non-Labor	NPASVP7Z	700	PCG	205	$5,400.00			Office Supplies
Engy Proj	PNG	EnergyProjects	B30	Prod Oper	549	Non-Labor	NPASVP7Z	700	PCG	501	$2,040.00			Manager - parking stall rental, $170/month
Engy Proj	PNG	EnergyProjects	B30	Prod Oper	549	Non-Labor	NPASVP7Z	700	PCG	520	$3,360.00			Manager - Mainland Travel,
Engy Proj	PNG	EnergyProjects	B30	Prod Oper	549	Non-Labor	NPASVP7Z	700	PCG	520	$3,360.00			Engineer - Mainland Travel
Engy Proj	PNG	EnergyProjects	B30	Prod Oper	549	Non-Labor	NPASVP7Z	700	PCG	521	$5,196.00			Manager - Meal & Entertainment
Engy Proj	PNG	EnergyProjects	B30	Prod Oper	549	Non-Labor	NPASVP7Z	700	PCG	521	$5,196.00			Engineer - Meals & Entertainment
Engy Proj	PNG	EnergyProjects	B30	Prod Oper	549	Non-Labor	NPASVP7Z	700	PCG	521	$500.00			Secretary - Meals
Engy Proj	PNG	EnergyProjects	B30	Prod Oper	549	Non-Labor	NPASVP7Z	700	PCG	520	$6,600.00			Manager - Interisland Travel
Engy Proj	PNG	EnergyProjects	B30	Prod Oper	549	Non-Labor	NPASVP7Z	700	PCG	520	$6,600.00			Engineer - Inerisland Travel
				Total Prod Oper							$202,430.28			
Engy Proj	PNG	EnergyProjects	B30	Prod Maint	551	Labor	NPASVP7Z	210	PCG	150	$47,971.20	912	$52.60	E - Manager, Energy Projects
Engy Proj	PNG	EnergyProjects	B30	Prod Maint	551	Non-Labor	NPASVP7Z	210	PCG	301	$8,280.00			Pool Car
				Total Prod maint							$56,251.20			
				~~Total~~							~~$258,681.48~~	6,666	hrs	

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Hawaiian Electric Company, Inc.
2005 Rate Case Data
Non-Projects - Labor Hours

RA	Prod Oper Hours	Prod Maint Hours	Total Hours
PRC	0	236	236
PRD	1,800	0	1,800
PRE	420	0	420
PRI	0	814	814
PRR	0	1,084	1,084
PRX	0	900	900
	2,220	3,034	5,254

PRC - PRX

Paco, May
From: Yim, Karen
Sent: Wednesday, December 29, 2004 1:05 PM
To: Paco, May
Subject: FW: Rate Case Supports to be provided to Production Witness

Attachments: Yim.xls

May - Sys Ops backups.....

From: Nakamura, Colleen
Sent: Tuesday, December 28, 2004 6:48 PM
To: Yim, Karen
Subject: FW: Rate Case Supports to be provided to Production Witness

Karen, attached is whatever information I was able to get. Call me if you have

Yim.xls (50 KB)

questions. Hope this helps.

From: Anbe, Kurt
Sent: Monday, December 27, 2004 8:19 AM
To: Yim, Karen
Cc: Nakamura, Colleen
Subject: RE: Rate Case Supports to be provided to Production Witness

System Operation documentation should come from Colleen Nakamura.

From: Yim, Karen
Sent: Sunday, December 26, 2004 12:26 PM
To: Morikuni, Bert; Marzano, Victoria; Motoki, Rosella; Hannigan, Carol; Murakami, Blane; Li, Susan; Hirashima, Donna; Takata, Valerie; Seki, Arthur; Anbe, Kurt
Cc: Sekiya, Irene; Ornellas, Larry; Fujinaka, Aaron
Subject: Rate Case Supports to be provided to Production Witness

Hi Everyone - I looked through all the Department PDF files provided by Regulatory and noted those areas needing to provide documentation to the Production witness, Aaron Fujinaka. I have indicated names of individuals who will be providing me with the information. If there is someone else I need to work with, can you let me know. Regulatory had provided detailed instructions on what information needs to be provided.

Note that in addition to providing documentation for all your pillar data input amounts as shown in your PDF file, for non-labor we are being asked to explain our amounts exceeding $50,000 (bid solicitation, price time quantity estimation, historical cost escalation, etc.)

Please provide information by Wed. Dec. 29 or earlier if possible. I'll be calling you too to discuss open statuses. If you have any questions please feel either myself or Irene Sekiya in Regulatory.

Dept/Div	RA	NARUC	Contact		Status
Admin-P&E	PYA	Prod Oper	B.Morikuni	Open	
Gener Planning	PYB	Prod Oper	B.Morikuni	Open	

SysOp	PRC	Communications	B31	Prod Maint	514	Labor	NPRZZZZZ	$8,142	✓	236 hrs
	a.	Glenn Yoshiyama								
	b.	No documentation. Trended relative to prior years' forecasts/actuals.								
		Includes maintenance of								
		- system hotline and generation hotline								
		- fiber optic maintenance								
		- power plant radios								
		- 800 mhz backup communications system								
		- power plant RTU's								
		- generation control RTU's								
		- telemetry system (frequency/voltage)								
	PRD	Operating Dispatch	B30	Prod Oper	500	Labor	NPRZZZZZ	$62,532	✓	1,800 hrs
	a.	Dean Mizumura								
	b.	No documentation available.								
		Based on labor for one Operations Engineer full time on generation scheduling								
		and coordination.								
	PRE	Operating Engineering	B30	Prod Oper	506	Labor	NPRZZZZZ	$13,448	✓	420 hrs
	a.	Peter Okunami								
	b.	Generation dispatch - labor in support of generation scheduling and coordination								
		as primary backup for Operations Engineer in PRD; no documentation available.								
	PRI	Instrument & Control	B31	Prod Maint		Labor	NPRZZZZZ	$27,422	✓	814 hrs
	PRI	Instrument & Control	B31	Prod Maint	514	Non-Labor	NPRZZZZZ	$600	✓	
	a.	Richard Freitas								
	b.	No documentation available; maintenance work is planned around Power Plant's								
		5-year plant overhaul/maintenance schedule; estimates are trended								
		based on prior years' actuals/forecasts; work includes:								
		- power plant meter calibration (required by PUC)								
		- power plant trouble calls (predictive/preventive)								
		- power plant equipment, RTU's maintenance								
		- any minor parts required for repairs								
		- all work is usually scheduled during the overhaul cycles whenever possible to								
		take advantage of down times for Hon, Kahe, Waiau, etc.								
	PRR	Relay	B31	Prod Maint		Labor	NPRZZZZZ	$35,983	✓	1,084 hrs
	PRR	Relay	B31	Prod Maint		Non-Labor	NPRZZZZZ	$2,880	✓	
		No documentation available; maintenance work is planned around Power Plant's								
		5-year plant overhaul/maintenance schedule; estimates are trended								
		based on prior years' actuals/forecasts; work includes:								
		- protection circuitry, relay tripping								
		- preventive/corrective maintenance on Hon, Kahe, Waiau, etc.								
		- any minor parts required for repairs								
	PRX	Construction Mgt.	B31	Prod Maint	511	Labor	NPRZZZZZ	$32,274	✓	900 hrs
	PRX	Construction Mgt.	B31	Prod Maint	511	Non-Labor	NPRZZZZZ	$6,000	✓	
		No documentation available; maintenance work is planned around Power Plant's								
		requests; estimates are trended based on prior years' actuals/forecasts; work								
		typically requested:								
		- concrete work, patching foundations, duct work; asphalt repairs in and around								
		the power plants;								
		- Ikaika work crews as needs of job requirements dictate								

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Projects - Labor Hours and Direct Labor by RA

RA	Prod Oper Hours	Prod Oper Amount	Prod Maint Hours	Prod Maint Amount	Total Hours	Total Amount
PIP	0	0	200	6,161	200	6,161
PIT	0	0	99,504	3,522,590	99,504	3,522,590
PYB	1,090	38,608	0	0	1,090	38,608
PBA	0	0	30	677	30	677
PBT	0	0	1,539	51,012	1,539	51,012
Total	1,090	38,608	101,273	3,580,440	102,363	3,619,048

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Projects - Labor Hours

RA	Prod Oper Hours	Prod Maint Hours	Total Hours
PIP	0	200	200
Total	0	200	200

Missing supporting documentation for:

Proj Description	Proj	RA	Acct Blk Descr	NARUC	Act	Loc	EE	Labor Hours	Labor Amount
Kahe Pond 1A Clean & Lining	P0000458	PIP	Prod Maint	510	212	KWW	150	200	$ 6,161

Explanation - Planning division support for project to be contracted out. Expect time needed to monitor contract.

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Projects - Labor Hours

RA	Prod Oper Hours	Prod Maint Hours	Total Hours
PIT	0	99,504	99,504
Total	0	99,504	99,504

4/7/2004 » budget manager: 1b Resource Leveling Detail Code Blk(Mo) 1:14PM

_RA	_LbrCla...	_Act	_Loc	_Ind	_Proj	_EE	Line item	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
PIT	I_TVL...	212	W09	NI	P0000601	150	W9 Gen Relay - Boiler	-40	-40	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W10	NI	P0000601	150	W10 Gen Relay - Boiler	-40	0	0	-40	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	WST	NI		150	Labor - Boiler	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	WST	NI	P0000677	150	4. Boiler Maintenance	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	WWW	NI	P0000086	150	Construction - Boiler Crew	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	WWW	NI	P0000956	150	Traveling Boiler	-300	0	0	0	0	-300	0	0	0	0	0	0	0
PIT	I_TVL...	212	WWW	NR	P0000956	150	Traveling Boiler - Removal work	-40	0	0	0	-40	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	H08	NE	P0000523	150	H8 BLR PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	H08	NE	P0000523	150	Upd Blr. Lab. 6-26-03 Hrs=5440	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	H09	NE	P0000848	150	H9 OH 2005	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	K01	NE	P0000846	150	K1 OH 2005 (1)	-7,780	0	0	0	0	0	0	-1,160	-4,336	-2,284	0	0	0
PIT	I_TVL...	257	K02	NE	P0000650	150	K2 OH BLR	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	K03	NE	P0000649	150	K3 OH BLR	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	K04	NE	P0000655	150	K4 OH BLR	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	K04	NE	P0000655	150	Upd Blr. 6-26-03 Hrs. 5168 each No	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	K04	NE	P0000845	150	K4 OH 2005 (2)	-15,720	0	0	-928	-3,872	-4,104	-4,104	-2,712	0	0	0	0	0
PIT	I_TVL...	257	K05	NE	P0000519	150	K05 BLR PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	K06	NE	P0000250	150	K6 BLR	0	0	0	0	0	0	0	0	0	0	0	0	0

_RA	_LbrCla...	_Act	_Loc	_Ind	_Proj	_EE	Line item	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
PIT	I_TVL...	260	W06	NE	P0000654	150	W6 OH BLR	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	W07	NE	P0000522	150	W7 TURB PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	W08	NE	P0000521	150	W08 TURB PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	WST	NE	NPIZZZZZ	150	mnt turb/pv Cond. Clnr & Ldr	-7,260	-605	-605	-605	-605	-605	-605	-605	-605	-605	-605	-605	-605
PIT	I_TVL...	700	PHE	NC	NPIZZZZZ	150	Dev. & Admin Bus Plans	-320	0	-80	0	0	0	-80	0	0	-80	0	0	-80
PIT	I_TVL...	789	PHE	NC	NPIZZZZZ	150	attnd trng	-2,609	-17	-327	-189	-341	-299	-141	-192	-270	-214	-439	-163	-17
PIT	I_TVL...	797	PHE	NC	NPIZZZZZ	150	sfty trng	-708	-59	-59	-59	-59	-59	-59	-59	-59	-59	-59	-59	-59
PIT	I_TVL...							-16,952	-1,305	-1,442	-1,352	-1,271	-1,273	-1,935	-1,987	-1,073	-588	-1,066	-1,945	-1,715
PIT	I_TVL...	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Labor Supply	20,800	1,680	1,600	1,840	1,680	1,760	1,760	1,680	1,840	1,760	1,680	1,760	1,760
PIT	I_TVL...	098	PHE	ND	NPIZZZZZ	107	IT Tech's Non Prod. Time	-3,237	-260	-245	-188	-245	-267	-252	-259	-267	-244	-267	-411	-332
PIT	I_TVL...	211	K01	NI	P0000610	150	Traveling Elec	-20	0	0	0	0	0	0	-20	0	0	0	0	0
PIT	I_TVL...	211	K02	NI	P0000609	150	Traveling Elec	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NI	P0000490	150	Electrical Maint - Traveling	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NI	P0000807	150	H8 TSI - Construction - Electricians	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NI	P0000814	150	4. Electrician	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NI	P0000831	150	H8 Op Console - Electrician - Constru...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NI	P0000875	150	Electrical--H8 S/B Controls	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NI	P0000895	150	H8 Main Xfmr - Install/Travel Elect	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NI	P0000935	150	Turbine Drain Program - TVL Electrical	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NR	P0000807	150	H8 TSI - Removal - Electrician	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NR	P0000814	150	5. Electrician-Removal	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NR	P0000831	150	H8 Op Console - Electrician - Removal	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P0000217	150	IT - Traveling Electricians	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P0000772	150	H92 Tvl Scr - HECO Electrician	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P0000815	150	4. Electrician	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P0000870	150	H9 Field Rewind - Install/Travel Elect	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P0000876	150	Electrical--H9 S/B Controls	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P0000935	150	Turbine Drain Program - TVL Electrical	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P9025000	150	T Field Construction--Electricians	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P9025000	150	T Training & Start-Up--Electricians	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P9107000	150	F. Construction - Electricians	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P9486000	150	T Field Construction--Electricians	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P9486000	150	T Training & Start-Up--Electricians	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NR	P0000815	150	5. Electrician-Removal	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NR	P0000870	150	H9 Field Rewind - Remove/Travel Elect	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	HST	NI		150	Labor - Electrician	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	HST	NI	P0000858	150	F. Construction - Electricians	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	HST	NI	P0000859	150	F. Construction - Electricians	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	HST	NI	P0000968	150	Traveling Elec - HPP (Process Param...	-36	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3
PIT	I_TVL...	212	HST	NI	P0000980	150	F. Construction - Electrician	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K01	NI	P0000465	150	Elec Maint.- Traveling	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K01	NI	P0000511	150	F. Construct - Elect	-100	0	0	0	0	0	0	-20	-80	0	0	0	0
PIT	I_TVL...	212	K01	NI	P0000601	150	K1 Gen Relay - Electricans	-80	0	0	0	0	0	0	0	-80	0	0	0	0
PIT	I_TVL...	212	K01	NI	P0000800	150	K1 Op Console - Electrician - Constru...	-60	0	0	0	0	0	0	-20	-20	-20	0	0	0
PIT	I_TVL...	212	K01	NI	P0000820	150	4. Electrician	-48	0	0	0	0	0	0	-16	-16	-16	0	0	0
PIT	I_TVL...	212	K01	NI	P0000830	150	4. Electrician	-600	0	0	0	0	0	0	-200	-200	-200	0	0	0
PIT	I_TVL...	212	K01	NI	P0000861	150	F. Construction - Electricians	-200	0	0	0	0	0	-40	-120	-40	0	0	0	0
PIT	I_TVL...	212	K01	NI	P0000871	150	Electrical--K1 S/B Controls	-520	0	0	0	0	-120	-120	-160	-80	-40	0	0	0
PIT	I_TVL...	212	K01	NI	P0000934	150	Turbine Drain Program - TVL Electrical	-80	0	0	0	0	0	0	-80	0	0	0	0	0
PIT	I_TVL...	212	K01	NI	P0000953	150	Traveling Elec	-16	0	0	0	0	0	0	0	-16	0	0	0	0
PIT	I_TVL...	212	K01	NI	P0001009	150	K1 Batt Bank - Install/Travel Elect	-120	0	0	0	0	0	0	0	-40	-80	0	0	0
PIT	I_TVL...	212	K01	NR	P0000800	150	K1 Op Console - Electrician - Removal	-60	0	0	0	0	0	0	-60	0	0	0	0	0
PIT	I_TVL...	212	K01	NR	P0000820	150	5. Electrician-Removal	-200	0	0	0	0	0	-200	0	0	0	0	0	0
PIT	I_TVL...	212	K01	NR	P0000830	150	5. Electrician-Removal	-200	0	0	0	0	0	-200	0	0	0	0	0	0
PIT	I_TVL...	212	K01	NR	P0001009	150	K1 Batt Bank - Remove/Travel Elect	-80	0	0	0	0	0	0	0	-80	0	0	0	0

257 - W04 - 150 E (25) 16,100
260 - " - 150 E (26) 12,600

4/7/2004 » budget manager: 1b Resource Leveling Detail Code Blk(Mo) 1:14PM

_RA	_LbrCla...	_Act	_Loc	_Ind	_Proj	_EE	Line item	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
PIT	I_TVL...	212	W07	NI	P0000818	150	W7 Exciter/Reg - Electrician - Install	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W07	NI	P0000856	150	W7 Main Xfmr - Install/Travel Elect	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W07	NI	P0000857	150	W7 Aux Xfmr - Install/Travel Elect	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W07	NI	P0000936	150	Turbine Drain Program - TVL Electrical	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W07	NI	P7590000	150	F. Construction - Electricians	-400	0	0	0	0	0	0	0	0	0	0	0	-400
PIT	I_TVL...	212	W07	NR	P0000856	150	W7 Main Xfmr -Remove/Travel Elect	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W07	NR	P0000857	150	W7 Aux Xfmr - Remove/Travel Elect	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NI	P0000097	150	W8 S/B Controls - Install Tvl Electr	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NI	P0000213	150	IT - Traveling Electricians	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NI	P0000231	150	installation labor - electrical	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NI	P0000232	150	installation labor - electrical	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NI	P0000313	150	W8 APH Sootblowers - Tvl Electr	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NI	P0000463	150	W8 ERV--Electrician	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NI	P0000511	150	F. Construct - Elect	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NI	P0000601	150	W8 Gen Relay - Electricians	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NI	P0000811	150	W8 Annunciator - Install/Travel Elect	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NI	P0000819	150	W8 Exciter/Volt Reg - Install/Travel El...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NI	P0000936	150	Turbine Drain Program - TVL Electrical	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NI	P7650000	150	W8 Controls Upgd - Electricians	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NR	P0000819	150	W8 Exciter/Volt Reg - Remove/Travel ...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W09	NI	P0000601	150	W9 Gen Relay - Electricians	-80	0	0	-80	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W10	NI	P0000601	150	W10 Gen Relay - Electricians	-80	0	0	0	-80	0	0	0	0	0	0	0	0

_RA	_LbrCla...	_Act	_Loc	_Ind	_Proj	_EE	Line item	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
PIT	I_TVL...	260	W05	NE	P0000252	150	W5 TURB	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	W06	NE	P0000654	150	W06 OH ELEC	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	W07	NE	P0000522	150	W7 TURB PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	W08	NE	P0000521	150	W08 TURB PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	700	PHE	NC	NPIZZZZZ	150	Dev. & Admin bus Plan (Info Sessions)	-72	0	-18	0	0	0	-18	0	0	-18	0	0	-18
PIT	I_TVL...	789	PHE	NC	NPIZZZZZ	150	attd trng	-588	-4	-74	-42	-77	-67	-32	-43	-61	-48	-99	-37	-4
PIT	I_TVL...	797	PHE	NC	NPIZZZZZ	150	sfty trng	-159	-13	-13	-13	-13	-13	-13	-13	-13	-13	-14	-14	-14
PIT	I_TVL...							-3,112	107	-244	-260	-315	-425	-597	-455	-280	-268	-137	-27	-211
PIT	I_TVL...	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Labor Supply	24,960	2,016	1,920	2,208	2,016	2,112	2,112	2,016	2,208	2,112	2,016	2,112	2,112
PIT	I_TVL...	098	PHE	ND	NPIZZZZZ	107	Holiday '00; IT Mach. Non Prod. Time ...	-3,901	-315	-295	-225	-296	-322	-303	-312	-322	-294	-322	-496	-399
PIT	I_TVL...	212	H08	NI	P0000486	150	Install FWH - Machinist Maint Tvl	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NI	P0000487	150	Install FWH - Machinist Maint Tvl	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H08	NI	P0000807	150	H8 TSI - Construction - Machinist	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P0000772	150	H92 Tvl Scn - HECO Machinist	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P9486000	150	T Field Construction--Machinist	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K03	NI	P0000989	150	K31 Cond Pump - Install Mach	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K03	NI	P0000989	150	K31 Cond Pump - Install Mach	0	0	0	0	0	0	0	0	0	0	0	0	0

_RA	_LbrCla...	_Act	_Loc	_Ind	_Proj	_EE	Line item	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
PIT	I_TVL...	258	W08	NR	P0000955	150	Traveling Machinist - Removal work	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	259	W03	NI	P0000459	150	Machinist - end preps	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	259	W04	NI	P0000460	150	Machinist - End preps	-50	0	0	0	-50	0	0	0	0	0	0	0	0
PIT	I_TVL...	259	W07	NI	P0000462	150	Machinist - End preps - W7 ERV Repl...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	H08	NE	P0000523	150	H8 TURB PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	H09	NE	P0000848	150	H9 OH 2005	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	K01	NE	P0000846	150	K1 OH 2005 24	-2,880	0	0	0	0	0	0	-360	-1,656	-864	0	0	0
PIT	I_TVL...	260	K02	NE	P0000650	150	K02 OH MACH	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	K03	NE	P0000649	150	K03 OH MACH	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	K04	NE	P0000655	150	K4 OH MACH	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	K04	NE	P0000845	150	K4 OH 2005 22	-6,120	0	0	-288	-1,512	-1,584	-1,584	-1,152	0	0	0	0	0
PIT	I_TVL...	260	K05	NE	P0000519	150	K05 TURB PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	K06	NE	P0000250	150	K6 TURB	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	K06	NE	P0000844	150	K6 OH 2005 20	-4,320	-1,512	-1,440	-1,368	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	K06	NE	P0000844	150	K6 added hrs to hit res. level	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	W03	NE	P0000249	150	W3 TURB	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	W04	NE	P0000847	150	W4 OH 2005 26	-5,400	0	0	0	0	0	0	0	0	-720	-1,512	-1,584	-1,584
PIT	I_TVL...	260	W05	NE	P0000252	150	W5 TURB	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	W06	NE	P0000654	150	W06 OH MACH	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	W07	NE	P0000522	150	W7 TURB PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	W08	NE	P0000521	150	W08 TURB PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	268	WST	NE	NPIZZZZZ	150	Mobile Equipment Maintenance	-1,740	-145	-145	-145	-145	-145	-145	-145	-145	-145	-145	-145	-145
PIT	I_TVL...	275	PCG	NE	NPIZZZZZ	150	Recy 10 31 03 CHP TVLMCH 2004 a...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	700	PHE	NC	NPIZZZZZ	150	Dev. & Adm. Bus Plan Info Session	-88	0	-22	0	0	0	-22	0	0	-22	0	0	-22
PIT	I_TVL...	789	PHE	NC	NPIZZZZZ	150	attd tng	-719	-5	-90	-52	-94	-82	-39	-53	-74	-59	-121	-45	-5
PIT	I_TVL...	797	PHE	NC	NPIZZZZZ	150	sfty trng	-192	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16
PIT	I_TVL...							-5,095	-193	-288	-374	-553	-789	-629	-238	-277	-288	-388	-716	-362
PIT	I_TVL...	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Labor Supply Supvs	8,320	672	640	736	672	704	704	672	736	704	672	704	704
PIT	I_TVL...	098	PHE	ND	NPIZZZZZ	107	Holiday '00/ IT Super Non Prod Time '...	-1,325	-109	-99	-74	-103	-109	-103	-106	-109	-99	-109	-170	-135
PIT	I_TVL...	212	H08	NI	P0000814	150	4. Supervisor	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P0000815	150	4. Supervisor	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P0000959	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P9025000	150	T Field Construction--Travel Maint Su...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P9107000	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P9486000	150	T Field Construction--Travel Maint Su...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	H09	NI	P9486000	150	T Training & Start-Up--Travel Maint S...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	HST	NI	P0000858	150	F. Construction - Travel Maint Supervi...	-52	0	0	0	0	0	0	0	0	-8	-24	-20	0
PIT	I_TVL...	212	HST	NI	P0000859	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K01	NI	P0000678	150	F. Construction - Travel Maint Supervi...	-5	0	0	-5	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K01	NI	P0000820	150	4. Supervisor	-24	0	0	0	0	0	0	-8	-8	-8	0	0	0
PIT	I_TVL...	212	K01	NI	P0000830	150	4. Supervisor	-24	0	0	0	0	0	0	-8	-8	-8	0	0	0
PIT	I_TVL...	212	K01	NI	P0000861	150	F. Construction - Travel Maint Supervi...	-70	0	0	0	0	0	-10	-20	-20	-20	0	0	0
PIT	I_TVL...	212	K01	NI	P0000957	150	F. Construction - Travel Maint Supervi...	-80	0	0	0	0	0	-20	-20	-20	-20	0	0	0
PIT	I_TVL...	212	K02	NI	P0000646	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K02	NI	P0000647	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K02	NI	P0000659	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K02	NI	P0000676	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K02	NI	P0000678	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K02	NI	P0000860	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K03	NI	P0000678	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K03	NI	P0000808	150	K3 Annun Upgrade - Tvl Maint Superv...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K03	NI	P9539000	150	G. Supervisor - Construction	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K04	NI	P0000678	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K04	NI	P0000781	150	F. Construction - Travel Maint Supervi...	-45	0	0	0	0	-15	-15	-15	0	0	0	0	0
PIT	I_TVL...	212	K04	NI	P0000782	150	F. Construction - Travel22 Maint Supe...	-45	0	0	0	0	-15	-15	-15	0	0	0	0	0

_RA	_LbrCla...	_Act	_Loc	_Ind	_Proj	_EE	Line item	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
PIT	I_TVL...	212	K04	NI	P0000863	150	K4 Generator Field Ground - Tvl Maint...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K04	NI	P0000869	150	4. Supervisor	-72	0	0	0	-18	-18	-18	-18	0	0	0	0	0
PIT	I_TVL...	212	K04	NI	P0000995	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K04	NI	P9454000	150	4. Supervisor	-640	0	0	-100	-160	-160	-160	-60	0	0	0	0	0
PIT	I_TVL...	212	K05	NI	P0000078	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K05	NI	P0000267	150	F. CONSTRUCTION - TRAVEL MAIN...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K05	NI	P0000678	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K05	NI	P0000750	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K06	NI	P0000678	150	F. Construction - Travel Maint Supervi...	-5	0	0	0	-5	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K06	NI	P0000855	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	K06	NI	P0000958	150	F. Construction - Travel Maint Supervi...	-90	-30	-30	-30	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	KTF	NI	P9544000	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W03	NI	P0000638	150	W3 Air Heater–Travel Supervisor	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W03	NI	P0000679	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W04	NI	P0000442	150	Supv-Tvl Maintn	-25	0	-1	0	0	0	0	0	-8	-8	-8	0	0
PIT	I_TVL...	212	W04	NI	P0000639	150		0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W04	NI	P0000679	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W05	NI	P0000679	150	F. Construction - Travel Maint Supervi...	-5	0	0	0	0	0	0	0	-5	0	0	0	0
PIT	I_TVL...	212	W06	NI	P0000679	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W07	NI	P0000302	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W07	NI	P0000679	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W07	NI	P7590000	150	F. Construction - Travel Maint Supervi...	-33	0	0	0	0	0	0	0	0	-8	-8	-9	-8
PIT	I_TVL...	212	W08	NI	P0000303	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NI	P0000679	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NI	P7650000	150	W8 Controls Upgd - Travel Maint Sup...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	WST	NI	P0000677	150	4. Travel Maint Supervisor	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	WST	NI	P0000680	150	F. Construction - Travel Maint Supervi...	-20	0	0	0	0	0	-20	0	0	0	0	0	0
PIT	I_TVL...	212	WST	NI	P0000688	150	F. Construction - Travel Maint Supervi...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	H08	NE	P0000523	150	H8 BLR PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	H09	NE	P0000848	150	H9 OH 2005	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	K01	NE	P0000846	150	K1 OH 2005 (13)	-470	0	0	0	0	0	0	-80	-258	-132	0	0	0
PIT	I_TVL...	257	K02	NE	P0000650	150	K02 OH SPV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	K03	NE	P0000649	150	K03 OH SPV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	K04	NE	P0000655	150	K04 OH SPV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	K04	NE	P0000655	150	Upd 6-26-03 Supv hrs. 43 each mo. N...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	K04	NE	P0000845	150	K4 OH 2005 (21)	-920	0	0	-64	-226	-242	-242	-146	0	0	0	0	0
PIT	I_TVL...	257	K05	NE	P0000519	150	K05 BLR PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	K06	NE	P0000250	150	K6 BLR	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	K06	NE	P0000844	150	K6 OH 2005 (19)	-630	-226	-210	-194	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	W03	NE	P0000249	150	W3 BLR	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	W04	NE	P0000847	150	W4 OH 2005 (23)	-820	0	0	0	0	0	0	0	0	-110	-226	-242	-242
PIT	I_TVL...	257	W05	NE	P0000252	150	W5 BLR	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	W06	NE	P0000654	150	W06 OH SPV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	W07	NE	P0000522	150	W7 BLR PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	W08	NE	P0000521	150	W08 BLR PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	H08	NE	P0000523	150	Supv	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	H09	NE	P0000848	150	H9 OH 2005	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	K01	NE	P0000846	150	K1 OH 2005 (24)	-640	0	0	0	0	0	0	-80	-368	-192	0	0	0
PIT	I_TVL...	260	K02	NE	P0000650	150	K02 OH SPV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	K03	NE	P0000649	150	K03 OH SPV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	K04	NE	P0000655	150	K04 OH SPV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	K04	NE	P0000845	150	K4 OH 2005 (22)	-1,360	0	0	-64	-336	-352	-352	-256	0	0	0	0	0
PIT	I_TVL...	260	K05	NE	P0000519	150	K05 TURB PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	K06	NE	P0000250	150	K6 TURB	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	K06	NE	P0000844	150	K6 OH 2005 (20)	-960	-336	-320	-304	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	W03	NE	P0000249	150	W3 TUBR	0	0	0	0	0	0	0	0	0	0	0	0	0

_RA	_LbrCla...	_Act	_Loc	_Ind	_Proj	_EE	Line item	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
PIT	I_TVL...	260	W04	NE	P0000847	150	W4 OH 2005	-1,200	0	0	0	0	0	0	0	0	-160	-336	-352	-352
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	150	W5 TUBB	0	0	0	0	0	0	0	0	0	0	0	0	0

_RA	_LbrCla...	_Act	_Loc	_Ind	_Proj	_EE	Line item	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
PIT	I_TVL...	212	W06	NI	P0000211	150	IT - Traveling Machinists	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W06	NI	P0000511	150	F. Construct - Tech	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W06	NI	P0000601	150	W6 Gen Relay - Tech	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W06	NI	P0000675	150	PP Technician	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W06	NI	P0000679	150	F. Construction - (Install Instrumnts)	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W06	NI	P0000682	150	F. Construction - Technicians	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W06	NI	P0000804	150	W6 Op Console - Technician - Constr...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W06	NI	P0000817	150	W6 Exciter/Volt Reg - Install/Travel T...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W06	NI	P0000936	150	Turbine Drain Program - TVL Technical	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W06	NR	P0000601	150	W6 Gen Relay - Removal	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W06	NR	P0000804	150	W6 Op Console - Technician - Removal	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W07	NI	P0000302	150	F. Construction - IT (Instll Instrumnts/ ...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W07	NI	P0000314	150	W7 APH Sootblowers - Install TVL T...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W07	NI	P0000510	150	W7 - Traveling Tech	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W07	NI	P0000679	150	F. Construction - (Install Instrumnts)	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W07	NI	P0000856	150	W7 Main Xfmr - Install/Travel Tech	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W07	NI	P0000857	150	W7 Aux Xfmr - Install/Travel Tech	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W07	NI	P0000936	150	Turbine Drain Program - TVL Technical	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W07	NI	P7590000	150	F. Construction - Technician	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W07	NR	P0000810	150	W7 Annunciator - Remove/Tech	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W07	NR	P0000856	150	W7 Main Xfmr -Remove/Travel Tech	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W07	NR	P0000857	150	W7 Aux Xfmr - Remove/Travel Tech	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NI	P0000097	150	W8 S/B Controls - Install Tvl Tech	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NI	P0000213	150	IT - Traveling Technicians	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NI	P0000231	150	installation labor - technicians	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NI	P0000232	150	W8 SH/RH Attemp Block & Ctrl Valve...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NI	P0000303	150	F. Construction - IT (Instll Instrumnts/ ...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NI	P0000313	150	W8 APH Sootblowers - Tvl Tech	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NI	P0000463	150	W8 ERV--Technician	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NI	P0000511	150	F. Construct - Tech	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NI	P0000601	150	W8 Gen Relay - Tech	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NI	P0000679	150	F. Construction - (Install Instrumnts)	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NI	P0000936	150	Turbine Drain Program - TVL Technical	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NI	P7650000	150	W8 Controls Upgd - Technician	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NR	P0000601	150	W8 Gen Relay - Removal	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W08	NR	P0000811	150	W8 Annunciator - Remove/Tech	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W09	NI	P0000601	150	W9 Gen Relay - Tech	-80	0	0	-80	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W10	NI	P0000601	150	W10 Gen Relay - Tech	-80	0	0	0	-80	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	W10	NR	P0000601	150	W10 Gen Relay - Removal	-80	0	0	-80	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	WFS	NI	P9544000	150	F. Construction - Traveling Technician	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	WST	NI		150	Labor - Tech	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	212	WST	NI	P0000680	150	F. Construction - (Install Insulation)	-60	0	0	0	0	0	-60	0	0	0	0	0	0
PIT	I_TVL...	212	WST	NI	P0000968	150	Traveling Tech - WPP	-120	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10
PIT	I_TVL...	212	WWW	NI	P0000956	150	Traveling Tech	-40	0	0	0	0	-40	0	0	0	0	0	0	0
PIT	I_TVL...	212	WWW	NI	P0000993	150	Traveling Tech - Waiau WWTF PLC	-50	0	0	0	0	0	-50	0	0	0	0	0	0
PIT	I_TVL...	212	WWW	NR	P0000993	150	Traveling Tech - Waiau Removal work	-10	0	0	0	0	0	-10	0	0	0	0	0	0
PIT	I_TVL...	257	H08	NE	P0000523	150	H8 BLR PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	H08	NE	P0000523	150	Upd Tech. 6-26-03 Hrs. 617	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	H09	NE	P0000848	150	H9 OH 2005	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	K01	NE	P0000846	150	K1 OH 2005 23	-640	0	0	0	0	0	0	-80	-368	-192	0	0	0
PIT	I_TVL...	257	K02	NE	P0000650	150	K02 OH TECH	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	K03	NE	P0000649	150	K03 OH TECH	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	K04	NE	P0000655	150	K04 OH TECH	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	K04	NE	P0000655	150	Upd 6-26-03 hrs. 912 each Nov Dec	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	K04	NE	P0000845	150	K4 OH 2005 21	-1,360	0	0	-64	-336	-352	-352	-256	0	0	0	0	0
PIT	I_TVL...	257	K05	NE	P0000519	150	K05 BLR PREV	0	0	0	0	0	0	0	0	0	0	0	0	0

_RA	_LbrCla...	_Act	_Loc	_Ind	_Proj	_EE	Line item	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
PIT	I_TVL...	257	K06	NE	P0000250	150	K6 BLR	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	K06	NE	P0000844	150	K6 OH 2005	-960	-336	-320	-304	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	W03	NE	P0000249	150	W3 BLR	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	W04	NE	P0000847	150	W4 OH 2005	-1,200	0	0	0	0	0	0	0	0	-160	-336	-352	-352
PIT	I_TVL...	257	W05	NE	P0000252	150	W5 BLR	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	W06	NE	P0000654	150	W06 OH TECH	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	W07	NE	P0000522	150	W07 BLR PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	257	W08	NE	P0000521	150	W08 BLR PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	259	K05	NI		150	I&C	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	259	K05	NR		150	Welders: Remove Existing Yarways	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	259	K05	NR		150	Welders: Install New Conductivity Pro...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	259	W03	NI	P0000459	150	I&C	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	259	W04	NI	P0000460	150	I&C	-200	0	0	0	-40	-120	-40	0	0	0	0	0	0
PIT	I_TVL...	259	W07	NI	P0000462	150	I&C - W7 ERV Replacement	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	H08	NE	P0000523	150	H8 TURB PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	H09	NE	P0000848	150	H9 OH 2005	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	K01	NE	P0000846	150	K1 OH 2005	-640	0	0	0	0	0	0	-80	-368	-192	0	0	0
PIT	I_TVL...	260	K02	NE	P0000650	150	K02 OH TECH	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	K03	NE	P0000649	150	K03 OH TECH	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	K04	NE	P0000655	150	K04 OH TECH	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	K04	NE	P0000845	150	K4 OH 2005	-1,360	0	0	-64	-336	-352	-352	-256	0	0	0	0	0
PIT	I_TVL...	260	K05	NE	P0000519	150	K05 TURB PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	K06	NE	P0000250	150	K6 TURB	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	K06	NE	P0000844	150	K6 OH 2005	-960	-336	-320	-304	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	W03	NE	P0000249	150	80	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	W04	NE	P0000847	150	W4 OH 2005	-1,200	0	0	0	0	0	0	0	0	-160	-336	-352	-352
PIT	I_TVL...	260	W05	NE	P0000252	150	W5 TURB	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	W06	NE	P0000654	150	W06 OH TECH	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	W07	NE	P0000522	150	W7 TURB PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	260	W08	NE	P0000521	150	W08 TURB PREV	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	319	OAH	NI	P0000732	150	1O - Construction - Power Plant - Install	-16	-16	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	319	OAH	NI	P0000732	150	1O - Construction - Power Plant - Install	-16	0	-16	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	319	OAH	NI	P0000732	150	1O - Construction - Power Plant - Install	-16	0	0	0	-16	0	0	0	0	0	0	0	0
PIT	I_TVL...	319	OAH	NI	P0000732	150	1O - Construction - Power Plant - Install	-16	0	0	0	0	0	-16	0	0	0	0	0	0
PIT	I_TVL...	319	OAH	NI	P0000732	150	1O - Construction - Power Plant - Install	-16	0	0	0	0	0	0	0	0	0	0	0	-16
PIT	I_TVL...	319	OAH	NI	P0000732	150	1O - Construction - Power Plant - Install	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	319	OAH	NI	P0000732	150	1O - Construction - Power Plant - Install	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	319	OAH	NI	P0000732	150	1O - Construction - Power Plant - Install	0	0	0	0	0	0	0	0	0	0	0	0	0
PIT	I_TVL...	700	PHE	NC	NPIZZZZZ	150	Dev. & Admin Bus Plans (Info Sessions)	-56	0	-14	0	0	0	-14	0	0	-14	0	0	-14
PIT	I_TVL...	789	PHE	NC	NPIZZZZZ	150	attd trng	-457	-3	-57	-33	-60	-52	-25	-34	-47	-37	-77	-29	-3
PIT	I_TVL...	797	PHE	NC	NPIZZZZZ	150	sfty trng	-120	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10
PIT	I_TVL...							-4,111	-219	-40	-126	-462	-635	-709	-373	-134	-436	-337	-517	-123
PIT								-30,875	-1,647	-2,081	-2,236	-2,817	-3,365	-4,149	-3,238	-1,865	-1,684	-2,017	-3,316	-2,460
PIW	__BUOCI	*Sup...	*Sup...	*Sup...	*Supply	*Sup...	Clerical Staff Labor Supply	2,080	168	160	184	168	176	176	168	184	176	168	176	176
PIW	__BUOCI	098	PHE	ND	NPIZZZZZ	107	Clerk	-329	-27	-25	-19	-26	-27	-26	-26	-27	-25	-27	-41	-33
PIW	__BUOCI	240	WST	NE	NPIZZZZZ	150	dev/mnt plcy	-935	-87	-72	-82	-72	-81	-78	-83	-83	-74	-78	-70	-75
PIW	__BUOCI	777	PHE	NC	NPIZZZZZ	150	prsc payrl	-935	-87	-72	-82	-72	-81	-78	-83	-83	-74	-78	-70	-75
PIW	__BUOCI	788	PPO	NE	P0000318	150	LORI L IGE + T&A conduct training	0	0	0	0	0	0	0	0	0	0	0	0	0
PIW	__BUOCI	789	PHE	NC	NPIZZZZZ	150	att tng	-139	-6	-9	-14	-21	-16	-7	-6	-12	-7	-22	-13	-6
PIW	__BUOCI	797	PHE	NC	NPIZZZZZ	150	sfty tng	-12	0	-2	-1	0	-2	-1	0	-2	-1	-2	-1	0
PIW	__BUOCI	891	PPO	NE	P0000318	150	LORI L IGE + T&A 8.0 func testing	0	0	0	0	0	0	0	0	0	0	0	0	0
PIW	__BUOCI	891	PPO	NE	P0000318	150	LORI L IGE + T&A 8.x Parallel Test	0	0	0	0	0	0	0	0	0	0	0	0	0
PIW	__BUOCI	891	PPO	NE	P0000318	150	LORI L IGE + T&A 9.0 integrated sys...	0	0	0	0	0	0	0	0	0	0	0	0	0
PIW	__BUOCI	891	PPO	NE	P0000318	150	LORI L IGE + T&A Final Testing	0	0	0	0	0	0	0	0	0	0	0	0	0

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Projects - Labor Hours

RA	Prod Oper Hours	Prod Maint Hours	Total Hours
PYB	1,090	0	1,090
Total	1,090	0	1,090

CA-IR-1
DOCKET NO. 04-0113
HECO T-6
ATTACHMENT 4C
PAGE 2 OF 4

PYB

Labor Manhour Breakdown - 2005

	General Planning	Power Purchase Support	Regulatory Support	Capital Project Support	IRP Support (GAH - originator)	Rate Case Activities: HECO	Rate Case Activities: HELCO (Non-Billable)	Rate Case Activities: MECO (Non-Billable)	Vacation	Holidays	Subtotal	TOTAL
HECO	7,806	400	0	0	1,280	1,090	0	0	1,200	1,040	12,816	12,816
		8,206 ← Non-Projects				5 Projects						
HELCO												
Production Activities (N. Uchida - originator)	0										0	
Engineering Activities (C. Nagata - originator)	1,762	100	220	120							2,202	
IRP Activities (G. Hashiro - originator)					2,228						2,228	
Subtotal HELCO												4,430
MECO												
Production Activities (S. Kiyonaga - originator)	1,900	120	80								2,100	
Engineering Activities (N. Shinyama - originator)				80							80	
IRP Activities (G. Hashiro - originator)					1,374						1,374	
Subtotal MECO												3,554
RHI												
RE RFPP (M. E. Nordyke-Grace)	0										0	0
GRAND TOTAL	11,468	620	300	200	4,882	1,090	0	0	1,200	1,040	20,800	20,800

SB 1-1-05

YB Budget 2005-2006 r1.xls - Labor Breakdown 2005

RHS
2/19/04

Forecasted YB Labor Hours
2004-2005
HECO

	2005		2006	
General Planning				
Data for Utility Analysts	80		80	
Adequacy of Supply	80		80	
Wall St Surveys	80		80	
PURPA	0		200	
Administrative (status rpts, staff mtgs, budget)	140		140	
Software/hardware support (pmonth, proscreen, etc)	120		120	
Proscreen/PMONTH Database Updates/Benchmarking	120		120	
Planning Analyses				
Intermittent Generation Assessment Protocol	0		0	
Honolulu Power Plant Retirement Scenarios	310		310	
Resource Plan Development	3,107		6,370	
General	249		250	
Rev. Req. for Electricity Price Forecast	60		60	
Fuel Consumption Forecasts	24		24	
Docket 7310 Monthly Avoided Energy Costs Calc.	0		0	
DSM Work Group support	300		100	
Forecast Planning Analyst Work	1,856		1,808	
Fuel Price Forecasting Work	400		400	
Competitive Bidding Docket	200		0	
PUC DG Docket	200		0	
Utility CHP Program	400		0	
Comments on Outside Studies	80		80	
Subtotal		7,806		10,222
Purchase Power Support				
Avoided Cost Calculations				
Proposal 1	200		0	
Proposal 2	200		0	
Other	0		0	
Subtotal		400		0
Regulatory - Rate Case	1,090	1,090	0	0
Regulatory - Other				
General	0		0	
Other	0		0	
Subtotal		0		0
Capital				
Barbers Point SCCT - PUC Application	0		0	
Misc	0		0	
Subtotal		0		0
IRP (See IRP Assumption tab)				
Misc IRP Activities	200		120	
DSM Avoided Cost Calculations	80		80	
IRP-3 (Filing, Regulatory Proceedings)	1,000		0	
IRP-3 Annual Evaluation Report	0		0	
Subtotal		1,280		200
TOTAL		10,576		10,422

Overview of Forecasted Labor Manhours
Generation Planning Division (YB)

	2005		2006	
SUPPLY				
Gross Available Manhours				
10 people		**20,800**		**20,800**
Non-Productive Manhours				
Vacation	-1,200		-1,400	
Holidays	-1,040		-1,120	
Leave	0		0	
Subtotal	-2,240	-2,240	-2,520	-2,520
Net Available Manhours		18,560		18,280
DEMAND				
HECO	10,576		10,422	
RHI	0		0	
HELCO	4,430		3,467	
MECO	3,554		4,391	
Subtotal	18,560	18,560	18,280	18,280
Total Surplus/Deficit		0		0
Net Avail Hours				
HECO Supply				
RHS (80%)	1,421		1,414	
CKC (100%)	1,856		1,808	
AJG (10%)	186		185	
NFR (10%)	186		181	
LKG (50%)	948		924	
HSH (10%)	182		181	
GRI (10%)	190		185	
MSN (100%)	1,856		1,848	
CTS (100%)	1,856		1,808	
New Planning Engr (100%)	1,896		1,888	
		10,575		10,422
HECO Demand		10,576		10,422
HECO Surplus/Deficit		-1		0
HELCO Supply				
RHS (10%)	178		177	
AJG (90%)	1,670		1,663	
HSH (90%)	1,634		1,627	
LKG (50% / 0%)	948		0	
		4,430		3,467
HELCO Demand		4,430		3,467
HELCO Surplus/Deficit		0		0
MECO Supply				
RHS (10%)	178		177	
NFR (90%)	1,670		1,627	
GRI (90%)	1,706		1,663	
LKG (0% / 50%)	0		924	
		3,554		4,391
MECO Demand		3,554		4,391
MECO Surplus/Deficit		0		0
RHI Supply				
CKC (HECO)	0		0	
AJG (HELCO)	0		0	
NFR (MECO)	0		0	
		0		0
RHI Demand		0		0
RHI Surplus/Deficit		0		0
TOTAL NET SUPPLY		18,560		18,280
TOTAL DEMAND		18,560		18,280
SURPLUS/DEFICIT		0		0

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Projects - Labor Hours

RA	Prod Oper Hours	Prod Maint Hours	Total Hours
PBA	0	30	30
Total	0	30	30

Missing supporting documentation for (amounts immaterial):

Proj Description	Proj	RA	Acct Blk Descr	NARUC	Act	Loc	EE	Labor Hours	Labor Amount
Kahe Sludge Bed Removal	P0000456	PBA	Prod Maint	511	211	KWW	150	(1) 12	$ 267
Kahe Pond 1A Clean & Lining	P0000458	PBA	Prod Maint	511	210	KWW	150	(2) 7	$ 164
Kahe Pond 1A Clean & Lining	P0000458	PBA	Prod Maint	511	211	KWW	150	11	$ 246
								30	$ 677

Explanations -

(1) - Preliminary engineering staff support

(2) - Engineering staff support. See additional comments on Attachment (4A), page 1 of 1.

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Projects - Labor Hours

RA	Prod Oper Hours	Prod Maint Hours	Total Hours
PBT	0	1,539	1,539
Total	0	1,539	1,539

Supporting documentation attached:

Proj Description	Proj	RA	Acct Blk Descr	NARUC	Act	Loc	EE	Labor Hours	Labor Amount
PSOM Structural Engr	P0000524	PBT	Prod Maint	511	265	WST	150	1,285	$ 42,589

Missing supporting documentation for:

Proj Description	Proj	RA	Acct Blk Descr	NARUC	Act	Loc	EE	Labor Hours	Labor Amount
Kahe Sludge Bed Removal	P0000456	PBT	Prod Maint	511	210	KWW	150	① 23	$ 706
Kahe Pond 1A Clean & Lining	P0000458	PBT	Prod Maint	510	211	KWW	150	② 200	$ 6,695
Kahe Pond 1A Clean & Lining	P0000458	PBT	Prod Maint	511	210	KWW	150	21	$ 707
Kahe Pond 1A Clean & Lining	P0000458	PBT	Prod Maint	511	211	KWW	150	10	$ 314
								254	$ 8,422

Total PBT	1,539	$51,011

Explanations

① Preliminary engineering staff support.

② Engineering staff support. See additional comments on Attachment (4A), page 1 of 1.

PBT
PSOM Structural Engr Proj # P0000524

Ornellas, Larry

From: Noda, Roy
Sent: Monday, September 13, 2004 11:05 AM
To: Ignacio, Lloyd
Cc: Koga, Kathy; Ornellas, Larry; Morikami, Ken
Subject: RE: O&M Expenses for 2005 – Officer Briefing

Lloyd,
Please keep 2005 PSOM at $100K ← $100,000 ÷ $77.02 per hr = 1,298 hrs ✓

Also, I'm checking to see if we can reduce 2005 Survey O&M by $10K. I'll get back to you on this.

From: Ignacio, Lloyd
Sent: Monday, September 13, 2004 10:47 AM
To: Noda, Roy
Cc: Koga, Kathy; Ornellas, Larry; Morikami, Ken
Subject: RE: O&M Expenses for 2005 -- Officer Briefing

Roy,
What about 2005? Will the spending reach the $100K level or can we reduce that amount a bit?

Thanks,
Li
lloyd.ignacio@heco.com

<><

From: Noda, Roy
Sent: Monday, September 13, 2004 10:43 AM
To: Ignacio, Lloyd
Cc: Koga, Kathy; Matsuura, Marc; Nakagawa, Paul; Shiroma, Richard; Wong, Kerstan; Ornellas, Larry; Morikami, Ken
Subject: RE: O&M Expenses for 2005 -- Officer Briefing

LLoyd,
Re: P0000524 PSOM Structural Engr
Actual cost as of today = $75,514
Forecast to 12/31/04 = 43,900 (570 labor hours, includes overheads)
Total = $119,414
Please note we are forecast to be $24K over the 2004 budget.
Reason: per direction from Power Supply, we need to complete various unforecasted O&M projects by December 2004. The forecasted hours represent 2 engineers (JJY & DYK) spending 60% of labor hours on PS O&M projects.

$43,900 ÷ 570 hrs = $77.02 per hr

Larry,

Please note the revised forecast hours for P0000524 PSOM Structural Engr thru 12/31/04.

Thanks,
Roy

From: Ignacio, Lloyd
Sent: Friday, September 10, 2004 10:43 AM
To: Morikami, Ken
Cc: Koga, Kathy; Matsuura, Marc; Nakagawa, Paul; Noda, Roy; Richard Shiroma; Wong, Kerstan
Subject: O&M Expenses for 2005 -- Officer Briefing
Importance: High

Per our discussion yesterday, I have taken a look at the Engineering Department's O&M for 2005. For the Officer Briefing scheduled to begin on Sep 22, we need to submit the attached (Engineering Dept-Energy Delivery) by Sep 15. Harold Kageura has asked each EDP department via the Administrators, to come up with possible reductions or additions to the 2005 O&M and submit it to him by Tuesday, Sep 14.

Craig has suggested that some of the OMS costs may be spent in '04 vs. '05 ($40K) so I have included that as a possible reduction.

Roy,
Can you check with L. Ornellas to see if we can reduce the PSOM Structural Engr by about $25K? Does not seem that we have been spending at the level shown in the budget. (Refer to the file attached, ED OM Comp)

Anyone have any other suggestions as to where we may be able to reduce spending in '05 or add back items we may have excluded?

Thanks,
Li
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Hawaiian Electric Company, Inc.
Production O&M
Staffing - 2004 vs 2005

Position	RA	Test Year 2005	Actuals 4/30/2004	Actuals 12/31/2004	Actuals 4/30/2004 vs Test Year 2005	Comments
Power Supply Service Manager	IA	1	0	1	1	Vacancy created due to promotion. Status: Filled in 2004
Power Supply Service Secretary	IA	1	0	1	1	Vacancy created due to promotion. Status: Filled in 2004
Administrator	IA	1	1	1	0	
Contracts Administrator	IA	1	1	2	0	Administrative Assistant converted to Contracts Admin. Status: Filled in 2004.
Administrative Assistant	IA	1	0	0	1	Vacancy, converted to Contracts Administrator.
Power Supply O&M Manager	IB	1	1	1	0	
Power Supply O&M Secretary	IB	1	1	1	0	
Budget Analyst	IB	1	0	1	1	Vacancy created due to job transfer. Status: Filled in 2004
Technical Trainer	IB	2	1	1	1	Addition - See Note (1) below. Status: Position to be filled in January, 2005.
Principal Staff Engineer	IB	1	1	0	0	
Envir Compliance Supervisor	IB	1	1	1	0	
Station Chemist	IB	2	2	2	0	
IT Specialist	IB	1	0	0	1	Addition - See Note (2) below. Status: Awaiting approval to fill.
Lead Func Admin Work Mgmt	IB	0	0	0	0	
Purchase Power Director	IC	1	1	1	0	
PPC Administrator	IC	3	3	3	0	
Administrative Assistant	IC	2	2	2	0	
Agency Temp	IC	0	0	0	0	
Fuel Resource Director	IF	1	1	1	0	
Fuels Procurement Specialist	IF	1	1	1	0	
Admin / Engineer II	IF	1	1	0	0	
Fuels Records Clerk	IF	1	1	1	0	
Admin Fuels Operations	IF	1	0	0	1	Addition (3) - See Note (3) below. Status: Interviews in progress.
Honolulu Senior Supervisor	IH	1	1	1	0	
Honolulu Clerk	IH	1	0	0	1	Vacancy created due to job transfer. Status: Considering reassignment to support Technical Trainer

Hawaiian Electric Company, Inc.
Production O&M
Staffing - 2004 vs 2005

Position	RA	Test Year 2005	Actuals 4/30/2004	Actuals 12/31/2004	Actuals 4/30/2004 vs Test Year 2005	Comments
Shift Supervisor	IH	5	4	4	1	Vacancy created due to retirement. Status: Scheduled to be filled in March, 2005 with a promotion from within.
Honolulu Operators	IH	19	12	14	7	5 Additions to support 24x7 operation of H8&9; 2 Vacancies due to promotion and job transfer. Status: 5 positions to be filled in February, 2005.
Kahe Senior Shift Supervisor	IK	1	1	1	0	
Kahe Station Aide	IK	1	1	1	0	
Shift Supervisor	IK	7	7	7	0	
Kahe Operators	IK	49	49	50	0	
Kahe Maint Supervisor	IL	3	2	2	1	Addition - +1 Night Shift. See Note (4) below. Status: Awaiting approval to fill.
Boiler Working Foreman	IL	2	1	1	1	Addition - +1 Night Shift. See Note (4) below. Status: Awaiting approval to fill.
Elec Working Foreman	IL	2	1	1	1	Addition - +1 Night Shift. See Note (4) below. Status: Awaiting approval to fill.
Machinist Working Foreman	IL	2	1	1	1	Addition - +1 Night Shift. See Note (4) below. Status: Awaiting approval to fill.
Senior Electrician	IL	5	4	4	1	Addition - +1 Night Shift. See Note (4) below. Status: Awaiting approval to fill.
Machinist	IL	4	3	3	1	Addition - +1 Night Shift. See Note (4) below. Status: Awaiting approval to fill.
Pipefitter Mechanic	IL	5	2	3	3	Addition - +1 Night Shift, +1higher work demands, +1 Vacancy due to retirement. Status: Awaiting approval to fill.
Certified Comb Welder	IL	4	3	3	1	Addition - +1 Night Shift. See Note (4) below. Status: Awaiting approval to fill.
Control Technician	IL	8	6	6	2	Addition - +2 Night Shift. See Note (4) below. Status: Awaiting approval to fill.
Helper	IL	2	2	2	0	
Mobile Crn & Hvy Eq Operator	IL	1	1	1	0	
O&M Maint Superintendent	IM	1	1	1	0	
Maintenance Clerk	IM	1	1	1	0	
Honolulu Maint Supervisor	IN	1	0	1	1	Vacancy due to retirement. Status:Filled in 2004
Boiler Working Foreman	IN	1	1	1	0	

Hawaiian Electric Company, Inc.
Production O&M
Staffing - 2004 vs 2005

Position	RA	Test Year 2005	Actuals 4/30/2004	Actuals 12/31/2004	Actuals 4/30/2004 vs Test Year 2005	Comments
Elec Working Foreman	IN	1	1	1	0	
Machinist Working Foreman	IN	1	1	1	0	
Senior Electrician	IN	1	1	1	0	
Machinist	IN	1	1	1	0	
Cert Equip/Pipefitter Mechanic	IN	1	1	1	0	
Control Technician	IN	2	2	1	0	
Operating Superintendent	IO	1	1	1	0	
Senior Supervisor	IO	0	0	0	0	
Operations Power Engineer	IO	0	0	2	0	2 Additions to support operations with field engineering support at Kahe and Waiau. Status: Filled in 2004.
Planning Superintendent	IP	1	1	1	0	
Power Plant Clerk	IP	1	1	1	0	
Senior Supervisor	IP	1	0	1	1	Vacancy due to promotion. Status: Filled in 2004.
Resource Planner	IP	8	4	7	4	2 Additions to support higher workload, 2 Vacancies due to job transfers. Status: all but 1 position have been filled in 2004. Remaining vacancy awaiting response to job offer.
Planning/Project Coordinator	IP	2	0	0	2	1 Addition to support higher workload, 1 Vacancy due to resignation. Status: Job interviews in progress.
O&M Engineer	IP	3	1	1	2	Vacancy due to retirement and job transfer. Status: Job interviews in progress.
PDM Supervisor	IP	1	1	1	0	
PDM Specialist	IP	3	3	3	0	
BRO Engineer	IP	1	1	1	0	
Traveling Maint Supervisor	IT	4	4	4	0	
Boiler Working Foreman	IT	2	2	2	0	
Elec Working Foreman	IT	2	2	2	0	
Machinist Working Foreman	IT	2	1	2	1	Vacancy due to termination. Status: Filled in 2004.
Insulator Working Foreman	IT	1	1	1	0	
Condenser Crew Leader	IT	1	1	1	0	
Senior Electrician	IT	8	7	8	1	Addition - +1 to support higher workload. Status: Filled in 2004

Hawaiian Electric Company, Inc.
Production O&M
Staffing - 2004 vs 2005

Position	RA	Test Year 2005	Actuals 4/30/2004	Actuals 12/31/2004	Actuals 4/30/2004 vs Test Year 2005	Comments
Machinist	IT	9	8	8	1	Vacancy due to retirement. Status: Job interviews in progress.
Pipefitter Mechanic	IT	7	7	7	0	
Certified Equip Mechanic	IT	1	1	1	0	
Certified Comb Welder	IT	7	6	6	1	Vacancy due to retirement. Status: Filled in January, 2005.
Control Technician	IT	7	6	6	1	Addition - +1 to support higher workload. Status: Targeting to fill in March, 2005.
Helper	IT	4	3	3	1	Vacancy due to promotion. Status: Interviews in progress.
Insulator	IT	11	9	11	2	+2 Vacancies due to termination and long term disability. Status: Filled in 2004
Condenser Cleaner	IT	8	4	4	4	+2 Vacancies due to retirement, +2 additions to support higher workload. Status: Interviews in progress.
Waiau Senior Shift Supervisor	IW	1	1	1	0	
Waiau Station Aide	IW	1	1	1	0	
Shift Supervisor	IW	7	7	7	0	
Waiau Operators	IW	53	46	55	7	4 Additions for 24x7 operation of W3&4, 3 Vacancies due to job transfers and retirements. Status: Positions fillled in 2004.
Waiau Maint Supervisor	IX	3	2	2	1	Addition - +1 Night Shift. See Note (4) below. Status: Awaiting approval to fill.
Boiler Working Foreman	IX	2	1	1	1	Addition - +1 Night Shift. See Note (4) below. Status: Awaiting approval to fill.
Elec Working Foreman	IX	2	1	1	1	Addition - +1 Night Shift. See Note (4) below. Status: Awaiting approval to fill.
Machinist Working Foreman	IX	2	1	1	1	Addition - +1 Night Shift. See Note (4) below. Status: Awaiting approval to fill.
Senior Electrician	IX	5	3	3	2	Addition - +1 Night Shift, +1 Work demands. See Note (4) below. Status: Awaiting approval to fill.
Machinist	IX	4	3	3	1	Addition - +1 Night Shift. See Note (4) below. Status: Awaiting approval to fill.
Pipefitter Mechanic	IX	5	4	4	1	Addition - +1 Night Shift. See Note (4) below. Status: Awaiting approval to fill.
Certified Comb Welder	IX	4	3	3	1	Addition - +1 Night Shift. See Note (4) below. Status: Awaiting approval to fill.

Hawaiian Electric Company, Inc.
Production O&M
Staffing - 2004 vs 2005

Position	RA	Test Year 2005	Actuals 4/30/2004	Actuals 12/31/2004	Actuals 4/30/2004 vs Test Year 2005	Comments
Control Technician	IX	8	5	5	3	Addition - +2 Night Shift - See Note (4) below; +1 Vacancy due to retirement. Status: Awaiting approval to fill 2 additional positions, interviews in progress to fill vacancy due to retirement.
Helper	IX	1	1	1	0	
Mobile Crn & Hvy Eq Operator	IX	1	1	1	0	
Total		354	285	310	69	

Note (1) - An additional full time trainer is required to support compliance and competency training requirements, with emphasis on operations. The combination of operator and Shift Supervisor retirements, the need to restore operation of Honolulu 8&9 and Waiau 3&4 to 24x7 operations, increasing changes in environmental regulations, and the continued application of technology have increased the need for full time and continuous training capability.

Note (2) - The Power Supply Process Area has depended heavily on technology to ensure compliant, safe, reliable and efficient operations. An IT Specialist is required to provide power user support, security administration, troubleshooting support, user training/certification, and document management support on the various business software applications in the PS Process Area.

Note (3) - Need to fill vacant position with personnel focused on 1) fuel supplier performance issues including compliance of purchased fuel to contract quality specifications; 2) fuel-related service contractor performance to ensure they operate fuel distribution facilities and providing transportation services in a safe, efficient and regulatory complaint manner; 3) resolve any measurement discrepancies to ensure Fuel Management Resourde System (FMRS) produces accurate information.

Note (4) - The staffing level increases in maintenance are necessary at this time as opposed to any other time in the recent past due to the significant increase in customer demand that is driving the need to operate aging units much harder with less operating reserve margins for required maintenance. This trend will continue into the foreseeable future. A nightshift maintenance crew is necessary because reserve margins during peak periods (normal business hours) are declining. This means there is less flexibility during the day-time peak periods to perform certain types of maintenance requiring unit deratings and/or short outages. During off-peak periods reserve margins are highest, which provides a consistent opportunity to perform maintenance requiring deratings. The additional maintenance personnel will initially be hired on the dayshift in 2005 to provide sufficient time (approximately 6-9 months) and experience to orient the new maintenance employees to HECO's maintenance practices, safety procedures and

Hawaiian Electric Company, Inc.
Production O&M
Staffing - 2004 vs 2005

Position	RA	Test Year 2005	Actuals 4/30/2004	Actuals 12/31/2004	Actuals 4/30/2004 vs Test Year 2005	Comments

environmental compliance requirements. The nightshift maintenance crew will consist of a mixture of trades and craft skill sets, (i.e., machinists, welders, pipefitters, insulators, technicians, and electricians, and helpers) to perform mechanical, electrical and technical maintenance during off-peak periods. The nightshift schedule will run from 21:30 hrs to 06:00 hrs relative to a typical daily load cycle.

2002 – 2004 Actual Generation Conditions

Generation Condition	Year		
	2002	2003	2004
Beta	2	7	54
1		1	14
2	1	1	6
3		1	4
4	1		

Generation Conditions Criteria:

Generation Condition	Spinning Reserve Shortfall	Risk of not Serving Load
ALPHA	>0MW	Normal – Reserve Capability Available
BETA	>0MW	No Units In Reserve
1	-40MW	AES, K5, K6 Outage
2	-90MW	Any Reheat Outage
3	-180MW	Any Unit Outage
4	<-180MW	Normal Load Shed

General Information Requests

amounts, please provide the following information:

Planned Outages (PO) described in HECO T-6, page 13 are budgeted as projects. This is distinguished from non-projects which capture the balance of O&M non-labor direct expenses. Therefore responses to this information request are organized into projects and non-projects. Attachment (1) breaks down the Operation and Maintenance direct non-labor totals in HECO-WP-101(G) pages 888 and 902 respectively, into project and non-project non-labor direct expenses. This serves as the basis for responding to the various information requests below.

a. A list of employees involved in the preparation of budgeted non-labor direct expense amounts included in the rate case test period budget and sponsored by HECO witness T-6 is provided in Attachment (2). Note that some of the budget preparers are no longer with the Company or has transferred to another area of the Company.

b. Attachment (3) provides a summary of the non-project, non-labor direct expense budget broken down by RA. Supporting budget input worksheets are provided in Attachments 3A - 3N. The non-project, non-labor direct expense budget was developed by the respective employees identified in Attachment (2) above.

   Attachment (4) provides a summary of the project non-labor direct expense budget broken down by RA. Supporting budget input worksheets are provided in Attachments 4A through 4C. The project non-labor direct expense budget was developed by the Superintendent of Operation, Karen Mark, and Maintenance Superintendent, Larry Ornellas.

c. Attachment (5) contains a list for each budgeted non-project, non-labor, amount in the test year forecast that exceeds $50,000, and describes the basis for determining the budgeted amount. For the most part estimates are based on historical expenditures, contracts or quotes, and experience.

   Attachment (6) contains a list for each budgeted project, non-labor, amount in the test year

forecast that exceeds $50,000, and describes the basis for determining the budgeted amount. As with non-projects, estimates are based on historical expenditures, contracts or quotes, and experience.

d. Refer to Attachment (5) and Attachments (3A – 3N) for non-project estimate explanations greater than $50,000.

Refer to Attachment (6) and Attachments (4A – 4C) for project estimate explanations greater than $50,000.

e. Refer to (c.) and (d.) above. It should be noted that inflation factors were not used in determining non-labor estimates. Where historical costs were used to estimate budget amounts, various methods were used to check for reasonableness depending on the experience and knowledge of the budget preparer. For the most part, previous years budgets served as the starting point and basis for developing future forecasts. Actual year-end results indicate the dynamic nature of maintaining and operating HECO's electrical system and are factored into the development of future budgets.

f. Referring to Attachment (5), there are 7 highlighted items that have copies of purchase orders that were used as the basis for estimating the budget amount for those respective items. Of the seven items identified, Janitorial Services was an item that involved soliciting bids. Attachment (7) is the bid proposal for Waiau, and served as a proxy for Kahe and Honolulu Power Plants, that covered 2002 thru 2005. Jani-King was selected as the service provider based on poor past performance from the lowest bidder, Armstrong Building Maintenance.

g. The information provided in response to CA-IR-2 captures the information and methods used to develop the 2005 TY forecast.

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Direct Non-Labor

	Prod Oper	Prod Maint	Total
Non-Projects	9,109,483	7,323,856	16,433,339
Projects	64,000	9,192,001	9,256,001
Total	9,173,483	16,515,857	25,689,340

Budget Preparer: Non-Projects - Non-Labor

RA	Name	Title
P9S	Arthur Seki	Director - Technology
PEP	Blane Murakami	IT Project Manager
PEZ	Blane Murakami	IT Project Manager
PHS	Eugene Uemura & Alan Cardoza	Director Security (E. Uemura) & Captain (A. Cardoza)
PIA	Kelly Whalen (Left Co.)	Administrator
PIB	Victoria Marzano (transferred to Cust Svc Dept)	Budget Analyst
PIC	Kelly Whalen (Left Co.)	Administrator
PIH	Victoria Marzano (transferred to Cust Svc Dept)	Budget Analyst
PIK	Victoria Marzano (transferred to Cust Svc Dept)	Budget Analyst
PIL	Victoria Marzano (transferred to Cust Svc Dept)	Budget Analyst
PIM	Victoria Marzano (transferred to Cust Svc Dept)	Budget Analyst
PIN	Victoria Marzano (transferred to Cust Svc Dept)	Budget Analyst
PIO	Victoria Marzano (transferred to Cust Svc Dept)	Budget Analyst
PIP	Victoria Marzano (transferred to Cust Svc Dept)	Budget Analyst
W	Victoria Marzano (transferred to Cust Svc Dept)	Budget Analyst
PIX	Victoria Marzano (transferred to Cust Svc Dept)	Budget Analyst
PJA	Sherri-Ann Loo	Environmental Department Manager
PJB	Barry Nakamoto	Air Quality/Noise Division Principal Engineer
PJC	Doug Rinehart	Chemistry Division Laboratory Supervisor
PJW	Donn Fukuda	Water & Hazardous Materials Principal Environm
PKM	Gilbert Ho	Director ERP Administration
PNG	Scott Seu & Dana Yamashita	Energy Projects Dept Manager (S. Seu) & Secreta
PNL	Cheryl Fujiwara	Land Agent
PNR	Arthur Seki	Director - Technology
PPA	Jeri Morimatsu	IR Generalist
PRI	Richard Freitas	Supervisor Instrument and Control Division
PRR	Wayne Kawamata	Supervisor Relay Division
PRX	Kurt Anbe	Substation Engineer
PYA	Bert Morikuni	Administrator
PYB	Ross Sakuda	Director Generation Planning
PYE	Dean Arakawa	Superintendent Technical Services

Budget Preparer: Projects - Non-Labor

Name	Title
Karen Mark	Superintendent, Operations Division
Larry Ornellas	Superintendent, Maintenance Division

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Non-Projects - Direct Non-Labor by RA

RA	Prod Oper	Prod Maint	Total
PIB	172,830	93,000	265,830
PIH	131,928	0	131,928
PIK	1,213,292	0	1,213,292
PIL	284,204	2,243,084	2,527,288
PIM	5,860	47,560	53,420
PIN	164,300	1,570,768	1,735,068
PIO	296,920	0	296,920
PIP	0	29,080	29,080
PIW	630,420	0	630,420
PIX	309,360	2,824,636	3,133,996
PIA	286,175	0	286,175
PIC	55,824	0	55,824
PJA	69,940	0	69,940
PJB	1,067,827	0	1,067,827
PJC	140,430	0	140,430
PJW	[illegible]	0	[illegible]
PYA	1,221,469	0	1,221,469
PYB	184,360	0	184,360
PYE	23,700	0	23,700
P9S	500,000	0	500,000
PEP	9,645	0	9,645
PEZ	799,335	482,488	1,281,823
PFC	229,058	0	229,058
PHS	584,416	0	584,416
PKM	13,608	15,480	29,088
PNG	38,252	8,280	46,532
PNL	85,110	0	85,110
PNR	175,000	0	175,000
PPA	80,640	0	80,640
PRI	0	600	600
PRR	0	2,880	2,880
PRX	0	6,000	6,000

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Non-Projects - Direct Non-Labor

RA	Prod Oper	Prod Maint	Total
PIB	172,830	93,000	265,830
PIH	131,928	0	131,928
PIK	1,213,292	0	1,213,292
PIL	284,204	2,243,084	2,527,288
PIM	5,860	47,560	53,420
PIN	164,300	1,570,768	1,735,068
PIO	296,920	0	296,920
PIP	0	29,080	29,080
PIW	630,420	0	630,420
PIX	309,360	2,824,636	3,133,996
Total	3,209,114	6,808,128	10,017,242

Σ(A) = $ 265,830

NONLABOR FORECAST WORKSHEET
POWER SUPPLY SERVICES DEPARTMENT - O&M

6/16/2003

2005 X 2004 ADMINISTRATION: IB

y ense Element lescription iption/Line Item	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
nland Travel-Training	RA	Activity	Location	Indicator	Project	Exp Elem							
	PIB	789	PHE	NC	NPIZZZZZ	520							
otel, Airfare	2000	3000	3000	3000	7000	3500	5000	8500	10000	2000	4000	0	51000
ie Main. Travel to Conf.				2000									2000
om Consultant					5000								5000
	2000	3000	3000	5000	12000	3500	5000	8500	10000	2000	4000	0	58000
risland Travel	RA	Activity	Location	Indicator	Project	Exp Elem							
terisle Travel for AF	PIB	720	PHE	NC	NPIZZZZZ	522							
	0	0	300	0	0	300	0	0	250	0	0	250	1100
	RA	Activity	Location	Indicator	Project	Exp Elem							
	PIB	789	PHE	NC	NPIZZZZZ	501							
ining cost for Dept	2300	28350	25600	33800	17500	16450	23300	25050	27100	36000	13800	9350	258600
ofessional Licences/Certification	0	0	0	0	0	2500	0	0	0	0	0	0	2500
se Reg. fess (Mincom Consul)				9800									9800
id conf.				1400									1400
total	2300	28350	25600	45000	17500	18950	23300	25050	27100	36000	13800	9350	272300
ils & Entertainment	RA	Activity	Location	Indicator	Project	Exp Elem							
or AF	PIB	720	PHE	NC	NPIZZZZZ	521							
	100		100		200		100		100		200		800
ieral Plant Equip Maint	RA	Activity	Location	Indicator	Project	Exp Elem							
ilities	PIB	240	WST	NE	NPIZZZZZ	600							
Long Distance Charges	100	100	100	100	100	100	100	100	100	100	100	100	1200
Cellular (1)	100	100	100	100	100	100	100	100	100	100	100	100	1200
Pagers (2)	50	50	50	50	50	50	50	50	50	50	50	50	600
Total Utility	250	250	250	250	250	250	250	250	250	250	250	250	3000 (A)
side Services-General	RA	Activity	Location	Indicator	Project	Exp Elem							
onsulting Fees - all sta. (put under Waiau	PIB	240	WST	NE	NPIZZZZZ	501							
	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	21600 (1)

240-WST-501 Σ(1) 32,400 (A)

ivity
xpense Element
Description

NONLABOR FORECAST WORKSHEET
POWER SUPPLY SERVICES DEPARTMENT - O&M
2006 X 2004 ADMINISTRATION: IB

6/16/2003

scription/Line Item	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Outside Services-General	RA	Activity	Location	Indicator	Project	Exp Elem							
OST Tech Agreement	PIB	257	WST	NE	NPIZZZZZ	501							
Waiau	0	0	0	0	0	16500	0	0	0	0	0	0	16500 A
Outside Services-General	RA	Activity	Location	Indicator	Project	Exp Elem							
OST Tech Agreement	PIB	257	KST	NE	NPIZZZZZ	501							
Kahe	0	0	0	0	0	16500	0	0	0	0	0	0	16500 A
Outside Services-General (3 stations)	RA	Activity	Location	Indicator	Project	Exp Elem							
	PIB	720	~~PHE~~ PPM	NC	NPIZZZZZ	501							
	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	60000 A
v. Mng. Recruitment	RA	Activity	Location	Indicator	Project	Exp Elem							
	PIB	767	PHE	NC	NPIZZZZZ	501							
	900	900	900	900	900	900	900	900	900	900	900	900	10800
HER	RA	Activity	Location	Indicator	Project	Exp Elem							
ITS (Est.Mike C. 6/16/03)	PIB	240	WST	NE	NPIZZZZZ	462							
be rev. per Dean 6/16/03	9400	9400	9400	9400	9400	9400	9400	9400	9400	9400	9400	9400	112800
$72K in '05													
ssigned Vehicles - hours	RA	Activity	Location	Indicator	Project	Exp Elem	2.75						
	PIB	240	PPO	NE	NPIZZZZZ	301							
(Ford Escort)	484	418	484	440	484	440	462	484	418	484	440	418	5456
Prod. Hrs.	176	152	176	160	176	160	168	176	152	176	160	152	1984
Material Desktop Purchases	RA	Activity	Location	Indicator	Project	Exp Elem							
HONOLULU PP	PIB	240	HST	NE	NPIZZZZZ	201							
Stationery & Supplies - Purchasing Card	400	400	400	400	400	400	400	400	400	400	400	400	4800
Zee Medical	200	200	200	200	200	200	200	200	200	200	200	200	2400
Petty Cash	33	33	33	33	33	33	33	33	33	33	33	33	400
Hon Total	633	633	633	633	633	633	633	633	633	633	633	633	7600 A
Material Desktop Purchases	RA	Activity	Location	Indicator	Project	Exp Elem							
WAIAU PP	PIB	240	WST	NE	NPIZZZZZ	201							
Stationery & Supplies - Purchasing Card	758	758	758	758	758	758	758	758	758	758	758	758	9100
Zee Medical	800	800	800	800	800	800	800	800	800	800	800	800	9600
Safety Shoes	25	25	25	25	25	25	25	25	25	25	25	25	300
Petty Cash	50	50	50	50	50	50	50	50	50	50	50	50	600
Waiau Total	1633	1633	1633	1633	1633	1633	1633	1633	1633	1633	1633	1633	19600 A

Revised budget amt not reflected on this sheet. Can't locate supporting doc to show change. ← $307,057 Diff. 82,035 A

tivity
:xpense Element
Description

NONLABOR FORECAST WORKSHEET
POWER SUPPLY SERVICES DEPARTMENT - O&M
2004 ADMINISTRATION: IB

6/16/2003

scription/Line Item	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Material Desktop Purchases	RA	Activity	Location	Indicator	Project	Exp Elem							
(AHE PP	PIB	240	KST	NE	NPIZZZZZ	201							
Stationery & Supplies - Purchasing Card	300	300	300	300	300	300	300	300	300	300	300	300	**3600**
Zee Medical Supplies	800	800	800	800	800	800	800	800	800	800	800	800	**9600**
Safety Shoes	0	0	100	0	0	0	0	0	0	0	0	0	**100**
Petty Cash	0	0	120	0	0	120	0	0	120	0	0	135	**495**
kahe Total	**1100**	**1100**	**1320**	**1100**	**1100**	**1220**	**1100**	**1100**	**1220**	**1100**	**1100**	**1235**	**13795**
lenehune Water	RA	Activity	Location	Indicator	Project	Exp Elem							
HONOLULU PP	PIB	240	HST	NE	NPIZZZZZ	501							
Menehune Water	400	400	400	400	400	400	400	400	400	400	400	400	**4800**
Hon Total	**400**	**400**	**400**	**400**	**400**	**400**	**400**	**400**	**400**	**400**	**400**	**400**	**4800**
lenehune Water	RA	Activity	Location	Indicator	Project	Exp Elem							
VAIAU PP	PIB	240	WST	NE	NPIZZZZZ	501							
Menehune Water	900	900	900	900	900	900	900	900	900	900	900	900	**10800**
Waiau Total	**900**	**900**	**900**	**900**	**900**	**900**	**900**	**900**	**900**	**900**	**900**	**900**	**10800**
Material Desktop Purchases	RA	Activity	Location	Indicator	Project	Exp Elem							
(AHE PP	PIB	240	KST	NE	NPIZZZZZ	501							
Menehune Water	800	800	800	800	800	800	800	800	800	800	800	800	**9600**
kahe Total	**800**	**800**	**800**	**800**	**800**	**800**	**800**	**800**	**800**	**800**	**800**	**800**	**9600**
)NLABOR TOTAL	**27701**	**54585**	**52521**	**73257**	**53001**	**79127**	**51679**	**56851**	**60805**	**61301**	**41257**	**32970**	**645051**

te: '02 budget for vehicle

KEN 5/22/03

NONLABOR FORECAST WORKSHEET
O&M DEPARTMENT
OPERATIONS HONOLULU: IH
2004

Σ(A) = $131,928

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
are of Building and Grounds														
Wastewater Mgmt Service Charges	RA / PIH	Exp Elem 501	Activity 931	Location HST	Indicator NE	Project NPIZZZZZ								
TOTAL		0 (Zero Dollars Recorded in '00 & May ytd '01 for Honolulu Operation							0	0	0	0	0	0
Comply Ongoing - Solid & Haz Waste	RA / PIH	Exp Elem 501	Activity 877	Location HST	Indicator NE	Project NPIZZZZZ								
HP000035 Prior 6.6	Foss. Environ. S	550	550	550	550	550	550	550	550	550	550	550	550	6,600 ok
	TOTAL	550	550	550	550	550	550	550	550	550	550	550	550	6,600 (A)
Operate & Monitor Plant Equip-Boiler Prior	RA / PIH	Exp Elem 501	Activity 242	Location HST	Indicator NE	Project NPIZZZZZ								
	Sewer Charges	100 ~~50~~	50	50	50	50	50	50	50	50	50	50	100 ~~50~~	1200 ~~600~~
HP000034 25.8	City Water ok	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	22,800
	TOTAL	~~1,950~~ 2000	1,950	1,950	1,950	1,950	1,950	1,950	1,950	1,950	1,950	1,950	1,950	~~23,400~~ 24,000
Develop & Maintain Policies	RA / PIH	Exp Elem 501	Activity 240	Location HST	Indicator NE	Project NPIZZZZZ	Combine actuals from act. 240 with 242							
HP000165 14.0	Pager/Cellular Pl	1,100	1,100	1,300	1,100	1,100	1,300	1,100	1,100	1,300	1,100	1,100	1,300	14,000 ok (A)
sub total 501		3,600	3,600	3,800	3,600	3,600	3,800	3,600	3,600	3,800	3,600	3,600	3,800	~~44,000~~ 44.6
Prior 46.4														
Dev, Mge, & Adm Safety Prog & Traing	RA / PIH	Exp Elem 201	Activity 795	Location PPO	Indicator NE	Project NPIZZZZZ								
Safety Equip:Shoes,Glasses,Oth	125	190	190	190	190	190	190	190	190	190	190	190	125 ~~190~~	1500 ~~2280~~
Prior 2280	TOTAL	190	190	190	190	190	190	190	190	190	190	190	190	2280
Comply w/ Ongoing Permit Reg Reqs-Wastewater Prior 0	RA / PIH	Exp Elem 201	Activity 240 ~~876~~	Location HST	Indicator NE	Project NPIZZZZZ								
Wastewater Treatmt Chem Purch/Issues		0 (Charged to activity 248)							0	0	0	0	75 ~~0~~	900 (A) ~~0~~
HP000165 Cellular	TOTAL	~~0~~ 75	0	0	0	0	0	0	0	0	0	0	0	0
Operate & Monitor Plant Equip - Boiler	RA / PIH	Exp Elem 201	Activity 242	Location HST	Indicator NE	Project NPIZZZZZ								
HP000168 Prior 15,600	LPB, Lube Oil, D 1500	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1500 ~~1300~~	1800 ~~15600~~ (A)
	TOTAL	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	15600

Revised budget amt not reflected on this sheet. Can't locate supporting doc to show change.

→ $17,688 Diff
41,688 (A)

CA-IR-2
DOCKET NO. 04-0113
HECO T-6
ATTACHMENT 3A
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NONLABOR FORECAST WORKSHEET
O&M DEPARTMENT
OPERATIONS HONOLULU: IH
2004

eb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Activity: 243	Location: HST	Indicator: NE	Project: NPIZZZZZ								
760	760	760	760	760	760	760	760	760	760	~~760~~ 800	~~9120~~ 9600
llars Recorded in '00 & 05/01 for Honolulu Operations)						0	0	0	0	0	0
760	760	760	760	760	760	760	760	760	760	760	9120
Activity: 248	Location: HST	Indicator: NE	Project: NPIZZZZZ								
190	190	190	190	190	190	190	190	190	190	~~190~~ 625	~~2280~~ 7500
50	3050	3050	3050	3050	3050	3050	3050	3050	3050	~~3050~~ 19000	36600 22800
90	490	490	490	490	490	490	490	490	490	490	5880
llars Recorded in 1999 for Honolulu Operations)						0	0	0	0	0	0
30	3730	3730	3730	3730	3730	3730	3730	3730	3730	3730	44760
											36,150
80	**5980**	**5980**	**5980**	**5980**	**5980**	**5980**	**5980**	**5980**	**5980**	**5980**	**71760**
Activity: 242	Location: HST	Indicator: NE	Project: NPIZZZZZ								
[redacted]											
0											0
60	880	800	880	800	840	880	760	880	760	760	~~9920~~
60	880	800	880	800	840	880	760	880	760	760	9920
											1984 x $2.5 = $4960
40	**10,660**	**10,380**	**10,460**	**10,580**	**10,420**	**10,460**	**10,540**	**10,460**	**10,340**	**10,540**	**125,680**

O&M DEPARTMENT

NONLABOR FORECAST W HEET

OPERATIONS KAHE: IK
2004 & 2005

Rev 5/22/03
Rev 6/12/03 Ltr
Σ(A) = $1,213,292

	Basis	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Develop & Maintain Policies & Procedures		RA	Exp Elem	Activity	Location	Indicator	Project							
		PIK	501	240	KST	NE	NPIZZZZZ							
HP000167 Pager/Cellular F	7200 ~~$9,600~~	600 ~~800~~	800	800	800	800	800	800	800	800	800	800	600 ~~800~~	7200 (A) ~~9,600~~
Operate & Monitor Plant Equip-Boiler		RA	Exp Elem	Activity	Location	Indicator	Project							
		PIK	501	242	KST	NE	NPIZZZZZ							
HP000736 City Water	228,000 ~~$180,000~~	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	228,000 ~~180,000~~
TOTAL		15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	180,000
Operate & Monitr Plant Equip -TurboGen		RA	Exp Elem	Activity	Location	Indicator	Project							
		PIK	501	243	KST	NE	NPIZZZZZ							
HP000175 Op. & Mon. Plt. Eq. Turb. Gen	ok $0	0	0	0	0	0	0	0	0	0	0	0	0	0
PR000177	$0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL		0	0	0	0	0	0	0	0	0	0	0	0	0
Comply Ongoing Solid & Haz. Waste, Oil Rel		RA	Exp Elem	Activity	Location	Indicator	Project							
HP000037 Marine Spill Response		PIK	501	877	KST	NE	NPIZZZZZ							
TOTAL	$12,800 ok	$3,200	0	0	$3,200	0	0	$3,200	0	0	$3,200	0	0	12800 (A)
Comply Ongoing Permits Reg./Req. - Air		RA	Exp Elem	Activity	Location	Indicator	Project							
HP000048		PIK	501	875	KST	NE	NPIZZZZZ							
TOTAL	$10,000 ok	$2,500	0	0	$2,500	0	0	$2,500	0	0	$2,500	0	0	10000 (A)
TOTAL 501		21,500	15,800	15,800	21,500	15,800	15,800	21,500	15,800	15,800	21,500	15,800	15,800	198,000 212,400
Dev, Mge, & Adm Safety Prog & Traing		RA	Exp Elem	Activity	Location	Indicator	Project							
		PIK	201	795	PPO	NE	NPIZZZZZ							
Safety Equip:Shoes,Glasses,Oth	ok $2,160	180	180	180	180	180	180	180	180	180	180	180	180	2,160
TOTAL		180	180	180	180	180	180	180	180	180	180	180	180	2160
Develop & Maintain Policies & Procedures		RA	Exp Elem	Activity	Location	Indicator	Project							
		PIK	201	241 ~~240~~	KST	NE	NPIZZZZZ							
	2400 ~~$8,400~~	700	700	700	700	700	700	700	700	700	700	700	700	2400 (A) ~~8400~~
TOTAL		700	700	700	700	700	700	700	700	700	700	700	700	8400

Revised budget amt not reflected on this sheet. Can't locate supporting doc to show change. → + 57,732 Diff. per pillow 285,732 (A)

Adj Oth.

None - 240-151-201

Missing documentation, amt is immaterial. → $399.96 (A)

2004 IK BUD Fore.5-10-03.xls
5/22/2003

CA-IR-2
DOCKET NO. 04-0113
HECO T-6
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O&M DEPAR...ENT

NONLABOR FORECAST W ...HEET

OPERATIONS KAHE: IK

2004 & 2005

		Basis	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Operate & Monitor Plant Equip - Boiler			RA	Exp Elem	Activity	Location	Indicator	Project							
			PIK	201	242	KST	NE	NPIZZZZZ							
HP000172	LPG, Lube Oil, Diesel	90,000 ~~$88,800~~	7,400	7,400	7,400	7,400	7,400	7,400	7,400	7,400	7,400	7,400	7,400	7,400	90,000 ~~88800~~
	TOTAL	Misc +18,000 (1)	7400	7400	7400	7400	7400	7400	7400	7400	7400	7400	7400	7400	88800 (1)
Operate & Monitr Plant Equip -TurboGen			RA	Exp Elem	Activity	Location	Indicator	Project							
			PIK	201	243	KST	NE	NPIZZZZZ							
HP000173	Elec. Plant Gases	9800 ~~$10,800~~	900	900	900	900	900	900	900	900	900	900	900	900	9800 ~~10,800~~
HP000175	Elec. Plant Gases	130,200 ~~$123,000~~	10,250	10,250	10,250	10,250	10,250	10,250	10,250	10,250	10,250	10,250	10,250	10,250	~~123,000~~ 130,200
PR000177	Elec. Plant Gases	2400 ~~$1,056~~	88	88	88	88	88	88	88	88	88	88	88	88	~~1,056~~ 2400
	TOTAL		11,238	11,238	11,238	11,238	11,238	11,238	11,238	11,238	11,238	11,238	11,238	11,238	~~134,856~~ 137,400 ✓(A)
Perf Water Treatmnt & Analys (Purifcatn)			RA	Exp Elem	Activity	Location	Indicator	Project							
			PIK	201	248	KST	NE	NPIZZZZZ							
HP000183	Wastewater Chem. Treat.	o/c $81,600	6,800	6,800	6,800	6,800	6,800	6,800	6,800	6,800	6,800	6,800	6,800	6,800	81,600
HP000184	Demin/Evap. Chemicals	o/K $300,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	300,000
HP000185	Condenser Chemicals	238,800 $234,000	19,500	19,500	19,500	19,500	19,500	19,500	19,500	19,500	19,500	19,500	19,500	19,500	234,000
HP000186	Boiler Water Treatment	25,200 ~~$24,000~~	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	24,000
	TOTAL	$639,600	53,300	53,300	53,300	53,300	53,300	53,300	53,300	53,300	53,300	53,300	53,300	53,300	~~639,600~~ 645,600 ✓(A)
Sub Total 201			72,818	72,818	72,818	72,818	72,818	72,818	72,818	72,818	72,818	72,818	72,818	72,818	~~873,816~~ 877,560
Oper & Monitor Plant Equip - Boiler			RA	Exp Elem	Activity	Location	Indicator	Project							
Vehicles			PIK	301	242	KST	NE	NPIZZZZZ							
A: Total Hours Available Per Month			184	160	176	168	184	168	176	184	160	184	176	168	2088
Less Holiday Hours			8	8	0	8	8	8	8	8	8	8	16	16	104
B: Total Productive Hours Per Month			176	152	176	160	176	160	168	176	152	176	160	152	1984
A47 Escort Pool Car: Prod. Hrs. * $2.5			440	380	440	400	440	400	420	440	380	440	400	380	4960
Another car (?)															0
	TOTAL		440	380	440	400	440	400	420	440	380	440	400	380	4960 ✓(A)
NONLABOR TOTAL-2004			94,758	88,998	89,058	94,718	89,058	89,018	94,738	89,058	88,998	94,758	89,018	88,998	1,091,176

E(1) 106,800 ✓(A)

2005 BUDGET YEAR
NON LABOR FORECAST/UPDATE WORKSHEET
POWER SUPPLY O&M DEPT - KAHE MAINTENANCE DIVISION (IL)
(in dollars)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
		PIL	878	KST	NE	NPIZZZZZ	501							
Hazardous waste disposal	PR000249	0	0	5,000	0	0	5,000	0	0	5,000	0	0	5,000	20,000
Lead abatement	PR000250	0	0	1,000	0	0	1,000	0	0	1,000	0	0	5,000	8,000
Mercury disposal	PR000251	0	0	5,000	0	0	5,000	0	0	5,000	0	0	1,000	16,000
Asbestos abate. disposal	PR000264	0	0	0	0	0	5,000	0	0	5,000	0	0	5,000	15,000
Waste Oil disposal	PR002109	0	0	0	0	0	5,000	0	0	0	0	0	5,000	10,000
	total	0	0	11,000	0	0	21,000	0	0	16,000	0	0	21,000	69,000 ✓
		PIL	875	KST	NE	NPIZZZZZ	501							
K6 CEMS	PR000727	0	0	0	0	0	0	0	0	0	0	0	0	0
K6 CEMS	PR001413	4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	14,167	4,167	4,167	4,167	60,004
	total	4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	14,167	4,167	4,167	4,167	60,004 ✓
		PIL	931	KST	NE	NPIZZZZZ	501							
Exterminator /Weed Cont.	PR000363	4,900	4,900	4,900	4,900	4,900	4,900	4,900	4,900	4,900	4,900	4,900	4,900	58,800 ✓
		PIL	933	KST	NE	NPIZZZZZ	501							
Security Equip.		0	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0	10,000 ✓
Clean Solvent	HP000342	PIL	259	KST	NE	NPIZZZZZ	501							
		0	0	4,300	0	0	4,300	0	0	4,400	0	0	4,400	17,400 ✓
Provide/manage Svcs-Custodial/Janit.	HP000339	PIL	934	KST	NE	NPIZZZZZ	501							
		4,800	4,800	4,800	4,800	4,800	4,800	4,800	4,800	4,800	4,800	4,800	4,800	57,600 ✓
Provide/manage Svcs-Waste/Refuse	HP000353	PIL	936	KST	NE	NPIZZZZZ	501							
		2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	28,800 ✓
		PIL	263	KST	NE	NPIZZZZZ	501							
Elevator maint	HP000347	1,825	1,825	1,825	1,825	1,825	1,825	1,825	1,825	1,825	1,825	1,825	1,825	21,900
Air Cond maint	HP000348	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	14,400
	total	3,025	3,025	3,025	3,025	3,025	3,025	3,025	3,025	3,025	3,025	3,025	3,025	36,300 ✓
		PIL	265	KST	NE	NPIZZZZZ	501							
air cond repairs		1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	14,400

See summary on last page.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
elevator repairs	0	0	1,500	0	0	1,500	0	0	1,500	0	0	1,500	6,000
K1/6 Structural Painting	0	0	0	0	0	0	0	50,000	50,000	50,000	50,000	0	200,000
Turb. Deck Drain Repairs	0	0	0	0	20,000	0	0	0	0	0	0	0	20,000
Turb. Deck Coating Repairs	0	0	0	15,000	0	0	0	0	0	0	0	0	15,000
Corrosion Control Painting	0	0	0	0	0	0	0	0	0	0	0	0	0
Culvert Drain Maint.								10,000					10,000
Landscape Roadside	0	12,500	0	0	0	10,000	0	0	0	8,500	0	0	31,000
Ground Maint. - Tree Trimming	0	0	0	8,500	0	0	0	0	0	8,500	0	0	17,000
Distilled Wtr Tanks Insp. & Repair	0	0	15,000	0	0	0	0	0	15,000	0	0	0	30,000
Intake Bar Grills insp & Clean	0	0	0	0	0	5,000	0	0	0	0	0	0	5,000
Discharge Shoebox Reprs					50,000								50,000
Wastewater Struct. Maint				30,000							30,000		60,000
Demin Structual Maint					15,000						0		15,000
Discharge Struc. Bar Grills Cln & Insp										15,000			15,000
Blackstart Annual Maint.											20,000		20,000
A/C Duct Cleaning & Disinfection	0	0	0	0	0	0	0	0	10,000	0	0	0	10,000
Fire Break Clearing	0	0	0	0	0	0	20,000	0	0	0	0	0	20,000
total	1,200	13,700	17,700	54,700	86,200	17,700	21,200	61,200	77,700	83,200	101,200	2,700	538,400 ✓

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
		PIL	271	KST	NE	NPIZZZZZ	501							
Fuel Oil Pipeline repr/inspec		0	0	0	0	0	0	15,000	0	0	0	0	0	15,000 ✓
		PIL	262	KST	NE	NPIZZZZZ	501							
Cond. Cleaners	PR000264	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	30,000
basin struct repairs	PR004485	0	0	0	0	0	0	0	0	50,000	50,000	50,000	0	150,000
Condenser Cleaning					0									0
Basin Dredging				75,000	75,000					25,000	25,000			50,000
Cathodic Protec									0					150,000
	total	2,500	2,500	77,500	77,500	2,500	2,500	2,500	2,500	77,500	77,500	52,500	2,500	380,000 ✓
		PIL	260	KST	NE	NPIZZZZZ	501							
CWP OH (1)	PR005340	0	0	0	0	0	20,000	0	0	0	0	0	0	~~20,000~~ 0 (1)
		PIL	266	KST	NE	NPIZZZZZ	501							
Drott Maint/Certification		0	0	6,000	0	0	0	0	0	0	6,000	0	0	12,000
Gantry crane inspec/Certif		0	0	0	0	0	0	0	0	0	0	2,000	0	2,000
	total	0	0	6,000	0	0	0	0	0	0	6,000	2,000	0	14,000 ✓

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
***productive monthly hours	176	152	176	160	176	160	168	176	152	176	160	152	
ASSIGNED VEHICALS	PIL	259	KST	NE	NPIZZZZZ	301							
$5.50													
A041 Fire Truck ($5.50 per hr)	968	836	968	880	968	880	924	968	836	968	880	836	10,912 ×5.5=1,982
$2.75													
A048 NEON($2.75 per hr)	484	418	484	440	484	440	462	484	418	484	440	418	5,456 ×2.75=1,98
ASSIGNED VEHICLES total	1,452	1,254	1,452	1,320	1,452	1,320	1,386	1,452	1,254	1,452	1,320	1,254	16,368 ✓
	PIL	262	KST	NE	NPIZZZZZ	301							
A042 15 Pass Van($5.50 per hr)	968	836	968	880	968	880	924	968	836	968	880	836	10,912 ×5.5=1,984
A044 GMC P/U Truck($5.50 per hr)	968	836	968	880	968	880	924	968	836	968	880	836	10,912
ASSIGNED VEHICLES total	1,936	1,672	1,936	1,760	1,936	1,760	1,848	1,936	1,672	1,936	1,760	1,672	21,824 (2)
													(1,984 × 2) × 5.15 = 5/13 22,816 (3)
	PIL	795	KST	NE	NPIZZZZZ	201							
Gen. Plt - trend	300	300	300	300	300	300	300	300	300	300	300	300	3,600 (4)
	PIL	263	KST	NE	NPIZZZZZ	201							
General Plt. - Trend	400	400	400	400	400	400	400	400	400	400	400	400	4,800 ✓
	PIL	257	KST	NE	NPIZZZZZ	201							
Gen Plant - Trend	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	12,000
BFP OH (1)	0	0	0	0	0	0	150,000	0	0	0	0	0	150,000
total	1,000	1,000	1,000	1,000	1,000	1,000	151,000	1,000	1,000	1,000	1,000	1,000	162,000 ✓
	PIL	260	KST	NE	NPIZZZZZ	201							
Gen Plant - Trend	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	18,000
CND Pump oh	0	0	0	0	0	0	0	0	13,000	0	0	0	13,000
total	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	14,500	1,500	1,500	1,500	31,000 ✓
	PIL	268	KST	NE	NPIZZZZZ	201							
Gen. Plant - Trend	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	132,000
	0	0	0	0	0	0	0	0	0	0	0	0	0
total	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	132,000 ✓
	PIL	265	KST	NE	NPIZZZZZ	201							
Gen. Plant - Trend	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	24,000
Roadway Repairs	0	0	0	0	35,000	0	0	0	0	0	0	0	35,000

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Maint Stn Common/CM	total	2,000	2,000	2,000	2,000	37,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	59,000 ✓
		PIL	259	KST	NE	NPIZZZZZ	201							
Gen. Plant - Trend		16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	192,000
Plant Fence Repairs					15,000									15,000
Sootblower Repairs		0	2,000	0	2,000	0	2,000	0	2,000	0	2,000	0	2,000	12,000
Burner tips replace		0	20,000	0	0	20,000	0	0	20,000	0	0	20,000	0	80,000
	total	16,000	38,000	16,000	33,000	36,000	18,000	16,000	38,000	16,000	18,000	36,000	18,000	299,000 ✓
		PIL	262	KST	NE	NPIZZZZZ	201							
Gen Plant - Trend		14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	168,000
Travelling Screen OH		0	0	0	0	0	0	50,000	0	0	50,000	0	0	100,000
Kahe Condenser Scrapers		0	0	12,000	0	0	0	0	0	0	0	0	0	12,000
Travel. Screen Wash Wtr Piping					25,000		0	0			0			25,000
	total	14,000	14,000	26,000	39,000	14,000	14,000	64,000	14,000	14,000	64,000	14,000	14,000	305,000 ✓
TOTAL		72,580	107,618	198,380	243,772	213,580	137,072	308,426	155,580	268,018	288,580	245,272	101,018	2,339,896

Delete Item ① <20,000>
Adj. for Veh Rt ② <21,824>
+③ 22,816
(sep. page) Budget Recyl ⑤ 210,000
A+G Cost ④ <3,600>

2,527,288

2005 Budget Recycle
4/15/04

Code Block	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TTL	Comments
PIT 259 K06 NE P0000844 201		5,000											5,000	K06 OH: Add $5K. Boiler CM. Insulation/Refractory. From $25K to $30K.
PIT 259 K06 NE P0000844 201		500											500	K06 OH: Add $5K. Boiler CM. Main Steam Stop Vlv Packing. From $0 to $0.5
PIT 259 K06 NE P0000844 201		4,500											4,500	K06 OH: Add $4.5K. Boiler CM. Main Steam Stop Shaft. From $0 to $4.5K.
PIT 259 K06 NE P0000844 501		5,000											5,000	K06 OH: Add $5K. Boiler CM. Scaffolding Svcs for Duct Rprs. From $10K to $15K.
PIT 257 W04 NE P0000847 201									-5,000				-5,000	W4 OH: Delete $5K. Boiler PM. DCS Batt RAM. From $5K to $0.
PIT 257 W04 NE P0000847 201									10,000				10,000	W4 OH: Add $10K. Boiler PM. DCS Pwr Supply Mod/DCS Cabinet Fans. From $20K to $30K.
PIT 257 W04 NE P0000847 501									-10,000				-10,000	W4 OH: Delete $10K. Boiler PM. Stack Inspection. From $10K to $0
PIT 258 W04 NE P0000847 501									-10,000				-10,000	W04 OH: Delete $10K. Boiler PDM. Blr Chem Cleaning-Frac Tank Rental. From $10K to $0.
PIT 258 W04 NE P0000847 501									-10,000				-10,000	W04 OH: Delete $10K. Boiler PDM. FWH ECT Contractor. From $30K to $20K.
PIT 261 W04 NE P0000847 501									-10,000				-10,000	W04 OH: Delete $10K. Turb PDM. Eddy Current Cond/Chiller Contractor. From $30K to $20K.
PIT 349 W04 NE P0000847 201									-10,000				-10,000	W04 OH: Delete $10K. Trans PDM. Transformer Oil Repl. Shift to capital. From $10 To $0.
PIT 349 W04 NE P0000847 501									-5,500				-5,500	W04 OH: Delete $5.5K. Trans PDM. Disposal of Transformer Oil. From $14 To $8.5.
PIL 269 KST NE NPIZZZZZ 501		210,000										5	210,000	Kahe Maint: Add $210K. Kahe FO Tank 11 Clean/Inspect. Defer from 2004 Budget to 2005 Kahe Maint Non Non Budget.
PIT 257 H09 NE P0000848 201									-113,000				-113,000	H9 Overhaul: Delete $113K. Materials.
PIT 258 H09 NE P0000848 201									-121,000				-121,000	H9 Overhaul: Delete $121K. Materials.
PIT 259 H09 NE P0000848 201									-94,500				-94,500	H9 Overhaul: Delete $94.5K. Materials.
PIT 260 H09 NE P0000848 201									-8,500				-8,500	H9 Overhaul: Delete $8.5K. Materials.
PIT 261 H09 NE P0000848 201									-10,000				-10,000	H9 Overhaul: Delete $10K. Materials.
PIT 262 H09 NE P0000848 201									-33,500				-33,500	H9 Overhaul: Delete $33.5K. Materials.
PIT 348 H09 NE P0000848 201									-1,000				-1,000	H9 Overhaul: Delete $1.0K. Materials.
PIT 350 H09 NE P0000848 201									-1,000				-1,000	H9 Overhaul: Delete $1.0K. Materials.
PIX 878 WST NE NPIZZZZZ 501		-20,000			-20,000			-20,000			-20,000		-80,000	WAI Haz, Lead, Mercury, Asbestos Removal.
PIX 265 WST NE NPIZZZZZ 501	-6,833	-58,333	-84,333	-5,833	-114,333	16,667	-6,833	-88,333	-34,333	-5,833	15,667	16,667	-355,996	WAI Corr Ctrl, Bldg Rprs, Bathrm Rpr, WWT Rprs, Paving, Tree Trimmg, Landscape etc.
PIX 260 WST NE NPIZZZZZ 501		55,000	5,000				-20,000	55,000	105,000				200,000	WAI Tvl Screen OH, Gantry Crane Cert, Cond Pump OH, Tunnel Cleaning.
PIX 262 WST NE NPIZZZZZ 501						-50,000	-50,000	50,000					-50,000	WAI Cond Clean, Cath Protectn, CW Spalling, Turb Deck Coating.
PIX 257 WST NE NPIZZZZZ 201			-75,000					75,000					0	WAI Genl Trend, BFP OH.

Σ(A) = $53,420

Activity
Expense Element
Description

NONLABOR FORECAST WORKSHEET
POWER SUPPLY SERVICES DEPARTMENT
2005 ~~2004~~ MAINT-ADMINISTRATION: IM

Description/Line Item	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Improve Business Process													
Mainland Travel- Training	RA: PIM	Activity: 789	Location: PHE	Indicator: NC	Project: NPIZZZZZ	Exp Elem: 520							
Fcst $ in "IB"													
IA-TCS Hotel, Airfare	0	0	0	0	0	0	0	0	0	0	0	0	0
General Plant Equip Maint	RA: PIM	Activity: 240	Location: WST	Indicator: NE	Project: NPIZZZZZ	Exp Elem: 600							
Utilities													
Long Distance Charges	100	100	100	100	100	100	100	100	100	100	100	100	1200
Cellular ( )	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	15600
Pagers (2) + 12 Fore. @ 60 per set/per yr.	70	70	70	70	70	70	70	70	70	70	70	70	840
Total Utility	1470	1470	1470	1470	1470	1470	1470	1470	1470	1470	1470	1470	17640
Total General Plant Equipment Maint	**1470**	**1470**	**1470**	**1470**	**1470**	**1470**	**1470**	**1470**	**1470**	**1470**	**1470**	**1470**	**17640**
IS Expense-PC Software Purch	RA: PIM	Activity:	Location: PHE	Indicator: NE	Project: NPIZZZZZ	Exp Elem: 462							
	0	0	0	0	0	0	0	0	0	0	0	0	0
prod hours per month	176	152	176	160	176	160	168	176	152	176	152	152	1976
Assigned Vehicles-fcst in prod hrs	RA: PIM	Activity: 259	Location: WST	Indicator: NE	Project: NPIZZZZZ	Exp Elem: 301							
hon pp													
A37 (98 Dodge Neon)-$2.5per hr	35	30	35	32	35	32	34	35	30	35	30	30	395
													0
Total Assigned Vehicles	**35**	**30**	**35**	**32**	**35**	**32**	**34**	**35**	**30**	**35**	**30**	**30**	**395** (1)
Assigned Vehicles	RA: PIM	Activity: 240	Location: WST	Indicator: NE	Project: NPIZZZZZ	Exp Elem: 301							
waiau pp													
A37 (98 Dodge Neon)-$2.5per hr	141	122	141	128	141	128	134	141	122	141	122	122	1581
Total Assigned Vehicles	**141**	**122**	**141**	**128**	**141**	**128**	**134**	**141**	**122**	**141**	**122**	**122**	**1581** (1)
Assigned Vehicles	RA: PIM	Activity: 240	Location: KST	Indicator: NE	Project: NPIZZZZZ	Exp Elem: 301							
kahe pp													
A37 (98 Dodge Neon)-$4per hr													0
Total Assigned Vehicles	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Activity 259 - WST - 301 $4,960 (A)
Error in budget; there's only one vehicle in PIM.
(Assigned Vehicles)

(Larry's) Vehicle A37 Σ(1) = 1,976 hrs
+8 diff.
$4,960 (A) or 1,984 hrs

Activity
Expense Element
Description

NONLABOR FORECAST WORKSHEET
POWER SUPPLY SERVICES DEPARTMENT
2004 MAINT-ADMINISTRATION: IM

Description/Line Item	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Material Desktop Purchases	RA	Activity	Location	Indicator	Project	Exp Elem							
	PIM	240	WST	NE	NPIZZZZZ	201							
Safety Shoes (2 * $100 *1 1/2 a yr.	0	0	150	0	0	0	0	0	0	0	0	150	300
Misc Supplies	50	50	50	50	50	50	50	50	50	50	50	50	600
Total Material Desktop Purchases	50	50	200	50	50	50	50	50	50	50	50	200	900 (A)
	RA	Activity	Location	Indicator	Project	Exp Elem							
	PIM	261	WST	NE		0 501							
Lube Oil Analysis PR008688	500	500	500	500	500	500	500	500	500	500	500	500	6000
	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	500	500	500	500	500	500	500	500	500	500	500	500	6000
	RA	Activity	Location	Indicator	Project	Exp Elem							
	PIM	258	WST	NE	NPIZZZZZ	501 201							
Misc. PDM work	300	300	300	300	300	300	300	300	300	300	300	300	3600
	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	300	300	300	300	300	300	300	300	300	300	300	300	3600 (A)
Professional Dues-Vibration Institute	RA	Activity	Location	Indicator	Project	Exp Elem							
	PIM	258	WST	NE		0 516							
	0	0	0	0	0	40	0	0	0	0	0	0	40
	RA	Activity	Location	Indicator	Project	Exp Elem							
	PIM	262	WST	NE	NPIZZZZZ	501							
Westinghouse Tech Svc. Agree PR008901	2000	2000	2000	2000	2000 20	2000	2000	2000	2000	2000	2000	2000	24000
NONLABOR TOTAL-2004	**3996**	**3972**	**4146**	**3980**	**3996**	**4020**	**3988**	**3996**	**3972**	**3996**	**3972**	**4122**	**48156**

Revised budget amt not reflected on this sheet. Can't locate supporting doc to show change.

$24,000
+12,000 Diff.
$36,000 (A)

Activity 268 - WST - 201 $3,000 (A)
Missing documentation.
(Maint. Com Misc. Eq Corr. "trend")

CA-IR-2
DOCKET NO. 04-0113
HECO T-6
ATTACHMENT 3A
PAGE 17 OF 29

Σ(A) = $1,735,068

NONLABOR FORECAST WORKSHEET
POWER SUPPLY SERVICES DEPARTMENT
HONOLULU MAINTENANCE PIN
2005

2.200% 2003 to 2004 Escalation Per Mgmt Acctg 1/30/04
2.100% 2004 to 2005 Escalation Per Mgmt Acctg 1/30/04

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RA / Activity / Location / Indicator / Project / Ee													
PIN 878 HST NE NPIZZZZZ 501													
Blanket		1000			3000			1,000			1,000	2,000	8,000
Asbestos Removal						25,000						25,000	50,000
Haz Waste Disposal		7,000			7,000			7,000				7,000	28,000
Lead Abatement				1,000		1,000			1,000			1,000	4,000
Mercury Disposal		1,000			1,000			1,000	0		1,000		4,000
	0	9,000	0	1,000	11,000	26,000	0	9,000	1,000	0	2,000	35,000	94,000 ✓ (A)
RA / Activity / Location / Indicator / Project / Ee													
PIN 933 HST NE NPIZZZZZ 501													
Security Equip	0	0	1,000	0	0	1,000	0	0	1,000	0	0	1,000	4,000 ✓
RA / Activity / Location / Indicator / Project / Ee													
PIN 931 HST NE NPIZZZZZ 501													
Exterminator Svc/Land. HP000334	625	625	625	625	625	625	625	625	625	625	625	625	7,500 ✓
RA / Activity / Location / Indicator / Project / Ee													
PIN 934 HST NE NPIZZZZZ 501													
Janitorial HP000337	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	51,600 ✓
RA / Activity / Location / Indicator / Project / Ee													
PIN 936 HST NE NPIZZZZZ 501													
Refuse Service HP000349	600	600	600	600	600	600	600	600	600	600	600	600	7,200 ✓
RA / Activity / Location / Indicator / Project / Ee													
PIN 270 HST NE NPIZZZZZ 501													
Iwilei-HPP FO Pipeline Pigging (~~Not in pillar.~~ Added 2/19/04)			160,000										160,000
RA / Activity / Location / Indicator / Project / Ee													
PIN 263 HST NE NPIZZZZZ 501													
Gen Plant - Trend	100	100	100	100	100	100	100	100	100	100	100	100	1,200
Elevator maint HP000343	850	850	850	850	850	850	850	850	850	850	850	850	10,200
Air Cond maint HP000344	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	12,000
Clean Solvent HP000340			400			500			400			500	1,800

See Budget Recycle 4/15/04 sheet on last page, item (1) for $80K. Can't locate supporting doc for $45K difference.

+80,000 Bud Recycl.
+45,000 Diff.
S/B 285,000 (A)

Activity 258 - H09 - 201 $400,000 (A)
See Budget Recycle 4/15/04 sheet on last page, item (2)

NONLABOR FORECAST WORKSHEET
POWER SUPPLY SERVICES DEPARTMENT
HONOLULU MAINTENANCE
2005

2.200% 2003 to 2004 Escalation Per Mgmt Acctg 1/30/04
2.100% 2004 to 2005 Escalation Per Mgmt Acctg 1/30/04

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	1,950	1,950	2,350	1,950	1,950	2,450	1,950	1,950	2,350	1,950	1,950	2,450	25,200

RA	Activity	Location	Indicator	Project	Ee
PIN	265	HST	NE	NPIZZZZZ	501

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
General Plant Trend	900	900	900	900	40900	900	900	900	900	50,900	900	900	100,800
Air Cond Repairs HP000360						2,500						2,500	5,000
Elevator Repairs HP000750						2,500							2,500
Building repairs				20,000				20,000				20,000	60,000
A/C Duct Clean. & Disinfection				6,500									6,500
Deck Plating Rprs (Not in pillar. Aded 2/19/04)										50,000			50,000
Tree Trimming (Not in pillar. Added 2/19/04)			500			500			500			500	2,000
	900	900	1,400	27,400	40,900	6,400	900	20,900	1,400	100,900	900	23,900	226,800

RA	Activity	Location	Indicator	Project	Ee
PIN	266	HST	NE	NPIZZZZZ	501

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
H8/9 Crane Certification	0	0	0	0	0	0	0	0	2,000	0	0	0	2,000

RA	Activity	Location	Indicator	Project	Ee
PIN	260	HST	NE	NPIZZZZZ	501

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Circ Water Pump Rpr	0	0	0	0	0	0	0	0	0	80,000	0	0	80,000

RA	Activity	Location	Indicator	Project	Ee
PIN	262	HST	NE	NPIZZZZZ	501

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
H8/9 Asbestos Strip from Fdwtr Heaters			25,000			25,000			25,000				75,000
Condenser Corrosion (Not in Pillar. Add 2/19/04)								25,000					25,000
Cathodic Protection				75,000	75,000								150,000
Cond. Clean. HP000260	500	500	500	500	500	500	500	500	500	500	500	500	6,000
	500	500	25,500	75,500	75,500	25,500	500	25,500	25,500	500	500	500	256,000

RA	Activity	Location	Indicator	Project	Ee
PIN	259	HST	NE	NPIZZZZZ	501

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Maint Boiler	0	0	0	30,000	0	0	0	0	0	0	0	0	30,000

RA	Activity	Location	Indicator	Project	Ee
PIN	259	HST	NE	NPIZZZZZ	301

$2.75

NONLABOR FORECAST WORKSHEET
POWER SUPPLY SERVICES DEPARTMENT
HONOLULU MAINTENANCE
2005

2.200% 2003 to 2004 Escalation Per Mgmt Acctg 1/30/04
2.100% 2004 to 2005 Escalation Per Mgmt Acctg 1/30/04

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
A33 1997 Neon Hrs	176	152	176	160	176	160	168	176	152	176	150	162	1,984
A33 1997 Neon Dollars	$484	$418	$484	$440	$484	$440	$462	$484	$418	$484	$413	$446	$5,456
$5.50													
Truck Hrs	176	152	176	160	176	160	168	176	152	176	150	162	1,984
Truck Dollars	$968	$836	$968	$880	$968	$880	$924	$968	$836	$968	$825	$891	$10,912
													$16,368 ✓ (A)
RA: PIN; Activity: 257; Location: HST; Indicator: NE; Project: NPIZZZZZ; Ee: 201													
Gen Plt - trend	600	600	600	600	600	600	600	600	600	600	600	600	7,200 ✓ (A)
RA: PIN; Activity: 260; Location: HST; Indicator: NE; Project: NPIZZZZZ; Ee: 201													
Gen Plt. - trend	400	400	400	400	400	400	400	400	400	400	400	400	4,800 ✓ (A)
RA: PIN; Activity: 265; Location: HST; Indicator: NE; Project: NPIZZZZZ; Ee: 201													
Gen. Plt - Trend	1,200	~~1,200~~ 2,200	~~1,200~~ 2,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	14,400
													$16,400 ✓ (A) Show $2K
RA: PIN; Activity: 259; Location: HST; Indicator: NE; Project: NPIZZZZZ; Ee: 201													
Gen. Plt. - trend	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	12,000
BFP OH							150,000						150,000
Burner tips Replacement					17,000								17,000
Maint blr equip/CM	1,000	1,000	1,000	1,000	18,000	1,000	151,000	1,000	1,000	1,000	1,000	1,000	179,000 ✓ (A)
RA: PIN; Activity: 262; Location: HST; Indicator: NE; Project: NPIZZZZZ; Ee: 201													
Gen. Plt. - Trend	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	18,000 ✓
RA: PIN; Activity: 268; Location: HST; Indicator: NE; Project: NPIZZZZZ; Ee: 201													
Gen Plt. - Trend	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	18,000 ✓
RA: PIN; Activity: 271; Location: HST; Indicator: NE; Project: NPIZZZZZ; Ee: 201													
Gen Plt. - trend	500	500	500	500	500	500	500	500	500	500	500	500	6,000 ✓

NONLABOR FORECAST WORKSHEET
POWER SUPPLY SERVICES DEPARTMENT
HONOLULU MAINTENANCE
2005

2.200% 2003 to 2004 Escalation Per Mgmt Acctg 1/30/04
2.100% 2004 to 2005 Escalation Per Mgmt Acctg 1/30/04

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
TOTAL In Pillar	$17,027	$25,829	$204,427	$149,395	$160,027	$75,395	$166,961	$71,027	$47,229	$197,027	$18,813	$76,912	$1,210,068

0K per CHiga via NYuen ig Run.
ls: Add $58K per RHarris =$47,783; 00Act=$63,325; t=$54,821; 03 Act=$59,878
$400K Kmark.
1 Oper IH. -$111K
Oper IW. $623K
5K for Gas Turbine Matls. bu. From $5K to $10K.
0K for Gas Turbine O/S. to $60K. Crane Rental Kiyabu.
10K for Gas Turbine O/S. om $10K to $20K.
25K for Gas Turbine O/S. Kiyabu. From $0 to $25K.
5K for Gas Turbine Matls. bu. From $5K to $10K.
60K for Gas Turbine O/S. to $60K. Crane Rental Kiyabu.
10K for Gas Turbine O/S. om $10K to $20K.
25K for Gas Turbine O/S. Kiyabu. From $0 to $25K.
5K. Boiler PM. DCS to $0
oiler PM. DCS inet Fans. From $20K to
Boiler PDM. FWH ECT K to $8K.
oiler CM. ERV Stop Valve .
urb PDM. Gen Stator $30K.
urb PDM. Gen Field om $0 to $80K.
iler CM. APH Basket Repl.

Final

PIO

NONLABOR FORECAST WORKSHEET
O&M DEPARTMENT
OPERATIONS: IO
2004 & 2005

Rev Non Labor 5-23-03

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Comply w/ Permit Reg Reqs-Solid & Haz	RA	Exp Elem	Activity	Location	Indicator	Project							
	PIO	501	877	WST	NE	NPIZZZZZ							
HP32/HP33/HP34 / Clean Island Council	139,000		0	0	0	0	0	0	0	0	0	0	139,000
Int'l Bird Resource Rehab Council	0	0	0	0	0	0	0	0	0	0	0	0	0
HP000047 / Honolulu Harbor Fees	0	0	0	0	0	145,600	0	0	0	0	0	0	145,600
TOTAL	139,000	0	0	0	0	145,600	0	0	0	0	0	0	284,600 (K)
Deve & Maintain Policies & Procedures	RA	Exp Elem	Activity	Location	Indicator	Project							
	PIO	501	240	WST	NE	NPIZZZZZ							
Pager/Cellular Phone	200	200	200	200	200	200	200	200	200	200	200	200	2400
TOTAL	200	200	200	200	200	200	200	200	200	200	200	200	2400 (K)
	RA	Exp Elem	Activity	Location	Indicator	Project							
	PIO	201	242	KST	NE	NPIZZZZZ							
Misc.	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
Deve, Mge, & Admin Safety Programs	RA	Exp Elem	Activity	Location	Indicator	Project							
	PIO	201	795	PPO	NE	NPIZZZZZ							
Safety Shoes and Other Equipment	0	0	75	0	0	75	0	0	75	0	0	75	300
TOTAL	0	0	75	0	0	75	0	0	75	0	0	75	300 Axtg
Deve & Maintain Policies & Procedures	RA	Exp Elem	Activity	Location	Indicator	Project							
Vehicles	PIO	301	242	WST	NE	NPIZZZZZ	$2.75 per hr.						
A: Total Hours Available Per Month	184	160	176	168	184	168	176	184	160	184	176	168	2088
Less Holiday Hours	0	8	0	8	8	8	8	8	8	8	24	16	104
B: Total Productive Hours Per Month	184	152	176	160	176	160	168	176	152	176	152	152	1984
(input hours ONLY to Pillar)	368	304	352	320	352	320	336	352	304	352	304	304	3968 (1)
A19 Shadow Pool Car: Jose Dizon +1 add.	$1,012	$880	$968	$924	$1,012	$924	$968	$1,012	$880	$1,012	$968	$924	~~$11,484~~
TOTAL	1012	880	968	924	1012	924	968	1012	880	1012	968	924	~~11484~~
NONLABOR TOTAL-2003	**140,212**	**1,080**	**1,243**	**1,124**	**1,212**	**146,799**	**1,168**	**1,212**	**1,155**	**1,212**	**1,168**	**1,199**	**298,784**

(1) 3968 x $2.50 = $9,920 (K)

2005 sedan rate

PIO Non-Labor Direct $ (A) 296,920.

2004 IO BUD Fore. 5-10-03.xls
6/18/2003

Final for Filing

T
ENT

n	Jul	Aug	Sep	Oct	Nov	Dec	Total
50	550	550	550	550	550	550	6600
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
20	120	120	120	120	120	120	1440
10	410	410	410	410	410	410	4920
21	21	21	21	21	20	20	250
51	551	551	551	551	550	550	6610
00	300	300	300	300	300	300	3600
0	0	0	40 0	0	0	0	40 0
50	168	176	152	176	160	152	1984
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	$0	$0	$0	$0	$0
0	$0	$0	$0	$0	$0	$0	$0
0	$0	$0	$0	$0	$0	$0	$0
5	89	93	81	93	85	81	1,052
5	89	93	81	93	85	81	1,052
0	178	187	161	187	170	161 2106	~~2,103~~
3	$245	$257	$222	$257	$233	$222	$2,892
3	$245	$257	$222	$257	$233	$222	$2,892
8	$490	$513	$443	$513	$466	$443	~~$5,785~~

2106 x $2.50 = $5,265

2004 IP BUD Fore. 5-10-03.xls
6/18/2003

NONLABOR FORECAST WORKSHEET
POWER SUPPLY SERVICES DEPARTMENT
2004 Planning: IP

Description/Line Item		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
		RA	Activity	Location	Indicator	Project	Exp Elem							
Kahe	47%	PIP	210 ~~266~~	KST	NE	NPIZZZZZ	301							
A19 (91 Dodge Shadow)		83	71	83	75	83	75	79	83	71	83	75	71	932
A32 (98 Dodge Neon)		83	71	83	75	83	75	79	83	71	83	75	71	932
Total Estimated Hours		165	143	165	150	165	150	158	165	143	165	150	143	1,862 1,865
A19 (91 Dodge Shadow)- $2.75 per hr		$227	$196	$227	$207	$227	$207	$217	$227	$196	$227	$207	$196	$2,564
A32 (98 Dodge Neon)- $2.75 per hr		$227	$196	$227	$207	$227	$207	$217	$227	$196	$227	$207	$196	$2,564
Total Estimated Cost - Kahe		$455	$393	$455	$414	$455	$414	$434	$455	$393	$455	$414	$393	$5,129
Total Vehicle Cost		$968	$836	$968	$880	$968	$880	$924	$968	$836	$968	$880	$836	$10,912
Material Desktop Purchases		RA	Activity	Location	Indicator	Project	Exp Elem							
		PIP	210	WST	NE	NPIZZZZZ	201							
Safety Shoes		190	190	190	190	190	190	190	190	190	200	200	200	2310
Misc Purchases		0	0	0	0	0	0	0	0	0	0	0	0	0
Total Material Desktop Purchases		190	190	190	190	190	190	190	190	190	200	200	200	2310
NONLABOR TOTAL-2003		$2,559	$2,427	$2,559	$2,471	$2,559	$2,471	$2,515	$2,559	$2,427	$2,569	$2,480	$2,436	$30,032

1,862 x $2.50 = 4,655 (A)

(A)

NONLABOR FORECAST KSHEET
O&M DEPARTME...
OPERATIONS WAIAU: IW
2004 & 2005

Final

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
& Proced.														
		RA: PIW	Exp Elem: 501	Activity: 240	Location: WST	Indicator: NE	Project: NPIZZZZZ							
ver Charges	6,000	500	500	500	500	500	500	500	500	500	500	500	500	6,000
er/Phones/Cells	12,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	12,000
		1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	18,000 (A)
quip-Blr		RA: PIW	Exp Elem: 501	Activity: 242	Location: WST	Indicator: NE	Project: NPIZZZZZ							
up Wtr. Monitoring	22,800	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	22,800
Plant	24,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	24,000
City Water	15,600	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	15,600
TOTAL		5,200	5,200	5,200	5,200	5,200	5,200	5,200	5,200	5,200	5,200	5,200	5,200	62,400 (A)
		RA: PIW	Exp Elem: 501	Activity: 877	Location: WST	Indicator: NE	Project: NPIZZZZZ							
ponse FOSS	12,600	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	12,600 (A)
501		7,750	7,750	7,750	7,750	7,750	7,750	7,750	7,750	7,750	7,750	7,750	7,750	93,000
rog &Train		RA: PIW	Exp Elem: 201	Activity: 795	Location: PPO	Indicator: NE	Project: NPIZZZZZ							
Shoes,Glasses,Oth	BUD 2005	475	475	475	475	475	475	475	475	475	475	475	475	~~5700~~
TOTAL		475	475	475	475	475	475	475	475	475	475	475	475	~~5700~~
& Proced.		RA: PIW	Exp Elem: 205	Activity: 240	Location: WST	Indicator: NE	Project: NPIZZZZZ							
T via cr card	~~BUD 2005~~ 31,500	2,625	2,625	2,625	2,625	2,625	2,625	2,625	2,625	2,625	2,625	2,625	2,625	31500
TOTAL		2625	2625	2625	2625	2625	2625	2625	2625	2625	2625	2625	2625	31500 (A)
quip - Boiler		RA: PIW	Exp Elem: 201	Activity: 242	Location: WST	Indicator: NE	Project: NPIZZZZZ							
PG, Lube Oil Diese	24,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	24,000
General Plant Issue	36,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	36,000
TOTAL		5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	60,000 (A)

PIW Non-Labor Σ (A) 630,420

2004 IW BUD Fore. 5-10-03.xls 6/18/2003

CA-IR-2
DOCKET NO. 04-0113
HECO T-6

NONLABOR FORECAST (SHEET
O&M DEPARTME.
OPERATIONS WAIAU: IW
2004 & 2005

Rev. non labor 5-23-03

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Operate & Monitr Plant Equip -TurboGen		RA	Exp Elem	Activity	Location	Indicator	Project							
		PIW	201	243	WST	NE	NPIZZZZZ							
HP000179 Electric Plant Gases	54,000	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	54,000
HP000177 Electric Plant Lube Oil	12,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	12,000
TOTAL		5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	66,000 (A)
Operate & Monitr Plant Equip -TurboGen		RA	Exp Elem	Activity	Location	Indicator	Project							
		PIW	201	245	WST	NE	NPIZZZZZ							
General Plant Issues	18,000	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	18,000
														0
TOTAL		1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	18,000 (A)
Perf Water Treatmnt & Analys (Purifcatn)		RA	Exp Elem	Activity	Location	Indicator	Project							
		PIW	201	248	WST	NE	NPIZZZZZ							
HP000187 Wast Water Treat.	82,000	6,833	6,833	6,833	6,833	6,833	6,833	6,833	6,833	6,833	6,833	6,833	6,833	82,000
HP000188 Demin/Evap. Chemicals	120,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	120,000
HP000189 Cond. Chemicals	79,800	6,650	6,650	6,650	6,650	6,650	6,650	6,650	6,650	6,650	6,650	6,650	6,650	79,800
HP000190 Boiler Water Treat.	22,200	1,850	1,850	1,850	1,850	1,850	1,850	1,850	1,850	1,850	1,850	1,850	1,850	22,200
Gen Plant	48,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	48,000
TOTAL		29,333	29,333	29,333	29,333	29,333	29,333	29,333	29,333	29,333	29,333	29,333	29,333	352,000 (A)
sub total 201		44,433	44,433	44,433	44,433	44,433	44,433	44,433	44,433	44,433	44,433	44,433	44,433	533,200
Oper & Monitor Plant Equip - Boiler		RA	Exp Elem	Activity	Location	Indicator	Project							
Vehicles		PIW	301	242	WST	NE	NPIZZZZZ							
A: Total Hours Available Per Month		184	160	176	168	184	168	176	184	160	184	176	168	2088
Less Holiday Hours		0	8	0	8	8	8	8	8	8	8	24	16	104
B: Total Productive Hours Per Month		184	152	176	160	176	160	168	176	152	176	152	152	1984 (1)
~~A40 Fire Truck: Line A * $4.25~~														0
A28 Neon Pool Car: Line B * $2.75	2	1012	836	968	880	968	880	924	968	836	968	836	836	10912
TOTAL		1012	836	968	880	968	880	924	968	836	968	836	836	10912
NONLABOR TOTAL-2004		53,195	53,019	53,151	53,063	53,151	53,063	53,107	53,151	53,019	53,151	53,019	53,019	637,112

2 vehicles

(1) 1,984 x 2 = 3,968 hrs
x $ 2.50/hr
$ 9,920 (A)

2004 IW BUD Fore. 5-10-03.xls 6/18/2003

2005 BUDGET YEAR
NON LABOR FORECAST WORKSHEET
POWER SUPPLY O&M DEPT - WAIAU MAINTENANCE DIVISION (IX)
(in dollars)

Final.

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
		PIX	878	WST	NE	NPIZZZZZ	501							
haz waste disposal	PR000253	0	12,500	0	0	12,500	0	0	12,500	0	0	12,500	0	50,000
lead abatement	PR000254	0	2,500	0	0	2,500	0	0	2,500	0	0	2,500	0	10,000
mercury disposal	PR000255	0	1,000	0	0	1,000	0	0	1,000	0	0	1,000	0	4,000
asbestos abate./remov	PR000256	0	25,000	0	0	25,000	0	0	25,000	0	0	25,000	0	100,000
		0	0	0	0	0	0	0	0	0	0	0	0	0
	total	0	41,000	0	0	41,000	0	0	41,000	0	0	41,000	0	164,000
		PIX	931	WST	NE	NPIZZZZZ	501							
Exterm. Svc/Lands. Weed	HP000335	500	500	500	500	500	500	500	500	500	500	500	500	6,000
Security		PIX	933	WST	NE	NPIZZZZZ	501							
	total	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	12,000
Janitorial Services	HP000338	PIX	934	WST	NE	NPIZZZZZ	501							
	total	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	86,400
Refuse Services	HP000350	PIX	936	WST	NE	NPIZZZZZ	501							
	total	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	36,000
		PIX	263	WST	NE	NPIZZZZZ	501							
Gen Plant		500	500	500	500	500	500	500	500	500	500	500	500	6,000
Elevator maint	HP000345	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	24,000
Air Cond maint	HP000346	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	18,000
	total	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	48,000
		PIX	265	WST	NE	NPIZZZZZ	501							
Elevator Repairs 3&4: To Capital		0	0	0	0	0	0	0	0	0	0	0	0	0
Paint Corrosion control		0	0	0	0	0	200,000	200,000	0	0	0	0	0	400,000
5/6 Gantry Crane Corrosion Cont.		0	0	0	0	75,000	0	0	0	0	0	0	0	75,000
Waiau Bldg Repairs Units 3&4			50,000			50,000			50,000					150,000
Waiau Shop Bldg Repairs		0	0	0	0	0	0	0	10,000	0	0	0	0	10,000
Bathroom Shower/Lockerm Refur.		0	20,000	0	0	0	0	0	0	0	0	0	0	20,000
Station Fencing Repairs		0	0	0	0	10,000	0	0	0	0	0	0	0	10,000
WWT Facility Repairs		0	0	0	0	40,000	35,000	0	0	0	0	0	0	75,000
Staion Paving Repairs		0	0	0	0	50,000	0	0	0	0	0	0	0	50,000
Tree Triming (Safety & Security)		0	0	0	0	0	5,000	0	0	5,000	0	0	0	10,000
FO Tank Maint: To Capital		0	0	0	0	0	0	0		0	0	0	0	0
Maint. Svc. Cont. Waterways		1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	12,000
Maint. Svc. Cont. Landscape		6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	72,000
Maint. Svc. Cont. Weed Control		0	1,000	0	1,000	0	1,000	0	1,000	0	1,000	0	1,000	6,000
Clean Driveways		2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	24,000
A/C Trouble Calls		5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	60,000
Elevator Trouble Calls		1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	20,004
A/C Duct Clean. & Disenfec.										15,000				15,000
	total	15,667	86,667	15,667	16,667	240,667	256,667	215,667	76,667	35,667	16,667	15,667	16,667	1,009,004

IX(04for05).xls
12/20/2004

PIX Non-labor Σ 3,133,996

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
	PIX	258	WST	NE	NPIZZZZZ	501							
Gen. Plant / Lube oil,etc.- Trend	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	36,000
	PIX	259	WST	NE	NPIZZZZZ	501							
Gen Plant - Trend	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	120,000
	PIX	260	WST	NE	NPIZZZZZ	501							
Travel Screen OH	0	0	75,000	0	0	0	0	0	75,000	0	0	0	150,000
Gantry Crane Certification	0	0	0	0	0	0	0	0	7,000	0	0	0	7,000
Tunnel Cleaning	0	55,000	0	0	0	0	0	55,000	0	0	0	0	110,000
Two Condensate Pmp OH	0	0	0	0	0	0	0	0	80,000	0	0	0	80,000
	0	55,000	75,000	0	0	0	0	55,000	162,000	0	0	0	347,000
	PIX	262	WST	NE	NPIZZZZZ	501							
Cond.Clean. 7/2/01	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	30,000
Cathodic Protection						75,000	75,000						150,000
Circ. Wtr Spalling Repairs						25,000	25,000						50,000
Turbine Deck Coating								50,000					50,000
total	2,500	2,500	2,500	2,500	2,500	102,500	102,500	52,500	2,500	2,500	2,500	2,500	280,000
	PIX	268	WST	NE	NPIZZZZZ	501							
Sludge Bed Drying Cell Renewal	0	0	0	50,000	0	0	0	0	50,000	0	0	0	100,000
Gantry Crane Mech/Hydr Repr					45,000								45,000
total	0	0	0	50,000	45,000	0	0	0	50,000	0	0	0	145,000
	176	152	176	160	176	160	168	176	152	176	160	152	1,984
2.75	PIX	242	WST	NE	NPIZZZZZ	301	5,456.00						
A039 Neon($2.75 per hr)	484	418	484	440	484	440	462	484	418	484	440	418	5,456 (1,984 x $2.80 = 9,960)
5.5	PIX	257	WST	NE	NPIZZZZZ	301	5,456.00						
A023 Chevy P/U Truck($5 per hr)	968	836	968	880	968	880	924	968	836	968	880	836	10,912 (1,984 x $5.75 = $11,408)
5.5	PIX	289	WST	NE	NPIZZZZZ	301	5,456.00						
A027 Ford Service Truck($5 per hr)	968	836	968	880	968	880	924	968	836	968	880	836	10,912 (1,984 x $5.75 = $11,408)
5.5	PIX	262	WST	NE	NPIZZZZZ	301	5,456.00						
Light Truck($5 per hr)	968	836	968	880	968	880	924	968	836	968	880	836	10,912 (1,984 x $5.75 = $11,408)
5.5	PIX	266	WST	NE	NPIZZZZZ	301	5,456.00						
Light Truck($5 per hr)	968	836	968	880	968	880	924	968	836	968	880	836	10,912 (1,984 x $5.75 = $11,408)
	PIX	795	WST	NE	NPIZZZZZ	201							
Protective Equip	575	575	575	575	575	575	575	575	575	575	575	575	6,900
	PIX	263	WST	NE	NPIZZZZZ	201							
Gen Plant - Trend	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	12,000
	PIX	257	WST	NE	NPIZZZZZ	201							
Gen Plant - Trend	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	12,000
BFP OH	0	0	0	0	0	0	0	150,000	0	0	0	0	150,000
total	1,000	1,000	1,000	1,000	1,000	1,000	1,000	151,000	1,000	1,000	1,000	1,000	162,000
	PIX	260	WST	NE	NPIZZZZZ	201							
Gen Plant - Trend	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	12,000

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
		======	======	======	======	======	======	======	======	======	======	======	======	======
Two CWP OH		0	0	0	0	0	0	0	0	40,000	0	0	0	40,000
Condenser Scrapers		6,000						5,000						11,000
		===	===	===	===	===	===	===	===	===	===	===	===	===
	total	7,000	1,000	1,000	1,000	1,000	1,000	6,000	1,000	41,000	1,000	1,000	1,000	63,000
		PIX	265	WST	NE	NPIZZZZZ	201							
Gen. Plant - Trend		10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	120,000
		PIX	259	WST	NE	NPIZZZZZ	201							
Gen Plant		22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	264,000
Burner tips replace.		0	12,500	0	0	12,500	0	0	12,500	0	0	12,500	0	50,000
		===	===	===	===	===	===	===	===	===	===	===	===	===
	total	22,000	34,500	22,000	22,000	34,500	22,000	22,000	34,500	22,000	22,000	34,500	22,000	314,000
		PIX	268	WST	NE	NPIZZZZZ	201							
Gen Plant		1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	18,000
		PIX	262	WST	NE	NPIZZZZZ	201							
Gen. Plant - Trend		8,500	8,500	8,500	8,500	8,500	8,500	8,500	8,500	8,500	8,500	8,500	8,500	102,000
		===	===	===	===	===	===	===	===	===	===	===	===	===
Maint Stm turb/CM	total	8,500	8,500	8,500	8,500	8,500	8,500	8,500	8,500	8,500	8,500	8,500	8,500	102,000
		PIX	274	WST	NE	NPIZZZZZ	201							
Gen. Plant - Trend		250	250	250	250	250	250	250	250	250	250	250	250	3,000
TOTAL		103,048	275,954	172,048	147,652	420,548	437,652	401,850	466,548	368,454	98,048	150,152	97,454	3,139,408

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Non-Projects - Direct Non-Labor

RA	Prod Oper	Prod Maint	Total
PIA	286,175	0	286,175
PIC	55,824	0	55,824
Total	341,999	0	341,999

[redacted] FORECAST WORKSHEET
ER SUPPLY SERVICES DEPARTMENT
[redacted]
2005

Σ (A) = $286,175
Total PIA

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
[redacted]										
WST NE NPIZZZZZ	205	205	205	205	205	205	205	205	205	2,458 ✓ Pillar 2,460 cleaning - Adj
[redacted]										
WST NE NPIZZZZZ	51	51	51	51	51	51	51	51	51	614 ✓ Pillar 612 ✓ cleaning - Adj
[redacted]										
WST NE NPIZZZZZ	102	102	102	102	102	102	102	102	102	1,229
	113	113	113	113	113	113	113	113	113	1,352
	215	215	215	215	215	215	215	215	215	2,580 ✓ (A)
[redacted]										
WST NE NPIZZZZZ	379	379	379	379	379	379	379	379	379	4,547 ✓ (A)
[redacted]										
WST NE NPIZZZZZ	0	0	102	0	0	0	0	0	102	205
preadsheet										
[redacted]										
WST NE NPIZZZZZ	80	80	80	80	80	80	80	80	80	960
	0	0	0	0	0	0	0	0	0	0
	108	108	108	108	108	108	108	108	108	1,296
	100	100	100	100	100	100	100	100	100	1,200
	63	63	63	63	63	63	63	63	63	756
	133	133	133	133	133	133	133	133	133	1,596
	484	484	484	484	484	484	484	484	484	5,808
Spreadsheet										
[redacted]										
WST NE NPIZZZZZ										

2 $249,419 (A)

allowed)
2 lower units.

CA-IR-2
DOCKET NO. 04-0113
HECO T-6
ATTACHMENT 3B
PAGE 2 OF 21

ECAST WORKSHEET
RVICES DEPARTMENT
TRATION: IA
2005

May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
0	0	0	0	0	0	0	0	0
50	50	50	50	50	50	50	50	600
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
25	25	25	25	25	25	25	25	300
34	34	34	34	34	34	34	34	408
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
0	0	0	0	0	0	0	0	0
109	109	109	109	109	109	109	109	1,308

[redacted]
NPIZZZZZ

75	75	75	75	75	75	75	75	900
50	50	50	50	50	50	50	50	600
125	125	125	125	125	125	125	125	1500

[redacted]
NPIZZZZZ

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
400	400	400	400	400	400	400	400	4,800
400	400	400	400	400	400	400	400	4,800

[redacted]
NPIZZZZZ

334	334	334	334	334	334	334	334	4,008
500	500	500	500	500	500	500	500	6,000
224	224	224	224	224	224	224	224	2,688
0	0	0	0	0	0	0	0	0

NONLABOR FORECAST WORKSHEET
POWER SUPPLY SERVICES DEPARTMENT
ADMINISTRATION: IA
2005

2.400%

Description/Line Item	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
MCE Motor Testor Maint (Itai)	417	417	417	417	417	417	417	417	417	417	417	417	5,004
Wonderware Maint (Ige)	167	167	167	167	167	167	167	167	167	167	167	167	2,004
CSI Vibration Software Maint: For 3-yr Maint Agreement (Itai)	0	0	0	0	0	0	0	0	0	0	0	0	0
CSI Data Collector Software Maint: Have 2 copies (Itai)	0	0	0	0	0	0	0	0	0	0	0	0	0
BentleyNevadaVibrationMaint (Itai)	142	142	142	142	142	142	142	142	142	142	142	142	1,704
OSI Maint KAH/WAI: PI Data Historian (Ige)	2,750	2,750	2,750	2,750	2,750	2,750	2,750	2,750	2,750	2,750	2,750	2,750	33,000
OSI Maint HPP	167	167	167	167	167	167	167	167	167	167	167	167	2,004
Weld Pro Write Upgrade (Chang)	27	27	27	27	27	27	27	27	27	27	27	27	324
Panametrics WinPlus	21	21	21	21	21	21	21	21	21	21	21	21	252
Expert Tune Maint (Joe)	0	0	0	0	0	0	0	0	0	0	0	0	0
Pasta and P&M Basis (Larry)	417	417	417	417	417	417	417	417	417	417	417	417	5,004
Total Plant Software	5,166	5,166	5,166	5,166	5,166	5,166	5,166	5,166	5,166	5,166	5,166	5,166	61,992
TOTAL COMPUTER REQUIREMENTS	6,284	6,284	6,284	6,284	6,284	6,284	6,284	6,284	6,284	6,284	6,284	6,284	75,408

Deve & Maintain Policies & Procedi Assigned Vehicles

Total Labor Hours Available Per Month	168	160	184	168	176	176	168	184	176	168	176	176	2,080
Less: Holiday Hours	0	8	8	0	8	8	8	8	8	8	16	16	96
Net Productive Hours	168	152	176	168	168	168	160	176	168	160	160	160	1,984
Net Productive Hours X 4 Cars	672	608	704	672	672	672	640	704	672	640	640	640	7,936
$3.00													
$3.00/hr _VEHSED (sedan)													
A11 (98 Neon)	$504	$456	$528	$504	$504	$504	$480	$528	$504	$480	$480	$480	$5,952
A16 (97 Neon)	$504	$456	$528	$504	$504	$504	$480	$528	$504	$480	$480	$480	$5,952
A38 (00 Focus)	$504	$456	$528	$504	$504	$504	$480	$528	$504	$480	$480	$480	$5,952
A36 ('98 Neon)	$504	$456	$528	$504	$504	$504	$480	$528	$504	$480	$480	$480	$5,952
Total Assigned Vehicles : Dollars	$2,016	$1,824	$2,112	$2,016	$2,016	$2,016	$1,920	$2,112	$2,016	$1,920	$1,920	$1920	$23,808

Vehicle Hours Waiau

	PIA	301	240	WST	NE	NPIZZZZZ							
Hours	672	608	704	672	672	672	640	704	672	640	640	640	7,936 ✓ Hrs agree.
Dollars	$2,016	$1,824	$2,112	$2,016	$2,016	$2,016	$1,920	$2,112	$2,016	$1,920	$1,920	$1,920	~~$23,808~~ Date revise. $19,840 (A)

Material Desktop Purchases
2004 Est $122 X 1.024%

Stationery, Zee Medical, Safety Shoes, Petty Cash, Other Misc. Purchases

PIA	201	240	WST	NE	NPIZZZZZ							
125	125	125	125	125	125	125	125	125	125	125	125	1,499
125	125	125	125	125	125	125	125	125	125	125	125	1,499 ✓ (A)

NONLABOR FORECAST WORKSHEET
POWER SUPPLY SERVICES DEPARTMENT
ADMINISTRATION: IA
2005

2.400%

Description/Line Item	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Pro-Card Office Supply Purchases													
2004 Est $258 X 1.024%													
[redacted]													
PIA	205	240	WST	NE	NPIZZZZZ								
	264	264	264	264	264	264	264	264	264	264	264	264	3,170
	264	264	264	264	264	264	264	264	264	264	264	264	3,170 (A)
Hotel, Airfare													
Mainland Travel													
2004 Est $2,500 X 1.024%													
[redacted]													
PIA	520	240	WST	NE	NPIZZZZZ								
	0	2,560	0	0	0	2,560	0	0	0	0	0	0	5,120 (A)
NONLABOR TOTAL-2005	9,539	11,907	9,635	9,539	9,539	12,201	9,443	9,635	9,539	9,443	9,443	9,545	119,409
NONLABOR TOTAL-2004	13,482	15,790	13,674	13,482	13,386	16,082	13,482	13,482	13,482	13,386	13,290	13,486	166,504
NONLABOR TOTAL-2003	6,686	8,994	6,622	6,622	6,622	9,158	6,686	6,558	6,622	6,686	6,430	6,722	84,402
NONLABOR TOTAL-2002	4,079	3,710	3,833	4,079	4,079	8,327	4,079	3,956	3,833	4,079	3,587	3,833	51,473
NONLABOR TOTAL-2001	4,147	3,763	4,147	3,891	4,147	8,508	4,019	4,147	3,763	4,147	3,891	3,763	52333
NONLABOR TOTAL-2000	4,353	4,225	4,699	4,097	4,881	9,278	4,825	4,881	4,715	4,353	4,097	4,187	58591
NONLABOR TOTAL-1999	4,170	4192	4644	4298	4570	9023	4848	4698	4888	4170	4170	4260	57931
NONLABOR TOTAL-1998	1697	3447	5181	5487	6297	2381	3747	7122	4347	3197	3972	1697	48572
NONLABOR TOTAL-1997	1724	3374	25249	4741	6724	3654	3974	5949	2124	5349	1724	2254	66840

PIA

HAWAIIAN ELECTRIC COMPANY, INC.
RATE CASE 2005 - PRODUCTION VARIANCES 2003 VS. 2005

OTHER VARIANCES

	Code	Loc	Activity	2003	2005	Inc/(Dec)	%Inc/(Dec)	Comments
506020	[redacted]	Waiau	Software	598	[redacted]	248,821	41609%	See variance explanation below - 1)
506030	PFC723PPONENPFZZZZZ900	n/a	Incent Prog	0	229,058	229,058	#DIV/0!	Merit Recog Program - Adjustment made to 2005 to exclude cost. See Heco T-6 testimony.
549	P9S730PPRNENPASVP7Z501	Other	New Tech	0	500,000	500,000	#DIV/0!	Research & Development - Design and build an Electronic Shock Absorber device to test the minimization of power fluctuations between wind farms and the utility grid.
				598	978,477	977,879		

NOTES:

1)	New in 2005 - Bailey DCS Software Maint	142,194	← see attachment.
	New in 2005 - Pipeline Software Maint	17,501	
	New in 2005 Work @ Home Via VPN	4,375	
	Plantview Software coded to another Code Block in 2003	6,000	
	MCI Software coded to another Code Block in 2003	6,500	
	OSI Maint - PI Data Historian coded to another code block in 2003	46,268	← see attachment.
	Various software different code/hardware cost in 2005 & misc. software	26,581	
		$249,419 [redacted]	

Hawaiian Electric Company
820 Ward Ave
PO Box 2750

May 17, 2004
Quote Number: 2495OSI8, Rev.1

OSIsoft

Multi-Year Renewal, Purchased lump sum on or before 5/31/04:

3-Year: SRP effective 6/1/04 to 5/31/07 — $135,833.00 (Savings of $23,971)

5-Year: SRP effective 6/1/04 to 5/31/09 — $221,5062.00 (Savings of $45,273)

Multi-Year Renewal, Billed annually on or before 5/31/04:

3-Years, 6/1/04 through 5/31/07:
Year 1, 6/1/04 – 5/31/05 = $53,268 (0 discount)
[redacted] (savings of $5,327)
Year 3, 6/1/06 – 5/31/07 = $46,343 (savings of $6,925)

Total 3 year savings of $12,252

5-Years, 6/1/04 through 5/31/09:

Year 1, 6/1/04 – 5/31/05 = $53,268 (0 discount)
Year 2, 6/1/05 – 5/31/06 = $47,941 (savings of $5,327)
Year 3, 6/1/06 – 5/31/07 = $46,343 (savings of $6,925)
Year 4, 6/1/07 – 5/31/08 = $45,810 (savings of $7,458)
Year 5, 6/1/08 – 5/31/09 = $45,277 (savings of $7,990)

Total 5 year savings of $27,700

SELECT THIS OPTION

Reqs 079659

PR040434 - Raised 5/19/04.
763244

Please note: Your acceptance and reference of this quotation on your purchase order indicates that the list of software provided above is a complete and accurate list of software within your possession and control. This is the list of software that will be supported and upgraded as needed.

OSI Software License Agreement Applies. Quoted prices are valid for 60 days from issuance of quote. Any third party interfaces are not considered part of OSI's Software Reliance Program. Software Reliance Program includes all revisions of the PI System Programs for the duration of this Agreement. 24 Hour/7 Day per week Help Desk Support is included with your Software Reliance Program. OSI Reserves the right to change its Price List as it deems appropriate.

Please include a copy of this quote with your P.O. and reference the quote number and system number on your Purchase Order. Purchase orders must include a bill to and a ship to address. For the ship to address P.O. boxes are not accepted. If downloads are desired please include a note on your purchase orders with the name, email address, and phone number of the person the downloads should be sent to. In order to receive downloads the person must be registered at http://support.osisoft.com. Purchase orders may be submitted by email, fax, or mail. Purchase orders should be sent to:

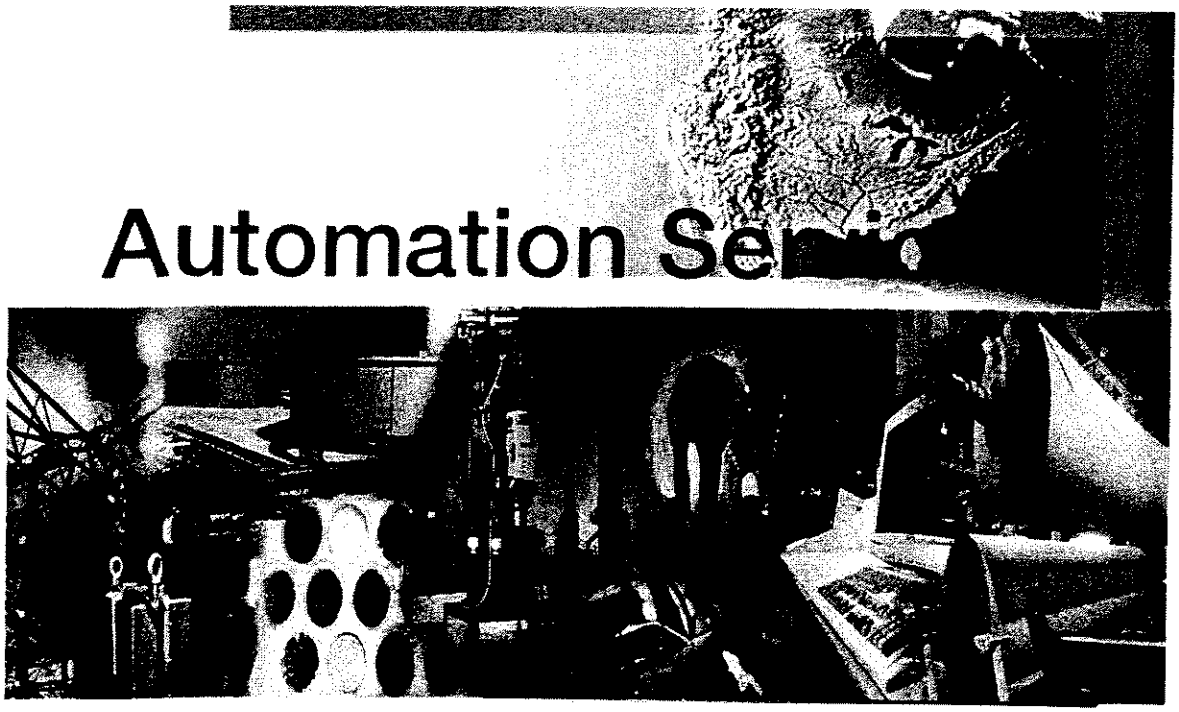
OSI Software Inc.
Attn: Order Processing
777 Davis Street, Suite 250
San Leandro, CA 94577
Fax: (240) 368-4765
Email: orders@osisoft.com

Bailey DCS

ABB

Proposal Date: February 4, 2004
Proposal Number: NJL-040121-1B
Prepared By: Nicholas J. Lehman
Service Account Manager: Joe Rodriguez
Operations Manager: Gerry Ignatowski
Account Manager: Ed Dupre

Hawaiian Electric Company, Inc.
Honolulu, HI 96840 USA



Services Proposal

ABB

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ABB

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Proposal Number: NJL-040121-1B Date: February 4, 2004

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ABB

Commercial Summary

Proposal Number: NJL-040121-1B

Date: February 4, 2004

Per Dean Arakawa, Tech Services Sup
$142,000 ot

ABB

Executive Summary

Proposal Number: NJL-040121-1B Date: February 4, 2004

SERVICE DELIVERY

ABB will provide one (1) full time resident engineer for up to 230 scheduled days (46 weeks) per contract year during PWH. The service engineer will complete all services described in the Scope of Supply of this document as time and equipment availability permit.

For the purpose of this agreement:

- ⇒ Primary Work Hour (PWH) is defined as an 8-hour period beginning between 7:00 A.M. and 10:00 A.M. Monday through Friday excluding all nationally and ABB recognized holidays.
- ⇒ Full Time Resident Engineer (RE) is defined as a person on-site during the PWH

ABB

Equipment List
Proposal Number: NJL-040121-1B Date: February 4, 2004

SPECIAL PROVISIONS

The following additional provisions will apply to this Agreement:

- Additional Primary Work Hours are available at 0.75 times list plus T&L expenses when additional ABB Field Service Engineers are needed or requested on-site.

EQUIPMENT LIST

The following Equipment is covered by this Agreement:

HECO's Kahe, Waiau and Honolulu Generating Stations located on Oahu

- ABB / Bailey INFI-90 Open Distributed Control Systems (DCS)

ABB

Scope of Supply
Proposal Number: NJL-040121-1B Date: February 4, 2004

PREVENTIVE MAINTENANCE PROGRAM

ABB's Preventive Maintenance Program is designed specifically for the hardware configuration of each specific system at the Honolulu facilities. The program has three primary objectives: (1) reduction of system malfunctions, (2) reduction of mean time to repair, and (3) maintenance of equipment appearance.

The Preventive Maintenance Program Service provides:

- The manpower required performing the periodic checks defined in the Preventive Maintenance Program.
- The performance of the scheduled activities.
- Continued monthly service summary reports by resident service engineer(s).

Hawaiian Electric Company, Inc. will be responsible for:

- Working together with ABB Service Representative(s) so as to maximize plant equipment availability.
- Directing the activities of the ABB Service Representative while on-site

Service labor time includes roundtrip travel, diagnostic time, repair time, verification time, time awaiting the delivery of parts, time waiting for access to equipment, and time required completing the documentation for the service call.

Scheduled On-Site Support Services may include:

- Maintenance on any existing ABB / Bailey products installed at your site
- Assist on-site personnel with control logic and configuration changes
- System tuning
- Calibration of the Distributed Control Systems

ABB

Scope of Supply

Proposal Number: NJL-040121-1B Date: February 4, 2004

PREVENTIVE MAINTENANCE PROGRAM (Continued)

Scheduled On-Site Support Services may include: (Continued)

- Repair of existing ABB / Bailey products installed at your facility
- Review of System functionality
- Power and Ground audits
- Software / Firmware upgrades
- Performing System diagnostics
- Informal on-site training of Operators
- Back-up power supply redundancy and battery checks
- Test back-up power supply using ABB load tester, log results and recommend when batteries need replacement
- System status and diagnostic review
- Diagnose potential problems, and suggest system performance improvements
- General equipment / Control Room inspections
- Visually inspects equipment, make minor improvements as necessary
- Notify and schedule with site coordinator when major upgrades or improvements are required.
- Disk File Maintenance
- Provide maintenance on hard drives, disk drives and streaming tape drives
- Cleaning and de-fragmentation of drives when needed, formatting and initialization of new drives.
- De-fragmentation/file back-ups will be performed at a reasonable interval (i.e., semiannual) as mutually agreed to by your site personnel
- Updating Maintenance Logbook and documentation
- Provide preventive and corrective maintenance logs on each ABB system.
- Preventive maintenance log to include power supply voltage checks, battery test results in addition to any other preventive improvements made
- Corrective maintenance log to include part failure information in addition to any corrective improvements made
- Complete or submit, on behalf of your facility, a "complaint or action request" form for any expressed dissatisfaction with ABB Products and Services
- Assist with Customer Complaint Resolution Process

ABB

Scope of Supply

Proposal Number: NJL-040121-1B Date: February 4, 2004

PREVENTIVE MAINTENANCE PROGRAM (Continued)

Documentation Maintenance:

The ABB engineer will maintain site documentation and software backups of the system. Documentation required for each Equipment component and system may vary. The objective of this service is to maintain the site equipment listed and maintenance documents to standards consistent with optimum equipment performance.

Documentation Maintenance Service may include:

- Hardware drawing mark-ups
- Software documentation updates
- Equipment Operation and Service Manuals
- Software Manuals
- Periodic Software Application Backups
- Periodic Software Data Backups
- Maintenance Records
- Routine Service Reports
- Time and Expense Records

ABB

Scope of Supply

Proposal Number: NJL-040121-1B Date: February 4, 2004

CORRECTIVE MAINTENANCE PROGRAM

ABB's Corrective Maintenance Service applies to your facility equipment as specified on the Equipment List. This service has two primary objectives, (1) to return sub-optimum equipment to full performance in the shortest possible time, and (2) to effect lasting repairs. To accomplish these objectives the service engineer will apply professional technical training and skills to implement prompt diagnosis and repair. Whenever possible, corrective maintenance services are provided during the Primary Working Hours (PWH) as defined in the ABB Standard Service Rate Sheet (SRS). Corrective Maintenance performed outside PWH will be charged at the contract rate with an overtime multiplier applied.

The Corrective Maintenance Service provisions:

- Equipment performance issues that do not degrade process performance should be treated as routine corrective maintenance. This maintenance will be provided during the next scheduled visit for preventative or other routine maintenance.
- Equipment performance issues that degrade process performance will be treated as urgent.

Hawaiian Electric Company, Inc. will be responsible for:

- Working together with ABB Service Representative(s) so as to maximize plant equipment availability.
- Any travel and living expenses incurred for all RE / FSE activity when applicable.
- Directing the activities of the ABB Service Representative while on-site
- Determining the days for service visits

ABB

Signature Page

Proposal Number: NJL-040121-1B Date: February 4, 2004

As hereinafter used, the term "AGREEMENT" shall mean the completed and final SERVICE AGREEMENT and understanding between Hawaiian Electric Company, Inc. (HECO) and ABB Inc. (ABB). The AGREEMENT is documented in its entirety in

proposal number NJL-040121-1B. ABB Inc. offers Proposal number NJL-040121-1B expressly conditioned upon the Strategic Alliance Agreement Number LA980601 originally entered into between Elsag Bailey Process Automation (now ABB Inc.) and HECO in October 1998 and any amendments, attachments, or schedules thereto. Any different or additional terms and conditions evidenced in your Purchase Order shall be considered an offer subject to written confirmation of ABB's acceptance. ABB's failure to object to any term contained in any such communication from HECO shall not be deemed an assent to such term or a waiver of this AGREEMENT.

This AGREEMENT may be extended provided both parties agree upon pricing, scope, and terms. This proposal is valid for 60 days.

AGREEMENT NUMBER: NJL-040121-1B

TOTAL PRICE IN YEAR 1: $ 159,000.00 (plus Travel & Living exp. at actual)
TOTAL PRICE IN YEAR 2: $ 166,950.00 (plus Travel & Living exp. at actual)
TOTAL PRICE IN YEAR 3: $ 175,298.00 (plus Travel & Living exp. at actual)
AGREEMENT TOTAL (3-yr): $ 501,248.00 (plus Travel & Living exp. at actual)

ABB Inc.	HECO - Honolulu, HI 96840 USA
Signature	Signature
Print Name	Print Name
Title	Title
Date	Date

Please reference this Proposal and direct your Purchase Order to:
ABB Inc., Attn: Debra Matocky, Business Administrator
29801 Euclid Avenue, MS 3S6
Wickliffe, OH 44092 USA
Phone: 440 585-7976

Σ(A) = $55,824
Total PIC

ORECAST WORKSHEET
/ SERVICES DEPARTMENT
HASE POWER: [redacted]
2005

Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
[redacted]									
NE		NPIZZZZZ							
86	86	86	86	86	86	86	86	86	1,032
86	86	86	86	86	86	86	86	86	1,032 (A)
'oup Independent Power Publication, GTE Phone, IKON Office Solutions									
[redacted]									
NE		NPIZZZZZ							
87	87	87	87	87	87	87	87	87	1,044 (A)
[redacted]									
NE		NPIZZZZZ							
167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	50,004 (A) ← see attached e-mail from Dan Ching.
[redacted]									
NE		NPIZZZZZ							
very 2 yrs, $150 ea. Licence renewed in 2004.									
pr 2006.									
0	0	0	0	0	0	0	0	0	0
[redacted]									
NE		NPIZZZZZ							
0	0	0	0	0	0	0	0	3,072	3,072 (A)
[redacted]									
NE		NPIZZZZZ							
13	13	13	13	13	13	13	13	13	156
[redacted]									
NE		NPIZZZZZ							
43	43	43	43	43	43	43	43	43	516

Activity
Expense Element

NONLABOR FORECAST WORKSHEET
POWER SUPPLY SERVICES DEPARTMENT
PURCHASE POWER: IC
2005

1.024%

Description/Line Item		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Interisle Travel: HELCO	✓	[redacted]												
		PIC	522	122	HEL	BE	NPIZZZZZ							
		0	0	0	150	150	150	150	150	0	0	0	0	750
Interisle Travel: MECO	✓	[redacted]												
		PIC	522	122	MAU	BE	NPIZZZZZ							
		0	0	0	0	0	150	150	150	150	0	0	0	600
NONLABOR TOTAL-2005		4,396	4,396	4,396	4,546	4,546	4,696	4,696	4,696	4,546	4,396	4,396	7,468	57,174
NONLABOR TOTAL-2004		3,524	3,524	3,674	3,824	3,824	3,824	3,824	3,524	3,824	3,674	3,524	6,524	47,088
NONLABOR TOTAL-2003		3,545	3,545	3,675	3,805	3,805	3,935	3,935	3,805	3,675	3,545	3,545	6,623	47,438
NONLABOR TOTAL-2002		3,526	3,526	3,526	4,146	3,786	3,786	3,786	3,786	3,786	3,656	3,526	6,604	47,440
NONLABOR TOTAL-2001		1,498	1,498	1,698	1,598	1,498	4,698	1,598	1,498	1,698	1,598	1,598	1,743	22,221
NONLABOR TOTAL-2000		445	445	745	1055	445	3745	445	445	835	445	445	790	10285
NONLABOR TOTAL-1999		695	695	975	785	695	3975	695	695	1065	695	695	1040	12705
NONLABOR TOTAL-1998		720	788	1526	788	5788	790	788	638	1508	638	788	708	15468
NONLABOR TOTAL-1997		3207	3127	3177	3127	3127	3257	3127	3127	3177	3127	3127	3177	37884

Whalen, Kelly

From: Ching, Dan (Director Power Purchase)
Sent: Wednesday, August 20, 2003 10:39 AM
To: Whalen, Kelly
Subject: FW: 04-05 Budget: For Your Review

Kelly:
Thanks for preparing the forecasts. Can we do the following.
1. Outside services, legal. For 2004, use $100,000; for 2005, use $50,000. Outside legal costs this year will be well over $100,000 based on AES refinancing/Amendment No. 2 work. It's difficult to predict the future costs, but raising the 2004 budget amount to $100,000 may be prudent. We're talking about amending the Kalaeloa PPA for additional capacity which may be a 2004 event, and which would involve Goodsill's time. 2005 is too far out to predict, so I'm suggesting lowering it to $50,000 in this cycle.
2. Material purchases. The forecast of $100 for 2004 may be low. Just can't do anything for $100. How about $500 for 2004, and for 2005, increase by the company's standard escalation factor.

-----Original Message-----
From: Whalen, Kelly
Sent: Tuesday, August 19, 2003 1:05 PM
To: Ching, Dan
Subject: 04-05 Budget: For Your Review

Dan,
Attached please find your division's 2004-2005 operating budget. The labor hours and labor dollars are based on 2002 actuals.

If you foresee needing more money for materials, attorney fees, etc. please let me know.

Thank You.

IC(03for04_05).xls

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Non-Projects - Direct Non-Labor

RA	Prod Oper	Prod Maint	Total
PJA	69,940	0	69,940 ✓
PJB	1,067,827	0	1,067,827 ✓
PJC	140,430	0	140,430 ✓
PJW	335,580	0	335,580 ✓
Total	1,613,777	0	1,613,777

Environmental

CA-IR-2

General Information Requests

For each of the HECO witnesses who sponsor test period budgeted non-labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted non-labor direct expense amounts included in the rate case test period budget and sponsored by the witness.

b. Provide complete copies of all calculations, spreadsheet files, "pencil" workpapers, surveys and other analyses performed by each of the employees identified in response to part (a), indicating the amounts by Department, RA, Activity and NARUC Account that such calculations support.

c. For each budgeted non-labor amount in the test period forecast that exceeds $50,000, please describe the basis for determining the budgeted amount (for example, bid solicitation, price times quantity estimation, historical cost escalated, etc.)

d. For each item in your response to part (c), where specific quantities and prices were discretely forecasted, explain the basis for and source of the budgeted quantity inputs and budgeted prices for each such item. Provide complete copies of all studies, reports and other documents that were relied upon.

e. For each item in your response to part (c) where historical costs were escalated, provide all historical cost information that was considered and explain how such data was evaluated and escalated to derive test year proposed levels.

f. For each item in your response to part (c) where a bid solicitation or other special analysis was conducted, explain what was done and provide complete copies of all supporting reports, bid solicitations, proposal, analyses, workpapers and other documents associated with such efforts.

g. Provide complete copies of all other information required to completely support and document the test year projected expense levels being proposed by the Company, including general assumptions and forecasting instructions that were employed.

HECO Response:

a. For the Environmental Dept. the employees involved in the preparation of budgeted staffing and associated non-labor direct expense amounts included in the witnesses' portion of the rate case test period budget are Sherri-Ann Loo, Environmental Dept. Manager, Barry Nakamoto, Air Quality/Noise Division Principal Environmental Scientist, Doug Rinehart,

Chemistry Division Laboratory Supervisor, and Donn Fukuda, Water & Hazardous Materials Division Principal Environmental Scientist.

b. Back-up support workpapers will be sent via interoffice mail.

c. For the Air Quality/Noise Division $50,000 ($50K for Kahe, $50K for Waiau, and $25K [redacted]

forecasted for Honolulu) forecasted for outside consultants compliance assistance. These amounts were based on anticipated level of effort. In addition, PSB emission fee amounts ($484K for Kahe, $300K for Waiau and $36K for Honolulu) were based on fuel consumption forecast and emission fee calculations provided by DOH. PSW For the Water & Hazardous Materials Division, $75,000 ($75K for Kahe, Waiau & Honolulu) amounts are for a NPDES 316(b) Study. The estimates are based on a proposal received from EPRI plus additional amount for the collection of baseline data.

d. N/A

e. N/A

Environmental Dept

Non-Labor Dollars (For CA-IR-2) (NARUC 500-577)

*BA #	*Act #	*Loc #	*Ind #	*Project #	*EE #	Line item	FY05

HECO ENVIRONMENTAL → P&E

HECO 2005 Rate Case
PJB Non-Labor Summary

Input sheet on next page.

RA	NARUC	EE	ABM	Loc	Dollars	Comments
PJB	506	508	865	KST	15,000 (B)	MACT support.
PJB	506	508	865	WST	27,000	Permit renewal application and MACT support.
PJB	506	501	875	HST	36,000	Emission fees. See attached worksheet.
PJB	506	501	875	KST	484,000	Emission fees. See attached worksheet.
PJB	506	501	875	WST	300,000	Emission fees. See attached worksheet.
PJB	506	508	875	HST	25,000	Outside consultant compliance assistance.
PJB	506	508	875	KST	50,000	Outside consultant compliance assistance.
PJB	506	508	875	WST	50,000	Outside consultant compliance assistance.
PJB	506	508	875	PHE	25,000	Outside consultant compliance assistance.
PJB	506	201	875	PHE	2,500 (B)	Miscellaneous material expenses.
PJB	506	301	875	PHE	5,976 *	Vehicles - Ford Truck, Trailer (units)
PJB	506	462	875	PHE	5,000 (1)	Software - Adobe, misc.
PJB	506	501	875	PHE	16,400 (B)	Training expenses, cell phones, pagers, prof. mem.
PJB	~~506~~ 921	508	865	PHE	25,000	General permit support. [redacted]
PJB	506	600	875	PHE	5,000 (B)	Janitorial services for Waiau lab.

* Hours = $26,457.84 (B)

(1) Revised to $5,469 (B)

Σ (B) = $1,067,827
Total PJB

NonLabor Input Sheet - NonProject/NonProgram
2005

Resp Area (RA) JB

Prepared by Barry Nakamoto

Dimension tab card						Units tab card												
Line Item	RA	Act	Loc	Ind	EE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
(enter Dollars or Vehicle Hours in "Units tab card")																		
Waiau CSP Renewal	[redacted]	865	WST	NE	508	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	[redacted]
Kahe CSP Renewal	[redacted]	865	KST	NE	508	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	[redacted]
Misc. Permitting	[redacted]	865	PHE	NE	508	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	[redacted]
Kahe Compliance	[redacted]	875	KST	NE	508	4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	[redacted]
Waiau Compliance	[redacted]	875	WST	NE	508	4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	[redacted]
Honolulu Compliance	[redacted]	875	HST	NE	508	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	[redacted]
Misc. Compliance	[redacted]	875	PHE	NE	508	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	[redacted]
Misc. Materials	[redacted]	875	PHE	NE	201	208	208	208	208	208	208	208	208	208	208	208	208	[redacted]
Vehicles - Truck (units)	[redacted]	875	PHE	NE	301	333	333	333	333	333	333	333	333	333	333	333	333	[redacted]
Vehicles - Trailer (units)	[redacted]	875	PHE	NE	301	165	165	165	165	165	165	165	165	165	165	165	165	[redacted]
Software	[redacted]	875	PHE	NE	462	417	417	417	417	417	417	417	417	417	417	417	417	[redacted]
Cell Phone	[redacted]	875	PHE	NE	501	100	100	100	100	100	100	100	100	100	100	100	100	[redacted]
Cell Phone	[redacted]	875	PHE	NE	501	100	100	100	100	100	100	100	100	100	100	100	100	[redacted]
Misc. prof. memberships	[redacted]	875	PHE	NE	501	208	208	208	208	208	208	208	208	208	208	208	208	[redacted]
Pager	[redacted]	875	PHE	NE	501	25	25	25	25	25	25	25	25	25	25	25	25	[redacted]
Subscriptions	[redacted]	875	PHE	NE	501	100	100	100	100	100	100	100	100	100	100	100	100	[redacted]
Training expenses	[redacted]	875	PHE	NE	501	833	833	833	833	833	833	833	833	833	833	833	833	[redacted]
Misc. Services - Janitorial	[redacted]	875	PHE	NE	600	417	417	417	417	417	417	417	417	417	417	417	417	[redacted]

Hours

$16,400

HECO TY 2005 Rate Case
Non-Labor Input Workpapers
BMN 12/22/2004

201 – Miscellaneous materials expenses. Includes items such as supplies for offices, meetings, training, and other materials.

301 – Vehicles. Costs for use of Ford Pick-up and trailer for support of air monitoring operations.

462 – Software. Includes forecasts for purchase/licensing of Adobe software for recordkeeping and other miscellaneous software.

501 – Emission fees. Based on fuel consumption forecast and emission fee calculations provided by DOH. Additional workpapers provided. Note fees were waived in 2004 for 2003 operations.

501 – Expenses. Includes forecast for expenses related to attending technical training, communications (cell phones, pagers), and professional memberships and trade subscriptions.

508 – Outside consultant services. Based on estimates provided by consultant or estimated based on anticipated level of effort.

600 – Miscellaneous services. Forecast for janitorial services for the portion of the Waiau facilities assigned to the Air Division.

Facility	Emission Fee Paid in 2003	Total 2002 Heat Input (MMBtu)	Projected 2005 Heat Input (MMBtu)	% Increase in Heat Input 2002 - 2005	% Increase of DoH Fees from 2003 Rate	2005 Projected Emission Fee
Kahe	$445,047.89	32,526,904	34,323,387	5.52%	1.03%	$483,703
Waiau	$271,262.54	14,429,895	15,431,795	6.94%	1.03%	$298,958
Honolulu	$31,230.56	1,520,833	1,718,610	13.0%	1.03%	$36,349

Notes

1. 2002 heat input from 2003 Emission Fee Report for the units primary fuel (No. 6 fuel oil for all units except Waiau CT which is No. 2 fuel oil)
2. 2005 Projected heat input from e-mail dated 4/15/04 from Craig Shigeta to Barry Nakamoto.

ctric Company, Inc.
Simulation - (Report One)
ıd May 2003 - Approved June 30, 2003
edule dated April 22, 2003
2003 Sales and Peak Forecast

	Net MWh Generation					Net Heat
al	Kahe	Waiau	Honolulu	Diesel	Total	Rate
2,080	258,363	106,655	5,430	1	370,449	10,560
3,923	222,074	111,030	8,420	2	341,526	10,523
1,266	294,342	130,463	13,175	602	438,582	10,514
9,930	258,229	123,290	12,516	276	394,311	10,550
2,533	261,342	120,899	11,423	9	393,673	10,523
3,612	264,289	124,871	11,897	4	401,061	10,506
5,897	291,964	118,646	8,290	9	418,909	10,446
1,046	289,669	133,476	15,088	715	438,948	10,505
3,251	319,526	129,610	14,189	1,074	464,399	10,457
2,869	319,144	115,470	9,732	4	444,350	10,426
0,520	291,458	104,073	6,732	2	402,265	10,417
3,866	296,167	102,715	2,506	4	401,392	10,398
3,792	3,366,567	1,421,198	119,398	2,702	4,909,865	10,484
10,484	68.6%	28.9%	2.4%	0.1%	100.0%	
0,889					47,429	9,296
4,682					4,957,294	10,472

$© = $140,430 total PJC (includes $30K in Bid Rerate, see le page)

*RA #	*Act #	*Loc #	*Ind #	*Project #	*EE #	Line item	FY05
PJC	_	_	_	_	462	Stores OHPJC	329
PJC	10	OUT	BN	NPJZZZZZ	905	Non-utility Revenue	-3,384
PJC	40	OUT	BN	NPJZZZZZ	501	General Excise Tax	144
PJC	**241**	**HST**	**NE**	**NPJZZZZZ**	**201**	**HST FUEL OIL (G0000364)**	**1,044** ©
PJC	**241**	**KST**	**NE**	**NPJZZZZZ**	**201**	**KST FUEL OIL (G0000390)**	**2,220**
PJC	241	LNS	BE	NPJZZZZZ	201	MGL M07154 001 LANAI FUEL OIL (G0000489)	240
PJC	241	MNS	BE	NPJZZZZZ	201	MGM M07156 001 MAALAEA FUEL OIL (G000046	1,260
PJC	241	NST	BE	NPJZZZZZ	201	MGK M071534 001 KAHULUI FUEL OIL (G000044	516
PJC	241	RST	BE	NPJZZZZZ	201	HGA H00249 001 HILL FUEL OIL (G0000424)	996
PJC	**241**	**WST**	**NE**	**NPJZZZZZ**	**201**	**WST FUEL OIL (G0000376)**	**2,220** ©
PJC	349	HAH	BE	NPJZZZZZ	201	HDC H00641 001 HELCO TSF OIL (E0000766)	1,200
PJC	349	MAU	BE	NPJZZZZZ	201	MDE M15915/002 MECO TSF OIL-DGA (E000077	276
PJC	789	PHE	NE	NPJZZZZZ	501	ATTEND TRAINING (G0002898)	7,500
PJC	876	CNS	BE	NPJZZZZZ	201	HGA H00285 001 KEAHOLE WASTEWATER (G0	528
PJC	**876**	**HST**	**NE**	**NPJZZZZZ**	**201**	**HST WASTEWATER (G0000360)**	**3,192** ©
PJC	**876**	**HST**	**NE**	**NPJZZZZZ**	**508**	**Update June 01 - HST WASTEWATER (G000036**	**648**
PJC	**876**	**KST**	**NE**	**NPJZZZZZ**	**201**	**KST WASTEWATER (G0000384)**	**18,492**
PJC	**876**	**KST**	**NE**	**NPJZZZZZ**	**508**	**Update June 01 - KST WASTEWATER (G000038**	**648**
PJC	876	MNS	BE	NPJZZZZZ	201	MGM M00838 003 MAALAEA WASTEWATER (G0	3,000
PJC	876	NST	BE	NPJZZZZZ	201	MGK M00386 003 KAHULUI WASTEWATER (G00	2,772
PJC	**876**	**PHE**	**NE**	**NPJZZZZZ**	**201**	**Stationery Supplies**	**2,640**
PJC	**876**	**PHE**	**NE**	**NPJZZZZZ**	**201**	**Update July 02 - Wastewater QA/QC**	**2,400** $5,04
PJC	**876**	**PHE**	**NE**	**NPJZZZZZ**	**301**	**Vehicle**	**4,960** ©
PJC	**876**	**PHE**	**NE**	**NPJZZZZZ**	**462**	**PC Software**	**998**
PJC	**876**	**PHE**	**NE**	**NPJZZZZZ**	**462**	**Update August 01 - LIMS Software Maintenance**	**2,940** $3,935
PJC	**876**	**PHE**	**NE**	**NPJZZZZZ**	**508**	**DISPOSAL OF HAZARDOUS WASTE**	**1,800** ©
PJC	**876**	**PHE**	**NE**	**NPJZZZZZ**	**600**	**Laboratory Instrument Maintenance Contracts**	**33,300**
PJC	876	PST	BE	NPJZZZZZ	201	HGA H00286 000 PUNA WASTEWATER (G00004	540
PJC	876	RST	BE	NPJZZZZZ	201	HGA H00288 001 HILL WASTEWATER (G000042	3,000
PJC	876	SST	BE	NPJZZZZZ	201	HGA H00289 001 SHIPMAN WASTEWATER (G00	540
PJC	**876**	**WST**	**NE**	**NPJZZZZZ**	**201**	**WST WASTEWATER (G0000384)**	**18,492** ©
PJC	**876**	**WST**	**NE**	**NPJZZZZZ**	**501**	**Update June 01 - Armstrong Bldg Maint Jan Svc**	**9,180**
PJC	**876**	**WST**	**NE**	**NPJZZZZZ**	**508**	**Update June 01 - WST WASTEWATER (G000037**	**648**
PJC	**877**	**HST**	**NE**	**NPJZZZZZ**	**508**	**Update June 01 - HST OIL-RELATED (G0000363**	**1,320**
PJC	**877**	**KST**	**NE**	**NPJZZZZZ**	**508**	**Update June 01 - KST OIL-RELATED (G0000386**	**648**
PJC	877	MAU	BE	NPJZZZZZ	201	MDE M15915/001 MECO TSF OIL-PCB (E0008355	804
PJC	**877**	**WST**	**NE**	**NPJZZZZZ**	**508**	**Update June 01 - WST OIL-RELATED (G0000374**	**2,640** ©
PJC							130,691
PJW	_	_	_	_	462	Stores OHPJW	110
PJW	788	CNS	BE	NPJZZZZZ	522	HGA H13741 003	470
PJW	788	HEL	BE	NPJZZZZZ	522	HDE H18794 001	940
PJW	788	MAL	BE	NPJZZZZZ	522	M15316 006 - Conduct Training Lanai	380
PJW	788	MAM	BE	NPJZZZZZ	522	M15317 005 - Conduct Training Palaau	380
PJW	788	MAU	BE	NPJZZZZZ	522	M15885 003 - Conduct Training ED	940
PJW	788	MPO	BE	NPJZZZZZ	521	M15314 010 - Conduct Training Maalaea	160
PJW	788	MPO	BE	NPJZZZZZ	522	M15313 009 - Conduct Training Kahului	940
PJW	788	MPO	BE	NPJZZZZZ	522	M15314 010 - Conduct Training Maalaea	1,420
PJW	788	PST	BE	NPJZZZZZ	521	HGA - Conduct Training	190
PJW	788	RST	BE	NPJZZZZZ	522	HGA H18840 001	570
PJW	788	SST	BE	NPJZZZZZ	521	HGA H18840 004	570

Σ(W) = $335,580
Total PJW

*RA #	*Act #	*Loc #	*Ind #	*Project #	*EE #	Line item	FY05	
PJW	876	BNS	BE	NPJZZZZZ	522	HGA H18945 005	235	
PJW	876	CNS	BE	NPJZZZZZ	201	HGA H18945 006	150	
PJW	876	CNS	BE	NPJZZZZZ	522	HGA H18945 006	2,550	
PJW	876	CNS	BE	NPJZZZZZ	522	HGA H18945 006	940	
PJW	876	HEL	BE	NPJZZZZZ	522	HDE H18794 002	235	
PJW	**876**	**HST**	**NE**	**NPJZZZZZ**	**201**	**WETT & ZOM Monitoring - HONOLULU**	**500**	(W)
PJW	**876**	**HST**	**NE**	**NPJZZZZZ**	**508**	**BBCM - Honolulu**	**4,000**	
PJW	**876**	**HST**	**NE**	**NPJZZZZZ**	**508**	**NPDES 316(b) Study**	**75,000**	$86,60
PJW	**876**	**HST**	**NE**	**NPJZZZZZ**	**508**	**WET TEST EXTRA ANALYSIS**	**6,000**	
PJW	**876**	**HST**	**NE**	**NPJZZZZZ**	**508**	**WETT - HONOLULU**	**1,600**	
PJW	**876**	**KST**	**NE**	**NPJZZZZZ**	**201**	**WETT, Sand and Coral Monitoring - KAHE**	**500**	(W)
PJW	**876**	**KST**	**NE**	**NPJZZZZZ**	**508**	**NPDES 316(b) Study**	**75,000**	
PJW	**876**	**KST**	**NE**	**NPJZZZZZ**	**508**	**WET TEST EXTRA ANALYSES**	**12,000**	$104,8
PJW	**876**	**KST**	**NE**	**NPJZZZZZ**	**508**	**WETT & Coral Study - KAHE**	**17,820**	
PJW	876	MNS	BE	NPJZZZZZ	201	MGM M19147 005	100	
PJW	876	MNS	BE	NPJZZZZZ	521	MGM M19147 005	150	
PJW	876	MNS	BE	NPJZZZZZ	522	MGM M19147 005	1,700	
PJW	876	MNS	BE	NPJZZZZZ	522	MGM M19147 005 - Compliance	1,410	
PJW	876	NST	BE	NPJZZZZZ	201	MGK M19146 005	200	
PJW	876	NST	BE	NPJZZZZZ	521	MGK M19146 005	480	
PJW	876	NST	BE	NPJZZZZZ	522	MGK M19146 005	3,000	
PJW	876	NST	BE	NPJZZZZZ	522	MGK M19146 005 - Compliance	1,410	
PJW	**876**	**PHE**	**NE**	**NPJZZZZZ**	**301**	**Vehicle, Assigned - Boat Trailer**	**11,960**	$23,92
PJW	**876**	**PHE**	**NE**	**NPJZZZZZ**	**301**	**Vehicle, Assigned - Van**	**11,960**	
PJW	**876**	**PHE**	**NE**	**NPJZZZZZ**	**501**	**Cellular Phone Svc - AT&T (4)**	**1,200**	
PJW	**876**	**PHE**	**NE**	**NPJZZZZZ**	**501**	**Misc - Printing, Utilities, Membership Fees/Dues**	**1,200**	$2,94
PJW	**876**	**PHE**	**NE**	**NPJZZZZZ**	**501**	**Pager - GTE (4)**	**540**	
PJW	**876**	**PHE**	**NE**	**NPJZZZZZ**	**520**	**Mainland Travel - Airfare, Hotel**	**2,000**	(W)
PJW	**876**	**PHE**	**NE**	**NPJZZZZZ**	**521**	**Meals/Entertainment**	**300**	
PJW	876	PST	BE	NPJZZZZZ	201	HGA H18945 003	50	
PJW	876	PST	BE	NPJZZZZZ	522	HGA H18945 003	570	
PJW	876	PST	BE	NPJZZZZZ	522	HGA H18945 003	235	
PJW	876	RST	BE	NPJZZZZZ	201	HGA H18845 002	150	
PJW	876	RST	BE	NPJZZZZZ	522	HGA H18845 002	1,520	
PJW	876	RST	BE	NPJZZZZZ	522	HGA H18845 002	1,410	
PJW	876	SST	BE	NPJZZZZZ	201	HGA H18945 001	1,100	
PJW	876	SST	BE	NPJZZZZZ	522	HGA H18945 001	760	

*RA #	*Act #	*Loc #	*Ind #	*Project #	*EE #	Line item	FY05
PJW	877	LNS	BE	NPJZZZZZ	522	MGL M19149 003	705
PJW	877	MAU	BE	NPJZZZZZ	508	MDE M15885 001	6,000
PJW	877	MAU	BE	NPJZZZZZ	522	MDE M15885 001	1,410
PJW	877	MNS	BE	NPJZZZZZ	521	MGM M19147 006	80
PJW	877	MNS	BE	NPJZZZZZ	522	MGM M19147 006	1,250
PJW	877	NST	BE	NPJZZZZZ	521	MGK M19146 006	120
PJW	877	NST	BE	NPJZZZZZ	522	MGK M19146 006	1,560
PJW	877	PDM	NE	NPJZZZZZ	508	SPCC Consulting	2,000

ar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TTL	Comments
85,000				-22,500	-40,000	-25,000				-214,000	WAI Genl Trend, CWP OH, Cond Scrapers.
		-10,000			-10,000			-10,000		-40,000	WAI Genl Trend, Burner Tips.
				-7,500						-15,000	WAI Genl Trend
25,000		-2,000			-2,000	-25,000			-2,000	-58,000	HON Asb, Haz, Lead, Mercury Disposal
									2,500	2,500	HON A/C Rprs
						-5,000				-5,000	HON H8/9 Crane Certification
-500	-500	-500	-500	-500	-500	-500	-500	-500	-500	-6,000	HON Con Clean
		8,000		75,000						83,000	HON BFP OH, Burner Tips.
-6,000			4,000			-1,000			4,000	1,000	KAH Haz, Lead, Marcury, Asb, Waste Oil Disp
1,167	1,167	1,167	1,167	1,167	-23,833	11,167	1,167	1,167	1,167	-996	KAH K6 CEMS
	-73,000	-15,000	-10,000		-10,000	-10,000		50,000		-68,000	KAH Struct Paintg, Turb Deck Rprs, Corr Ctrl, Culvert Drain, Intake Bar Grills, Demin Struct, A/C Duct Clean.
	-13,000						25,000			12,000	KAH Basin Dredging.
			-20,000							-20,000	KAH CWP OH.
-4,000							-4,000	-3,000		-11,000	KAH Drott Maint, Gantry Crane Inspect/Cert.
				70,000						70,000	KAH BFP OH
						-5,000				-5,000	KAH Cond Pump OH
		-5,000			-5,000			-5,000		-20,000	KAH Burner Tips
23,000				20,000			-5,000			-8,000	KAH Tvl Screen OH, Cond Scrapers, Tvl Screen Wash.
										489,504	
										100,000	Chem Lab Staffing: Add 1 Clerk JC. $100K
										30,000	Chem Lab Renovation: Add $30K
										130,000	

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Non-Projects - Direct Non-Labor

RA	Prod Oper	Prod Maint	Total
PYA	1,221,469	0	1,221,469 ✓
PYB	184,360	0	184,360 ✓
PYE	23,700	0	23,700 ✓
Total	1,429,529	0	1,429,529

P&E

CA-IR-2

General Information Requests

For each of the HECO witnesses who sponsor test period budgeted non-labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted non-labor direct expense amounts included in the rate case test period budget and sponsored by the witness.

b. Provide complete copies of all calculations, spreadsheet files, "pencil" workpapers, surveys and other analyses performed by each of the employees identified in response to part (a), indicating the amounts by Department, RA, Activity and NARUC Account that such calculations support.

c. For each budgeted non-labor amount in the test period forecast that exceeds $50,000, please describe the basis for determining the budgeted amount (for example, bid solicitation, price times quantity estimation, historical cost escalated, etc.)

d. For each item in your response to part (c), where specific quantities and prices were discretely forecasted, explain the basis for and source of the budgeted quantity inputs and budgeted prices for each such item. Provide complete copies of all studies, reports and other documents that were relied upon.

e. For each item in your response to part (c) where historical costs were escalated, provide all historical cost information that was considered and explain how such data was evaluated and escalated to derive test year proposed levels.

f. For each item in your response to part (c) where a bid solicitation or other special analysis was conducted, explain what was done and provide complete copies of all supporting reports, bid solicitations, proposal, analyses, workpapers and other documents associated with such efforts.

g. Provide complete copies of all other information required to completely support and document the test year projected expense levels being proposed by the Company, including general assumptions and forecasting instructions that were employed.

HECO Response:

a. For the Planning & Engineering Dept. (due to reorganization now known as the Power Supply Engineering Dept.) the employees involved in the preparation of budgeted non-labor direct expense amounts included in the rate case test period budget and sponsored by the witness are Bert Morikuni, Dept. Administrator, Ross Sakuda, Director Generation Planning

Division, and Dean Arakawa, Superintendent Technical Services Division

b. Back-up support workpaper will be sent via interoffice mail.

c. PYA - $900,000 for the Kahe 7 amortization which was an agreed upon write-off with the PUC. PYA - $302,244 for the Waiau Well Water amortization which was an agreed upon write-off with the PUC. PYB - $84,360 consists of an Alternative Tolling Arrangement consultant ($75,000), Strategist software maintenance cost ($2,600) and PPLUS software maintenance cost ($6,760). The Alternative Tolling Arrangement consultant cost was based on an estimate. PYB - $75,000 for Competitive Bidding Legal costs. This was based on an estimate.

d. N/A.

e. N/A.

f. N/A.

g. Support workpapers will be sent via interoffice mail.

PYA

2005		
Forecasted Non-Labor Dollars		
Administrative Division		
	Cost Type	2005 YA
NON-PROJECTS (Act/Loc/Ind)		
Billables		
IRP - MECO (712/MAU/BD)	201	500
IRP - HELCO (711/HEL/BE)	201	500
Non-Project Billables, Total:		1,000
O&M		
Office Supplies (201/WST/NE)	201	6,300
Dept. Vehicle (201/WST/NE)	301	5,200
Software Upg. (201/WST/NE)(YB-$400 +10 x $200)	462	2,625
Outside Services (201/WST/NE)	501	5,100
Amortization of Waiau Well Water	901	302,244
Amortization of Kahe 7 Project Costs	901	900,000
O&M, Total:		1,221,469 ✓
Power Supply Clearing		
Office Supplies (211/WST/NC)	201	7,500
Software Upg (211/WST/NC) (25 x $150)-YA,C,F,G,J,M	462	3,750
Outside Services (211/WST/NC)	501	5,700
Clearing, Total:		16,950
IRP Incremental		
IRP - HECO (712/PHE/ND)	201	500
IRP Incremental, Total:		500

2005-2006 Budget for YB
Non-Labor Costs

PYB

	2005	2006	Remarks
CONSOLIDATED			
Consultant - Competitive Bidding	$50,000	$0	Follow-up work
Consultant - Alternative Tolling Arrangement	$75,000	$0	
Software - Strategist	$26,000	$27,000	Estimated fees based on Amendment No. 11 of System License
Software - PPLUS	$13,520	$13,520	
Strategist Training	$0	$0	
PMONTH Training	$0	$0	
Travel - Mainland	$10,000	$4,000	
Travel - Interisland - Support Rate Case	$0	$0	
Travel - Interisland - Support PPA Negotiations	$400	$400	
Travel - Interisland - Develop Forecasts	$400	$400	
Travel - Interisland - Support Cost Recovery	$400	$400	
TOTAL	$175,720	$45,720	
HECO			
Consultant - Competitive Bidding	$25,000 (A)	$0	
Legal Consultant - Competitive Bidding	$75,000	$0	
Consultant - Alternative Tolling Arrangement	(1) $75,000	$0	
Software - Strategist (20% x 50%)	(1) $2,600	$2,700	
Software - Strategist - IRP (80% x 50%)	$10,400	$10,800	
Software - PPLUS (50%) Σ(1) =	(1) $6,760 (A)	$6,760	Σ(A) = $184,360
Strategist Training $84,360	$0	$0	
PMONTH Training	$0	$0	
Travel - Mainland	$10,000	$4,000	
Subtotal	$204,760	$24,260	
HELCO			
Consultant - Competitive Bidding	$12,500	$0	
Consultant - Alternative Tolling Arrangement	$0	$0	
Software - Strategist (20% x 25%) - Generation Plng	$1,300	$1,350	
Software - Strategist - IRP (80% x 25%)	$5,200	$5,400	
Software - PPLUS (25%) - Generation Planning	$3,380	$3,380	
Travel - Mainland	$0	$0	
Travel - Interisland - Support Rate Case	$0	$0	
Travel - Interisland - Support PPA Negotiations	$200	$200	
Travel - Interisland - Develop Forecasts - Gen Plng	$200	$200	
Travel - Interisland - Support Cost Recovery - Cont. Plng	$200	$200	
Subtotal	$22,980	$10,730	
MECO			
Consultant - Competitive Bidding	$12,500	$0	
Consultant - Alternative Tolling Arrangement	$0	$0	
Software - Strategist (20% x 25%) - Generation Plng	$1,300	$1,350	
Software - Strategist - IRP (80% x 25%)	$5,200	$5,400	
Software - PPLUS (25%) - Generation Planning	$3,380	$3,380	
Travel - Mainland	$0	$0	
Travel - Interisland - Support Rate Case	$0	$0	
Travel - Interisland - Support PPA Negotiations	$200	$200	
Travel - Interisland - Develop Forecasts - Gen Plng.	$200	$200	
Travel - Interisland - Support Cost Recovery - Gen Plng.	$200	$200	
Subtotal	$22,980	$10,730	
	FALSE	TRUE	

2005
Forecasted Non-Labor Dollars
Technical Services Division

	Cost Type	Prior Year Forecast 2004	Prior Year Forecast 2005	Current Year Forecast 2005		
ROJECTS (Act/Loc/Ind)						
ables						
.CO Boiler Inspection (O&M)	501	1,040	540	540	0	
.CO Boiler Inspection (O&M)	522	2,550	2,210	2,210	0	
:o Pipeline Audits	522	0	0	0	0	
CO Boiler Inspection (O&M)	522	0	0	0	0	
CO Internal/External Boiler Inspection (O&M)-Kahului	501	820	500	500	0	
CO Internal/External Boiler Inspection (O&M)-Kahului	522	1,700	1,190	1,190	0	
CO Internal/External Various Inspections (O&M)-Maalaea	501	1,140	40	40	0	
CO Internal/External Various Inspections (O&M)-Maalaea	522	850	1,190	1,190	0	
CO Pressure Vessel Inspection - Molokai	501	0	20	20	0	
CO Pressure Vessel Inspection - Molokai	522	0	170	170	0	
CO Pressure Vessel Inspection - Lanai	501	0	20	20	0	
CO Pressure Vessel Inspection - Lanai	522	0	170	170	0	
Non-Project Billables, Total:		8,100	6,050	6,050	0	
M						
& Maintain Policies & Procedures (240/WST/NE)	521	0	0	0	0	Meals & Entertainment
rate & Monitor Plant Equip- Boiler (242/WST/NE)	501	0	0	0	0	Outside Services(Includes long distance calls, cells, pagers)
itor Plant/Operational Perf-Boiler (245/WST/NE)	201	4,000	4,000	4,200 (A)	0	Supplies
itor Plant/Operational Perf-Boiler (245/WST/NE)	501	9,800	9,800	9,800 (I)	0	Various Software Maintenances
itor Plant/Operational Perf-Boiler (245/WST/NE)	501	9,000	9,000	9,000 (I)	0	R-Stamp,State Application Fee/Misc Outside Services
itor Plant/Operational Perf-Boiler (245/WST/NE)	516	2,500	700	700 (A)	0	Memberships
itor Plant/Operational Perf-Boiler (245/WST/NE)	600	0	0	0	0	Long Distance Calls, Cells, Pager
ntain Boiler Plant&Related Equip-Prev (257/WST/NE)	501	0	0	0	0	R-Stamp Documents
ntain Boiler Plant&Related Equip-Prev (257/WST/NE)	201	0	0	0	0	Purchases ($4,200), Safety Shoes ($700), ASME Code Books
ntain Boiler Plant& Related Equip-Corr (259/WST/NE)	201	0	0	0	0	
ntain Boiler Plant& Related Equip-Corr (259/WST/NE)	522	0	0	0	0	Interisland Travel
O&M, Total:		25,300	23,500	23,700	0	
wer Supply Clearing						
partment Vehicle (259/WST/NC)	301	5,764	6,240	5,720	0	
tware Upgrades (259/WST/NC) (9 x $150)	462	1,512	1,350	1,350	0	
tside Services (259/WST/NC)	501	4,800	4,800	4,800	0	Cells, Pagers
end Training - Course Fees (789/PPO/NC)	501	31,000	14,000	14,000	0	
end Training - Mainland Travel (789/PPO/NC)	520	6,000	2,000	2,000	0	
end Training - Meals (789/PPO/NC)	521	3,000	1,000	1,000	0	
Clearing, Total:		52,076	29,390	28,870	0	

nse renewal for AHo & EChang every 2 yrs, $130 ea. Licence renewed in 2002. Next renewal due in 2004 (Include in budget for '04)
ate renewal for Echang every 3yrs $510. Cert renewed in 2001 expires in 2/02. Next renewal due in 2004. (Include in budget for '04)
ation required to inspect oper repairs and oper permits. Certification due every 3 years. Paid in 2001. Next due in 4/04 $510 + $1100.
cation required every 3 years. Next certification due 6/03. Include $5,000 in budget for 2003.
Welding Society Certified Welding Inspector Fee due every 3 years. Next fee due in 03/2002. Include $200 in budget for 2002.

Σ(I) = $18,800 (A)

Σ(A) = $23,700 ✓

Comments
Chang and A. Ho every 3 years.
Chang every three years.
ation due every three years (includ
ation due every three years (includ
ation due every three years in 2005 budget).
ted by Production Dept.

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Non-Projects - Direct Non-Labor

RA	Prod Oper	Prod Maint	Total
P9S	500,000	0	500,000
Total	500,000	0	500,000

Yim, Karen

From: Takata, Valerie
Sent: Wednesday, December 22, 2004 7:06 AM
To: Yim, Karen
Cc: Seki, Arthur
Subject: RE: Rate Case - Budget labor and nonlabor documentation needed

Attachments: Electronic Shock Absorber.doc

Karen --

I am attaching a write up on the Electronic Shock Absorber which was provided to you in an e-mail dated 8/5 from Art Seki. Justification for the cost contingency was added under ESA Phase II Budget.

Electronic Shock Absorber.doc ...

From: Yim, Karen
Sent: Tuesday, December 21, 2004 5:54 PM
To: Takata, Valerie; Seki, Arthur; Ignacio, Lloyd; Koga, Kathy; Marzano, Victoria; Young, Patti; Chun, Joycelynn; Paco, May; Rinehart, Douglas; Tomita, Kirk; Nakamoto, Barry; Hirashima, Donna; Li, Susan; Hannigan, Carol; Anbe, Kurt; Morikuni, Bert; Yuen, Michael
Cc: Ornellas, Larry; Hiramoto, Lane; Mark, Karen; Fujinaka, Aaron
Subject: Rate Case - Budget labor and nonlabor documentation needed

Please send supporting documentation for NARUC 500 thru 557 to me since I am assisting Aaron Fujinaka, who is the Other Production O&M witness. Please note that support for all labor and nonlabor budget items are needed. If there is someone else who will be responsible for gathering the information, can you forward this e-mail to that person. Let me know if you have questions.

Karen Yim
HECO Production O&M
Mail Code: WP2-IB
(808) 543-4349

P9S	VAL TAKATA, ART SEKI
PBA	LLOYD IGNACIO, KATHY KOGA
PBT	
PCB	VICTORIA MARZANO
PEP	PATTI YOUNG
PEZ	
PHS	JOCELYNN CHUN
PIA	MAY PACO
PIC	
F	
PJA	DOUG RINEHART, KIRK TOMITA; BARRY NAKAMOTO
PJB	
PJC	

Electronic Shock Absorber (ESA) brief

To help stabilize operation of grid-connected wind turbines and minimize power fluctuations on an electric grid that is connected to a number of wind farms, HECO, HELCO, and MECO have teamed with a private company to conduct a study and confirm that a device can be developed from commercial products for installation between a wind farm and the utility grid. The purpose of the device, called the Electronic Shock Absorber, is to help the electric utility ride through short duration power fluctuations (frequency, voltage, etc.) from the wind farm caused by the variable nature of wind.

ESA Patent

(File sent earlier)

ESA Phase II Statement of Work

We have a non-disclosure agreement with the contractor for ESA Phase II--to ensure confidentiality, I will summarize what we are doing with this project.

Background

With the increasing penetration of wind power on electric grids (and particularly on grids like the Hawaiian Islands, where on some islands, wind power is planned to become upwards of 20+% of the available generation), the short term power fluctuations from the wind farms has been, and are continuing to cause significant problems in voltage stability and frequency swings and ultimately the overall stability of the grid. In addition, wind-farm susceptibility to faults on the utility system can "very quickly" result in all of the wind generation tripping off the system.

In many utility situations, it is necessary that the point of interconnect (POI) with the utility power system have a means to allow voltage regulation as the wind farm and utility system conditions change. When using some of the older wind turbine-generators, it may also be desirable to have the compensator provide a Fault Ride Through (FRT) capability. . Wind turbine manufacturer's have recognized the need to provide FRT as requests from other utilities in the United States have recognized the need for FRT with increasing wind energy penetration levels and the installation of large wind farms (i.e. 200 MW wind farms as opposed to individual wind turbines at a single site). Since wind turbine manufacturer's are currently addressing FRT capabilities with the wind turbine generators, it will not be a part of the Scope of Work (SOW) of this Electronic Shock Absorber (ESA) Demo project.

As part of this Demo ESA system program, the two needs/requirements or functions to be performed include:

§ Voltage regulation at the POI
§ Power fluctuation smoothing

This project has been divided into two phases. In phase I of this project, performed in 2003, a detailed analysis of wind-farm energy device was completed. Phase I included alternative Electronic Shock Absorber (ESA) designs and approximate capital and O&M cost for these alternative systems.

In phase II, an ESA Demostration unit will be designed, built and tested on a modular test bed.

Phase II Schedule--Work activities are listed below and subject to change--
2004 work effort includes development of

- project specification
- product design and review
- system simulation model and report
- electrical single-line diagram

2005 work effort includes (budgeted $500K)

- procurement and assembly of elclosures, components, etc.
- factory testing
- shipment from factory
- development of basic controls and software
- install system and interface
- operate and monitor

2006 work effort includes

- operate and monitor
- develop final report

ESA Phase II Budget
We projected $500K for 2005. The attached spreadsheet estimates budgets by year and utility. The ESA Phase II budget for 2005 is larger than the proposed contract. Moving from paper design to actual hardware is always a giant step. The unit being built is a first-of-a-kind system in the world; thus, there will be uncertainties in the design, integration, component and system performance for this ESA demonstration unit. The difference between the proposed contract and

Phase II budget accounts for any contingencies, changes in scope, changes in technology components or project size that might occur in the 2005 timetable. While most of the base technologies are available, the assembly of all these different components and the development of the new software to perform for a new and different function is unknown. Since this is a first-of-a-kind system in the world the larger cost contingency would be warranted.

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Non-Projects - Direct Non-Labor

RA	Prod Oper	Prod Maint	Total
PEZ	799,335	482,488	1,281,823

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Non-Projects - Direct Non-Labor

RA	Prod Oper	Prod Maint	Total
PEP	9,645	0	9,645

TO: AARON FUJINAKA/KAREN YIM DATE: 12/27/04
FROM: BLANE MURAKAMI

PEP & PEZ

HERE ARE "INFO TECH" WORKPAPERS SUPPORTING O&M ESTIMATES IN YOUR AREA. I HAVE CROSS-REFERENCED O&M AMOUNTS FROM THE LIST IMMEDIATELY ATTACHED TO THE WORK-PAPERS FOR YOUR CONVE

NARUC Account	Acct Block Description	O&M Witness
510, 511, 512, 513, 514	Prod Maintenance	Aaron Fujinaka

12/20/2004

Dept	RA	Resp Area	Acct Blk	Acct Blk Descr	NARUC	Exp Class	Proj	Act	Loc	EE	FY05
InfoTech	PEM	Mailing Services	B38	A & G Operation	921	Non-Labor	NPEZZZZZ	966	PHE	501	3,493
											$3,493.00
											28,741
InfoTech	PEM	Mailing Services	B38								$365,200.60
						ERNEST SHIRAKI					
InfoTech	PEM	Mailing Services	B39	A & G Maint	932	Non-Labor	NPEZZZZZ	966	PHE	600	36,780
											$36,780.00
											36,780
InfoTech	PEM	Mailing Services	B39								$36,780.00
						TAYNE SEKIMURA					
										EBUS AMORTIZATION	69,277
InfoTech	PEM										$488,631.52
InfoTech	PEP	Project & Bus Mgt	B30	Prod Oper	506	Non-Labor	NPNEZZZZ	730	PPO	901	9,644.84 H
											$9,644.84
											9,644.84
InfoTech	PEP	Project & Bus Mgt	B30								$9,644.84
						AARON FUJINAKA					
InfoTech	PEP	Project & Bus Mgt	B34	Distribution Oper	587	Non-Labor	NPNEZZZZ	600	OAH	901	38,579.13
											$38,579.13
											38,579.13
InfoTech	PEP	Project & Bus Mgt	B34								$38,579.13
						STEVE YOSHIDA					
InfoTech	PEP	Project & Bus Mgt	B36	Customer Accounts	903	Non-Labor	NPNEZZZZ	611	OAH	901	38,579.13
											$38,579.13
											38,579.13
InfoTech	PEP	Project & Bus Mgt	B36								$38,579.13
						DARREN YAMAMOTO					
InfoTech	PEP	Project & Bus Mgt	B37	Customer Services	910	Non-Labor	NPNEZZZZ	110	PHE	901	18,903.71
											$18,903.71
InfoTech	PEP	Project & Bus Mgt	B37	Customer Services	910	Non-Labor	NPNEZZZZ	713	PHE	901	48,609.61
											$48,609.61
InfoTech	PEP	Project & Bus Mgt	B37	Customer Services	910	Non-Labor	NPNEZZZZ	750	PHE	901	28,934.41
											$28,934.41
											96,447.73
InfoTech	PEP	Project & Bus Mgt	B37								$96,447.73
						ALAN HEE					
InfoTech	PEP	Project & Bus Mgt	B38	A & G Operation	925	Non-Labor	NPNEZZZZ	950	PHE	901	9,644.84
											$9,644.84
											9,644.84
InfoTech	PEP	Project & Bus Mgt	B38								$9,644.84
						RUSSELL HARRIS					
											192,895.67
InfoTech	PEP										$192,895.67
InfoTech	PEZ	ISD Chargeback	B30	Prod Oper	500	Non-Labor	NPYZZZZZ	201	WST	451	103,512 A
											$103,512.00
InfoTech	PEZ	ISD Chargeback	B30	Prod Oper	502	Non-Labor	NPAVP2ZZ	245	KST	451	12,900
											$12,900.00

12/20/2004

Dept	_RA	Resp Area	Acct Blk	Acct Blk Descr	NARUC	Exp Class	_Proj	_Act	_Loc	_EE	FY05	
InfoTech	PEZ	ISD Chargeback	B30	Prod Oper	502	Non-Labor	NPIZZZZZ	242	KST	451	82,848 $82,848.00	A-
InfoTech	PEZ	ISD Chargeback	B30	Prod Oper	505	Non-Labor	NPAVP2ZZ	246	KST	451	10,776 $10,776.00	A-
InfoTech	PEZ	ISD Chargeback	B30	Prod Oper	506	Non-Labor	NPEZZZZZ	730	PPO	451	4,404 $4,404.00	A-
InfoTech	PEZ	ISD Chargeback	B30	Prod Oper	506	Non-Labor	NPIZZZZZ	240	WST	451	500,835 $500,835.00	A-
InfoTech	PEZ	ISD Chargeback	B30	Prod Oper	506	Non-Labor	NPJZZZZZ	875	HST	451	84,060 $84,060.00	A-
InfoTech	PEZ	ISD Chargeback	B30			AARON FUJINAKA					799,335 $799,335.00	$
InfoTech	PEZ	ISD Chargeback	B31	Prod Maint	512	Non-Labor	NPAVP2ZZ	258	KST	451	16,368 $16,368.00	A-
InfoTech	PEZ	ISD Chargeback	B31	Prod Maint	513	Non-Labor	NPAVP2ZZ	261	KST	451	9,708 $9,708.00	A-
InfoTech	PEZ	ISD Chargeback	B31	Prod Maint	514	Non-Labor	NPAVP2ZZ	212	KST	451	8,112 $8,112.00	A-
InfoTech	PEZ	ISD Chargeback	B31	Prod Maint	514	Non-Labor	NPEZZZZZ	256	KST	451	4,092 $4,092.00	A-
InfoTech	PEZ	ISD Chargeback	B31	Prod Maint	514	Non-Labor	NPEZZZZZ	256	WST	451	4,092 $4,092.00	A-
InfoTech	PEZ	ISD Chargeback	B31	Prod Maint	514	Non-Labor	NPIZZZZZ	256	WST	451	440,116 $440,116.00	A-
InfoTech	PEZ	ISD Chargeback	B31			AARON FUJINAKA					482,488 $482,488.00	$
InfoTech	PEZ	ISD Chargeback	B32	Transmission Oper	563	Non-Labor	NPAVP2ZZ	331	OAH	451	2,796 $2,796.00	
InfoTech	PEZ	ISD Chargeback	B32	Transmission Oper	566	Non-Labor	NPAVP2ZZ	320	OAH	451	24,084 $24,084.00	
InfoTech	PEZ	ISD Chargeback	B32	Transmission Oper	566	Non-Labor	NPEZZZZZ	326	OAH	451	20,364 $20,364.00	
InfoTech	PEZ	ISD Chargeback	B32	Transmission Oper	566	Non-Labor	NPRZZZZZ	326	OAH	451	129,192 $129,192.00	
InfoTech	PEZ	ISD Chargeback	B32			STEVE YOSHIDA					176,436 $176,436.00	
InfoTech	PEZ	ISD Chargeback	B33	Transmission Maint	570	Non-Labor	NPAVP2ZZ	349	OAH	451	1,728 $1,728.00	
InfoTech	PEZ	ISD Chargeback	B33	Transmission Maint	571	Non-Labor	NPAVP2ZZ	343	OAH	451	3,864 $3,864.00	
InfoTech	PEZ	ISD Chargeback	B33			STEVE YOSHIDA					5,592 $5,592.00	
InfoTech	PEZ	ISD Chargeback	B34	Distribution Oper	581	Non-Labor	NPRZZZZZ	377	OAH	451	7,908 $7,908.00	
InfoTech	PEZ	ISD Chargeback	B34	Distribution Oper	582	Non-Labor	NPAVP2ZZ	463	OAH	451	4,128 $4,128.00	
InfoTech	PEZ	ISD Chargeback	B34	Distribution Oper	583	Non-Labor	NPAVP2ZZ	461	OAH	451	4,260 $4,260.00	

Hawaiian Electric Company, Inc.
Information Technology & Services Department
ITS Costing System Allocated Costs - PEZ Entries

HECO's IT costs are allocated to functional area code blocks via the IT Costing System. The allocation entries are coded with the Responsibility Area (RA) code PEZ in HECO's financial system. The following is a general description of the PEZ budgeting methodology. Workpapers A-1 through A-7 show the detail allocation amounts for 2005.

Costs to be Cleared

IT Non-Project and non-capital Project costs represent the base of costs to be allocated. These costs are coded with Indicator NC (Non-billable clearing) and are therefore said to be subject to "Clearing". For 2005, the Costs to be Cleared were estimated to be $12,865,283, as shown on workpaper A-1. Details of these costs are shown on workpapers B and C.

Costs Cleared to

IT Costs are cleared to the following categories:

1) HELCO IT Costing System Direct Charges (2005 Estimate - $226,338)
2) MECO IT Costing System Direct Charges (2005 Estimate - $177,768)
3) Non-ITS Project Charges - Expense Element 451 transactions (2005 Estimate - $709,008)
4) Intercompany Billings (2005 Estimate - $265,335)
5) EFMS Program Charges (2005 Estimate - $799,992)
6) Ebusiness Program Charges (2005 Estimate - $758,292)
7) Other Functional Area Charges ($9,928,550)

Basis for Clearing

Amounts which are cleared to the first 4 items above (HELCO/MECO IT Direct Charges, Non-ITS Project Charges, Intercompany Billings) are directly identified. Workpapers D, E, and F show the basis for the amounts included in the 2005 budget.

Amounts which are cleared for items 5 (EFMS Program) and 6 (Ebusiness Program) are estimated by the Program Managers of these IT-Managed programs. Costs are cleared to HECO functional area code blocks benefiting from the services provided by these programs. EFMS and Ebusiness Program costs are shown on workpaper C. Proration percentages used to allocate these costs were identified by Program Managers in prior years and are shown on workpaper G-1.

The amount of item 7 (Other Functional Area Charges) represent the residual of "Costs to be Cleared" reduced by the first 6 items of "Costs Cleared to". These costs are prorated to functional area code blocks based on actual 2003 PEZ proration amounts shown on workpaper G.

PEZ Workpaper Index

A - PEZ Allocation Model
B - Non-Project "NC" Charges
C - Project "NC" Charges
D - HELCO and MECO IT Costing System Direct Charges
E - Non-ITS Project - Expense Element 451 Charges
F - Intercompany Billable Estimates
G - 2003 PEZ Actuals

Prepared by Blane Murakami, ITS Project Manager

PEZ ALLOCATION MODEL

Hawaiian Electric Company, Inc.
Information Technology & Services Department
PEZ Actuals Jan- Dec 2003

	RA	Act	Loc	Ind	Project	EE	Monthly 05	Total 2005
COSTS TO BE CLEARED:								
(Total NC charges)								
	NC per Non-Project							9,093,607
	Non-Project on-cost							2,149,763
	NC per EFMS Project							800,000
	NC per EBUS Project							758,300
	NC per Other Projects							63,613
		Total NC charges					1,072,107	12,865,283
COSTS CLEARED TO:								
Less: HELCO-IT Costing System direct charge per B. Tobara							18,862	226,338
Less: MECO-IT Costing System direct charge per B. Tobara							14,814	177,768
Less: Expense Element 451 charges by non-ITS PMs								709,008
								11,752,169
Less: InterCompany								
	PEZ	700	RHI	BE	NPASVP7Z	451	89	1,070
	PEZ	775	HEI	BE	NPFZZZZZ	451	212	2,544
	PEZ	776	HEL	BE	NPFZZZZZ	451	212	2,544
	PEZ	777	MAU	BE	NPFZZZZZ	451	212	2,544
	PEZ	776	HEI	BE	NPFZZZZZ	451	167	1,998
	PEZ	776	HPC	BE	NPFZZZZZ	451	7	87
	PEZ	776	PEC	BE	NPFZZZZZ	451	15	174
	PEZ	778	HEI	BE	NPFZZZZZ	451	87	1,045
	PEZ	778	HPC	BE	NPFZZZZZ	451	4	45
	PEZ	778	PEC	BE	NPFZZZZZ	451	8	91
	PEZ	779	HEI	BE	NPFZZZZZ	451	95	1,140
	PEZ	779	HPC	BE	NPFZZZZZ	451	2	20
	PEZ	779	PEC	BE	NPFZZZZZ	451	3	40
	PEZ	817	HEL	BE	NPAZZZZZ	451	-	-
	PEZ	817	MAU	BE	NPAZZZZZ	451	-	-
	PEZ	825	HEI	BE	NPKZZZZZ	451	205	2,464
	PEZ	825	HEL	BE	NPKZZZZZ	451	16	189
	PEZ	825	MAU	BE	NPKZZZZZ	451	16	189
	PEZ	826	HEL	BE	NPKZZZZZ	451	66	791
	PEZ	826	MAU	BE	NPKZZZZZ	451	78	931
	PEZ	891	HEI	BE	NPEZZZZZ	451	113	1,357
	PEZ	895	HEL	BE	NPAVP2ZZ	451	10,253	123,036
	PEZ	895	MAU	BE	NPAVP2ZZ	451	10,253	123,036
Total Intercompany							22,111	265,335
Less: EFMS Allocations								
	PEZ	211	WST	NC	NPYZZZZZ		7,175	86,100.00
	PEZ	256	KST	NE	NPEZZZZZ		341	4,092.00 ✓ NARUC 514
	PEZ	256	WST	NE	NPEZZZZZ		341	4,092.00 ✓ NARUC 514
	PEZ	307	OAH	NC	NPEZZZZZ		12,954	155,448.00
	PEZ	326	OAH	NE	NPEZZZZZ		1,697	20,364.00
	PEZ	408	OAH	NC	NPEZZZZZ		12,954	155,448.00

A-

Hawaiian Electric Company, Inc.
Information Technology & Services Department
PEZ Actuals Jan- Dec 2003

RA	Act	Loc	Ind	Project	EE	Monthly 05	Total 2005
PEZ	455	OAH	NC	NPEZZZZZ		3,928	47,136.00
PEZ	455	OAH	NE	NPEZZZZZ		399	4,788.00
PEZ	456	OAH	NE	NPEZZZZZ		6,794	81,528.00
PEZ	600	OAH	NE	NPWZZZZZ		14,944	179,328.00
PEZ	907	OAH	NC	NPBZZZZZ		1,993	23,916.00
PEZ	926	PHE	NE	NPEZZZZZ		1,108	13,296.00
PEZ	931	PHE	NE	NPEZZZZZ		2,038	24,456.00
Total EFMS						66,667	799,992.00
			NE	41%	NE		331,944.00
			NC	59%	NC		468,048.00
			Total	100%			799,992.00
Less: EBusiness Allocations							
PEZ	110	PHE	NE	NPNEZZZZ		6565	78,780.00

Hawaiian Electric Company, Inc.
Information Technology & Services Department
PEZ Actuals Jan- Dec 2003

RA	Act	Loc	Ind	Project	EE	Monthly 05	Total 2005	
PEZ	242	KST	NE	NPIZZZZZ	451	6,904	82,848	NARUC 502
PEZ	242	WST	NE	NPIZZZZZ	451			
PEZ	242	HST	NE	NPIZZZZZ	451			
	242 Total							
PEZ	245	KST	NE	NPAVP2ZZ	451	1,075	12,900	NARUC 502
	245 Total							
PEZ	246	KST	NE	NPAVP2ZZ	451	898	10,776	NARUC 505
	246 Total							
PEZ	256	WST	NE	NPIZZZZZ	451	34,054	408,648	[illegible] ITS NUT

Hawaiian Electric Company, Inc.
Information Technology & Services Department
PEZ Actuals Jan- Dec 2003

RA	Act	Loc	Ind	Project	EE	Monthly 05	Total 2005
	461 Total						
PEZ	462	OAH	NE	NPAVP2ZZ	451	310	3,720
	462 Total						
PEZ	463	OAH	NE	NPAVP2ZZ	451	344	4,128
	463 Total						
PEZ	465	OAH	NE	NPWZZZZZ	451	1,412	16,944
	465 Total						
PEZ	474	OAH	NE	NPAVP2ZZ	451	554	6,648
	474 Total						
PEZ	477	OAH	NE	NPAVP2ZZ	451	543	6,516
	477 Total						
PEZ	486	OAH	NE	NPAVP2ZZ	451	177	2,124
	486 Total						
PEZ	600	OAH	NC	NPWZZZZZ	451	32,902	394,824
PEZ	600	OAH	NE	NPWZZZZZ	451	16,606	199,272
PEZ	600	OAH	NE	NPCZZZZZ	451		

Hawaiian Electric Company, Inc.
Information Technology & Services Department
PEZ Actuals Jan- Dec 2003

RA	Act	Loc	Ind	Project	EE	Monthly 05	Total 2005
PEZ	714	PHE	NE	NPEZZZZZ	451		
	714 Total						
PEZ	720	PHE	NS	NPCZZZZZ	451	60,493	725,916
PEZ	720	PHE	NE	NPNEZZZZ	451		
	720 Total						

Hawaiian Electric Company, Inc.
Information Technology & Services Department
PEZ Actuals Jan- Dec 2003

RA	Act	Loc	Ind	Project	EE	Monthly 05	Total 2005
PEZ	818	PHE	NE	**NPAVP1ZZ**	451		
PEZ	818	PHE	NE	NPAZZZZZ	451		
	818 Total						
PEZ	825	PHE	NE	NPKZZZZZ	451	1,452	17,424
	825 Total						
PEZ	826	PHE	NE	NPKZZZZZ	451	4,289	51,468
PEZ	826	PHE	NE	NPAVP4ZZ	451		
	826 Total						
PEZ	827	PHE	NE	NPKZZZZZ	451	2,846	34,152
	827 Total						
PEZ	842	PHE	NE	NPKZZZZZ	451	16,574	198,888

Hawaiian Electric Company, Inc.
Information Technology & Services Department
PEZ Actuals Jan- Dec 2003

RA	Act	Loc	Ind	Project	EE		Monthly 05	Total 2005
PEZ	950	PHE	NE	NPHZZZZZ	451		8,268	99,216
PEZ	950	PHE	NE	NPKZZZZZ	451			
	950 Total							
PEZ	951	PHE	NE	NPKZZZZZ	451		2,825	33,900
	951 Total							
PEZ	953	PHE	NE	NPFZZZZZ	451		3,520	42,240
	953 Total							
PEZ	960	PHE	NE	NPNCZZZZ	451		6,244	74,928
	960 Total							
PEZ	965	PHE	NE	NPEZZZZZ	451		1,636	19,632
	965 Total							
PEZ	966	PHE	NE	NPEZZZZZ	451		2,896	34,752
	966 Total							
PEZ	967	PHE	NE	NPEZZZZZ	451		3,375	40,500
	967 Total							
	Grand Total						827,378	9,928,536
						NE	599,043	7,249,788
						NC/N	228,335	2,678,748
								9,928,536
Check total to pillar								11,752,155.00

NON-PROJECT "NC" CHARGES

4/20/2004 » budget manager: PR300 11:49AM

Dept	Expense Categ...	FY05 Upd04 RA
InfoTech	Labor (A)	$4,714,393
	Materials	$105,604
	On-Costs	0
	Other	$1,181,513
	Outside Svcs	$3,090,837
	Transportation	$1,260
		$9,093,607

SEE WORKPAPER B-3 FOR DETAILS

LABOR (A) 4714,393

LABOR ON-COST % XB-1 × 45.6%

NC LABOR ON-COST 2,149,763

A

B

NON-PROJECT TOTAL CHARGES

4/20/2004 » budget manager: P... 11:49AM

NOTE: USED TO CALCULATE LABOR ON-COST %

Dept	Expense Categ...		FY05 Upd04 RA
InfoTech	Labor	C	$6,241,212
	Materials	A	$314,204
	On-Costs	E	$2,875,047
	Other		$1,761,191
	Outside Svcs		$3,311,618
	Transportation		$23,040
			$14,526,312

MATERIAL	A	314,204
MATERIAL ON-COST %		x B-2 x .09.5
MATERIAL ON-COST		28,750
TOTAL ON-COST	B	2,875,047
LABOR ON-COST		2,846,297
LABOR BASE	C	6,241,212
LABOR ON-COST %		45.6%
		x B

B-1

On-Costs and Vehicle Rates

On-Cost	2004 Budget Rates	1/1/2004 Recorded Rates	2/1/2004 Recorded Rates	4/1/2004 Recorded Rates	Preliminary 2005 Budget Rates
Payroll Taxes	8.51%	8.51%	8.51%	8.51%	8.42%
Employee Benefits	$6.25	$9.38	$5.96	$5.96	$6.46
Non-Productive Wages	$4.44	$4.44	$4.44	$4.44	$3.84
Corporate Administration	$2.76	$2.89	$2.74	$2.74	$2.86
Customer Engineering	$113.55	$119.53	$100.00	$90.00	~~$98.56~~
Stores	12.00%	12.55%	10.70%	10.70%	9.15%
Energy Delivery	$26.80	$28.22	$27.75	$27.75	~~$26.88~~
Power Supply	$6.38	$6.72	$6.24	$6.24	$6.70
Vehicles					
Heavy Trucks (VH)	$12.50	$12.47	$16.39		$12.50
Medium Trucks (VM)	$8.50	$9.45	$12.53		$8.75
Light Trucks (VL)	$5.50	$5.08	$4.98		$5.50
Sedans (VS)	$2.75	$1.89	$2.79		$2.50
Condor 150I (VC)	$58.25	$31.79	$37.32		$59.25
Misc (VZ)	$1.50	$1.26	$1.55		$1.50
Caterpillar (VX)	$4.25	$2.25	$2.61		$4.25

x B-1

Productive labor is labor less non-productive hours such as holiday, sick, vacation, etc.

Effective 1/1/01, there are no recorded vehicle rates. Instead, transportation clearing costs are allocated monthly to (1) assigned vehicles based on 8 hours per day, Monday through Friday, excluding holidays and (2) pool vehicles based on actual usage.

NON-PROJECT "NC" CHARGES

12/22/2004 » budget manager: PR300 NPUpd - Exp Category $ 9:12AM

Dept	*RA #	*Act #	*Ind #	*Loc #	*Proj #	*EE #	Line Item	FY05 Upd04 RA	Expense Category
InfoTech	PEA	730	NC	PHE	NPEZZZZZ	150	E res new tech 730	$7,796	Labor
InfoTech	PEA	777	NC	PHE	NPEZZZZZ	150	I process payroll 777	$2,365	Labor
InfoTech	PEA	890	NC	PHE	NPEZZZZZ	150	E dev-new 890	$32,484	Labor
InfoTech	PEA	891	NC	PHE	NPEZZZZZ	150	E dev comp apps enh 891	$27,287	Labor
InfoTech	PEA	895	NC	PHE	NPEZZZZZ	150	E mainframe 895	$10,395	Labor
InfoTech	PEA	896	NC	PHE	NPEZZZZZ	150	E LAN 896	$20,790	Labor
InfoTech	PEA	897	NC	PHE	NPEZZZZZ	150	E desktop-bus 897	$11,694	Labor
InfoTech	PEA	898	NC	PHE	NPEZZZZZ	150	E desktop-tech 898	$9,096	Labor
InfoTech	PEA	901	NC	PHE	NPEZZZZZ	150	E provide IT cust asst 901	$10,395	Labor
InfoTech	PEA	901	NC	PHE	NPEZZZZZ	150	I provide IT cust asst 901	$44,648	Labor
InfoTech	PEC	701	NC	PHE	NPEZZZZZ	150	TC Dev Mnge Fcst 701	$12,234	Labor
InfoTech	PEC	721	NC	PHE	NPEZZZZZ	150	TC Dev Meas & Anl Perf 721	$41,673	Labor
InfoTech	PEC	840	NC	PHE	NPEZZZZZ	150	TC Admin Oth Procur Pgm 840	$6,117	Labor
InfoTech	PEC	842	NC	PHE	NPEZZZZZ	150	I order mat'ls equip-clrg 842	$9,757	Labor
InfoTech	PEC	844	NC	PHE	NPEZZZZZ	150	I prepare contracts-clrg 844	$47,900	Labor
InfoTech	PEC	844	NC	PHE	NPEZZZZZ	150	TC prep/mge contracts-clrg 844	$24,468	Labor
InfoTech	PEC	901	NC	PHE	NPEZZZZZ	150	FS IT cust asst 901	$51,605	Labor
InfoTech	PEC	901	NC	PHE	NPEZZZZZ	150	TC provide it customer assistance-clrg 901	$295,533	Labor
InfoTech	PEC	901	NC	PHE	NPEZZZZZ	150	I provide IT cust asst-clrg 901	$183,913	Labor
InfoTech	PEC	965	NC	PHE	NPEZZZZZ	150	FS dev mng fcst 701	$17,367	Labor
InfoTech	PEC	966	NC	PHE	NPEZZZZZ	150	FS maint rel 721	$8,435	Labor
InfoTech	PEC	967	NC	PHE	NPEZZZZZ	150	FS Org Dev Strat 722	$8,435	Labor
InfoTech	PED	730	NC	PHE	NPEZZZZZ	150	TC new tech 730	$18,351	Labor
InfoTech	PED	785	NC	PHE	NPEZZZZZ	150	FS Plan Emp Trng & Dev 785	$8,435	Labor
InfoTech	PED	789	NC	PHE	NPEZZZZZ	150	TC attend training 789	$55,436	Labor
InfoTech	PED	890	NC	PHE	NPEZZZZZ	150	TC develop comp apps-new 890	$221,746	Labor
InfoTech	PED	891	NC	PHE	NPEZZZZZ	150	FS develop comp apps-enh 891	$76,911	Labor
InfoTech	PED	891	NC	PHE	NPEZZZZZ	150	TC develop comp apps-enhanced 891	$1,532,721	Labor
InfoTech	PED	901	NC	PHE	NPEZZZZZ	150	TC Prov IT Cust Assist 901	$18,351	Labor
InfoTech	PEI	895	NC	PHE	NPEZZZZZ	150	FS oper & main mainframe 895	$13,894	Labor
InfoTech	PEI	895	NC	PHE	NPEZZZZZ	150	BUOC oper & main mainframe 895	$216,509	Labor
InfoTech	PEI	895	NC	PHE	NPEZZZZZ	150	TCS oper & main mainframe 895	$63,476	Labor

SEE HOURS/ EMPLOYEES ON WORKPAPER B-4

B-3

Dept	*RA #	*Act #	*Ind #	*Loc #	*Proj #	*EE #	Line Item		FY05 Upd04 RA	Expense Category
InfoTech	PEI	895	NC	PHE	NPEZZZZZ	150	TC oper & main mainframe 895		$242,391	Labor
InfoTech	PEI	896	NC	PHE	NPEZZZZZ	150	FS oper & main LAN 896		$46,147	Labor
InfoTech	PEI	896	NC	PHE	NPEZZZZZ	150	I oper & main LAN 896		$50,561	Labor
InfoTech	PEI	896	NC	PHE	NPEZZZZZ	150	TC oper & main LAN 896		$423,611	Labor
InfoTech	PEI	897	NC	PHE	NPEZZZZZ	150	TC oper & main desktop 897		$116,225	Labor
InfoTech	PEI	897	NC	PHE	NPEZZZZZ	150	I oper & maint desktop 897		$45,239	Labor
InfoTech	PEI	897	NC	PHE	NPEZZZZZ	150	FS oper & main desktop 897		$32,253	Labor
InfoTech	PEI	900	NC	PHE	NPEZZZZZ	150	I op desk top offc telecom 900		$44,056	Labor
InfoTech	PEP	700	NC	PHE	NPEZZZZZ	150	FS dev & adm bus plans 700		$4,466	Labor
InfoTech	PEP	700	NC	PHE	NPEZZZZZ	150	TC dev & adm bus plans 700		$10,323	Labor
InfoTech	PEP	701	NC	PHE	NPEZZZZZ	150	TC dev & mg fcst 701		$51,613	Labor
InfoTech	PEP	722	NC	PHE	NPEZZZZZ	150	TC org dev strat 722		$20,645	Labor
InfoTech	PEP	722	NC	PHE	NPEZZZZZ	150	FS org dev strat 722		$8,932	Labor
InfoTech	PEP	730	NC	PHE	NPEZZZZZ	150	TC research new tech 730		$77,229	Labor
InfoTech	PEP	730	NC	PHE	NPEZZZZZ	150	FS rsrch new technology 730		$57,063	Labor
InfoTech	PEP	765	NC	PHE	NPEZZZZZ	150	FS empl pol prac proc 765		$4,466	Labor
InfoTech	PEP	785	NC	PHE	NPEZZZZZ	150	FS performance appraisals 785		$4,466	Labor
InfoTech	PEP	789	NC	PHE	NPEZZZZZ	150	TC attend training - local 789		$5,352	Labor
InfoTech	PEP	890	NC	PHE	NPEZZZZZ	150	TC develop apps - new 890		$20,645	Labor
InfoTech	PEP	891	NC	PHE	NPEZZZZZ	150	TC maintain apps - enhances 891		$211,041	Labor
InfoTech	PEP	896	NC	PHE	NPEZZZZZ	150	TC op and maintain LAN 896		$51,613	Labor
InfoTech	PEP	906	NC	PHE	NPEZZZZZ	150	TC plan the Sys Telecom 906		$66,906	Labor
InfoTech	PEP	906	NC	PHE	NPEZZZZZ	150	FS telecom-man, engr, design 906		$8,932	Labor
InfoTech									$4,714,393	Labor
InfoTech	PEA	901	NC	PHE	NPEZZZZZ	205	Materials-misc, cells, pagers	<EA>	$42,500	Materials
InfoTech	PEI	895	NC	PHE	NPEZZZZZ	201	Laser forms	<Eo>	$19,404	Materials
InfoTech	PEI	895	NC	PHE	NPEZZZZZ	201	Laser supplies	<Eo>	$4,000	Materials
InfoTech	PEI	895	NC	PHE	NPEZZZZZ	201	Micr toner forms	<Eo>	$7,000	Materials
InfoTech	PEI	895	NC	PHE	NPEZZZZZ	201	Tapes		$1,500	Materials
InfoTech	PEI	896	NC	PHE	NPEZZZZZ	201	Cabling	<ES>	$7,200	Materials
InfoTech	PEI	897	NC	PHE	NPEZZZZZ	201	PC hdwre purchases	<EI>	$24,000	Materials
InfoTech									$105,604	Materials

BASED on HISTORY

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Dept	*RA #	*Act #	*Ind #	*Loc #	*Proj #	*EE #	Line Item	FY05 Upd04 RA	Expense Category	
InfoTech	PEA	749	NC	PHE	NPEZZZZZ	515	UTC Dues 1/2 2004-2005	$3,200	Other	BASED ON HISTORY
InfoTech	PEA	749	NC	PHE	NPEZZZZZ	520	Travel - mainland	$6,000	Other	
InfoTech	PEA	749	NC	PHE	NPEZZZZZ	520	Conferences - Maintain Industry Relations	$9,500	Other	
InfoTech	PEA	749	NC	PHE	NPEZZZZZ	521	Travel - mainland meals/ent	$500	Other	
InfoTech	PEA	891	NC	PHE	NPEZZZZZ	461	Consultants-applications dev <ED>	$140,000	Other	
InfoTech	PEA	901	NC	PHE	NPEZZZZZ	461	Consulting <ED>	$70,000	Other	
InfoTech	PEA	901	NC	PHE	NPEZZZZZ	461	Gartner Fees	$35,000	Other	
InfoTech	PEA	901	NC	PHE	NPEZZZZZ	522	Travel - neighbor island	$3,800	Other	
InfoTech	PED	890	NC	PHE	NPEZZZZZ	462	PC Software Products - New App Devl & Enhance	$45,000	Other	
InfoTech	PED	891	NC	PHE	NPEZZZZZ	463	Software Prod Application Maint - sybase/power bldr	$1,500	Other	
InfoTech	PEI	896	NC	PHE	NPEZZZZZ	462	Mcafee license <EI>	$90,000	Other	
InfoTech	PEI	896	NC	PHE	NPEZZZZZ	570	Network data circuits <ES>	$150,000	Other	
InfoTech	PEI	897	NC	PHE	NPEZZZZZ	462	Misc software & Verisign @$3K <EC>	$8,500	Other	
InfoTech	PEI	897	NC	PHE	NPEZZZZZ	462	Remedy's Change Management 2005B Add	$90,000	Other	NEW 2005 REQUIREMENT
InfoTech	PEI	900	NC	PHE	NPEZZZZZ	570	HECO trunks <ES>	$178,800	Other	BASED ON HISTORY
InfoTech	PEI	915	NC	PHE	NPEZZZZZ	900	Expanet & Koolau & generator maint <EI>	$349,713	Other	
InfoTech								$1,181,513	Other	
InfoTech	PEA	789	NC	PHE	NPEZZZZZ	501	Education & Training	$50,000	Outside Svcs	BASED ON HISTORY
InfoTech	PED	891	NC	PHE	NPEZZZZZ	501	Middleware Maintenance	$55,200	Outside Svcs	
InfoTech	PED	891	NC	PHE	NPEZZZZZ	501	Bell&Howell transformer/ Grp 1 Cd 1 SW Maintenance	$32,900	Outside Svcs	
InfoTech	PEI	795	NC	PHE	NPEZZZZZ	501	Safety shoes <Eo>	$1,000	Outside Svcs	
InfoTech	PEI	895	NC	PHE	NPEZZZZZ	501	IBM laser printers <Eo>	$79,263	Outside Svcs	
InfoTech	PEI	895	NC	PHE	NPEZZZZZ	501	Mainframe hardware maintenance <Eo>	$193,015	Outside Svcs	
InfoTech	PEI	895	NC	PHE	NPEZZZZZ	501	UPS & generator maintenance <Eo>	$33,600	Outside Svcs	
InfoTech	PEI	895	NC	PHE	NPEZZZZZ	501	CPU (Z800 2066 OC1) Lease <Eo>	$156,516	Outside Svcs	
InfoTech	PEI	895	NC	PHE	NPEZZZZZ	501	Disaster Recovery for Enterprise Server < Eo>	$65,052	Outside Svcs	
InfoTech	PEI	895	NC	PHE	NPEZZZZZ	501	Mainframe Software <Eo>	$528,261	Outside Svcs	
InfoTech	PEI	895	NC	PHE	NPEZZZZZ	501	IBM Software <Eo>	$393,384	Outside Svcs	
InfoTech	PEI	895	NC	PHE	NPEZZZZZ	501	HEI Fees for Internet (2004 contains increm incr only)	$82,706	Outside Svcs	
InfoTech	PEI	895	NC	PHE	NPEZZZZZ	501	HEI Fees for Spam (Big Fish) Filtering Charges	$30,000	Outside Svcs	
InfoTech	PEI	896	NC	PHE	NPEZZZZZ	501	MS premier support fees <EI>	$141,000	Outside Svcs	
InfoTech	PEI	896	NC	PHE	NPEZZZZZ	501	Network Equipment Maintenance <EI>	$250,000	Outside Svcs	

Dept	*RA #	*Act #	*Ind #	*Loc #	*Proj #	*EE #	Line Item			FY05 Upd04 RA	Expense Category	
InfoTech	PEI	896	NC	PHE	NPEZZZZZ	501	10 ISDN Phones			$4,800	Outside Svcs	BASED on HISTORY
InfoTech	PEI	897	NC	PHE	NPEZZZZZ	501	MEA for HECO	<EC>		$311,000	Outside Svcs	
InfoTech	PEI	897	NC	PHE	NPEZZZZZ	501	PC maintenance		<EI>	$374,400	Outside Svcs	
InfoTech	PEI	898	NC	PHE	NPEZZZZZ	501	EFMS maint (Intergraph)		<EI>	$275,000	Outside Svcs	
InfoTech	PEI	900	NC	PHE	NPEZZZZZ	501	Generator propane		<EI>	$540	Outside Svcs	
InfoTech	PEI	900	NC	PHE	NPEZZZZZ	501	Moves, adds, chgs		<EI>	$6,000	Outside Svcs	
InfoTech	PEI	900	NC	PHE	NPEZZZZZ	501	Long Distance Charges		<ES>	$20,000	Outside Svcs	
InfoTech	PEI	900	NC	PHE	NPEZZZZZ	501	Directory Listing	<EI>		$7,200	Outside Svcs	
InfoTech										$3,090,837	Outside Svcs	
InfoTech	PEA	901	NC	PHE	NPEZZZZZ	301	Car pools			$1,260	Transportation	BASED on HISTORY
InfoTech										$1,260	Transportation	
										$9,093,607		

HOURS / EMPLOYEES - "NC" CHARGES

12/22/2004 » budget manager: PR110H NPUpd - Det... 1:06PM

*R...	*Ac...	*Lo...	*In...	*Proj #	*E...	*Lbr Class	Line Item	FY05 Upd04 RA (Hours)	Employees
PEA	730	PHE	NC	NPEZZ...	150	__E	E res new tech 730	144	
PEA	890	PHE	NC	NPEZZ...	150	__E	E dev-new 890	600	
PEA	891	PHE	NC	NPEZZ...	150	__E	E dev comp apps enh 891	504	
PEA	895	PHE	NC	NPEZZ...	150	__E	E mainframe 895	192	
PEA	896	PHE	NC	NPEZZ...	150	__E	E LAN 896	384	
PEA	897	PHE	NC	NPEZZ...	150	__E	E desktop-bus 897	216	
PEA	898	PHE	NC	NPEZZ...	150	__E	E desktop-tech 898	168	
PEA	901	PHE	NC	NPEZZ...	150	__E	E provide IT cust asst 901	192	
PEA							ITS CHIEF INFORMATION OFFICER	2,400	1
PEA	777	PHE	NC	NPEZZ...	150	__I	I process payroll 777	96	
PEA	901	PHE	NC	NPEZZ...	150	__I	I provide IT cust asst 901	1,812	
PEA							ITS SECRETARY	1,908	1
PEC	901	PHE	NC	NPEZZ...	150	__FS	FS IT cust asst 901	1,248	
PEC	965	PHE	NC	NPEZZ...	150	__FS	FS dev mng fcst 701	420	
PEC	966	PHE	NC	NPEZZ...	150	__FS	FS maint rel 721	204	
PEC	967	PHE	NC	NPEZZ...	150	__FS	FS Org Dev Strat 722	204	
PEC							DIRECTOR - CUSTOMER CARE	2,076	1
PEC	842	PHE	NC	NPEZZ...	150	__I	I order mat'ls equip-clrg 842	396	
PEC	844	PHE	NC	NPEZZ...	150	__I	I prepare contracts-clrg 844	1,944	
PEC	901	PHE	NC	NPEZZ...	150	__I	I provide IT cust asst-clrg 901	7,464	
PEC							SPECIALISTS	9,804	5
PEC	701	PHE	NC	NPEZZ...	150	__TC	TC Dev Mnge Fcst 701	384	
PEC	721	PHE	NC	NPEZZ...	150	__TC	TC Dev Meas & Anl Perf 721	1,308	
PEC	840	PHE	NC	NPEZZ...	150	__TC	TC Admin Oth Procur Pgm 840	192	
PEC	844	PHE	NC	NPEZZ...	150	__TC	TC prep/mge contracts-clrg 844	768	
PEC	901	PHE	NC	NPEZZ...	150	__TC	TC provide it customer assistance-clrg...	9,276	
PEC							CONSULTANTS / ANALYSTS	11,928	6
PED	785	PHE	NC	NPEZZ...	150	__FS	FS Plan Emp Trng & Dev 785	204	
PED	891	PHE	NC	NPEZZ...	150	__FS	FS develop comp apps-enh 891	1,860	
PED							DIRECTOR - DEVELOPMENT SERVICES	2,064	1
PED	730	PHE	NC	NPEZZ...	150	__TC	TC new tech 730	576	
PED	789	PHE	NC	NPEZZ...	150	__TC	TC attend training 789	1,740	
PED	890	PHE	NC	NPEZZ...	150	__TC	TC develop comp apps-new 890	6,960	
PED	891	PHE	NC	NPEZZ...	150	__TC	TC develop comp apps-enhanced 891	48,108	
PED	901	PHE	NC	NPEZZ...	150	__TC	TC Prov IT Cust Assist 901	576	
PED							LEAD/ANALYSTS/SPECIALISTS	57,960	30
PEI	895	PHE	NC	NPEZZ...	150	__BUOC	BUOC oper & main mainframe 895	9,120	
PEI							OPERATORS	9,120	5
PEI	895	PHE	NC	NPEZZ...	150	__FS	FS oper & main mainframe 895	336	
PEI	896	PHE	NC	NPEZZ...	150	__FS	FS oper & main LAN 896	1,116	
PEI	897	PHE	NC	NPEZZ...	150	__FS	FS oper & main desktop 897	780	
PEI							DIRECTOR - INFRASTRUCTURE & OPERATIONS	2,232	1
PEI	896	PHE	NC	NPEZZ...	150	__I	I oper & main LAN 896	2,052	

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12/22/2004 » budget manager: PR110H NPUpd - Det... 1:06PM

HOURS

*R...	*Ac...	*Lo...	*In...	*Proj #	*E...	*Lbr Class	Line Item	FY05 Upd04 RA	EMPLOYEE
PEI	897	PHE	NC	NPEZZ...	150	__I	I oper & maint desktop 897	1,836	
PEI	900	PHE	NC	NPEZZ...	150	__I	I op desk top offc telecom 900	1,788	
PEI							SPECIALISTS/COORDINATOR	5,676	3
PEI	895	PHE	NC	NPEZZ...	150	__TC	TC oper & main mainframe 895	7,608	
PEI	896	PHE	NC	NPEZZ...	150	__TC	TC oper & main LAN 896	13,296	
PEI	897	PHE	NC	NPEZZ...	150	__TC	TC oper & main desktop 897	3,648	
PEI							LEAD/ADMINISTRATOR/ANALYSTS	24,552	12
PEI	895	PHE	NC	NPEZZ...	150	__TCS	TCS oper & main mainframe 895	2,028	
PEI							SUPERVISOR	2,028	1
PEP	700	PHE	NC	NPEZZ...	150	__FS	FS dev & adm bus plans 700	108	
PEP	722	PHE	NC	NPEZZ...	150	__FS	FS org dev strat 722	216	
PEP	730	PHE	NC	NPEZZ...	150	__FS	FS rsrch new technology 730	1,380	
PEP	765	PHE	NC	NPEZZ...	150	__FS	FS empl pol prac proc 765	108	
PEP	785	PHE	NC	NPEZZ...	150	__FS	FS performance appraisals 785	108	
PEP	906	PHE	NC	NPEZZ...	150	__FS	FS telecom-man, engr, design 906	216	
PEP							DIRECTOR-PROJECT & BUS MGT	2,136	1
PEP	700	PHE	NC	NPEZZ...	150	__TC	TC dev & adm bus plans 700	324	
PEP	701	PHE	NC	NPEZZ...	150	__TC	TC dev & mg fcst 701	1,620	
PEP	722	PHE	NC	NPEZZ...	150	__TC	TC org dev strat 722	648	
PEP	730	PHE	NC	NPEZZ...	150	__TC	TC research new tech 730	2,424	
PEP	789	PHE	NC	NPEZZ...	150	__TC	TC attend training - local 789	168	
PEP	890	PHE	NC	NPEZZ...	150	__TC	TC develop apps - new 890	648	
PEP	891	PHE	NC	NPEZZ...	150	__TC	TC maintain apps - enhances 891	6,624	
PEP	896	PHE	NC	NPEZZ...	150	__TC	TC op and maintain LAN 896	1,620	
PEP	906	PHE	NC	NPEZZ...	150	__TC	TC plan the Sys Telecom 906	2,100	
PEP							LEAD	16,176	9
								150,060	77

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PROJECT "NC" CHARGES

FROM: PROJECT FIL
INDICATOR = NC

4/20/2004 » budget manager: PR9100-P: Summa... 11:34

*Project #	Project	*M-Proj #	Curr Upd New Total $	Proj to Date Act $	FY05 UPDATE04
P0000040	EFMS Program	P0000040	$3,780,000	0	$800,000
		R0003012	$25,234	$25,234	0
		R0003621	$79,981	$79,981	0
		R0003624	$65,116	$65,116	0
		R0003625	$168,320	$168,320	0
		R0003627	-$14,583	-$14,583	0
		R0003628	$31,662	$31,662	0
		R0004779	$35,110	$35,110	0
		R0004780	$13,263	$13,263	0
		R0004884	$0	$0	0
		R0004885	$63,305	$63,305	0
		R0004886	$38,964	$38,964	0
		R0004887	$38,964	$38,964	0
		R0004888	$38,964	$38,964	0
		R0005500	$12,188	$12,188	0
		R0005749	$28,100	$28,100	0
		R0006579	$54,938	$54,938	0
		R0006598	$26,880	$26,880	0
		R0009382	$4	$4	0
		R0009383	$7,486	$7,486	0
			$4,493,893	$713,893	$800,000
P0000427	e-Bus HECOcom Proje...		$24,827	0	$18,300
		P0000427	$2,721,233	$50,233	$740,000
			$2,746,060	$50,233	$758,300
P0000868	Middleware Implementa...		$50,311	0	$7,842
		P0000868	$425,727	0	$55,771
			$476,039	0	$63,613
			$7,715,992	$764,126	$1,621,913

C

HECO IT Costing Estimates for 2005-2006 for HELCO

HELCO - IT COSTING SYSTEM DIRECT CHARGE

DIRECT CHARGES

Dist.	Project #	WO #		Account Code					Estimate 2005	Estimate 2006	
HELC			H9P	700	HEL	NE	NHAPRESI	451	1,143	1,143	
HELC			HAA	701	HEL	NE	NHAZZZZZ	451	1,714	1,714	
HELC			HAA	818	HEL	NE	NHAZZZZZ	451	1,714	1,714	
HELC			HAC	818	HEL	NE	NHAZZZZZ	451	3,727	3,727	
HELC			HAK	604	HAK	NE	NHAZZZZZ	451	5,407	5,407	
HELC			HAP	817	HEL	NE	NHAZZZZZ	451	2,285	2,285	
HELC			HDA	965	HED	NC	NHDZZZZZ	451	7,013	7,013	
HELC			HDC	603	HAH	NE	NHDZZZZZ	451	15,328	15,328	
HELC			HDR	455	HED	NC	NHDZZZZZ	451	3,428	3,428	
HELC			HDR	600	HAH	NE	NHDZZZZZ	451	3,428	3,428	
HELC			HGA	211	ANS	NS	NHGZZZZZ	451	3,620	3,620	
HELC			HNA	775	HEL	NE	NHNZZZZZ	451	1,299	1,299	
HELC			HNL	928	HEL	NE	NHNZZZZZ	451	1,517	1,517	
HELC		CS000024	HCS	112	HEL	NE	NHCZZZZZ	451	6,040	6,040	
HELC		CS000101.	HCE	750	HEL	NE	NHCZZZZZ	451	1,143	1,143	
HELC		CS000274	HAW	604	HEL	NE	NHAZZZZZ	451	8,448	8,448	
HELC		CS000317	HAK	604	HAK	NE	NHAZZZZZ	451	17,470	17,470	
HELC		CS000347	HAS	604	HAH	NE	NHAZZZZZ	451	32,863	32,863	
HELC		CS000431	HCB	711	HEL	NE	H0000004	451	3,802	3,802	
HELC		EE000629	HWA	408	HED	NC	NHWZZZZZ	451	49,364	49,364	
HELC		FI000043	HAC	818	HEL	NE	NHAZZZZZ	451	6,186	6,186	
HELC		HR000258	HNP	778	HEL	NE	NHNZZZZZ	451	30,450	30,450	FBF App labor
HELC		HR000259	HNP	779	HEL	NE	NHNZZZZZ	451	1,800	1,800	FBH App labor
HELC		HR000260	HNP	779	HEL	NE	NHNZZZZZ	451	600	600	FBP App labor
HELC		HR000261	HNP	776	HEL	NE	NHNZZZZZ	451	450	450	FBS App labor
HELC		HR000262	?	?	?	?	?	451	7,500	7,500	FCC App labor
HELC		HR000264	?	?	?	?	?	451	600	600	FP App labor
HELC	C0000929		HCI	714	HEL	NE	H0000002	451	5,588	5,588	
HELC	C0000939		HCI	714	HEL	NE	H0000001	451	2,411	2,411	
							TOTAL		226,338	226,338	

XA

INTERCOMPANY BILLABLE (ICB) CHARGES

Dist.	Project #	WO #		Account Code					2005	2006	
HECO		HR000238	PFC	775	HEL	NE	NPFZZZZZ	451	2,574	2,574	PFC Desktop
							TOTAL		2,574	2,574	

D

Murakami, Blane

From: Inouye, Juliane
Sent: Tuesday, April 20, 2004 1:34 PM
To: Murakami, Blane
Subject: FW: 2005-2006 ITCosting Estimates for HELCO

From: Inouye, Juliane
Sent: Tuesday, March 16, 2004 10:16 AM
To: Fujioka, Paul
Cc: Young, Patti; Tobara, Bryce
Subject: 2005-2006 ITCosting Estimates for HELCO

Paul,

Attached are HECO's ITS Costing Estimates for 2005 and 2006. As in the past, all estimates except for those marked "App Labor" are based on last year's actual charges. The App labor estimates are projections. Note that although most Benefits and Compensation charges were App labor charges are now being direct charged, one charge will continue to be processed through intercompany billing.

In addition, completed Inercompany Service Forms for Records Management and Microsoft MEA are being mailed to you today.

Please feel free to call me if you have any questions.

Thank you,

Juliane Inouye
HECO - ITS Dept.
ph. 808-543-7135

HECO IT Costing Estimates for 2005-2006 for MECO

MECO - IT COSTING SYSTEM DIRECT CHARGE

Murakami, Blane

From: Inouye, Juliane
Sent: Tuesday, April 20, 2004 1:34 PM
To: Murakami, Blane
Subject: FW: 2005-2006 ITCosting Estimates for MECO

From: Inouye, Juliane
Sent: Tuesday, March 16, 2004 10:24 AM
To: Matsunaga, Lyle
Cc: Matsumura, Joyce; Young, Patti; Tobara, Bryce
Subject: 2005-2006 ITCosting Estimates for MECO

Lyle,

Attached are our ITS Costing Estimates for 2005 and 2006. As in the past, all estimates except for those marked "App Labor" are based on last year's actual charges. The App labor estimates are projections. Note that although most Benefits and Compensation charges were App labor charges are now being direct charged, one charge will continue to be processed through intercompany billing.

Completed Intercompany Service forms for Microsoft MEA and Customer Service (CB) are being mailed to you. We also completed for and sent IS forms to Monica Lynch and Wendy Nathan (they requested that their forms be sent directly to them). One of Wendy's forms is for the ICB charge ($2,574/yr) shown in the attached spreadsheet [redacted]

Please feel free to call me if you have any questions.

Thank you,

Juliane Inouye
HECO - ITS Dept.
ph. 808-543-7135

NON-ITS PROJECT - EXPENSE ELEMENT 451 CHARGES FROM LINDA YAMAMOTO

*Project #	Project	*M-Proj #	ProjMgrOrEngr	*RA #	*Ind #	*EE #	FY05	FY05 Adj
P0000318	Project Ellipse	P0000318	Noda, R	PEZ	BE	451	-	
P0000318	Project Ellipse	P0000318	Noda, R	PEZ	NE	451	-	
P0000318							-	-
P0000350	Field Service System Replacement	P0000350	Oda, W	PEZ	NI	451	-	
P0000350							-	-
P0000502	Waiau Minor Gen Addns	P0000502	Nakano, W	PEZ	NI	451	48	
P0000502							48	2,400
P0000503	Ward Ave Minor Addns	P0000503	Nakano, W	PEZ	NI	451	96	
P0000503							96	4,800
P0000504	King St Minor Addns	P0000504	Nakano, W	PEZ	NI	451	48	
P0000504							48	2,400
P0000571	CIS Replacement	P0000571	Hull, Thomas	PEZ	BD	451	78,813	
P0000571	CIS Replacement	P0000571	Hull, Thomas	PEZ	BE	451	23,037	
P0000571	CIS Replacement	P0000571	Hull, Thomas	PEZ	ND	451	172,987	
P0000571	CIS Replacement	P0000571	Hull, Thomas	PEZ	NE	451	50,563	
P0000571							325,400	325,400
P0000825	C&M Renovation	P0000825	Nakano, W	PEZ	NI	451	120	
P0000825							120	6,000
P0000826	ITS Renovation	P0000826	Nakano, W	PEZ	NI	451	-	
P0000826							-	-
P0000851	Purchasing Warehouse Renov	P0000851	Nakano, W	PEZ	NI	451	-	
P0000851							-	-
P0000878	Check Processing Upgrade	P0000878	Ejercito, A	PEZ	NE	451	-	
P0000878							-	-
00896	Finance Plus Replacement		Takamura, J	PEZ	NE	451	-	
00896							-	-
P0000907	PLC Market Trial		Nordyke, M	PEZ	NE	451	154,800	
P0000907							154,800	154,800
P0000984	Promote e-Customer Service		Ejercito, A	PCA	NE	451	12,000	
P0000984							12,000	12,000
P0000985	Bill Payment System/ATM Proj		Ejercito, A	PCA	NE	451	6,000	
P0000985	Bill Payment System/ATM Proj		Ejercito, A	PCA	NI	451	-	
P0000985							6,000	6,000
P0000986	GPS (Global Posit. Sys.)		Ejercito, A	PCA	NE	451	4,000	
P0000986	GPS (Global Posit. Sys.)		Ejercito, A	PCA	NI	451	-	
P0000986							4,000	4,000
P0000987	3rd Party Pay Solutions		Ejercito, A	PCA	NE	451	-	
P0000987							-	-
P0000988	ACCESS (solutions to issues)		Ejercito, A	PCA	NE	451	10,000	
P0000988	ACCESS (solutions to issues)		Ejercito, A	PCA	NI	451	-	
P0000988							10,000	10,000
P0001010	HR/Benefits/Comp Suite		Price, J	PEZ	BE	451	46,560	
P0001010	HR/Benefits/Comp Suite		Price, J	PEZ	NE	451	100,290	
P0001010							146,850	146,850
Security11	Temp Proj Security11_		Uemura, E	PEZ	NE	451	12,700	
Security11_	(P0001011)						12,700	12,700
00828	Outage Management System	P0000828	Naito, C	PEZ	ND	451	16,494	
00828	Outage Management System	P0000828	Naito, C	PEZ	NE	451	-	
P0000828	Outage Management System	P0000828	Naito, C	PEZ	NI	451	5,164	
P0000828	Outage Management System	P0000828					21,658	21,658
								709,008

XA

Murakami, Blane

From: Yamamoto, Linda
Sent: Thursday, April 15, 2004 12:43 PM
To: Murakami, Blane
Cc: Young, Patti; Shimabukuro, Gail
Subject: RE: ITS cost reports aka EE451 reports

)415 ITS Upd Costs EDProj.ASC)415 ITS Upd Costs NEDProj.ASC...

Attached are your reports for the Update.

-----Original Message-----
From: Murakami, Blane
Sent: Thursday, April 15, 2004 11:08 AM
To: Yamamoto, Linda
Cc: Young, Patti; Shimabukuro, Gail
Subject: RE: ITS cost reports aka EE451 reports

Would you send me an update of the ascii files below (based on Pillar inputs submitted on April 12). I would like to review the current EE451 estimates to determine if changes to ITS's 2005 Budget PEZ estimates are required.

Thanks.

-----Original Message-----
From: Yamamoto, Linda
Sent: Friday, February 13, 2004 9:48 AM
To: Murakami, Blane
Cc: Young, Patti; Takahashi, Cynthia
Subject: RE: ITS cost reports aka EE451 reports

<< File: 0212 ITS Bud Costs EDProj.ASC >> << File: 0212 ITS Bud Costs NEDProj.ASC >> << File: 0212 ITS Upd Costs EDProj.ASC >> << File: 0212 ITS Upd Costs NEDProj.ASC >>

Attached are the reports you requested. Let me know if you have any questions.

Linda

-----Original Message-----
From: Murakami, Blane
Sent: Friday, February 13, 2004 9:16 AM
To: Yamamoto, Linda
Cc: Young, Patti; Takahashi, Cynthia
Subject: FW: ITS cost reports aka EE451 reports

Would you be able to provide the reports below based on the current Pillar inputs (as of Feb 12). We call these the EE451 entries in ITS.

Thanks

-----Original Message-----
From: Yamamoto, Linda
Sent: Wednesday, August 27, 2003 11:34 AM
To: Murakami, Blane; Young, Patti; Takahashi, Cynthia
Subject: ITS cost reports

<< File: 0826 ED ITS Bud Costs 04-05.ASC >> << File: 0826 ED ITS Costs Aug-Dec03.ASC >> << File: 0826 NED ITS Bud Costs 04-05.ASC >> << File: 0826 NED ITS Costs Aug-Dec03.ASC >>

Attached are the ITS cost reports for 2003 Update (Aug-Dec) as well as 2004 and 2005 Budget.

Linda Yamamoto
543-7752

2005 INTERCOMPANY BILLINGS PROJECTED FROM 2003 ACTUALS

INTERCOMPANY BILLABLE

*RA #	*Act #	*Loc #	*Ind #	*Project #	*EE #	Line Item	FY05
PEA	965	HEL	BE	NPEZZZZZ	521	H9P HELCO File Audit Rec ...	$180.00
PEA	965	HEL	BE	NPEZZZZZ	522	H9P HELCO File Audit Rec ...	$580.00
PEA	965	MAU	BE	NPEZZZZZ	521	MSA MECO File Audit Rec ...	$180.00
PEA	965	MAU	BE	NPEZZZZZ	522	MSA MECO File Audit Rec ...	$580.00
PED	711	HEL	BE	NPEZZZZZ	452	HEL billable Dev Sup for HE...	$2,000.00
PEI	895	FCU	BE	NPEZZZZZ	451	HECO Federal Credit Union	$9,600.00
PEI	895	HEI	BE	NPEZZZZZ	451	HEI Stock Transfer Data Ce...	$23,376.00
PEI	897	HEL	BE	NPEZZZZZ	501	HAC MEA for HELCO ...	$60,000.00
PEI	897	MAU	BE	NPEZZZZZ	501	MAA MEA for MECO ...	$49,000.00
PEI	900	HEI	BE	NPEZZZZZ	501	HEI telecomm-HEI ...	$9,000.00
PEZ	700	RHI	BE	NPASVP7Z	451	RHI Billable	$1,070.00
PEZ	775	HEI	BE	NPFZZZZZ	451	PFC HEI Billable - Empl Co...	$2,544.00
PEZ	775	HEL	BE	NPFZZZZZ	451	PFC HEL Billable - Empl Co...	$2,544.00
PEZ	775	MAU	BE	NPFZZZZZ	451	PFC MAU Billable - Empl C...	$2,544.00
PEZ	776	HEI	BE	NPFZZZZZ	451	PFB - HEI Billable - Ben Pla...	$1,998.00
PEZ	776	HPC	BE	NPFZZZZZ	451	PFB HPC Billable - Ben Pla...	$87.00
PEZ	776	PEC	BE	NPFZZZZZ	451	PFB PEC Billable - Ben Pla...	$174.00
PEZ	778	HEI	BE	NPFZZZZZ	451	PFB HEI Billable - Adm Flex...	$1,045.00
PEZ	778	HPC	BE	NPFZZZZZ	451	PFB HPC Billable - Adm Fle...	$45.00
PEZ	778	PEC	BE	NPFZZZZZ	451	PFB PEC Billable - Adm Fle...	$91.00
PEZ	779	HEI	BE	NPFZZZZZ	451	PFB HEI Billable - Adm Reti...	$1,140.00
PEZ	779	HPC	BE	NPFZZZZZ	451	PFB HPC Billable - Adm Re...	$20.00
PEZ	779	PEC	BE	NPFZZZZZ	451	PFB PEC Billable - Adm Ret...	$40.00
PEZ	817	HEL	BE	NPAZZZZZ	451	HEL Billable	$0.00
PEZ	817	MAU	BE	NPAZZZZZ	451	MAU Billable	$0.00
PEZ	825	HEI	BE	NPKZZZZZ	451	PKT HEI Billable - Manage ...	$2,464.00
PEZ	825	HEL	BE	NPKZZZZZ	451	HEL Billable	$189.00
PEZ	825	MAU	BE	NPKZZZZZ	451	MAU Billable	$189.00
PEZ	826	HEL	BE	NPKZZZZZ	451	HEL Billable	$791.00
PEZ	826	MAU	BE	NPKZZZZZ	451	MAU Billable	$931.00
PEZ	891	HEI	BE	NPEZZZZZ	451	HEI Billable	$1,357.00
PEZ	895	HEL	BE	NPAVP2ZZ	451	P2V HEL Billable - Op & Ma...	$123,036.00
PEZ	895	MAU	BE	NPAVP2ZZ	451	P2V MAU Billable - Op & M...	$123,036.00

(HISTORY)

ITS Department
PEZ Actuals Jan-Dec 2003

2003 INTERCOMPANY BILLABLES

PA	Act	Loc	Ind	Proj	EE	Q1	Q2	Q3	Q4	FY 03	Mo Avg
PEZ	775	HEI	BE	NPFZZZZZ	451	670	637	648	588	2,544	212
PEZ	776	HEI	BE	NPFZZZZZ	451	1,357	416	91	134	1,998	167
PEZ	825	HEI	BE	NPKZZZZZ	451	641	616	632	574	2,464	205
PEZ	891	HEI	BE	NPEZZZZZ	451	0	1,357	0	0	1,357	113
PEZ	700	RHI	BE	NPASVP7Z	451	0	13,573	(12,503)	0	1,070	89
PEZ	776	PVT	BE	NPFZZZZZ	451	118	36	0	0	154	13
PEZ	778	PVT	BE	NPFZZZZZ	451	17	23	0	0	40	3
PEZ	779	PVT	BE	NPFZZZZZ	451	21	7	0	0	29	2
PEZ	776	PEC	BE	NPFZZZZZ	451	118	36	8	12	174	15
PEZ	778	PEC	BE	NPFZZZZZ	451	17	23	15	35	91	8
PEZ	779	PEC	BE	NPFZZZZZ	451	21	7	5	6	40	3
PEZ	776	HPC	BE	NPFZZZZZ	451	59	18	4	6	87	7
PEZ	778	HPC	BE	NPFZZZZZ	451	9	11	8	18	45	4
PEZ	775	MAU	BE	NPFZZZZZ	451	670	637	648	588	2,544	212
PEZ	775	HEL	BE	NPFZZZZZ	451	670	637	648	588	2,544	212
PEZ	776	MAU	BE	NPFZZZZZ	451	9,086	2,786	607	900	13,378	1,115
PEZ	776	HEL	BE	NPFZZZZZ	451	8,791	2,695	591	877	[illegible]	[illegible]

2003 PEZ ACTUALS
ITS COSTING SYSTEM
ALLOCATIONS

Hawaiian Electric Company, Inc.
Information Technology & Services Department
PEZ Actuals Jan- Dec 2003

RA	Act	Loc	Ind	Project	EE	Jan-Dec 03	Proportions
PEZ	100	PHE	NE	NPSZZZZZ	451	67,746	
	100 Total					67,746	0.7%
PEZ	102	PHE	NE	NPSZZZZZ	451	13,789	
	102 Total					13,789	0.2%
PEZ	110	PHE	NE	NPSZZZZZ	451	144,316	
PEZ	110	PHE	NE	NPEZZZZZ	451	0	
	110 Total					144,316	1.6%
PEZ	112	PHE	NE	NPSZZZZZ	451	75,064	
	112 Total					75,064	0.8%
PEZ	122	PHE	NE	NPIZZZZZ	451	54,438	
	122 Total					54,438	0.6%
PEZ	201	WST	NE	NPYZZZZZ	451	95,731	
	201 Total					95,731	1.0%
PEZ	210	WST	NC	NPYZZZZZ	451	0	
	210 Total					0	0.0%
PEZ	211	WST	NC	NPYZZZZZ	451	165,147	
PEZ	211	WST	NC	NPEZZZZZ	451	0	
	211 Total					165,147	1.8%
PEZ	212	KST	NE	NPAVP2ZZ	451	7,505	
	212 Total					7,505	0.1%
PEZ	220	WST	NE	NPIZZZZZ	451	18,952	
	220 Total					18,952	0.2%
PEZ	240	WST	NE	NPIZZZZZ	451	356,793	
PEZ	240	WST	NE	NPYZZZZZ	451	73,230	
	240 Total					430,023	4.7%
PEZ	242	KST	NE	NPIZZZZZ	451	31,586	
PEZ	242	WST	NE	NPIZZZZZ	451	26,078	
PEZ	242	HST	NE	NPIZZZZZ	451	18,952	
	242 Total					76,616	0.8%
PEZ	245	KST	NE	NPAVP2ZZ	451	11,935	
	245 Total					11,935	0.1%
PEZ	246	KST	NE	NPAVP2ZZ	451	9,966	
	246 Total					9,966	0.1%
PEZ	256	WST	NE	NPIZZZZZ	451	327,375	
PEZ	256	KST	NE	NPIZZZZZ	451	37,904	
PEZ	256	HST	NE	NPIZZZZZ	451	12,635	
	256 Total					377,914	4.1%
PEZ	258	KST	NE	NPAVP2ZZ	451	15,133	
	258 Total					15,133	0.2%
PEZ	261	KST	NE	NPAVP2ZZ	451	8,982	
	261 Total					8,982	0.1%
PEZ	307	OAH	NC	NPBZZZZZ	451	447,870	

Hawaiian Electric Company, Inc.
Information Technology & Services Department
PEZ Actuals Jan- Dec 2003

RA	Act	Loc	Ind	Project	EE	Jan-Dec 03	Proportions
PEZ	331	OAH	NE	NPAVP2ZZ	451	2,584	
	331 Total					2,584	0.0%
PEZ	333	OAH	NC	**NPRZZZZZ**	451	124,556	
PEZ	333	OAH	NE	NPAVP2ZZ	451	2,707	
	333 Total					127,263	1.4%
PEZ	343	OAH	NE	NPAVP2ZZ	451	3,568	
	343 Total					3,568	0.0%
PEZ	349	OAH	NE	NPAVP2ZZ	451	1,599	
	349 Total					1,599	0.0%
PEZ	375	OAH	NC	**NPRZZZZZ**	451	165,571	
	375 Total					165,571	1.8%
PEZ	377	OAH	NE	NPRZZZZZ	451	7,310	
	377 Total					7,310	0.1%
PEZ	408	OAH	NC	**NPBZZZZZ**	451	429,266	
PEZ	408	OAH	NC	NPEZZZZZ	451	0	
	408 Total					429,266	4.7%
PEZ	420	OAH	NE	NPAVP2ZZ	451	74,068	
	420 Total					74,068	0.8%
PEZ	455	OAH	NE	**NPDZZZZZ**	451	602,593	6.6%

Hawaiian Electric Company, Inc.
Information Technology & Services Department
PEZ Actuals Jan- Dec 2003

RA	Act	Loc	Ind	Project	EE	Jan-Dec 03	Proportions
PEZ	614	OAH	NE	NPCZZZZZ	451	8,400	
	614 Total					8,400	0.1%
PEZ	616	OAH	NE	NPCZZZZZ	451	64,575	
	616 Total					64,575	0.7%
PEZ	700	PHE	NE	NPAVP7ZZ	451	31,586	
PEZ	700	PHE	NE	NPAVP3ZZ	451	31,586	
PEZ	700	PHE	NE	NPAPRESI	451	25,615	
PEZ	700	PHE	NE	NPASVP9Z	451	26,090	
	700 Total					114,877	1.3%
PEZ	701	PHE	NC	NPKZZZZZ	451	17,947	
	701	OAH	NC'	NPRZZZZZ	451	38,713	0.6%
PEZ	701	PHE	NE	NPKZZZZZ	451	32,591	0.4%
	701 Total					89,251	
PEZ	710	PHE	NE	NPSZZZZZ	451	31,835	
	710 Total					31,835	0.3%
PEZ	712	PHE	ND	NPYZZZZZ	451	7,594	
PEZ	712	PHE	ND	NPSZZZZZ	451	2,009	
	712 Total					9,603	0.1%
PEZ	713	PHE	NE	NPEZZZZZ	451	125,856	
	713 Total					125,856	1.4%
PEZ	714	PHE	NE	P0000021	451	0	
PEZ	714	PHE	NE	P0000022	451	0	
PEZ	714	PHE	NE	P0000023	451	0	

Hawaiian Electric Company, Inc.
Information Technology & Services Department

Hawaiian Electric Company, Inc.
Information Technology & Services Department
PEZ Actuals Jan- Dec 2003

	RA	Act	Loc	Ind	Project	EE	Jan-Dec 03		Proportions
	PEZ	876	PHE	NE	NPJZZZZZ	451	131,933		
		876 Total					131,933		1.4%
	PEZ	896	PHE	NE	NPEZZZZZ	451	37,921		
		896 Total					37,921		0.4%
	PEZ	899	PHE	NE	NPKZZZZZ	451	0		
		899 Total					0		0.0%
	PEZ	907	OAH	NC	NPBZZZZZ	451	17,425		
	PEZ	907	OAH	NC	NPEZZZZZ	451	0		
		907 Total					17,425		0.2%
	PEZ	916	PHE	NC	**NPRZZZZZ**	451	31,586		
		916 Total					31,586		0.3%
	PEZ	926	PDO	NE	NPWZZZZZ	451	10,125		
	PEZ	926	PHE	NE	**NPNLZZZZ**	451	40,454		
		926 Total					50,579		0.6%
	PEZ	928	PHE	NE	NPNLZZZZ	451	36,205		
		928 Total					36,205		0.4%
	PEZ	931	PHE	NE	**NPHZZZZZ**	451	55,593		
		931 Total					55,593		0.6%
	PEZ	932	PHE	NE	**NPVZZZZZ**	451	32,741		
		932 Total					32,741		0.4%
	PEZ	933	PHE	NE	**NPHZZZZZ**	451	62,201	Wrong corrected	
		933 Total					62,201		0.7%

ITS Department
EFMS and Ebus Allocations

EFMS Allocations		Allocation Basis:	
PEZ 211 WST NC	NPYZZZZZ	62,388	10.8%
PEZ 256 KST NE	NPEZZZZZ	2,964	0.5%
PEZ 256 WST NE	NPEZZZZZ	2,964	0.5%
PEZ 307 OAH NC	NPEZZZZZ	112,644	19.4%
PEZ ## OAH NE	NPEZZZZZ	14,760	2.5%
PEZ 408 OAH NC	NPEZZZZZ	112,644	19.4%
PEZ 455 OAH NC	NPEZZZZZ	34,152	5.9%
PEZ 455 OAH NE	NPEZZZZZ	3,468	0.6%
PEZ 456 OAH NE	NPEZZZZZ	59,076	10.2%
PEZ 600 OAH NE	NPWZZZZZ	129,948	22.4%
PEZ 907 OAH NC	NPBZZZZZ	17,328	3.0%
PEZ ## PHE NE	NPEZZZZZ	9,636	1.7%
PEZ 931 PHE NE	NPEZZZZZ	17,724	3.1%
Total EFMS		579,696	100.0%

EBusiness Allocations		Allocation Basis:	
PEZ ## PHE NE	NPNEZZZZ	1,767	10.4%
PEZ ## OAH NE	NPNEZZZZ	119	0.7%
PEZ ## OAH NE	NPNEZZZZ	3,607	21.2%
PEZ ## PHE NE	NPNEZZZZ	1,531	9.0%
PEZ ## PHE NE	NPNEZZZZ	-	0.0%
PEZ ## PHE NE	NPNEZZZZ	6,259	36.8%
PEZ ## PHE NE	NPNEZZZZ	3,725	21.9%
EFMS Allocations Total		17,008	100.0%

ALLOCATION BASIS ESTABLISH BY EFMS AND EBUS PROGRAM MANAGERS IN PRIOR YEARS.

G-1

Hawaiian Electric Company, Inc.
Information Technology & Services Department
Direct Charges to O&M

ITS Department costs for non-core IT functions, including Records Management, Printing Services and Mailing Services are directly charged to Operations & Maintenance Expenses. Amortizaton of deferred Ebusiness costs are also directly charged to Operations & Maintenance Expenses. These costs not processed through the ITS Costing System.

The attached workpapers H and H-1 show the assumptions for 2005 Estimates for non-core IT functions. These costs are directly charged to functional area code block in the following areas:

Non-Core IT Function Direct O&M Charges:
- A & G Operation
- Customer Operations

Ebusiness Amortization Direct O&M Charges:
- Customer Services
- Distribution Operations
- Customer Accounts
- Customer Services
- Production Operations
- A & G Operations

» budget manager: PR300 NPUpd - Exp Category $ 10:24AM

Ind #	*Loc #	*Proj #	*EE #	Line Item	FY05 Upd04 RA	Expense Category	
~~IE~~	~~PHE~~	~~NPEZZZZZ~~	~~401~~	~~Prioritization List Additions~~	~~$105,000~~	~~Other~~	DELETED 6/3/04
IE	PHE	NPEZZZZZ	205	Records Mgt Supplies & Ref Materials	$1,200	Materials	
					$106,200		
IE	PHE	NPEZZZZZ	150	IMPL 965-150 Provide Records Mgmt Svcs	$43,169	Labor	1752 HRS - 1 EMPL
IE	PHE	NPEZZZZZ	150	BUOC Provide Records Mgmt Svcs 965	$42,732	Labor	1800 HRS - 1 EMPL
IE	PHE	NPEZZZZZ	150	TC Provide Records Mgmt Svcs 965	$62,318	Labor	1956 HRS - 1 EMPL
IE	PHE	NPEZZZZZ	501	Records Equip Maintenance	$2,000	Outside Svcs	BASED ON HISTORY
IE	PHE	NPEZZZZZ	501	Records Outside Svcs (ie Storage)	$80,000 $60,000	Outside Svcs	
IE	PHE	NPEZZZZZ	501	Records Outside Svcs (ie Microfilm, Rearch, etc)	$13,000	Outside Svcs	
IE	PHE	NPEZZZZZ	501	Shredex	$5,000	Outside Svcs	
IE	PHE	NPEZZZZZ	501	Copyright Clearinghouse License	$7,600	Outside Svcs	
IE	PHE	NPEZZZZZ	600	Shredder Equip Maint	$4,300	Other	
					$240,119		
IE	PHE	NPEZZZZZ	150	TC Provide Printing Svcs 967 (PER TCS)	$60,024	Labor	1884 HRS - 1 EMPL
IE	PHE	NPEZZZZZ	150	I Provide Printing Svcs 967 (PER)	$43,465	Labor	1764 HRS - 1 EMPL
IE	PHE	NPEZZZZZ	150	BUOC Provide Printing Svcs 967 (PER)	$86,034	Labor	3624 HRS - 2 EMPL
IE	PHE	NPEZZZZZ	201	Copier, Fax, Toner & Misc Supplies	$92,400 $84,000	Materials	BASED ON HISTORY
IE	PHE	NPEZZZZZ	201	Printshop Supplies (PER)	$8,400	Materials	
IE	PHE	NPEZZZZZ	205	Printshop Supplies (PER)	$107,200 $32,200	Materials	
IE	PHE	NPEZZZZZ	205	Copier & Fax Paper - Pro Card	$75,000	Materials	
IE	PHE	NPEZZZZZ	501	Safety Shoes (PER)	$864	Outside Svcs	
IE	PHE	NPEZZZZZ	501	Copier Software & Software Upgrades	$11,688 $3,300	Outside Svcs	
IE	PHE	NPEZZZZZ	501	Printshop Outside Svcs (PER)	$7,524	Outside Svcs	
IE	PHE	NPEZZZZZ	600	Copier & Fax Equip Maint	$151,512 $144,000	Other	
IE	PHE	NPEZZZZZ	600	Printshop Equip Maint (PER)	$7,512	Other	
IE	PHE	NPEZZZZZ	150	BUOC Prov Word Proc Svcs 968 (PER)	$42,732	Labor	1800 HRS - 1 EMPL
IE	PHE	NPEZZZZZ	462	Word Proc Software & Upgrades (PER)	$2,151	Other	
					$597,206		
E	OAH	NPEZZZZZ	150	BUOC Proc Customer Bills 614	$89,167	Labor	3756 HRS - 2 EMPL
E	PHE	NPEZZZZZ	150	BUTC Handle & Deliver Mail 966	$52,473	Labor	1932 HRS - 1 EMPL
E	PHE	NPEZZZZZ	150	TCS Handle & Deliver Mail 966	$60,096	Labor	1920 HRS - 1 EMPL
E	PHE	NPEZZZZZ	150	BUOC Handle & Deliver Mail 966	$228,759	Labor	9636 HRS - 5 EMPL

A&G OPERATIONS

CUSTOMER OPERATIONS

A&G OPERATIONS

Dept	*RA #	*Act #	*Ind #	*Loc #	*Proj #	*EE #	Line Item		FY05 Upd04 RA	Expense Category	
InfoTech	PEM	966	NE	PHE	NPEZZZZZ	205	Mailroom Supplies	A&G OPERATIONS	$7,800	Materials	BASED on HISTORY
InfoTech	PEM	966	NE	PHE	NPEZZZZZ	301	Vehicle (1): Van		$10,890	Transportation	
InfoTech	PEM	966	NE	PHE	NPEZZZZZ	301	Vehicle (1): Light vehicle		$10,890	Transportation	
InfoTech	PEM	966	NE	PHE	NPEZZZZZ	501	Postal Fees: Postal P. O. Box fees + subscription		$3,493	Outside Svcs	
InfoTech	PEM	966	NE	PHE	NPEZZZZZ	600	EM Mach Maint: Pitney Bowes + B&H + Valenti		$36,780	Other	
InfoTech	PEM								$500,348		
InfoTech	PEP	110	NE	PHE	NPNEZZZZ	901	Amort of eBus BTL [ebus platform]	CUSTOMER SERVICES 18,903	$12,062	Other	5-YEAR AMORTIZATION
InfoTech	PEP	110	NE	PHE	NPNEZZZZ	901	Amort of eBus ATL [heco.com]		$6,841	Other	
InfoTech	PEP	600	NE	OAH	NPNEZZZZ	901	Amort of eBus BTL [ebus platform]	DISTRIBUTION OPERATIONS 38,579	$24,617	Other	
InfoTech	PEP	600	NE	OAH	NPNEZZZZ	901	Amort of eBus ATL [heco.com]		$13,962	Other	
InfoTech	PEP	611	NE	OAH	NPNEZZZZ	901	Amort of eBus BTL [ebus platform]	CUSTOMER ACCOUNTS 38,579	$24,617	Other	
InfoTech	PEP	611	NE	OAH	NPNEZZZZ	901	Amort of eBus ATL [heco.com]		$13,962	Other	
InfoTech	PEP	713	NE	PHE	NPNEZZZZ	901	Amort of eBus BTL [ebus platform]	CUSTOMER SERVICES 48,609	$31,017	Other	
InfoTech	PEP	713	NE	PHE	NPNEZZZZ	901	Amort of eBus ATL [heco.com]		$17,592	Other	NARUC 506
InfoTech	PEP	730	NE	PPO	NPNEZZZZ	901	Amort of eBus BTL [ebus platform]	PRODUCTION OPERATIONS 9644	$6,154	Other	
InfoTech	PEP	730	NE	PPO	NPNEZZZZ	901	Amort of eBus ATL [heco.com]		$3,491	Other	
InfoTech	PEP	750	NE	PHE	NPNEZZZZ	901	Amort of eBus BTL [ebus platform]	CUSTOMER SERVICES 28,934	$12,308	Other	
InfoTech	PEP	750	NE	PHE	NPNEZZZZ	901	Amort of eBus BTL [ebus platform]		$6,154	Other	
InfoTech	PEP	750	NE	PHE	NPNEZZZZ	901	Amort of eBus ATL [heco.com]		$6,981	Other	
InfoTech	PEP	750	NE	PHE	NPNEZZZZ	901	Amort of eBus ATL [heco.com]		$3,491	Other	
InfoTech	PEP	950	NE	PHE	NPNEZZZZ	901	Amort of eBus BTL [ebus platform]	A&G OPERATIONS 9645	$6,154	Other	
InfoTech	PEP	950	NE	PHE	NPNEZZZZ	901	Amort of eBus ATL [heco.com]		$3,491	Other	
InfoTech	PEP								$192,896		
									$1,636,769		

12/22/2004

» budget manager: PR110H NPUpd - Detail Hrs

*R...	*Ac...	*Lo...	*In...	*Proj #	*E...	*Lbr Class	Line item	HOURS FY05 Upd04 RA	EMPLOYEES
PEC	965	PHE	NE	NPEZZ...	150	__BUOC	BUOC Provide Records Mgmt Svcs 965	1,800	1
PEC	965	PHE	NE	NPEZZ...	150	__I	IMPL 965-150 Provide Records Mgmt Svcs	1,752	1
PEC	965	PHE	NE	NPEZZ...	150	__TC	TC Provide Records Mgmt Svcs 965	1,956	1
PEC								5,508	
PEI	967	PHE	NE	NPEZZ...	150	__BUOC	BUOC Provide Printing Svcs 967 (PER)	3,624	2
PEI	967	PHE	NE	NPEZZ...	150	__I	I Provide Printing Svcs 967 (PER)	1,764	1
PEI	967	PHE	NE	NPEZZ...	150	__TC	TC Provide Printing Svcs 967 (PER TCS)	1,884	1
PEI	968	PHE	NE	NPEZZ...	150	__BUOC	BUOC Prov Word Proc Svcs 968 (PER)	1,800	1
PEI								9,072	
PEM	614	OAH	NE	NPEZZ...	150	__BUOC	BUOC Proc Customer Bills 614	3,756	2
PEM	966	PHE	NE	NPEZZ...	150	__BUOC	BUOC Handle & Deliver Mail 966	9,636	5
PEM	966	PHE	NE	NPEZZ...	150	__BUTC	BUTC Handle & Deliver Mail 966	1,932	1
PEM	966	PHE	NE	NPEZZ...	150	__TCS	TCS Handle & Deliver Mail 966	1,920	1
PEM								17,244	
								31,824	17

H-1

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Non-Projects - Direct Non-Labor

RA	Prod Oper	Prod Maint	Total
PFC	229,058	0	229,058

NOTE: Amt is adjustment in Rate Case, see HECO-616, Docket No. 04-0113 (copy is attached).

Hawaiian Electric Company, Inc.
2005 TEST YEAR

OTHER PRODUCTION O&M EXPENSE ADJUSTMENTS
($ Thousands)

Line		(A)	(B)	(C)
	Adjustments	Operations Non-Labor	Maintenance Non-labor	Total
1	Abandoned Projects	14	0	14
2	Merit Recognition Program	-229	0	-229
3	E-Business Amortization	-10	0	-10
4	Combined Heat & Power	62	157	219
5	TOTAL	-163	157	-6

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Non-Projects - Direct Non-Labor

RA	Prod Oper	Prod Maint	Total
PHS	584,416	0	584,416 ✓

INTEROFFICE CORRESPONDENCE

Hawaiian Electric Co., Inc.

December 29, 2004

To: Aaron Fujinaka
Manager, Power Supply

From: Eugene Uemura
Director, Security Division

Subject: HECO Rate Case – Request for Information
NARUC ACCOUNT: 506 – Production Operations

Per Patsy Nanbu's memo of December 21, attached are the responses required for Safety, Security & Facilities, Security Division (HS). Also attached are the supporting documents.

Should you have any questions concerning the attached information, please contact:

Eugene Uemura, Director
Alan Cardoza, Captain
Security Division
Safety, Security & Facilities Department
Phone: Geno: 543-7853
Alan: 543-4385

Mail Stop Code: WAG - HS

Thank you and Happy New Year!

GS:s
Attachment

cc: E. Uemura
A. Cardoza

DEC 30 2004

CA-IR-~~12~~ NON-LABOR

NARUC: 506 ACTIVITY: 933

EXP ELEMENT: 501 Outside Services - Honolulu

1.a. Employee involved in preparing the budget of both labor & direct expense amounts: Alan Cardoza

1.b. Are copies of calculations, spreadsheets workpapers, or other analyses for each employee identified above used to calculate required staffing levels & overtime hours by Department, RA, Activity & NARUC Accounts: See Spreadsheet attached

1.c. Describe the actual level that existed at the date the budget was prepared or otherwise served as a base for preparing the budget.: Security coverage of the plant consist 1 offer per shift - 24 hrs/7 day a week
Total hours = 168

1.d. For each budgeted employee position that is added to existing actual force levels (as of the date the budget was prepared) explain the analyses undertaken to determine that each added position was necessary and should be filled in order to meet present or anticipated work requirements. Explain how the anticipated work requirements were defined and determined.

1.e. Describe and to the extent possible; Quantify the backlog of work, unfinished projects, deferred maintenance and other labor requirements unfulfilled at present staffing levels, that will be satisfied by adding the employee positions identified in your response above.

1.f. Provide complete copies of all studies, analyses, workpapers, projections, notes, correspondence, assumptions and other documents associated with your responses to parts d and e above.

CA-IR-12 NON-LABOR

NARUC: 506 ACTIVITY: 933

EXP ELEMENT: 501 Outside Services - Kahe

1.a. Employee involved in preparing the budget of both labor & direct expense amounts: Alan Cordoza

1.b. Are copies of calculations, spreadsheets workpapers, or other analyses for each employee identified above used to calculate required staffing levels & overtime hours by Department, RA, Activity & NARUC Accounts: See spreadsheet attached

1.c. Describe the actual level that existed at the date the budget was prepared or otherwise served as a base for preparing the budget. Security coverage of the plant consist of 2 officer for day shift - mon to Fri and 1 officer for swing and grave shift and weekends...

is added to existing actual force levels (as of the date the budget was prepared) explain the analyses undertaken to determine that each added position was necessary and should be filled in order to meet present or anticipated work requirements. Explain how the anticipated work requirements were defined and determined.

1.e. Describe and to the extent possible; Quantify the backlog of work, unfinished projects, deferred maintenance and other labor requirements unfulfilled at present staffing levels, that will be satisfied by

CA-IR-~~1~~ 2 NON-LABOR

NARUC: 506

ACTIVITY: 933

EXP ELEMENT: 501

Outside Services - Waiau

1.a. Employee involved in preparing the budget of both labor & direct expense amounts: Alan Cardoza

1.b. Are copies of calculations, spreadsheets workpapers, or other analyses for each employee identified above used to calculate required staffing levels & overtime hours by Department, RA, Activity & NARUC Accounts: See Spreadsheet attached

1.c. Describe the actual level that existed at the date the budget was prepared or otherwise served as a base for preparing: Security coverage consist of 2 officers for day shift monday [illegible]

Hawaiian Electric Company
Proposed Rate Increases

Pay	Bill
$ 9.50	$ 15.90
$ 9.75	$ 16.25
$ 10.00	$ 16.89
$ 10.25	$ 17.00
$ 10.50	$ 17.70
$ 10.75	$ 18.05
$ 11.00	$ 18.35
$ 11.25	$ 18.70
$ 11.50	$ 19.08
$ 11.75	$ 19.45
$ 12.00	$ 19.70
$ 12.25	$ 20.20
$ 12.50	$ 20.50
$ 12.75	$ 20.95
$ 13.00	$ 21.33
$ 13.25	$ 21.72
$ 13.50	$ 22.10
$ 13.75	$ 22.52
$ 14.00	$ 22.65
$ 14.25	$ 23.05

Command Center

Officer	Pay	Hours	Bill	Total/Position
K. Toleafoa	$ 13.50	40	$ 22.10	$ 884.00
V. Vanterpool	$ 11.25	40	$ 19.08	$ 763.20
A. Lai Hipp	$ 11.25	40	$ 19.08	$ 763.20
M. Bozeman	$ 11.25	40	$ 19.08	$ 763.20
K. Kimoto	$ 11.25	40	$ 19.08	$ 763.20
L. Kang	$ 11.25	40	$ 19.08	$ 763.20
Open	$ 11.25	40	$ 19.08	$ 763.20
Total hours/week		280		$ 5,463.20
Total hours/month (31 days)		1240		$ 24,194.17

Honolulu

Officer	Pay	Hours	Bill	Total/Position
N. Ieru	$ 12.50	40	$ 20.50	$ 820.00
W. Tanjutco	$ 9.75	16	$ 16.25	$ 260.00
R. Ramil	$ 9.75	40	$ 16.25	$ 650.00
R. Smith	$ 9.75	40	$ 16.25	$ 650.00
J. Matthews	$ 9.75	16	$ 16.25	$ 260.00
Open	$ 9.75	16	$ 16.25	$ 260.00
Total hours/week		168		$ 2,900.00
Total hours/month (31 days)		744		$ 12,842.86

Kahe

Officer	Pay	Hours	Bill	Total/Position
O. Brester	$ 13.25	40	$ 21.72	$ 868.80
K. Kaleleiki	$ 10.50	40	$ 17.70	$ 708.00
R. Teopaco	$ 10.50	16	$ 17.70	$ 283.20
E. Tote	$ 10.50	40	$ 17.70	$ 708.00
K. Anglemire	$ 9.75	40	$ 16.25	$ 650.00
A. Castillo	$ 9.75	16	$ 16.25	$ 260.00
Open	$ 9.75	16	$ 16.25	$ 260.00
Total hours/week		208		$ 3,738.00
Total hours/month (31 days)		921		$ 16,554.00

King

Officer	Pay	Hours	Bill	Total/Position
J. Garland	$ 11.50	40	$ 19.08	$ 763.20
W. Dagostino	$ 10.25	25	$ 17.00	$ 425.00
Total hours/week		65		$ 1,188.20
Total hours/month (31 days)		287.9		$ 5,262.03

Waiau

Officer	Pay	Hours	Bill	Total/Position
R. Desamito	$ 13.25	40	$ 21.72	$ 868.80
O. Brester	$ 10.25	40	$ 17.00	$ 680.00
J. Anderson	$ 10.50	40	$ 17.70	$ 708.00
H. Weidenhof	$ 9.50	32	$ 15.90	$ 508.80
R. Abellana	$ 9.75	40	$ 16.25	$ 650.00
J. Mallare	$ 9.50	16	$ 15.90	$ 254.40
M. Sailele	$ 9.75	40	$ 16.25	$ 650.00
Total hours/week		248		$ 4,320.00
Total hours/month (31 days)		1098		$ 19,131.43

Ward

Officer	Pay	Hours	Bill	Total/Position
J. Waller	$ 13.50	40	$ 22.10	$ 884.00
J. Balintag	$ 10.50	40	$ 17.70	$ 708.00
E. Howton	$ 9.75	40	$ 16.25	$ 650.00
G. Defrancis	$ 9.50	40	$ 15.90	$ 636.00
L. McGee	$ 9.75	24	$ 16.25	$ 390.00
A. Desima	$ 9.50	24	$ 15.90	$ 381.60
Open	$ 9.50	40	$ 15.90	$ 636.00
Total hours/week*		248		$ 4,285.60
Total hours/month (31 days)		1098		$ 18,979.09

*Until Officer Afalava returns. Once Officer Afalava returns we go down by 40 hours/week.

Guardsmark Confidential

SSF - CA/R
Safety, Security Facilities

PHS - Security Division

SSF	PHS	Security	B30	Prod Oper	506	Labor	NPHZZZZZ	933	HST	150	6,992.76	Eugene Uemura, Director & Alan Cardoza, Captain	Yes - See attached spread sheet	Hours were divided among the three areas of responsibility. Hours were calculated by time spent at each location	NA	NA	NA	NA
SSF	PHS	Security	B30	Prod Oper	506	Labor	NPHZZZZZ	933	KST	150	11,562.59	Eugene Uemura, Director & Alan Cardoza, Captain	Yes - See attached spread sheet	Hours were divided among the three areas of responsibility. Hours were calculated by time spent at each location	NA	NA	NA	NA
SSF	PHS	Security	B30	Prod Oper	506	Labor	NPHZZZZZ	933	WST	150	12,145.32	Eugene Uemura, Director & Alan Cardoza, Captain	Yes - See attached spread sheet	Hours were divided among the three areas of responsibility. Hours were calculated by time spent at each location	NA	NA	NA	NA
SSF	PHS	Security	B30	Prod Oper	506	Non-Labor	NPHZZZZZ	933	HST	501	69,999.96 A	Eugene Uemura, Director & Alan Cardoza, Captain	Yes - See attached spread sheet	Based on 168 hrs a week at the facility. Amount was from the bidding process	NA	NA	NA	NA
SSF	PHS	Security	B30	Prod Oper	506	Non-Labor	NPHZZZZZ	933	KST	501	251,808.00 A	Eugene Uemura, Director & Alan Cardoza, Captain	Yes - See attached spread sheet	Based on 208 hrs a week at the facility. Amount was from the bidding process	NA	NA	NA	NA
SSF	PHS	Security	B30	Prod Oper	506	Non-Labor	NPHZZZZZ	933	WST	501	262,608.00 A	Eugene Uemura, Director & Alan Cardoza, Captain	Yes - See attached spread sheet	Based on 248 hrs a week at the facility. Amount was from the bidding process	NA	NA	NA	NA
					~~506~~	~~NON-LABOR COSTS~~		~~933~~			~~645,115.00~~							

Σ(A) = $584,416
Total PHS

Hawaiian Electric Company
Proposed Rate Increases

Pay	Bill
$ 9.50	$ 15.90
$ 9.75	$ 16.25
$ 10.00	$ 16.89
$ 10.25	$ 17.00
$ 10.50	$ 17.70
$ 10.75	$ 18.05
$ 11.00	$ 18.35
$ 11.25	$ 18.70
$ 11.50	$ 19.08
$ 11.75	$ 19.45
$ 12.00	$ 19.70
$ 12.25	$ 20.20
$ 12.50	$ 20.50
$ 12.75	$ 20.95
$ 13.00	$ 21.33
$ 13.25	$ 21.72
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M. Sailele	$ 9.75	40	$ 16.25	$ 650.00
Total hours/week		248		$ 4,320.00
Total hours/month (31 days)		1098		$ 19,131.43

Ward

Officer	Pay	Hours	Bill	Total/Position
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Open	$ 9.50	40	$ 15.90	$ 636.00
Total hours/week*		248		$ 4,285.60
Total hours/month (31 days)		1098		$ 18,979.09

*Until Officer Afalava returns. Once Officer Afalava returns we go down by 40 hours/week.

Guardsmark Confidential

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Non-Projects - Direct Non-Labor

RA	Prod Oper	Prod Maint	Total
PKM	13,608	15,480	29,088

12/20/2004

Dept	_RA	Resp Area	Acct Blk	Acct Blk Descr	NARUC	Exp Class	_Proj	_Act	_Loc	_EE	FY05	Jan 05	
MAFS	PKC	Budgets	B38	A & G Operation	921	Non-Labor	NPKZZZZZ	749	PHE	520	0	0	
											$0.00	$0.00	
MAFS	PKC	Budgets	B38	A & G Operation	921	Non-Labor	NPKZZZZZ	789	PHE	501	2,000	0	
											$2,000.00	$0.00	
MAFS	PKC	Budgets	B38	A & G Operation	921	Non-Labor	NPKZZZZZ	789	PHE	520	2,300	0	
											$2,300.00	$0.00	
MAFS	PKC	Budgets	B38	A & G Operation	921	Non-Labor	NPKZZZZZ	789	PHE	521	300	0	
											$300.00	$0.00	
MAFS	PKC	Budgets	B38	A & G Operation	923	Non-Labor	NPKZZZZZ	835	PHE	501	20,107	0	
											$20,107.00	$0.00	
MAFS	PKC	Budgets	B38								98,955	1,114	
											$485,851.80	$32,682.88	$30,
MAFS	PKC										98,955	1,114	
											$485,851.80	$32,682.88	$30,
MAFS	PKF	Financial Analysis	B38	A & G Operation	920	Labor	NPKZZZZZ	701	PHE	150	12	0	
											$368.04	$0.00	
MAFS	PKF	Financial Analysis	B38	A & G Operation	920	Labor	NPKZZZZZ	827	PHE	150	3,673	290	
											$120,310.23	$9,598.08	$10,
MAFS	PKF	Financial Analysis	B38								3,685	290	
											$120,678.27	$9,598.08	$10,
MAFS	PKF										3,685	290	
											$120,678.27	$9,598.08	$10,
MAFS	PKM	ERP Administration	B30	Prod Oper	502	Non-Labor	NPKZZZZZ	245	KST	901	5,400	450	
											$5,400.00	$450.00	$
MAFS	PKM	ERP Administration	B30	Prod Oper	505	Non-Labor	NPKZZZZZ	246	KST	901	8,208	684	
											$8,208.00	$684.00	$
MAFS	PKM	ERP Administration	B30								13,608	1,134	
											$13,608.00	$1,134.00	$1,
MAFS	PKM	ERP Administration	B31	Prod Maint	512	Non-Labor	NPKZZZZZ	258	KST	901	4,932	411	
											$4,932.00	$411.00	$
MAFS	PKM	ERP Administration	B31	Prod Maint	513	Non-Labor	NPKZZZZZ	261	KST	901	4,056	338	
											$4,056.00	$338.00	$
MAFS	PKM	ERP Administration	B31	Prod Maint	514	Non-Labor	NPKZZZZZ	212	KST	901	6,492	541	
											$6,492.00	$541.00	$
MAFS	PKM	ERP Administration	B31								15,480	1,290	
											$15,480.00	$1,290.00	$1,
MAFS	PKM	ERP Administration	B32	Transmission Oper	562	Non-Labor	NPKZZZZZ	333	OAH	901	12,072	1,006	
											$12,072.00	$1,006.00	$1,
MAFS	PKM	ERP Administration	B32	Transmission Oper	563	Non-Labor	NPKZZZZZ	331	OAH	901	1,404	117	
											$1,404.00	$117.00	$1
MAFS	PKM	ERP Administration	B32	Transmission Oper	566	Non-Labor	NPKZZZZZ	320	OAH	901	1,452	121	
											$1,452.00	$121.00	$1
MAFS	PKM	ERP Administration	B32								14,928	1,244	
											$14,928.00	$1,244.00	$1,

To: May Paco
fm: Donna Hirashima
x7952

AllConsRABud05-RateCase -Direct-ABM.PLN

NonLabor Input Sheet - NonProject/NonProgram
2005

Prepared by _____
Date _____

(enter Dollars or Vehicle Hours in "Units tab card")

on tab card							Rates tab card	Units tab card													
Act	Loc	Ind	Proj	EE	Lbr Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total		
749	PHE	NE	NPKZZZZZ	501		No escalation	0	0	0	0	0	0	0	0	0	1,100	0		1,100		
749	PHE	NE	NPKZZZZZ	520		No escalation	0	0	0	2,400	0	0	0	0	0	2,400	0	0	4,800		
891	PHE	NE	NPKZZZZZ	501		No escalation	0	0	0	0	0	0	0	0	0	0	0	0	0		
891	PHE	NE	NPKZZZZZ	501		No escalation		1,641											1,641	1,641	
891	PHE	NE	NPKZZZZZ	501		No escalation												204	204	204	
212	KST	NE	NPKZZZZZ	901			541	541	541	541	541	541	541	541	541	541	541	541	6,491	5/10 6,492 (A)	Diff. immaterial
245	KST	NE	NPKZZZZZ	901			450	450	450	450	450	450	450	450	450	450	450	450	5,397	5/10 5,400	
246	KST	NE	NPKZZZZZ	901			684	684	684	684	684	684	684	684	684	684	684	684	8,212	5/10 8,208	
258	KST	NE	NPKZZZZZ	901			411	411	411	411	411	411	411	411	411	411	411	411	4,927	5/10 4,932	
261	KST	NE	NPKZZZZZ	901			338	338	338	338	338	338	338	338	338	338	338	338	4,062	5/10 4,056	
320	OAH	NE	NPKZZZZZ	901			121	121	121	121	121	121	121	121	121	121	121	121	1,454		
331	OAH	NE	NPKZZZZZ	901			117	117	117	117	117	117	117	117	117	117	117	117	1,409		
333	OAH	NE	NPKZZZZZ	901			1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	12,072		
343	OAH	NE	NPKZZZZZ	901			75	75	75	75	75	75	75	75	75	75	75	75	898		
349	OAH	NE	NPKZZZZZ	901			161	161	161	161	161	161	161	161	161	161	161	161	1,926		
420	OAH	NE	NPKZZZZZ	901			178	178	178	178	178	178	178	178	178	178	178	178	2,134		
461	OAH	NE	NPKZZZZZ	901			157	157	157	157	157	157	157	157	157	157	157	157	1,884		
462	OAH	NE	NPKZZZZZ	901			173	173	173	173	173	173	173	173	173	173	173	173	2,079		
463	OAH	NE	NPKZZZZZ	901			90	90	90	90	90	90	90	90	90	90	90	90	1,085		
474	OAH	NE	NPKZZZZZ	901			280	280	280	280	280	280	280	280	280	280	280	280	3,362		
477	OAH	NE	NPKZZZZZ	901			271	271	271	271	271	271	271	271	271	271	271	271	3,247		
486	OAH	NE	NPKZZZZZ	901			3,357	3,357	3,357	3,357	3,357	3,357	3,357	3,357	3,357	3,357	3,357	3,357	40,279		
766	PHE	NE	NPKZZZZZ	901			350	350	350	350	350	350	350	350	350	350	350	350	4,202		
777	PHE	NE	NPKZZZZZ	901			10,945	10,945	10,945	10,945	10,945	10,945	10,945	10,945	10,945	10,945	10,945	10,945	131,345		
818	PHE	NE	NPKZZZZZ	901			17,209	17,209	17,209	17,209	17,209	17,209	17,209	17,209	17,209	17,209	17,209	17,209	206,509		
842	PHE	NE	NPKZZZZZ	901			889	889	889	889	889	889	889	889	889	889	889	889	10,669		
843	PHE	NE	NPKZZZZZ	901			5,770	5,770	5,770	5,770	5,770	5,770	5,770	5,770	5,770	5,770	5,770	5,770	69,242		
850	PHE	NE	NPKZZZZZ	901			2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232	26,779	549,664 (B)	
891	PHE	NE	NPKZZZZZ	501			see amort of software maintenance above														
891	PHE	NE	NPKZZZZZ	501			see amort of software maintenance above														
891	PHE	NE	NPKZZZZZ	501															0		
891	PHE	NE	NPKZZZZZ	501															0		
891	PHE	NE	NPKZZZZZ	501															0		
891	PHE	ND	NPKZZZZZ	501															0		
891	PHE	NE	NPKZZZZZ	501														19,600	19,600		
891	PHE	NE	NPKZZZZZ	501																	
891	MAU	BD	NPKZZZZZ	501			9,815	9,815	9,815	9,815	9,815	9,815	9,815	9,815	9,815	9,815	9,815	9,815	117,785	117,785	
891	MAU	BE	NPKZZZZZ	501			0	0	0	0	0	0	0	0	0	0	0	4,200	4,200		
891	HEL	BD	NPKZZZZZ	501			9,815	9,815	9,815	9,815	9,815	9,815	9,815	9,815	9,815	9,815	9,815	9,815	117,785	117,785	
891	HEL	BE	NPKZZZZZ	501			0	0	0	0	0	0	0	0	0	0	0	4,200	4,200		
																			820,979	787,079	

Σ(A) = $29,088
Total PKM

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ATTACHMENT 31
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12/18/2004

Budget for Ellipse Maintenance

Software maint folder

Original file

Amendment 17

	Old maint fee	Amort of relicense fee	credit for old maint fee	New maint fee	BSI	TOTAL P,H,M	CPI
200401	47,308.93				1,222.50		
200402	47,308.93				1,222.50		
200403	47,308.93				1,222.50		
200404	47,308.93				1,222.50		
200405	47,308.93				1,222.50		
200406	13,798.44	47,742.75	(13,798.44)	16,232.54	1,222.50	65,197.79	
200407	13,798.44	47,742.75	(13,798.44)	16,232.54	1,222.50	65,197.79	
200408	13,798.44	47,742.75	(13,798.44)	16,232.54	1,222.50	65,197.79	
200409	13,798.44	47,742.75	(13,798.44)	16,232.54	1,222.50	65,197.79	
200410	13,798.44	47,742.75	(13,798.44)	16,232.54	1,222.50	65,197.79	
200411	13,798.44	47,742.75	(13,798.44)	16,232.54	1,222.50	65,197.79	
200412	13,798.44	47,742.75	(13,798.44)	16,232.54	1,222.50	65,197.79	
200501	13,798.44	47,742.75	(13,798.44)	16,232.54	1,249.76	65,225.05	0.0223
200502	13,798.44	47,742.75	(13,798.44)	16,232.54	1,249.76	65,225.05	
200503	13,798.44	47,742.75	(13,798.44)	16,232.54	1,249.76	65,225.05	
200504	13,798.44	47,742.75	(13,798.44)	16,232.54	1,249.76	65,225.05	
200505	13,798.44	47,742.75	(13,798.44)	16,232.54	1,249.76	65,225.05	
200506	13,798.44	47,742.75	(13,798.44)	16,594.52	1,249.76	65,587.03	0.0223
200507	13,798.44	47,742.75	(13,798.44)	16,594.52	1,249.76	65,587.03	
200508	13,798.44	47,742.75	(13,798.44)	16,594.52	1,249.76	65,587.03	
200509	13,798.44	47,742.75	(13,798.44)	16,594.52	1,249.76	65,587.03	
200510	13,798.44	47,742.75	(13,798.44)	16,594.52	1,249.76	65,587.03	
200511	13,798.44	47,742.75	(13,798.44)	16,594.52	1,249.76	65,587.03	
200512	13,798.44	47,742.75	(13,798.44)	16,594.52	1,249.76	65,587.03	
200601	13,798.44	47,742.75	(13,798.44)	16,594.52	1,277.63	65,614.90	0.0223
200602	13,798.44	47,742.75	(13,798.44)	16,594.52	1,277.63	65,614.90	
200603	13,798.44	47,742.75	(13,798.44)	16,594.52	1,277.63	65,614.90	
200604	13,798.44	47,742.75	(13,798.44)	16,594.52	1,277.63	65,614.90	
200605	13,798.44	47,742.75	(13,798.44)	16,594.52	1,277.63	65,614.90	
200606				16,964.58	1,277.63	18,242.21	0.0223
200607				16,964.58	1,277.63	18,242.21	
200608				16,964.58	1,277.63	18,242.21	
200609				16,964.58	1,277.63	18,242.21	
200610				16,964.58	1,277.63	18,242.21	
200611				16,964.58	1,277.63	18,242.21	
200612				16,964.58	1,277.63	18,242.21	
200701				16,964.58	1,306.12	18,270.70	0.0223
200702				16,964.58	1,306.12	18,270.70	
200703				16,964.58	1,306.12	18,270.70	
200704				16,964.58	1,306.12	18,270.70	
200705				16,964.58	1,306.12	18,270.70	
200706				17,342.89	1,306.12	18,649.01	0.0223
200707				17,342.89	1,306.12	18,649.01	
200708				17,342.89	1,306.12	18,649.01	
200709				17,342.89	1,306.12	18,649.01	
200710				17,342.89	1,306.12	18,649.01	
200711				17,342.89	1,306.12	18,649.01	
200712				17,342.89	1,306.12	18,649.01	
200801				17,342.89		17,342.89	
200802				17,342.89		17,342.89	
200803				17,342.89		17,342.89	
200804				17,342.89		17,342.89	
200805				17,342.89		17,342.89	
200806						-	
200807						-	
200808						-	
200809						-	
200810						-	
200811						-	
200812						-	

$785,234 for HECO, Hale, MECO
see (A)

Hawaiian Electric Company
Maintenance Invoice information **Reminder to budget for GET Tax 1.04166**

			Escalation used 2005		2004 june to dec
Ellipse Software			785,234.47		355,251.02
			785,234.47	A	355,251.02
1% Contingency					
Total			**785,234.47**		**355,251.02**
HECO portion	70%		549,664.13	A	248,675.71
HELC portion	15%		117,785.17		53,287.65
MECO portion	15%		117,785.17		53,287.65
			785,234.47	A	**355,251.02**

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Non-Projects - Direct Non-Labor

RA	Prod Oper	Prod Maint	Total
PNG	38,252	8,280	46,532

Paco, May

From: Motoki, Rosella
Sent: Tuesday, January 04, 2005 3:16 PM
To: Paco, May; Yim, Karen
Subject: Rate Case Supports to be provided to Production Witness
Attachments: 2005 O&M Explanations.xls

Hi May,

Here is the revised spreadsheet that includes labor hours and standard labor rates. As we discussed on the phone, there are no Pillar input sheets as Energy Projects is a small, new department and the forecast numbers were estimated and entered informally.

Rosella Motoki
rosella.motoki@heco.com
(808) 543-4808

Paco, May
From: Motoki, Rosella
Sent: Monday, January 03, 2005 3:40 PM
To: Paco, May; Yim, Karen
Cc: Yamashita, Dana; Seu, Scott
Subject: FW: Rate Case Supports to be provided to Production Witness

Importance: High

Attachments: 2005 O&M Explanations.xls; HECO Rate Case - Request for Information; RE: HECO Rate Case - Request for Information; EngProj.pdf

Hi May,

The attached spreadsheet contains the explanations for the Energy Projects O&M expenses, please let me know if more detailed explanations are required. The employees involved in preparing the labor and non-labor expense amounts were Scott Seu (Manager, Energy Projects) and Dana Yamashita (Secretary, Energy Projects).

2005 O&M xplanations.xls (22 .

From: Paco, May
Sent: Thursday, December 30, 2004 8:09 AM
To: Motoki, Rosella
Cc: Yim, Karen
Subject: RE: Rate Case Supports to be provided to Production Witness
Importance: High

Rosella,
Per our telephone discussion, attached are the e-mails that Patsy Nanbu (Regulatory Affairs) sent regarding the CA IRs 1 & 2 and the Pillar pdf file for your department mentioned in Pat's e-mail (obtained from H:\OPEN2ALL\RegAff\2005 TY Rate Case\Pillar Reports\Direct O&M\Non-Project (Dept) folder).

HECO Rate Case - Request for I... | RE: HECO Rate Case - Request f... | EngProj.pdf (173 KB)

For NARUC 500 thru 557 (Prod Oper & Prod Maint), please send me the following:

1. Labor
   a. Supporting documentation for EACH line item (each code block).
   b. Identify employee(s) involved in preparation of the labor budget – provide Position Title (i.e., Energy Projects Mgr).

2. Non-Labor
   a. Supporting documentation for EACH line item (each code block).
      * Noted there's no non-labor items > $50K.
   b. Identify employee(s) involved in preparation of the non-labor budget – provide Position Title (i.e., Energy Projects Mgr).

Dept	RA	Resp Area	Acct Blk	Acct Blk Descr	NARUC	Exp Class	Proj	Act	Loc	EE	FY05 - $	FY05-Hours	Std Rate	Explanation
Engy Proj	PNG	EnergyProjects	B30	Prod Oper	546	Labor	NPASVP7Z	211	PCG	150	$118,386.20	3,860	$30.67	TC - Senior Technical Services Engineer (5)
Engy Proj	PNG	EnergyProjects	B30	Prod Oper	549	Labor	NPASVP7Z	701	PCG	150	$22,107.04	932	$23.72	I - Budget/Statistical Analyst
Engy Proj	PNG	EnergyProjects	B30	Prod Oper	549	Labor	NPASVP7Z	711	PCG	150	$1,578.00	30	$52.60	E - Manager, HECO IRP
Engy Proj	PNG	EnergyProjects	B30	Prod Oper	549	Labor	NPASVP7Z	720	PCG	150	$22,107.04	932	$23.72	I - Secretary
Engy Proj	PNG	EnergyProjects	B30	Prod Oper	549	Non-Labor	NPASVP7Z	700	PCG	205	$5,400.00			Office Supplies
Engy Proj	PNG	EnergyProjects	B30	Prod Oper	549	Non-Labor	NPASVP7Z	700	PCG	501	$2,040.00			Manager - parking stall rental, $170/month
Engy Proj	PNG	EnergyProjects	B30	Prod Oper	549	Non-Labor	NPASVP7Z	700	PCG	520	$3,360.00			Manager - Mainland Travel,
Engy Proj	PNG	EnergyProjects	B30	Prod Oper	549	Non-Labor	NPASVP7Z	700	PCG	520	$3,360.00			Engineer - Mainland Travel
Engy Proj	PNG	EnergyProjects	B30	Prod Oper	549	Non-Labor	NPASVP7Z	700	PCG	521	$5,196.00			Manager - Meal & Entertainment
Engy Proj	PNG	EnergyProjects	B30	Prod Oper	549	Non-Labor	NPASVP7Z	700	PCG	521	$5,196.00			Engineer - Meals & Entertainment
Engy Proj	PNG	EnergyProjects	B30	Prod Oper	549	Non-Labor	NPASVP7Z	700	PCG	521	$500.00			Secretary - Meals
Engy Proj	PNG	EnergyProjects	B30	Prod Oper	549	Non-Labor	NPASVP7Z	700	PCG	520	$6,600.00			Manager - Interisland Travel
Engy Proj	PNG	EnergyProjects	B30	Prod Oper	549	Non-Labor	NPASVP7Z	700	PCG	520	$6,600.00			Engineer - Inerisland Travel
				Total Prod Oper							$202,430.28			
Engy Proj	PNG	EnergyProjects	B30	Prod Maint	551	Labor	NPASVP7Z	210	PCG	150	$47,971.20	912	$52.60	E - Manager, Energy Projects
Engy Proj	PNG	EnergyProjects	B30	Prod Maint	551	Non-Labor	NPASVP7Z	210	PCG	301	$8,280.00			Pool Car
				Total Prod maint							$56,251.20			
				~~Total~~							~~$258,681.48~~			

$6,720.00 (A)

$10,392.00 (A)

$13,200.00 (A)

Σ(A) = $46,532

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ATTACHMENT 3J
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Hawaiian Electric Company, Inc.
2005 Rate Case Data
Non-Projects - Direct Non-Labor

RA	Prod Oper	Prod Maint	Total
PNL	85,110	0	85,110

Pruss, Rachelle

PNL

From: Pruss, Rachelle
Sent: Tuesday, December 28, 2004 10:53 AM
To: Yim, Karen
Cc: Li, Susan
Subject: Rate Case Explanations - PNL (NARUC 506 & 507)
Attachments: Scan001.TIF; Scan001.TIF; Scan001.TIF; Scan001.TIF

Here are the explanations for the PNL non-labor line items reflected on the Pillar report on the share drive:

NARUC 506 NPNLZZZZ 926 PPO 501 ($7,950.00) A - Line item for Waiau PP real property taxes. The first attachment shows the actual amounts HECO must pay the City for FY 2004/2005 second installment, due 2/20/05, in the amount of $3,853.86. For FY 2005/2006, the first installment is due 8/20/05, in the amount of $4,188.14. The forecasted amounts shown in the Pillar report vary slightly as they were pre-assessment notice estimated amounts based on the previous year's payments.

NARUC 507 NPNLZZZZ 926 PPO 570 ($77,160) A - Line item for the rent expense for the Energy Corridor lease (see second attachment) and Barbers Pt. Pipeline (see third attachment). The fourth attachment shows the quarterly payment amounts and the payment schedules for each project. For 2005, the annual rent for the Barbers Pt. Pipeline is $15,160.00 and the annual rent for the Energy Corridor lease is $62,000.00 (combined total being the line item amount of $77,160.00).

Hard copies of the attachments are being sent to you via inter-office mail. Please call me if you have any questions. Thanks

2 A $85,110

Rachelle K. Pruss
Land Agent
Land & Rights of Way (CP14-NL)
Hawaiian Electric Company, Inc.
P. O. Box 2750
Honolulu, HI 96803
(808)543-4737 ofc.
(808)543-4726 fax
email: Rachelle.Pruss@heco.com

HECC

TMK #	USE	Site Location	Area (sf / ac)	Pitt Code	Land Clas
ACCOUNT # PNL926PDONENPNLZZZZ---501 (PNL-LA					
8-5-019:049	New Waianae Sub	Waianae	28,719	500	Agricultura
8-5-019:080	New Waianae Sub	Waianae	70,000	500	Agricultura
ACCOUNT # PNL926PPONENPNLZZZZ---501 (PNL-LA					
9-7-019:002	Waiau PP	Waiau	43,879	400	Industrial

HECC

TMK #	USE	Site Location	Area (sf / ac)	Pitt Code	Land Clas
ACCOUNT # PNL926PDONENPNLZZZZ---501 (PNL-LA					
8-5-019:049	New Waianae Sub	Waianae	28,719	500	Agricultura
8-5-019:080	New Waianae Sub	Waianae	70,000	500	Agricultura
ACCOUNT # PNL926PPONENPNLZZZZ---501 (PNL-LA					
9-7-019:002	Waiau PP	Waiau	43,879	400	Industrial

04:52 PM

RECAST

	NOVEMBER	DECEMBER	TOTAL	
			$15,160	A
			$43	
5	$835	$921	$25,798	
6	$835	$921	$25,841	
			$972	
4	$14	$14	$7,545	
			$0	
4	$14	$14	$8,517	
		$15,800	$82,000	A
9	$849	$16,435	$111,518	$111,518
			$0	
	$25	$25	$200	
0	$25	$25	$200	
0	$25	$25	$200	$200
0	$0	$0	$0	
9	$99	$99	$1,188	
0	$0	$0	$105	
			$0	
		$95	$380	
0	$20	$20	$240	
9	$119	$214	$1,913	$1,913
0	$1,000	$1,000	$12,000	
			$0	
9	$1,119	$1,214	$13,913	$13,913
		$100	$300	
0	$220	$220	$2,640	
0	$220	$320	$2,940	
0	$220	$320	$2,940	$2,940
0	$120	$120	$1,440	$1,440
9	$2,333	$18,114	$130,011	$130,011

ΣA $77,161

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ATTACHMENT 3K
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ENERGY CORRIDOR LEASE

THIS LEASE is made and entered into this 31ST day of DECEMBER, 2002, by and between the STATE OF HAWAII, by its Director of Transportation, hereinafter called the "LESSOR," and HAWAIIAN ELECTRIC COMPANY, INC., a Hawaii Corporation, whose mailing address is P.O. Box 2750, Hawaii 96840-0001, hereinafter called the "LESSEE."

WITNESSETH THAT:

ARTICLE I. RECITALS

A. LESSOR maintains, manages and controls the Energy Corridor from Kalaeloa Barbers Point Harbor to Honolulu Harbor for the purpose of transporting by pipeline sources of energy pursuant to Chapter 277, Hawaii Revised Statutes; and

B. LESSOR, through its Director of Transportation, is authorized by said Chapter 277 to transfer or dispose interests in the Energy Corridor by lease, license or easement to persons engaged in the business of furnishing or delivering sources of energy in bulk; and

C. LESSEE is engaged in the business of furnishing and delivering sources of energy in bulk and is desirous and willing to enter into a lease of easement within said Energy Corridor from LESSOR upon the terms, covenants and conditions hereinafter set forth.

D. LESSEE is a public utility pursuant to Chapter 269, Hawaii Revised Statutes, and its operations are subject to rules and regulations promulgated by the State of Hawaii Public Utilities Commission as well as LESSEE's published tariffs.

ARTICLE II. DEFINITIONS

As used herein, unless specifically indicated otherwise or clearly repugnant to the context:

A. "Administrator" means the Harbors Administrator, State of Hawaii, Department of Transportation, Harbors Division or his or her designated representative.

B. "Director" means the Director of Transportation, State of Hawaii or his or her duly authorized representative.

A. Initial Payment: The initial payment as provided for in section VI.b of the Cost Sharing Basis, a copy of which is attached hereto as Exhibit "B," as modified as follows. LESSOR agrees that the initial payment shall be made prior to the commencement of construction of any Leasehold Improvements by LESSEE and the amount of the initial payment shall be calculated according to the method provided in Section VI.b of the Cost Sharing Basis for payments during the first 30 years of the

September 8, 2000 letter attached hereto as Exhibit "C").

B. Rental: Lease rental for the Premises shall be paid as follows:

1. Annual Rental. During each of the first five (5) years of this Lease, the LESSEE shall pay an annual rental of SIXTY ONE THOUSAND EIGHT HUNDRED SEVENTY EIGHT ($61,878); for each of the sixth (6th) through the tenth (10th) years, the LESSEE shall pay an annual rental of SEVENTY ONE THOUSAND ONE HUNDRED SIXTY ($71,160); and for each of the eleventh (11th) through fifteenth (15th) years, the LESSEE shall pay an annual rental of EIGHTY ONE THOUSAND EIGHT HUNDRED THIRTY FOUR ($81,834);

2. General Payment Provision. The rental and fees required herein

HECO LEASE SUMMARY

TYPE : Lease PAYABLE LEASE DATE : January 24, 1992

OWNER's LEASE # : DOT H-91-1 HECO's LEASE # :

OWNER : Name STATE OF HAWAII, DEPARTMENT OF TRANSPORTATION

Address Harbors Division, 79 S. Nimitz Highway, Honolulu, HI 96813

LESSEE : Name HAWAIIAN ELECTRIC COMPANY, INC. (HECO)

Address P. O. Box 2750, Honolulu, HI 96840-0001

LOCATION : Easement C, portion of Lot 9540, Land Court App. 1069, Honouliuli, Ewa, Oahu, being Governor's Executive Order 3383, Kalaeloa/Barbers Point Harbor

T M K # : 9-1-014-024 por. R/W # :

AREA: **LAND** **BASE RENTAL :** (QUARTERLY)

NET AREA : 0.427 sf / ac Payable 1st day of J F M A M J J A S O N D

UNUSABLE AREA : sf / ac Eff Date : Sept. 22, 1989 to Sept. 21, 1990 1st Per : $0.00

GROSS AREA : 0.427 sf / ac Eff Date : Sept. 22, 1990 to Sept. 21, 1994 2nd Per : $3,943.00

BLDG Eff Date : Sept. 22, 1994 to Sept. 21, 1999 3rd Per : $5,126.00

GROSS AREA : N / A sf / ac Eff Date : Sept. 22, 1999 to Sept. 21, 2004 4th Per : $6,664.00

NET USABLE AREA : sf / ac Eff Date : Sept. 22, 2004 to Sept. 21, 2014 5th Per : At Market

COMMON AREA : sf / ac Eff Date : Sept. 22, 2014 to Sept. 21, 2024 6th Per : At Market

PARKING STALLS : N / A SECURITY DEPOSIT : N / A PAST DUE INT : 12% per annum

TAXES : RPT N / A GET (4.167%) N / A PWT (6.82%) N / A

LEASE TERM : EFFECTIVE September 22, 1989 for a term of 35 years to September 21, 2024.

OPTION TO EXTEND : N/A

USE : Lease of easement for two subsurface fuel pipelines.

INSURANCE REQUIREMENT : Yes

GENERAL LIABILITY : (AG) N/A (Per OC) $3,000,000

(WATER DAMAGE) Combined (PD) Combined

FIRE & EXTENDED : N/A

ASSIGNMENT / SUBLETTING : Owner's prior written consent required.

SPECIAL CONDITIONS : Annual Additional Rent: Sept. 22, 1990 to Sept. 21, 1994, $2,957; Sept. 22, 1994 to Sept. 21, 1999, $3,845; Sept. 22, 1999 to Sept. 21, 2004, $4,998; Sept. 22, 2004 to Sept. 21, 2014, at market; Sept. 22, 2014 to Sept. 21, 2024, at market. See also relocation at lessee's expense provison.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HARBORS DIVISION

HARBOR LEASE NO. H-91-1

THIS INDENTURE OF LEASE, made this 24th day of January, 19 92, by and between the STATE OF HAWAII, by its Director of Transportation, hereinafter called the "LESSOR," and HAWAIIAN ELECTRIC COMPANY, INC., a Hawaii corporation, whose business address is P. O. Box 2750, Honolulu, Hawaii 96840-0001, hereinafter called the "LESSEE,"

WITNESSETH THAT:

1. AREA LEASED. THE LESSOR, for and in consideration of the rent to be paid and of the terms, covenants and conditions herein contained, all on the part of the LESSEE to be kept, observed and performed, does hereby demise and lease unto the LESSEE, and the LESSEE does hereby lease and hire from the LESSOR, a nonexclusive subsurface pipeline easement designated as Easement C, varying from 10 to 19.33 feet wide, containing an area of 0.427 acre, situated at Barbers Point Harbor, Ewa, Oahu, Hawaii, being a portion of Tax Map Key No. 9-1-14:8 and Governor's Executive Order No. 3383, hereinafter called the "easement area," and more particularly described in Exhibit "A" and shown and delineated on the map designated Exhibit "B," both of which Exhibits are attached hereto and made parts hereof.

2. USE OF PREMISES. The easement area shall be used solely for the construction, installation, maintenance, use and repair of two subsurface fuel pipelines, measuring 12 inches and 20 inches in nominal pipe size, respectively, for the distribution of petroleum products. No other use shall be permitted, except upon the written approval of the LESSOR.

3. DEFINITIONS. As used herein, unless specifically indicated otherwise or clearly repugnant to the context:

(a) "Director" means the Director of Transportation of the State of Hawaii or his representative;

(b) "LESSEE" means the LESSEE herein, its successors or permitted assigns, according to the context hereof;

(c) "Holder of record of a security [illegible]

(d) "' sement area" means the pa(el of land affected b) the nonexclusive subsurface pipeline now or hereafter constructed and installed thereon;

(e) "LESSOR" means the State of Hawaii.

4. GENDER AND NUMBER. The use of any gender includes all genders; the singular includes the plural and the plural includes the singular.

5. HEADINGS NOT TO BE USED TO CONSTRUE DOCUMENT. The marginal headings throughout this lease are for the convenience of the LESSOR and the LESSEE and are not intended to construe the intent or meaning of any of the provisions hereof.

6. LEASE TERM. The term of this lease shall be for a period of thirty-five (35) years commencing on September 22, 1989 and terminating on September 21, 2024, unless sooner terminated as hereinafter provided.

7. RENTALS, CHARGES AND RENTAL REOPENING. Rental for the first year, commencing from the effective date of this lease, shall be waived.

(a) Pipeline Easement Base Rental. During each of the second (2nd) through the fifth (5th) years of this lease, the LESSEE shall pay to the LESSOR

p' e size using the followin schedule to calculate cumulative additional annual rentals in addition to the base rental for the easement area where

LESSEE installs or uses pipelines with an aggregate nominal pipe size exceeding twelve inches (12") measured in inches of nominal pipe size.

SCHEDULE OF CUMULATIVE ADDITIONAL ANNUAL RENTALS

QUANTITY OF PIPE, MEASURED IN INCHES OF NOMINAL PIPE SIZE	CUMULATIVE ADDITIONAL RENTAL
Over 12 but not more than 24	1/2 of base rental
" 24 " " " " 36	1/4 " " "
" 36 " " " " 48	1/8 " " "
" 48 " " " " 60	1/16 " " "
" 60 " " " " 72	1/32 " " "

(c) Wharfage and Other Fees and Charges. In addition to the above rentals, the LESSOR shall assess wharfage charges on the petroleum products pumped or passed through the pipelines installed by the LESSEE under this lease pursuant to Section 19-44-68 of the Hawaii Administrative Rules Commercial Harbors and Tariff of the Harbors Division, Department of Transportation, State of Hawaii, as such section and said tariff may hereafter be amended from time to time. Moreover, this paragraph shall not be construed as a waiver of the LESSOR'S right to assess dockage fees and demurrage charges in accordance with said Hawaii Administrative Rules Commercial Harbors and Tariff and any Rules supplementary, amending or replacing said Rules.

(d) Rental Reopening Period. The base annual rental hereinabove reserved shall be reopened and redetermined at the expiration of the fifteenth (15th) and twenty-fifth (25th) years of said term. The appraiser(s) referred to below shall also determine an appreciation rate to be applied on the latter five (5)-year portion of each ten (10)-year period, which rate shall not be less than thirty percent (30%).

(e) Determination of rental upon reopening of the annual rental. The rental for any ensuing period shall be the fair market rental based upon all legal uses and not necessarily limited to the uses at the time of reopening. Except as provided herein, the provisions in Chapter 658,

Hawaii Revised Statutes, shall be followed. At least six (6) months prior to the time of reopening, the fair market rental and appreciation rate shall be determined by an appraiser whose services shall be contracted for by the LESSOR, and the LESSEE shall be promptly notified by certified mail, return receipt requested, of the fair market rental and appreciation rate as determined by LESSOR'S appraiser; provided, that should the LESSEE fail to notify LESSOR in writing within thirty (30) days after receipt thereof that LESSEE disagrees with the fair market rental and appreciation rate as determined by LESSOR'S appraiser and that LESSEE has appointed its own appraiser to prepare an independent appraisal report, then the fair market rental and appreciation rate as determined by LESSOR'S appraiser shall be deemed to have been accepted by LESSEE

In the event that the appraisers are unable to determine the fair market rental before the reopening date, or by the foregoing prescribed time, whichever is later, the LESSEE shall pay the fair market rental as determined by LESSOR'S new appraised value until the new rent is determined and the rental paid by LESSEE shall then be subject to retroactive adjustments as appropriate to reflect the fair market rental determined as set forth hereinabove. However, LESSEE or LESSEE'S appraiser's failure to comply with the procedures set forth above shall constitute a waiver of LESSEE'S right to contest the new rent, and the LESSEE shall pay the rent as determined by LESSOR'S appraiser without any retroactive adjustments. Alternatively, LESSOR may treat such failure as a breach of this lease and terminate the lease.

The value of improvements constructed, installed and owned by the LESSEE within the easement area shall not be considered in determining the fair market rental.

8. TIME AND METHOD OF PAYMENT. The LESSEE shall pay to the LESSOR without notice or demand at the Harbors Division, 79 S. Nimitz Highway, Honolulu, Hawaii 96813, the annual rentals as provided hereinabove, payable in advance in quarterly installments on the first day of January, April, July and October of each and every year during the term of this lease in legal tender of the United States of America. The rental for the first and last quarters of this lease shall be prorated in relation to the days within the quarter

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Non-Projects - Direct Non-Labor

RA	Prod Oper	Prod Maint	Total
PNR	175,000	0	175,000

Hawaiian Electric Company, Inc.

Non-Labor Support for PNR, Technology

Technology entries--

$75,000 (1) at PPO

This entry is a placeholder for the cost of Sun Power for Schools photovoltaic installations at Oahu public schools (middle and high schools) in 2005. This estimate is offset by monies collected from our customers that are participating in the Sun Power for Schools program by providing a one-time contribution or monthly contributions that is added to their electric bill.

$100,000 (1) at PPR

This entry is a placeholder for biomass energy initiative. There is State law for utilities to increase the percentage of renewable energy on the electric system. Biomass technology is one renewable technology that could be developed. HECO is working with the University of Hawaii researchers and sugar mill operators for possible use of total crop (no open field burning) for energy production. The funds identified would be used to help increase the development of this renewable resource: siting work, resource verification, land use, etc. The funds could also be used for possible studies related to co-firing of biomass with conventional fossil generating systems.

(1) 175,000 ✓

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Non-Projects - Direct Non-Labor

RA	Prod Oper	Prod Maint	Total
PPA	80,640	0	80,640

PPA

Paco, May
From: Yim, Karen
Sent: Wednesday, December 29, 2004 1:12 PM
To: Paco, May
Subject: FW: Rate Case - Budget labor and nonlabor documentation needed

Attachments: Hookina_08-03.xls

PPA
~~PPI~~ Industrial relation's backup.....

From: Morimatsu, Jeri
Sent: Monday, December 27, 2004 11:43 AM
To: Yim, Karen
Subject: FW: Rate Case - Budget labor and nonlabor documentation needed

Karen,
Arvin asked me to provide info for Transmission Operations so I guess that falls under his NARUC account. You can disregard that item. Thanks.

From: Morimatsu, Jeri
Sent: Monday, December 27, 2004 11:13 AM
To: Yim, Karen
Subject: FW: Rate Case - Budget labor and nonlabor documentation needed

Hi Karen,
After reviewing the info that Patsy sent, I think this is what you need from me...

For non-labor, the Ho'okina budget is $200 per employee (used 1440 as employee count) and is split between Distribution , Transmission , Production, and Admin & General. The assumption (and goal) is that all employees will receive an award. The program's criteria can change from year to year, depending on Executive input/approval. The budget is adjusted quarterly according to the actual number of employees that qualify at that time. I'm attaching the worksheet I followed for the budget and highlighted the items that fall under your NARUC account.

Hookina_08-03.xls
(23 KB)

Please let me know if you have any questions or need anything else. Thanks.

From: Hannigan, Carol
Sent: Wednesday, December 22, 2004 7:33 AM
To: Morimatsu, Jeri
Subject: FW: Rate Case - Budget labor and nonlabor documentation needed

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From: Yim, Karen
Sent: Tuesday, December 21, 2004 5:54 PM

Recognition Program
2004-2005

Ho'okina

		2003	Reduce to $200 Award	1440 EEs	810 EEs	6/03 Update	Using 2003 $s as base
		Original Budget	**2003 Recycle**	**2003 Rev. Budget**	**5/1/03 Adjustment**	**2003 Upd. Budget**	**2004-2005 Estimate**
Distr Operations	19.6%	95,625	(39,034.6)	56,590.4	(24,813.5)	31,776.9	**56,492.3**
Trans Operations	19.6%	95,625	(39,034.6)	56,590.4	(24,813.5)	31,776.9	**56,492.3**
Prod Operations	28.0%	136,500	(55,720.0)	80,780.0	(35,420.0)	45,360.0	**80,640.0** ✓
Adm & General	32.8%	159,750	(65,210.8)	94,539.2	(41,453.1)	53,086.2	**94,375.4**
TOTAL	100%	487,500	(199,000)	288,500	(126,500)	162,000	**288,000**

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Non-Projects - Direct Non-Labor

RA	Prod Oper	Prod Maint	Total
PRI	0	600	600
PRR	0	2,880	2,880
PRX	0	6,000	6,000
Total	0	9,480	9,480

PRC - PRX

Paco, May
From: Yim, Karen
Sent: Wednesday, December 29, 2004 1:05 PM
To: Paco, May
Subject: FW: Rate Case Supports to be provided to Production Witness

Attachments: Yim.xls

May - Sys Ops backups.....

From: Nakamura, Colleen
Sent: Tuesday, December 28, 2004 6:48 PM
To: Yim, Karen
Subject: FW: Rate Case Supports to be provided to Production Witness

Karen, attached is whatever information I was able to get. Call me if you have

Yim.xls (50 KB)

questions. Hope this helps.

From: Anbe, Kurt
Sent: Monday, December 27, 2004 8:19 AM
To: Yim, Karen
Cc: Nakamura, Colleen
Subject: RE: Rate Case Supports to be provided to Production Witness

System Operation documentation should come from Colleen Nakamura.

From: Yim, Karen
Sent: Sunday, December 26, 2004 12:26 PM
To: Morikuni, Bert; Marzano, Victoria; Motoki, Rosella; Hannigan, Carol; Murakami, Blane; Li, Susan; Hirashima, Donna; Takata, Valerie; Seki, Arthur; Anbe, Kurt
Cc: Sekiya, Irene; Ornellas, Larry; Fujinaka, Aaron
Subject: Rate Case Supports to be provided to Production Witness

Hi Everyone - I looked through all the Department PDF files provided by Regulatory and noted those areas needing to provide documentation to the Production witness, Aaron Fujinaka. I have indicated names of individuals who will be providing me with the information. If there is someone else I need to work with, can you let me know. Regulatory had provided detailed instructions on what information needs to be provided.

Note that in addition to providing documentation for all your pillar data input amounts as shown in your PDF file, for non-labor we are being asked to explain our amounts exceeding $50,000 (bid solicitation, price time quantity estimation, historical cost escalation, etc.)

Please provide information by Wed. Dec. 29 or earlier if possible. I'll be calling you too to discuss open statuses. If you have any questions please feel either myself or Irene Sekiya in Regulatory.

Dept/Div	RA	NARUC	Contact		Status
Admin-P&E	PYA	Prod Oper	B.Morikuni	Open	
Gener Planning	PYB	Prod Oper	B.Morikuni	Open	

SysOp	PRC	Communications	B31	Prod Maint	514	Labor	NPRZZZZZ	$8,142	✓	236 hrs
	a.	Glenn Yoshiyama								
	b.	No documentation. Trended relative to prior years' forecasts/actuals.								
		Includes maintenance of								
		- system hotline and generation hotline								
		- fiber optic maintenance								
		- power plant radios								
		- 800 mhz backup communications system								
		- power plant RTU's								
		- generation control RTU's								
		- telemetry system (frequency/voltage)								
	PRD	Operating Dispatch	B30	Prod Oper	500	Labor	NPRZZZZZ	$62,532	✓	1,800 hrs
	a.	Dean Mizumura								
	b.	No documentation available.								
		Based on labor for one Operations Engineer full time on generation scheduling								
		and coordination.								
	PRE	Operating Engineering	B30	Prod Oper	506	Labor	NPRZZZZZ	$13,448	✓	420 hrs
	a.	Peter Okunami								
	b.	Generation dispatch - labor in support of generation scheduling and coordination								
		as primary backup for Operations Engineer in PRD; no documentation available.								
	PRI	Instrument & Control	B31	Prod Maint		Labor	NPRZZZZZ	$27,422	✓	814 hrs
	PRI	Instrument & Control	B31	Prod Maint	514	Non-Labor	NPRZZZZZ	$600	✓	
	a.	Richard Freitas								
	b.	No documentation available; maintenance work is planned around Power Plant's								
		5-year plant overhaul/maintenance schedule; estimates are trended								
		based on prior years' actuals/forecasts; work includes:								
		- power plant meter calibration (required by PUC)								
		- power plant trouble calls (predictive/preventive)								
		- power plant equipment, RTU's maintenance								
		- any minor parts required for repairs								
		- all work is usually scheduled during the overhaul cycles whenever possible to								
		take advantage of down times for Hon, Kahe, Waiau, etc.								
	PRR	Relay	B31	Prod Maint		Labor	NPRZZZZZ	$35,983	✓	1,084 hrs
	PRR	Relay	B31	Prod Maint		Non-Labor	NPRZZZZZ	$2,880	✓	
		No documentation available; maintenance work is planned around Power Plant's								
		5-year plant overhaul/maintenance schedule; estimates are trended								
		based on prior years' actuals/forecasts; work includes:								
		- protection circuitry, relay tripping								
		- preventive/corrective maintenance on Hon, Kahe, Waiau, etc.								
		- any minor parts required for repairs								
	PRX	Construction Mgt.	B31	Prod Maint	511	Labor	NPRZZZZZ	$32,274	✓	900 hrs
	PRX	Construction Mgt.	B31	Prod Maint	511	Non-Labor	NPRZZZZZ	$6,000	✓	
		No documentation available; maintenance work is planned around Power Plant's								
		requests; estimates are trended based on prior years' actuals/forecasts; work								
		typically requested:								
		- concrete work, patching foundations, duct work; asphalt repairs in and around								
		the power plants;								
		- Ikaika work crews as needs of job requirements dictate								

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Projects - Direct Non-Labor by RA

RA	Prod Oper	Prod Maint	Total
PIP	0	850,000	850,000
PIT	0	8,342,001	8,342,001
PHS	64,000	0	64,000
Total	64,000	9,192,001	9,256,001

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Projects - Direct Non-Labor

RA	Prod Oper	Prod Maint	Total
PIP	0	850,000	850,000

Activity 212 - Expense Element 506		$ 830,000
Activity 212 - Expense Element 508		20,000
		$ 850,000

*Project #	Project	*M-Proj	Cost Category	FY04 BUD04-VIEW	FY05 BUD04-VIEW	FY06 BUD04-VIEW	FY07 BUD04-VIEW
P0000458	Kahe Pond 1A Clean & Lining	MProj26	AFUDC	306	1,475	4,442	0
P0000458	Kahe Pond 1A Clean & Lining	MProj26	LABOR	4,999	3,363	3,488	0
P0000458	Kahe Pond 1A Clean & Lining	MProj26	O/S SVCS	0	0	130,000	0
P0000458	Kahe Pond 1A Clean & Lining	MProj26	OVERHEADS	6,866	4,215	4,226	0
P0000458	Kahe Pond 1A Clean & Lining	_MProj26_		12,172	9,053	142,155	0
P0000458	Kahe Pond 1A Clean & Lining	MProj27	LABOR	10,147	14,375	13,422	1,448
P0000458	Kahe Pond 1A Clean & Lining	MProj27	O/S SVCS	830,000	850,000✓	0	0
P0000458	Kahe Pond 1A Clean & Lining	MProj27	OVERHEADS	12,307	15,178	13,467	1,695
P0000458	Kahe Pond 1A Clean & Lining	_MProj27_		852,454	879,553	26,889	3,143
P0000458	Kahe Pond 1A Clean & Lining	P0000458	AFUDC	0	0	0	0
P0000458	Kahe Pond 1A Clean & Lining	P0000458	OTHER	0	1	0	0
P0000458	Kahe Pond 1A Clean & Lining	P0000458		0	1	0	0
P0000458				864,626	888,607	169,044	3,143
				864,626	888,607	169,044	3,143

GENPP 10-14
BA/G

INTEROFFICE CORRESPONDENCE

Hawaiian Electric Company

February 28, 2001

Route in Turn: L. Ornellas
H. Kageura
T. Joaquin
Property Accounting (KS3-AT)
Management Accounting (KS3-AM)

From: R. Noda

Subject: **Kahe Pond 1A Cleaning** - P00004958
Project Initiation Form Routing

Please find the attached Project Identification Form (PIF), Production Change Request (PCR), and Pillar File Reports for **initiation** of the following project:

Project	Pillar ID	Cost	Completion Date
Kahe Pond 1A Cleaning	Jyanagid_27	$1,529,635.80	December 2002

As indicated in the attached PIF, this project will remove silt and sediment from Kahe Pond 1A and haul it to the landfill. Kahe Pond 1A is about 2/3 full and it needs to be cleaned to continue operating the Kahe waste water treatment system. This cost estimate has been based on the assumption that the material in the pond is non-hazardous. The materials will be dried and tested prior to disposal.

Property Accounting has classified this project as an **O&M project**.

If you have any questions, please call me or Jon Yanagida at extension 7005.

JJY:

CC: w/ attachments
L. Ornellas
K. Mark
G. Yonamine
C. Higa
R. Oniate

PROJECT IDENTIFICATION FORM - INITIALIZE PROJECT

The Project identified below has not been established in MIMS

Project Title: Kahe Pond 1A Cleaning

Project Number: JYANAGID27
(Temporary)

Stategic Plan Linkage: 1E - Reliability
(Primary)

Plant Addition Date: 2002-12

Commitment Date: 2001-08

Primary Corporate Goal: O&M Prod

Impact on Goal: Low

Project Forecast (Thousand $)

(Attach the "View - 5-Yr Proj Costs by Ind & Cost Cat" report obtained from the estimators' Pillar file.)

Prior Years	2001	2002	2003	2004	2005	Future Years	Total
$0	$22	$1,507	$0	$0	$0	$0	$1,529

Assessment Factors

Compliance	Competitive Advantage	Financial Impact	Reliability	Corporate Image	Total Score
0	0	0	33	0	33

Purpose/Objectives:

This project will remove about 7000 cubic yards of silt from Kahe Pond 1A. This pond is an integral part of the Kahe waste water treatment system and it is presently about 2/3 full of sludge and silt. This pond needs to be cleaned before additional silt accumulates and interferes with the operation of the waste water treatment system.

Scope Description:

The work scope is listed below.

1. All water that flows into Pond 1A shall be dirverted into Pond 1B. Pond 1B will function as the waste water treatment pond during the cleaning of Pond 1A.

2. The silt in Pond 1A will be allowed to dry.

3. The silt in Pond 1A will be tested to confirm that it is non-hazardous and can be disposed in the Waimanalo Gulch Landfill.

4. The silt will be excavated and hauled to Waimanalo Gulch.

Note: Form to only initialize project. Project was in fact not completed in 2002.

PROJECT IDENTIFICATION FORM - INITIALIZE PROJECT

The Project identified below has not been established in MIMS

Resource Needs:

Most of the work will be performed by outside contractors. This project will have a minimal impact to Production's labor resorces.

The Engineering Department will provide civil engineering project support. Production wil provide most of the field supervision for this project.

Justification:

This pond cleaning project is necessary to keep the pond operational. With additional siltation, the pond may be too full to be a functional component of the Kahe waste water system. The Kahe waste water treatment system is a necessary part of the Kahe Power Plant.

If this work is not done, the pond will continue to fill with silt. Eventually, the pond will become so full that we cannot operate the Kahe waste water treatment system.

Issues, Impacts, Considerations:

The pond is a necessary part of the Kahe waste water treatment system. The pond must be cleaned or eventually, the pond will fill up and the waste water system will not be operational.

Most of the cost of pond cleaning is the tipping fee. Tipping fees charged by the landfill constitute $1.1 M out of the total $1.5M project cost. While this is expensive, there is no other disposal site recommended as acceptable by HECO Enviromental.

PROJECT IDENTIFICATION FORM - INITIALIZE PROJECT

The Project identified below has not been established in MIMS

PUC Approved: ○ Approval Required ● Not Required

○ Approved, Date of Decision & Order: - - Docket Number:

○ Awaiting PUC Approval, Application Filed - -

Authorization for: ☐ Engineering ☐ Materials ☐ Construction

Approval Option: Initialize project

Submitted by: _____ **Phone/Ext #:** 4245

Originator's Name: Larry Ornellas

Responsible Estimator: Jon Yanagida
(Pillar UserID)

Resp. Estimator Dept: Engineering
(Pillar Department Folder)

Project Manager: Jon Yanagida
(Note: Value does not appear in MIMS or Pillar)

Date: 02/26/2001

Required Approvals to Initialize a Project:

_____
Responsible Manager **Date**

_____
Responsible Vice President **Date**

If project exceeds $5 million ($1M unbudgeted), additional approvals are required. Please call Management Accounting at x7729

PRODUCTION CHANGE REQUEST (PCR) FORM

Requestor:	
Phone Number:	
District:	P-HECO
Temporary Project Number:	JYANAGID27
Project Number:	
Project Title: (28 characters)	Kahe Pond 1A Cleaning
Short Project Title: (10 characters)	K Pnd Cln
Originator Employee's Number:	21110
Person Assigned To:	Jon Yanagida
Person Assigned to Employee Number:	20950
Responsibility Area:	PBT
Activity:	212
Location:	KWW
Indicator:	NE
Apply AFUDC (yes or no):	No
Existing Grandparent Project Number: or **New Grandparent Project Description:**	
Pillar Temporary Projects or 5th Segment Projects to link to Grandparent Project above:	
Plant Addition Date:	2002-12
Plant Functional Category:	Non-Steam Production
Project or Program:	Project

For Admin use only:

Date updated MIMS Prod files: _____

Copy given to Pillar Admin: _____

Date: 02/26/2001

*VIEW: 5-Yr Proj Cost

use for 2005 ↓ (FY02)

*Labor Class #	em	Total 5 Year Cost	FY01	FY02	FY03	FY04	FY05
	OH	$10,412.07	$3,371.52	$7,040.55	$0.00	$0.00	$0.00
	p OH	$1,479.00	$0.00	$1,479.00	$0.00	$0.00	$0.00
	Tfr to Constr OH	$2,821.82	$634.88	$2,186.94	$0.00	$0.00	$0.00
	H	$4,741.20	$1,090.56	$3,650.64	$0.00	$0.00	$0.00
	Benefits OH	-$6,402.21	-$883.20	-$5,519.01	$0.00	$0.00	$0.00
	Tax OH	$2,901.14	$633.13	$2,268.01	$0.00	$0.00	$0.00
__BUOCB	ineering Administration - Clerical	$422.76	$198.80	$223.96	$0.00	$0.00	$0.00
__BUOCB	Delivery - Clerical (Kahe Pond Cleann Encll)	$422.76	$198.80	$223.96	$0.00	$0.00	$0.00
__BUOCB	Clerical Support	$305.40	$0.00	$305.40	$0.00	$0.00	$0.00
__FS-B	ineering Administration - CSA Principal	$2,818.96	$626.56	$2,192.40	$0.00	$0.00	$0.00
B_STRDFT	g Tech	$2,024.30	$1,729.20	$295.10	$0.00	$0.00	$0.00
B_STRENG	ineering Design - CSA Engineer	$12,065.60	$4,721.60	$7,344.00	$0.00	$0.00	$0.00
	ineering Design - Vehicle	$88.00	$40.00	$48.00	$0.00	$0.00	$0.00
B_STRENG	ineering Obs - CSA Engineer	$6,732.00	$0.00	$6,732.00	$0.00	$0.00	$0.00
	e Svcs-Eng. Consult Envirom	$29,500.00	$10,000.00	$19,500.00	$0.00	$0.00	$0.00
	e Svcs-Eng. Consult Envir Field Sup	$50,000.00	$0.00	$50,000.00	$0.00	$0.00	$0.00
I_PPENGR	struction - Power Plant Engineer	$9,303.00	$0.00	$9,303.00	$0.00	$0.00	$0.00
	struction - Out Cont Haul	$300,000.00	$0.00	$300,000.00	$0.00	$0.00	$0.00
	struction - Tipping Fee	$1,100,000.00	$0.00	$1,100,000.00	$0.00	$0.00	$0.00
		$1,529,635.80	$22,361.85	$1,507,273.95	$0.00	$0.00	$0.00
		$1,529,635.80	$22,361.85	$1,507,273.95	$0.00	$0.00	$0.00

2/26/01
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Page 1

*VIEW: 5-Yr Proj Labor Hour

*Project #	*M-Proj #	*RA #	*Act #	*Loc #	*Ind #	*EE #	*Labor Class #	Line Item	Total 5 Year Lbr Hour	FY01	FY02	FY03	FY04	FY05
JYanagid27_	20950M27_	PBA	210	KWW	NE	150	__BUOCB	A. Engineering Administration - Clerical	21	10	11	0	0	0
JYanagid27_	20950M27_	PBA	211	KWW	NE	150	__BUOCB	Energy Delivery - Clerical (Kahe Pond Cleann Encl)	21	10	11	0	0	0
JYanagid27_	20950M27_	PBT	210	KWW	NE	150	__BUOCB	Project Clerical Support	15	0	15	0	0	0
JYanagid27_	20950M27_	PBT	210	KWW	NE	150	__FS-B	A. Engineering Administration - CSA Principal	70	16	54	0	0	0
JYanagid27_	20950M27_	PBT	211	KWW	NE	150	B_STRDFT	Drafting Tech	70	60	10	0	0	0
JYanagid27_	20950M27_	PBT	211	KWW	NE	150	B_STRENG	D. Engineering Design - CSA Engineer	400	160	240	0	0	0
JYanagid27_	20950M27_	PBT	211	KWW	NS	150	B_STRENG	D. Engineering Obs - CSA Engineer	220	0	220	0	0	0
JYanagid27_	20950M27_	PIP	212	KWW	NE	150	I_PPENGR	F. Construction - Power Plant Engineer	300	0	300	0	0	0
JYanagid27_									1,117	256	861	0	0	0
									1,117	256	861	0	0	0

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Projects - Direct Non-Labor

RA	Prod Oper	Prod Maint	Total
PIT	0	8,342,001	8,342,001

Proj	Proj Description	Prod Maint	
P0000650	Kahe 2 Overhaul (2004) (1)	481,500	<- Missing supporting documentation.
P0000844	Kahe 6 Overhaul (2005)	1,458,500	
P0000845	Kahe 4 Overhaul (2005)	1,545,800	
P0000846	Kahe 1 Overhaul (2005)	930,501	
P0000847	Waiau 4 Overhaul (2005)	1,955,700	
P0000937	W9 Major Inspection	985,000	
P0000938	W10 Major Inspection	985,000	
		8,342,001	

Explanation -

(1) Overhaul project expected to be completed near the end of 2004. Due to timing, expected to have outside service invoices carried over to be paid in 2005. Amount represents estimated [illegible]

2005 OVERHAUL
NON-LABOR BUDGET

Σ(A) = $1,458,500 Σ(B) = $1,545,800 Σ(C) = $930,501 PAGE

	A	B	D	E	G	H	J
1		KAHE 6 01/15/05 TO 03/		KAHE 4 04/09/05 TO 07/		KAHE 1 07/23/05 TO 09/	
2	PROJECT NAME:	P0000844		P0000845		P0000846	
3		EST'D COST	REV	EST'D COST	REV	EST'D COST	REV
4							
5	PREVENTIVE MAINTENANCE - ASSOCIATED WITH THE OPENING, INSPECTION, AND						
6	CLOSING OF UNIT. WORK DONE ON A TIME CYCLE BASIS						
7	**BOILER PM 257**						
8	**Material 201**						
9	Boiler Door Gaskets	$7,000		$5,000		$5,000	
10	Boiler Observation Ports	$1,000		$2,300		$1,000	
11	Boiler Ash Waste Treatment (Chemicals)	$1,000		$1,000		$1,000	
12	Dampers	$8,000		$8,000		$8,000	
13	DCS BattRAM	$5,000		$5,000		$0	
14	DCS Power Supply Modules/DCS Cabinet Fans	$10,000		$5,000		$30,000	
15	DCS UPS Batteries/Fans	$5,000		$1,500		$1,500	
16	Draft lines	$500		$500		$500	
17	Expansion Joints-Ducts/Downcomers			$30,000			
18	Ignitors	$2,500		$1,000		$1,000	
19	Instrument Air	$1,000		$1,000		$1,000	
20	O2 Analyzers	$2,000		$2,000		$2,000	
21	Power Operators (service kits)	$2,500		$10,000		$3,000	
22	Safety Valves Section I	$5,000		$5,000		$5,000	
23	Switchgear/MCC/Breaker Parts	$2,500		$2,500		$2,500	
24	Relief Valves Section VIII	$20,000		$5,000		$5,000	
25							
26	**SUBTOTAL**	**$73,000**	(A)	**$84,800**	(B)	**$66,500**	(C)
27		JAN/FEB		FEB/MAR/APR//MAY/JUN		JUN/JUL/AUG	
28		**PIT257K06NEP000084420**		**PIT257K04NEP000084520**		**PIT257K01NEP000084620**	
29							
30	**BOILER PM 257**						
31	**Outside Services 501**						
32	Draft Lines-scaffolding rental	$1,000		$1,000		$1,000	
33	Stack Inspection and/or Repairs	$25,000		$15,000		$15,000	

2005 OVERHAUL
NON-LABOR BUDGET

	A	B	D	E	G	H	J
1		KAHE 6 01/15/05 TO 03/		KAHE 4 04/09/05 TO 07/		KAHE 1 07/23/05 TO 09/	
2	PROJECT NAME:	P0000844		P0000845		P0000846	
3		EST'D COST	REV	EST'D COST	REV	EST'D COST	REV
4							
59		PIT260K06NEP000084420		PIT260K04NEP000084520		PIT260K01NEP000084620	
60							
61	**TURBINE PM 260**						
62	**Services 501**						
63	Calibrate Flow meter (Gas Turbines)			$0		$0	
64	CW Tunnel Inspection and cleaning (if req'd)	$45,000		$45,000		$45,000	
65	Fire Protection Testing (CT's)						
66	Lube Oil Reservoir Painting/Coating			$0		$0	
67	Helpers	$0					
68	T/G Sandblast incl dust collection	$0				$0	
69	Turbine/Trb Valves Weld/Machining Services	$0				$0	
70	Vac Truck Services	$0					
71	Grind Trb/Gen Bearing Journals or Rebabbit Trb/Gen Bearing Journals	$0		$0		$0	
72	Balance Turbine Spindle			$0		$0	
73	Balance Turbine Stub Shaft						
74	**SUBTOTAL**	**$45,000**	A	**$45,000**	B	**$45,000**	C
75		FEB/MAR/APR		MAY/JUN/JUL/AUG		AUG/SEP/OCT	
76		PIT260K06NEP000084450		PIT260K04NEP000084550		PIT260K01NEP000084650	
77							
78	**TRANSFORMER PM 348**						
79	**Material 201**						
80	Misc Xfmer Parts	$1,000		$1,000		$1,000	
81							
82	**SUBTOTAL**	**$1,000**	✓	**$1,000**	✓	**$1,000**	✓
83		JAN/FEB		FEB/MAR/APR/MAY/JUN		JUN/JUL/AUG	
84		PIT348K06NELORNELLA1		PIT348K04NEP000084520		PIT348K01NEP000084620	
85							
86	**TRANSFORMER PM 348**						
87	**Services 501**						
88							
89							
90	**SUBTOTAL**	**$0**		**$0**		**$0**	
91		JAN/FEB/MAR/APR		MAY/JUN/JUL/AUG		AUG/SEP/OCT	
92		PIT348K06NEP000084401		PIT348K04NEP000084550		PIT348K01NEP000084650	
93							
94	**CORRECTIVE MAINTENANCE** - REPAIR OR REPLACEMENT OF FAILED OR FAILING EQUIP						
95	**BOILER CM 259**						
96	**Material 201**						
97	Air Preheater Misc Parts (seals)	$5,000		$2,000		$2,000	
98	APH Basket Replacements	$175,000		$40,000		$80,000	
99	APH Gearbox						
100	APH Tube Sleeves (W3/4, H8)						
101	APH Tubes Replacement						
102	APH-Channel frame for manual damper and expansion joint (Waianae side AH duct)			$10,000			
103	Attemperator (SH/RH) CV Internals	$20,000					
104	Breaker / Starter Parts	$2,500		$2,500		$2,500	
105	Control Valve Internals/Actuator Parts	$25,000		$25,000		$25,000	
106	Economizer Tube Bend Repl (W6, W5, H8, H9)						
107	Electrical Cables (Bad Insulation)/Cable Trays			$15,000			
108	Expansion Jts (duct)	$25,000		$15,000		$15,000	
109	Expansion Jts (dwncmers, piping)	$15,000		$8,000		$8,000	
110	ERV Stop Valve Repair/Replace			$12,000			

2005 OVERHAUL
NON-LABOR BUDGET

	A	B	D	E	G	H	J
1		KAHE 6 01/15/05 TO 03/		KAHE 4 04/09/05 TO 07/		KAHE 1 07/23/05 TO 09/	
2	PROJECT NAME:	P0000844		P0000845		P0000846	
3		EST'D COST	REV	EST'D COST	REV	EST'D COST	REV
4							
111	ERV Controls						
112	FD Fan Vane Replacement						
113	FDF/IDF Ball Pins	$1,000		$1,000		$1,000	
114	Ignitors	$6,000		$5,000		$5,000	
115	ID Fan Vane parts						
116	Instrumentation (thermocouples, etc.)	$10,000		$5,000		$5,000	
117	Insulation/Refractory	$30,000		$25,000		$25,000	
118	MS Clam Shell Elbow Repl (CE Boilers)			$0		$0	
119	Main Steam Stop Disk			$0		$0	
120	Main Steam Stop Vlv Packing Gld Replace	$500					
121	Main Steam Stop Shaft	$4,500		$0		$0	
122	Main Steam Stop Seal Rings	$2,500		$2,500		$2,500	
123	Observation Ports	$10,000		$15,000		$5,000	
124	Piping Replacements			$15,000			
125	Siding-Blr Structural/Enclosure			$10,000			
126	Silencers						
127	Sootblower (Blr G9B) Parts						
128	Sootblower (Blr IK) Parts	$8,000		$0		$0	
129	Sootblower (APH) Parts (spray nozzle)	$2,000		$2,000		$2,000	
130	Sootblower Wall Box Refractory Replace	$15,000					

2005 OVERHAUL
NON-LABOR BUDGET

	A	B	D	E	G	H	J
1		KAHE 6 01/15/05 TO 03/		KAHE 4 04/09/05 TO 07/		KAHE 1 07/23/05 TO 09/	
2	PROJECT NAME:	P0000844		P0000845		P0000846	
3		EST'D COST	REV	EST'D COST	REV	EST'D COST	REV
4							
166	H2 Sensing Relocate from Brg Enlargemnt			$5,000			
167	Instrumentation			$3,000		$3,000	
168	Intake Bar Screen						
169	Motor Bearings	$3,000		$2,000		$2,000	
170	MOV Parts (Turbine Drn Valves, CW System)	$15,000		$10,000		$10,000	
171							
172	T/G Packing Spring Repl (Brandonized Packing)						
173	[illegible]			$15,000			

2005 OVERHAUL
NON-LABOR BUDGET

	A	B	D	E	G	H	J
1		KAHE 6 01/15/05 TO 03/		KAHE 4 04/09/05 TO 07/		KAHE 1 07/23/05 TO 09/	
2	PROJECT NAME:	P0000844		P0000845		P0000846	
3		EST'D COST	REV	EST'D COST	REV	EST'D COST	REV
4							
217	Condensate Pump OH	$10,000		$10,000		$10,000	
218	Electrical Cables Replace-Motors			$15,000		$10,000	
219	Dissimilar Metal Weld Dutchman-SSH			$15,000			
220	Circ Water Pump Overhaul	$15,000		$15,000		$15,000	
221	Chordal (Blr) Thermocouples			$10,000			
222	Penthouse bends	$5,000					
223	Rear WW Tubes Replace						
224	RH Attemperator Nozzle Replacement						
225	RH Attemperator nozzle/liner Replacement						
226	Reheater Bends Replacement						
227	SH Attemperator Nozzle Replacment	$23,000					
228	SH Attemperator Nozzle/Liner Replacement						
229	Steam Cooled Spacer Tube Expansion Jt.			$5,000			
230	SSH T2 Tubes Replace (K6)	$25,000					
231	SSH/PSH/RSH tube end support castings and Header Handhole Plugs	$10,000		$10,000		$10,000	
232	N2 Blanket for FWHs	$1,000		$1,000		$1,000	
233	**SUBTOTAL**	**$359,500**	A	**$349,000**	B	**$229,000**	C
234		JAN/FEB		FEB/MAR/APR/MAY/JUN		JUN/JUL/AUG	
235		**PIT258K06NEP000084420**		**PIT258K04NEP000084520**		**PIT258K01NEP000084620**	
236							
237	**BOILER PDM 258**						
238	**Outside Services 501**						
239	Blr Chemical Cleaning Services (TFA/Tube Analysis)	$30,000		$30,000		$0	
240	Blr Chemical Cleaning-Frac Tank Rental and Other Support Eqmt.	$10,000		$10,000			
241	BRULS/HiEL	$20,000		$20,000		$20,000	
242	FWH ECT-tube cleaning	$15,000		$15,000		$15,000	
243	FWH ECT-ECT contractor	$20,000		$20,000		$6,000	
244	Motor Repairs	$20,000		$20,000		$20,000	
245	MS to SSH Outlet Hdr Weld (H9)						
246	Xray of Dissimilar Weld Areas			$3,000			
247	WFMT WW Roof Tube bends	$1,000					
248							
249	**SUBTOTAL**	**$116,000**	A	**$118,000**	B	**$61,000**	C
250		FEB/MAR/APR		MAY/JUN/JUL/AUG		AUG/SEP/OCT	
251		**PIT258K06NEP000084450**		**PIT258K04NEP000084550**		**PIT258K01NEP000084650**	
252							
253							
254	**TURBINE PDM 261**						
255	**Material 201**						
256	EH Fluid Flush/Oil Replacement	$8,000		$8,000			
257	EHC(K3/K4) Parts Replace (trb trip devices, etc.)						
258	EH System Servo Valves Replace	$20,000		$20,000			
259	Circulating Water Pumps-Overhaul	$15,000		$35,000			
260	Thermocouple for Generator	$0					
261	Turbine Lube Oil Replace (reservoir)	$5,000		$5,000		$5,000	
262	Turbine Lube Oil Replace (tank for the unit)	$0		$8,000			
263	Generator Stator Wedges			$30,000			
264	**SUBTOTAL**	**$48,000**	A	**$106,000**	B	**$5,000**	C
265		JAN/FEB		FEB/MAR/APR//MAY/JUN		JUN/JUL/AUG	
266		**PIT261K06NEP000084420**		**PIT261K04NEP000084520**		**PIT261K01NEP000084620**	
267							
268	**TURBINE PDM 261**	?					
269	**Services 501**						

2005 OVERHAUL
NON-LABOR BUDGET

	A	B	D	E	G	H	J
1		KAHE 6 01/15/05 TO 03/		KAHE 4 04/09/05 TO 07/		KAHE 1 07/23/05 TO 09/	
2	PROJECT NAME:	P0000844		P0000845		P0000846	
3		EST'D COST	REV	EST'D COST	REV	EST'D COST	REV
4							
270	Clean LO Tank (tank for the unit)	$0		$0		$0	
271	Eddy Current Condenser/Chiller-Contractor	$20,000		$15,000		$20,000	
272	Eddy Current Condenser/Chiller-tube cleaning-Contractor	$15,000		$10,000		$25,000	
273	EH System Hydraulic Rams Refurbish	$20,000		$20,000			
274	EH Fluid Flush (TFA, oil disposal)	$60,000		$60,000			
275	Iris Testing Gen H2 Coolers-Contractor	$0		$0		$0	
276	HP or HP/IP Bore	$0					
277	LP Bore						
278	Generator Bore						
279	Post Weld Heat Treatment Console/Contractor Services						
280	Motor Repairs	$30,000		$25,000		$25,000	
281	NDT Turbine Blades	$0					
282	NDT Generator Retaining Rings	$0		$0			
283	NDT Valves/Steam Chest	$0					
284	Positive Material Identification Services	$0					
285	Steam Path Audit (turbine efficiency)						
286	Generator Inspection/NDT						
287	Generator Field Specialist (support gen repairs, i.e. re-wedging)			$80,000			
288	Gen Voltage Regulator/Rheostat Calibration	$8,000		$8,000		$8,000	
289	Scaffolding to support BRULS/HiEL	$10,000		$10,000		$10,000	
290	Video Probe of Weld Repair						
291	**SUBTOTAL**	**$163,000** (A)		**$228,000** (B)		**$88,000** (C)	
292		FEB/MAR/APR		MAY/JUN/JUL/AUG		AUG/SEP/OCT	
293		**PIT261K06NEP000084450**		**PIT261K04NEP000084550**		**PIT261K01NEP000084650**	
294							
295	**TRANSFORMER PDM 349**						
296	**Material 201**						
297	Transformer Oil Replace (mineral oil)			$0		$0	
298							
299	**SUBTOTAL**	**$0**		**$0**		**$0**	
300		JAN/FEB		FEB/MAR/APR/MAY/JUN		JUN/JUL/AUG	
301		**PIT349K06NEP000084420**		**PIT349K04NEP000084520**		**PIT349K01NEP000084620**	
302							
303	**TRANSFORMER PDM 349**						
304	**Services 501**						
305	Disposal of Xfmer Oil	$0		$0		$0	
306	Main / Aux Trans Testing	$8,500		$8,500		$8,500	
307	**SUBTOTAL**	**$8,500** ✓		**$8,500** ✓		**$8,500** ✓	
308		FEB/MAR/APR		MAY/JUN/JUL/AUG		AUG/SEP/OCT	
309		**PIT349K06NEP000084450**		**PIT349K04NEP000084550**		**PIT349K01NEP000084650**	
310							
312	**TOTAL**	**$1,470,000**		**$1,557,300**		**$942,000**	
313							
314	**TOTAL ALL OVERHAULS**			**$5,936,500**			

2005 OVERHAUL
NON-LABOR BUDGET

Σ(D) = $1,955,700

	A	K	M	N
1		WAIAU 4	09/24/05 TO 12/30/05	
2	PROJECT NAME:	P0000847		
3		EST'D COST	REV	
4				
5	PREVENTIVE MAINTENANCE - AS			
6	CLOS			
7	**BOILER PM 257**			
8	**Material 201**			
9	Boiler Door Gaskets	$5,000		$22,000
10	Boiler Observation Ports	$1,000		$5,300
11	Boiler Ash Waste Treatment (Chemicals)	$1,000		$4,000
12	Dampers	$2,000		$26,000
13	DCS BattRAM	$0		$10,000
14	DCS Power Supply Modules/DCS Cabinet Fans	$30,000		$75,000
15	DCS UPS Batteries/Fans	$1,500		$9,500
16	Draft lines	$500		$2,000
17	Expansion Joints-Ducts/Downcomers			
18	Ignitors	$0		$4,500
19	Instrument Air	$1,000		$4,000
20	O2 Analyzers	$2,000		$8,000
21	Power Operators (service kits)	$3,000		$18,500
22	Safety Valves Section I	$5,000		$20,000
23	Switchgear/MCC/Breaker Parts	$2,500		$10,000
24	Relief Valves Section VIII	$15,000		$45,000
25				$0
26	**SUBTOTAL**	**$69,500** (D)		**$263,800**
27		AUG/SEPT/OCT/NOV		
28		**PIT257W04NEP0000847201**		
29				
30	**BOILER PM 257**			
31	**Outside Services 501**			
32	Draft Lines-scaffolding rental	$1,000		$4,000
33	Stack Inspection and/or Repairs	$0		$55,000
34	Boiler Waste Treat and Disposal	$2,000		$17,000
35	Forklift Rental	$6,000		$24,000
36	Helpers-Outsourcing	$32,000		$100,000
37	Mechanical Tube Cleaning (blr)	$0		$0
38	Power Operators (service outsourcing)			$0
39	PRV (Sec 1 safeties) Contractor	$0		$0
40	Technicians (Outsourcing)	$0		$0
41	**SUBTOTAL**	**$41,000** (D)		**$200,000**
42		OCT/NOV/DEC		
43		**PIT257W04NEP0000847501**		
44				
45	**TURBINE PM 260**			
46	**Material 201**			
47	Generator Gas (H2/CO2)	$1,500		$6,000
48	Generator H2 Seals	$10,000		$10,000
49	Instrumentation	$2,000		$8,000
50	Sand blast grit	$10,000		$10,000
51	T/G Insulation	$5,000		$5,000
52	Turbine Steam (or Water) Seals	$10,000		$10,000
53	Turbine HP Bell Seals Replacement	$25,000		$25,000
54	Turbine Valve Parts	$30,000		$30,000
55	Turbine Seals/Packing	$30,000		$30,000
56	Gen H2 System Valves/Piping Inspect/Replace	$5,000		$11,000
57	**SUBTOTAL**	**$128,500** (D)		**$145,000**
58		AUG/SEP/OCT/NOV		

2005 OVERHAUL
NON-LABOR BUDGET

	A	K	M	N
1		WAIAU 4 09/24/05 TO 12/30/05		
2	PROJECT NAME:	P0000847		
3		EST'D COST	REV	
4				
59		PIT260W04NEP0000846201		
60				
61	**TURBINE PM 260**			
62	**Services 501**			
63	Calibrate Flow meter (Gas Turbines)			$0
64	CW Tunnel Inspection and cleaning (if req'd)	$45,000		$180,000
65	Fire Protection Testing (CT's)			$0
66	Lube Oil Reservoir Painting/Coating	$5,000		$5,000
67	Helpers	$10,000		$10,000
68	T/G Sandblast incl dust collection	$30,000		$30,000
69	Turbine/Trb Valves Weld/Machining Services	$80,000		$80,000
70	Vac Truck Services			$0
71	Grind Trb/Gen Bearing Journals or Rebabbit Trb/Gen Bearing Journals	$30,000		$30,000
72	Balance Turbine Spindle	$10,000		$10,000
73	Balance Turbine Stub Shaft			$0
74	**SUBTOTAL**	**$210,000**		**$345,000**
75		OCT/NOV/DEC		
76		PIT260W04NEP0000847501		
77				
78	**TRANSFORMER PM 348**			
79	**Material 201**			
80	Misc Xfmer Parts	$1,000		$4,000
81				$0
82	**SUBTOTAL**	**$1,000**		**$4,000**
83		AUG/SEP/OCT/NOV		
84		PIT348W04NEP0000847201		
85				
86	**TRANSFORMER PM 348**			
87	**Services 501**			
88				
89				$0
90	**SUBTOTAL**	**$0**		**$0**
91		OCT/NOV/DEC		
92		PIT348W04NEP0000847501		
93				
94	**CORRECTIVE MAINTENANCE** - RI			
95	**BOILER CM 259**			
96	**Material 201**			
97	Air Preheater Misc Parts (seals)	$0		$9,000
98	APH Basket Replacements			$295,000
99	APH Gearbox			$0
100	APH Tube Sleeves (W3/4, H8)	$10,000		$10,000
101	APH Tubes Replacement			$0
102	APH-Channel frame for manual damper and expansion joint (Waianae side AH duct)			
103	Attemperator (SH/RH) CV Internals			$20,000
104	Breaker / Starter Parts	$2,000		$9,500
105	Control Valve Internals/Actuator Parts	$25,000		$100,000
106	Economizer Tube Bend Repl (W6, W5, H8, H9)			$0
107	Electrical Cables (Bad Insulation)/Cable Trays	$10,000		$25,000
108	Expansion Jts (duct)	$16,000		$71,000
109	Expansion Jts (dwncmers, piping)	$5,000		$36,000
110	ERV Stop Valve Repair/Replace			

2005 OVERHAUL
NON-LABOR BUDGET

	A	K	M	N
1		WAIAU 4 09/24/05 TO 12/30/05		
2	PROJECT NAME:	P0000847		
3		EST'D COST	REV	
4				
111	ERV Controls			$0
112	FD Fan Vane Replacement	$0		$0
113	FDF/IDF Ball Pins	$1,000		$4,000
114	Ignitors			$16,000
115	ID Fan Vane parts			$0
116	Instrumentation (thermocouples, etc.)	$5,000		$25,000
117	Insulation/Refractory	$25,000		$105,000
118	MS Clam Shell Elbow Repl (CE Boilers)			$0
119	Main Steam Stop Disk	$2,500		$2,500
120	Main Steam Stop Vlv Packing Gld Replace			$500
121	Main Steam Stop Shaft	$0		$4,500
122	Main Steam Stop Seal Rings	$2,500		$10,000
123	Observation Ports			
124	Piping Replacements			
125	Siding-Blr Structural/Enclosure			
126	Silencers	$12,000		$12,000
127	Sootblower (Blr G9B) Parts			$0
128	Sootblower (Blr IK) Parts	$0		$8,000
129	Sootblower (APH) Parts (spray nozzle)	$2,000		$8,000
130	Sootblower Wall Box Refractory Replace			
131	Sootblower Wall box Replacement	$5,000		$15,000
132	Steam Trap Repairs	$1,200		$6,200
133	Valve Packing	$3,000		$18,000
134	Valves (root, isolation, drain) Replacement	$15,000		$63,000
135	Water Cooled Doors			
136	Water wall tubes/panels	$0		$0
137	**SUBTOTAL**	**$142,200**		**$873,200**
138		AUG/SEP/OCT/NOV		
139		**PIT259W04NEP0000847201**		
140				
141	**BOILER CM 259**			
142	**Outside Services 501**			
143	Scaffolding Svcs to Support Duct Repairs (APH hoppers, GR, Air, Gas.)	$10,000		$45,000
144	Blr Exterior Asbestos Abatement-TURN KEY	$500,000		$500,000
145	Blr Sootblower (IK) Refurbishment	$12,000		$32,000
146	Blr Sootblower (G9B) Refurbishment	$4,000		$4,000
147	Control Valves Refurbish	$10,000		$70,000
	Corrosion Control-Penthouse/Safety Valve			

2005 OVERHAUL
NON-LABOR BUDGET

	A	K	M	N
1		WAIAU 4 09/24/05 TO 12/30/05		
2	PROJECT NAME:	P0000847		
3		EST'D COST	REV	
4				
166	H2 Sensing Relocate from Brg Enlargemnt			$5,000
167	Instrumentation			$6,000
168	Intake Bar Screen			$0
169	Motor Bearings	$2,000		$9,000
170	MOV Parts (Turbine Drn Valves, CW System)	$10,000		$45,000
171				
	T/C Packing Spring Repl/Brandonized			

2005 OVERHAUL
NON-LABOR BUDGET

I	A	K	M	N

2005 OVERHAUL
NON-LABOR BUDGET

	A	K	M	N
1		WAIAU 4 09/24/05 TO 12/30/05		
2	PROJECT NAME:	P0000847		
3		EST'D COST	REV	
4				
270	Clean LO Tank (tank for the unit)	$3,000		$3,000
271	Eddy Current Condenser/Chiller-Contractor	$20,000		$75,000
272	Eddy Current Condenser/Chiller-tube cleaning-Contractor	$15,000		$65,000
273	EH System Hydraulic Rams Refurbish			
274	EH Fluid Flush (TFA, oil disposal)			$120,000
275	Iris Testing Gen H2 Coolers-Contractor	$5,000		$5,000
276	HP or HP/IP Bore	$30,000		$30,000
277	LP Bore	$30,000		$30,000
278	Generator Bore	$30,000		$30,000
279	Post Weld Heat Treatment Console/Contractor Services	$75,000		$75,000
280	Motor Repairs	$10,000		$90,000
281	NDT Turbine Blades	$20,000		$20,000
282	NDT Generator Retaining Rings	$20,000		$20,000
283	NDT Valves/Steam Chest	$10,000		$10,000
284	Positive Material Identification Services			$0
285	Steam Path Audit (turbine efficiency)			$0
286	Generator Inspection/NDT	$20,000		$20,000
287	Generator Field Specialist (support gen repairs, i.e. re-wedging)	$30,000		$110,000
288	Gen Voltage Regulator/Rheostat Calibration	$8,000		$32,000
289	Scaffolding to support BRULS/HiEL	$10,000		
290	Video Probe of Weld Repair			$0
291	**SUBTOTAL**	**$336,000**		**$735,000**
292		OCT/NOV/DEC		
293		**PIT261W04NEP0000847501**		
294				
295	**TRANSFORMER PDM 349**			
296	**Material 201**			
297	Transformer Oil Replace (mineral oil)	$0		$0
298				$0
299	**SUBTOTAL**	**$0**		**$0**
300		AUG/SEP/OCT/NOV		
301		**PIT349W04NEP0000847201**		
302				
303	**TRANSFORMER PDM 349**			
304	**Services 501**			
305	Disposal of Xfmer Oil	$0		$0
306	Main / Aux Trans Testing	$8,500		$34,000
307	**SUBTOTAL**	**$8,500**		**$34,000**
308		OCT/NOV/DEC		
309		**PIT349W04NEP0000847501**		
310				
312	**TOTAL**	**$1,967,200**		**$5,936,500**
313				
314	**TOTAL ALL OVERHAULS**			

2005 OVERHAUL
NON-LABOR BUDGET (Gas Turbines)

Σ(E) = $985,000 Σ(F) = $985,000

PROJECT NAME:	WAIAU 9 1/17/05 to 3/25/05 P0000937 / RKIYABU08 EST'D COST	REV	WAIAU 10 4/25/05 to 7/1/05 P0000938 / RKIYABU20 EST'D COST	REV
PREVENTATIVE MAINTENANCE - ASSOCIATED WITH THE OPENING, INSPECTION, AN CLOSING OF UNIT. WORK DONE ON A TIME CYCLE BAS				
GAS TURBINE PM 272				
Material 201				
Turbine insulation	$3,000		$3,000	
Lubricants, fluids replace (radiator, pumps, etc.)	$7,000		$7,000	
Consumables (filters, gaskets, etc.)	$5,000		$5,000	
Combustion Section (liner, transition pieces)/Turbine parts (bolts)	$60,000		$60,000	
Instrumentation	$3,000		$3,000	
Sand blast grit	$10,000		$10,000	
SUBTOTAL	**$88,000** (E) JAN / FEB PIT272W09NERKIYABU0820		**$88,000** (F) MAR / APR / MAY PIT272W09NERKIYABU20201	
GAS TURBINE PM 272				
Services 501				
Outsourcing of major inpspection	$325,000		$325,000	
Weld repairs/machining services	$60,000		$60,000	
Helpers	$16,000		$16,000	
Flow meter calibration	$2,500		$2,500	
Voltage regulator calibration	$7,000		$7,000	
Fire protection system inspection/servicing	$3,000		$3,000	
Sand blast compressor/turbine parts (outsource)	$25,000		$25,000	

2005 OVERHAUL
NON-LABOR BUDGET (Gas Turbines)

PROJECT NAME:	WAIAU 9 1/17/05 to 3/25/05 P0000937 / RKIYABU08 EST'D COST	REV	WAIAU 10 4/25/05 to 7/1/05 P0000938 / RKIYABU20 EST'D COST	REV
CORRECTIVE MAINTENANCE - REPAIR OR REPLACEMENT OF FAILED OR FAILING EC				
GAS TURBINE CM 274 **Material 201**				
Torque converter parts	$50,000		$50,000	
Valves, piping	$5,000		$5,000	
	$55,000 E JAN / FEB PIT274W09NERKIYABU0820		**$55,000** F MAR / APR / MAY PIT274W10NERKIYABU20201	
GAS TURBINE CM 274 **Outside Services 501**				
Welders	$20,000		$20,000	
Turbine compartment roof side panels	$8,000		$8,000	
SUBTOTAL	**$28,000** E MAR / APR PIT274W09NERKIYABU0850		**$28,000** F JUN / JUL PIT274W10NERKIYABU20501	
TRANSFORMER CM 350 **Material 201**				
SUBTOTAL	**$0**		**$0**	
	JAN / FEB PIT350W09NERKIYABU0820		MAR / APR / MAY PIT350W10NERKIYABU20201	
TRANSFORMER CM 350 **Outside Services 501**				
Transformer bus duct-corrosion control	$8,000		$8,000	
SUBTOTAL	**$8,000** MAR / APR PIT350W09NERKIYABU0850		**$8,000** JUN / JUL PIT350W10NERKIYABU20501	
PREDICTIVE MAINTENANCE - INFORMATION BASED ON ANALYSIS				
GAS TURBINE PDM 273 **Materials 201**				
Generator	$23,000		$23,000	
Generator stator wedges	$21,000		$21,000	
SUBTOTAL	**$44,000** E		**$44,000** F	

2005 OVERHAUL
NON-LABOR BUDGET (Gas Turbines)

PROJECT NAME:	WAIAU 9 1/17/05 to 3/25/05 P0000937 / RKIYABU08 EST'D COST	REV	WAIAU 10 4/25/05 to 7/1/05 P0000938 / RKIYABU20 EST'D COST	REV
	JAN / FEB PIT273W09NERKIYABU0820		MAR / APR / MAY PIT273W10NERKIYABU20201	
GAS TURBINE PDM 273				
Outside Services 501				
Generator retaining rings NDT	$12,000		$12,000	
Compressor/turbine blades/blade rings NDT	$15,000		$15,000	
Generator rotor/stator NDT	$25,000		$25,000	
Generator stator re-wedge	$100,000		$100,000	
Generator	$15,000		$15,000	
Compressor/turbine blades/blade rings repairs	$25,000		$25,000	
Exhaust stack inspection/repairs	$25,000		$25,000	
Motor re-conditioning	$15,000		$15,000	
Generator Testing	$25,000		$25,000	
SUBTOTAL	**$245,000** (E) MAR / APR PIT273W09NERKIYABU0850		**$245,000** (F) JUN / JUL PIT273W10NERKIYABU20501	
TRANSFORMER PDM 349				
Material 201				
Transformer oil (based on test)	$3,500		$3,500	
SUBTOTAL	**$3,500** JAN / FEB PIT349W09NERKIYABU0820		**$3,500** MAR / APR / MAY PIT349W10NERKIYABU20201	
TRANSFORMER PDM 349				
Outside Services 501				
Main / Aux / Start Up Xfmer NDT	$10,000		$10,000	
Transformer oil disposal costs (based on PDM test)	$5,000		$5,000	
SUBTOTAL	**$15,000** MAR / APR PIT349W09NERKIYABU0850		**$15,000** JUN / JUL PIT349W10NERKIYABU20501	
TOTAL	**$1,012,500**		**$1,012,500**	

Hawaiian Electric Company, Inc.
2005 Rate Case Data
Projects - Direct Non-Labor

RA	Prod Oper	Prod Maint	Total
PHS	64,000	0	64,000

— COPY —

INTEROFFICE CORRESPONDENCE

Hawaiian Electric Co., Inc.

January 7, 2005

To: Irene Sekiya

From: Eugene Uemura, Director, Security Division
Alan Cardoza, Captian, Security Division

Subject: HECO Rate Case-Request for Information
NARUC ACCOUNT: 506 – Production Operations

Per Patsy Nanbu's memo of December 21, attached are the responses required for Safety, Security & Facilities, Security Division (HS). Also attached are the supporting documents.

Should you have any questions concerning the attached information, please contact:

Eugene Uemura, Director
Alan Cardoza, Captain
Security Division
Safety, Security & Facilities Department
Phone: Geno: 543-7853
Alan: 543-4385

Mail Stop Code: WAG-HS

Thank you ,

Attatchment

cc: E. Uemura
A. Cardoza

2C. HISTORICAL DATA:

Back in 1996 HECO's substations experienced a rash of copper thefts one break-in ended with a fatality which caused an outage. HECO spent an excessive amount of dollars to replace and repair the damage caused by the criminal.

To prevent this unwanted behavior, HECO installed the necessary tools (i.e. cameras and photo electric beams) at numerous locations.

2E. Over a period of time HECO has increased its surveillance system by adding CCTV cameras, photo electric beams, and access control systems to various sites. Since our Security systems are under constant use (24/7) they eventually started wearing down. In order to maintain a robust system we needed to implement a maintenance program.

POST 9/11

Site security surveys were conducted by Federal and Local government agencies where several locations were identified as critical "MEVA" sites. Company responded by adding more CCTV to these areas to prevent criminal activity. A command center was also established to centrally monitor over 140 cameras.

2F. Security met with a local vendor to discuss a maintenance plan to help keep the cameras on. Vendor stated that the standard industry cost to maintain equipment ran about 5 to 10 percent of existing value of equipment.

Options discuss with vendor:

Levels of Service I, II, and III
Time and Materials
Company Saving

ACTIVITY ALLOCATION:

For HST, WST, KST funds were allocated by priority and response time. These facilities currently have live contract security so limited priority was given to theses locations.

Substations have no security and are vulnerable. To ensure system reliability a higher priority was given to these locations for quicker response time.

SSF	PHS	Security	B30	Prod Oper	508	Non Labor	NPHZZZZZ	933	HST, KST, WST	501	63,999.96	Eugene Uemura, Director & Alan Cardoza, Captain	Yes, see attached spreadsheet	Yes,see attachment	Yes,see attachment	Yes,see attachment	Yes,see attachment	Yes,see attachment
SSF	PHS	Security	B33	T&D	573	Non Labor	NPHZZZZZ	933	PTM	501	63,999.96	Eugene Uemura, Director & Alan Cardoza, Captain	Yes, see attached spreadsheet	Yes,see attachment	Yes,see attachment	Yes,see attachment	Yes,see attachment	Yes,see attachment
SSF	PHS	Security	B39	A&G Maint	932	Non Labor	NPHZZZZZ	933	KNG, WRD, OLP	600	32,000.00	Eugene Uemura, Director & Alan Cardoza, Captain	Yes, see attached spreadsheet	Yes,see attachment	Yes,see attachment	Yes,see attachment	Yes,see attachment	Yes,see attachment

2F

Security System Maintenance Cost Structure Explanation

Presented by Sensormatic Hawaii, 1/06/05
Contact: Teren Watamull, 779-9740, twatumull@sensormatichawaii.com

Summary:

The Mid-Pacific industry average for the standard maintenance of integrated digital security systems is 10% of the installation cost per annum. This average includes all labor to preventively maintain, troubleshoot, repair, replace and restore data for integrated access control and video surveillance systems. The primary driver of cost is that the standard life expectancy of security systems components is 5 years. Additional cost beyond this average could be required for 24/7 or emergency response.

Details:

Each year, because of the life expectancy of security system components, a minimum 10% probability exists that a component will require replacement. The maintenance cost covers all of these costs as well as the labor involved.

To ensure maximum performance and minimize outages of equipment, preventive maintenance in the form of checking, cleaning and replacing ancillary components is included in a maintenance agreement.

Today's security systems are computer based. The software must generally be upgraded at least once a year to ensure an optimal performance and compliance with developing IT standards and requirements. The maintenance agreement covers such activities.

Given the mission critical nature of security systems, anytime an outage occurs, the security system provider must ensure the continuous functionality of security at the facility including the restoring of any lost or damaged data due to the outage. The labor cost for this service is included in the maintenance agreement.

Summary:

Given the life expectancy of security equipment and the mission critical nature of these systems, the Mid-Pacific industry average for the standard maintenance of integrated digital security systems is 10% of the installation cost per annum

Sheet1

DENT	VALUED	REPORTING PERSON	COST TO REPLACE
	$ 5,320.74	Tom Harrington	COST RECOVERED
	$ 60,000.00	American Line Builders	DNA
t	$ 3,000.00	Gordon Mattos	$ 1,500
:	$ 2,019.00	Gordon Mattos	$ 2,019
	$ 60.00	Gordon Mattos	$ 4,500
	$ 30.00	Jerry Donaldson	$ 4,500
	$ 60.00	Nosaka, Leroy	$ 4,500
	$ 30.00	Roy Yokono	$ 4,500
	UNK	Substation	
	$ 120.00	BURNS	$ 4,500
	$ 60.00	Grounds Keeper	$ 1,000
	$ 300.00	Rodney Joseph	
	$ 60.00	Roy Yokono	$ 3,000
	$ 60.00	Robert Bull	$ 5,000
	$ 200.00	Frank Nacino	
	$ 200.00	Robert Souza	$ 4,500
	$ 200.00	CSS	
	$ 2,000.00	Substation	
	$ 200.00	AL BASCON	$ 4,500
	$ 200.00	AL BASCON	$ 4,500
S	$ 4,000.00	G. MATTOS	
		SUBSTATION	
EN		G. MATTOS	
	$ 50.000	G. MATTOS	
ed			
G		ED LEWIS	
		SILVIA MC CRAW	
ERTY		PAT MIZUTA	
	$ 75.00		$ 48,519

	A	B	C	E	F	H	I	J	K	L	M	N	O
1	**Hawaiian Electric Company, Inc.**												
2	**Rate Case 2005 - Other Production O&M**												
3	**Non Projects - Non-Labor > $50,000**												
4													
5	**Dept**	**RA**	**Resp Area**	**Acct Blk Descr**	**NARUC**	**Proj**	**Act**	**Loc**	**EE**	**FY05**	**Description/Line Item**	**Basis for Budget**	**Comments**
6	Production	PIA	Admin-PS Services	Prod Oper	506	NPIZZZZZ	240	WST	462	$ 249,419	ITS PC Software	From vendor quotes or historical cost.	Reference CA-IR 2, Attachment 3B, Page 6 of 21.
7	Production	PIB	Admin-PS O&M	Prod Oper	506	NPIZZZZZ	240	WST	462	$ 82,035	ITS PC Software	From vendor quotes or historical cost.	Reference CA-IR 2, Attachment 3A, Page 3 of 29.
8	Production	PIB	Admin-PS O&M	Prod Maint	514	NPIZZZZZ	720	PPM	501	$ 60,000	Consultant Fees	Estimated based on past consultant costs	Reference CA-IR 2, Attachment 3A, Page 3 of 29.
9	Production	PIC	Power Purchase	Prod Oper	557	NPIZZZZZ	120	PHE	502	$ 50,004	Outside Services-Legal	Estimated 2005 Budget by taking one-half of $100K budgeted for 2004. Expected to incur less in 2005 than 2004. 2004 Budget was based on AES refinancing/Amendment No. 2 work.	Reference CA-IR 2, Attachment 3B, Page 19 of 21.
10	Production	PIK	Kahe Stn Oper	Prod Oper	502	NPIZZZZZ	242	KST	201	$ 106,800	Kahe Diesel and Boiler Plant lube oil	Estimated based on recent years expenditures.	Reference CA-IR 2, Attachment 3A, Page 8 of 29.
11	Production	PIK	Kahe Stn Oper	Prod Oper	502	NPIZZZZZ	242	KST	501	$ 285,732	Kahe City Water	Estimated based on recent years expenditures.	Reference CA-IR 2, Attachment 3A, Page 7 of 29.
12	Production	PIK	Kahe Stn Oper	Prod Oper	502	NPIZZZZZ	248	KST	201	$ 645,600	Kahe Demin and Waste Water Chemicals	Estimated based on recent years expenditures.	Reference CA-IR 2, Attachment 3A, Page 8 of 29.
13	Production	PIK	Kahe Stn Oper	Prod Oper	505	NPIZZZZZ	243	KST	201	$ 137,400	Kahe Generator Gases and Turbine Plant Lube oil	Estimated based on recent years expenditures.	Reference CA-IR 2, Attachment 3A, Page 8 of 29.
14	Production	PIL	Kahe Stn Maint	Prod Oper	506	NPIZZZZZ	875	KST	501	$ 60,004	Kahe CEMS Maintenance and Kahe 6 Source Test	Quote and previous years cost	See Purchase Order Number P53372. PO for $47818.65. Budget included contingency for unexpected Maintenance.
15	Production	PIL	Kahe Stn Maint	Prod Oper	506	NPIZZZZZ	878	KST	501	$ 69,000	Kahe Solid and Hazardous Waste Disposal	Estimated based on recent years expenditures.	Reference CA-IR 2, Attachment 3A, Page 9 of 29.
16	Production	PIL	Kahe Stn Maint	Prod Oper	506	NPIZZZZZ	931	KST	501	$ 58,800	Kahe Grounds keeping	Contract	See Purchase Order Number P55511. That PO is for six months. One year = 2 x $29,400 = $58,800.
17	Production	PIL	Kahe Stn Maint	Prod Oper	506	NPIZZZZZ	934	KST	501	$ 57,600	Kahe Janitorial Services	Contract	See Purchase Order Number P47761. One year = 3 x $19,133.20 = $57,399.00.
18	Production	PIL	Kahe Stn Maint	Prod Maint	511	NPIZZZZZ	265	KST	201	$ 59,000	Kahe Misc Station Common Areas Material	Trended costs and expenditure for roadway repairs based on past actual costs	Reference CA-IR 2, Attachment 3A, Page 13 of 29.
19	Production	PIL	Kahe Stn Maint	Prod Maint	511	NPIZZZZZ	265	KST	501	$ 538,400	Kahe Misc Station Common Areas Outside Services	Trended Expenditures and expenditures for Structural painting, turbine deck drain repair, turbine deck maintenance, and other uniquely identified station work based on past actual cost	Reference CA-IR 2, Attachment 3A, Page 10 of 29.
20	Production	PIL	Kahe Stn Maint	Prod Maint	512	NPIZZZZZ	257	KST	201	$ 162,000	Kahe Boiler Preventive Maintenance Material	Trended Expenditures and expenditure for one rebuilt boiler feed pump volute based on past actual cost	Reference CA-IR 2, Attachment 3A, Page 12 of 29.
21	Production	PIL	Kahe Stn Maint	Prod Maint	512	NPIZZZZZ	259	KST	201	$ 299,000	Kahe Boiler Corrective Maintenance Material	Trended Expenditures and expenditures for plant fence repairs, soot blower repairs and burner tip replacement based on past actual costs	Reference CA-IR 2, Attachment 3A, Page 13 of 29.
22	Production	PIL	Kahe Stn Maint	Prod Maint	512	NPIZZZZZ	269	KST	501	$ 210,000	Kahe Fuel Feed System Preventive Maintenance Outside Services	Expenditure for fuel tank clean and inspection based on past actual costs.	Reference CA-IR 2, Attachment 3A, Page 14 of 29.

CA-IR-2
DOCKET NO. 04-0113
HECO T-6
ATTACHMENT 5
PAGE 1 OF 29

	A	B	C	E	F	H	I	J	K	L	M	N	O
1	**Hawaiian Electric Company, Inc.**												
2	**Rate Case 2005 - Other Production O&M**												
3	**Non Projects - Non-Labor > $50,000**												
4													
5	**Dept**	**RA**	**Resp Area**	**Acct Blk Descr**	**NARUC**	**Proj**	**Act**	**Loc**	**EE**	**FY05**	**Description/Line Item**	**Basis for Budget**	**Comments**
23	Production	PIL	Kahe Stn Maint	Prod Maint	513	NPIZZZZZ	262	KST	201	$ 305,000	Kahe Electrical Plant Corrective Maintenance Material	Trended Expenditures and expenditures for Travel Screen overhaul, and condenser scrapers based on past actual costs and estimate for travel screen wash water piping.	Reference CA-IR 2, Attachment 3A, Page 13 of 29.
24	Production	PIL	Kahe Stn Maint	Prod Maint	513	NPIZZZZZ	262	KST	501	$ 380,000	Kahe Electrical Plant Corrective Maintenance Outside Services	Trended Expenditures and expenditure for basin structural repairs, condenser cleaning, and basin dredging based on past actual costs and estimated cathodic protection repairs	Reference CA-IR 2, Attachment 3A, Page 11 of 29.
25	Production	PIL	Kahe Stn Maint	Prod Maint	514	NPIZZZZZ	268	KST	201	$ 132,000	Kahe Common Miscellaneous Equipment Corrective Maintenance Outside Services	Averaged Expenditure	Reference CA-IR 2, Attachment 3A, Page 12 of 29.
26	Production	PIN	Honolulu Stn Maint	Prod Oper	506	NPIZZZZZ	878	HST	501	$ 94,000	Honolulu Solid and Hazardous Waste Disposal	Estimated based on recent years expenditures.	Reference CA-IR 2, Attachment 3A, Page 17 of 29.
27	Production	PIN	Honolulu Stn Maint	Prod Oper	506	NPIZZZZZ	934	HST	501	$ 51,600	Honolulu Janitorial Services	Contract	See Purchase Order Number P47760. One year = 3 x $17,304.04 = $51,912.12
28	Production	PIN	Honolulu Stn Maint	Prod Maint	511	NPIZZZZZ	265	HST	501	$ 226,800	Honolulu Misc Station Common Areas Outside Services	Trended Expenditures and expenditures for building repairs, deck plating repairs, and other uniquely identified station work based on past actual cost	Reference CA-IR 2, Attachment 3A, Page 18 of 29.
29	Production	PIN	Honolulu Stn Maint	Prod Maint	512	NPIZZZZZ	258	H09	201	$ 400,000	Honolulu 9 Boiler Chemical Clean	Estimate based on other Chemical cleans and verbal quote for additional equipment for HPP	Reference CA-IR 2, Attachment 3A, Page 21 of 29.
30	Production	PIN	Honolulu Stn Maint	Prod Maint	512	NPIZZZZZ	259	HST	201	$ 179,000	Honolulu Boiler Corrective Maintenance Material	Trended Expenditures and expenditures for rebuilt boiler feed pump volute and burner tip replacement based on past actual costs	Reference CA-IR 2, Attachment 3A, Page 19 of 29.
31	Production	PIN	Honolulu Stn Maint	Prod Maint	512	NPIZZZZZ	270	HST	501	$ 285,000	Honolulu Fuel feed System Predictive Maintenance Outside Services	Iwilei Pipeline pigging estimate on verbal quote from vendor	Reference CA-IR 2, Attachment 3A, Page 17 of 29.
32	Production	PIN	Honolulu Stn Maint	Prod Maint	513	NPIZZZZZ	260	HST	501	$ 80,000	Honolulu Electrical Plant Preventive Maintenance Outside Services	Estimate to overhaul on Clr Water pump based on verbal quote from vendor for similar pump	Reference CA-IR 2, Attachment 3A, Page 18 of 29.
33	Production	PIN	Honolulu Stn Maint	Prod Maint	513	NPIZZZZZ	262	HST	501	$ 256,000	Honolulu Electrical Plant Corrective Maintenance Outside Services	Trended Expenditures and expenditure for condenser cleaning, condenser corrosion control and Feedwater heater asbestos removal based on past actual costs and estimated cathodic protection repairs	Reference CA-IR 2, Attachment 3A, Page 18 of 29.
34	Production	PIO	Operations Admin	Prod Oper	506	NPIZZZZZ	877	WST	501	$ 284,600	Clean Island Council and Honolulu Harbor Fees	Clean Island Council fees based on contract and Honolulu Harbor Fees based on past expenditures	See Purchase Order Number P46576. PO is for one years of Clean Island Council Services. Balance of this line item is for Honolulu Harbor fees which are estimated. Reference CA-IR 2, Attachment 3A, Page 22 of 29.
35	Production	PIW	Waiau Stn Oper	Prod Oper	502	NPIZZZZZ	242	WST	201	$ 60,000	Waiau Propane and Boiler Plant lube oil	Estimated based on recent years expenditures.	Reference CA-IR 2, Attachment 3A, Page 25 of 29.

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lumber P49652 for Waiau Power ther Waiau 72 for one year. are 63.4% of that
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reed control costs umber P50892 at 81,120 per year. $1,009,004 tachment 3A,
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1	**Hawaiian Electric Company, Inc.**												
2	**Rate Case 2005 - Other Production O&M**												
3	**Non Projects - Non-Labor > $50,000**												
4													
5	**Dept**	**RA**	**Resp Area**	**Acct Blk Descr**	**NARUC**	**Proj**	**Act**	**Loc**	**EE**	**FY05**	**Description/Line Item**	**Basis for Budget**	**Comments**
50	Production	PIX	Waiau Stn Maint	Prod Maint	514	NPIZZZZZ	268	WST	501	$ 145,000	Waiau Station Common Miscellaneous Equipment Corrective Maintenance	Expenditure for sludge drying bed renewal and Gantry Crane repairs based on past actual costs	Reference CA-IR 2, Attachment 3A, Page 28 of 29.
51	Comp & Ben	PFC	Compensation	Prod Oper	506	NPFZZZZZ	723	PPO	900	$ 229,058	Merit Recognition Program	Amt is adjustment in Rate Case (will not claim). See HECO-616, Docket No. 04-0113.	Reference CA-IR 2, Attachment 3G, Page 1 of 2.
52	Environ	PJB	Air Quality & Noise	Prod Oper	506	NPJZZZZZ	875	KST	501	$ 484,000	Emission fees	Based on fuel consumption forecast & emission fee calculations provided by DOH.	Reference CA-IR 2, Attachment 3C, Page 5 of 13.
53	Environ	PJB	Air Quality & Noise	Prod Oper	506	NPJZZZZZ	875	WST	501	$ 300,000	Emission fees	Based on fuel consumption forecast & emission fee calculations provided by DOH.	Reference CA-IR 2, Attachment 3C, Page 5 of 13.
54	Environ	PJW	Water & Haz Mat	Prod Oper	506	NPJZZZZZ	876	HST	508	$ 86,600	Outside Services-Environmental (majority is for NPDES 316(b) Study, $75K per station)	Proposal received from EPRI plus additional amount for the collection of baseline data.	Reference CA-IR 2, Attachment 3C, Page 11 of 13.
55	Environ	PJW	Water & Haz Mat	Prod Oper	506	NPJZZZZZ	876	KST	508	$ 104,820	Outside Services-Environmental (majority is for NPDES 316(b) Study, $75K per station)	Proposal received from EPRI plus additional amount for the collection of baseline data.	Reference CA-IR 2, Attachment 3C, Page 11 of 13.
56	Environ	PJW	Water & Haz Mat	Prod Oper	506	NPJZZZZZ	876	WST	508	$ 103,000	Outside Services-Environmental (majority is for NPDES 316(b) Study, $75K per station)	Proposal received from EPRI plus additional amount for the collection of baseline data.	Reference CA-IR 2, Attachment 3C, Page 11 of 13.
57	Ind Rel	PPA	Admin-Ind Rel	Prod Oper	506	NPPZZZZZ	723	PPO	900	$ 80,640	Ho'okina Award	Assume that all employees will receive award ($200 per employee) & split by department, according to actual number of employees that qualify at the time when budget was prepared.	Reference CA-IR 2, Attachment 3M, Page 3 of 3.
58	Info Tech	PEZ	ISD Chargeback	Prod Oper	500	NPYZZZZZ	201	WST	451	$ 103,512	Information System Expense-Production & Development	HECO's IT costs are allocated to functional area code blocks via the IT Costing System. ITS Project Manager goes through PEZ allocation model.	Reference CA-IR 2, Attachment 3F, Page 3 of 40.
59	Info Tech	PEZ	ISD Chargeback	Prod Oper	502	NPIZZZZZ	242	KST	451	$ 82,848	Information System Expense-Production & Development	HECO's IT costs are allocated to functional area code blocks via the IT Costing System. ITS Project Manager goes through PEZ allocation model.	Reference CA-IR 2, Attachment 3F, Page 3 of 40.
60	Info Tech	PEZ	ISD Chargeback	Prod Oper	506	NPIZZZZZ	240	WST	451	$ 500,835	Information System Expense-Production & Development	HECO's IT costs are allocated to functional area code blocks via the IT Costing System. ITS Project Manager goes through PEZ allocation model.	Reference CA-IR 2, Attachment 3F, Page 3 of 40.
61	Info Tech	PEZ	ISD Chargeback	Prod Oper	506	NPJZZZZZ	875	HST	451	$ 84,060	Information System Expense-Production & Development	HECO's IT costs are allocated to functional area code blocks via the IT Costing System. ITS Project Manager goes through PEZ allocation model.	Reference CA-IR 2, Attachment 3F, Page 3 of 40.
62	Info Tech	PEZ	ISD Chargeback	Prod Maint	514	NPIZZZZZ	256	WST	451	$ 440,116	Information System Expense-Production & Development	HECO's IT costs are allocated to functional area code blocks via the IT Costing System. ITS Project Manager goes through PEZ allocation model.	Reference CA-IR 2, Attachment 3F, Page 3 of 40.
63	Legal	PNL	Land & Rights of Way	Prod Oper	507	NPNLZZZZ	926	PPO	570	$ 77,160	Rent Expense - BP Pipeline & Energy Corridor	Based on lease agreements.	Reference CA-IR 2, Attachment 3K, Page 2 of 12.
64	Plng & Engr	PYA	Admin-Plng & Engr	Prod Oper	500	NPYZZZZZ	211	WST	901	$ 900,000	Amortization of Kahe 7 Project Costs	Agreed upon write-off with the PUC.	Reference CA-IR 2, Attachment 3D, Page 4 of 7.
65	Plng & Engr	PYA	Admin-Plng & Engr	Prod Oper	557	NPYZZZZZ	121	PHE	901	$ 302,244	Amortization of Waiau Well Water	Agreed upon write-off with the PUC.	Reference CA-IR 2, Attachment 3D, Page 4 of 7.

CA-IR-2
DOCKET NO. 04-0113
HECO T-6
ATTACHMENT 5
PAGE 4 OF 29

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Basis for Budget	**Comments**
g Arrangement consultant cost was based & cost for similar projects.	Reference CA-IR 2, Attachment 3D, Page 5 of 7.
mate (cost for similar projects).	Reference CA-IR 2, Attachment 3D, Page 5 of 7.
s a week at the facility. Amount was from ss.	Reference CA-IR 2, Attachment 3H, Page 7 of 8.
s a week at the facility. Amount was from ss.	Reference CA-IR 2, Attachment 3H, Page 7 of 8.
s a week at the facility. Amount was from ss.	Reference CA-IR 2, Attachment 3H, Page 7 of 8.
ent for ESA Phase II project.	Reference CA-IR 2, Attachment 3E, Page 3 of 5.
un Power for Schools photovoltaic iblic school rooftops (about $20K per Forecasted about $75K for 3-4 05.	Reference CA-IR 2, Attachment 3I, Page 2 of 2.
rent Kahe wind monitoring effort. hat could be equated to the biomass stimated at $66K. Biomass crop resource mated at $35K based on past integrated nent studies.	Reference CA-IR 2, Attachment 3I, Page 2 of 2.

WP3 -1A
Page : 1

Purchase Order Number: P53372
Change Order:
Change Order Date:

Buyer: KIMMELL II,JOHN
Phone No.: 543-4236
Fax No.: 543-4292
E-Mail: JKIMMELL@HEI.COM

eight Terms: NOT APPLICABLE
yment Terms: Net 30
iginal Purchase Order Date: 07/29/03

It of chase	Unit Price Without Tax	Extended Price Including Tax
NA	47816.6500	47816.6500

Authorized Signature

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P53372
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HEI.COM
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Extended
Price Including
Tax
47816.65
3 of 3
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WP3 -1A
Page : 1

Purchase Order Number: P55511
Change Order:
Change Order Date:

INC.

Buyer: KIMMELL II,JOHN
Phone No.: 543-4236
Fax No.: 543-4292
E-Mail: JKIMMELL@HEI.COM

INC.

Freight Terms: NOT APPLICABLE
Payment Terms: Net 30
0-0001 Original Purchase Order Date: 10/10/03

ntity dered	Unit of Purchase	Unit Price Without Tax	Extended Price Including Tax
0.00	NA	29400.0000	29400.0000

BY Tommy Vigona for John Kimmell
Authorized Signature

WP3 -1A
Page : 2

Order Number: P55511
Change Order:
ge Order Date:

KIMMELL II,JOHN
: 543-4236
543-4292
JKIMMELL@HEI.COM

NOT APPLICABLE
Net 30
se Order Date: 10/10/03

Unit Without Tax	Extended Price Including Tax

ature for John Pinnell
horized Signature

WP3 -1A
Page : 2

ase Order Number: P47761
Change Order:
ange Order Date:

: KIMMELL II,JOHN
No.: 543-4236
: 543-4292
: JKIMMELL@HEI.COM

ms: NOT APPLICABLE
MS: Net 30
rchase Order Date: 02/12/03

Unit ice Without Tax	Extended Price Including Tax

Authorized Signature

WP3 -1A
Page : 3

Order Number: P47761
Change Order:
ge Order Date:

KIMMELL II, JOHN
1 543-4236
543-4292
JKIMMELL@HEI.COM

NOT APPLICABLE
Net 30
ase Order Date: 02/12/03

Unit Without Tax	Extended Price Including Tax

uthorized Signature

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age : 4
mber: P47761
rder:
Date:
L 11 JOHN
36
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LLSHEI.COM

CABLE
Date: 02/12/03

Extended
Price Including
Tax

57399.60
4 of 4

Signature

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Page : 1

Purchase Order Number: P47160
Change Order:
Change Order Date:

Buyer: KIMMELL II, JOHN
Phone No.: 543-4236
Fax No.: 543-4292
E-Mail: JKIMMELL@HEI.COM

Freight Terms: NOT APPLICABLE
Payment Terms: Net 30
Original Purchase Order Date: 02/12/03

Part of Purchase	Unit Price Without Tax	Extended Price Including Tax
1A	17304.0400	17304.0400
1A	17304.0400	17304.0400
1A	17304.0400	17304.0400

Authorized Signature

2
P47760
02/12/03
ended
including
fax

WP3 -1A
Page : 3

se Order Number: P47160
Change Order:
ange Order Date:

KINNELL II,JOHN
No.: 543-4256
: 548-4292
: JKINNELL@HEI.COM

ns: NOT APPLICABLE
M: Net 30
chase Order Date: 02/12/03

Unit Price Without Tax	Extended Price Including Tax

Authorized Signature

WP3 -1A
Page : 1

Number: P46576
Order:
Date:

ELL II,JOHN
4236
4292
MELL@REI.COM

PLICABLE
1
er Date: 01/10/03

	Extended Price Including Tax
	139000.0000

Signature

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nber: P46576
der:
Date:

L ll,JOHN
36
92
LL@HEI.COM

CABLE

Date: 01/10/03

Extended Price Including Tax

ignature

1	P49652	CHN	COM	04/08/03	Extended Investing Tax	43387.2400	43387.2400	43387.2400	

WP3 -1A
Page : 2

Number: P49652
Order:
Date:

WELL 11, JOHN
-4236
-4292
WELLONE, COM

PLICABLE
TO
Date: 04/08/03

Extended
Prime Including
Tax

Signature

WP3 -1A
Page : 1

chase Order Number: P50892
Change Order:
Change Order Date:

er: KIMMELL II,JOHN
ne No.: 543-4236
No.: 543-4292
ail: JKIMMELL@HEI.COM

erms: NOT APPLICABLE
erms: Net 30
Purchase Order Date: 05/14/03

Unit Price Without Tax	Extended Price Including Tax
50000.0000	50000.0000

Authorized Signature

WP3 -1A
Page : 3

hase Order Number: P50892
Change Order:
Change Order Date:

er: KIMMELL II,JOHN
ne No.: 543-4236
No.: 543-4292
ail: JKIMMELL@HEI.COM

erms: NOT APPLICABLE
erms: Net 30
Purchase Order Date: 05/14/03

Unit Price Without Tax	Extended Price Including Tax
hase Order: Page: 3 of 3	50000.00

Authorized Signature

Hawaiian Electric Company, Inc.
Rate Case 2005 - Other Production O&M
Projects - Non-Labor > $50,000

Proj Description	Proj	Dept	RA	Resp Area	Acct Blk	Acct Blk Descr	NARUC	Exp Class	Act	Loc	EE	FY05	Description/Line Item	Basis for Budget	Comments
W9 Major Inspection	P0000937	Production	PIT	Traveling Maintenance	B31	Prod Maint	553	Non-Labor	272	W09	201	$ 88,000	Waiau 9 Overhaul Gas Turbine Preventive Maintenance Material	Based on vendor quotes and estimates	Reference CA-IR 2, Attachment 4B Page 14 of 16.
W9 Major Inspection	P0000937	Production	PIT	Traveling Maintenance	B31	Prod Maint	553	Non-Labor	272	W09	501	$ 525,000	Waiau 9 Overhaul Gas Turbine Preventive Maintenance Outside Services	Based on vendor quotes and estimates	Reference CA-IR 2, Attachment 4B Page 14 of 16.
W9 Major Inspection	P0000937	Production	PIT	Traveling Maintenance	B31	Prod Maint	553	Non-Labor	273	W09	501	$ 245,000	Waiau 9 Overhaul Gas Turbine Predictive Maintenance Outside Services	Based on vendor quotes and estimates	Reference CA-IR 2, Attachment 4B Page 16 of 16.
W9 Major Inspection	P0000937	Production	PIT	Traveling Maintenance	B31	Prod Maint	553	Non-Labor	274	W09	201	$ 55,000	Waiau 9 Overhaul Gas Turbine Corrective Maintenance Material	Based on vendor quotes and estimates	Reference CA-IR 2, Attachment 4B Page 15 of 16.
W10 Major Inspection	P0000938	Production	PIT	Traveling Maintenance	B31	Prod Maint	553	Non-Labor	272	W10	201	$ 88,000	Waiau 10 Overhaul Gas Turbine Preventive Maintenance Material	Based on vendor quotes and estimates	Reference CA-IR 2, Attachment 4B Page 14 of 16.
W10 Major Inspection	P0000938	Production	PIT	Traveling Maintenance	B31	Prod Maint	553	Non-Labor	272	W10	501	$ 525,000	Waiau 10 Overhaul Gas Turbine Preventive Maintenance Outside Services	Based on vendor quotes and estimates	Reference CA-IR 2, Attachment 4B Page 14 of 16.
W10 Major Inspection	P0000938	Production	PIT	Traveling Maintenance	B31	Prod Maint	553	Non-Labor	273	W10	501	$ 245,000	Waiau 10 Overhaul Gas Turbine Predictive Maintenance Outside Services	Based on vendor quotes and estimates	Reference CA-IR 2, Attachment 4B Page 16 of 16.
W10 Major Inspection	P0000938	Production	PIT	Traveling Maintenance	B31	Prod Maint	553	Non-Labor	274	W10	201	$ 55,000	Waiau 10 Overhaul Gas Turbine Corrective Maintenance Material	Based on vendor quotes and estimates	Reference CA-IR 2, Attachment 4B Page 15 of 16.
Kahe 2 Overhaul (2004)	P0000650	Production	PIT	Traveling Maintenance	B31	Prod Maint	512	Non-Labor	257	K02	501	$ 168,000	Kahe 2 Overhaul Boiler Preventive Maintenance Outside Services	Estimates based on experience. Anticipated carry over from end of year 2004 overhaul.	
Kahe 2 Overhaul (2004)	P0000650	Production	PIT	Traveling Maintenance	B31	Prod Maint	512	Non-Labor	258	K02	501	$ 52,500	Kahe 2 Overhaul Boiler Predictive Maintenance Outside Services	Estimates based on experience. Anticipated carry over from end of year 2004 overhaul.	
Kahe 2 Overhaul (2004)	P0000650	Production	PIT	Traveling Maintenance	B31	Prod Maint	512	Non-Labor	259	K02	501	$ 63,750	Kahe 2 Overhaul Boiler Corrective Maintenance Outside Services	Estimates based on experience. Anticipated carry over from end of year 2004 overhaul.	
Kahe 2 Overhaul (2004)	P0000650	Production	PIT	Traveling Maintenance	B31	Prod Maint	513	Non-Labor	260	K02	501	$ 107,250	Kahe 2 Overhaul Turbine Preventive Maintenance Outside Services	Estimates based on experience. Anticipated carry over from end of year 2004 overhaul.	
Kahe 2 Overhaul (2004)	P0000650	Production	PIT	Traveling Maintenance	B31	Prod Maint	513	Non-Labor	261	K02	501	$ 82,500	Kahe 2 Overhaul Turbine Predictive Maintenance Outside Services	Estimates based on experience. Anticipated carry over from end of year 2004 overhaul.	
Kahe 6 Overhaul (2005)	P0000844	Production	PIT	Traveling Maintenance	B31	Prod Maint	512	Non-Labor	257	K06	201	$ 73,000	Kahe 6 Overhaul Boiler Preventive Maintenance Material	Based on costs for similar scope of work for past overhauls	Reference CA-IR 2, Attachment 4B Page 2 of 16.
Kahe 6 Overhaul (2005)	P0000844	Production	PIT	Traveling Maintenance	B31	Prod Maint	512	Non-Labor	257	K06	501	$ 53,000	Kahe 6 Overhaul Boiler Preventive Maintenance Outside Services	Based on costs for similar scope of work for past overhauls	Reference CA-IR 2, Attachment 4B Page 2 of 16.
Kahe 6 Overhaul (2005)	P0000844	Production	PIT	Traveling Maintenance	B31	Prod Maint	512	Non-Labor	258	K06	201	$ 359,500	Kahe 6 Overhaul Boiler Predictive Maintenance Material	Based on costs for similar scope of work for past overhauls	Reference CA-IR 2, Attachment 4B Page 6 of 16.

Class	Act	Loc	EE	FY05	Description/Line Item	Basis for Budget	Comments
Labor	258	K06	501	$ 116,000	Kahe 6 Overhaul Boiler Predictive Maintenance Outside Services	Based on costs for similar scope of work for past overhauls	Reference CA-IR 2, Attachment 4B Page 6 of 16.
Labor	259	K06	201	$ 383,000	Kahe 6 Overhaul Boiler Corrective Maintenance Material	Based on costs for similar scope of work for past overhauls	Reference CA-IR 2, Attachment 4B Page 4 of 16.
Labor	259	K06	501	$ 75,000	Kahe 6 Overhaul Boiler Corrective Maintenance Outside Services	Based on costs for similar scope of work for past overhauls	Reference CA-IR 2, Attachment 4B Page 4 of 16.
-Labor	261	K06	501	$ 163,000	Kahe 6 Overhaul Turbine Predictive Maintenance Outside Services	Based on costs for similar scope of work for past overhauls	Reference CA-IR 2, Attachment 4B Page 7 of 16.
-Labor	262	K06	201	$ 84,500	Kahe 6 Overhaul Turbine Corrective Maintenance Material	Based on costs for similar scope of work for past overhauls	Reference CA-IR 2, Attachment 4B Page 5 of 16.
-Labor	262	K06	501	$ 55,000	Kahe 6 Overhaul Turbine Corrective Maintenance Outside Services	Based on costs for similar scope of work for past overhauls	Reference CA-IR 2, Attachment 4B Page 5 of 16.
-Labor	257	K04	201	$ 84,800	Kahe 4 Overhaul Boiler Preventive Maintenance Material	Based on costs for similar scope of work for past overhauls	Reference CA-IR 2, Attachment 4B Page 2 of 16.
-Labor	257	K04	501	$ 59,000	Kahe 4 Overhaul Boiler Preventive Maintenance Outside Services	Based on costs for similar scope of work for past overhauls	Reference CA-IR 2, Attachment 4B Page 2 of 16.
-Labor	258	K04	201	$ 349,000	Kahe 4 Overhaul Boiler Predictive Maintenance Material	Based on costs for similar scope of work for past overhauls	Reference CA-IR 2, Attachment 4B Page 6 of 16.
-Labor	258	K04	501	$ 118,000	Kahe 4 Overhaul Boiler Predictive Maintenance Outside Services	Based on costs for similar scope of work for past overhauls	Reference CA-IR 2, Attachment 4B Page 6 of 16.
-Labor	259	K04	201	$ 246,000	Kahe 4 Overhaul Boiler Corrective Maintenance Material	Based on costs for similar scope of work for past overhauls	Reference CA-IR 2, Attachment 4B Page 4 of 16.
-Labor	259	K04	501	$ 200,000	Kahe 4 Overhaul Boiler Corrective Maintenance Outside Services	Based on costs for similar scope of work for past overhauls	Reference CA-IR 2, Attachment 4B Page 4 of 16.
-Labor	261	K04	201	$ 106,000	Kahe 4 Overhaul Turbine Predictive Maintenance Material	Based on costs for similar scope of work for past overhauls	Reference CA-IR 2, Attachment 4B Page 6 of 16.
-Labor	261	K04	501	$ 228,000	Kahe 4 Overhaul Turbine Predictive Maintenance Outside Services	Based on costs for similar scope of work for past overhauls	Reference CA-IR 2, Attachment 4B Page 7 of 16.
-Labor	262	K04	201	$ 88,500	Kahe 4 Overhaul Turbine Corrective Maintenance Material	Based on costs for similar scope of work for past overhauls	Reference CA-IR 2, Attachment 4B Page 5 of 16.
-Labor	257	K01	201	$ 66,500	Kahe 1 Overhaul Boiler Preventive Maintenance Material	Based on costs for similar scope of work for past overhauls	Reference CA-IR 2, Attachment 4B Page 2 of 16.
-Labor	258	K01	201	$ 229,000	Kahe 1 Overhaul Boiler Predictive Maintenance Material	Based on costs for similar scope of work for past overhauls	Reference CA-IR 2, Attachment 4B Page 6 of 16.

Comments
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CA-IR 2, Attachment of 9.

JANITORIAL CONTRACT
April 1, 2002-March 31, 2005

INTEROFFICE CORRESPONDENCE

Hawaiian Electric Co., Inc.

February 4, 2002

Route in Turn: R. Yokoi
L. Ornellas
H. Kageura
T. Joaquin (For signature)

From: John A. Kimmell
Contract Administrator
Waiau (WPS-IS)

Subject: **Recommendation to Award 3 Year Janitorial Service Contract Waiau Station**

Project / Work Order / Account Code / % / Dept / Present Annual Cost

G00003893 (35%) G0000368 (65%) Environmental Department (Waiau)	$10,693.56
HP000338 (100%) O & M Department (Waiau)	$67,078.08
TD000048 (100%) C & M Department (Waiau)	$22,234.44
PVM931WRDNANPVZZZZZ501 (100%) Support Services (Waiau)	$5,532.84
Total	$105,838.92

Description of Service to Be Provided:

The chosen vendor will provide all of the janitorial services for the Waiau Station as outlined in attachment "A", for the years 2002 thru 2005. The scope of this proposed contract has been slightly increased over the last contract. This Includes higher standards of service and responsibilities for clean up of parking areas and plant grounds.

Bid Analysis:

Competitive bids were solicited from the present vendor (Armstrong Building Maintenance), the vendor presently supplying Janitorial Services to Kahe Station and Honolulu Station (Jani-King Hawaii) and a third vendor known for quality service (Hawaiian Building Maintenance). A bid Walk-down, conducted by Richard Yokoi, was held for all of the vendors and proposals were

Armstrong Building Maintenance, The current vendor, has submitted the proposal with the least cost, **$118,671.48** (price subject to change after the first year). Our experience with this vendor has been marginally satisfactory. They tend do the minimum to get by and over time slip back to old habits and require frequent reminders of areas that need attention. They are good at ramping up to correct something that they have let slide then it is soon back to the same old ways. The Station Supervisor feels that he has had to spend more time than he should to monitor this vendor to insure that they are living up to the contract and doing the job we pay them to do. Another area of concern is the presumed ability of the vendor's on-site personnel to understand and communicate in Basic English and here again the Station Supervisor is affected because he feels his directions or questions are not understood and he must spend extra time in following up to verify he got his point or issue across. This communications problem becomes a **MAJOR SAFETY** concern because of the nature of our business and the need to understand what may be dangerous or constitute a safety hazard as the janitorial staff goes about their work. The need to have the ability to comprehend a warning issued over the Gai-Tronics, is definitely a safety issue. This has been brought to the attention of the vendor with minimum success. Armstrong's management style has, in the past, consistently been reactive rather than proactive, other wise known as "The squeaky wheel gets the grease". They have however proposed a formal quality assurance program for the next contract. In the meantime they have not contacted the station supervisor, except during the recent bid walk down with area management, to evaluate how well they are presently performing. The vendor's supervisors are seldom seen on site or if they are on-site, seldom make it known. Presently the staffing for Armstrong consists of three individuals (40 hours per week) who perform their duties during normal working day (6:30 am to 3:00 pm). Often it is observed that these daytime janitors are less than actively engaged in the work at hand.

Their proposal would increase the staffing level by 1 part time (20 hour per week with one individual working late afternoon 4 pm to 8 pm mainly performing admin building and office area clean up.

Armstrong Building Maintenance, minimum 3-year contract cost $356,014.44 (not fixed subject to change after 1st year)

Jani-King Hawaii is the next lowest first year cost with a proposed **$130,161.72** (fixed price three years). They are presently performing satisfactorily at Honolulu and Kahe Stations. If there are issues, it has been our experience with the Honolulu & Kahe service that they are duly noted and quickly resolved. The franchise owners are hands on managers who continually monitor the performance of their janitorial staff. They make frequent inquires to the station staff about the quality of the janitorial service they have provided. They use a *MEMO PAD* program to enable daily communication of problems or issues. There is a *Contract Evaluation Sheet* and a *Past Performance Sheet* that are utilized to also gauge their service. Additionally there are at least, quarterly walk downs; more frequent if needed, by regional management, which result in formal *Inspection Reports* designed to ensure that all required duties were satisfactorily performed.

In their proposal the initial staffing would be 4 daytime (6:30 am to 3:00 pm) personnel with 1 overlap (afternoon into the evening shift) and 1-2 individuals on the evening. This proposed preliminary staffing level is subject to change and the situation evolves and a better picture of the need becomes clear.

Jani-King Hawaii, 3 year FIXED contract cost $390,485.16

Hawaiian Building Maintenance, the third invited vendor has submitted a proposal costing **$184,373.88** (the 1st year) with a 3% increase each of the following years. This vendor has an excellent reputation in the industry and is highly regarded by those they serve. They presently have janitorial service contracts with some very large and visible customers such as Ala Moana Shopping Center, First Hawaiian Bank, AMFAC Center, and other large high profile customers. They have the experience to do the work that we require. But in reviewing their proposal they go over-board, offering the *Cadillac* in janitorial service.

Their proposal has 1 Project Manager, part-time (10 hours/week) 1 Day Supervisor and 3 custodians on site full-time (40 hours/week each) during the normal work day, 1 part-time Night Supervisor (25 hours/week) and 3 part-time Night Custodians (20 hours/week) a total of 9 full and or part-time workers. Our experience tells us that this is over-kill and the additional cost cannot be justified.

The 3-year graduated contract cost $569,933.88

Recommendation:

The **Hawaiian Building Maintenance** proposal of **$569,933.88** is excessively high and eliminates them as a possible service provider for this requirement.

Both **Armstrong Building Maintenance** with the low proposal of **$118,671.48** (first year only, subject to increases thereafter) and **Jani-King** with the next lowest proposal at **$124,956.00** / year (a three year FIXED cost NO INCREASES) are know quantities in that we have used both of their janitorial service for the past several years. Armstrong has required frequent monitoring or their performance degrades. Jani-King has presented far fewer problems and has demonstrated a flexibility and initiative to perform and maintain a higher standard. Unlike the present vendor Jani-King personnel wear a uniform for easy identification and to help address security concerns.

The cost difference for the 3-year life of the contract amounts to, a total increase of $34,481.52 or **$957.52** / a month more than the lowest proposal. It is felt by all concerned that Jani-King provides a better value even at this increased cost. It is recommended that the contract for Waiau Station Janitorial Services 2002-2005 be awarded to **Jani-King Hawaii** with a total three year contract cost including taxes ***$390,485.16***

The formal proposals are available in the Contract Administrators Office available for review upon request.

Two copies of the contract are attached for review. Upon concurrence with this recommendation, please initial or sign the attached contract as appropriate.

If there are any questions please call me at 543-4236.