

Estimate of Load-Based Cost Recovery Adjustment Clause - LB CRAC 2 FY 02
for April 2002 - September 2002

Increased Revenue Required 41.78%

Change to Slice Rate 41.02%

Change to non-Slice Rate 39.92%

Revised Rates						
	Apr-02	May-02	Jun-02	Jul-02	Aug-02	Sep-02
Slice (\$/% Slice per month)	\$2,001,680	\$2,001,680	\$2,001,680	\$2,001,680	\$2,001,680	\$2,001,680
5-yr PF-02 and RL-02 rates						
HLH (\$/MWh)	18.44	18.37	23.02	30.26	44.80	32.10
LLH (\$/MWh)	12.34	10.14	12.31	20.55	25.09	26.29
Demand (\$/kW-mo)	2.03	2.00	2.50	3.23	3.23	3.23
Load Variance (\$/MWh)	1.12	1.12	1.12	1.12	1.12	1.12
Stepped PF-02 Rates						
HLH (\$/MWh)	17.60	17.53	22.18	29.43	43.96	31.26
LLH (\$/MWh)	11.50	9.30	11.47	19.71	24.25	25.45
Demand (\$/kW-mo)	2.03	2.00	2.50	3.23	3.23	3.23
Load Variance (\$/MWh)	1.12	1.12	1.12	1.12	1.12	1.12
IP-02 Rates w/IPTAC(A)						
HLH (\$/MWh)	23.70	23.62	28.29	35.51	50.06	37.36
LLH (\$/MWh)	17.59	15.39	17.56	25.82	30.33	31.55
Demand (\$/kW-mo)	2.03	2.00	2.50	3.23	3.23	3.23
IP-02 Rates w/IPTAC(B)						
HLH (\$/MWh)	25.80	25.72	30.36	37.61	52.16	39.46
LLH (\$/MWh)	19.69	17.49	19.66	27.91	32.43	33.65
Demand (\$/kW-mo)	2.03	2.00	2.50	3.23	3.23	3.23

Average Net Augmentation Need and Net Short Position				
		<u>Apr-02</u>	<u>Jul-02</u>	<u>Apr-02</u>
		<u>to</u>	<u>to</u>	<u>to</u>
		<u>Jun-02</u>	<u>Sep-02</u>	<u>Sep-02</u>
1 -Gross Augmentation Need	aMW	3,382	3,335	3,359
2 - Net Augmentation Need (w/losses)	aMW	1,073	1,216	1,145
3 - Net Short Position	aMW	16	0	8
	HLH	aMW	0	15
	LLH	aMW	0	1

Note: These numbers are approximate due to the use of simple averaging.

1- Gross augmentation need = system load - system capability.

2 - Net Augmentation Need reflects gross augmentation need reduced by rate mitigation load reduction plus losses of 1.8%. It is the simple average of actual monthly net augmentation need used in the model.

3 - The net short position is the simple average of the HLH and LLH actual net short positions for the given months.

Selected Total Cost and Revenue Calculations	
1 - Augmentation Pre-Purchase Costs	\$ 269,178,845
2 - Net Short Costs	\$ 1,046,155
3 - Load Reduction Costs	\$ 164,621,419
4 - Total Gross Augmentation Costs in LB CRAC	\$ 356,154,079
5 - Revenues from Resale of Augmentation Quantity	\$ 141,386,539
6 - Net Augmentation Costs (= 4-5)	\$ 214,767,540
7 - Total Revenues from Slice before LB CRAC	\$ 186,564,070
8 - Total Revenues from non-Slice products before LB CRAC	\$ 327,522,680
9 - Total CRAC'able revenue before LB CRAC (= 7+8)	\$ 514,086,750
LB CRAC% (= 6/9)	41.78%

1- Sum of augmentation pre-purchases and power buyback for rate mitigation. Cost of rate mitigation deals with Slice/Block included here. IOU power conversions costs here also. (Cost of IOU and DSI load reduction deals are contained in row 3). Rate mitigation buyback costs include both premium portion and cost of deals tied to LB CRAC.

2 - net short costs = cost of meeting BPA's net short position

3 - All costs associated with load reductions from IOU, DSIs and load following publics.

4 - If row 4 total is less than sum rows (1+2+3), some costs in rows 1+2 are being excluded from recovery from LB CRAC. Chase product included as a credit in the calculation of Total Gross Augmentation Costs.

8 - Total revenue from non-Slice products that are subject to LB CRAC before application of LB CRAC.

**Selected Quarterly Loads and Cost Inputs -
Look Forward**

**LB CRAC 2 FY 02
April 02 - Sept 02**

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Average Costs and Loads		units	Apr-June	July-Sept.	6 months
Slice Load		aMW	1,600	1,600	1,600
PF Base Load		aMW			
	HLH	aMW	3,915	3,746	3,830
	LLH	aMW	3,470	3,219	3,344
RL Base Load		aMW			
	HLH	aMW	1,001	1,001	1,001
	LLH	aMW	1,001	1,001	1,001
IP Base Load		aMW			
	HLH	aMW	1486	1486	1486
	LLH	aMW	1486	1486	1486
Augmentation Pre-Purchase Costs					
(Note: this includes mkt. Pre-purchase cost	HLH	\$	16,107,545	25,620,603	20,864,074
+ fixed portion of power buybacks)	LLH	\$	12,309,695	20,269,392	16,289,543
Load Reduction Costs					
	HLH	\$	16,401,845	15,034,993	15,718,419
	LLH	\$	12,200,258	11,236,711	11,718,484
LDD Slice Costs		\$	447,209.42	441,103.06	444,156.24
LDD Non-Slice Costs		\$	719,609.59	1,225,213.18	972,411.38
C&R Slice Costs		\$	584,717	584,717	584,717
C&R Non-Slice Costs		\$	2,558,164	2,627,162	2,592,663

Note: These numbers are approximate due to the use of simple averaging of actual numbers.

Average Loads, Rate Mitigation, System Capability					
			April-June	July-Sept.	6 months
1 - System Load		aMW	8,710	8,590	8,650
2 - System Capability		aMW	5,328	5,255	5,291
3 - Load Reduction		aMW	2,328	2,141	2,234
	Public	aMW	224	224	224
	DSI	aMW	1,438	1,258	1,348
	IOU	aMW	664	664	664
4 - Augmentation Market Purchases					
	HLH	aMW	686	1,471	1,079
	LLH	aMW	703	1,561	1,132
5 - Augmentation Power Buybacks		aMW	515	506	510
	HLH	aMW	514	488	501
	LLH	aMW	520	527	524

Note: These numbers are approximate due to the use of simple averaging of actual numbers. Each row in this table is the simple average of the actual numbers in the analysis for that variable.

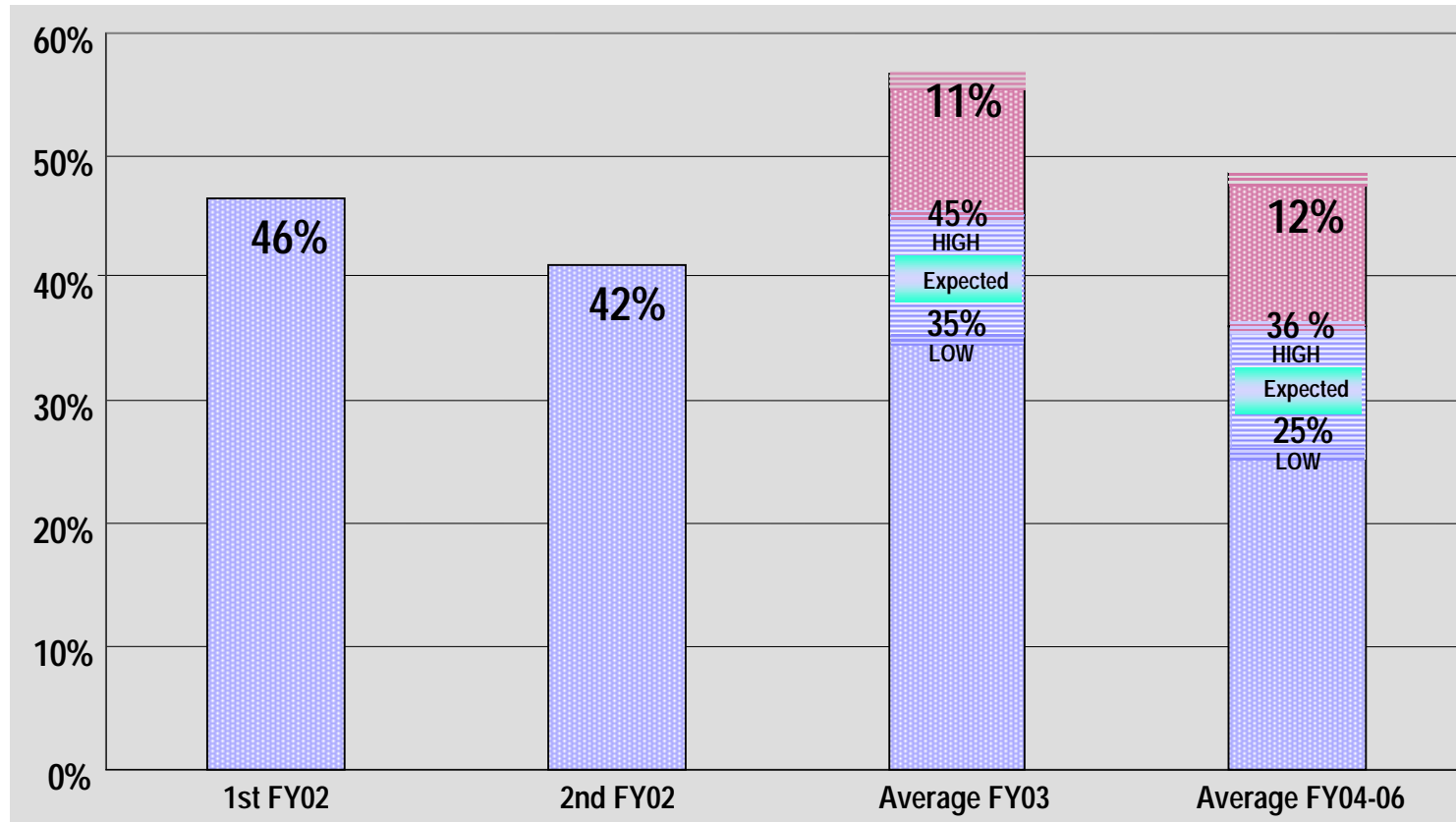
1&2 - These numbers are net of 1,600 aMW of Slice and do not include losses.

3 - All DSI, IOU, and load following publics rate mitigation deals treated as load reductions.

4 - Includes only market purchases.

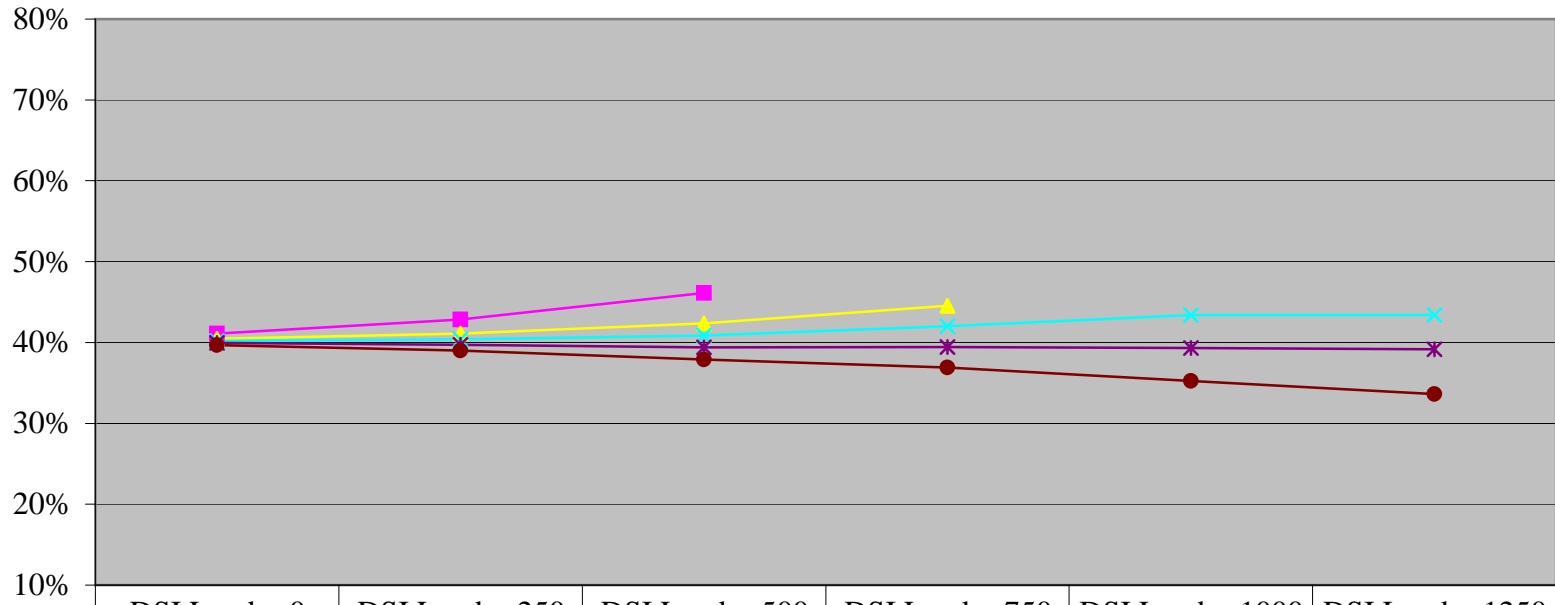
5 - Includes only rate mitigation with Block/Slice customers.

Estimated LB-CRACs with Maximum FB-CRAC*



■ **FB-CRAC MAX**
■ **LBCRAC**
 Driven primarily by loads and market prices
 * SN CRAC Excluded

Plausible Estimates of Load-Based CRAC for FY03 at Various Spot Market Prices and DSI Service Levels



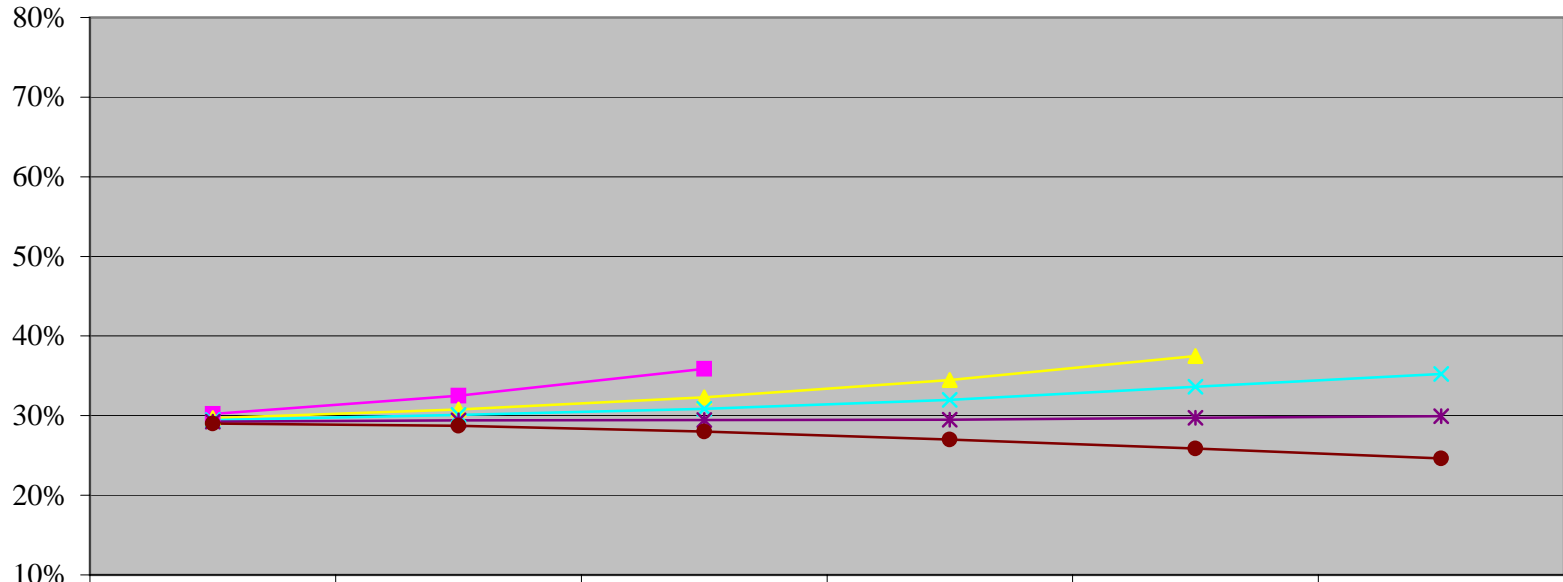
	DSI Load = 0	DSI Load = 250	DSI Load = 500	DSI Load = 750	DSI Load = 1000	DSI Load = 1250
◆						
■ Spot Price = \$75	41%	43%	46%			
▲ Spot Price = \$50	40%	41%	42%	45%		
✕ Spot Price = \$40	40%	40%	41%	42%	43%	43%
* Spot Price = \$30	40%	40%	39%	39%	39%	39%
● Spot Price = \$20	40%	39%	38%	37%	35%	34%

- LB CRAC estimates could be 3% to 4% lower with a public/IOU settlement

- Maximum additional FB CRAC is 11% in this time period

-Current Forecast of LB CRAC for this period is approximately 40%

Plausible Estimates of Load-Based CRAC for FY04-06 at Various Spot Market Prices and DSI Service Levels



	DSI Load = 0	DSI Load = 250	DSI Load = 500	DSI Load = 750	DSI Load = 1000	DSI Load = 1250
Spot Price = \$75	30%	33%	36%			
Spot Price = \$50	30%	31%	32%	34%	37%	
Spot Price = \$40	29%	30%	31%	32%	34%	35%
Spot Price = \$30	29%	29%	29%	29%	30%	30%
Spot Price = \$20	29%	29%	28%	27%	26%	25%

- LB CRAC estimates could be 3% to 4% lower with a public/IOU settlement
- Maximum additional FB CRAC is 12% for this time period
- Current forecast of LB CRAC for this period is approximately 30%

**Selected Total Cost and Revenue Calculations
Look Back**

Oct 01 - Nov 01

1 - Augmentation Pre-Purchase Costs - 120 Day Rule	\$	99,419,565
1 - Augmentation Pre-Purchase Costs - 0 Day Rule		104,541,034
2 - Net Short Costs - 120 Day Rule	\$	0
2 - Net Short Costs - 0 Day Rule		0
3 - Load Reduction Costs	\$	65,631,105
4 - Total Gross Augmentation Costs in LB CRAC - 120 Day Rule	\$	112,011,774
4 - Total Gross Augmentation Costs in LB CRAC - 0 Day Rule	\$	111,555,278
5 - Revenues from Resale of Augmentation Quantity	\$	\$28,465,288
6 - Net Augmentation Costs (= 4-5) - 120 Day Rule	\$	83,546,486
6 - Net Augmentation Costs (= 4-5) - 0 Day Rule	\$	83,089,990
<i>Rows 7, 8, 9 revenue calculations are the revenues BPA earned under LB CRAC'ed rates</i>		
7 - Total Revenues from Slice	\$	91,973,368
8 - Total Revenues from non-Slice products	\$	184,585,527
9 - Total CRAC'able revenue before LB CRAC (= 7+8)	\$	276,558,895
<i>Rows 10, 11 are the revenues BPA earned only from the LB CRAC part of rates.</i>		
10 - LB CRAC revenues earned from Slice	\$	29,789,802
11 - LB CRAC revenues earned from non-Slice products	\$	60,377,736
<i>Rows 12, 13 are the actual LB CRAC Revenue Requirement</i>		
12 - Revenues required from Slice to cover actual LB CRAC cost	\$	27,784,504
13 - Revenues required from non-Slice to cover actual LB CRAC cost	\$	55,305,486
<i>Rows 14, 15, 16 are the total dollar adjustment on customer bills</i>		
14 - Bill Adjustment for Slice	\$	(2,005,298)
15 - Bill Adjustment for non-Slice	\$	(5,072,250)
16 - Total bill adjustment	\$	(7,077,548)
<i>Rows 17, 18 are the adjustment factors used to determine individual customer bill adjustments</i>		
17 - Adjustment factor for each Slice customer bill		(0.007267678)
18 - Adjustment factor for each non-Slice customer bill		(0.009159710)

1 - Sum of augmentation pre-purchases and power buyback for rate mitigation. Cost of rate mitigation deals with Slice/Block included here. IOU power conversions costs here also.

(Cost of IOU and DSI load reduction deals are contained in row 3.) Rate mitigation buyback costs include both premium portion and cost of deals tied to LB CRAC.

2 - net short costs = cost of meeting BPA's net short position

3 - All costs associated with load reductions from IOU, DSIs, and load following publics are borne by Slice and non-Slice.

4 - If row 4 total is less than sum rows (1+2+3), some costs in rows 1+2 are being excluded from recovery from LB CRAC.

Also, the Chase product included as a credit in the calculation of Total Gross Augmentation Costs.

5 - Revenues from resale of augmentation amount

7, 8, 9 - Total revenue earned by BPA from Slice and non-Slice products that are subject to LB CRAC for sales at rates with LB CRAC.

10, 11 - Incremental revenues earned by BPA from the LB CRAC increment to rates.

12, 13 - Incremental costs that the incremental revenue must be sufficient to cover.

14, 15 - Amount by which the incremental revenue falls short of (exceeds) incremental cost.

16, 17 - Adjustment factors applied to revenue received for each individual Slice and non-Slice customer in order to balance incremental revenue with incremental cost.

**Selected Quarterly Loads and Cost Inputs -
Look Back**

Oct 01 - Nov 01

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Quarterly Average Loads	units	Oct- Nov
Slice Load	aMW	1,600
PF Load		
	HLH aMW	3,946
	LLH aMW	3,540
RL Load		
	HLH aMW	350
	LLH aMW	351
IP Load		
	HLH aMW	65
	LLH aMW	64

Note: These numbers are approximate due to the use of simple averaging of actual numbers.

Quarterly LDD & C&R Dollars	units	Oct-Nov
LDD Slice Costs	\$	436,838
LDD Non-Slice Costs	\$	577,658
C&R Slice Costs	\$	594,265
C&R Non-Slice Costs	\$	2,326,077

Note: These numbers are approximate due to the use of simple averaging of actual numbers.

Average Pre-Purchase Quantities to Meet Augmentation Need		<u>Oct-Nov</u>
1 - Augmentation Market Purchases - 120 Day Rule		
	HLH aMW	1,259
	LLH aMW	1,292
1 - Augmentation Market Purchases - 0 Day Rule		
	HLH aMW	1,259
	LLH aMW	1,292
2 - Augmentation Power Buybacks - 120 Day Rule		
	HLH aMW	257
	LLH aMW	264
2 - Augmentation Power Buybacks - 0 Day Rule		
	HLH aMW	255
	LLH aMW	354

Note: These numbers are approximate due to the use of simple averaging of actual numbers.

Each row in this table is the simple average of the actual numbers in the analysis for that variable.

1 - Includes only market purchases.

2 - Includes only rate mitigation with Block/Slice customers and IOU cash for power conversion.

**Selected Quarterly and Total Results -
Look Back**

Oct 01 - Nov 01

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Average Net Augmentation Need and Net Short Position		
		<u>Oct to Nov</u>
1 - System Load	aMW	5,901
2 - System Capability	aMW	5,220
3 -Gross Augmentation Need	aMW	681
4 - Net Augmentation Need (w/losses)	aMW	693
5 - Net Short Position	aMW	0
	HLH	0
	LLH	0

Note: These numbers are approximate due to the use of simple averaging.

3- Gross augmentation need = system load - system capability.

4 - Net Augmentation Need reflects gross augmentation need reduced by rate mitigation load reduction plus losses of 1.8%. It is the simple average of actual monthly net augmentation need used in the model.

5 - The net short position is the simple average of the HLH and LLH actual net short positions for the given months.