

FortisBC Inc.
2005 Revenue Requirements Application,
2005-2024 System Development Plan and 2005 Resource Plan

50.0 Reference: Volume 1, Tab 7.1, p. 4 and Appendix A, p. 9

Q50.1 The actual and forecast energy sales in Table 7.6.1 of Appendix A include the effects of Demand Side Management. Please provide a corresponding table that includes a separate line item showing the effects of DSM.

A50.1 Please refer to attachment BCUC A50.1. The values in the attachment should be viewed as incremental values over and above the levels of DSM in 2004

Q50.2 FortisBC forecasts Residential Use per Customer on the basis of a 25-year average annual decline rate of 67 kWh/customer. FortisBC notes that possible explanations for this decline include the availability of more efficient electrical appliances and declining dependence on electricity as a primary source of energy for heating and cooling. Is any component of the declining use per customer forecast attributable to DSM measures? If so, please explain and demonstrate how the effects of DSM, as included in Table 7.6.1, account for the changes in use per account that would have occurred anyway in the absence of DSM measures.

A50.2 The forecast includes a decline rate of 67 kW.h per customer and proceeds from a base of 2003 normalized use per customer. The decline rate represents the “natural occurring” DSM which results from price and income effects up to 2004, and does not reflect the impact of new FortisBC DSM activities. These are forecast separately and then subtracted from the forecast, as described.

BCUC A50.1

Reduction of ENERGY due to DSM (MWh)																				
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Resi	1632.0	4689.0	7859.0	12756.6	15669.0	18581.4	21493.8	24406.2	27318.6	29745.6	32172.6	34599.6	37026.6	39453.6	41880.6	44307.6	46734.6	49161.6	51588.6	54015.6
GenSvc	2663.0	7618.0	12568.0	19932.0	24160.0	28388.0	32616.0	36844.0	41072.0	44454.4	47836.8	51219.2	54601.6	57984.0	61366.4	64748.8	68131.2	71513.6	74896.0	78278.4
Ind	533.0	1522.0	2578.0	3930.0	4770.0	4770.0	4770.0	4770.0	4770.0	5610.0	6450.0	7290.0	8130.0	8970.0	9810.0	10650.0	11490.0	12330.0	13170.0	14010.0
Wholesale	2500.0	7143.0	11858.0	18768.5	22803.0	27677.5	32552.0	37426.5	42301.0	45664.0	49027.1	52390.1	55753.1	59116.1	62479.2	65842.2	69205.2	72568.2	75931.3	79294.3
System Losses:	836.1	2253.0	3750.0	5878.0	7153.1	8428.2	9703.3	10978.4	12253.5	13316.0	14378.6	15441.2	16503.8	17566.4	18628.9	19691.5	20754.1	21816.7	22879.2	23941.8
Total DSM Impact:	8164.1	23225.0	38613.0	61265.1	74555.1	87845.1	101135.1	114425.1	127715.1	138790.1	149865.1	160940.1	172015.1	183090.1	194165.1	205240.1	216315.1	227390.1	238465.1	249540.1

Reduction of PEAK due to DSM (MW)																				
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Resi	0.53	1.08	1.65	2.2	2.7	3.2	3.7	4.2	4.7	5.2	5.6	6	6.4	6.9	7.3	7.7	8.1	8.5	9	9.4
GenSvc	0.87	1.74	2.62	2.9	3.5	4.1	4.7	5.3	6	6.5	6.9	7.4	7.9	8.4	8.9	9.4	9.9	10.4	10.9	11.4
Ind	0.17	0.35	0.54	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.7	0.8	0.9	0.9	1	1.1	1.2	1.2
Wholesalers:	0.82	1.64	2.48	2.7	3.2	3.9	4.5	5.2	5.8	6.3	6.8	7.2	7.7	8.2	8.7	9.1	9.6	10.1	10.6	11
System Losses:	0.30	0.59	0.81	0.91	1.10	1.30	1.49	1.69	1.88	2.04	2.21	2.36	2.53	2.70	2.86	3.01	3.17	3.34	3.51	3.66
Total DSM Impact:	2.69	5.40	8.10	9.01	10.90	12.90	14.79	16.79	18.78	20.54	22.11	23.56	25.23	27.00	28.66	30.11	31.77	33.44	35.21	36.66

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51.0 Reference: Volume 1, Tab 7.2, pp. 2-3

Q51.1 Please update the Table on page 2 with Actual 2004 data if available.

A51.1 Please see the response to BCUC IR1 A51.2.

Q51.2 Please update the Table on page 2 with forecast 2005 revenues based on the interim approval in Commission Order No. G-111-04.

A51.2

Actual and Forecast Revenue by Customer Class
with 3.7% Interim Rate Increase
(\$000s)

	Actual 2001	Actual 2002	Actual 2003	2004		Forecast 2005	
				Forecast	Actual	As filed	Including 3.7%
Residential	59,892	61,837	70,345	74,462	71,854	74,925	77,697
General Service	30,965	32,171	36,346	39,046	37,532	39,834	41,308
Industrial	14,778	16,138	15,768	16,925	16,766	17,307	17,947
Wholesale	32,581	34,821	36,763	41,509	39,673	41,240	42,766
Other	3,603	3,471	3,733	3,661	3,297	3,428	3,555
Total	141,819	148,438	162,955	175,603	169,122	176,734	183,273
True-up of estimated unbilled revenue					5,759		
	141,819	148,438	162,955	175,603	174,881	176,734	183,273

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52.0 Reference: Volume 1, Tab 7.3, p. 6

The new Canal Plant Agreement “is expected to provide an increase in entitlement of approximately 48 GWh and 9 MW annually to account for the upgrades which have been completed ... offset by a reduction of about 20 GWh to account for an apparent reduced plant performance based on recent efficiency tests”.

Q52.1 Please provide an itemized list of the changes to the energy and capacity entitlements, by plant or by unit, as applicable.

A52.1 Please see the following table (BCUC A52.1.xls) which details the entitlement changes. The last line of this sheet under “FortisBC Changes” shows the total net increase of 28 GW.h. The 9 MW increase in capacity is shown under the month of January, in which the peak load is expected to occur.

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FortisBC Historical Entitlements

CAPACITY (MW)	January	February	March	April	May	June	July	August	September	October	November	December	
P1	41	42	42	41.4	38	37	39	42	41	41	42	41	
P2	60	60	60	59.3	57	56	57	59	59	59	60	59	
P3	53	53	53	54.4	54	53	54	54	54	55	53	53	
P4	48	44	43	40.1	39	34	42	50	51	50	51	51	
Plants 1 - 4 Total	202	199	198	195	188	180	192	205	205	205	206	204	198
ENERGY (MW.h)	January	February	March	April	May	June	July	August	September	October	November	December	Total
P1	29,600	26,700	27,100	28,100	26,982	25,000	27,500	29,700	28,700	28,200	26,600	28,900	333,082
P2	41,100	31,700	28,600	38,000	40,100	38,000	41,051	41,600	40,600	31,500	30,300	33,300	435,851
P3	37,400	33,000	31,500	36,200	37,700	36,200	38,277	38,800	37,500	34,500	31,500	34,500	427,077
P4	33,900	25,700	22,300	26,400	27,846	23,000	29,400	35,500	35,300	28,300	27,200	30,100	344,946
Plants 1 - 4 Total	142,000	117,100	109,500	128,700	132,628	122,200	136,228	145,600	142,100	122,500	115,600	126,800	1,540,956

FortisBC Expected 2005 Entitlements

CAPACITY (MW)	January	February	March	April	May	June	July	August	September	October	November	December	
P1	45	45	45	45	41	39	41	44	45	45	45	45	
P2	66	66	66	66	64	63	64	65	66	66	66	66	
P3	54	54	54	54	52	50	52	54	54	54	54	54	
P4	46	42	41	38	34	31	36	45	48	49	50	49	
Plants 1 - 4 Total	211	207	206	202	192	183	193	209	213	214	215	214	205
ENERGY (MW.h)	January	February	March	April	May	June	July	August	September	October	November	December	Total
P1	31,516	28,760	29,308	30,211	29,007	26,498	28,907	31,014	30,312	29,910	28,907	30,814	355,163
P2	44,564	34,836	31,617	43,460	44,865	42,557	44,865	45,769	35,932	33,222	32,821	35,130	469,638
P3	38,040	33,519	31,817	36,635	36,735	33,925	36,635	37,940	34,929	33,323	32,319	34,728	420,546
P4	32,219	25,215	23,085	25,293	23,687	20,977	24,892	31,617	29,810	28,706	28,104	30,011	323,615
Plants 1 - 4 Total	146,339	122,330	115,827	135,600	134,295	123,957	135,299	146,339	130,983	125,161	122,150	130,682	1,568,962

FortisBC Changes to Entitlement

CAPACITY (MW)	January	February	March	April	May	June	July	August	September	October	November	December	
P1	4	3	3	3	3	2	2	2	4	4	3	4	
P2	6	6	6	6	7	7	7	6	7	7	6	7	
P3	1	1	1	0	-2	-3	-2	0	0	-1	1	1	
P4	-2	-2	-2	-3	-5	-3	-7	-5	-3	-1	-1	-2	
Plants 1 - 4 Total	9	8	8	7	4	3	1	4	8	9	9	10	7
ENERGY (MW.h)	January	February	March	April	May	June	July	August	September	October	November	December	Total
P1	1,916	2,060	2,208	2,111	2,025	1,498	1,407	1,314	1,612	1,710	2,307	1,914	22,081
P2	3,464	3,136	3,017	5,460	4,765	4,557	3,814	4,169	-4,668	1,722	2,521	1,830	33,787
P3	640	519	317	435	-965	-2,275	-1,642	-860	-2,571	-1,177	819	228	-6,531
P4	-1,681	-485	785	-1,107	-4,159	-2,023	-4,508	-3,883	-5,490	406	904	-89	-21,331
Plants 1 - 4 Total	4,339	5,230	6,327	6,900	1,667	1,757	-929	739	-11,117	2,661	6,550	3,882	28,006

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Q52.2 Please provide a summary of the efficiency test results.

A52.2 Please see the attachment BCUC A52.2 that summarizes the flow vs. output for the FortisBC plants including upgrades, which has been derived from the new efficiency tests. If these tables are compared with the flow vs. output in the existing CPA (see the Flow Rating Tables, Exhibit 2, Table 1 of the existing CPA, a copy of which has been provided in response to Wait IR1 Q34), it can be seen that for a given flow the power output has been reduced. For example, comparing the Corra Linn plant (no upgrades have been done at this plant), 10,000 cfs flow point and forebay elevation of 1734.0, in the new tables the total plant output is 32.26 MW while under the original CPA tables the total plant output is 33.4 MW.

TABLE LB - 1

**LOWER BONNINGTON
PLANT OUPUT VERSUS FLOW**

Unit 1 existing
Unit 2 after upgrade
Unit 3 existing

HWL Dwg F-408
TWL Dwg F-408

Max. Plant Flow (cfs) 10400

Total Flow (cfs)	HWL (ft)	TWL (ft)	Gross Head (ft)	Unit 1 Flow (cfs)	Unit 1 Power (MW)	Unit 2 Flow (cfs)	Unit 2 Power (MW)	Unit 3 Flow (cfs)	Unit 3 Power (MW)	Total Power (MW)	P/H Flow (cfs)
0	1610.73	1541.26	69.47	0	0.00	0	0.00	0	0.00	0.00	0
3500	1610.73	1542.73	68.00	0	0.00	3500	17.04	0	0.00	17.04	3500
5000	1610.73	1543.32	67.41	2400	11.31	0	0.00	2600	12.83	24.14	5000
6000	1610.73	1543.71	67.02	0	0.00	3300	16.01	2700	13.20	29.21	6000
7000	1610.73	1544.08	66.65	2300	10.62	2300	10.14	2400	11.60	32.36	7000
7500	1610.73	1544.27	66.46	2400	11.15	2700	12.53	2400	11.57	35.25	7500
8000	1610.73	1544.45	66.28	2400	11.12	3100	14.85	2500	12.11	38.08	8000
8500	1610.73	1544.63	66.10	2650	12.27	3200	15.32	2650	12.81	40.41	8500
9000	1610.73	1544.81	65.92	2900	12.98	3000	14.22	3100	14.08	41.27	9000
9500	1610.73	1544.98	65.75	2900	12.94	3600	16.77	3000	13.86	43.57	9500
10000	1610.73	1545.16	65.57	3000	13.04	3800	17.06	3200	14.12	44.22	10000
10500	1610.75	1545.33	65.43	3000	13.01	3800	17.02	3600	13.98	44.01	10400
10800	1610.83	1545.43	65.40	3099	12.93	3960	17.01	3341	14.15	44.10	10400
11000	1610.88	1545.50	65.38	3099	12.93	3959	17.01	3342	14.14	44.08	10400
11500	1611.00	1545.66	65.34	3098	12.92	3958	16.99	3344	14.13	44.04	10400
12000	1611.12	1545.83	65.29	3097	12.90	3957	16.97	3346	14.12	44.00	10400
12500	1611.24	1545.99	65.24	3096	12.89	3956	16.96	3348	14.11	43.96	10400
13000	1611.35	1546.16	65.20	3095	12.87	3955	16.94	3351	14.10	43.92	10400
13500	1611.46	1546.31	65.15	3094	12.86	3954	16.92	3353	14.09	43.88	10400
14000	1611.58	1546.47	65.10	3092	12.85	3952	16.91	3355	14.08	43.84	10400
16000	1612.00	1547.09	64.91	3088	12.79	3948	16.84	3364	14.04	43.67	10400
18000	1612.40	1547.68	64.72	3083	12.73	3943	16.77	3374	14.00	43.50	10400
20000	1612.76	1548.24	64.53	3079	12.68	3938	16.70	3377	13.92	43.29	10394
22000	1613.11	1548.78	64.33	3074	12.62	3934	16.63	3372	13.86	43.10	10379
24000	1613.43	1549.29	64.13	3069	12.56	3929	16.55	3367	13.79	42.91	10365
25000	1613.58	1549.54	64.03	3067	12.53	3926	16.52	3364	13.76	42.81	10357
30000	1614.26	1550.73	63.54	3055	12.39	3914	16.34	3351	13.60	42.32	10320
40000	1615.34	1552.80	62.54	3031	12.10	3889	15.98	3324	13.28	41.36	10245
50000	1616.17	1554.61	61.56	3007	11.81	3865	15.63	3298	12.97	40.42	10171
60000	1616.86	1556.24	60.63	2984	11.54	3841	15.30	3273	12.68	39.52	10099
70000	1617.51	1557.78	59.74	2962	11.29	3819	14.99	3249	12.40	38.68	10030
80000	1618.17	1559.26	58.90	2941	11.06	3797	14.70	3226	12.14	37.89	9965
90000	1618.85	1560.73	58.12	2922	10.84	3777	14.42	3205	11.90	37.16	9904
100000	1619.57	1562.18	57.38	2903	10.63	3758	14.17	3184	11.67	36.47	9846
110000	1620.31	1563.62	56.69	2886	10.44	3740	13.93	3165	11.46	35.83	9791
120000	1621.06	1565.03	56.04	2869	10.26	3722	13.70	3147	11.26	35.23	9738
200000	1626.45	1574.99	51.46	2749	9.03	3598	12.16	3016	9.91	31.10	9362

TABLE UB - 1

UPPER BONNINGTON
PLANT OUPUT VERSUS FLOW

Unit 1 existing
Unit 2 existing
Unit 3 existing
Unit 4 existing
Unit 5 upgraded
Unit 6 existing

HWL FortisBC data
TWL FortisBC data

Max. Plant Flow 14942 cfs including City of Nelson flow

Total Flow (cfs)	C of N (cfs)	Available Flow (cfs)	HWL (ft)	TWL (ft)	Gross Head (ft)	Unit 1 Flow (cfs)	Unit 1 Power (MW)	Unit 2 Flow (cfs)	Unit 2 Power (MW)	Unit 3 Flow (cfs)	Unit 3 Power (MW)	Unit 4 Flow (cfs)	Unit 4 Power (MW)	Unit 5 Flow (cfs)	Unit 5 Power (MW)	Unit 6 Flow (cfs)	Unit 6 Power (MW)	Total Power (MW)	P/H Flow (cfs)
0	0	0	1683.50	1607.87	75.63	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0.00	0
3500	1428	2072	1683.50	1609.77	73.73	1212	6.02	860	4.52	0	0.00	0	0.00	0	0.00	0	0.00	10.54	2072
5000	1428	3572	1683.50	1610.48	73.02	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3572	18.58	18.58	3572
6000	1429	4571	1683.50	1610.93	72.57	0	0.00	1000	5.05	0	0.00	0	0.00	0	0.00	3571	18.47	23.52	4571
7000	1428	5572	1683.50	1611.35	72.15	1200	5.84	900	4.61	0	0.00	0	0.00	0	0.00	3472	17.96	28.41	5572
7500	1428	6072	1683.50	1611.55	71.95	1250	6.06	0	0.00	0	0.00	1250	5.93	0	0.00	3572	18.31	30.31	6072
8000	1428	6572	1683.50	1611.75	71.75	0	0.00	0	0.00	0	0.00	0	0.00	4000	20.35	2572	12.89	33.24	6572
8500	1428	7072	1683.50	1611.95	71.55	0	0.00	0	0.00	0	0.00	0	0.00	4300	22.16	2772	14.09	36.25	7072
9000	1428	7572	1683.50	1612.14	71.36	0	0.00	0	0.00	0	0.00	0	0.00	4400	22.71	3172	16.34	39.06	7572
9500	1428	8072	1683.50	1612.32	71.18	0	0.00	0	0.00	0	0.00	0	0.00	4400	22.65	3672	18.46	41.11	8072
10000	1428	8572	1683.50	1612.50	71.00	0	0.00	800	4.04	0	0.00	0	0.00	4400	22.59	3372	17.24	43.88	8572
10500	1428	9072	1683.50	1612.68	70.82	0	0.00	850	4.29	0	0.00	0	0.00	4400	22.54	3822	18.78	45.61	9072
10800	1428	9372	1683.50	1612.78	70.72	1200	5.72	0	0.00	0	0.00	0	0.00	4400	22.51	3772	18.63	46.85	9372
11000	1428	9572	1683.50	1612.85	70.65	0	0.00	850	4.28	900	4.17	0	0.00	4400	22.48	3422	17.38	48.31	9572
11500	1428	10072	1683.50	1613.02	70.48	1200	5.70	0	0.00	0	0.00	1200	5.57	4400	22.43	3272	16.65	50.35	10072
12000	1428	10572	1683.50	1613.18	70.32	1300	6.16	0	0.00	0	0.00	1300	6.03	4400	22.38	3572	17.90	52.46	10572
12500	1428	11072	1683.50	1613.34	70.16	1300	6.14	850	4.25	900	4.14	0	0.00	4400	22.33	3622	18.03	54.89	11072
13000	1428	11572	1683.50	1613.50	70.00	1300	6.13	850	4.24	0	0.00	1250	5.77	4400	22.28	3772	18.44	56.86	11572
13500	1428	12072	1683.50	1613.65	69.85	1300	6.11	850	4.23	900	4.12	1250	5.76	4400	22.23	3372	16.96	59.42	12072
14000	1428	12572	1683.50	1613.80	69.70	1400	6.51	1000	4.85	1000	4.57	1250	5.75	4400	22.18	3522	17.55	61.42	12572
16000	2142	13858	1684.17	1614.37	69.80	1400	6.52	1039	4.98	1000	4.58	1250	5.76	4437	22.21	3674	18.17	62.23	12800
18000	2142	15858	1684.97	1614.89	70.09	1400	6.55	1022	4.95	1000	4.60	1250	5.78	4446	22.35	3682	18.28	62.52	12800
20000	2142	17858	1685.66	1615.37	70.30	1400	6.57	1010	4.93	1000	4.61	1250	5.80	4453	22.45	3688	18.37	62.73	12800
22000	2142	19858	1686.25	1615.81	70.45	1400	6.58	1001	4.91	1000	4.62	1250	5.81	4457	22.52	3691	18.43	62.87	12800
24000	2142	21858	1686.75	1616.22	70.54	1400	6.59	996	4.90	1000	4.63	1250	5.82	4460	22.57	3694	18.46	62.96	12800
25000	2142	22858	1686.98	1616.41	70.56	1400	6.59	994	4.89	1000	4.63	1250	5.82	4461	22.58	3695	18.47	62.99	12800
30000	2142	27858	1687.86	1617.31	70.55	1400	6.59	995	4.89	1000	4.63	1250	5.82	4461	22.57	3694	18.47	62.97	12800
40000	2142	37858	1688.92	1618.81	70.10	1400	6.55	1021	4.95	1000	4.60	1250	5.78	4447	22.36	3683	18.29	62.54	12800
50000	2142	47858	1689.65	1620.12	69.53	1400	6.50	1054	5.01	1000	4.56	1250	5.73	4428	22.09	3667	18.07	61.96	12800
60000	2142	57858	1690.41	1621.35	69.06	1400	6.45	1082	5.05	1000	4.53	1250	5.69	4413	21.86	3655	17.88	61.48	12800
70000	2142	67858	1691.26	1622.54	68.72	1400	6.42	1101	5.07	1000	4.51	1250	5.67	4403	21.70	3646	17.75	61.12	12800
80000	2142	77858	1692.11	1623.68	68.43	1400	6.40	1118	5.08	1000	4.49	1250	5.64	4393	21.56	3638	17.64	60.82	12800
90000	2142	87858	1692.86	1624.79	68.08	1400	6.36	1139	5.09	1000	4.47	1250	5.61	4382	21.40	3629	17.50	60.44	12800
100000	2142	97858	1693.44	1625.85	67.59	1418	6.30	1139	4.95	1009	4.47	1250	5.57	4366	21.17	3616	17.32	59.78	12799
110000	2142	107858	1693.88	1626.88	67.00	1412	6.22	1134	4.88	1055	4.60	1250	5.53	4347	20.89	3600	17.09	59.21	12799
120000	2142	117858	1694.33	1627.89	66.44	1406	6.15	1130	4.82	1099	4.69	1250	5.48	4329	20.63	3585	16.88	58.65	12799
200000	2142	197858	1695.00	1635.56	59.44	1330	5.20	1068	4.08	1110	4.01	1333	5.10	4095	17.46	3391	14.28	50.12	12326

TABLE CLcalc1

**CORRA LINN
PLANT OUPUT VERSUS FLOW**

Unit 1 existing
Unit 2 existing
Unit 3 existing

HWL EI 1734.00
TWL FortisBC Data

Max. Plant Flow (cfs) 12600

Total Flow (cfs)	HWL (ft)	TWL (ft)	Gross Head (ft)	Unit 1 Flow (cfs)	Unit 1 Power (MW)	Unit 2 Flow (cfs)	Unit 2 Power (MW)	Unit 3 Flow (cfs)	Unit 3 Power (MW)	Total Power (MW)	P/H Flow (cfs)
0	1734.00	1681.12	52.88	0	0.00	0	0.00	0	0.00	0.00	0
3500	1734.00	1682.83	51.17	0	0.00	3500	12.09	0	0.00	12.09	3500
5000	1734.00	1683.45	50.55	0	0.00	3600	12.33	1400	3.67	16.00	5000
6000	1734.00	1683.84	50.16	0	0.00	3600	12.24	2400	7.28	19.52	6000
7000	1734.00	1684.21	49.79	0	0.00	3700	12.51	3300	10.70	23.21	7000
7500	1734.00	1684.38	49.62	3700	12.10	3800	12.81	0	0.00	24.91	7500
8000	1734.00	1684.55	49.45	4000	12.91	4000	13.35	0	0.00	26.26	8000
8500	1734.00	1684.72	49.28	2500	7.62	3500	11.64	2500	7.54	26.80	8500
9000	1734.00	1684.88	49.12	2750	8.58	3500	11.60	2750	8.50	28.68	9000
9500	1734.00	1685.04	48.96	2950	9.32	3600	11.95	2950	9.24	30.51	9500
10000	1734.00	1685.19	48.81	3200	10.22	3600	11.91	3200	10.13	32.26	10000
10500	1734.00	1685.34	48.66	3450	11.06	3600	11.87	3450	10.96	33.89	10500
10800	1734.00	1685.43	48.57	3600	11.53	3650	12.03	3550	11.26	34.83	10800
11000	1734.00	1685.49	48.51	3600	11.52	3800	12.52	3600	11.40	35.44	11000
11500	1734.00	1685.63	48.37	3800	12.09	3900	12.79	3800	11.94	36.82	11500
12000	1734.00	1685.77	48.23	3931	12.28	3891	12.45	4069	12.36	37.10	11892
12500	1734.00	1685.90	48.10	3926	12.23	3886	12.40	4063	12.31	36.94	11875
13000	1734.00	1686.03	47.97	3921	12.18	3881	12.35	4058	12.26	36.79	11859
13500	1734.00	1686.16	47.84	3915	12.13	3875	12.30	4052	12.21	36.64	11843
14000	1734.00	1686.29	47.71	3910	12.09	3870	12.25	4047	12.17	36.50	11828
16000	1734.00	1686.76	47.24	3891	11.91	3851	12.07	4027	11.98	35.95	11769
18000	1734.00	1687.20	46.80	3873	11.74	3833	11.90	4008	11.82	35.46	11714
20000	1734.00	1687.60	46.40	3856	11.59	3816	11.74	3991	11.66	35.00	11663
22000	1734.00	1687.99	46.01	3840	11.45	3801	11.60	3974	11.52	34.57	11615
24000	1734.00	1688.34	45.66	3825	11.31	3786	11.46	3959	11.39	34.16	11570
25000	1734.00	1688.52	45.48	3818	11.25	3779	11.40	3951	11.32	33.97	11548
30000	1734.00	1689.33	44.67	3783	10.95	3745	11.10	3916	11.02	33.06	11444
40000	1734.00	1690.78	43.22	3721	10.42	3683	10.56	3852	10.49	31.46	11256
50000	1734.00	1692.12	41.88	3663	9.94	3626	10.07	3792	10.00	30.01	11081
60000	1734.00	1693.36	40.64	3609	9.50	3572	9.63	3735	9.56	28.69	10915
70000	1734.00	1694.51	39.49	3557	9.10	3521	9.22	3682	9.16	27.49	10761
80000	1734.00	1695.55	38.45	3510	8.74	3474	8.86	3633	8.80	26.40	10617
90000	1734.00	1696.51	37.49	3466	8.42	3431	8.53	3587	8.47	25.42	10484
100000	1734.00	1697.41	36.59	3424	8.11	3389	8.22	3544	8.17	24.51	10357
110000	1734.00	1698.27	35.73	3384	7.83	3349	7.94	3502	7.88	23.65	10235
120000	1734.00	1699.10	34.90	3344	7.56	3310	7.66	3461	7.61	22.84	10116
200000	1734.00	1704.80	29.20	3059	5.79	3028	5.86	3166	5.82	17.47	9253

TABLE CLcalc2

**CORRA LINN
PLANT OUPUT VERSUS FLOW**

Unit 1 existing
Unit 2 existing
Unit 3 existing

HWL EI 1738.00
TWL FortisBC Data

Max. Plant Flow (cfs) 12600

Total Flow (cfs)	HWL (ft)	TWL (ft)	Gross Head (ft)	Unit 1 Flow (cfs)	Unit 1 Power (MW)	Unit 2 Flow (cfs)	Unit 2 Power (MW)	Unit 3 Flow (cfs)	Unit 3 Power (MW)	Total Power (MW)	P/H Flow (cfs)
0	1738.00	1681.12	56.88	0	0.00	0	0.00	0	0.00	0.00	0
3500	1738.00	1682.83	55.17	0	0.00	3500	13.03	0	0.00	13.03	3500
5000	1738.00	1683.45	54.55	0	0.00	3600	13.31	1400	3.96	17.27	5000
6000	1738.00	1683.84	54.16	0	0.00	3600	13.21	2400	7.86	21.07	6000
7000	1738.00	1684.21	53.79	0	0.00	3700	13.52	3300	11.55	25.07	7000
7500	1738.00	1684.38	53.62	3700	13.07	3800	13.84	0	0.00	26.92	7500
8000	1738.00	1684.55	53.45	4000	13.96	4000	14.43	0	0.00	28.39	8000
8500	1738.00	1684.72	53.28	2500	8.24	3500	12.58	2500	8.16	28.98	8500
9000	1738.00	1684.88	53.12	2750	9.28	3500	12.55	2750	9.19	31.01	9000
9500	1738.00	1685.04	52.96	2950	10.09	3600	12.92	2950	9.99	33.00	9500
10000	1738.00	1685.19	52.81	3200	11.06	3600	12.88	3200	10.96	34.91	10000
10500	1738.00	1685.34	52.66	3450	11.97	3600	12.85	3450	11.86	36.68	10500
10800	1738.00	1685.43	52.57	3600	12.48	3650	13.02	3550	12.19	37.69	10800
11000	1738.00	1685.49	52.51	3600	12.47	3800	13.56	3600	12.34	38.37	11000
11500	1738.00	1685.63	52.37	3800	13.09	3900	13.85	3800	12.93	39.87	11500
12000	1738.00	1685.77	52.23	4000	13.64	4000	14.10	4000	13.44	41.18	12000
12500	1738.00	1685.90	52.10	4086	13.79	4044	13.97	4229	13.88	41.64	12359
13000	1738.00	1686.03	51.97	4081	13.74	4039	13.92	4224	13.83	41.49	12344
13500	1738.00	1686.16	51.84	4076	13.69	4034	13.87	4218	13.78	41.33	12328
14000	1738.00	1686.29	51.71	4071	13.64	4029	13.82	4213	13.73	41.18	12313
16000	1738.00	1686.76	51.24	4052	13.45	4011	13.63	4194	13.54	40.62	12257
18000	1738.00	1687.20	50.80	4035	13.28	3994	13.46	4176	13.36	40.10	12204
20000	1738.00	1687.60	50.40	4018	13.12	3978	13.29	4159	13.20	39.62	12155
22000	1738.00	1687.99	50.01	4003	12.97	3963	13.14	4143	13.06	39.17	12109
24000	1738.00	1688.34	49.66	3989	12.83	3948	13.00	4129	12.92	38.75	12066
25000	1738.00	1688.52	49.48	3982	12.76	3941	12.94	4121	12.85	38.55	12045
30000	1738.00	1689.33	48.67	3949	12.45	3909	12.62	4088	12.53	37.60	11946
40000	1738.00	1690.78	47.22	3890	11.90	3850	12.06	4026	11.98	35.93	11766
50000	1738.00	1692.12	45.88	3834	11.40	3795	11.55	3969	11.47	34.41	11598
60000	1738.00	1693.36	44.64	3782	10.94	3744	11.08	3914	11.01	33.03	11440
70000	1738.00	1694.51	43.49	3733	10.52	3695	10.66	3864	10.59	31.77	11292
80000	1738.00	1695.55	42.45	3688	10.14	3651	10.28	3817	10.21	30.63	11156
90000	1738.00	1696.51	41.49	3646	9.80	3609	9.93	3774	9.86	29.59	11029
100000	1738.00	1697.41	40.59	3606	9.48	3570	9.61	3733	9.54	28.63	10908
110000	1738.00	1698.27	39.73	3568	9.18	3532	9.31	3693	9.24	27.73	10792
120000	1738.00	1699.10	38.90	3531	8.90	3495	9.02	3654	8.96	26.87	10680
200000	1738.00	1704.80	33.20	3262	7.01	3228	7.11	3376	7.06	21.18	9866

TABLE CLcalc4

**CORRA LINN
PLANT OUPUT VERSUS FLOW**

Unit 1 existing
Unit 2 existing
Unit 3 existing

HWL EI 1746.00
TWL FortisBC Data

Max. Plant Flow (cfs) 12600

Total Flow (cfs)	HWL (ft)	TWL (ft)	Gross Head (ft)	Unit 1 Flow (cfs)	Unit 1 Power (MW)	Unit 2 Flow (cfs)	Unit 2 Power (MW)	Unit 3 Flow (cfs)	Unit 3 Power (MW)	Total Power (MW)	P/H Flow (cfs)
0	1746.00	1681.12	64.88	0	0.00	0	0.00	0	0.00	0.00	0
3500	1746.00	1682.83	63.17	0	0.00	3500	14.92	0	0.00	14.92	3500
5000	1746.00	1683.45	62.55	0	0.00	3600	15.26	1400	4.54	19.80	5000
6000	1746.00	1683.84	62.16	0	0.00	3600	15.17	2400	9.02	24.18	6000
7000	1746.00	1684.21	61.79	0	0.00	3700	15.53	3300	13.27	28.80	7000
7500	1746.00	1684.38	61.62	3700	15.02	3800	15.91	0	0.00	30.93	7500
8000	1746.00	1684.55	61.45	4000	16.05	4000	16.59	0	0.00	32.64	8000
8500	1746.00	1684.72	61.28	2500	9.48	3500	14.47	2500	9.38	33.33	8500
9000	1746.00	1684.88	61.12	2750	10.68	3500	14.44	2750	10.57	35.69	9000
9500	1746.00	1685.04	60.96	2950	11.61	3600	14.87	2950	11.50	37.99	9500
10000	1746.00	1685.19	60.81	3200	12.74	3600	14.84	3200	12.62	40.20	10000
10500	1746.00	1685.34	60.66	3450	13.79	3600	14.80	3450	13.66	42.25	10500
10800	1746.00	1685.43	60.57	3600	14.38	3650	15.00	3550	14.04	43.43	10800
11000	1746.00	1685.49	60.51	3600	14.37	3800	15.62	3600	14.22	44.21	11000
11500	1746.00	1685.63	60.37	3800	15.09	3900	15.96	3800	14.90	45.96	11500
12000	1746.00	1685.77	60.23	4000	15.73	4000	16.26	4000	15.49	47.49	12000
12500	1746.00	1685.90	60.10	4150	16.14	4150	16.66	4200	15.98	48.77	12500
13000	1746.00	1686.03	59.97	4150	16.11	4150	16.62	4300	16.16	48.88	12600
13500	1746.00	1686.16	59.84	4150	16.07	4150	16.58	4300	16.12	48.78	12600
14000	1746.00	1686.29	59.71	4150	16.04	4150	16.55	4300	16.09	48.67	12600
16000	1746.00	1686.76	59.24	4150	15.91	4150	16.42	4300	15.96	48.29	12600
18000	1746.00	1687.20	58.80	4160	15.82	4140	16.27	4300	15.84	47.93	12600
20000	1746.00	1687.60	58.40	4170	15.74	4130	16.13	4300	15.73	47.60	12600
22000	1746.00	1687.99	58.01	4170	15.63	4130	16.03	4300	15.63	47.29	12600
24000	1746.00	1688.34	57.66	4170	15.54	4130	15.93	4300	15.53	47.00	12600
25000	1746.00	1688.52	57.48	4170	15.49	4130	15.88	4300	15.49	46.86	12600
30000	1746.00	1689.33	56.67	4170	15.27	4130	15.66	4300	15.27	46.20	12600
40000	1746.00	1690.78	55.22	4170	14.88	4130	15.26	4300	14.88	45.01	12600
50000	1746.00	1692.12	53.88	4155	14.50	4113	14.70	4301	14.60	43.80	12569
60000	1746.00	1693.36	52.64	4107	14.00	4065	14.19	4251	14.10	42.29	12423
70000	1746.00	1694.51	51.49	4062	13.55	4021	13.73	4204	13.64	40.92	12287
80000	1746.00	1695.55	50.45	4021	13.14	3980	13.32	4161	13.23	39.68	12162
90000	1746.00	1696.51	49.49	3982	12.77	3942	12.94	4122	12.85	38.55	12045
100000	1746.00	1697.41	48.59	3946	12.42	3906	12.59	4084	12.50	37.50	11935
110000	1746.00	1698.27	47.73	3911	12.09	3871	12.25	4048	12.17	36.51	11829
120000	1746.00	1699.10	46.90	3877	11.78	3837	11.94	4013	11.86	35.57	11727
200000	1746.00	1704.80	41.20	3633	9.70	3596	9.83	3761	9.76	29.29	10991

TABLE CLcalc5

**CORRA LINN
PLANT OUPUT VERSUS FLOW**

Unit 1 existing
Unit 2 existing
Unit 3 existing

HWL EI 1750.00
TWL FortisBC Data

Max. Plant Flow (cfs) 12600

Total Flow (cfs)	HWL (ft)	TWL (ft)	Gross Head (ft)	Unit 1 Flow (cfs)	Unit 1 Power (MW)	Unit 2 Flow (cfs)	Unit 2 Power (MW)	Unit 3 Flow (cfs)	Unit 3 Power (MW)	Total Power (MW)	P/H Flow (cfs)
0	1750.00	1681.12	68.88	0	0.00	0	0.00	0	0.00	0.00	0
3500	1750.00	1682.83	67.17	0	0.00	3500	15.87	0	0.00	15.87	3500
5000	1750.00	1683.45	66.55	0	0.00	3600	16.24	1400	4.83	21.07	5000
6000	1750.00	1683.84	66.16	0	0.00	3600	16.14	2400	9.60	25.74	6000
7000	1750.00	1684.21	65.79	0	0.00	3700	16.54	3300	14.13	30.67	7000
7500	1750.00	1684.38	65.62	3700	16.00	3800	16.94	0	0.00	32.94	7500
8000	1750.00	1684.55	65.45	4000	17.09	4000	17.67	0	0.00	34.76	8000
8500	1750.00	1684.72	65.28	2500	10.09	3500	15.42	2500	9.99	35.51	8500
9000	1750.00	1684.88	65.12	2750	11.37	3500	15.38	2750	11.27	38.02	9000
9500	1750.00	1685.04	64.96	2950	12.37	3600	15.85	2950	12.26	40.48	9500
10000	1750.00	1685.19	64.81	3200	13.57	3600	15.81	3200	13.45	42.84	10000
10500	1750.00	1685.34	64.66	3450	14.70	3600	15.78	3450	14.56	45.04	10500
10800	1750.00	1685.43	64.57	3600	15.33	3650	16.00	3550	14.97	46.30	10800
11000	1750.00	1685.49	64.51	3600	15.32	3800	16.65	3600	15.16	47.13	11000
11500	1750.00	1685.63	64.37	3800	16.09	3900	17.02	3800	15.89	49.00	11500
12000	1750.00	1685.77	64.23	4000	16.77	4000	17.35	4000	16.52	50.64	12000
12500	1750.00	1685.90	64.10	4150	17.22	4150	17.76	4200	17.04	52.02	12500
13000	1750.00	1686.03	63.97	4150	17.18	4150	17.73	4300	17.23	52.14	12600
13500	1750.00	1686.16	63.84	4150	17.15	4150	17.69	4300	17.20	52.04	12600
14000	1750.00	1686.29	63.71	4150	17.11	4150	17.66	4300	17.17	51.93	12600
16000	1750.00	1686.76	63.24	4150	16.98	4150	17.53	4300	17.04	51.55	12600
18000	1750.00	1687.20	62.80	4160	16.90	4140	17.38	4300	16.92	51.19	12600
20000	1750.00	1687.60	62.40	4170	16.82	4130	17.24	4300	16.81	50.86	12600
22000	1750.00	1687.99	62.01	4170	16.71	4130	17.13	4300	16.71	50.55	12600
24000	1750.00	1688.34	61.66	4170	16.62	4130	17.04	4300	16.61	50.26	12600
25000	1750.00	1688.52	61.48	4170	16.57	4130	16.99	4300	16.56	50.12	12600
30000	1750.00	1689.33	60.67	4170	16.35	4130	16.76	4300	16.35	49.46	12600
40000	1750.00	1690.78	59.22	4170	15.96	4130	16.36	4300	15.95	48.27	12600
50000	1750.00	1692.12	57.88	4170	15.60	4130	15.99	4300	15.59	47.18	12600
60000	1750.00	1693.36	56.64	4170	15.26	4130	15.65	4300	15.26	46.17	12600
70000	1750.00	1694.51	55.49	4170	14.96	4130	15.33	4300	14.95	45.24	12600
80000	1750.00	1695.55	54.45	4170	14.67	4130	15.04	4300	14.67	44.39	12600
90000	1750.00	1696.51	53.49	4140	14.34	4098	14.54	4285	14.44	43.32	12523
100000	1750.00	1697.41	52.59	4105	13.98	4063	14.17	4249	14.08	42.23	12417
110000	1750.00	1698.27	51.73	4071	13.64	4030	13.83	4214	13.73	41.20	12315
120000	1750.00	1699.10	50.90	4039	13.32	3998	13.50	4180	13.41	40.22	12216
200000	1750.00	1704.80	45.20	3806	11.14	3767	11.29	3939	11.22	33.65	11512

FortisBC Inc.
2005 Revenue Requirements Application,
2005-2024 System Development Plan and 2005 Resource Plan

Q53.0 Reference: Volume 1, Tab 7.3, p. 9

Please detail the reason(s) for the 57.8 percent increase in IPP energy for 2005 over 2004.

A53.0 This is based on information received from our major IPP who has indicated plans to generate more energy in 2005 than in 2004.

FortisBC Inc.
2005 Revenue Requirements Application,
2005-2024 System Development Plan and 2005 Resource Plan

Q54.0 Reference: Volume 1, Tab 7.3, p. 10

Please provide a copy of the November 16, 2004 *Avista Energy Distributed Report* and the *Energy Market Report* cited under the heading “Purchases Made in Advance.”

A54.0 The *Avista Energy Distributed Report* is a confidential document that we receive free of charge from Avista Energy and we are not able to release it. The *Energy Market Report* for November 16, 2004 is attached.

ENERGY MARKET REPORT

by *Daniel Fisher & S. Kris Van Vactor*

daily

Tuesday, November 16, 2004

Vol. 10, No. 221

Western Pre-Scheduled Firm Power Prices

Prices for	11/17/2004									
	Peak					Off-Peak				
	Low		High		Low		High			
	\$/MWh	Change	\$/MWh	Change	\$/MWh	Change	\$/MWh	Change		
NW/N. Rockies	44.50	1.00	49.00	3.25	38.00	3.00	42.50	3.00		
Mid-Columbia	44.50	1.00	49.00	3.25	41.00	5.00	42.50	3.00		
COB	50.00	0.50	53.50	1.50	43.50	3.75	45.00	1.00		
N. California	64.00	2.00	68.00	1.75	44.50	1.00	47.25	1.00		
Midway/Sylmar	NA	NA	NA	NA	NA	NA	NA	NA		
S. California	61.25	8.25	63.00	8.00	35.50	1.00	43.25	5.00		
Mead	56.25	6.00	57.25	5.00	38.00	3.50	41.00	5.00		
Palo Verde	53.50	7.50	56.75	6.75	36.75	4.75	40.75	6.60		
Inland SW	53.50	7.50	57.25	5.00	36.75	4.75	41.00	5.00		
4-Corners	54.75	7.50	56.00	6.00	36.00	4.00	39.50	7.00		
Central Rockies	50.50	6.50	55.00	7.00	32.00	4.50	36.25	5.25		

EMR Prices include price ranges from various sources, including confidential phone communication, marketer and LSE trade sheets, and prices reported by the Intercontinental Exchange (ICE).

California Dreaming: Is Public Power Dead?

In an article released by the *LA Times* on Monday, the debate for public power rages on in the City of Irvine. After more than \$400,000 and two years spent on feasibility studies the current City Council voted to scrap the idea of a city-owned electric utility. However if on December 14th, political allies too Mayor Larry Agran are elected to the council, the concept could receive a large jolt, much like that delivered by a defibrillator. While Irvine does already have a Municipal Power Utility, the utility as it is structured right now is more or less a city-owned trailer attached to a power generator, which probably consumes more power than it produces. This was a common practice by many cities during the brown outs of 2000-2001 when dozens filed the necessary paperwork to create these municipals, but without any actual assets, they are largely considered worthless. While the majority of cities have not made the actual investment into public power, some cities have forged on. For instance, the City of Moreno provides power only to its newly-developed areas-a sort of compromise between providing power to all of its residents and not providing power at all.

WECC

Power prices in the West made gains on Tuesday. Climbing spot natural gas prices likely caused the premium placed on West Coast power. On NYMEX, natural gas futures contradicted their more immediate relation, the

spot contract, as prices took a bit of a tumble. The December contract lost 31.2 cents to settle at 7.124\$/mmBtu. While the January contract ended 29 cents lower to finish at 7.757\$/mmBtu. Other contracts lost ground anywhere from 3.3 cents/mmBtu to 29.5 cents/mmBtu.

Northwest

Power in the Northwest regions was more expensive on Tuesday as traders bartered Wednesday deliveries. At the main Northwest hub, the Mid-Columbia delivery point, peak power was bought and sold from 44.50 to 49\$/MWh, while off-peak blocks were exchanged from 41 to 42.50\$/MWh. In unit news, there were no new unit outages to report. Local forecasts anticipated the Northwest to see no significant changes for Thursday at each major load center. While the latest six-to-ten day forecast predicted the majority of the Northwest to be at seasonally warm temperature ranges, Wyoming and Montana should see normal temperature levels from November 22 to 26.

California

The Golden State saw power prices make gains on Tuesday. One of the dominant market factors seemed to be spot natural gas, which made strong gains, despite losses by their longer-termed relations. At COB, heavy-load power was traded from 50 to 53.50\$/MWh, while light-load blocks were seen going from 43.50 to 45\$/MWh. NP-15 saw power make more moderate gains when compared to other hubs. Peak power was bartered from 64 to 68\$/MWh, while off-peak blocks were swapped from 44.50 to 47.25\$/

MWh. SP-15 saw heavy-load blocks bought and sold from 61.25 to 63\$/MWh, while light-load pieces were swapped from 35.50 to 43.25\$/MWh. In unit news, one unit was curtailed dramatically as Helms #2 (407 MW) came down so that the unit was producing no power as of this writing. In local news, the committee studying the Riverside Power Plant has recommended that the facility receive an exemption under the Small Power Plant Exemption Process. Under this process, a power plant proposal may be exempted from licensing processes if the plant is sufficiently small enough (less than 100 MW) and has no adverse environmental, transmission and public health impacts. The latest five-day forecast showed California weather to be hovering roughly within the same temperature ranges on Thursday as was predicted on Wednesday. The extended forecast anticipated the northern portions of the Golden State to be seasonally warm, while the southern section should be at normal temperature levels from November 22 to 26.

Southwest

Power in the Southwest made gains on Tuesday. Largely to blame for the sharp increase in power pricing was most probably the gains made in the spot natural gas market. Mead saw heavy-load power bought and sold from 56.25 to 57.25\$/MWh, while light-load pieces were exchanged from 38 to 41\$/MWh. Palo Verde saw peak power swapping hands from 53.50 to 56.75\$/MWh, while off-peak blocks were traded from 36.75 to 40.75\$/

MWh. In unit news, there were no new unit outages to report for the region. In local news, Nevada Power filed its deferred rate case with the Public Utility Commission of Nevada. The subsidiary of Sierra Pacific Power is seeking \$115.9 million in recovery. The recovery is based on higher fuel costs that were incurred from October 1st of 2003 to September 30th of 2004. The company is hoping that the future rate decrease can be extended until April of 2005, at which the decrease of 2.6 percent can be implemented. The most recent five-day forecast expected most of the Southwest to see no significant changes in daytime temperatures throughout the region, with the exception of Phoenix, which should experience warming as temperatures head into the upper 70s. The most recent six-to-ten predicted mixed temperature ranges for the Southwest. Northern Nevada should see above-normal levels, while the southern sections should experience seasonally normal temperatures. Northwestern Utah should also experience seasonally warm temperature levels, while the rest of the Southwest should feel below-normal temperatures from November 22 to 26.

Western Natural Gas (\$/mmBtu)				
NYMEX Henry Hub			Western Spot Gas	
	Close	Change	Low	High
Dec	7.124	-0.312	PG & E CG 6.38	6.70
			Sumas 5.75	6.15
			So Cal 6.00	6.48
Jan	7.757	-0.290	San Juan 5.78	5.97
			Waha 5.90	6.30

OTC Western Forward Electricity Costs in \$/MWh																				
	Mid-Columbia				Palo Verde				SP-15				NP-15				Mead			
	On-Peak		Off-Peak		On-Peak		Off-Peak		On-Peak		Off-Peak		On-Peak		Off-Peak		On-Peak		Off-Peak	
	Bid	Ask	Bid	Ask	Bid	Ask	Bid	Ask	Bid	Ask	Bid	Ask	Bid	Ask	Bid	Ask	Bid	Ask	Bid	Ask
DEC 2004	55.00	56.00	NA	NA	56.00	57.00	42.25	43.25	64.50	65.50	NA	NA	66.75	67.75	50.50	51.50	NA	NA	NA	NA
JAN 2005	58.25	59.25	NA	NA	60.75	61.75	45.50	46.50	68.00	69.00	NA	NA	69.00	70.00	NA	NA	NA	NA	NA	NA
Q1 2005	55.75	56.75	NA	NA	58.75	59.75	43.50	44.50	65.50	66.50	49.25	50.25	65.75	66.75	51.50	52.50	61.25	62.25	NA	NA
Q2 2005	37.50	38.50	NA	NA	55.00	56.00	36.50	37.50	60.75	61.75	41.00	42.00	57.75	58.75	NA	NA	57.75	58.75	NA	NA
Q3 2005	54.25	55.25	NA	NA	66.75	67.75	45.00	46.00	73.50	74.50	52.00	53.00	71.00	72.00	NA	NA	71.75	72.75	NA	NA
Q4 2005	55.25	56.25	NA	NA	56.25	57.25	NA	NA	63.50	64.50	48.25	49.25	64.00	65.00	NA	NA	58.75	59.75	NA	NA
CAL 05	50.50	51.50	43.00	44.00	59.25	60.25	42.00	43.00	65.75	66.75	48.00	49.00	64.75	65.75	49.50	50.50	62.00	63.00	44.25	45.25
CAL 06	49.50	50.50	42.00	43.00	57.25	58.25	40.75	41.75	64.50	65.50	46.25	47.25	63.00	64.00	47.75	48.75	60.25	61.00	43.25	44.25
CAL 07	47.50	48.50	40.75	41.75	56.00	57.00	39.00	40.00	63.25	64.25	44.75	45.75	62.00	63.00	46.50	47.50	58.50	59.50	42.25	43.25
C 07-10	46.50	47.50	39.25	40.25	53.75	54.75	37.25	38.25	61.25	62.25	43.00	44.00	59.25	60.25	45.50	46.50	56.75	57.75	39.75	40.75
C 11-12	NA	NA	NA	NA	51.00	52.00	NA	NA	58.00	59.25	NA	NA	56.00	57.00	NA	NA	54.00	55.00	NA	NA

Represents the most recent bid/ask spread at time of publishing. Economic Insight does not warrant or guarantee their accuracy or that any transitions were or could have been executed at the indicated price. Economic Insight assumes no liability for any direct or indirect loss or damage of any kind arising from the use of this data, including losses or damages arising as a result of Economic Insights negligence.

CAISO Congestion Index in \$/MWh

	Path	Peak	Off-Peak
For 11/17/04	NW to NP15	399	000
	NW3 to SP15	000	000
	AZ3 to SP15	572	000
	LC1 to SP15	121	000
	SP15 to NP15	000	000

CIBC Energy Update Western OTC Forward Natural Gas Prices in \$/mmBtu

Dates	NYMEX	Sumas	Malin	Rockies	SoCal
Dec-04 to Mar-05	7.56	6.75	6.84	6.72	6.92
Apr-05 to Oct-05	6.68	5.92	6.26	5.97	6.33
Nov-05 to Mar-06	7.28	6.73	6.82	6.61	6.83

Data provided by CIBC World Markets' Energy update and NYMEX. The prices provided by CIBC are indications only, as prices fluctuate throughout the day. All prices are based on NYMEX settlements for the day of publication, and prices for other hubs cannot be guaranteed by either CIBC or the EMR. Investors should use above prices at their own risk, as CIBC

Alberta Power Pool Index in C\$/MWh

	Peak (14)	Peak (16)	Off-Peak	Flat	Change
11/15/04	5444	5067	1646	4048	2667

Western Break-Even Heat Rates

HUB	Gas Hub	Spot Gas, \$/mmBtu	Plant Type	Peak Break-even Heat Rate	Off-Peak Break-even Heat Rate	Var. O&M	Avg. Spot Peak, \$/MWh	Avg. Spot Off-Peak, \$/MWh
Mid-C	Sumas	\$6.15	CC	7,195	6,382	\$2.50	\$46.75	\$41.75
Mid-C	Sumas	\$6.15	CT	6,951	6,138	\$4.00	\$46.75	\$41.75
NP-15	PG&E	\$6.70	CC	9,478	6,474	\$2.50	\$66.00	\$45.88
NP-15	PG&E	\$6.70	CT	9,254	6,250	\$4.00	\$66.00	\$45.88
SP-15	SoCal	\$6.48	CC	9,201	5,691	\$2.50	\$62.13	\$39.38
SP-15	SoCal	\$6.48	CT	8,970	5,459	\$4.00	\$62.13	\$39.38

Avg. Spot Peak and Off-Peak prices represent arithmetic averages between the daily high and low price for each hub. Variable O&M costs are approximations of Combined Cycle and Combustion Turbine plant VOMs only.

Peak Load Forecast (MW)

For	CAISO
11/17/04	31,726

Western City Temperature Forecasts

Region	City	17-Nov-2004			18-Nov-2004			19-Nov-2004			20-Nov-2004			21-Nov-2004		
		High	Low	HDD/CDD	High	Low	HDD/CDD	High	Low	HDD/CDD	High	Low	HDD/CDD	High	Low	HDD/CDD
CA	Fresno	69	44	8.5/	67	47	8/	64	43	11.5/	64	43	11.5/	65	42	11.5/
CA	Los Angeles	70	50	5/	70	50	5/	70	50	5/	75	50	2.5/	75	50	2.5/
CA	Sacramento	63	46	10.5/	63	45	11/	65	45	10/	65	45	10/	65	45	10/
CA	San Francisco	60	45	12.5/	60	45	12.5/	60	40	15/	60	40	15/	60	40	15/
NW	Portland	53	40	18.5/	53	40	18.5/	53	38	19.5/	50	37	21.5/	50	37	21.5/
NW	Seattle	53	42	17.5/	52	38	20/	52	38	20/	50	38	21/	50	38	21/
NW	Spokane	45	35	25/	45	30	27.5/	38	22	35/	38	22	35/	38	22	35/
Rockies	Denver	53	32	22.5/	53	31	23/	48	24	29/	39	21	35/	40	22	34/
SW	Las Vegas	68	48	7/	68	48	7/	68	45	8.5/	62	40	14/	60	37	16.5/
SW	Phoenix	73	50	3.5/	77	50	1.5/	77	50	1.5/	77	45	4/	64	45	10.5/
SW	Salt Lake City	52	32	23/	52	32	23/	42	25	31.5/	35	22	36.5/	35	22	36.5/

Western Generating Unit Outages

Capacity	Unit	Owner*	Fuel	Begins	Ends	Reason
Current	3,950 CAISO units curtailed < 250 MW	various	various	NA	NA	planned and unplanned
	336 Alamos #3	AES	gas	10/22/2004	?	unplanned
	333 Alamos #4	AES	gas	10/22/2001	?	unplanned
	1,100 Diablo Canyon #2	PG&E	nuke	10/25/2004	Mid Nov.	refueling outage
	300 Encina #4	Cabrillo Power	gas	10/9/2004	?	planned
	343 Haynes #5	LADWP	gas	11/2/2004	?	planned
	407 Helms #2	PG&E	gas	11/16/2004	?	planned
	933 Hyatt Thermalito	CDWR	hydro	9/14/2004	?	@504 MW, unplanned
	561 Los Medanos	CCFC2	gas	11/6/2004	?	planned
	510 Moss Landing #1	Duke	gas	10/28/2004	?	@250 MW, unplanned
	1,270 Palo Verde #3	APS	nuke	10/1/2004	11/24/2004	refueling outage
	1,100 San Onofre #3	SCE	nuke	9/27/2004	January	refueling outage/extended

Bold denotes change from previous EMR. *Entity with majority share of the unit.

Future outages are provided in part by NukeWorker.com. These are estimates and could change at any time.

Eastern Pre-Scheduled Firm Power Prices

Prices for	11/17/2004		Peak				Off-Peak			
			Low		High		Low		High	
			\$/MWh	Change	\$/MWh	Change	\$/MWh	Change	\$/MWh	Change
AEP	38.75	-1.25	40.40	-1.10	22.00	-4.00	22.00	-4.00		
Cinergy	38.50	-1.50	44.00	-2.00	25.50	-1.50	26.25	-2.25		
Entergy	45.50	2.25	47.25	1.75	NA	NA	NA	NA		
ERCOT	52.50	7.25	55.00	4.00	29.60	2.10	32.00	4.00		
ERCOT-North	52.00	1.75	53.75	1.75	30.50	3.00	30.50	3.00		
Nepool	60.75	4.25	62.25	3.25	NA	NA	NA	NA		
N Illinois	36.00	-2.25	38.25	-3.00	NA	NA	NA	NA		
PJM-West	43.75	-2.25	45.00	-1.50	27.50	-5.50	27.50	-5.50		
TVA	NA	NA	NA	NA	NA	NA	NA	NA		

EMR Prices include price ranges from various sources, including confidential phone communication, marketer and LSE trade sheets, and prices reported by the Intercontinental Exchange (ICE).

The Wrath of Natural Gas

In what appears to be becoming routine, the north and the south diverged as natural gas dependence dictated the southern market. Warmer temperatures in the north calmed heating demand, and in turn, prices. Nuclear generation saw modest changes as the routine curtailment of Pilgrim #1 (653 MW) was partially countered by Farley #1's (830 MW) partial return to the grid. A representative for Pilgrim #1 said that they were reversing the flow of the condenser backwater for bio control. Apparently blue mussels tend to clog the water intake. He predicted that they would be back to full power on Tuesday night and would start ramping up once the tide levels were favorable. The spot natural gas market continued its volatile rampage, with the average trade gaining 50 cents/mmBtu for Wednesday delivery. Front-month futures closed on the negative side. December and January settled close to 30 cents/mmBtu lower than on Tuesday. Aside from the seasonally cool bubble that lingered over the Midwest, the Eastern Interconnect was expected to feel seasonally normal temperatures from November 22 through 26.

Midwest

A small relief from the cold helped depress loads and heating demand. In the end, electricity prices were pushed modestly downward. AEP wit-

nessed exchanges from 38.75 to 40.40\$/MWh, while Into Cinergy saw those same hours swapped from 38.50 to 44\$/MWh. North Illinois sold at the biggest discount, with deals made from 36.00 to 38.25\$/MWh. In preparation for Thanksgiving week, several deals were made to cover peak load during the 22nd through 26th window. Into Cinergy recorded a handful that ranged from 37.75 to 38.50 \$/MWh, while AEP saw the same piece valued in the 38.00 to 40.50\$/MWh ballpark. In future nuke news, our eyes are on Kewaunee (575 MW) as it surpassed its 4th week of refueling and should be approaching its return. On Thursday, Chicago was forecasted to be in the low 50s, while Detroit should see highs in the mid 50s. Pittsburgh and Cincinnati were predicted to be the warmest of the bunch, with temperatures peaking in the low 60s.

PJM

Wednesday's peak power at PJM-West was bought and sold in the 43.75 to 45.00\$/MWh spectrum. The 6:00 to 17:00 EST LMP session spent most of the time trading near the 43.65\$/MWh average. Prices were the most elevated during the first and last hours, where the high of 74.45\$/MWh was achieved. Highlights of the session included two transactions that occurred below the 10\$/MWh mark. In nuclear news, Beaver Valley #1 (821 MW) held its 30 percent reactor status. On Monday, FirstEnergy announced that they were going to take the ramp up slow as routine testing was be-

ing conducted. PJM officials predicted constrained operations in the AP, PS, PE, JC, CE, PL, DPL and AE areas on November 18th. Temperatures in the upper 50s to low 60s were forecasted for Baltimore, Philadelphia, and D.C. on Thursday.

Southeast

The bull made an appearance in the Into Entergy hub as warmer temperature forecasts could not tame natural gas. Wednesday's heavy-load hours were valued from 45.50 to 47.25\$/MWh at the hub. In nuclear news, Farley #1 (830 MW) began its post-refueling return, with technicians posting a 12 percent output on Tuesday morning. Locals were expected to see temperatures on Thursday that were similar to those on Wednesday. Atlanta and Nashville were projected to warm a few degrees while New Orleans and Raleigh-Durham were expected to cool a degree or two.

Texas

Much like the Southeast, Texas saw the price of electricity rise on spot natural gas' upward

swing. Heavy-load electricity flowed from 52.50 to 55.00\$/MWh with the Seller's Choice label and from 52.00 to 53.75\$/MWh at ERCOT-North. Both of Texas' nuclear power plants reposted healthy electricity production on Tuesday morning. In weather, Thursday was predicted to bring highs in the mid 60s for El Paso, upper 60s for Dallas, and low 70s for Houston. The six-to-ten day outlook projected seasonally cool temperatures to reside over the majority of Texas from November 22 through 26. Houston, however, had a chance to be seasonally normal during that same timeframe.

Eastern Natural Gas (\$/mmBtu)			
NYMEX Henry Hub		Eastern Spot Gas	
	Close	Change	
Dec	7.124	-0.312	
Jan	7.757	-0.290	
			Low High
			San Juan 5.78 5.97
			Waha 5.90 6.30
			Katy 6.31 6.39
			E Texas 6.33 6.47
			LA Avg. 6.33 6.63
			App. TCO 6.77 7.15
			Chicago 6.40 6.85

Eastern Peak Load Forecasts (MW)						
For	ERCOT	PJM	PJM West	Comed	AEP	Dayton
11/17/04	34,508	38,000	6,425	12,541	16,209	2,264
11/18/04	35,014	38,000	6,269	12,285	15,767	2,240

Eastern Break-Even Heat Rates									
HUB	Gas Hub	Spot Gas, \$/mmBtu	Plant Type	Peak Break-even Heat Rate	Off-Peak Break-even Heat Rate	Var. O & M	Avg. Spot Peak, \$/MWh	Avg. Spot Off-Peak, \$/MWh	Avg Spot Peak and Off-Peak prices represent arithmetic averages between the daily high and low price for each hub. Variable O&M costs are approximations of Combined Cycle and Combustion Turbine plant VOMs only.
ERCOT-W	Katy	\$6.39	CC	8,020	4,429	\$2.50	\$53.75	\$30.80	
ERCOT-W	Katy	\$6.39	CT	7,786	4,194	\$4.00	\$53.75	\$30.80	
ERCOT-W	San Juan	\$5.97	CC	8,585	4,740	\$2.50	\$53.75	\$30.80	
ERCOT-W	San Juan	\$5.97	CT	8,333	4,489	\$4.00	\$53.75	\$30.80	
ERCOT-E	E. Texas	\$6.47	CC	7,921	4,374	\$2.50	\$53.75	\$30.80	
ERCOT-E	E. Texas	\$6.47	CT	7,689	4,142	\$4.00	\$53.75	\$30.80	
Entergy	LA Avg.	\$6.63	CC	6,618	NA	\$2.50	\$46.38	NA	
Entergy	LA Avg.	\$6.63	CT	6,391	NA	\$4.00	\$46.38	NA	
Entergy	App. Avg.	\$7.15	CC	6,136	NA	\$2.50	\$46.38	NA	
Entergy	App. Avg.	\$7.15	CT	5,927	NA	\$4.00	\$46.38	NA	
N. ILL	Chicago CG	\$6.85	CC	5,055	NA	\$2.50	\$37.13	NA	
N. ILL	Chicago CG	\$6.85	CT	4,836	NA	\$4.00	\$37.13	NA	

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ERCOT Day-Ahead Market Report Summary (Averaged by Shape)					
11/17/2004	Service	Avg. MW Requested	Avg. MW Procured	Avg. Price (\$/MWh)	Avg. MW Bid
Peak	Non-Spinning Reserve	0	0	\$0.00	548
Off-Peak	Non-Spinning Reserve	0	0	\$0.00	620
Peak	Regulation-Down Reserves	833	295	\$11.39	1,281
Off-Peak	Regulation-Down Reserves	678	382	\$18.99	934
Peak	Regulation-Up Reserves	871	392	\$17.75	968
Off-Peak	Regulation-Up Reserves	821	384	\$17.01	980
Peak	Response Requirement	2,300	975	\$11.08	1,926
Off-Peak	Response Requirement	2,300	1,050	\$14.76	1,863

CIBC Energy Update Eastern OTC Forward Natural Gas Prices in \$/mmBtu					
Dates	NMEX	Ventura	Chicago	TZ6 (NOC)	TMB(N App)
Dec-04 to Mar-05	7.56	7.33	7.65	9.56	9.15
Apr-05 to Oct-05	6.68	6.31	6.72	7.22	7.22
Nov-05 to Mar-06	7.28	7.15	7.37	8.98	8.60

Data provided by CIBC World Markets' Energy update and NYMEX. The prices provided by CIBC are indications only, as prices fluctuate throughout the day. All prices are based on NYMEX settlements for the day of publication, and prices for other hubs cannot be guaranteed by either CIBC or the EMR. Investors should use above prices at their own risk, as CIBC and the EMR are not responsible for any inaccuracies contained in the above data set.

Eastern City Temperature Forecasts																
Region	City	17-Nov-2004			18-Nov-2004			19-Nov-2004			20-Nov-2004			21-Nov-2004		
		High	Low	HDD/CDD	High	Low	HDD/CDD	High	Low	HDD/CDD	High	Low	HDD/CDD	High	Low	HDD/CDD
ECAR	Cincinnati	60	48	11/	62	42	13/	62	48	10/	58	42	15/	53	33	22/
ECAR	Detroit	57	48	12.5/	56	37	18.5/	54	45	15.5/	55	39	18/	45	29	28/
ECAR	Pittsburgh	55	45	15/	60	42	14/	55	42	16.5/	55	40	17.5/	50	35	22.5/
ERCOT	Dallas	69	61	0/	69	56	2.5/	69	54	3.5/	64	45	10.5/	51	37	21/
ERCOT	El Paso	60	43	13.5/	65	42	11.5/	68	41	10.5/	65	42	11.5/	60	36	17/
ERCOT	Houston	71	65	/3	73	62	/2.5	75	60	/2.5	74	59	/1.5	70	55	2.5/
NIL	Chicago	61	48	10.5/	53	46	15.5/	51	50	14.5/	50	38	21/	42	31	28.5/
PJM	Baltimore	58	42	15/	61	50	9.5/	60	44	13/	55	41	17/	57	48	12.5/
PJM	Philadelphia	58	45	13.5/	58	42	15/	60	40	15/	55	42	16.5/	58	45	13.5/
PJM	Washington DC	59	43	14/	61	44	12.5/	62	44	12/	59	42	14.5/	60	46	12/
SERC	Atlanta	67	49	7/	69	47	7/	64	49	8.5/	62	48	10/	63	50	8.5/
SERC	Nashville	66	47	8.5/	68	46	8/	64	47	9.5/	61	48	10.5/	57	39	17/
SERC	New Orleans	75	60	/2.5	74	62	/3	72	62	/2	74	60	/2	74	56	0/
SERC	Raleigh-Durham	62	40	14/	60	42	14/	62	42	13/	62	45	11.5/	62	45	11.5/

Eastern Generating Unit Outages

Capacity	Unit	Owner*	Region	Type	Begins	Ramping Up	Reason	Notes
Current	1,040 Indian Point #2	Entergy Nuclear	NPCC/1	Nuclear	10/23/04	Mid Nov.	Refueling outage	0%
	821 Beaver Valley #1	FirstEnergy	PJM/1	Nuclear	10/17/04	11/15/04	Exiting refueling	30%
	1,049 Hope Creek #1	PSEG Nuclear	PJM/1	Nuclear	10/11/04	December	Steam leak/refueling outage	0%
	619 Oyster Creek	Exelon	PJM/1	Nuclear	11/01/04	Late Nov.	Refueling outage	0%
	653 Pilgrim #1	Entergy Nuclear	NPCC/1	Nuclear	11/16/04	10/16/04	Condenser backwash	63%
	1,105 Susquehanna #1	PPL	PJM/1	Nuclear	11/07/04	?	Condensate pump motor	80%
	693 Turkey Point #3	FP&L	FRCC/2	Nuclear	09/25/04	November	Refueling outage	0%
	830 Farley #1	So. Nuclear Operating	SERC/2	Nuclear	10/02/04	11/16/04	Exiting refueling	12%
	900 Harris #1	Progress Energy	SERC/2	Nuclear	11/08/04	?	Trouble restarting	0%
	846 Oconee #3	Duke Energy	SERC/2	Nuclear	10/09/04	End of Dec.	Refueling/SG replacement	0%
	1,125 Sequoyah #1	TVA	SERC/2	Nuclear	10/25/04	Mid Nov.	Refueling outage	0%
	810 Surry #1	Virginia E&P	SERC/2	Nuclear	10/31/04	Early Dec.	Refueling outage	0%
	1,089 Fermi #2	Detroit Edison	ECAR/3	Nuclear	11/06/04	Early Dec.	Refueling outage	0%
	792 Palisades	Nuclear Manag. Co.	ECAR/3	Nuclear	09/18/04	Early Dec.	Refueling outage/extended	0%
	850 Dresden #2	Exelon	MAIN/3	Nuclear	10/30/04	?	Turbine vibrations	0%
	850 Dresden #3	Exelon	MAIN/3	Nuclear	10/26/04	Mid Nov.	Refueling outage	0%
	575 Kewaunee	Nuclear Manag. Co.	MAIN/3	Nuclear	10/09/04	Early Nov.	Refueling outage	0%
	522 Prairie Island #1	Nuclear Manag. Co.	MAPP/3	Nuclear	08/21/04	November	Refueling/SG replacement	0%
	966 River Bend #1	Entergy Nuclear	SERC/4	Nuclear	10/22/04	Mid Nov.	Refueling outage	0%

Future It was estimated that Saint Lucie #2 (839 MW) would begin refueling 11/22/2004

Bold denotes change from previous EMR. *Entity with majority share of the unit.

Future outages are provided in part by NukeWorker.com. These are estimates and could change at any time.

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Q55.0 Reference: Volume 1, Tab 7.3, pp. 10-11

What is the energy price, if any, associated with the capacity block purchases from TeckCominco?

A55.0 There is no energy purchased under the capacity block purchases from TeckCominco.

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56.0 Reference: Volume 1, Tab 7.3, p. 11

FortisBC purchased a Pre-Schedule Call Option from Avista Energy.

Q56.1 Would it be correct to characterize the purchase as a “deliverability” hedge as opposed to a price hedge?

A56.1 Yes, since the price of energy from it is linked to the market it does not provide any price certainty. It is more of a reliability issue.

Q56.2 Why is this hedge required?

A56.2 The hedge is considered prudent to ensure against short-term shortages in the pre-schedule market. With the call option FortisBC is guaranteed supply in the event of such a shortage. Short-term shortages can occur at any time in the market. Please also see the response to BCUC IR1 Q193.9.

Lack of transmission from the U.S. to B.C. is also a potential concern. Having this call option in place provides a measure of protection against limited transmission from the market to FortisBC since the call option is not limited to U.S. based sources.

Q56.3 Please describe any previous circumstances under which FortisBC was concerned about the possibility of not being able to meet its load due to deliverability concerns.

A56.3 There have been several real-time instances over the last five years where FortisBC has been unable to obtain power from the real-time markets due to a short-term regional shortage or a lack of supply or a transmission congestion from the U.S. to FortisBC. This required FortisBC to employ option A in the real-time balancing options as described in the response to BCUC IR1 Q172.3. This includes January 5th, 2004 where FortisBC was unable to obtain real-time power from the market for certain hours and had to depend on industrial load reductions. There was a shortfall in regional supply due to severe cold weather that was only forecast after the close of pre-schedule transactions. Therefore, the entire region was required to deal with the shortfall on a real-time basis. This was made worse by the fact that this was the first real cold snap that the region had experienced since 1996 and therefore load uncertainty was much higher than it normally would be.

The transmission congestion events experienced in 2004 resulted in several real-time schedules from the U.S. to FortisBC being cut at the last second—in at least one case after the hour had already started.

These difficulties have not been experienced on FortisBC pre-schedule (as opposed to real-time) transactions to date but the potential does exist. For example, in the Winter of 2000/01 a regional shortage existed and created potential deliverability issues for many WECC utilities. FortisBC had call options in place and as such we were not exposed to the potential lack of pre-schedule supply that occurred at that time.

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Q56.4 If the call option were to be exercised, and the forecast upon which the exercise was based turns out to be incorrect, is the energy taken anyway?

A56.4 Yes, FortisBC has an obligation to take the energy if the call option is exercised, unless the seller agrees to redirect it somewhere else. We are required to ensure the seller receives the full price we agreed to pay. However, the option must be exercised on a daily basis so the forecast error should be relatively small.

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57.0 Reference: Volume 1, Tab 7.3, p. 12

Less energy is expected to be required from the [spot] market in 2005 due to increased capacity resources and slightly lower forecasted peaks in critical months.

Q57.1 How much of the reduction is due to increased capacity and how much is due to reduced peak demand?

A57.1 The estimated reduction in market power purchase costs in 2005 compared to 2004 is \$1.08 million. The drivers for this reduction that were listed in Volume 1, Tab 7.3, p.12 account for the following portion of this amount:

- increased capacity resources for 2005 resulted in a reduction of \$474,000
- lower forecasted peaks in critical months resulted in a reduction of \$52,000.

In addition there are two other factors:

- An under-estimation of the market purchases for 2005 owing to a calculation error in the call option energy which should have been \$252,000 higher than shown. A revised 2005 Power Purchase Forecast will be submitted incorporating the correction.
- Actual purchases in the 2004 power purchase table varying from modeled estimated requirements by \$302,000

Q57.2 How much of the reduction in peak demand comes simply by assuming “normal” winter temperatures?

A57.2 The 2005 load forecast assumes “normal” weather. In general, weather is the largest driver in setting the peak demand and will be by far the largest driver in determining variances in peak demand from the 2005 plan compared to 2004 actual.

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58.0 Reference: Volume 1, Tab 7.3, p. 14, Table 7.4 A

Q58.1 Please confirm that, on line 9 of the table, the figures should be (1,240), (310), and (930), respectively, and that the leftmost value on line 10 should be (660).

A58.1 For these four responses, please refer to the following table for the 2004 Power Purchase Incentive. This table was presented at the January 20, 2005 Annual Review (Slide 20 of the presentation) and replaces Table 7.4 A of the Application. It provides the Incentive calculation based on 2004 actual results.

2004 Power Purchase Incentive

Target Cost	Actual	Power Purchase Variance "PPV"	FortisBC Share of Market Incentive	Adjustment to Rates
FORECAST POWER PURCHASE EXPENSE "FPPE"	61,366	(000's)		
ADJUSTED POWER PURCHASE EXPENSE "APPE"	61,561	59,014		
Shared Component				
On first \$1 million		(1,000)	(350)	(650)
Over \$ 1 million		(1,547)	(387)	(1,160)
			(737)	(1,810)
Flow-through Component				
Impact of BCHydro Interim Rate Reduction not included above			121	(121)
2004 ADJUSTMENT			(616)	(1,931)

Q58.2 The following values have been extracted from the tables in this section:

- i. 31,081 from line 16 of Table 7.4 A**
- ii. 31,551 from line 3 of Table 7.5**
- iii. 31,393 from line 81 of Table 7.1**

Should these values all be the same? If not, why not?

A58.2 Please refer to the Actual values in the response to BCUC IR Q58.1 above.

Q58.3 Are the "2004 BC Hydro Final Rate" amounts on lines 16 and 17 of the table embedded in the "Actual" amount of 60,389 shown on line 6?

A58.3 Table 7.4 A did "double count" a portion of the BC Hydro rate reduction impact. In the table above, the full impact of the reduction is included in the APPE and Actual values. In accordance with the sharing mechanism, 75 percent of the \$484,000 rate impact is returned to

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customers through the shared component. The remaining 25 percent, or \$121,000, is shown as a flow-through adjustment, increasing the benefit to rates and reducing the FortisBC share by the same amount. This reduction effectively completes the flow through process of passing this 2004 power purchase cost reduction on to FortisBC customers.

Q58.4 If the answer to the previous question is “yes,” should the total rate adjustment to customers be (1,580) as shown on line 10 rather than (2,076) as shown on line 19? If not, please explain why adding lines 10 and 18 does not amount to “double counting.”

A58.4 Please see the response to BCUC IR Q58.3.

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**Q59.0 Reference: Volume 1, Tab 8, Revenue Requirements, Table of Contents, Item 2
Operation and Maintenance**

Please provide a comparative schedule for Total Operating and Maintenance costs, by BCUC account, for the years 2001 to 2005, inclusive. For the year 2004, in addition to the projected amounts, also show the amounts approved as per Order No. G-38-04.

A59.0 The information for 2001 - 2005 is attached as BCUC A59.0. FortisBC wishes to qualify this response by noting that caution must be used in strictly interpreting year to year changes in the table. While every effort is made to conform with the Uniform System of Accounts as it applies to the Company, circumstances since 2000 have resulted in some apparent differences in categorization of costs from year to year related to specific functions. These circumstances included the 2001/2002 integration of the BC and Alberta utilities and the attendant organizational restructuring, the implementation of a new accounting system in 2002, the 2004/2005 transition back to a stand-alone utility, again with associated reorganization.

For 2004, the approved O&M expense was target-driven and was derived at the company level. A key premise of a PBR rate-setting process is that operating flexibility will increase by permitting a redistribution of funding from year to year as circumstances require. For this reason there was no "approved" O&M expense at this level of detail.

BCUC A59.0

OPERATING AND MAINTENANCE EXPENSES, 2001 - 2005

	2001	2002	2003	Forecast 2004	Forecast 2005
GENERATION					
	(\$000s)				
Supervision & Administration	278	391	254	486	587
Water Fees					
Structures	611	636	568	543	587
Dams and Waterways	104	88	161	124	130
Electric Plant	265	337	383	63	67
Other Plant	169	216	394	472	489
	<u>1,426</u>	<u>1,668</u>	<u>1,760</u>	<u>1,690</u>	<u>1,860</u>
OTHER POWER SUPPLY					
Purchased Power					
System Control	578	593	690	651	661
	<u>578</u>	<u>593</u>	<u>690</u>	<u>651</u>	<u>661</u>
TRANSMISSION & DISTRIBUTION					
Supervision & Administration	1,921	2,254	2,947	103	87
System Planning	372	680	1,246	838	1,192
Load Dispatching	518	787	957	863	875
Transmission Station Expense	889	663	659	330	545
Transmission Line Maintenance	286	133	129	80	139
Transmission ROW Maintenance	555	657	353	853	594
Wheeling	-				
Rents (Cominco/BTS)	239	239	239	3,215	3,318
Distribution Line Maintenance	2,012	1,004	707	1,664	2,105
Distribution ROW Maintenance	1,438	1,172	1,219	950	1,271
Meter Expenses	839	970	633	694	791
Customer Installations	236	28	-		
Distribution Station Expense	458	1,118	1,060	834	895
Line Transformers					
Street Lighting	220	256	35	183	222
Other Plant	15	-	-		
	<u>10,000</u>	<u>9,963</u>	<u>10,184</u>	<u>10,607</u>	<u>12,034</u>
CUSTOMER SERVICE					
Supervision & Administration	1,387	613	445	597	551
Meter Reading	1,074	407	899	1,358	1,405
Customer Billing	623	631	803	384	640
Credit and Collections	239	1,217	656	1,460	856
Customer Assistance	1,152	1,759	857	931	2,147
Energy Management Promotion	73	84	101	97	-
	<u>4,549</u>	<u>4,711</u>	<u>3,761</u>	<u>4,827</u>	<u>5,599</u>
ADMINISTRATIVE AND GENERAL					
Salaries					
Executive and Senior Management	1,712	911	1,256	1,407	1,336
Engineering					
Transm & Distribution Admin					
Legal	211	231	317	541	601
Human Resources	586	1,418	1,006	871	1,117
Finance and Accounting	644	579	1,006	2,598	1,307
Office Services	515	379	359	-	-
Information Services	451	1,093	729	2,169	2,551
Materials Management	990	1,275	1,267	1,310	1,391
Other	190	360	336	138	233
	<u>5,299</u>	<u>6,246</u>	<u>6,276</u>	<u>9,034</u>	<u>8,536</u>
Expenses					
Executive and Senior Management	495	225	248	314	360
Engineering					
Transm & Distribution Admin					
Legal	61	106	76	97	154
Human Resources	461	(32)	341	365	298
Finance and Accounting	344	436	741	177	864
Office Services	137	127	123	25	
Information Services	716	1,002	756	630	321
Materials Management	101	84	(138)	42	140
Other	128	1,262	885	124	361
	<u>2,443</u>	<u>3,212</u>	<u>3,032</u>	<u>1,774</u>	<u>2,498</u>
Admin and General Transferred	(705)	(540)	(438)	(447)	(528)
Special Services (Consultants)	717	817	817	744	753
Insurance	736	844	1,757	1,870	1,661
Conservation Promotion					
Maintenance of General Plant	751	1,379	1,392	2,980	2,571
Transportation Equipment Expenses	147	1,924	831	1,261	648
Other Admin & General		4,276	-		
Less Shareholder Expense		(3,000)	-		
	<u>1,646</u>	<u>5,699</u>	<u>4,359</u>	<u>6,408</u>	<u>5,105</u>
	<u>25,940</u>	<u>32,092</u>	<u>30,062</u>	<u>34,991</u>	<u>36,293</u>