

**Manitoba Hydro Undertaking #132**

**Manitoba Hydro to demonstrate the concordance between RCM/TREE Ex. 10 - pg. 23 (RCM/TREE/MH I-3(e)(iii) - Attachment 3) & pg. 22 (RCM/TREE/MH I-3(e)(iii) - Attachment 2 (Pg. 1 of 35))**

Page 22 of the RCM/TREE book of documents shows a portion of the eight years of daily peak, shoulder and off-peak SEP prices, as well as the prices adjusted for inflation, that are used to calculate the twelve marginal cost weightings used in the '12 Period Weighted Energy Table' of PCOSS10.

Page 23 of the book of documents shows a summary of these prices, and weighted prices calculated from them (Appendix 38, Attachment 3).

Manitoba Hydro was specifically requested by RCM/TREE to advise if the daily prices shown on page 22 had been translated to exclude weekends from the on-peak calculation shown on page 23. Manitoba Hydro has determined that the calculation of the average peak price includes the peak value from all days including weekends as well as holidays, which is inconsistent with the definition of the peak shown on page 23. The calculation of peak and shoulder prices will be corrected in future PCOSS.

A corrected version of the schedule that does not include weekend/holiday prices in the determination of average peak prices, but rather in the average shoulder price, is provided as Attachment 1 hereto. Attachment 2 shows the original, uncorrected version of the schedule.

Attachment 3 depicts the (minimal) impacts of the correction on PCOSS10 RCCs.

**Calculation of Marginal Cost Weightings With  
Weekend/Holiday 'Peak' Prices Removed from Average Peak Price and Added to Average Shoulder Price**

SEP AVERAGE INFLATION-ADJUSTED PRICES April 01, 2000 - March 31, 2008				HOURS IN MONTH				HOURS X PRICE IN MONTH			
Month	Peak	Shoulder	Off-Peak	Days	Peak	Shoulder	Off-Peak	Peak	Shoulder	Off-Peak	
1	\$90.24	\$58.84	\$43.91	31.0	172.0	324.0	248.0	Winter	15,521	19,063	10,890
2	\$89.76	\$63.11	\$51.90	28.3	160.0	292.0	226.0	Winter	14,362	18,428	11,730
3	\$83.82	\$59.42	\$48.24	31.0	171.0	325.0	248.0	Winter	14,332	19,310	11,963
4	\$70.34	\$51.91	\$36.31	30.0	156.0	324.0	240.0	Spring	10,974	16,820	8,715
5	\$59.32	\$51.32	\$24.19	31.0	172.0	324.0	248.0	Spring	10,203	16,627	5,999
6	\$77.22	\$49.35	\$17.03	30.0	171.0	309.0	240.0	Summer	13,205	15,249	4,087
7	\$99.94	\$60.26	\$21.09	31.0	167.0	329.0	248.0	Summer	16,691	19,827	5,231
8	\$90.17	\$64.47	\$26.14	31.0	172.0	324.0	248.0	Summer	15,509	20,887	6,482
9	\$65.19	\$45.10	\$23.03	30.0	161.0	319.0	240.0	Summer	10,495	14,388	5,528
10	\$58.18	\$52.12	\$27.71	31.0	170.0	326.0	248.0	Fall	9,890	16,992	6,871
11	\$73.66	\$50.76	\$35.36	30.0	169.0	311.0	240.0	Fall	12,449	15,786	8,486
12	\$106.95	\$58.59	\$39.73	31.0	158.0	338.0	248.0	Winter	16,899	19,804	9,854

**COSTING PERIODS:**

Spring: April through May

Peak : 7:00 to 11:00 a.m. to 4:00p.m. to 8:00 p.m. Weekdays Excl Holidays

Shoulder : 11:00 a.m. to 4:00 p.m. Weekdays; 8:00 p.m. to 11:00 p.m. Weekdays

7:00 a.m. to 11:00 p.m. Weekends and Holidays

Off Peak : 11:00 p.m. to 7:00 a.m. all days

Summer: June through September

Peak : 12:00 Noon to 8:00 p.m. Weekdays Excl Holidays

Shoulder : 7:00 a.m. to 12:00 noon ; 8:00 p.m. to 11:00 p.m. Weekdays.

7:00 a.m. to 11:00 p.m. Weekends and Holidays

Off Peak : 11:00 p.m. to 7:00 a.m. all days

Fall: Oct through November

Peak : 7:00 to 11:00 a.m. to 4:00p.m. to 8:00 p.m. Weekdays Excl Holidays

Shoulder : 11:00 a.m. to 4:00 p.m. Weekdays; 8:00 p.m. to 11:00 p.m. Weekdays

7:00 a.m. to 11:00 p.m. Weekends and Holidays

Off Peak : 11:00 p.m. to 7:00 a.m. all days

Winter: December through March

Peak : 7:00 to 11:00 a.m. to 4:00p.m. to 8:00 p.m. Weekdays Excl Holidays

Shoulder : 11:00 a.m. to 4:00 p.m. Weekdays; 8:00 p.m. to 11:00 p.m. Weekdays

7:00 a.m. to 11:00 p.m. Weekends and Holidays

Off Peak : 11:00 p.m. to 7:00 a.m. all days

**Hour Weighted Average Price  
(Cdn\$ per kW.h)**

	Peak	Shoulder	Off
<b>Spring Season:</b>	<b>0.0646</b>	<b>0.0516</b>	0.0302
<b>Summer Season:</b>	<b>0.0833</b>	<b>0.0549</b>	0.0219
<b>Fall Season:</b>	<b>0.0659</b>	<b>0.0515</b>	0.0315
<b>Winter Season:</b>	<b>0.0925</b>	<b>0.0599</b>	0.0458

**Marginal Cost Weighting**

	Peak	Shoulder	Off
<b>Spring Season:</b>	<b>2.954</b>	<b>2.362</b>	1.380
<b>Summer Season:</b>	<b>3.812</b>	<b>2.513</b>	1.000
<b>Fall Season:</b>	<b>3.016</b>	<b>2.355</b>	1.440
<b>Winter Season:</b>	<b>4.231</b>	<b>2.741</b>	2.096

**Calculation of Marginal Cost Weightings as Used in PCOSS10 (Appendix 38, Attachment 3)  
and Page 23 of RCM/TREE Book of Documents**

SEP AVERAGE INFLATION-ADJUSTED PRICES April 01, 2000 - March 31, 2008				HOURS IN MONTH				HOURS X PRICE IN MONTH			
Month	Peak	Shoulder	Off-Peak	Days	Peak	Shoulder	Off-Peak	Peak	Shoulder	Off-Peak	
1	\$83.02	\$56.43	\$43.91	31.0	177.14	318.86	248.00	Winter	14,705.82	17,994.19	10,889.60
2	\$83.41	\$61.68	\$51.90	28.3	161.43	290.57	226.00	Winter	13,464.20	17,923.25	11,729.53
3	\$77.29	\$58.37	\$48.24	31.0	177.14	318.86	248.00	Winter	13,690.65	18,611.40	11,962.70
4	\$64.60	\$51.21	\$36.31	30.0	171.43	308.57	240.00	Spring	11,074.53	15,800.68	8,714.95
5	\$54.09	\$51.23	\$24.19	31.0	177.14	318.86	248.00	Spring	9,582.23	16,336.08	5,998.93
6	\$68.81	\$49.75	\$17.03	30.0	171.43	308.57	240.00	Summer	11,795.84	15,350.96	4,087.43
7	\$89.31	\$57.93	\$21.09	31.0	177.14	318.86	248.00	Summer	15,821.09	18,472.81	5,231.41
8	\$81.91	\$64.84	\$26.14	31.0	177.14	318.86	248.00	Summer	14,510.58	20,676.23	6,481.51
9	\$59.52	\$44.16	\$23.03	30.0	171.43	308.57	240.00	Summer	10,203.49	13,626.14	5,527.81
10	\$54.20	\$51.16	\$27.71	31.0	177.14	318.86	248.00	Fall	9,600.93	16,312.27	6,871.07
11	\$68.10	\$49.54	\$35.36	30.0	171.43	308.57	240.00	Fall	11,674.27	15,287.92	8,486.17
12	\$92.36	\$55.63	\$39.73	31.0	177.14	318.86	248.00	Winter	16,361.05	17,738.93	9,854.12

**COSTING PERIODS (SAME AS TOU REPORT):**

Spring: April through May

Peak : 7:00 to 11:00 a.m. to 4:00p.m. to 8:00 p.m. Weekdays

Shoulder : 11:00 a.m. to 4:00 p.m. Weekdays; 8:00 p.m. to 11:00 p.m. Weekdays

7:00 a.m. to 11:00 p.m. Weekends

Off Peak : 11:00 p.m. to 7:00 a.m. all days

Summer: June through September

Peak : 12:00 Noon to 8:00 p.m. Weekdays

Shoulder : 7:00 a.m. to 12:00 noon ; 8:00 p.m. to 11:00 p.m. Weekdays.

7:00 a.m. to 11:00 p.m. Weekends

Off Peak : 11:00 p.m. to 7:00 a.m. all days

Fall: Oct through November

Peak : 7:00 to 11:00 a.m. to 4:00p.m. to 8:00 p.m. Weekdays

Shoulder : 11:00 a.m. to 4:00 p.m. Weekdays; 8:00 p.m. to 11:00 p.m. Weekdays

7:00 a.m. to 11:00 p.m. Weekends

Off Peak : 11:00 p.m. to 7:00 a.m. all days

Winter: December through March

Peak : 7:00 to 11:00 a.m. to 4:00p.m. to 8:00 p.m. Weekdays

Shoulder : 11:00 a.m. to 4:00 p.m. Weekdays; 8:00 p.m. to 11:00 p.m. Weekdays

7:00 a.m. to 11:00 p.m. Weekends

Off Peak : 11:00 p.m. to 7:00 a.m. all days

**Hour Weighted Average Price  
(Cdn\$ per kW.h)**

<b>Spring Season:</b>	0.0593	0.0512	0.0302
<b>Summer Season:</b>	0.0751	0.0543	0.0219
<b>Fall Season:</b>	0.0610	0.0504	0.0315
<b>Winter Season:</b>	0.0840	0.0579	0.0458

**Marginal Cost Weighting**

<b>Spring Season:</b>	2.712	2.344	1.380
<b>Summer Season:</b>	3.435	2.484	1.000
<b>Fall Season:</b>	2.793	2.305	1.440
<b>Winter Season:</b>	3.845	2.652	2.096

Manitoba Hydro  
Prospective Cost Of Service Study  
March 31, 2010  
Revenue Cost Coverage Analysis  
*Weekend/Holiday 'Peak' Prices Removed from Average Peak Price and Added to Average Shoulder Price*  
**S U M M A R Y**

Customer Class	Total Cost (\$000)	Class Revenue (\$000)	RCC % Pre Export Allocation	Net Export Revenue (\$000)	Total Revenue (\$000)	RCC % w/Revised Peak Price	RCC % Current Rates
Residential	561,474	486,651	86.7%	54,667	541,317	96.4%	96.4%
General Service - Small Non Demand	116,120	111,651	96.2%	10,970	122,621	105.6%	105.7%
General Service - Small Demand	123,506	115,256	93.3%	11,606	126,862	102.7%	102.8%
General Service - Medium	173,202	158,991	91.8%	16,406	175,397	101.3%	101.3%
General Service - Large 0 - 30kV	82,035	67,889	82.8%	7,758	75,647	92.2%	92.3%
General Service - Large 30-100kV*	45,857	44,588	97.2%	4,451	49,039	106.9%	106.8%
General Service - Large >100kV*	193,459	192,906	99.7%	18,646	211,551	109.4%	109.2%
*Includes Curtailment Customers							
SEP	1,513	1,315	86.9%	-	1,315	86.9%	86.9%
Area & Roadway Lighting	20,457	19,837	97.0%	655	20,491	100.2%	100.0%
<b>Total General Consumers</b>	<b>1,317,624</b>	<b>1,199,084</b>	<b>91.0%</b>	<b>125,158</b>	<b>1,324,242</b>	<b>100.5%</b>	<b>100.5%</b>
Diesel	12,516	4,665	37.3%	1,233	5,898	47.1%	47.1%
Export	419,730	546,121	130.1%	(126,391)	419,730	100.0%	100.0%
<b>Total System</b>	<b>1,749,870</b>	<b>1,749,870</b>	<b>100.0%</b>	<b>-</b>	<b>1,749,870</b>	<b>100.0%</b>	<b>100.0%</b>

The summer and winter period average prices are the average of the adjusted daily SEP prices for each of those periods.

In order to calculate the peak and shoulder prices for fall and spring an additional adjustment is required to reflect the fact that in the months of May and October only four of the hours defined as peak in the PCOSS occur during the SEP peak period, and the other four occur in the SEP shoulder period.

This adjustment has been made in both PCOSS10 and PCOSS11, as well as prior studies that utilized the weighted energy allocator.