

Memorandum

To: Kenneth Russell, Counsel, Ontario Electricity Financial Corporation

From: Stephen Cartwright

Date: September 9, 2005

Re: Refinement to 2002 and 2003 DCR_{new} Calculations

Introduction

It has been brought to our attention that the data source used for the monthly uplift figure for the Total Market Cost ("TMC") calculation requires refinement. The IESO publishes a market summary report on a monthly basis that identifies a number of the data points used in the calculation of TMC. From market opening through May 2003, the monthly uplift charge was identified in Section 1.6 of the monthly report only and this figure was used in the calculation of TMC. Subsequent to May 2003, the IESO monthly market summary began to publish two monthly uplift charges - the original number in Section 1.6 plus another figure in the summary table entitled "Summary of Wholesale Market Electricity Charges in Ontario's Competitive Market Place" presently located in Section 8 of the report.

IESO representatives have indicated that the uplift charge in Section 1.6 is essentially a subset of the monthly uplift figure identified in the table in Section 8. While the Section 1.6 figure includes the costs associated with contracted services such as black start capability, voltage support and regulation service, the Section 8 figure includes additional miscellaneous charges or rebates associated with operating the electricity market in Ontario. These items include charges or rebates associated with emergency energy purchases or sales, local market power rebates, generation cost guarantee recovery debit, demand response debit and any adjustments to the monthly rebate figure contained in Section 1.6. These miscellaneous items contained in the Section 8 monthly uplift can be positive or negative, and therefore the Section 8 figure can be higher or lower than the Section 1.6 monthly uplift estimate. Since these miscellaneous charges and rebates would apply to directly connected customers, it was decided that the calculation of TMC should be updated to include the Section 8 monthly uplift figure to be consistent with the letter and spirit of the draft working paper dated June 24, 2002 prepared by the working committee of OEFC representatives and IPPSO representatives.

As mentioned previously, the monthly uplift figure contained in Section 8 has only been published by the IESO since June 2003. We also were informed by IESO representatives that the monthly uplift figures published in the monthly report since June 2002 do not represent finalized results. Therefore, in order to update the calculations of TMC and DCR_{new} for the entire period after market opening, Navigant Consulting asked the IESO to provide the finalized monthly uplift numbers for Section 8 for the period May 2002 through June 2005. The figures provided by the IESO are appended to this memo. Navigant Consulting and a NUG representative will meet with the IESO to determine how the IESO might publicly disseminate the finalized monthly uplift figures going forward.

Based on the finalized monthly uplift figures provided by the IESO, Navigant Consulting was able to update the results for TMC and DCR_{new} for the periods 2002 and 2003. The 2004 final DCR_{new} and 2005 interim DCR_{new} use the same Section 8 monthly uplift and the results of these calculations are outlined in a separate memo.

Update to 2002 TMC and DCR_{new}

The updated 115kV Total Market Cost (TMC) for 2002 using the Section 8 monthly uplift figure is 6.1295 cents/kWh, which is slightly lower than the original figure of 6.1322 cents/kWh that used the Section 1.6 monthly uplift number. The new and previous Wholesale Market Service Charge figures, which contain the monthly uplift, also are shown in the table below.

Table 1 - Updated 2002 Total Market Cost 115kv

MONTHLY STATISTICS		Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Total		
REGULATED RATES (ACTUAL for 115 kv)																
Energy charge																
on peak	c/kWh	5.33	5.33	5.33	4.72											
off peak	c/kWh	4.12	4.12	4.12	3.05											
Demand charge	\$/kWmth	12.84	12.84	12.84	8.91											
														Average		
MARKET RATES																
HOEP	c/kWh					2.919	3.513	5.810	6.418	7.519	4.866	4.938	5.627	5.2013		
WMSC	c/kWh					0.363	0.397	0.959	0.929	1.269	0.519	0.482	0.579	0.6869		
						Previous WMSC								0.6911		
Tx network	\$/kWmth					2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83		
Tx line connection	\$/kWmth					0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82		
DRC	c/kWh					0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70		
Rebate	c/kWh					(0.949)	(0.949)	(0.949)	(0.949)	(0.949)	(0.949)	(0.949)	(0.949)	(0.949)		
TOTAL MARKET COST CALCULATION																
Total market cost per month	c/kWmth	4,775	4,440	4,736	3,675	2,622	3,001	5,216	5,646	6,513	4,187	4,088	4,797			
Total annual market cost	c/kWwhr														53,694	
TMC = total market cost	c/kWh														Updated TMC	6.1295
															Previous TMC	6.1322

The updated 230kV Total Market Cost (TMC) for 2002 using the Section 8 monthly uplift figure is 6.1121 cents/kWh, which is slightly lower than the original figure of 6.1148 cents/kWh that used the Section 1.6 monthly uplift number.

Table 2 - 2002 Total Market Cost 230kv

MONTHLY STATISTICS		Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Total		
REGULATED RATES (ACTUAL for 230 kv)																
Energy charge																
on peak	c/kWh	5.33	5.33	5.33	4.72											
off peak	c/kWh	4.12	4.12	4.12	3.05											
Demand charge	\$/kWmth	12.46	12.46	12.46	8.53											
														Average		
MARKET RATES																
HOEP	c/kWh					2.919	3.513	5.810	6.418	7.519	4.866	4.938	5.627	5.2013		
WMSC	c/kWh					0.363	0.397	0.959	0.929	1.269	0.519	0.482	0.579	0.6869		
						Previous WMSC								0.6911		
Tx network	\$/kWmth					2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83		
Tx line connection	\$/kWmth					0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82		
DRC	c/kWh					0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70		
Rebate	c/kWh					(0.949)	(0.949)	(0.949)	(0.949)	(0.949)	(0.949)	(0.949)	(0.949)	(0.949)		
TOTAL MARKET COST CALCULATION																
Total market cost per month	c/kWmth	4,737	4,402	4,698	3,637	2,622	3,001	5,216	5,646	6,513	4,187	4,088	4,797			
Total annual market cost	c/kWwhr														53,542	
TMC = total market cost	c/kWh														Updated TMC	6.1121
															Previous TMC	6.1148

The updated 115kV DCR_{new} for 2002 using the updated 2002 TMC is 5.8678 cents/kWh, which is slightly lower than the original figure of 5.8687 cents/kWh based on the previous TMC calculation.

Table 3 - Updated 2002 DCR_{new} 115kV

	2000	2001	2002 Final
Regulated DCR (P) @ 115 kV	5.0369	5.4454	5.7369
Avg annual HOEP			5.2013
TMC (P)			
Historic, incl. DRC adjustment	5.7369	5.7369	
Current, based on actual HOEP WMSC, regulated tariffs, estimated rebate, etc.			6.1295
DCR (old calc)	5.0369	5.4454	
DCR (2002) = greater of:			
i) Average TMC (2002, 2001, 2000)	5.8678		
ii) DCR (2001)	5.4454		
Therefore, Updated DCR _{new} (2002)			5.8678
	Previous DCR _{new}		5.8687

The updated 230kV DCR_{new} for 2002 using the updated 2002 TMC is 5.8272 cents/kWh, which is slightly lower than the original figure of 5.8281 cents/kWh based on the previous TMC calculation.

Table 4 - Updated 2002 DCR_{new} 230kV

	2000	2001	2002 Final
Regulated DCR (P) @ 230 kV	4.9848	5.3933	5.6848
Avg annual HOEP			5.2013
TMC (P)			
Historic, incl. DRC adjustment	5.6848	5.6848	
Current, based on actual HOEP WMSC, regulated tariffs, estimated rebate, etc.			6.1121
DCR (old calc)	4.9848	5.3933	
DCR (2002) = greater of:			
i) Average TMC (2002, 2001, 2000)	5.8272		
ii) DCR (2001)	5.3933		
Therefore, DCR (2002)			5.8272
	Previous DCR _{new}		5.8281

Update to 2003 TMC and DCR_{new}

The updated 115kV and 230kV Total Market Cost (TMC) for 2003 using the Section 8 monthly uplift figure is 6.0820 cents/kWh, which has increased from the original figure of 6.0649 cents/kWh that used the Section 1.6 monthly uplift number. This increase can be attributed almost entirely to an Emergency Energy Charge that occurred during the month of August 2003 associated with the blackout. This charge did not show in the monthly uplift numbers published by the IESO. By definition, the annual TMC for 115kV and 230kV are identical from 2003 onward.

Table 5 - 2003 Total Market Cost 115kv and 230kv

MONTHLY STATISTICS		Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Total	
														Average	
MARKET RATES															
HOEP	c/kWh	5.962	8.646	8.149	5.888	4.317	4.164	4.008	4.897	4.856	5.709	4.045	4.442	5.4236	
WMSC	c/kWh	0.461	0.647	0.557	0.538	0.448	0.473	0.365	0.539	0.410	0.435	0.422	0.529	0.4854	
	Previous WMSC	0.463	0.654	0.572	0.541	0.451	0.482	0.375	0.369	0.422	0.440	0.417	0.438	0.4687	
Tx network	\$/kWmth	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	
Tx line connection	\$/kWmth	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	
DRC	c/kWh	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	
Rebate	c/kWh	(0.949)	(2.129)	(2.129)	(2.129)	(0.316)	(0.316)	(0.316)	(0.783)	(0.783)	(0.783)	(0.779)	(0.779)		
TOTAL MARKET COST CALCULATION															
Total market cost per month	c/kWmth	4.958	5.649	5.779	3.963	4.197	3.981	3.905	4.348	4.097	4.875	3.524	4.005		
Total annual market cost	c/kWmthyr														53,278
TMC = total market cost	c/kWh														6.0820
														Previous TMC	6.0649

The updated 115kV DCR_{new} for 2003 using the updated 2003 TMC is 5.9828 cents/kWh, which reflects a slight increase from the original figure of 5.9780 cents/kWh based on the previous TMC calculation.

Table 6 - Updated 2003 DCR_{new} 115kV

	2001	2002 Final	2003 Final
Regulated DCR (P) @ 115 kV	5.4454	5.7369	
Avg annual HOEP		5.2013	5.4236
TMC (P)			
Historic, incl. DRC adjustment	5.7369		
Current, based on actual HOEP WMSC, regulated tariffs, estimated rebate, etc.		6.1295	6.0820
DCR	5.4454	5.8678	
DCR _{new} (2003) = greater of:			
i) Average TMC (2003, 2002, 2001)	5.9828		
ii) DCR _{new} (2002)	5.8678		
Therefore, Updated DCR _{new} (2003)			5.9828
			Previous DCR _{new}
			5.9780

The updated 230kV DCR_{new} for 2003 using the updated 2003 TMC is 5.9596 cents/kWh, which is higher than the original figure of 5.9548 cents/kWh based on the previous TMC calculation.

Table 7 - Updated 2003 DCR_{new} 230kV

	2001	2002 Final	2003 Final
Regulated DCR (P) @ 230 kV	5.3933	5.6848	
Avg annual HOEP		5.2013	5.4236
TMC (P)			
Historic, incl. DRC adjustment	5.6848		
Current, based on actual HOEP WMSC, regulated tariffs, estimated rebate, etc.		6.1121	6.0820
DCR	5.3933	5.8272	
DCR _{new} (2003) = greater of:			
i) Average TMC (2003, 2002, 2001)	5.9597		
ii) DCR _{new} (2002)	5.8272		
Therefore, Updated DCR _{new} (2003)			5.9597
		Previous DCR _{new}	5.9548

Summary of Refinement to TMC and DCR_{new}

The following table summarizes the changes to TMC and DCR_{new} over the period 2002 and 2003:

	2002		2003	
	Previous	Updated	Previous	Updated
115kV TMC	6.1322 cents/kWh	6.1295 cents/kWh	6.0649 cents/kWh	6.0820 cents/kWh
115kV DCR _{new}	5.8687 cents/kWh	5.8678 cents/kWh	5.9780 cents/kWh	5.9828 cents/kWh
230kV TMC	6.1148 cents/kWh	6.1121 cents/kWh	6.0649 cents/kWh	6.0820 cents/kWh
230kV DCR _{new}	5.8281 cents/kWh	5.8272 cents/kWh	5.9548 cents/kWh	5.9597 cents/kWh

Table 8 - Finalized Monthly Uplift Figures as Provided by the IESO

(\$ perMWh)	Finalized Monthly Uplift Section 8
2002 May	0.23
June	0.21
July	0.16
August	0.14
September	0.10
October	0.20
November	0.19
December	0.17
2003 January	0.45
February	0.10
March	0.12
April	0.26
May	0.21
June	0.15
July	0.14
August	1.94
September	0.19
October	0.21
November	0.38
December	1.22
2004 January	0.60
February	0.50
March	0.98
April	0.41
May	0.37
June	0.41
July	0.47
August	0.50
September	0.56
October	0.52
November	0.55
December	0.43
2005 January	0.43
February	0.44
March	0.48
April	0.57
May	0.44
June	0.48