



Memorandum

To: Mike Manning, Chief Operating Officer, Ontario Electricity Financial Corporation
From: Andy Tam and Dixon Grant
Date: February 4, 2021
Re: Second Interim (2020) and Provisional (2021) 115-230kV DCR_{new} Calculations

Introduction

The Ontario Electricity Financial Corporation (“OEF”) is required to calculate and publish the Interim (2020) TMC_{Index} and DCR_{new} for 115-230kV as soon as market data is available. The data for both calculations are now available and OEF has asked Guidehouse to perform these calculations. This memo will provide the Interim (2020) DCR_{new} 115-230kV calculation.

The calculation of the 115-230kV TMC reflects interim rates resulting from the EB-2019-0296 Uniform Transmission Rate decision, issued by the Ontario Energy Board (“OEB”) on December 19, 2019.¹

Additionally, the calculation of the 115-230kV TMC has been adjusted to include settlement amounts to recover certain costs incurred by distribution companies for the connection of new renewable generation to their distribution systems. The costs for 2020 were assessed and were charged to participants based on their proportion of Allocated Quantity of Energy Withdrawn (“AQEW”) for the month².

The Renewable Generation Connection – Monthly Compensation Settlement Credit has been added to the Wholesale Market Service Charges (“WMSC”) component of the 115-230kV TMC and has been broken out for reference in the background section of this memo. Furthermore, the Independent Electricity System Operator (“IESO”) introduced a Daily Uplift Charge as of October 2011, which has been added to the WMSC component of the 115-230kV TMC³.

The Capacity Based Demand Response Recovery (“CBDR”) charge has also been added to the WMSC component of the 115-230kV TMC since its introduction in May 2015. The CBDR charge is allocated using the same method as the Global Adjustment (see “Changes in the Global Adjustment Allocation” section below).

The Ontario Electricity Support Program (“OESP”) ceased being payable by ratepayers effective May 1, 2017. OESP is not included in the calculation of TMC as of May 2017.

¹ Updated rates were released December 2020, but the OEB delayed the implementation of these due to COVID-19

² IESO – Market Summaries
<http://www.ieso.ca/power-data/market-summaries-archive>

³ IESO – Guide to Wholesale Electricity Charges
<http://www.ieso.ca/en/Sector-Participants/Settlements/Guide-to-Wholesale-Electricity-Charges>

The Debt Retirement Charge (“DRC”) ended as of March 31, 2018 for all electricity users. As such, the DRC is not included in the calculation of TMC effective as of April 1, 2018⁴.

Changes in the Global Adjustment Allocation

The method for allocating the Global Adjustment to customers was changed in 2011. Prior to 2011, the Global Adjustment was allocated to all consumers based on their energy use. Ontario Regulation 398/10 changed this by amending Ontario Regulation 429/04, which allowed for the allocation of the Global Adjustment differently among Class A and Class B consumers.

In this memo, TMC is calculated to include the amount of Global Adjustment payable by all energy consumers allocated on a pro rata energy use basis to reflect the allocation of the Global Adjustment required under the judgment of Justice Wilton-Siegel dated March 12, 2015 in *N-R Power and Energy Corporation v. OEFC*.

Ontario Fair Hydro Plan Act, 2017 (“FHP Act”) and Fixing the Hydro Mess Act, 2019 (“FHM Act”)

Under FHP Act a portion of the Global Adjustment costs which would have been payable by certain consumers was deferred (defined as the “IESO deferral” in the FHP Act) effective as of May 1, 2017, for eventual recovery through the clean energy adjustment (“CEA”), as provided for and defined in the FHP Act. The IESO deferral and the CEA were repealed effective as of November 1, 2019 by the FHM Act.

For NUGs whose power purchase agreements provide for rate escalation based on TMC_{Index} and DCR_{new} , in calculating TMC during the period from May 1, 2017 to October 31, 2019, the annual total of the IESO deferral amounts for each year is included and added by OEFC in the calculation of TMC.

The amendments to the *Ontario Rebate for Electricity Consumers Act, 2016* enacted by the FHM Act to provide financial assistance to certain consumers do not affect the calculation of TMC.

Methodology and Results

The Interim (2020) DCR_{new} for 115-230kV is given in Table 1. Supporting information on the calculations involved is provided in the sections that follow.

Table 1: Second Interim (2020) and Provisional (2021) 115-230kV DCR_{new} (cents/kWh)

Voltage	Second Interim (2020) and Provisional (2021)
115-230kV	12.0127

⁴ IESO – Debt Retirement Charge ended March 31 for all electricity users
<http://www.ieso.ca/en/sector-participants/ieso-news/2018/04/debt-retirement-charge-ended-march-31-for-all-electricity-users>

Total Market Cost Calculations

The Second Interim (2020) and Provisional (2021) TMC value for 115-230kV is 12.5636 cents/kWh as shown in Table 2.

Table 2: Calculation of Second Interim (2020) and Provisional (2021) 115-230kV TMC

MONTHLY STATISTICS		Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Total /
days		31	29	31	30	31	30	31	31	30	31	30	31	366
total hours		744	696	744	720	744	720	744	744	720	744	720	744	8784
														Weighted Average
MARKET RATES														
HOEP	c/kWh	1.392	1.400	1.344	0.578	0.731	1.122	1.860	1.817	1.378	1.065	0.954	1.516	1.2651
WMSC	c/kWh	0.374	0.369	0.355	0.344	(0.161)	0.407	0.427	0.517	0.424	0.411	(0.048)	0.433	0.3212
Tx network	\$/kW-mth	3.920	3.920	3.920	3.920	3.920	3.920	3.920	3.920	3.920	3.920	3.920	3.920	3.920
Tx line connection	\$/kW-mth	0.970	0.970	0.970	0.970	0.970	0.970	0.970	0.970	0.970	0.970	0.970	0.970	0.970
Debt Retirement Charge	c/kWh	-	-	-	-	-	-	-	-	-	-	-	-	-
Global Adjustment	c/kWh	8.958	9.827	10.251	13.128	12.726	11.398	8.975	8.988	9.990	10.550	9.803	9.184	
TOTAL MARKET COST CALCULATION														
Total market cost per month	c/kW-mth	8,467	8,560	9,380	10,605	10,382	9,797	8,868	8,913	8,980	9,436	8,199	8,772	
Total annual market cost	c/kW-yr													110,358
TMC = total market cost	c/kWh													12.5636

Second Interim (2020) and Provisional (2021) 115-230kV DCR_{new} Calculations

The Second Interim (2020) and Provisional (2021) 115-230kV DCR_{new} is the greater of (i) the average of the 115-230kV TMC for the three-year period from January 2018 through December 2020 inclusive, based on the number of days in each period and (ii) the Final (2019) 115-230kV DCR_{new}. The Second Interim (2020) and Provisional (2021) 115-230kV DCR_{new} is 12.0127 cents/kWh as shown in Table 3.

Table 3: Interim (2020) 115-230kV DCR_{new}

	2018 Final	2019 Final	2020 Second Interim	2021 Provisional
TMC (P) Current, based on actual HOEP WMSC, regulated tariffs, estimated rebate, etc.	11.3784	12.0946	12.5636	
DCR _{new}	11.8008	11.8008		
DCR _{new} 2020 Second Interim = greater of:				
i) Average of TMC (2018, 2019, 2020)	12.0127			
ii) DCR _{new} 2019 Final	11.8008			
DCR _{New} 2020 Second Interim			12.0127	
DCR _{New} 2021 Provisional				12.0127

Background on TMC and the DCR

A significant number of Non-Utility Generator (“NUG”) Power Purchase Agreements (“PPAs”) contain provisions that provide for annual contract price adjustment based on the Ontario Hydro

Direct Customer Rate (“DCR”). Since the DCR ceased to exist upon market opening it was necessary to establish a replacement index. The Board of Directors of OEFC approved the replacement of the DCR in the PPAs between OEFC and NUG’s on the basis set out in the draft working paper dated June 24, 2002 prepared by the working committee of OEFC representatives and Independent Power Producers Society of Ontario (“IPPSO”) representatives (“*working paper*”). This replacement index is based on the fully loaded cost of 100% load factor power that the typical direct customer would pay going forward in the restructured market, at the voltage provided. Values for $DCR_{new}(P)$ and $TMC(P)$ in this paper are calculated in accordance with the *working paper*, for year P.

It should be noted that Calculation of the WMSC for a given month currently includes the following components:

1. Hourly Uplift Settlement Charges (amount in \$/MWh from IESO data identified as being ‘final’);
2. Daily Uplift Charges (amount in \$/MWh from IESO data identified as being ‘final’);
3. Monthly Uplift Charges (amount in \$/MWh from IESO data identified as being ‘final’);
4. IESO Administration Charge (amount in \$/MWh as determined by the OEB);
5. Rural and Remote Electricity Rate Protection (amount in \$/MWh, as determined by the OEB);
6. Capacity Based Demand Response charges (amount in \$/MWh from IESO data identified as being ‘final’ for all months); and,
7. Renewable Generation Connection Monthly Compensation Settlement Credit (amount in \$/MWh from IESO data identified as being ‘final’ for all months except December, which is identified as being ‘preliminary’).

The WMSC published in IESO monthly reports (currently Section 7 of that report) are not used for TMC calculations, since they are based on preliminary hourly uplift settlement charges.

At market opening, the Market Power Mitigation Agreement (“MPMA”) rebate framework applied to all Ontario consumers, and as such, is incorporated in TMC calculations. The MPMA rebate was replaced by the Business Protection Plan Rebate (“BPPR”) framework in May 2003. While the MPMA rebate was used in the TMC calculations for May 1, 2002 to April 30, 2003, the BPPR was used in the TMC calculations from May 2003 until March 2005.

The rebate mechanism was further changed, and the TMC calculation updated to reflect, the establishment of the Global Adjustment (“GA”) in 2004. The GA reflects the difference between total payments made to contracted assets (including NUGs and RFP generators), load reduction contracts and regulated OPG generators (prescribed assets) and any offsetting market revenues. The GA is calculated and paid each month and can be either positive or negative.

In addition to the GA, the then new regulation included the OPG Non-Prescribed Assets (“ONPA”) rebate, which ended April 30, 2009, but was last paid to market participants for the period ending January 31, 2009.

Additional details on these rebates and their treatment in the calculation of total market cost can be viewed in the updated Navigant Consulting (now known as Guidehouse) letter to OEFC dated April 27, 2006 and posted on the OEFC website.

Recovering the Cost of Renewable Energy Generation Connections

The recovery of certain connection costs incurred by distribution companies with respect to renewable generation was enabled by Ontario Regulation 330/09. Guidehouse has included the Renewable Generation Connection Monthly Compensation Settlement Credit amounts in the monthly Wholesale Market Service Charges component of the TMC; however, for clarity, the monthly rates have been provided in Table 4 below. These values are also published within Section 7 of the IESO monthly reports.

Table 4: Renewable Energy Generation Connection Monthly Compensation Settlement Credit

Month	Rate (\$/MWh)	Preliminary / Final
January	\$0.0159	Final
February	\$0.0170	Final
March	\$0.0172	Final
April	\$0.0201	Final
May	\$0.0193	Final
June	\$0.0175	Final
July	\$0.0145	Final
August	\$0.0158	Final
September	\$0.0187	Final
October	\$0.0184	Final
November	\$0.0181	Final
December	\$0.0163	Preliminary