Guidehouse

Memorandum

To: **Mike Manning, Chief Operating Officer, Ontario Electricity Financial Corporation**

From: **Pedro Torres-Basanta**

Date: **September 14, 2022**

Re: **Interim (2022) 115-230kV DCR_{new} Calculations**

Introduction

The Ontario Electricity Financial Corporation ("OEFC") is required to calculate and publish the Interim (2022) TMC_{Index} and DCR_{new} for 115-230kV as soon as market data is available. The data for both calculations are now available and OEFC has asked Guidehouse to perform these calculations. This memo will provide the Interim (2022) DCR_{new} 115-230kV calculation, which has been carried out in accordance with past practice, as summarized in the DCR_{new} memo from August 28, 2020[1]. Changes to the calculation that have been made since are summarized below.

The calculation of the 115-230kV TMC reflects interim rates resulting from the EB-2022-0084 Uniform Transmission Rates decision, issued by the Ontario Energy Board ("OEB") on April 07, 2022[2].

Global Adjustment – Provincial Funding

Under Ontario Regulation 735/20 amounts payable under certain IESO renewable energy contracts are funded by the Province under section 25.34 of *Electricity Act, 1998*. As a result, the costs associated with such contracts are not included in the GA paid by electricity ratepayers since January 1, 2021. However, the GA component of TMC has been calculated such that the costs associated with these renewable energy contracts are included in the GA component of TMC after January 1, 2021. The data for the dollar amount of GA used in the TMC calculation is available at the following website: ht tps://www.ieso.ca/-/media/Files/IESO/Market-Summaries/GA-by-Components.ashx

Methodology and Results

The Interim (2022) DCR_{new} for 115-230kV is given in Table 1. Supporting information on the calculations involved is provided in the sections that follow.

[1] OEFC – DCRnew Memo
https://www.oefc.on.ca/pdf/2019_final_DCRnew_memo_08-28-2020_en.pdf

[2] OEB – UTR Decision and Order
https://www.rds.oeb.ca/CMWebDrawer/Record/745099/File/document

Table 1: Interim (2022) 115-230kV DCR_{new} (cents/kWh)

Voltage	2022 Interim Jan - Jun
115-230kV	12.4698

Total Market Cost Calculations

The Interim (2022) TMC value for 115- 230kV is 12.7885 cents/kWh, as shown in Table 2.

Table 2: Calculation of Interim (2022) 115-230kV TMC

		Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Total /
MONTHLY STATISTICS														
days		31	28	31	30	31	30							181
total hours		744	672	744	720	744	720							4344
														Weighted Average
MARKET RATES														
HOEP	c/kWh	4.267	3.942	3.730	2.777	3.061	3.482							3.5411
WMSC	c/kWh	0.540	0.535	0.498	0.534	0.259	0.810							0.5276
Tx network	$/kW-mth	5.130	5.130	5.130	5.460	5.460	5.460							5.295
Tx line connection	$/kW-mth	0.880	0.880	0.880	0.880	0.880	0.880							0.880
Debt Retirement Charge	c/kWh	-	-	-	-	-	-							-
Global Adjustment	c/kWh	5.703	6.686	7.178	9.238	9.395	8.966							
TOTAL MARKET COST CALCULATION														
Total market cost per month	c/kW-mth	8,420	8,103	9,087	9,669	10,094	10,180							
Total annual market cost	c/kW-yr													55,553
TMC = total market cost	c/kWh													**12.7885**

Interim (2022) 115-230kV DCR_{new} Calculations

The Interim (2022) 115-230kV DCR_{new} is the greater of (i) the average of the 115-230kV TMC for the three-year period from July 2019 through June 2022 inclusive, based on the number of days in each period and (ii) the Final (2021) 115-230kV DCR_{new}. The Interim (2022) 115-230kV DCR_{new} is 12.4698 cents/kWh as shown in Table 3.

Table 3: Interim (2022) 115-230kV DCR_{new}

	2019 Final Jul-Dec	2020 Final	2021 Final	2022 Interim Jan - Jun
TMC (P) Current, based on actual HOEP WMSC, regulated tariffs, estimated rebate, etc.	12.2197	12.5647	12.3426	12.7885
DCR_{new}			12.3342	
DCR_{new} 2022 Interim = greater of: i) Average of TMC (Jul 2019 to June 2022) ii) DCR_{new} 2021 Final	12.4698 12.3342			
DCR_{New} 2022 Interim			12.4698	

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 Wholesale Market Service Charges ("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'); and,
7. Renewable Generation Connection Monthly Compensation Settlement Credit (amount in $/MWh from IESO data identified as being 'final').

The WMSC published in IESO monthly reports are not used for TMC calculations, since they are based on preliminary hourly uplift settlement charges.

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 the Wholesale Market Electricity Charges section of the IESO's Monthly Market Reports[3].

[3] IESO Monthly Market Report
https://www.ieso.ca/en/Power-Data/Monthly-Market-Report

Table 4: Renewable Energy Generation Connection Monthly Compensation Settlement Credit

Month (2022)	Rate ($/MWh)	Preliminary / Final
January	$ 0.0207	Final
February	$ 0.0235	Final
March	$ 0.0227	Final
April	$ 0.0258	Final
May	$ 0.0251	Prelim
June	$0.0242	Final

*The Final May Renewable Energy Generation Connection Monthly Compensation Settlement Credit was not provided by the IESO due technical issues on their reporting site as of August 23, 2022.