



Memorandum

To: Mike Manning, Chief Operating Officer, Ontario Electricity Financial Corporation
From: Pedro Torres-Basanta
Date: August 16, 2023
Re: Final (2022) 115-230kV DCR_{new} Calculations

Introduction

The Ontario Electricity Financial Corporation (“OEFC”) is required to calculate and publish the Final (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 Final (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, 2020¹. 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-2021-0276 Uniform Transmission Rate decision and the subsequent EB-2022-0084 Uniform Transmission Rates Update decision, issued by the Ontario Energy Board (“OEB”) on December 16, 2021² and April 7, 2022³ respectively.

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 starting 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:
<https://www.ieso.ca/-/media/Files/IESO/Market-Summaries/GA-by-Components.ashx>

Methodology and Results

The Final (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 – DCR_{new} Memo
https://www.oefc.on.ca/pdf/2019_final_DCRnew_memo_08-28-2020_en.pdf

² OEB - 2022 UNIFORM TRANSMISSION RATES
<https://www.rds.oeb.ca/CMWebDrawer/Record/735873/File/document>

³ OEB – 2022 Uniform Transmission Rates Update
<https://www.rds.oeb.ca/CMWebDrawer/Record/745099/File/document>

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

Voltage	Final (2022)
115-230kV	12.5105

Total Market Cost Calculations

The Final (2022) TMC value for 115-230kV is 12.6242 cents/kWh as shown in Table 2.

Table 2: Calculation of Final (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	31	31	30	31	30	31	365
total hours		744	672	744	720	744	720	744	744	720	744	720	744	8760
		Weighted Average												
MARKET RATES														
HOEP	c/kWh	4.267	3.942	3.730	2.777	3.061	3.482	5.769	8.075	5.870	4.428	3.028	5.374	4.4956
WMSC	c/kWh	0.546	0.542	0.504	0.540	0.265	0.816	0.878	0.909	0.855	0.780	(0.393)	0.663	0.5770
Tx network	\$/kW-mth	5.130	5.130	5.130	5.460	5.460	5.460	5.460	5.460	5.460	5.460	5.460	5.460	5.378
Tx line connection	\$/kW-mth	0.880	0.880	0.880	0.880	0.880	0.880	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	5.490	2.450	5.017	7.223	8.064	5.067	
TOTAL MARKET COST CALCULATION														
Total market cost per month	c/kW-mth	8,425	8,107	9,092	9,673	10,099	10,184	9,664	9,141	9,088	9,882	8,337	8,895	
Total annual market cost	c/kW-yr													110,588
TMC = total market cost	c/kWh													12.6242

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

The Final (2022) 115-230kV DCR_{new} is the greater of (i) the average of the 115-230kV TMC for the three-year period from January 2020 through December 2022 inclusive, based on the number of days in each period and (ii) the Final (2021) 115-230kV DCR_{new}. The Final (2022) 115-230kV DCR_{new} is 12.5105 cents/kWh as shown in Table 3.

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

	2020 Final	2021 Final	2022 Final
TMC (P) Current, based on actual HOEP WMSC, regulated tariffs, estimated rebate, etc.	12.5647	12.3426	12.6242
DCR _{new}	12.0131	12.3342	
DCR _{new} 2022 Final = greater of: i) Average of TMC (2020, 2021, 2022) ii) DCR _{new} 2021 Final	12.5105 12.3342		
DCR _{New} 2022 Final			12.5105

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. 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 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.

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 or 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 (under Wholesale Market Electricity Charges)⁴ are not used for TMC calculations, since they are based on preliminary hourly uplift settlement charges.

⁴ IESO Monthly Market Report: <https://www.ieso.ca/en/Power-Data/Monthly-Market-Report>

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 in the Wholesale Market Electricity Charges section of the IESO's Monthly Market Reports⁴.

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	Final
June	\$0.0242	Final
July	\$0.0219	Final
August	\$0.0214	Final
September	\$0.0250	Final
October	\$0.0258	Final
November	\$0.0245	Final
December	\$0.0222	Final