

EB-2022-0222
Technical Conference

EGI 2024 Rates Rebasing
Panel 3

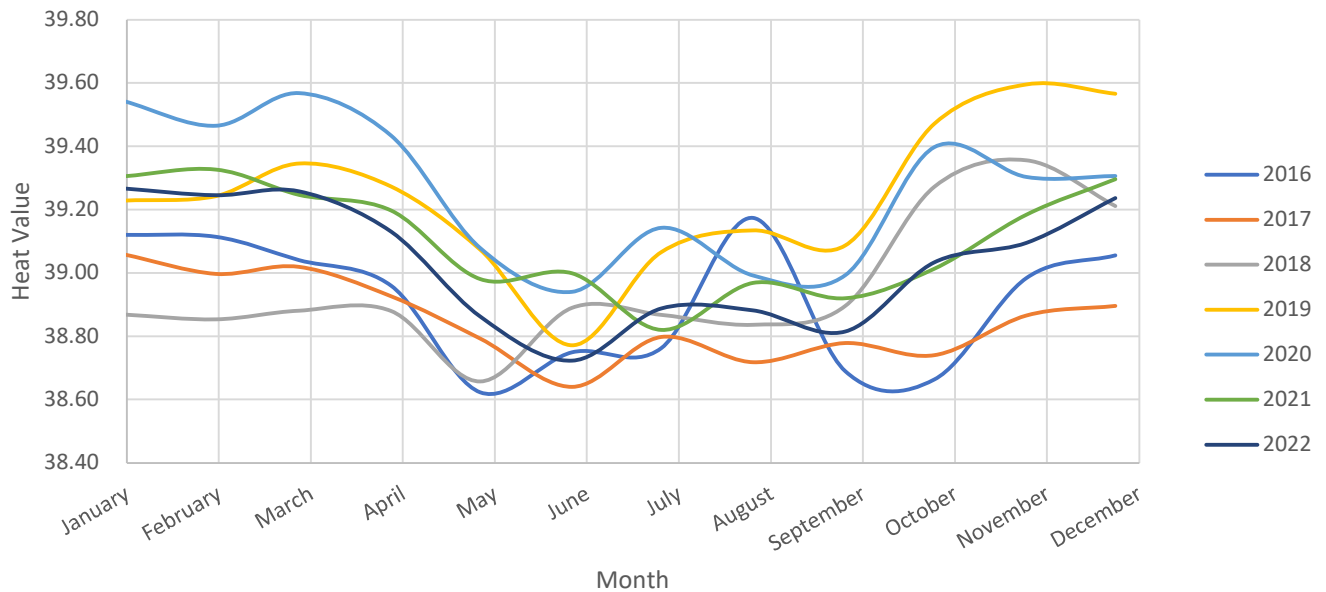
FRPO Compendium

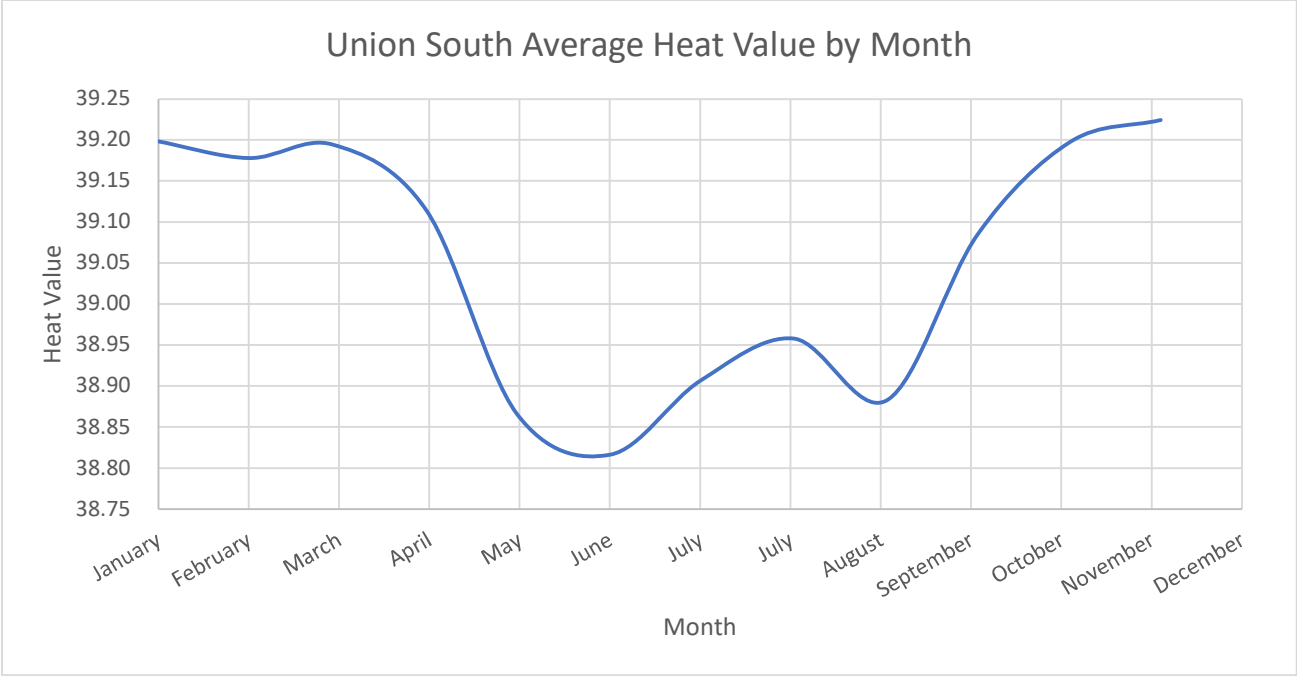
March 21, 2023

Historic Heat Value Union South

Month	2016	2017	2018	2019	2020	2021	2022	Average
January	39.12	39.06	38.87	39.23	39.54	39.31	39.27	39.20
February	39.11	39.00	38.85	39.24	39.46	39.33	39.25	39.18
March	39.04	39.02	38.88	39.35	39.57	39.25	39.26	39.19
April	38.96	38.93	38.88	39.27	39.43	39.20	39.13	39.11
May	38.62	38.79	38.66	39.07	39.08	38.98	38.86	38.87
June	38.75	38.64	38.89	38.77	38.94	39.00	38.72	38.82
July	38.76	38.80	38.87	39.07	39.14	38.82	38.89	38.91
August	39.17	38.72	38.84	39.14	38.99	38.97	38.88	38.96
September	38.69	38.78	38.90	39.09	38.99	38.92	38.82	38.88
October	38.66	38.74	39.27	39.47	39.40	39.01	39.03	39.08
November	38.98	38.87	39.36	39.60	39.30	39.18	39.10	39.20
December	39.06	38.90	39.21	39.57	39.31	39.30	39.24	39.22

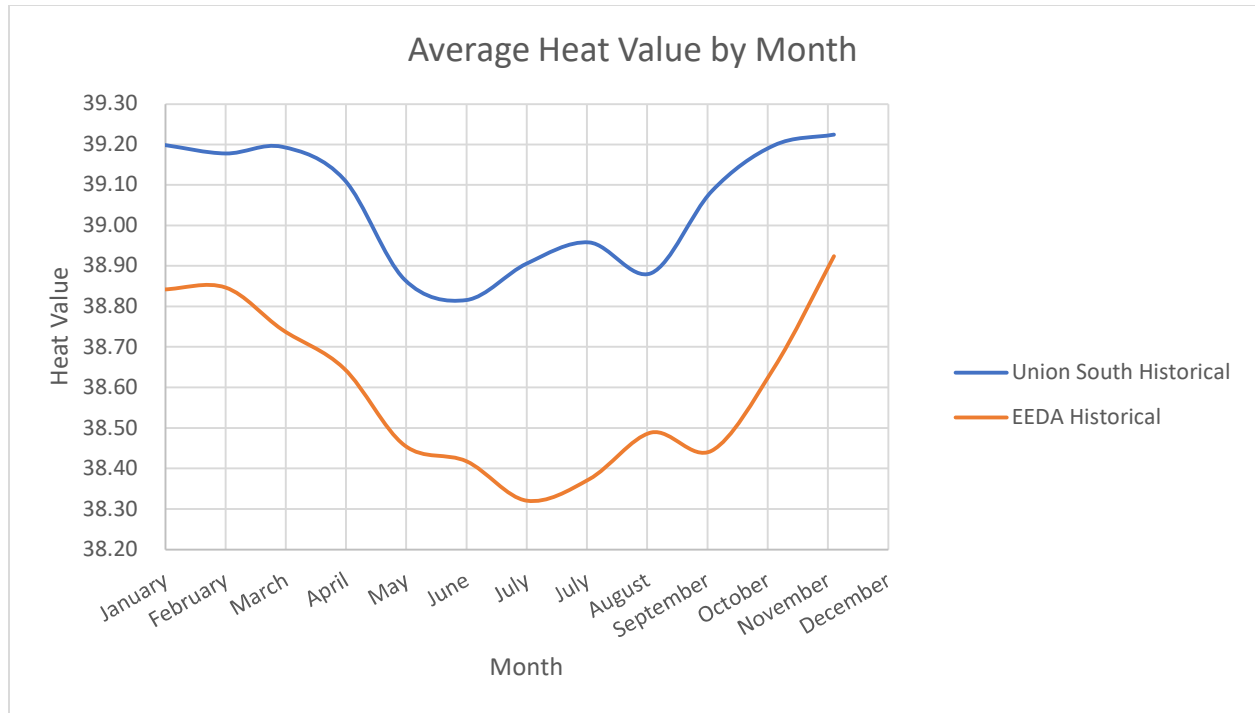
Union South Historical Heat Value





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June	38.75	38.64	38.89	38.77	38.94	39.00	38.72	38.82
July	38.76	38.80	38.87	39.07	39.14	38.82	38.89	38.91
August	39.17	38.72	38.84	39.14	38.99	38.97	38.88	38.96
September	38.69	38.78	38.90	39.09	38.99	38.92	38.82	38.88
October	38.66	38.74	39.27	39.47	39.40	39.01	39.03	39.08
November	38.98	38.87	39.36	39.60	39.30	39.18	39.10	39.20
December	39.06	38.90	39.21	39.57	39.31	39.30	39.24	39.22

Rebasing Heat Value EEDA								
Month	2016	2017	2018	2019	2020	2021	2022	Average
January	38.66	38.68	38.72	38.85	38.99	38.97	39.02	38.84
February	38.65	38.74	38.67	38.79	39.04	39.00	39.03	38.85
March	38.46	38.67	38.73	38.69	38.91	38.87	38.88	38.74
April	38.49	38.47	38.67	38.61	38.78	38.67	38.84	38.65
May	38.13	38.36	38.26	38.36	38.54	38.61	38.93	38.46
June	38.15	38.20	38.42	38.47	38.43	38.58	38.68	38.42
July	37.91	38.03	38.41	38.43	38.36	38.47	38.63	38.32
August	37.91	38.11	38.27	38.37	38.57	38.64	38.74	38.37
September	38.05	38.07	38.24	38.48	38.68	39.01	38.90	38.49
October	37.93	38.28	38.42	38.37	38.48	38.95	38.67	38.44
November	38.27	38.53	38.49	38.92	38.65	38.89	38.78	38.65
December	38.58	38.66	38.73	39.11	38.97	39.40	39.02	38.92



ENBRIDGE GAS INC.

Answer to Interrogatory from
Federation of Rental-housing Providers of Ontario (FRPO)

Interrogatory

Reference:

Ex. 3, Tab 6, Schedule 1

Preamble:

We would like to understand the impact of EGI's Heat Value proposals.

EGI evidence on pg. 6-7 state: *The AHV alternatives reviewed focused on two evaluation criteria: 1) simplify/harmonize and 2) minimize impact to system users and customers. To further assist with the evaluation, six years of historical annual heat values (2016 to 2021) were reviewed to understand the historical heat value changes and relationships between the EGD (ECDA and EEDA), Union North, and Union South rate zones.*

Question(s):

Please file the review study that evaluated the alternatives.

- a) In Excel format, please file the monthly data from the respective locations that the data was drawn from.
 - i. Please also include data for 2022.
 - ii. If a map showing the locations is not in the study, please provide a map locating the heat value measurement points.
 - iii. If the data did not include the monthly Heat Values of the TCPL system for the following locations, please include in the Excel file:
 - 1) Spruce
 - 2) EGD EDA
 - 3) EGD CDA
 - 4) UNION CDA
 - 5) UNION EDA (please confirm precisely where measured)
 - 6) Kirkwall (please confirm precisely where measured)
- b) In tabular form, please provide a summary of the range of differences in heat value in comparing the Union North values that been used by Union Rate Zone over the 2016-2022 period.

- c) If not included in the study, please present in a table the summary results that considered seasonal effects of varying monthly heat values across the measurement points.
- d) Please file EGI's most recent reconciliation of heat value done for the purposes of ensuring appropriate recovery of gas costs,
- e) Please provide EGI's views on the efficacy of a quarterly adjusted heat value at the time of QRAM.
 - i. Please provide data in support of those views.
- f) Please provide EGI's views on the efficacy of quarterly or annual heat value reconciliations for these quarterly figures for the purposes of recovering the difference between forecast and actual.

Response:

The analysis of the alternatives was included in the evidence and tables provided at Exhibit 3, Tab 6, Schedule 1, pages 6 to 8. The analysis is based on annual measured receipts and deliveries as provided at Exhibit 3 Tab 6, Schedule 1, Attachment 1.

- a) Please see Attachment 1 for the Excel, for the monthly heat values underpinning these annual numbers.
 - i. The 2022 heat values have been included by month at Attachment 1.
 - ii. Please see Figure 1. Figure 1 includes locations where Enbridge Gas receives heat value information from other pipelines or from Enbridge Gas's own equipment. The Dawn number of 45 includes 35 storage measurement locations.

Figure 1: Heat Value Measurement Locations Used



iii. Please see Attachment 2 for the Excel, for the heat values at the additional locations of Spruce, Union CDA, and Kirkwall heat values.

- b) Please see Attachment 3 for a summary of the range of differences in heat value comparing the Union North values used over the 2016 to 2022 period.
- c) The seasonality in heat values was not studied for the annual heat value calculation. When determining the annual heat values, Enbridge Gas used the annual measured receipts and deliveries in GJ and 10^3m^3 which considers the monthly measured volumes and energy. It was assessed using the cumulative annual numbers which considers the seasonality.
- d) On a monthly basis, the gas cost relating to system sales throughput volume is calculated based on the approved heat value. In the following month, when the actual heat values are available, the difference between the actual and approved heat value is recorded in the purchase gas variance account (PGVA) by applying the heat value difference to the system sales throughput volumes multiplied by the

approved reference price. Please see Table 1 which provides a calculation of the gas cost impact associated with system gas throughput for the difference between the actual and approved heat value for the month of December 2022 for the Union South rate zone.

Table 1
December 2022 Heat Value Adjustment - Union South Rate Zone

Line No.	Particulars		
1	Approved Heat Value (GJ/10 ³ m ³)	(a)	39.120
2	Actual Heat Value (GJ/10 ³ m ³)	(b)	39.314
3	Heat Value Difference (GJ/10 ³ m ³)	(c)=(a)-(b)	0.194
4	Union South December 2022 System Gas Throughput (10 ³ m ³)	(d)	509,899.5
5	Heat Value Adjustment (GJ)	(e)=(d)*(c)	98,920.5
6	Approved Oct 2022 Reference Price (\$/GJ)	(f)	6.653
7	Gas Cost Impact (\$) (1)	(g)=(e)*(f)	658,118

Note:

(1) The gas cost impact would be recorded as a debit to Union South PGVA

A similar adjustment is also recorded for unaccounted for gas (UFG) costs. On a monthly basis, the UFG volume is calculated based on the approved heat value. In the following month, when the actual heat values are available, the difference between the actual and approved heat value is recorded in the UFG deferral accounts by applying the heat value difference to the UFG volumes. Please see Table 2 which provides a calculation of the gas cost related impact relating to UFG for the difference between the actual heat value and the approved heat value for the month of December 2022 for the Union rate zones.

Table 2
December 2022 UFG Heat Value Adjustment - Union Rate Zones

Line No.	Particulars		
1	Approved Heat Value (GJ/10 ³ m ³)	(a)	39.120
2	Actual Heat Value (GJ/10 ³ m ³)	(b)	39.314
3	Heat Value Difference (GJ/10 ³ m ³)	(c)=(a)-(b)	0.194
4	Union South December 2022 UFG Volume (10 ³ m ³)	(d)	39,732
5	Heat Value Adjustment (GJ)	(e)=(d)*(c)	7,708.0
6	Approved Oct 2022 Reference Price (\$/GJ)	(f)	6.653
7	Gas Cost Impact (\$) (1)	(g)=(e)*(f)	51,281

Note:

- (1) The gas cost impact would be recorded as a debit (receivable) to UFG Volume Deferral Account

e,f) A quarterly adjusted heat value is not efficient when setting the annual heat value (AHV). The AHV aligns with the annual planning and forecasting processes.

From a gas cost perspective, gas cost related heat value variances, as described in part d) are captured in the relevant deferral and variance accounts, irrespective of the frequency of adjusting the forecast heat value.

The monthly heat value (MHV) process, used for billing purposes, will capture differences in balancing and storage activity between the direct purchase customers' daily contracted quantity (utilizing AHV) and their daily consumption (utilizing MHV).



Project Name	Cost of the Project	Number of customers expected to connect	Cost/ Customer
Scugog Island	\$ 16,550,837	810	\$ 20,433
Chippewa of the Thames First Nation	\$ 1,863,000	44	\$ 42,341
Saugeen First Nation	\$ 3,314,000	89	\$ 37,236
Northshore and Peninsula Rd	\$ 10,095,000	134	\$ 75,336
Brunner	\$ 1,293,836	44	\$ 29,405
Kenora District (Hwy 594)	\$ 1,551,582	30	\$ 51,719
Stanley's Old Maple Lane Farm	\$ 820,779	11	\$ 74,616
Burks Falls	\$ 1,663,917	41	\$ 40,583
Haldimand Shores	\$ 4,048,709	112	\$ 36,149
Source: Exhibit 1.2-CCC-12			

Project Name	Cost of the Project	Number of customers expected to connect	Cost/ Customer
Hiawatha First Nation	\$ 5,286,857	213	\$ 24,821
Cornwall Island	\$ 8,418,045	354	\$ 23,780
Bobcaygeon	\$ 116,714,815	3978	\$ 29,340
Hidden Valley	\$ 3,463,661	110	\$ 31,488
Mohawks of the Bay of Quinte	\$ 10,715,495	179	\$ 59,863
Selwyn	\$ 4,502,425	87	\$ 51,752
Neustadt	\$ 7,769,155	219	\$ 35,476
Prince Edward County (Cherry Valley)	\$ 7,883,379	152	\$ 51,864
Sandford	\$ 6,631,637	140	\$ 47,369
Eganville	\$ 36,757,345	674	\$ 54,536
East Gwillimbury (North and East)	\$ 15,563,359	422	\$ 36,880
Boblo Island	\$ 2,776,579	92	\$ 30,180
Merrickville-Wolford	\$ 4,024,120	67	\$ 60,061
St Charles	\$ 8,602,563	162	\$ 53,102
Glendale Subdivision	\$ 3,753,588	77	\$ 48,748
Chute-a-Blondeau	\$ 9,038,505	318	\$ 28,423
Tweed	\$ 5,091,557	62	\$ 82,122
Lanark and Balderson	\$ 19,199,846	334	\$ 57,485
Red Rock First Nation (Lake Helen Reserve)	\$ 4,081,700	77	\$ 53,009
Caledon (Humber Station)	\$ 7,010,026	100	\$ 70,100
Severn (Washago)	\$ 28,859,544	723	\$ 39,916
Cedar Springs	\$ 3,479,788	103	\$ 33,784
Source: Exhibit 1.2-CCC-12			