



ENBRIDGE PIPELINES INC.

IN CONNECTION WITH

ENBRIDGE ENERGY, LIMITED PARTNERSHIP INTERNATIONAL JOINT RATE TARIFF

APPLYING ON
CRUDE PETROLEUM, CONDENSATES AND NATURAL GAS LIQUIDS
FROM

POINTS IN THE PROVINCES OF ALBERTA, SASKATCHEWAN, MANITOBA,

TO

POINTS IN THE PROVINCE OF ONTARIO AND POINTS IN THE STATES OF ILLINOIS, INDIANA,
MICHIGAN, MINNESOTA, NEW YORK, AND WISCONSIN

USING JOINT ROUTING AS DEPICTED ON PAGE 5 OF THIS TARIFF

The transportation rates listed in this tariff are subject to the Rules and Regulations published by:

Enbridge Pipelines Inc., NEB (National Energy Board) Tariffs Nos. [W] ~~443 438~~, 389 and 417, and reissues thereof, on file with the National Energy Board on file with the National Energy Board, for transportation within Canada.

Enbridge Energy, Limited Partnership FERC Tariff Nos. [W] ~~41.16.0 41.15.0~~ and 42.5.0, and reissues thereof, for transportation within the United States.

[N] The rates listed in this tariff are payable in United States currency and are applicable on the international movement of Crude Petroleum, Condensates and Natural Gas Liquids tendered to Enbridge Pipelines Inc. at established receiving points in Canada for delivery to established receiving points in Canada for delivery to established delivery points in the United States and Canada.

The provisions published herein will, if effective, not result in an effect on the quality of the human environment.

ISSUED: May 30, 2019

EFFECTIVE: July 1, 2019

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TRANSPORTATION RATES

Commodities shall be classified on the basis of the density and viscosity of such commodities at the time of receipt by Enbridge Pipelines Inc. and assessed a transportation rate as listed in the transportation rate tables below. Density shall be based on 15°C. Viscosity shall be based on Enbridge Pipelines Inc.'s reference line temperature at the time of receipt. Where the density of a commodity falls within the density range of one commodity classification and the viscosity of the commodity falls within the viscosity range of another commodity classification, then the commodity shall be deemed to be in the commodity classification with the higher transportation rate.

NATURAL GAS LIQUIDS (NGL) - A commodity having a maximum absolute vapor pressure of 1,250 kilopascals at 37.8°C and a density of up to but not including 600 kilograms per cubic meter (kg/m³) and a viscosity of up to but not including 0.4 square millimeters per second (mm²/s) will be classified as **Natural Gas Liquids**.

CONDENSATES (CND) – A commodity having a density from 600 kg/ m³ up to but not including 800 kg/ m³ and a viscosity of 0.4 mm²/s up to but not including 2 mm²/s will be classified as **Condensates**.

LIGHT CRUDE PETROLEUM (LIGHT) - A commodity having a density from 800 kg/m³ up to but not including 876 kg/m³ and a viscosity from 2 mm²/s up to but not including 20 mm²/s will be classified as **Light Crude Petroleum**.

MEDIUM CRUDE PETROLEUM (MEDIUM) - A commodity having a density from 876 kg/m³ up to but not including 904 kg/m³ and a viscosity from 20 mm²/s up to but not including 100 mm²/s will be classified as **Medium Crude Petroleum**.

HEAVY CRUDE PETROLEUM (HEAVY) - A commodity having a density from 904 kg/m³ to 940 kg/m³ inclusive and a viscosity from 100 up to and including 350 mm²/s will be classified as **Heavy Crude Petroleum**.

The following tables provide rates including Transmission and Terminalling Charges, as well as the Abandonment Surcharges, the Edmonton Transportation Surcharge, the Phase 1 Southern Access Expansion Surcharge, the Interim Lakehead Operational Tank Surcharge, the Line 78 (Line 62) Twin Surcharge, the CTS Section 20.1 surcharge, the Non-Performance Penalty, and the Line 61 Twin Surcharge. For further information on the applicable tankage charges in Canada and the United States, refer to Enbridge Pipelines Inc.'s NEB Tariff No. **[W] 448 440**, Enbridge Pipelines Inc.'s NEB RT Tariff No. **[W] 19-1 48-2**, and Enbridge Energy, Limited Partnership's FERC Tariff No. **[W] 43.31.0 43.28.0**. For the applicable Oil Allowance charges in Canada and the United States, refer to Enbridge Pipelines Inc.'s NEB Tariff No. **[W] 448 440**, and Enbridge Energy, Limited Partnership's FERC Tariff No. **[W] 41.16.0 41.45.0**.

[!] All rates on this page have increased.

**INTERNATIONAL JOINT TRANSPORTATION RATES FOR ENBRIDGE PIPELINES INC.
AND ENBRIDGE ENERGY, LIMITED PARTNERSHIP**

INTERNATIONAL JOINT TRANSPORTATION RATES IN US DOLLARS PER CUBIC METER						
From	To	Rate				
		NGL	CND	LIGHT	MEDIUM	HEAVY
Edmonton Terminal, Alberta	Clearbrook, Minnesota		15.6579	16.5453	17.5800	19.3924
	Superior, Wisconsin	17.6203	18.4346	19.3264	20.5727	22.7525
	Lockport, Illinois		25.4811	26.3831	28.1474	31.2384
	Mokena, Illinois		25.4811	26.3831	28.1474	31.2384
	Flanagan, Illinois		25.0262	25.9282	27.6925	30.7835
	Griffith, Indiana		25.4811	26.3831	28.1474	31.2384
	Stockbridge, Michigan		27.8606	28.7665	30.7215	34.1470
	Rapid River, Michigan	21.4990				
	Marysville, Michigan		27.8606	28.7665	30.7215	34.1470
	Corunna or Sarnia Terminal, Ontario	26.6027	28.2273	29.1418	31.107	34.5436
	Nanticoke, Ontario		30.4763	31.5821	33.7381	37.5095
	West Seneca, New York		30.8149	31.9429	34.1482	38.0072
Hardisty Terminal, Alberta	Clearbrook, Minnesota			13.3333	14.2435	15.8384
	Superior, Wisconsin			16.1144	17.2362	19.1986
	Lockport, Illinois			23.1713	24.8111	27.6843
	Mokena, Illinois			23.1713	24.8111	27.6843
	Flanagan, Illinois			22.7164	24.3562	27.2294
	Griffith, Indiana			23.1713	24.8111	27.6843
	Stockbridge, Michigan			25.5546	27.3852	30.5931
	Rapid River, Michigan					
	Marysville, Michigan			25.5546	27.3852	30.5931
	Corunna or Sarnia Terminal, Ontario			25.9300	27.7706	30.9899
	Nanticoke, Ontario			28.3699	30.4018	33.9554
	West Seneca, New York			28.7312	30.8122	34.4534

[I] All rates on this page have increased.

INTERNATIONAL JOINT TRANSPORTATION RATES IN US DOLLARS PER CUBIC METER						
From	To	Rate				
		NGL	CND	LIGHT	MEDIUM	HEAVY
Kerrobot Station, Saskatchewan	Clearbrook, Minnesota			11.7368		13.8980
	Superior, Wisconsin	13.1233		14.5179		17.2581
	Lockport, Illinois			21.5747		25.7440
	Mokena, Illinois			21.5747		25.7440
	Flanagan, Illinois			21.1198		25.2891
	Griffith, Indiana			21.5747		25.7440
	Stockbridge, Michigan			23.9580		28.6526
	Rapid River, Michigan	17.0021				
	Marysville, Michigan			23.9580		28.6526
	Corunna or Sarnia Terminal, Ontario	22.1059		24.3333		29.0492
	Nanticoke, Ontario			26.7734		32.0150
West Seneca, New York			27.1345		32.5129	
Regina Terminal, Saskatchewan	Clearbrook, Minnesota			8.5349		10.0060
	Superior, Wisconsin			11.3158		13.3661
	Lockport, Illinois			18.3727		21.8521
	Mokena, Illinois			18.3727		21.8521
	Flanagan, Illinois			17.9178		21.3972
	Griffith, Indiana			18.3727		21.8521
	Stockbridge, Michigan			20.7561		24.7609
	Rapid River, Michigan					
	Marysville, Michigan			20.7561		24.7609
	Corunna or Sarnia Terminal, Ontario			21.1312		25.1574
	Nanticoke, Ontario			23.5715		28.1232
West Seneca, New York			23.9325		28.6209	
Cromer Terminal, Manitoba	Clearbrook, Minnesota			6.2216	6.5749	7.1947
	Superior, Wisconsin	8.1483		9.0029	9.5677	10.5550
	Lockport, Illinois			16.0598	17.1423	19.0407
	Mokena, Illinois			16.0598	17.1423	19.0407
	Flanagan, Illinois			15.6049	16.6874	18.5858
	Griffith, Indiana			16.0598	17.1423	19.0407
	Stockbridge, Michigan			18.4431	19.7164	21.9494
	Rapid River, Michigan	12.0272				
	Marysville, Michigan			18.4431	19.7164	21.9494
	Corunna or Sarnia Terminal, Ontario	17.1308		18.8180	20.1016	22.3460
	Nanticoke, Ontario			21.2583	22.7330	25.3117
West Seneca, New York			21.6195	23.1433	25.8095	

Notes

- a) **Abandonment Surcharge:** The transportation rates include Abandonment Surcharges for transmission and terminalling pursuant to National Energy Board Decision MH-001-2013 and Order MO-030-2014 for movements of all commodities. All movements to the United States incur a receipt terminalling Abandonment Surcharge. Movements to Corunna or Sarnia Terminal, Ontario and Nanticoke, Ontario incur both a receipt and delivery terminalling Abandonment Surcharge.
- b) **Edmonton Transportation Surcharge:** Pursuant to CTS Section 16.3, the transportation tolls from the Edmonton Terminal, Alberta receiving point include a surcharge for transmission and terminalling, which is adjusted on July 1 for the GDPP Index but not adjusted for distance or commodity type.
- c) **Phase 1 Southern Access Expansion Surcharge:** Pursuant to CTS Section 16.3, the transportation tolls for all movements downstream of Superior, Wisconsin include a surcharge, which is adjusted on July 1 for the GDPP Index but not adjusted for distance or commodity type.
- d) **Interim Lakehead Operational Tank Surcharge:** Pursuant to CTS Section 16.3, the transportation tolls for all movements downstream of Superior, Wisconsin include a surcharge, which is adjusted on July 1 for the GDPP Index but not adjusted for distance or commodity type.
- e) **Line 78 (Line 62 Twin) Surcharge:** Pursuant to CTS Section 16.3, the transportation tolls for all commodity movements into and east of Chicago include a surcharge, which is adjusted on July 1 for the GDPP Index but not adjusted for distance or commodity type.
- f) **CTS Section 20.1(i) Surcharge:** Pursuant to CTS Section 20.1(i), the transportation tolls include a surcharge for Regulatory Change(s) or Enbridge Specific Regulatory Change(s), which is adjusted for distance and commodity type.
- g) **Non-Performance Penalty:** The transportation tolls for all commodity movements include a surcredit for refund of collections under the Non-Performance Penalty, which is adjusted for distance only.
- h) **Line 61 Twin Surcharge:** Pursuant to CTS Section 13.1(e), the transportation tolls include a surcharge, which is adjusted for distance and commodity type.

JOINT ROUTING

Receipt Points in the provinces of Alberta, Saskatchewan, and Manitoba to delivery points in the province of Ontario and the states of Illinois, Indiana, Michigan, Minnesota, and New York

Enbridge Pipelines Inc. – Edmonton or Hardisty, Alberta; Kerrobert or Regina, Saskatchewan; or Cromer, Manitoba to the International Border near Gretna, Manitoba, connecting to;

Enbridge Energy, Limited Partnership – International Border near Neche, North Dakota to Clearbrook, Minnesota; Superior, Wisconsin; Lockport or Mokena, Illinois; Griffith, Indiana; Stockbridge or Rapid River, Michigan; or Marysville, Michigan, connecting to;

Enbridge Pipelines Inc. – International Border near Sarnia, Ontario to Corunna or Sarnia Terminal, Ontario or Nanticoke, Ontario, connecting to;

Enbridge Energy, Limited Partnership – International Border near Grand Island, New York to West Seneca, New York.

EXCEPTIONS

For exceptions to Enbridge Pipelines Inc., Rules and Regulations and Enbridge Energy, Limited Partnership, Rules and Regulations, see the following:

- a) **Exception to Enbridge Energy, Limited Partnership's Rules and Regulations FERC No. [W] 41.16.0 ~~41.15.0~~ Item 9 (h) and FERC No. 42.5.0 Item 10 (i).** For the purposes of this international joint tariff, Enbridge Pipelines Inc. shall collect in kind a percentage, in the amount of 1/10th of 1 percent of all hydrocarbons physically delivered at the designated Regular Delivery Point.
- b) **Exception to Enbridge Energy, Limited Partnership's Rules and Regulations FERC No. [W] 41.16.0 ~~41.15.0~~ Item 7 (a) and FERC No. 42.5.0 Item 8 (c).** For the purposes of this international joint tariff, Enbridge Pipelines Inc. shall charge a shipper the rate for the transportation of Crude Petroleum that is in effect on the date of delivery at the designated Regular Delivery Point for such Crude Petroleum.

SYMBOLS:

[W] – Change in wording only

[N] – New

[I] – Increase

Enbridge Pipelines Inc. and Enbridge Energy, Limited Partnership
International Joint Transportation Rates
Worksheet Supporting NEB Tariff No. 449 and FERC No. 45.17.0
Effective: July 01, 2019

JOINT TRANSPORTATION RATES IN US DOLLARS PER CUBIC METER											
Natural Gas Liquids (NGL)											
FROM	TO	Transmission & Terminalling From NEB No. 441 FERC No. 45.16.0	Adjusted Transmission & Terminalling ¹	CTS Section 20.1 (i) Surcharge	Abandonment Surcharge	Edmonton Transportation Surcharge ¹	Phase 1 Southern Access Expansion Surcharge ¹	Interim Lakehead Operation Tank Surcharge ¹	Line 78 (Line 62) Surcharge ¹	Non-Performance Penalty Credit	Total NEB No. 449 & FERC No. 45.17.0
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)=(B)+(C)+(D)+(E)+(F)+(G)+(H)+(I)
Edmonton, Alberta	Superior, Wisconsin	15.4215	15.6620	0.0957	0.2400	1.6245	-	-	-	(0.0019)	17.6203
	Rapid River, Michigan	18.4730	18.7611	0.1604	0.2400	1.6245	0.1950	0.0650	0.4549	(0.0019)	21.4990
	Corunna or Sarnia Terminal, Ontario	23.4007	23.7656	0.2548	0.2448	1.6245	0.1950	0.0650	0.4549	(0.0019)	26.6027
Kerobert, Saskatchewan	Superior, Wisconsin	12.6627	12.8602	0.0915	0.1730	-	-	-	-	(0.0014)	13.1233
	Rapid River, Michigan	15.7143	15.9594	0.1562	0.1730	-	0.1950	0.0650	0.4549	(0.0014)	17.0021
	Corunna or Sarnia Terminal, Ontario	20.6420	20.9639	0.2507	0.1778	-	0.1950	0.0650	0.4549	(0.0014)	22.1059
Cromer, Manitoba	Superior, Wisconsin	7.8843	8.0073	0.0843	0.0571	-	-	-	-	(0.0004)	8.1483
	Rapid River, Michigan	10.9360	11.1066	0.1490	0.0571	-	0.1950	0.0650	0.4549	(0.0004)	12.0272
	Corunna or Sarnia Terminal, Ontario	15.8638	16.1112	0.2434	0.0618	-	0.1950	0.0650	0.4549	(0.0005)	17.1308

¹ Adjusted by 75% of GDDP Index (as defined in CTS Section 3.1 (hh)) of 2.0794%

JOINT TRANSPORTATION RATES IN US DOLLARS PER CUBIC METER											
Condensate (CND)											
FROM	TO	Transmission & Terminalling From NEB No. 441 FERC No. 45.16.0	Adjusted Transmission & Terminalling ¹	CTS Section 20.1 (i) Surcharge	Abandonment Surcharge	Edmonton Transportation Surcharge ¹	Phase 1 Southern Access Expansion Surcharge ¹	Interim Lakehead Operation Tank Surcharge ¹	Line 78 (Line 62) Surcharge ¹	Non- Performance Penalty Credit	Total NEB No. 449 & FERC No. 45.17.0
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)=(B)+(C)+(D)+ (E)+(F)+(G)+(H)+ (I)
Edmonton, Alberta	Clearbrook, Minnesota	13.5346	13.7457	0.0496	0.2400	1.6245	-	-	-	(0.0019)	15.6579
	Superior, Wisconsin	16.2211	16.4741	0.0979	0.2400	1.6245	-	-	-	(0.0019)	18.4346
	Lockport, Illinois	22.3385	22.6869	0.2167	0.2400	1.6245	0.1950	0.0650	0.4549	(0.0019)	25.4811
	Mokena, Illinois	22.3385	22.6869	0.2167	0.2400	1.6245	0.1950	0.0650	0.4549	(0.0019)	25.4811
	Flanagan, Illinois	22.3385	22.6869	0.2167	0.2400	1.6245	0.1950	0.0650	-	(0.0019)	25.0262
	Griffith, Indiana	22.3385	22.6869	0.2167	0.2400	1.6245	0.1950	0.0650	0.4549	(0.0019)	25.4811
	Stockbridge, Michigan	24.6385	25.0227	0.2604	0.2400	1.6245	0.1950	0.0650	0.4549	(0.0019)	27.8606
	Marysville, Michigan	24.6385	25.0227	0.2604	0.2400	1.6245	0.1950	0.0650	0.4549	(0.0019)	27.8606
	Corunna or Sarnia Terminal, Ontario	24.9947	25.3845	0.2605	0.2448	1.6245	0.1950	0.0650	0.4549	(0.0019)	28.2273
Nanticoke, Ontario	27.1558	27.5793	0.2638	0.2961	1.6245	0.1950	0.0650	0.4549	(0.0023)	30.4763	
West Seneca, New York	27.4792	27.9078	0.2706	0.2995	1.6245	0.1950	0.0650	0.4549	(0.0024)	30.8149	

¹ Adjusted by 75% of GDPP Index (as defined in CTS Section 3.1 (hh)) of 2.0794%

JOINT TRANSPORTATION RATES IN US DOLLARS PER CUBIC METER											
Light Crude Petroleum (LGT)											
FROM	TO	Transmission & Terminalling From NEB No. 441 FERC No. 45.16.0	Adjusted Transmission & Terminalling ¹	CTS Section 20.1 (I) Surcharge	Abandonment Surcharge	Edmonton Transportation Surcharge ¹	Phase 1 Southern Access Expansion Surcharge ¹	Interim Lakehead Operation Tank Surcharge ¹	Line 78 (Line 62) Surcharge ¹	Non- Performance Penalty Credit	Total NEB No. 449 & FERC No. 45.17.0
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)=(B)+(C)+(D)+ (E)+(F)+(G)+(H)+ (I)
Edmonton, Alberta	Clearbrook, Minnesota	14.4043	14.6289	0.0538	0.2400	1.6245	-	-	-	(0.0019)	16.5453
	Superior, Wisconsin	17.0910	17.3575	0.1063	0.2400	1.6245	-	-	-	(0.0019)	19.3264
	Lockport, Illinois	23.2081	23.5700	0.2356	0.2400	1.6245	0.1950	0.0650	0.4549	(0.0019)	26.3831
	Mokena, Illinois	23.2081	23.5700	0.2356	0.2400	1.6245	0.1950	0.0650	0.4549	(0.0019)	26.3831
	Flanagan, Illinois	23.2081	23.5700	0.2356	0.2400	1.6245	0.1950	0.0650	-	(0.0019)	25.9282
	Griffith, Indiana	23.2081	23.5700	0.2356	0.2400	1.6245	0.1950	0.0650	0.4549	(0.0019)	26.3831
	Stockbridge, Michigan	25.5082	25.9060	0.2830	0.2400	1.6245	0.1950	0.0650	0.4549	(0.0019)	28.7665
	Marysville, Michigan	25.5082	25.9060	0.2830	0.2400	1.6245	0.1950	0.0650	0.4549	(0.0019)	28.7665
	Corunna or Sarnia Terminal, Ontario	25.8728	26.2763	0.2832	0.2448	1.6245	0.1950	0.0650	0.4549	(0.0019)	29.1418
	Nanticoke, Ontario	28.2220	28.6621	0.2868	0.2961	1.6245	0.1950	0.0650	0.4549	(0.0023)	31.5821
West Seneca, New York	28.5669	29.0124	0.2940	0.2995	1.6245	0.1950	0.0650	0.4549	(0.0024)	31.9429	
Hardisty, Alberta	Clearbrook, Minnesota	12.8760	13.0768	0.0515	0.2066	-	-	-	-	(0.0016)	13.3333
	Superior, Wisconsin	15.5627	15.8054	0.1040	0.2066	-	-	-	-	(0.0016)	16.1144
	Lockport, Illinois	21.6800	22.0181	0.2333	0.2066	-	0.1950	0.0650	0.4549	(0.0016)	23.1713
	Mokena, Illinois	21.6800	22.0181	0.2333	0.2066	-	0.1950	0.0650	0.4549	(0.0016)	23.1713
	Flanagan, Illinois	21.6800	22.0181	0.2333	0.2066	-	0.1950	0.0650	-	(0.0016)	22.7164
	Griffith, Indiana	21.6800	22.0181	0.2333	0.2066	-	0.1950	0.0650	0.4549	(0.0016)	23.1713
	Stockbridge, Michigan	23.9800	24.3540	0.2807	0.2066	-	0.1950	0.0650	0.4549	(0.0016)	25.5546
	Marysville, Michigan	23.9800	24.3540	0.2807	0.2066	-	0.1950	0.0650	0.4549	(0.0016)	25.5546
	Corunna or Sarnia Terminal, Ontario	24.3448	24.7245	0.2809	0.2114	-	0.1950	0.0650	0.4549	(0.0017)	25.9300
	Nanticoke, Ontario	26.6936	27.1099	0.2845	0.2627	-	0.1950	0.0650	0.4549	(0.0021)	28.3699
West Seneca, New York	27.0388	27.4605	0.2918	0.2661	-	0.1950	0.0650	0.4549	(0.0021)	28.7312	

¹ Adjusted by 75% of GDP Index (as defined in CTS Section 3.1 (hh)) of 2.0794%

JOINT TRANSPORTATION RATES IN US DOLLARS PER CUBIC METER											
Light Crude Petroleum (LGT) - Continued											
FROM	TO	Transmission & Terminalling From NEB No. 441 FERC No. 45.16.0	Adjusted Transmission & Terminalling ¹	CTS Section 20.1 (I) Surcharge	Abandonment Surcharge	Edmonton Transportation Surcharge ¹	Phase 1 Southern Access Expansion Surcharge ¹	Interim Lakehead Operation Tank Surcharge ¹	Line 78 (Line 62) Surcharge ¹	Non-Performance Penalty Credit	Total NEB No. 449 & FERC No. 45.17.0
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)=(B)+(C)+(D)+(E)+(F)+(G)+(H)+(I)
Kerrobert, Saskatchewan	Clearbrook, Minnesota	11.3392	11.5160	0.0492	0.1730	-	-	-	-	(0.0014)	11.7368
	Superior, Wisconsin	14.0259	14.2446	0.1017	0.1730	-	-	-	-	(0.0014)	14.5179
	Lockport, Illinois	20.1431	20.4572	0.2310	0.1730	-	0.1950	0.0650	0.4549	(0.0014)	21.5747
	Mokena, Illinois	20.1431	20.4572	0.2310	0.1730	-	0.1950	0.0650	0.4549	(0.0014)	21.5747
	Flanagan, Illinois	20.1431	20.4572	0.2310	0.1730	-	0.1950	0.0650	-	(0.0014)	21.1198
	Griffith, Indiana	20.1431	20.4572	0.2310	0.1730	-	0.1950	0.0650	0.4549	(0.0014)	21.5747
	Stockbridge, Michigan	22.4431	22.7931	0.2784	0.1730	-	0.1950	0.0650	0.4549	(0.0014)	23.9580
	Marysville, Michigan	22.4431	22.7931	0.2784	0.1730	-	0.1950	0.0650	0.4549	(0.0014)	23.9580
	Corunna or Sarnia Terminal, Ontario	22.8077	23.1634	0.2786	0.1778	-	0.1950	0.0650	0.4549	(0.0014)	24.3333
	Nanticoke, Ontario	25.1568	25.5491	0.2821	0.2291	-	0.1950	0.0650	0.4549	(0.0018)	26.7734
West Seneca, New York	25.5018	25.8995	0.2894	0.2325	-	0.1950	0.0650	0.4549	(0.0018)	27.1345	
Regina, Saskatchewan	Clearbrook, Minnesota	8.2566	8.3854	0.0446	0.1057	-	-	-	-	(0.0008)	8.5349
	Superior, Wisconsin	10.9431	11.1138	0.0971	0.1057	-	-	-	-	(0.0008)	11.3158
	Lockport, Illinois	17.0604	17.3265	0.2264	0.1057	-	0.1950	0.0650	0.4549	(0.0008)	18.3727
	Mokena, Illinois	17.0604	17.3265	0.2264	0.1057	-	0.1950	0.0650	0.4549	(0.0008)	18.3727
	Flanagan, Illinois	17.0604	17.3265	0.2264	0.1057	-	0.1950	0.0650	-	(0.0008)	17.9178
	Griffith, Indiana	17.0604	17.3265	0.2264	0.1057	-	0.1950	0.0650	0.4549	(0.0008)	18.3727
	Stockbridge, Michigan	19.3606	19.6625	0.2738	0.1057	-	0.1950	0.0650	0.4549	(0.0008)	20.7561
	Marysville, Michigan	19.3606	19.6625	0.2738	0.1057	-	0.1950	0.0650	0.4549	(0.0008)	20.7561
	Corunna or Sarnia Terminal, Ontario	19.7251	20.0327	0.2739	0.1105	-	0.1950	0.0650	0.4549	(0.0008)	21.1312
	Nanticoke, Ontario	22.0744	22.4187	0.2774	0.1618	-	0.1950	0.0650	0.4549	(0.0013)	23.5715
West Seneca, New York	22.4193	22.7689	0.2848	0.1652	-	0.1950	0.0650	0.4549	(0.0013)	23.9325	
Cromer, Manitoba	Clearbrook, Minnesota	6.0297	6.1237	0.0412	0.0571	-	-	-	-	(0.0004)	6.2216
	Superior, Wisconsin	8.7166	8.8525	0.0937	0.0571	-	-	-	-	(0.0004)	9.0029
	Lockport, Illinois	14.8339	15.0652	0.2230	0.0571	-	0.1950	0.0650	0.4549	(0.0004)	16.0598
	Mokena, Illinois	14.8339	15.0652	0.2230	0.0571	-	0.1950	0.0650	0.4549	(0.0004)	16.0598
	Flanagan, Illinois	14.8339	15.0652	0.2230	0.0571	-	0.1950	0.0650	-	(0.0004)	15.6049
	Griffith, Indiana	14.8339	15.0652	0.2230	0.0571	-	0.1950	0.0650	0.4549	(0.0004)	16.0598
	Stockbridge, Michigan	17.1339	17.4011	0.2704	0.0571	-	0.1950	0.0650	0.4549	(0.0004)	18.4431
	Marysville, Michigan	17.1339	17.4011	0.2704	0.0571	-	0.1950	0.0650	0.4549	(0.0004)	18.4431
	Corunna or Sarnia Terminal, Ontario	17.4984	17.7713	0.2705	0.0618	-	0.1950	0.0650	0.4549	(0.0005)	18.8180
	Nanticoke, Ontario	19.8475	20.1570	0.2741	0.1132	-	0.1950	0.0650	0.4549	(0.0009)	21.2583
West Seneca, New York	20.1926	20.5075	0.2814	0.1166	-	0.1950	0.0650	0.4549	(0.0009)	21.6195	

¹ Adjusted by 75% of GDPP Index (as defined in CTS Section 3.1 (hh)) of 2.0794%

JOINT TRANSPORTATION RATES IN US DOLLARS PER CUBIC METER											
Medium Crude Petroleum (MED)											
FROM	TO	Transmission & Terminalling From NEB No. 441 FERC No. 45.16.0	Adjusted Transmission & Terminalling ¹	CTS Section 20.1 (I) Surcharge	Abandonment Surcharge	Edmonton Transportation Surcharge ¹	Phase 1 Southern Access Expansion Surcharge ¹	Interim Lakehead Operation Tank Surcharge ¹	Line 78 (Line 62) Surcharge ¹	Non-Performance Penalty Credit	Total NEB No. 449 & FERC No. 45.17.0
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)=(B)+(C)+(D)+(E)+(F)+(G)+(H)+(I)
Edmonton, Alberta	Clearbrook, Minnesota	15.4187	15.6592	0.0582	0.2400	1.6245	-	-	-	(0.0019)	17.5800
	Superior, Wisconsin	18.3098	18.5954	0.1147	0.2400	1.6245	-	-	-	(0.0019)	20.5727
	Lockport, Illinois	24.9268	25.3155	0.2544	0.2400	1.6245	0.1950	0.0650	0.4549	(0.0019)	28.1474
	Mokena, Illinois	24.9268	25.3155	0.2544	0.2400	1.6245	0.1950	0.0650	0.4549	(0.0019)	28.1474
	Flanagan, Illinois	24.9268	25.3155	0.2544	0.2400	1.6245	0.1950	0.0650	-	(0.0019)	27.6925
	Griffith, Indiana	24.9268	25.3155	0.2544	0.2400	1.6245	0.1950	0.0650	0.4549	(0.0019)	28.1474
	Stockbridge, Michigan	27.4108	27.8383	0.3057	0.2400	1.6245	0.1950	0.0650	0.4549	(0.0019)	30.7215
	Marysville, Michigan	27.4108	27.8383	0.3057	0.2400	1.6245	0.1950	0.0650	0.4549	(0.0019)	30.7215
	Corunna or Sarnia Terminal, Ontario	27.7855	28.2188	0.3059	0.2448	1.6245	0.1950	0.0650	0.4549	(0.0019)	31.1070
	Nanticoke, Ontario	30.3223	30.7952	0.3097	0.2961	1.6245	0.1950	0.0650	0.4549	(0.0023)	33.7381
West Seneca, New York	30.7152	31.1942	0.3175	0.2995	1.6245	0.1950	0.0650	0.4549	(0.0024)	34.1482	
Hardisty, Alberta	Clearbrook, Minnesota	13.7681	13.9828	0.0557	0.2066	-	-	-	-	(0.0016)	14.2435
	Superior, Wisconsin	16.6592	16.9190	0.1122	0.2066	-	-	-	-	(0.0016)	17.2362
	Lockport, Illinois	23.2763	23.6393	0.2519	0.2066	-	0.1950	0.0650	0.4549	(0.0016)	24.8111
	Mokena, Illinois	23.2763	23.6393	0.2519	0.2066	-	0.1950	0.0650	0.4549	(0.0016)	24.8111
	Flanagan, Illinois	23.2763	23.6393	0.2519	0.2066	-	0.1950	0.0650	-	(0.0016)	24.3562
	Griffith, Indiana	23.2763	23.6393	0.2519	0.2066	-	0.1950	0.0650	0.4549	(0.0016)	24.8111
	Stockbridge, Michigan	25.7604	26.1621	0.3032	0.2066	-	0.1950	0.0650	0.4549	(0.0016)	27.3852
	Marysville, Michigan	25.7604	26.1621	0.3032	0.2066	-	0.1950	0.0650	0.4549	(0.0016)	27.3852
	Corunna or Sarnia Terminal, Ontario	26.1350	26.5426	0.3034	0.2114	-	0.1950	0.0650	0.4549	(0.0017)	27.7706
	Nanticoke, Ontario	28.6718	29.1190	0.3073	0.2627	-	0.1950	0.0650	0.4549	(0.0021)	30.4018
West Seneca, New York	29.0649	29.5182	0.3151	0.2661	-	0.1950	0.0650	0.4549	(0.0021)	30.8122	
Cromer, Manitoba	Clearbrook, Minnesota	6.3743	6.4737	0.0445	0.0571	-	-	-	-	(0.0004)	6.5749
	Superior, Wisconsin	9.2655	9.4100	0.1010	0.0571	-	-	-	-	(0.0004)	9.5677
	Lockport, Illinois	15.8823	16.1300	0.2407	0.0571	-	0.1950	0.0650	0.4549	(0.0004)	17.1423
	Mokena, Illinois	15.8823	16.1300	0.2407	0.0571	-	0.1950	0.0650	0.4549	(0.0004)	17.1423
	Flanagan, Illinois	15.8823	16.1300	0.2407	0.0571	-	0.1950	0.0650	-	(0.0004)	16.6874
	Griffith, Indiana	15.8823	16.1300	0.2407	0.0571	-	0.1950	0.0650	0.4549	(0.0004)	17.1423
	Stockbridge, Michigan	18.3664	18.6528	0.2920	0.0571	-	0.1950	0.0650	0.4549	(0.0004)	19.7164
	Marysville, Michigan	18.3664	18.6528	0.2920	0.0571	-	0.1950	0.0650	0.4549	(0.0004)	19.7164
	Corunna or Sarnia Terminal, Ontario	18.7409	19.0332	0.2922	0.0618	-	0.1950	0.0650	0.4549	(0.0005)	20.1016
	Nanticoke, Ontario	21.2779	21.6097	0.2961	0.1132	-	0.1950	0.0650	0.4549	(0.0009)	22.7330
West Seneca, New York	21.6708	22.0088	0.3039	0.1166	-	0.1950	0.0650	0.4549	(0.0009)	23.1433	

¹ Adjusted by 75% of GDDP Index (as defined in CTS Section 3.1 (hh)) of 2.0794%

JOINT TRANSPORTATION RATES IN US DOLLARS PER CUBIC METER											
Heavy Crude Petroleum (HVY)											
FROM	TO	Transmission & Terminalling From NEB No. 441 FERC No. 45.16.0	Adjusted Transmission & Terminalling ¹	CTS Section 20.1 (I) Surcharge	Abandonment Surcharge	Edmonton Transportation Surcharge ¹	Phase 1 Southern Access Expansion Surcharge ¹	Interim Lakehead Operation Tank Surcharge ¹	Line 78 (Line 62) Surcharge ¹	Non- Performance Penalty Credit	Total NEB No. 449 & FERC No. 45.17.0
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)=(B)+(C)+(D)+ (E)+(F)+(G)+(H)+ (I)
Edmonton, Alberta	Clearbrook, Minnesota	17.1957	17.4639	0.0659	0.2400	1.6245	-	-	-	(0.0019)	19.3924
	Superior, Wisconsin	20.4414	20.7602	0.1297	0.2400	1.6245	-	-	-	(0.0019)	22.7525
	Lockport, Illinois	27.9378	28.3735	0.2874	0.2400	1.6245	0.1950	0.0650	0.4549	(0.0019)	31.2384
	Mokena, Illinois	27.9378	28.3735	0.2874	0.2400	1.6245	0.1950	0.0650	0.4549	(0.0019)	31.2384
	Flanagan, Illinois	27.9378	28.3735	0.2874	0.2400	1.6245	0.1950	0.0650	-	(0.0019)	30.7835
	Griffith, Indiana	27.9378	28.3735	0.2874	0.2400	1.6245	0.1950	0.0650	0.4549	(0.0019)	31.2384
	Stockbridge, Michigan	30.7446	31.2241	0.3454	0.2400	1.6245	0.1950	0.0650	0.4549	(0.0019)	34.1470
	Marysville, Michigan	30.7446	31.2241	0.3454	0.2400	1.6245	0.1950	0.0650	0.4549	(0.0019)	34.1470
	Corunna or Sarnia Terminal, Ontario	31.1302	31.6157	0.3456	0.2448	1.6245	0.1950	0.0650	0.4549	(0.0019)	34.5436
	Nanticoke, Ontario	33.9962	34.5264	0.3499	0.2961	1.6245	0.1950	0.0650	0.4549	(0.0023)	37.5095
West Seneca, New York	34.4743	35.0119	0.3588	0.2995	1.6245	0.1950	0.0650	0.4549	(0.0024)	38.0072	
Hardisty, Alberta	Clearbrook, Minnesota	15.3312	15.5703	0.0631	0.2066	-	-	-	-	(0.0016)	15.8384
	Superior, Wisconsin	18.5770	18.8667	0.1269	0.2066	-	-	-	-	(0.0016)	19.1986
	Lockport, Illinois	26.0732	26.4798	0.2846	0.2066	-	0.1950	0.0650	0.4549	(0.0016)	27.6843
	Mokena, Illinois	26.0732	26.4798	0.2846	0.2066	-	0.1950	0.0650	0.4549	(0.0016)	27.6843
	Flanagan, Illinois	26.0732	26.4798	0.2846	0.2066	-	0.1950	0.0650	-	(0.0016)	27.2294
	Griffith, Indiana	26.0732	26.4798	0.2846	0.2066	-	0.1950	0.0650	0.4549	(0.0016)	27.6843
	Stockbridge, Michigan	28.8802	29.3306	0.3426	0.2066	-	0.1950	0.0650	0.4549	(0.0016)	30.5931
	Marysville, Michigan	28.8802	29.3306	0.3426	0.2066	-	0.1950	0.0650	0.4549	(0.0016)	30.5931
	Corunna or Sarnia Terminal, Ontario	29.2661	29.7225	0.3428	0.2114	-	0.1950	0.0650	0.4549	(0.0017)	30.9899
	Nanticoke, Ontario	32.1318	32.6329	0.3470	0.2627	-	0.1950	0.0650	0.4549	(0.0021)	33.9554
West Seneca, New York	32.6099	33.1185	0.3560	0.2661	-	0.1950	0.0650	0.4549	(0.0021)	34.4534	

¹ Adjusted by 75% of GDPP Index (as defined in CTS Section 3.1 (hh)) of 2.0794%

JOINT TRANSPORTATION RATES IN US DOLLARS PER CUBIC METER											
Heavy Crude Petroleum (HVY) - Continued											
FROM	TO	Transmission & Terminalling From NEB No. 441 FERC No. 45.16.0	Adjusted Transmission & Terminalling ¹	CTS Section 20.1 (I) Surcharge	Abandonment Surcharge	Edmonton Transportation Surcharge ¹	Phase 1 Southern Access Expansion Surcharge ¹	Interim Lakehead Operation Tank Surcharge ¹	Line 78 (Line 62) Surcharge ¹	Non-Performance Penalty Credit	Total NEB No. 449 & FERC No. 45.17.0
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)=(B)+(C)+(D)+(E)+(F)+(G)+(H)+(I)
Kerrobert, Saskatchewan	Clearbrook, Minnesota	13.4562	13.6661	0.0603	0.1730	-	-	-	-	(0.0014)	13.8980
	Superior, Wisconsin	16.7019	16.9624	0.1241	0.1730	-	-	-	-	(0.0014)	17.2581
	Lockport, Illinois	24.1983	24.5757	0.2818	0.1730	-	0.1950	0.0650	0.4549	(0.0014)	25.7440
	Mokena, Illinois	24.1983	24.5757	0.2818	0.1730	-	0.1950	0.0650	0.4549	(0.0014)	25.7440
	Flanagan, Illinois	24.1983	24.5757	0.2818	0.1730	-	0.1950	0.0650	-	(0.0014)	25.2891
	Griffith, Indiana	24.1983	24.5757	0.2818	0.1730	-	0.1950	0.0650	0.4549	(0.0014)	25.7440
	Stockbridge, Michigan	27.0051	27.4263	0.3398	0.1730	-	0.1950	0.0650	0.4549	(0.0014)	28.6526
	Marysville, Michigan	27.0051	27.4263	0.3398	0.1730	-	0.1950	0.0650	0.4549	(0.0014)	28.6526
	Corunna or Sarnia Terminal, Ontario	27.3908	27.8180	0.3399	0.1778	-	0.1950	0.0650	0.4549	(0.0014)	29.0492
	Nanticoke, Ontario	30.2567	30.7286	0.3442	0.2291	-	0.1950	0.0650	0.4549	(0.0018)	32.0150
West Seneca, New York	30.7348	31.2141	0.3532	0.2325	-	0.1950	0.0650	0.4549	(0.0018)	32.5129	
Regina, Saskatchewan	Clearbrook, Minnesota	9.6954	9.8466	0.0545	0.1057	-	-	-	-	(0.0008)	10.0060
	Superior, Wisconsin	12.9411	13.1429	0.1183	0.1057	-	-	-	-	(0.0008)	13.3661
	Lockport, Illinois	20.4376	20.7563	0.2760	0.1057	-	0.1950	0.0650	0.4549	(0.0008)	21.8521
	Mokena, Illinois	20.4376	20.7563	0.2760	0.1057	-	0.1950	0.0650	0.4549	(0.0008)	21.8521
	Flanagan, Illinois	20.4376	20.7563	0.2760	0.1057	-	0.1950	0.0650	-	(0.0008)	21.3972
	Griffith, Indiana	20.4376	20.7563	0.2760	0.1057	-	0.1950	0.0650	0.4549	(0.0008)	21.8521
	Stockbridge, Michigan	23.2446	23.6071	0.3340	0.1057	-	0.1950	0.0650	0.4549	(0.0008)	24.7609
	Marysville, Michigan	23.2446	23.6071	0.3340	0.1057	-	0.1950	0.0650	0.4549	(0.0008)	24.7609
	Corunna or Sarnia Terminal, Ontario	23.6302	23.9987	0.3341	0.1105	-	0.1950	0.0650	0.4549	(0.0008)	25.1574
	Nanticoke, Ontario	26.4960	26.9092	0.3386	0.1618	-	0.1950	0.0650	0.4549	(0.0013)	28.1232
West Seneca, New York	26.9740	27.3947	0.3474	0.1652	-	0.1950	0.0650	0.4549	(0.0013)	28.6209	
Cromer, Manitoba	Clearbrook, Minnesota	6.9788	7.0876	0.0504	0.0571	-	-	-	-	(0.0004)	7.1947
	Superior, Wisconsin	10.2246	10.3841	0.1142	0.0571	-	-	-	-	(0.0004)	10.5550
	Lockport, Illinois	17.7208	17.9972	0.2719	0.0571	-	0.1950	0.0650	0.4549	(0.0004)	19.0407
	Mokena, Illinois	17.7208	17.9972	0.2719	0.0571	-	0.1950	0.0650	0.4549	(0.0004)	19.0407
	Flanagan, Illinois	17.7208	17.9972	0.2719	0.0571	-	0.1950	0.0650	-	(0.0004)	18.5858
	Griffith, Indiana	17.7208	17.9972	0.2719	0.0571	-	0.1950	0.0650	0.4549	(0.0004)	19.0407
	Stockbridge, Michigan	20.5278	20.8479	0.3299	0.0571	-	0.1950	0.0650	0.4549	(0.0004)	21.9494
	Marysville, Michigan	20.5278	20.8479	0.3299	0.0571	-	0.1950	0.0650	0.4549	(0.0004)	21.9494
	Corunna or Sarnia Terminal, Ontario	20.9135	21.2397	0.3301	0.0618	-	0.1950	0.0650	0.4549	(0.0005)	22.3460
	Nanticoke, Ontario	23.7793	24.1502	0.3343	0.1132	-	0.1950	0.0650	0.4549	(0.0009)	25.3117
West Seneca, New York	24.2573	24.6356	0.3433	0.1166	-	0.1950	0.0650	0.4549	(0.0009)	25.8095	

¹ Adjusted by 75% of GDP Index (as defined in CTS Section 3.1 (hh)) of 2.0794%