

Marathon Petroleum Corporation Market Data

Price information through 10/31/2021

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
											(1) + (10)	(11) - (8)		(1) + (13)	(14) - (8)	
	WTI Prompt Price (a)	MEH Prompt Price (a)	ANS Prompt Price (a)	Mid-Con WTI 3-2-1 Crack (ex-RIN) (b)	USGC MEH 3-2-1 Crack (ex-RIN) (b)	WC ANS 3-2-1 Crack (ex-RIN) (b)	Blended Crack (c)	Blended Prompt Crude Price (d)	RVO Cost in Crack	Sweet Delivered Differential (e)	Sweet Delivered Cost (f)	Prompt Sweet Differential	Sour Delivered Diff. (e)	Sour Delivered Cost (f)	Prompt Sour Differential	Market Structure (g)
Oct-21	81.22	82.10	83.10	12.41	11.55	15.89	12.76	81.95	6.76	0.60	81.82	(0.13)	(3.22)	78.00	(3.95)	0.37
Nov-21																
Dec-21																
4Q21	81.22	82.10	83.10	12.41	11.55	15.89	12.76	81.95	6.76	0.60	81.82	(0.13)	(3.22)	78.00	(3.95)	0.37

Hypothetical R&M Margin Indicator Calculation								Provided Outlook				
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	
Crude Throughput (mmbbls)	Non-Crude Throughput (mmbbls)	Total Throughput (mmbbls)	Blended Crack Spread (\$MM)	Sweet Differential (\$MM)	Sour Differential (\$MM)	Market Structure (\$MM)	R&M Margin Indicator (\$MM)	Crude Throughput (MBD)	Other Charge/Feedstocks (MBD)	Sweet Crude Throughput Percentage	Sour Crude Throughput Percentage	
(I) x Days in Qtr.	(J) x Days in Qtr.	(A) + (B)	(C) x Col 7	(A) x Col 12 x (K)	(A) x Col 15 x (L)	(A) x Col 16 x %	Sum of (D) thru (G)					
4th Quarter	239	18	257	3,282	16	453	(45)	3,706	2,595	200	52%	48%

- (a) Prompt Price represents calendar workday average of prices quoted that month for crude delivered in immediately following month(s).
- (b) Crack Spread Calculation: Mid-Con = ((Chicago CBOB Gasoline x 2 + Chicago Ultra Low Sulfur Distillate)/3) - WTI Prompt Price
USGC = ((U.S. Gulf Coast (USGC) CBOB Gasoline x 2 + USGC Ultra Low Sulfur Distillate) / 3) - MEH Prompt Price
West Coast = ((LA California Reformulated Gasoline Blendstock for Oxygenate Blending (CARBOB) x 2 + LA California Air Resources Board (CARB) Diesel)/3) - ANS Prompt Price
- (c) Blended Mid-Con/USGC/West Coast crack spread is weighted 40%/40%/20% based on MPC's refining capacity by PADD.
- (d) Blended WTI/MEH/ANS prompt crude price is weighted 40%/40%/20% based on blended crack spread.
- (e) Delivered differentials (versus Prompt WTI) for the trade month period beginning with the 26th calendar day two months prior to the prompt month through the 25th day one month prior to the prompt month. The exception is the Maya delivered differential which is calculated on a prompt calendar month basis.
MPC's typical sweet crude oil basket consists of the following crudes: Bakken, Brent, MEH, WTI-Cushing, WTI-Midland
MPC's typical sour crude oil basket consists of the following crudes: ANS, ASCI, Maya, Western Canadian Select.
- (f) Delivered cost is based on WTI prompt price plus each respective grade's delivered differential and does not include market structure or other expenses such as transportation, demurrage, etc. Market structure effects are calculated as a separate adjustment (see column 16 and (G) above).
- (g) Delivered month market structure (roll). Negative values represent contango and positive values represent backwardation. Approximately 50% of MPC's crude oil acquisition volume uses market structure in its acquisition price formula.

All prices and differentials listed are in Dollars per Barrel unless otherwise noted
Data Sources: NYMEX, Argus, and MPC Estimate

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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
	WTI	LLS	ANS	Mid-Con	USGC	WC		Blended	RVO	Sweet	Sweet	Prompt	Sour	Sour	Prompt	Market	
	Prompt	Prompt	Prompt	WTI 3-2-1 Crack	LLS 3-2-1 Crack	ANS 3-2-1 Crack		Prompt	Cost in Crack	Delivered	Delivered	Sweet	Delivered	Delivered	Sour	Structure	
	Price (a)	Price (a)	Price (a)	(ex-RIN) (b)	(ex-RIN) (b)	(ex-RIN) (b)		Crude Price (d)		Differential (e)	Cost (f)	Differential	Differential (e)	Cost (f)	Differential	(g)	
2020																	
Jan-20	57.53	61.41	64.95	8.74	5.64	12.12	8.37	60.78	1.15	2.01	59.54	(1.24)	(2.83)	54.70	(6.08)	0.19	
Feb-20	50.54	53.88	54.49	11.59	7.01	20.19	11.91	52.76	1.86	1.14	51.68	(1.08)	(3.39)	47.21	(5.54)	0.16	
Mar-20	30.45	29.13	34.76	2.48	6.81	6.74	5.15	30.98	1.80	0.68	31.13	0.15	(2.68)	27.76	(3.22)	(0.18)	
1Q20	45.78	47.65	51.03	7.39	6.48	12.68	8.31	47.75	1.60	1.27	47.05	(0.70)	(2.99)	42.85	(4.90)	0.05	
Apr-20	16.70	19.76	20.10	1.87	3.57	2.91	2.77	18.68	1.98	0.67	17.37	(1.30)	(2.49)	14.27	(4.41)	(1.07)	
May-20	28.53	31.56	28.93	5.32	1.09	11.15	5.11	29.77	2.14	(3.54)	24.99	(4.78)	(3.66)	24.87	(4.90)	(6.22)	
Jun-20	38.31	39.48	42.07	6.89	3.47	8.39	5.95	39.66	2.51	2.07	40.38	0.72	(0.82)	37.49	(2.17)	(1.81)	
2Q20	28.00	30.39	30.57	4.72	2.75	7.44	4.62	29.53	2.22	(0.18)	27.82	(1.70)	(2.26)	25.74	(3.78)	(2.96)	
Jul-20	40.77	42.35	43.56	6.20	3.47	5.73	4.24	42.04	2.58	0.28	41.05	(0.99)	(1.43)	39.33	(2.70)	(0.34)	
Aug-20	42.39	44.08	43.84	5.49	3.15	10.37	5.77	43.38	2.53	0.34	42.73	(0.65)	(0.68)	41.71	(1.67)	(0.17)	
Sep-20	39.63	41.06	40.81	4.94	3.23	8.71	5.19	40.46	2.81	0.72	40.35	(0.11)	(1.57)	38.05	(2.40)	(0.29)	
3Q20	40.92	42.49	42.75	5.55	3.28	9.21	5.57	41.96	2.64	0.44	41.37	(0.59)	(1.23)	39.69	(2.26)	(0.27)	
Oct-20	39.55	40.81	40.75	4.82	2.95	7.97	4.70	40.30	3.03	(0.46)	39.10	(1.20)	(1.48)	38.07	(2.22)	(0.39)	
Nov-20	41.35	42.44	43.28	3.17	2.21	8.91	3.93	42.17	3.47	(0.43)	40.92	(1.25)	(2.03)	39.32	(2.85)	(0.31)	
Dec-20	47.07	48.92	50.44	3.16	2.69	6.93	3.73	48.49	3.94	(0.19)	46.88	(1.61)	(1.87)	45.20	(3.29)	(0.35)	
4Q20	42.70	44.14	44.90	3.76	2.64	7.81	4.12	43.71	3.48	(0.36)	42.34	(1.37)	(1.78)	40.92	(2.80)	(0.35)	
2020 YTD	39.34	41.15	42.28	5.34	3.77	9.26	5.64	40.71	2.49	0.30	39.64	(1.07)	(2.08)	37.26	(3.45)	(0.88)	

	WTI	MEH	ANS	Mid-Con	USGC	WC		Blended	RVO	Sweet	Sweet	Prompt	Sour	Sour	Prompt	Market		
	Prompt	Prompt	Prompt	WTI 3-2-1 Crack	MEH 3-2-1 Crack	ANS 3-2-1 Crack		Prompt	Cost in Crack	Delivered	Delivered	Sweet	Delivered	Delivered	Sour	Structure		
	Price (a)	Price (a)	Price (a)	(ex-RIN) (b)	(ex-RIN) (b)	(ex-RIN) (b)		Crude Price (d)		Differential (e)	Cost (f)	Differential	Differential (e)	Cost (f)	Differential	(g)		
2021																		
Jan-21	52.10	53.69	55.39	4.57	4.58	7.57	5.17	53.39	4.70	(0.13)	51.98	(1.42)	(1.82)	50.28	(3.11)	(0.17)		
Feb-21	59.06	60.50	61.48	8.01	6.04	10.84	7.79	60.12	5.21	0.02	59.08	(1.04)	(2.09)	56.98	(3.14)	(0.02)		
Mar-21	62.36	63.50	65.42	10.38	8.90	12.99	10.31	63.43	6.59	0.38	62.73	(0.69)	(2.04)	60.32	(3.11)	0.17		
1Q21	58.14	59.51	61.07	7.83	6.66	10.63	7.92	59.27	5.57	0.11	58.25	(1.02)	(1.98)	56.15	(3.12)	0.01		
Apr-21	61.70	62.61	64.63	13.68	9.12	13.79	11.87	62.65	7.01	0.98	62.68	0.03	(2.11)	59.60	(3.05)	0.18		
May-21	65.16	65.85	68.02	13.35	8.23	14.08	11.45	66.01	9.00	0.53	65.68	(0.33)	(1.96)	63.20	(2.81)	0.04		
Jun-21	71.35	71.93	72.67	10.04	6.62	12.46	9.16	71.85	8.46	(0.00)	71.35	(0.50)	(2.89)	68.46	(3.38)	0.15		
2Q21	66.17	66.90	68.51	12.30	7.96	13.42	10.79	66.93	8.15	0.49	66.66	(0.27)	(2.33)	63.84	(3.09)	0.13		
Jul-21	72.43	72.72	73.62	12.00	9.46	14.44	11.47	72.79	7.73	(0.14)	72.29	(0.49)	(3.54)	68.89	(3.90)	0.51		
Aug-21	67.71	68.32	70.14	14.29	11.49	16.20	13.55	68.44	7.93	0.35	68.06	(0.38)	(4.12)	63.59	(4.85)	0.85		
Sep-21	71.54	72.59	74.43	14.28	11.11	13.08	12.77	72.54	6.26	0.40	71.94	(0.60)	(4.12)	67.42	(5.12)	0.52		
3Q21	70.52	71.17	72.69	13.53	10.70	14.60	12.61	71.21	7.32	0.20	70.72	(0.49)	(3.99)	66.59	(4.62)	0.63		
Oct-21	81.22	82.10	83.10	12.41	11.55	15.89	12.76	81.95	6.76	0.60	81.82	(0.13)	(3.22)	78.00	(3.95)	0.37		
Nov-21																		
Dec-21																		
4Q21	81.22	82.10	83.10	12.41	11.55	15.89	12.76	81.95	6.76	0.60	81.82	(0.13)	(3.22)	78.00	(3.95)	0.37		
2021 YTD	66.67	67.57	69.09	11.39	8.78	13.21	10.71	67.51	7.00	0.30	66.97	(0.54)	(2.81)	63.86	(3.65)	0.27		

R&M Margin Indicator Calculation Based on Actuals											Actuals			
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	
Crude	Non-Crude	Total	Blended	Sweet	Sour	Market	R&M Margin	Reported	Reported vs.	Crude	Other Charge/	Sweet Crude	Sour Crude	
Throughput	Throughput	Throughput	Crack Spread	Differential	Differential	Structure	Indicator	R&M Margin	Indicator	Throughput	Feedstocks	Throughput	Throughput	
(mmbbls)	(mmbbls)	(mmbbls)	(\$/MM)	(\$/MM)	(\$/MM)	(\$/MM)	(\$/MM)	(\$/MM)	(\$/MM)	(MBD)	(MBD)	Percentage	Percentage	
(K) x Days in Qtr.	(L) x Days in Qtr.	(A) + (B)	(C) x Col 7	(A) x Col 12 x (M)	(A) x Col 15 x (N)	(A) x Col 16 x (N)	Sum of (D) thru (G)		(J) - (I)					
										(Detail Below)				
1Q19	258	19	278	2,580	412	418	37	3,446	3,165	(281)	2,869	215	48%	52%
2Q19	267	18	285	4,680	375	254	22	5,331	4,539	(792)	2,937	198	53%	47%
3Q19	273	17	290	4,031	188	305	11	4,535	4,388	(147)	2,969	187	53%	48%
4Q19	260	22	282	3,275	314	596	(12)	4,173	4,619	446	2,831	238	55%	45%
1Q20	253	19	272	2,265	90	606	(7)	2,954	3,231	277	2,784	210	51%	49%
2Q20	197	10	207	958	159	392	336	1,845	1,583	(262)	2,165	111	47%	53%
3Q20	220	13	233	1,299	66	246	34	1,645	1,931	286	2,390	146	51%	49%
4Q20	215	18	233	959	155	284	45	1,443	1,726	283	2,335	193	53%	47%
1Q21	214	17	231	1,829	114	321	-	2,263	2,346	82	2,381	184	52%	48%
2Q21	247	13	260	2,802	34	368	(16)	3,189	3,233	45	2,713	141	52%	48%
3Q21	247	14	261	3,291	66	518	(72)	3,803	3,785	(17)	2,684	152	55%	45%

Reported vs. Indicator Variance Explanation Other Margin (\$MM)			
Reported vs. Indicator	Crude Related	Product Related	Volumetric Gains
1Q19	(281)	(702)	115
2Q19	(792)	(695)	(355)
3Q19	(147)	(658)	238
4Q19	446	(736)	867
1Q20	277	(979)	1,041
2Q20	(262)	(956)	571
3Q20	286	(375)	473
4Q20	283	(695)	785
1Q21	82	(666)	474
2Q21	45	(786)	525
3Q21	(17)	(1,002)	697

- (a) Prompt Price represents calendar workday average of prices quoted that month for crude delivered in immediately following month(s). Switched from LLS to MEH for USGC beginning 1Q21
- (b) Crack Spread Calculation: Mid-Con x (Chicago CBOB Gasoline x 2 + Chicago Ultra Low Sulfur Distillate/3) - WTI Prompt Price
USGC = ((U.S. Gulf Coast (USGC) CBOB Gasoline x 2 + USGC Ultra Low Sulfur Distillate) /3) - MEH Prompt Price (note: switched from LLS to MEH for USGC beginning 1Q21)
West Coast = ((LA California Reformulated Gasoline Blendstock for Oxygenate Blending (CARBOB) x 2 + LA California Air Resources Board (CARB) Diesel/3) - ANS Prompt Price)
- (c) Blended Mid-Con/USGC/West Coast crack spread is weighted beginning 4Q20 40%/40%/20% based on MPC's refining capacity by PADD, with prior period's weighted 38%/38%/24%.
- (d) Blended WTI/MEH/ANS prompt crude price is weighted beginning 4Q20 40%/40%/20% based on blended crack spread, with prior period's weighted 38%/38%/24%.
- (e) Delivered differentials (versus Prompt WTI) for the trade month period beginning with the 26th calendar day two months prior to the prompt month through the 25th day one month prior to the prompt month. The exception is the Maya delivered differential which is calculated on a prompt calendar month basis.
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- (g) Delivered month market structure (roll). Negative values represent contango and positive values represent backwardation. Approximately 50% of MPC's crude oil acquisition volume uses market structure in its acquisition price formula.

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