

Marathon Petroleum Corporation Market Data

Price information through 9/30/2018

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	LLS Prompt Price (a)	Chicago 6-3-2-1 Crack (b)	USGC 6-3-2-1 Crack (b)	Blended 6-3-2-1 Crack (c)	RIN/CBOB Crack Adjustment (d)	Blended ex-RIN 6-3-2-1 Crack (4) + (5)	WTI Prompt Price (a)	LLS Prompt vs. WTI Prompt (1) - (7)	LLS Delivered Diff. (e)	LLS Delivered Cost (g)	LLS Prompt vs. LLS Delivered (1) - (10)	Sour Delivered Diff. (f)	Sour Delivered Cost (g)	LLS Prompt Sweet/Sour Diff. (1) - (13)	Market Structure (h)
Jul-18	72.75	11.35	10.40	10.78	(1.74)	9.04	70.58	2.17	7.51	78.09	(5.34)	(1.40)	69.19	3.56	0.51
Aug-18	72.62	11.20	9.95	10.45	(1.91)	8.55	67.85	4.77	1.89	69.74	2.88	(5.94)	61.91	10.71	2.22
Sep-18	77.52	9.21	6.85	7.79	(1.52)	6.28	70.08	7.44	4.06	74.14	3.38	(5.81)	64.27	13.25	1.08
3Q18	74.14	10.65	9.17	9.76	(1.73)	8.03	69.43	4.71	4.42	73.85	0.29	(4.38)	65.05	9.09	1.27

Hypothetical Other Margin Indicator Calculation											Provided Outlook			
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	
Crude Throughput (mmbbls)	Non-Crude Throughput (mmbbls)	Total Throughput (mmbbls)	LLS 6-3-2-1 Crack Spread (\$MM)	RIN/CBOB Crack Adjustment (\$MM)	Sweet/Sour Differential (\$MM)	LLS Prompt vs WTI Prompt (\$MM)	LLS Prompt vs. Delivered (\$MM)	Market Structure (\$MM)	R&M Margin Indicator (\$MM)	Crude Throughput (MBD)	Other Charge/Feedstocks	Sour Crude Oil Throughput Percentage	WTI- Priced Crude Oil Throughput Percentage	
(k) x Days in Qtr.	(L) x Days in Qtr.	(A) + (B)	(C) x Col 4	(C) x Col 5	(A) x Col 14 x (M)	(A) x Col 8 x (N)	(A) x Col 11 x [1-(M)-(N)]	(A) x Col 15 x 60%	Sum of (D) thru (J)					
3Q18	161	18	179	1,751	(311)	776	243	7	(123)	2,343	1,750	200	53%	32%

(a) Prompt Price represents calendar workday average of prices quoted that month for crude delivered in immediately following month(s).

(b) Crack Spread Calculation: Chicago = ((Chicago 87 Octane Gasoline x 3 + Chicago Ultra Low Sulfur Distillate x 2+ USGC 3% Residual Fuel Oil)/6) - LLS Prompt Price
 USGC = ((U.S. Gulf Coast (USGC) 87 Octane Gasoline x 3 + USGC Ultra Low Sulfur Distillate x 2+ USGC 3% Residual Fuel Oil)/6) - LLS Prompt Price

(c) Blended Chicago/USGC crack spread is 40%/60% based on MPC's refining capacity by PADD.

(d) Represents the market cost of Renewable Identification Numbers (RINs)(credits needed to meet an EPA-specific Renewable Volume Obligation) for attributable products and the difference between 87 Octane Gasoline and 84 Octane CBOB Gasoline.

(e) Represents differential (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 (see next page for Prompt LLS versus LLS Delivered Cost calculation).

(f) Delivered differentials per footnote (e), with the exception of the Maya delivered differential which is calculated on a prompt calendar month basis. MPC's typical sour crude oil basket consists of the following crudes: Arab Light, Kuwait, Maya, Western Canadian Select, Mars.

(g) 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 15 and (I) above).

(h) Delivered month market structure (roll). Negative values represent contango and positive values represent backwardation. For 2018 approximately 60% 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
 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
	LLS Prompt Price (a)	Chicago 6-3-2-1 Crack (b)	USGC 6-3-2-1 Crack (b)	Blended 6-3-2-1 Crack (c)	RIN/CBOB Crack Adjustment (d)	Blended ex-RIN 6-3-2-1 Crack	WTI Prompt Price (a)	LLS Prompt vs. WTI Prompt	LLS Delivered Diff. (e)	LLS Delivered Cost (g)	LLS Prompt vs. LLS Delivered	Sour Delivered Diff. (f)	Sour Delivered Cost (g)	LLS Prompt Sweet/Sour Diff. (1) - (13)	Market Structure (h)
2018						(4) + (5)		(1) - (7)		(7) + (9)		(1) - (10)		(7) + (12)	(1) - (13)
Jan-18	67.74	7.93	8.43	8.23	(3.09)	5.14	63.66	4.08	5.45	69.11	(1.37)	(2.71)	60.95	6.80	(0.03)
Feb-18	64.46	6.58	7.21	7.21	(3.19)	4.01	62.18	2.28	4.55	66.73	(2.27)	(4.70)	57.49	6.98	0.11
Mar-18	65.13	6.58	8.29	7.61	(2.78)	4.83	62.77	2.36	2.36	65.13	0.01	(7.04)	55.73	9.40	0.26
1Q18	65.82	6.74	8.33	7.70	(3.02)	4.68	62.89	2.93	4.10	67.00	(1.18)	(4.82)	58.07	7.75	0.12
Apr-18	69.46	8.88	9.63	9.33	(2.32)	7.00	66.33	3.13	2.32	68.65	0.81	(6.54)	59.79	9.67	0.13
May-18	75.23	10.28	9.81	10.00	(2.13)	7.87	69.98	5.24	2.97	72.96	2.27	(3.80)	66.19	9.04	0.11
Jun-18	74.31	8.52	7.72	8.04	(2.02)	6.02	67.32	6.99	4.66	71.98	2.33	(2.70)	64.62	9.69	0.14
2Q18	73.03	9.24	9.07	9.14	(2.16)	6.98	67.91	5.12	3.31	71.22	1.81	(4.34)	63.57	9.46	0.12
Jul-18	72.75	11.35	10.40	10.78	(1.74)	9.04	70.58	2.17	7.51	78.09	(5.34)	(1.40)	69.19	3.56	0.51
Aug-18	72.62	11.20	9.95	10.45	(1.91)	8.55	67.85	4.77	1.89	69.74	2.88	(5.94)	61.91	10.71	2.22
Sep-18	77.52	9.21	6.85	7.79	(1.52)	6.28	70.08	7.44	4.06	74.14	3.38	(5.81)	64.27	13.25	1.08
3Q18	74.14	10.65	9.17	9.76	(1.73)	8.03	69.43	4.71	4.42	73.85	0.29	(4.38)	65.05	9.09	1.27
2018 YTD	71.06	8.90	8.86	8.88	(2.29)	6.59	66.79	4.27	3.94	70.73	0.33	(4.51)	62.28	8.78	0.51

	LLS Prompt Price (a)	Chicago 6-3-2-1 Crack (b)	USGC 6-3-2-1 Crack (b)	Blended 6-3-2-1 Crack (c)	RIN/CBOB Crack Adjustment (d)	Blended ex-RIN 6-3-2-1 Crack	WTI Prompt Price (a)	LLS Prompt vs. WTI Prompt	LLS Delivered Diff. (e)	LLS Delivered Cost (g)	LLS Prompt vs. LLS Delivered	Sour Delivered Diff. (f)	Sour Delivered Cost (g)	LLS Prompt Sweet/Sour Diff. (1) - (13)	Market Structure (h)
2017															
1Q17	53.39	6.62	8.46	7.72	(2.98)	4.75	51.78	1.61	1.59	53.37	0.02	(5.23)	46.55	6.84	(1.03)
2Q17	50.17	8.96	9.32	9.18	(3.46)	5.71	48.15	2.03	1.96	50.11	0.07	(3.46)	44.69	5.48	(0.54)
3Q17	51.61	12.38	12.89	12.69	(4.00)	8.68	48.20	3.42	2.37	50.56	1.05	(2.00)	46.20	5.42	(0.26)
4Q17	60.94	11.08	8.86	9.75	(3.78)	5.98	55.30	5.64	5.45	60.75	0.18	(0.48)	54.82	6.11	(0.41)
2017 YTD	54.00	9.77	9.89	9.84	(3.56)	6.29	50.85	3.15	2.84	53.69	0.31	(2.79)	48.06	5.94	(0.56)

	LLS Prompt Price (a)	Chicago 6-3-2-1 Crack (b)	USGC 6-3-2-1 Crack (b)	Blended 6-3-2-1 Crack (c)	RIN/CBOB Crack Adjustment (d)	Blended ex-RIN 6-3-2-1 Crack	WTI Prompt Price (a)	LLS Prompt vs. WTI Prompt	LLS Delivered Diff. (e)	LLS Delivered Cost (g)	LLS Prompt vs. LLS Delivered	Sour Delivered Diff. (f)	Sour Delivered Cost (g)	LLS Prompt Sweet/Sour Diff. (1) - (13)	Market Structure (h)
2016															
1Q16	35.29	4.11	4.97	4.62	(3.00)	1.62	33.63	1.66	1.60	35.23	0.06	(5.11)	28.52	6.77	(1.84)
2Q16	47.38	9.47	6.44	7.66	(3.30)	4.36	45.64	1.74	2.04	47.68	(0.30)	(5.17)	40.47	6.91	(1.49)
3Q16	46.52	8.70	7.66	8.08	(3.78)	4.30	44.94	1.58	1.73	46.67	(0.15)	(4.70)	40.24	6.28	(0.86)
4Q16	50.59	6.32	8.10	7.39	(3.91)	3.48	49.29	1.30	1.42	50.71	(0.12)	(4.94)	44.35	6.24	(0.78)
2016 YTD	45.01	7.19	6.80	6.96	(3.50)	3.46	43.47	1.55	1.70	45.17	(0.15)	(4.98)	38.49	6.53	(1.24)

Other Margin Indicator Calculation Based on Actuals															
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)		
Crude Throughput (mmbbls)	Non-Crude Throughput (mmbbls)	Total Throughput (mmbbls) (A) + (B)	LLS 6-3-2-1 Crack Spread (\$MM) (C) x Col 4	RIN/CBOB Crack Adjustment (\$MM) (E) x Col 5	Sweet/Sour Differential (\$MM) (F) x Col 14 x (M)	LLS Prompt vs WTI Prompt (\$MM) (G) x Col 8 x (N)	LLS Prompt vs Delivered (\$MM) (H) x Col 11 x [1-(M)-(N)]	Market Structure (\$MM) (I) x Col 15 x % (h)	R&M Margin Indicator (\$MM) (J) thru (I)	Reported R&M Margin* (\$MM) (K)	Reported vs. Indicator R&M Margin (\$MM) (K) - (J) (Detail Below)	Sour Crude Oil Throughput Percentage	WTI- Priced Crude Oil Throughput Percentage		
1Q16	146	16	161	747	(484)	604	44	2	201	1,114	1,593	480	61%	18%	
2Q16	157	15	172	1,316	(567)	665	58	(8)	176	1,640	2,189	549	61%	21%	
3Q16	165	12	177	1,431	(669)	606	53	(5)	106	1,522	1,891	370	59%	20%	
4Q16	154	13	167	1,230	(651)	581	36	(4)	90	1,282	1,884	602	61%	18%	
1Q17	136	18	154	1,187	(458)	623	33	1	91	1,477	1,791	314	67%	15%	
2Q17	170	14	184	1,689	(638)	576	69	2	175	2,084	2,443	325	62%	20%	
3Q17	170	16	186	2,354	(743)	524	133	36	29	2,333	2,624	291	57%	23%	
4Q17	169	17	186	1,816	(704)	544	250	6	40	1,952	2,443	491	53%	26%	
1Q18	157	14	171	1,319	(517)	628	122	(41)	(11)	1,501	1,814	313	52%	26%	
2Q18	171	14	185	1,694	(399)	892	250	50	(13)	2,474	2,855	381	55%	28%	

Reported vs. Indicator Variance Explanation Other Margin			
Reported vs. Indicator (\$MM)	Crude Related (\$MM)	Product Related (\$MM)	Volumetric Gains (\$MM)
1Q16	482	(511)	864
2Q16	547	(336)	697
3Q16	367	(418)	624
4Q16	604	(295)	759
1Q17	320	(439)	538
2Q17	325	(503)	631
3Q17	287	(383)	416
4Q17	491	(294)	464
1Q18	313	(373)	478
2Q18	381	(330)	411

- (a) Prompt Price represents calendar workday average of prices quoted that month for crude delivered in immediately following month(s).
 - (b) Crack Spread Calculation: Chicago = ((Chicago 87 Octane Gasoline x 3 + Chicago Ultra Low Sulfur Distillate x 2 + USGC 3% Residual Fuel Oil)/6) - LLS Prompt Price
USGC = ((U.S. Gulf Coast (USGC) 87 Octane Gasoline x 3 + USGC Ultra Low Sulfur Distillate x 2 + USGC 3% Residual Fuel Oil)/6) - LLS Prompt Price
 - (c) Blended Chicago/USGC crack is 40%/60% in 2016, 2017, and 2018 based on MPC's refining capacity by PADD in each period.
 - (d) Represents the market cost of Renewable Identification Numbers (RINs)(credits needed to meet an EPA-specific Renewable Volume Obligation) for attributable products and the difference between 87 Octane Gasoline and 84 Octane CBOB Gasoline.
 - (e) Represents differential (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 (see next page for Prompt LLS versus LLS Delivered Cost calculation).
 - (f) Delivered differentials per footnote (e), with the exception of the Maya delivered differential which is calculated on a prompt calendar month basis. MPC's typical sour crude oil basket consists of the following crudes: Arab Light, Kuwait, Maya, Western Canadian Select, Mars.
 - (g) 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 15 and (I) above).
 - (h) Delivered month market structure (roll). Negative values represent contango and positive values represent backwardation. For 2018 approximately 60% of MPC's crude oil acquisition volume uses market structure in its acquisition price formula. In 2016 and 2017 the formula factors utilized were 75% and 65%, respectively.
- * R&M Reported Margin excludes non-cash LCM inventory valuation benefit / (charges) of \$360 MM, (\$15 MM) and (\$345 MM) in 2Q 2016, 1Q 2016 and 4Q 2015, respectively. Prior period information for other margin has been recast in connection with the contribution of certain pipeline assets to MPLX on March 1, 2017.

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

Prompt LLS versus Calendar Month Average (CMA) Delivered Cost example

	1	2	3	4		5	
		<u>Spot LLS</u>	<u>Spot WTI</u>	<u>Spot LLS-WTI Differential</u>		<u>NYMEX WTI</u>	
1	09/26/11	106.94	80.24	26.70		80.24	1
2	09/27/11	109.58	84.45	25.13		84.45	2
3	09/28/11	106.29	81.21	25.08		81.21	3
4	09/29/11	106.14	82.14	24.00		82.14	4
5	09/30/11	103.93	79.20	24.73		79.20	5
6	10/03/11	103.49	77.61	25.88		77.61	6
7	10/04/11	102.27	75.67	26.60		75.67	7
8	10/05/11	106.06	79.68	26.38		79.68	8
9	10/06/11	108.52	82.59	25.93		82.59	9
10	10/07/11	109.31	82.98	26.33		82.98	10
11	10/10/11	111.89	85.41	26.48		85.41	11
12	10/11/11	113.59	85.81	27.78		85.81	12
13	10/12/11	114.72	85.57	29.15		85.57	13
14	10/13/11	113.06	84.23	28.83		84.23	14
15	10/14/11	115.58	86.80	28.78		86.80	15
16	10/17/11	113.58	86.38	27.20		86.38	16
17	10/18/11	113.94	88.34	25.60		88.34	17
18	10/19/11	111.66	86.11	25.55		86.11	18
19	10/20/11	113.10	85.30	27.80		85.30	19
20	10/21/11	115.51	87.23	28.28		87.40	20
21	10/24/11	115.92	91.09	24.83		91.27	21
22	10/25/11	114.88	93.00	21.88		93.17	22
23	Trade Day Average	110.45	84.14	26.31	November Trade Month (Sep 26 - Oct 25)	84.16	23
24	10/26/11	110.55	90.20	20.35		90.20	24
25	10/27/11	114.59	93.96	20.63		93.96	25
26	10/28/11	112.62	93.32	19.30		93.32	26
27	10/31/11	111.79	93.19	18.60		93.19	27
28	Calendar Work Day Average	111.74	86.40	25.34	October Calendar Month Average	86.43	28
29	11/01/11	110.27	92.19	18.08		92.19	29
30	11/02/11	110.54	92.51	18.03		92.51	30
31	11/03/11	111.52	94.07	17.45		94.07	31
32	11/04/11	112.56	94.26	18.30		94.26	32
33	11/07/11	115.47	95.52	19.95		95.52	33
34	11/08/11	116.58	96.80	19.78		96.80	34
35	11/09/11	114.29	95.74	18.55		95.74	35
36	11/10/11	114.78	97.78	17.00		97.78	36
37	11/11/11	115.74	98.99	16.75		98.99	37
38	11/14/11	113.52	98.14	15.38		98.14	38
39	11/15/11	113.95	99.37	14.58		99.37	39
40	11/16/11	114.84	102.59	12.25		102.59	40
41	11/17/11	110.32	98.82	11.50		98.82	41
42	11/18/11	109.91	97.41	12.50		97.41	42
43	11/21/11	108.03	96.68	11.35		96.92	43
44	11/22/11	108.51	97.71	10.80		98.01	44
45	11/23/11	107.77	95.87	11.90		96.17	45
46	11/25/11					96.77	46
47	Trade Day Average	112.29	95.96	16.33	December Trade Month (Oct 26 - Nov 25)	96.03	47
48	11/28/11	109.91	98.21	11.70		98.21	48
49	11/29/11	112.49	99.79	12.70		99.79	49
50	11/30/11	111.91	100.36	11.55		100.36	50
51	Calendar Work Day Average	112.14	97.14	15.00	November Calendar Month Average	97.16	51
52				LLS-WTI November Trade Month Differential		26.31	52
53				November Delivered LLS Value		123.47	53
54				November Prompt LLS Value		112.14	54
55				November Prompt - November CMA Delivered (excludes market structure adjustment)		(11.33)	55