

FEBRUARY 11-15, 2019

SPOT PRICE SUMMARY

Spot ethylene prices sank this week, reaching new lows for the month. Feb MtB-NOVA ethylene traded at 16.25 cpp on Tuesday and at 16 cpp on Wednesday. Offers steadily fell after that and Feb ended the week valued at 15.25 cpp. The Feb/Mar spread traded at 0.25 cpp contango and the Mar/Apr spread was flat. An Apr trade on Friday at 15.5 cpp supported the Feb assessment that day at 15.25 cpp.

The only Choctaw ethylene trades this week were two Feb deals on Thursday at 15.25 cpp. While Choctaw ethylene had slipped the previous week to 0.25 cpp below MtB-NOVA ethylene, the two systems came back to parity on Friday as Feb Choctaw ethylene was bid at 15.25 cpp.

In the monthly contract market, no news was heard regarding Feb pricing. The Jan contract price was settled by many parties at 28.75 cpp, down 0.5 cpp from Dec; not all parties agreed to this price.

The MTD 30-day weighted average for Feb ethylene was 16.639 cpp for Texas only and 16.456 cpp for Texas and Louisiana combined, compared with Jan averages of 18.564 cpp for Texas only and 18.454 cpp for Texas and Louisiana combined. The MTD 45-day weighted average for Feb ethylene was 17.264 cpp for Texas only and 17.052 cpp for Texas and Louisiana combined, compared with Jan averages of 18.899 cpp for Texas only and 18.955 cpp for Texas and Louisiana combined.

TRADING VOLUME SUMMARY

MTD trading volume for Feb delivery was 71 million pounds, compared with 85 million pounds for Jan delivery during all of Jan. MTD forward trading volume was 28 million pounds, compared with 69 million pounds in Jan. MTD spread trading volume was 44 million pounds, compared with 72 million pounds in Jan. MTD index-based trading volume was 22 million pounds, compared with 59 million pounds in Jan. MTD paper trading volume was 29 million pounds, compared with 56.4 million pounds in Jan.

CASH COST SUMMARY

Propane, butane and natural gasoline remained unattractive ethylene feedstocks relative to spot ethylene pricing, and ethane was still the only profitable raw material. MTD ethylene cash costs averaged 14.244 cpp, compared with an average of 14.007 cpp in Jan. Costs using propane averaged 19.616 cpp, compared with an average of 20.702 cpp in Jan. Costs using butane averaged 22.33 cpp, compared with an average of 21.562 cpp in Jan.

OPERATIONS & NEWS SUMMARY

Overall maximum operating rates for Gulf Coast olefins plants were estimated to be 94% so far in Feb, compared with 96% in Jan. A community hotline posted a notice on Thursday that a fire occurred at Chevron Phillips' Baytown, TX facility at approximately 3:30 pm local time. The site contains the company's Cedar Bayou olefins units as well as alpha olefins and PE production. Details of the specific location of the incident were not disclosed, but an all clear was issued shortly after 4 pm. ExxonMobil's Baton Rouge, LA olefins unit was expected to begin flaring today due to a planned shutdown, according to an emissions notice filed to the Louisiana Department of Environmental Quality. The visible flaring was expected to occur from 8 am through Sunday, the notification stated. Chevron Phillips' Olefins Unit 22 at Sweeny, TX and Eastman's HCC-3 unit at Longview, TX remained shut.

PRICE SUMMARY

FEB SPOT ASSESSMENTS

(\$/lb)	Friday	1-Week Δ	4-Week Δ
Mont Belvieu-NOVA (TX)	0.15250	-0.01500	-0.04000
Choctaw (LA)	0.15250	-0.01250	-0.03750

TRADING RANGES

(\$/lb)	LOW	HIGH	MIDPOINT
Current Week TX	0.16000	0.16250	0.16125
Current Week LA	0.15250	0.15250	0.15250
30-Day TX	0.16500	0.17250	0.16875
30-Day TX/LA	0.16500	0.17250	0.16875
45-Day TX	0.16500	0.19250	0.17875
45-Day TX/LA	0.16500	0.19250	0.17875

WEIGHTED SPOT AVERAGES

(\$/lb)	MTD avg	Monthly Δ	1-Year Δ
30-Day TX	0.16639	-0.01925	-0.05753
30-Day TX/LA	0.16456	-0.01998	-0.06151
45-Day TX	0.17264	-0.01635	-0.05872
45-Day TX/LA	0.17052	-0.01903	-0.06138

CALENDAR SPOT AVERAGES

(\$/lb)	MTD avg	Monthly Δ	1-Year Δ
Feb TX	0.16398	-0.01673	-0.06490
Feb LA	0.16193	-0.01986	-0.06945

MONTHLY CONTRACT PRICE

(\$/lb)	NTP	Monthly Δ	1-Year Δ
Jan	0.28750	-0.00500	-0.01250
Feb	NA	NA	NA

For PCW's methodology on its ethylene assessments and weighted monthly average calculations, click [HERE](#)

ETHYLENE SPOT TRANSACTIONS

	15-Feb	14-Feb	13-Feb	12-Feb	11-Feb
February Physical		.1525 Choc .1525 Choc	.16 MtB-N	.1625 MtB-N	
Forward Physical	.155 Apr MtB-N		.16 Mar MtB-N		.17 Apr MtB-N
Spreads Physical	.0025 Feb/Mar MtB-N .0025 Feb/Mar MtB-N				
Index Physical				.0 Feb PCW index	
All Paper		.16 Apr	.17 Feb-Dec		

	8-Feb	7-Feb	6-Feb	5-Feb	4-Feb
February Physical	.1675 Choc .1675 MtB-N	.17 MtB-N .1675 MtB-N		.165 MtB-N .165 Choc	.1725 MtB-N .17 MtB-N .16875 MtB-N .165 MtB-N .165 MtB-N .1675 Choc
Forward Physical		.17 Mar MtB-N	.16875 Mar MtB-N		.17 Mar MtB-N
Spreads Physical	.0025 Feb MtB-N/ Choc		.0025 Feb MtB-N/ Choc		
Index Physical					
All Paper			.175 Feb-Dec		.17 Mar

Ethylene Spot Volumes (MM lbs)		
	MTD Feb	Jan
Current Month phys 30d - TX & LA	71	85
Current Month phys 30d - TX only	44	57
Current Month phys 30d - LA only	27	28
Current Month phys 45d - TX & LA	109	114.5
Current Month phys 45d - TX only	74	75.5
Current Month phys 45d - LA only	35	39
Forward phys - TX & LA	28	34
Spreads phys - TX & LA	44	72
Index phys - TX & LA	22	59
All Paper	29	54.6

CME VOLUMES & OPEN INTEREST (MM LBS)		
	MTD FEB VOL	JAN VOL
Cleared Physical (MBE)	19	28
Paper (MBN)	29	54.6
	MTD FEB OI	JAN OI
Cleared Physical (MBE)	50	50
Paper (MBN)	214.7	229.5

USGC ETHYLENE SYSTEM MAP

The map details pipeline, storage and production assets in Texas and Louisiana, including steam crackers and olefins derivatives plants and pipeline connections. Order yours today at

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STEAM CRACKER OPERATIONS SUMMARY

MTD EST. ETHYLENE OUTPUT	
MTD Max GC Capacity	3.033 B
MTD Est GC Output	2.908 B
MTD LBS OUT	0.125 B

MTD OVERALL OPERATING RATES	
Texas	94.8%
Louisiana	100.0%
Gulf Coast	95.9%

YTD OVERALL OPERATING RATES	
Texas	96.9%
Louisiana	100.0%
Gulf Coast	97.6%

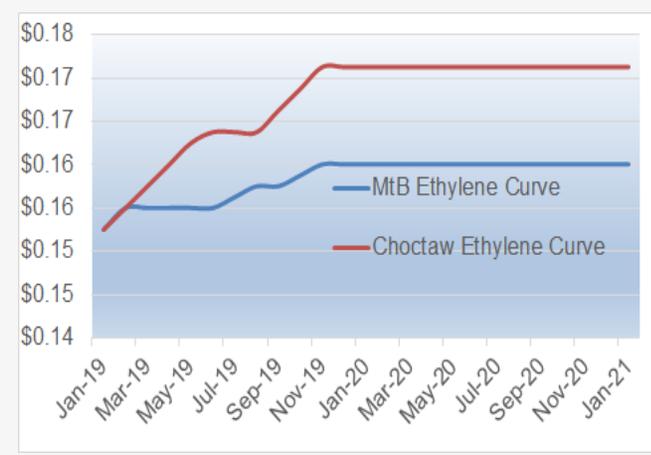
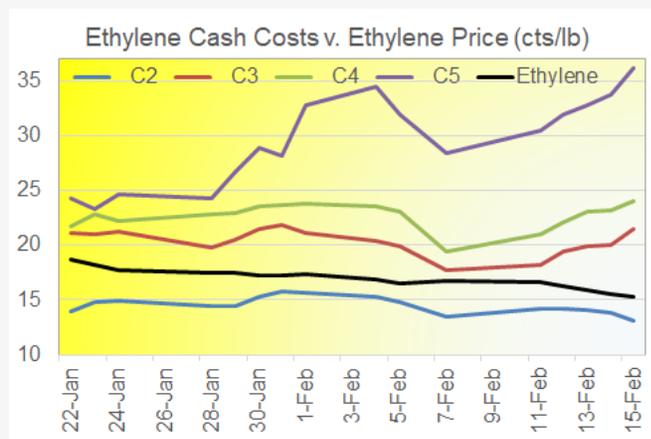
YTD EST. ETHYLENE OUTPUT	
YTD Max GC Capacity	9.301 B
YTD Est GC Output	9.077 B
YTD LBS OUT	0.224 B

Current Outages	Location	MM lbs/day Ethylene	% US Capacity	Start Date	Status	Planned or Unplanned	Total Days Down/Reduced	Est. MM Pounds Out
Eastman	Longview HCC-3	0.849	0.46%	2H Oct	<i>Shut</i>	P	113	96
Chevron Phillips	Sweeny 22	1.640	0.90%	9-May-18	<i>Idled</i>	P	282	462
ExxonMobil	Baton Rouge	2.945	1.61%	15-Feb-19	<i>Shut</i>	P	1	3
Past Outages	Location	MM lbs/day Ethylene	% US Capacity	Start Date	End Date	Planned or Unplanned	Total Days Down/Reduced	Est. MM Pounds Out
ExxonMobil	Beaumont	4.932	2.70%	8-Jan-19	mid-Jan	U	6	<i>Reduced</i>
BASF/Total	Port Arthur	5.830	3.19%	30-Dec-18	Early Jan	U	4	<i>Reduced</i>
Dow	Freeport TX-8	6.288	3.44%	27-Dec-18	29-Dec-18	U	2	13
NOVA	Geismar	5.644	3.09%	end-Nov	21-Dec-18	P	25	141
Chevron Phillips	Sweeny 24	4.110	2.25%	22-Nov-18	end-Nov	U	<i>Reduced</i>	<i>Reduced</i>
Eastman	Longview HCC-3A	0.849	0.46%	15-Apr-18	2H Oct	P	184	156
Chevron Phillips	Port Arthur	5.150	2.82%	9-Sep-18	mid-Nov	P	68	350
Shell	Deer Park OP2	2.190	1.20%	10-Nov-18	20-Nov-18	U	10	22
MarkWest	Javelina	0.616	0.34%	19-Oct-18	2-Nov-18	U	14	9
Chevron Phillips	Port Arthur	5.150	2.82%	29-Jun-18	9-Sep-18	P	71	<i>Reduced</i>
Huntsman	Port Neches	1.096	0.60%	10-May-18	19-Jun-18	P	70	77
Dow	Freeport TX-8	6.288	3.44%	23-Apr-18	24-Jun-18	P	62	390
Nova/Dow	Joffre E-3	7.671	NA	23-May-18	21-Jun-18	P	24	230
Dow	St Charles SCO 1	3.562	1.95%	28-Apr-18	11-Jun-18	U	45	160
Markwest	Javelina	0.616	0.34%	20-May-18	26-May-18	P	6	3.7

FORWARD MARKETS

SPOT ETHYLENE MtB-N \$/lb	
Feb-19	0.15250
Mar-19	0.15500
Apr-19	0.15500
May-19	0.15500
Jun-19	0.15500
Jul-19	0.15500
Aug-19	0.15625
Sep-19	0.15750
Oct-19	0.15750
Nov-19	0.15875
Dec-19	0.16000
Jan-20	0.16000
Feb-20	0.16000
Mar-20	0.16000
Apr-20	0.16000
May-20	0.16000
Jun-20	0.16000
Jul-20	0.16000
Aug-20	0.16000
Sep-20	0.16000
Oct-20	0.16000
Nov-20	0.16000
Dec-20	0.16000
Jan-21	0.16000
Feb-21	0.16000

SPOT ETHYLENE Choctaw \$/lb	
Feb-19	0.15250
Mar-19	0.15500
Apr-19	0.15750
May-19	0.16000
Jun-19	0.16250
Jul-19	0.16375
Aug-19	0.16375
Sep-19	0.16375
Oct-19	0.16625
Nov-19	0.16875
Dec-19	0.17125
Jan-20	0.17125
Feb-20	0.17125
Mar-20	0.17125
Apr-20	0.17125
May-20	0.17125
Jun-20	0.17125
Jul-20	0.17125
Aug-20	0.17125
Sep-20	0.17125
Oct-20	0.17125
Nov-20	0.17125
Dec-20	0.17125
Jan-21	0.17125
Feb-21	0.17125



ETHYLENE FORWARD CASH COSTS \$/lb				
	Ethane	Propane	Butane	Natural Gasoline
Feb-19	0.131	0.215	0.241	0.361
Mar-19	0.134	0.221	0.237	0.383
Apr-19	0.135	0.217	0.216	0.371
May-19	0.136	0.213	0.209	0.368
Jun-19	0.136	0.212	0.208	0.365
Jul-19	0.136	0.211	0.207	0.364
Aug-19	0.136	0.212	0.208	0.364
Sep-19	0.136	0.215	0.209	0.365
Oct-19	0.136	0.217	0.210	0.365
Nov-19	0.135	0.218	0.211	0.365
Dec-19	0.135	0.219	0.211	0.363
Jan-20	0.134	0.220	0.210	0.360
Feb-20	0.133	0.216	0.206	0.357
Mar-20	0.132	0.201	0.191	0.353
Apr-20	0.129	0.187	0.179	0.345
May-20	0.128	0.181	0.173	0.340
Jun-20	0.126	0.179	0.171	0.335
Jul-20	0.125	0.182	0.173	0.338
Aug-20	0.125	0.186	0.176	0.340

Ethylene cash costs use a proprietary formula that includes forward curves for OPIS NGLs as well as co-products including propylene, butadiene, butylenes, benzene, toluene, MX, methane, hydrogen and fuel oil. Spreads to ethane

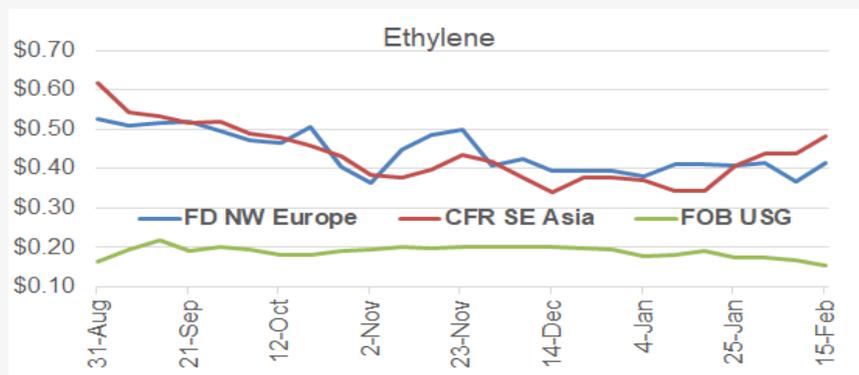
FORWARD SPREAD MARKETS \$/lb			
	Ethylene-Ethane Mt. B	HDPE-Ethylene Mt. B-Hou	HDPE-Ethane Mt. B-Hou
Feb-19	0.054	0.238	0.292
Mar-19	0.058	0.235	0.293
Apr-19	0.056	0.235	0.291
May-19	0.055	0.235	0.290
Jun-19	0.054	0.235	0.289
Jul-19	0.053	0.235	0.288
Aug-19	0.054	0.234	0.288

For PetroChem Wire's methodology on daily ethylene assessments and forward curves, visit www.petrochemwire.com or click [HERE](#)

INTERNATIONAL SNAPSHOT

GLOBAL ETHYLENE INDICATORS*

	SPOT		1-Week Δ	
	\$/MT	\$/LB	\$/MT	\$/LB
Ethylene FD NW Europe	918	0.41640	106	0.04785
Ethylene CFR SE Asia	1065	0.48308	95	0.04309
Ethylene FOB Mt Belvieu	336	0.15250	-33	-0.01500



FEEDSTOCK INDICATORS

SPOT

	\$/MT	\$/LB
Naphtha FD Europe	475.00	0.21546
Naphtha CFR Japan	507.50	0.23020
Ethane USG	216.19	0.09806

FREIGHT RATES

	\$/MT	\$/LB
USG-Europe	150-160	0.068-0.073
USG-Asia	250-300	0.113-0.136
Brazil-USG	150-160	0.068-0.073
Brazil-Asia	290-300	0.132-0.136
Brazil-Europe	165-185	0.075-0.084

EUROPE*

The spot ethylene market remained at a 15-20% discount to monthly contract prices, which equated to €788-837/mt (\$890-945/mt or 40.4-42.9 cpp). Supply was described as ample. A deal for May or Jun delivery was concluded this week at a 3% discount to the month of delivery contract price.

Upstream, naphtha prices ended the week at \$475/mt, compared with \$490/mt the previous Friday. Downstream, spot PE prices were unchanged on a euro basis. Spot HDPE IM was at €1050/mt (\$1186/mt or 53.8 cpp) FD NWE. Spot LLDPE butene film was at €1060/mt (\$1197/mt or 54.3 cpp) FD NWE. LDPE film was at €1090/mt (\$1231/mt or 55.8 cpp) FD NWE.

In operations news, LyondellBasell's Wesseling, Germany cracker continued ramping up operating rates. The Eni Versalis facility at Priolo, Italy remained shut from a Jan 10 fire at the site. The olefins unit was expected to restart in mid-Feb and shut again in mid-Mar for maintenance. A heavy maintenance season is expected to support steady imports to the region. BASF's cracker at Antwerp, Belgium, is scheduled to shut from early May into Jun, Shell's cracker at Moerdijk, the Netherlands is scheduled to shut from late Apr for 60 days. Dow's cracker at Boehlen, Germany will also be offline during this period. Between Aug and Nov, the following units are scheduled to shut for 6-8 weeks: INEOS at Grangemouth, UK; Dow at Terneuzen, Germany; Repsol at Tarragona, Spain; SABIC at Geleen, the Netherlands; BASF at Ludwigshafen, Germany; and BPRP at Gelsenkirchen, Germany. In downstream operations, Ineos maintained its force majeure declaration on HDPE from Lavera, France and SABIC declared force majeure on PE from its Wilton, UK plant.

ASIA*

Spot propylene prices soared as the market returned from the Lunar New Year holiday and several plants in the region experienced operating issues. The CFR Northeast Asia price was up \$95/mt at \$1165/mt (52.8 cpp) and the CFR Southeast Asia price was up \$95/mt at \$1065/mt (48.3 cpp).

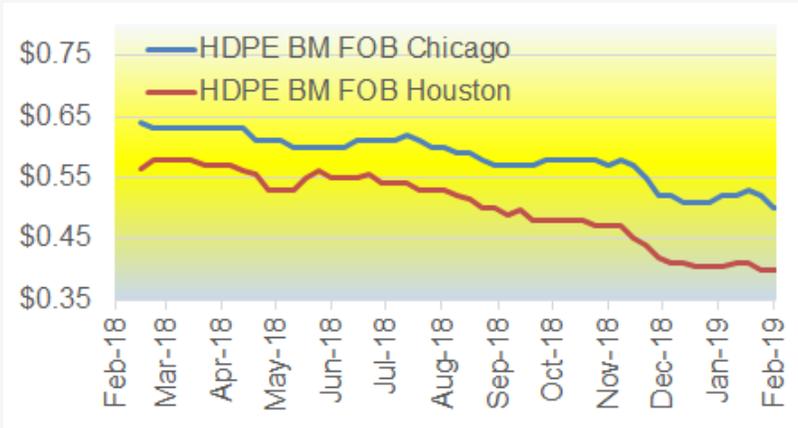
Upstream, naphtha prices rose from \$484.75/mt to \$507.50/mt this week. Downstream, PE spot prices were mixed in the region, as trading activity gradually increased following the Lunar New Year holidays. LLDPE butene film import prices on a CFR China Main Port basis were down \$5/mt on average at \$1035/mt (46.9 cpp), while the CFR Southeast Asia market was up \$10/mt at \$1035/mt. East China domestic LLDPE butene film spot prices fell by Rmb125/mt to Rmb8900/mt (\$1315/mt) ex-warehouse.

In operations news, Lotte Chemical's 1.03 million mt/yr cracker in Yeosu, South Korea was shut due to an electricity supply problem last week. Keiyo Ethylene's 700,000 mt/yr olefins plant in Chiba, Japan shut for maintenance last week. Most plants in China were reported to be operating at 90-100% rates.

**European and Asian prices and commentaries are courtesy of Tecnon OrbiChem.*

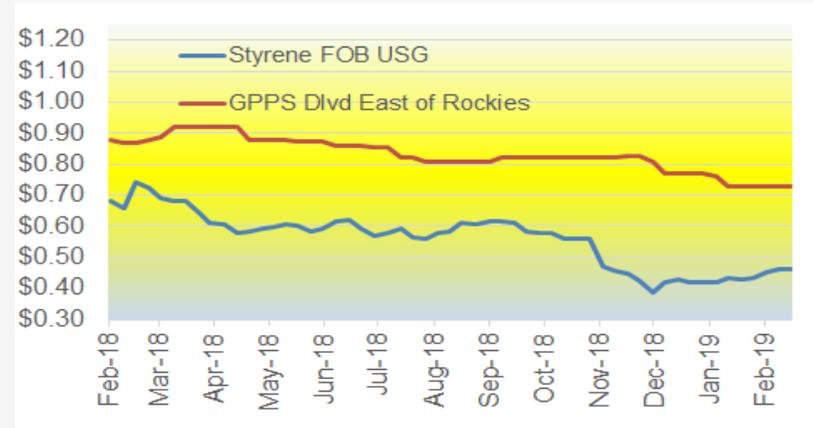
DOWNSTREAM MARKETS SNAPSHOT

POLYETHYLENE



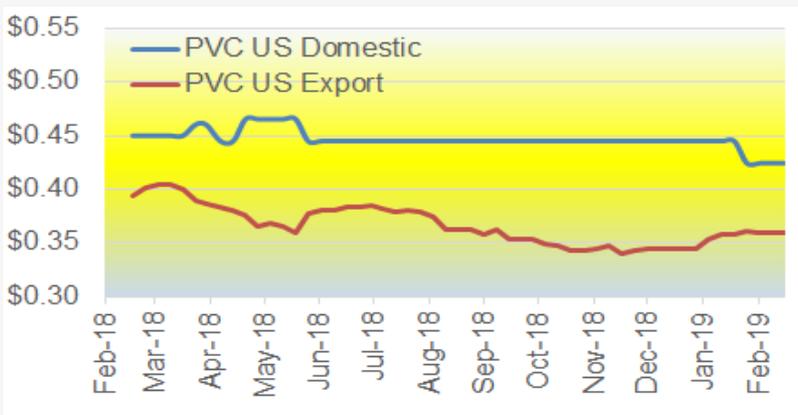
[For an in-depth look at PE, click here for the PCW PE Weekly Report](#)

STYRENE/PS



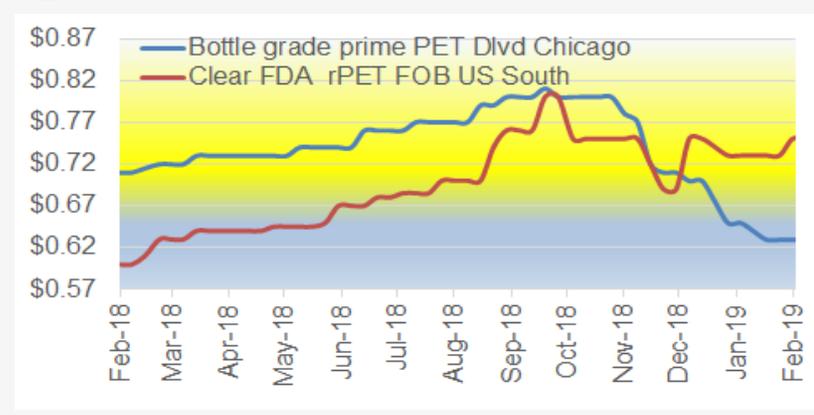
[For an in-depth look at styrene and PS, click here for the PCW Benzene-PS Weekly Report](#)

PVC



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PET



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