

TODAY IN THE MARKETS

Ethylene prices were higher at the Enterprise hub and unchanged at the Choctaw hub. PGP traded higher, and RGP was quiet. Energy futures and olefins feedstocks were mixed. Polymers prices were unchanged.

Feb MtB-EPC ethylene traded at 37 cpp and then at 36.75 cpp. Feb last traded yesterday at 36.5 cpp. Mar was bid at 36.125 cpp and offered at 37 cpp. Late in the day, the Feb/Mar MtB-EPC ethylene exchange traded at 0.25 cpp backward. Outside of the Enterprise hub, no bids or offers were present for Feb TX-Other ethylene. Feb TX-Other last traded on Feb 16 at 40 cpp. Mar was bid at 36 cpp and offered at 37 cpp. Mar TX-Other ethylene was confirmed to have traded yesterday at 37.25 cpp. Feb Caliche last traded on Feb 18 at 34 cpp. In Louisiana, Feb Choctaw ethylene was offered at 35 cpp against no bids. Feb last traded yesterday at 34 cpp. Mar Choctaw ethylene traded at 34 cpp. Mar was offered at 34.5 cpp against no bids.

The MTD calendar average for Feb MtB-EPC ethylene was 38.234 cpp. The MTD calendar average for Feb Choctaw ethylene was 35.492 cpp. The MTD 30-day weighted average for Feb MtB-EPC ethylene was 38.2 cpp. The MTD 30-day weighted average for Feb Choctaw ethylene was 34.438 cpp. The MTD 30-day weighted average for Feb TX/LA ethylene was 37.071 cpp. The MTD 45-day weighted average for Feb MtB-EPC ethylene was 40.51 cpp. The MTD 45-day weighted average for Feb Choctaw ethylene was 35.796 cpp. The MTD 45-day weighted average for Feb TX/LA ethylene was 39.622 cpp.

Feb MtB-EPC PGP traded at 66.25 cpp. Feb last traded at 64 cpp on Feb 18 and was previously assessed at 65 cpp. Feb was bid at 64.5 cpp and offered at 70 cpp. Mar was bid at 62 cpp against no offers. The Calendar 2023 paper PGP strip traded twice at 61.5 cpp. Feb MtB-EPC pipeline RGP was bid at 26 cpp against no offers. After market close, Feb was offered at 34 cpp against no bids. Feb MtB-EPC pipeline RGP last traded on Feb 17 at 26 cpp. Feb TX-Other railcar RGP last traded on Feb 16 at 52.5 cpp. Feb TX-Other truck RGP last traded on Feb 17 at 50 cpp.

Ethylene: \$/lb. MtB-EPC = Mont Belvieu (TX) Enterprise storage. Choctaw = Choctaw (LA) Boardwalk storage. Propylene: \$/lb, MtB-EPC = Mont Belvieu (TX) Enterprise storage. Styrene: \$/lb, FOB US Gulf basis. Resins: \$/lb, Generic Prime. Domestic resale prices reflect reseller railcars delivered to North American locations excluding Mexico, West Coast and Pacific Northwest. Cash Costs are derived from formulas using OPIS NGLs and PCW petrochemical assessments and employ yield formulas understood to be commonly used by ethylene producers. They are not specific to any particular plant or technology; they are an estimated average.

Closing Markets (\$/lb)

MONOMERS	FEB	CHANGE	MTD CAL AVG
Ethylene FOB MtB-EPC	0.36750	0.00250	0.38234
Ethylene FOB Choctaw	0.34000	-- --	0.35492
PGP FOB MtB-EPC	0.66250	0.01250	0.61445
RGP FOB MtB-EPC	0.26000	-- --	0.24633
Styrene FOB USG (US Gulf)	0.69500	-- --	0.67697

POLYMERS - FOB HOUSTON BULK RAIL	FEB	CHANGE	MTD CAL AVG
HDPE Blow Mold	0.55000	-- --	0.55000
LLDPE Film	0.65000	-- --	0.63438
HoPP Raffia	0.78000	-- --	0.77312
HoPP Inj	0.78000	-- --	0.77312

POLYMERS - DOMESTIC RESALE (DER)	FEB	CHANGE	MTD CAL AVG
HDPE Blow Mold	0.73000	-- --	0.72563
LDPE Film	0.84000	-- --	0.84375
HDPE Inj	0.74000	-- --	0.74500
HMWPE Film	0.74000	-- --	0.74000
LLDPE Film	0.76000	-- --	0.76687
HoPP	0.95000	-- --	0.93750
CoPP	0.99000	-- --	0.98250
GPPS	0.99000	-- --	0.97812
HIPS	1.11000	-- --	1.06688

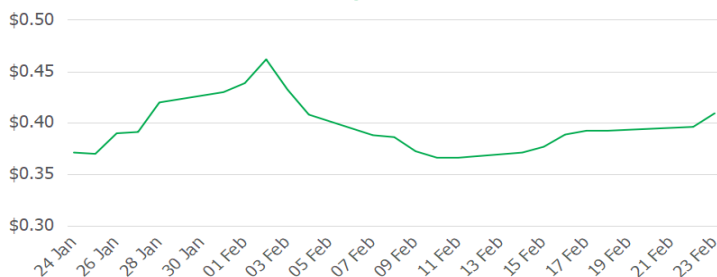
ETHYLENE CASH COSTS	FEB	CHANGE	MTD CAL AVG
Ethane - Based	0.15807	0.00504	0.15502
Propane - Based	0.48260	0.00941	0.40624
N.Butane - Based	0.39760	-0.00055	0.39625
C5 - Based	0.63284	-0.01454	0.63949

Closing Bid/Ask (\$/lb)

MONOMERS	BID	ASK
Ethylene MtB-EPC Current Month	-- --	0.36750
Ethylene MtB-EPC Next Month	0.36125	0.37000
Ethylene TX-Other Current Month	-- --	-- --
Ethylene TX-Other Next Month	0.36000	0.37000
Ethylene Choctaw FOB Current Month	-- --	0.35000
Ethylene Choctaw FOB Next Month	-- --	0.34500
RGP MtB-EPC Current Month	0.26000	-- --
RGP MtB-EPC Next Month	-- --	-- --
PGP MtB-EPC Current Month	0.64500	0.70000
PGP MtB-EPC Next Month	0.62000	-- --
Styrene FOB USG (US Gulf) Current Month	0.69000	0.70000
Styrene FOB USG (US Gulf) Next Month	0.70000	0.72500

POLYMERS	BID	ASK
HDPE BM FOB Houston	0.55000	0.57000
LLDPE Film FOB Houston	0.63000	0.65000
HoPP Raffia FOB Houston	0.76000	0.80000
HoPP Inj FOB Houston	0.76000	0.80000
HoPP Inj Domestic	0.94000	0.96000
CoPP inj Domestic	0.96000	1.02000
HDPE BM Domestic	0.71000	0.75000
HDPE Inj Domestic	0.73000	0.75000
LLDPE Film Domestic	0.74000	0.78000
HMWPE Film Domestic	0.73000	0.75000
LDPE Film Domestic	0.83000	0.85000
HIPS Domestic	1.10000	1.12000
GPPS Domestic	0.97000	1.01000

Ethane (\$/gal) – Closing Price for Last 30 Days

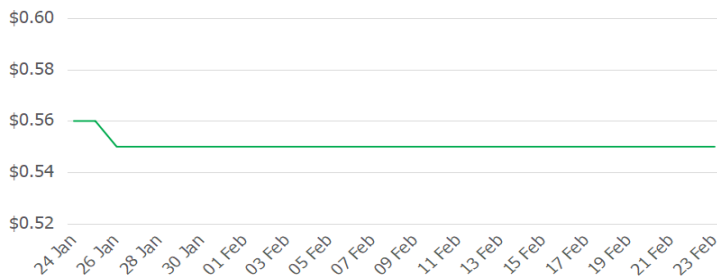


Forward Curve Spreads (\$/lb)

MONTH	ETHYLENE ETHANE	HDPE BM ETHANE	PGP PROPANE	HoPP PROPANE
FEB 22	0.22966	0.41216	0.31173	0.42923
MAR 22	0.22739	0.41364	0.34217	0.45967
APR 22	0.21950	0.41700	0.34988	0.47238
MAY 22	0.21140	0.41890	0.35817	0.48567
JUN 22	0.20266	0.42016	0.36160	0.49410
JUL 22	0.19850	0.42100	0.36463	0.49838
AUG 22	0.19413	0.42163	0.36471	0.49971
SEP 22	0.18955	0.42205	0.36435	0.50060
OCT 22	0.18644	0.42269	0.36464	0.50089
NOV 22	0.18186	0.42311	0.36494	0.50119
DEC 22	0.17770	0.42395	0.36553	0.50178
JAN 23	0.17875	0.42500	0.36253	0.50503

Ethylene = FOB MtB-NOVA, HDPE BM = FOB Houston, Ethane = FOB MtB-TET
 PGP = FOB MtB-EPC, Propane = FOB MtB-TET, HoPP = FOB Houston

HDPE BM (\$/lb) – Closing Price for Last 30 Days



Closing Spreads (\$/lb)

PRODUCT	PRICE
Ethylene - (Ethane x. 0.422)	0.19474
Ethylene - (Ethane div. 2.97)	0.22966
Ethylene - Propane	0.01673
Ethylene - Butane	0.04999
Ethylene - Natural gasoline	-0.01659
Ethylene - PGP	-0.29500
Ethylene - RGP	0.10750
RGP - Propane	-0.09077
PGP - RGP	0.40250
LDPE Film - Ethylene	0.47250
LLDPE Film - Ethylene	0.39250
HDPE Blow Mold - Ethylene	0.36250
HDPE Inj - Ethylene	0.37250
HDPE HMW - Ethylene	0.37250
LDPE Film - Ethane	0.70216
LLDPE Film - Ethane	0.62216
HDPE Blow Mold - Ethane	0.59216
HDPE Inj - Ethane	0.60216
HDPE HMW - Ethane	0.60216
HoPP Inj - RGP	0.69000
CoPP - RGP	0.73000
HoPP Inj - Propane	0.59923
CoPP - Propane	0.63923
GPPS - Benzene	0.48549
GPPS - Ethylene	0.62250
HIPS - Benzene	0.60549
HIPS - Ethylene	0.74250

Closing spreads are calculated on a straight price basis, not inclusive of costs or co-product credit factors. Spreads are calculated in \$/lb, using standard conversion factors for NGLs and benzene, which transact in \$/gal.

Closing Forward Curves (\$/lb)

FORWARD MONTH	ETHANE BASED COST	PROPANE BASED COST	BUTANE BASED COST	C5 -BASED COST	ETHYLENE MtB-EPC	ETHYLENE Choc	PGP FOB MtB-EPC	HDPE FOB Hou	LLDPE FOB Hou	HoPP FOB Hou	HDPE FOB Chi	LLDPE FOB Chi	HoPP FOB Chi
FEB 22	0.15807	0.48260	0.39760	0.63284	0.36750	0.34000	0.66250	0.55000	0.65000	0.78000	0.70000	0.71000	0.90000
MAR 22	0.15627	0.42199	0.38868	0.62442	0.36375	0.34000	0.66250	0.55000	0.65000	0.78000	0.70000	0.71000	0.90000
APR 22	0.15237	0.39849	0.38027	0.61465	0.35250	0.34000	0.65750	0.55000	0.65000	0.78000	0.70000	0.71000	0.90000
MAY 22	0.15031	0.37419	0.36173	0.58410	0.34250	0.32250	0.65250	0.55000	0.65000	0.78000	0.70000	0.71000	0.90000
JUN 22	0.14898	0.35949	0.35042	0.56245	0.33250	0.30500	0.64750	0.55000	0.65000	0.78000	0.70000	0.71000	0.90000
JUL 22	0.14811	0.35205	0.34443	0.54226	0.32750	0.31000	0.64625	0.55000	0.65000	0.78000	0.70000	0.71000	0.90000
AUG 22	0.14753	0.35043	0.34317	0.52499	0.32250	0.31000	0.64500	0.55000	0.65000	0.78000	0.70000	0.71000	0.90000
SEP 22	0.14724	0.34942	0.34274	0.51619	0.31750	0.31000	0.64375	0.55000	0.65000	0.78000	0.70000	0.71000	0.90000
OCT 22	0.14652	0.34919	0.34219	0.50822	0.31375	0.30375	0.64375	0.55000	0.65000	0.78000	0.70000	0.71000	0.90000
NOV 22	0.14591	0.34880	0.34168	0.49864	0.30875	0.29750	0.64375	0.55000	0.65000	0.78000	0.70000	0.71000	0.90000
DEC 22	0.14466	0.34769	0.34077	0.48896	0.30375	0.29125	0.64375	0.55000	0.65000	0.78000	0.70000	0.71000	0.90000
JAN 23	0.14347	0.34282	0.33887	0.48343	0.30375	0.29125	0.63750	0.55000	0.65000	0.78000	0.70000	0.71000	0.90000
FEB 23	0.14191	0.33248	0.32742	0.47583	0.30375	0.29125	0.63500	0.55000	0.65000	0.78000	0.70000	0.71000	0.90000
MAR 23	0.13397	0.30277	0.30265	0.46632	0.30375	0.29125	0.63250	0.55000	0.65000	0.78000	0.70000	0.71000	0.90000
APR 23	0.12269	0.27393	0.27890	0.45834	0.30375	0.29125	0.63000	0.55000	0.65000	0.78000	0.70000	0.71000	0.90000
MAY 23	0.11697	0.26223	0.26350	0.44847	0.30375	0.29125	0.62750	0.55000	0.65000	0.78000	0.70000	0.71000	0.90000
JUN 23	0.11507	0.25568	0.25891	0.43944	0.30375	0.29125	0.62500	0.55000	0.65000	0.78000	0.70000	0.71000	0.90000
JUL 23	0.11398	0.25191	0.25632	0.43830	0.30375	0.29125	0.62375	0.55000	0.65000	0.78000	0.70000	0.71000	0.90000
AUG 23	0.11339	0.25024	0.25576	0.43984	0.30375	0.29125	0.62375	0.55000	0.65000	0.78000	0.70000	0.71000	0.90000
SEP 23	---	---	---	---	0.30375	0.29125	0.62375	0.55000	0.65000	0.78000	0.70000	0.71000	0.90000
OCT 23	---	---	---	---	0.30375	0.29125	0.62375	0.55000	0.65000	0.78000	0.70000	0.71000	0.90000
NOV 23	---	---	---	---	0.30375	0.29125	0.62375	0.55000	0.65000	0.78000	0.70000	0.71000	0.90000
DEC 23	---	---	---	---	0.30375	0.29125	0.62375	0.55000	0.65000	0.78000	0.70000	0.71000	0.90000
JAN 24	---	---	---	---	0.30375	0.29125	0.62375	0.55000	0.65000	0.78000	0.70000	0.71000	0.90000
FEB 24	---	---	---	---	0.30375	0.29125	0.62375	0.55000	0.65000	0.78000	0.70000	0.71000	0.90000

FOB = Free on Board. MtB = Mont Belvieu. Choc = Choctaw. Hou = Houston. Chi = Chicago. For a full methodology, visit www.opisnet.com/about/methodology/#pcw

Spot Ethylene Trade Data

CALENDAR AVERAGES	MTD FEB	JAN	CHANGE
30-Day MtB-EPC	0.38234	0.41050	-0.02816
30-Day Choctaw	0.35492	0.38825	-0.03333

WEIGHTED AVERAGES	MTD MAR	MTD FEB	JAN
30-Day MtB-EPC	---	0.38200	0.41048
30-Day TX-Other	---	0.38667	0.42357
30-Day TX All	---	0.38266	0.41455
30-Day LA All	---	0.34824	0.38222
30-Day TX/LA	---	0.37071	0.40357
45-Day MtB-EPC	0.37500	0.40510	0.40345
45-Day TX-Other	0.37250	0.42993	0.42357
45-Day TX All	0.37438	0.41065	0.40921
45-Day LA All	0.34500	0.36195	0.38222
45-Day TX/LA	0.36458	0.39622	0.40053

SPOT VOLUMES (MM LBS)	MTD FEB	JAN
Current Mo. Phys 30d - TX & LA	98.0	341.5
Current Mo. Phys 30d - TX only	64.0	225.5
Current Mo. Phys 30d - LA only	34.0	116.0
Current Mo. Phys 45d - TX & LA	216.0	360.5
Current Mo. Phys 45d - TX only	152.0	244.5
Current Mo. Phys 45d - LA only	64.0	116.0
Next Month Phys 45d - TX & LA	30.0	118.0
Forward Phys - TX & LA	84.0	311.0
Spreads Phys - TX & LA	159.0	588.0
Index Phys - TX & LA	328.0	294.0
All Paper	79.0	10.0

TODAY'S TRADING RANGES	LOW	HIGH	MIDPOINT
Ethylene TX	0.36750	0.37000	0.36875
Ethylene LA	---	---	---

MTD TRADING RANGES	LOW	HIGH	MIDPOINT
Ethylene TX	0.34000	0.42000	0.38000
Ethylene LA	0.34000	0.36000	0.35000

Spot Ethylene Trades

TRADE DATE	DEAL TYPE	PRICE	DELIVERY TIME	SYSTEM	MODE
02/23/2022	PHYSICAL	0.34000	Mar'22	Choctaw	PIPE
02/23/2022	PHYSICAL	0.37000	Feb'22	MtB-EPC	PIPE
02/23/2022	PHYSICAL	0.36750	Feb'22	MtB-EPC	PIPE
02/23/2022	SPREAD	0.00250	Feb'22/Mar'22	MtB-EPC	PIPE
02/22/2022	PHYSICAL	0.34000	Feb'22	Choctaw	PIPE
02/22/2022	PHYSICAL	0.34000	Feb'22	Choctaw	PIPE
02/22/2022	PHYSICAL	0.34000	Q2'22	MtB-EPC	PIPE
02/22/2022	PHYSICAL	0.36500	Feb'22	MtB-EPC	PIPE
02/22/2022	PHYSICAL	0.37250	Mar'22	TX-Other	PIPE
02/18/2022	SPREAD	0.00500	Feb'22/Apr'22	Choctaw	PIPE
02/18/2022	PHYSICAL	0.34000	Feb'22	TX-Other	PIPE
02/18/2022	PHYSICAL	0.34000	Feb'22	Choctaw	PIPE
02/18/2022	PHYSICAL	0.35000	Mar'22	Choctaw	PIPE
02/18/2022	PHYSICAL	0.36000	Mar'22	MtB-EPC	PIPE
02/16/2022	PHYSICAL	0.40000	Feb'22	TX-Other	PIPE
02/16/2022	SPREAD	0.00500	Mar'22/Apr'22	Choctaw	PIPE
02/16/2022	INDEX	PCW 30 Day Avg. + 0.01000	Mar'22	TX-Other	PIPE
02/16/2022	SPREAD	0.00500	Feb'22/Mar'22	MtB-EPC	PIPE
02/16/2022	SPREAD	0.00500	Feb'22/Apr'22	Choctaw	PIPE
02/16/2022	INDEX	PCW 30 Day Avg. + 0.0	2H'22	Choctaw	PIPE
02/16/2022	PHYSICAL	0.38500	Feb'22	MtB-EPC	PIPE
02/16/2022	SPREAD	0.00500	Feb'22/Mar'22	MtB-EPC	PIPE
02/16/2022	SPREAD	0.01000	Apr'22	Choctaw vs LA-Other	PIPE
02/16/2022	PHYSICAL	0.38250	Mar'22	MtB-EPC	PIPE
02/15/2022	PAPER	0.35250	Q2'22	MtB-EPC	PIPE

Spot PGP Trade Data

TODAY'S TRADING RANGES	LOW	HIGH	MIDPOINT
PGP MtB-EPC	0.66250	0.66250	0.66250
PGP TX Non-MtB	---	---	---

MTD TRADING RANGES	LOW	HIGH	MIDPOINT
PGP MtB-EPC	0.58500	0.66250	0.62375
PGP TX Non-MtB	---	---	---

CALENDAR AVERAGES	MTD FEB	JAN	CHANGE
30-Day MtB-EPC	0.61445	0.54669	0.06777

WEIGHTED AVERAGES	MTD MAR	MTD FEB	JAN
30-Day MtB-EPC	---	0.60822	0.54700
30-Day TX All	---	0.60822	0.54700
45-Day MtB-EPC	---	0.60450	0.54700
45-Day TX All	---	0.60450	0.54700

SPOT VOLUMES (MM LBS)	MTD FEB	JAN
Current Mo. Phys 30d	127.5	226.5
Current Mo. Phys 45d	140.5	226.5
Next Month Phys 45d	0.0	13.0
Forward Phys	0.0	13.0
Spreads Phys	10.0	113.0
Index Phys	0.0	20.0
All Paper	109.0	126.3

Spot Polymer Grade Propylene Trades

TRADE DATE	DEAL TYPE	PRICE	DELIVERY TIME	SYSTEM	MODE
02/23/2022	PHYSICAL	0.66250	Feb'22	MtB-EPC	PIPE
02/23/2022	PAPER	0.61500	Cal'23	MtB-EPC	PIPE
02/23/2022	PAPER	0.61500	Cal'23	MtB-EPC	PIPE
02/22/2022	PHYSICAL	0.65000	Feb'22	MtB-EPC	PIPE
02/22/2022	PHYSICAL	0.65000	Feb'22	MtB-EPC	PIPE
02/18/2022	PAPER	0.63000	Q2'22	MtB-EPC	PIPE
02/18/2022	PHYSICAL	0.64000	Feb'22	MtB-EPC	PIPE
02/18/2022	PAPER	0.63000	Q2'22	MtB-EPC	PIPE
02/17/2022	PHYSICAL	0.63500	Feb'22	MtB-EPC	PIPE
02/17/2022	PHYSICAL	0.63500	Feb'22	MtB-EPC	PIPE
02/16/2022	PAPER	0.61000	2H'22	MtB-EPC	PIPE
02/16/2022	PHYSICAL	0.63250	Feb'22	MtB-EPC	PIPE
02/16/2022	PHYSICAL	0.63250	Feb'22	MtB-EPC	PIPE
02/16/2022	PHYSICAL	0.63250	Feb'22	MtB-EPC	PIPE
02/16/2022	PHYSICAL	0.63500	Feb'22	MtB-EPC	PIPE
02/15/2022	PHYSICAL	0.62500	Feb'22	MtB-EPC	PIPE
02/15/2022	PHYSICAL	0.62500	Feb'22	MtB-EPC	PIPE
02/15/2022	PHYSICAL	0.63000	Feb'22	MtB-EPC	PIPE
02/15/2022	PHYSICAL	0.63000	Feb'22	MtB-EPC	PIPE
02/15/2022	PHYSICAL	0.63000	Feb'22	MtB-EPC	PIPE
02/14/2022	PAPER	0.59000	Cal'23	MtB-EPC	PIPE
02/11/2022	PAPER	0.61000	Q2'22	MtB-EPC	PIPE
02/11/2022	PAPER	0.61000	Q2'22	MtB-EPC	PIPE
02/11/2022	PAPER	0.61000	Q2'22	MtB-EPC	PIPE
02/11/2022	PAPER	0.59000	Cal'23	MtB-EPC	PIPE
02/10/2022	PAPER	0.57500	Cal'23	MtB-EPC	PIPE
02/09/2022	PHYSICAL	0.59000	Feb'22	MtB-EPC	PIPE
02/09/2022	PHYSICAL	0.59000	Feb'22	MtB-EPC	PIPE
02/09/2022	PHYSICAL	0.59000	Feb'22	MtB-EPC	PIPE
02/09/2022	SPREAD	-0.00125	Feb'22/Mar'22	MtB-EPC	PIPE

Spot RGP Trade Data

TODAY'S TRADING RANGES	LOW	HIGH	MIDPOINT
RGP MtB-E	---	---	---
RGP TX Non-MtB	---	---	---
RGP Non-TX	---	---	---

MTD TRADING RANGES	LOW	HIGH	MIDPOINT
RGP MtB-E	0.23875	0.26000	0.24938
RGP TX Non-MtB	0.49000	0.52500	0.50750
RGP Non-TX	---	---	---

CALENDAR AVERAGES	MTD FEB	JAN	CHANGE
30-Day RGP Pipe	0.24633	0.23612	0.01020

WEIGHTED AVERAGES	MTD MAR	MTD FEB	JAN
30-Day Pipe MtB-E	---	0.24350	0.23470
30-Day All TX	---	0.36466	0.30747
30-Day All TX/Non-TX	---	0.36466	0.30747
45-Day Pipe MtB-E	---	0.24350	0.23470
45-Day All TX	0.56000	0.38424	0.32209
45-Day All TX/Non-TX	0.56000	0.38424	0.32209

SPOT VOLUMES (K BBLs)	MTD FEB	JAN
Current Mo. Pipe 30d	125.0	210.0
Current Mo. Pipe 45d	125.0	210.0
Next Month Pipe 45d	0.0	0.0
Current Mo. All 30d	229.0	357.0
Current Mo. All 45d	278.0	424.0
Next Month All 45d	10.5	49.0
Forward Phys	10.5	49.0
Spreads Phys	0.0	0.0
Index Phys	35.0	9.8

Spot Refinery Grade Propylene Trades

TRADE DATE	DEAL TYPE	PRICE	DELIVERY TIME	SYSTEM	MODE
02/17/2022	PHYSICAL	0.50000	Feb'22	TX-Other	TRUCK
02/17/2022	PHYSICAL	0.26000	Feb'22	MtB-EPC	PIPE
02/17/2022	INDEX	Monthly Contract - 0.05000	Mar'22	TX-Other	RAIL
02/17/2022	PHYSICAL	0.56000	Mar'22	TX-Other	RAIL
02/15/2022	INDEX	Monthly Contract - 0.05000	Mar'22	TX-Other	RAIL
02/15/2022	PHYSICAL	0.51250	Feb'22	TX-Other	RAIL
02/15/2022	PHYSICAL	0.52500	Feb'22	TX-Other	RAIL
02/14/2022	PHYSICAL	0.51250	Feb'22	TX-Other	RAIL
02/10/2022	PHYSICAL	0.24000	Feb'22	MtB-EPC	PIPE
02/10/2022	PHYSICAL	0.51000	Feb'22	TX-Other	RAIL
02/09/2022	PHYSICAL	0.51000	Feb'22	TX-Other	RAIL
02/09/2022	PHYSICAL	0.24000	Feb'22	MtB-EPC	PIPE
02/04/2022	PHYSICAL	0.49000	Feb'22	TX-Other	TRUCK
02/02/2022	PHYSICAL	0.23875	Feb'22	MtB-EPC	PIPE
02/01/2022	PHYSICAL	0.23875	Feb'22	MtB-EPC	PIPE
01/31/2022	PHYSICAL	0.23500	Jan'22	MtB-EPC	PIPE
01/28/2022	PHYSICAL	0.49000	Feb'22	TX-Other	RAIL
01/28/2022	PHYSICAL	0.49000	Feb'22	TX-Other	RAIL
01/21/2022	PHYSICAL	0.23500	Jan'22	MtB-EPC	PIPE
01/19/2022	INDEX	Monthly Contract - 0.07000	Jan'22	TX-Other	RAIL
01/19/2022	PHYSICAL	0.45000	Feb'22	TX-Other	RAIL
01/14/2022	PHYSICAL	0.40000	Jan'22	TX-Other	TRUCK
01/13/2022	PHYSICAL	0.23500	Jan'22	MtB-EPC	PIPE
01/11/2022	PHYSICAL	0.23500	Jan'22	MtB-EPC	PIPE
01/11/2022	PHYSICAL	0.43000	Jan'22	TX-Other	RAIL
01/10/2022	PHYSICAL	0.23500	Jan'22	MtB-EPC	PIPE
01/10/2022	PHYSICAL	0.43000	Jan'22	TX-Other	RAIL

Steam Cracker Shutdown Summary

MTD EST ETHYLENE OUTPUT		MTD OVERALL OPERATING RATES		YTD OVERALL OPERATING RATES		YTD EST ETHYLENE OUTPUT	
MTD Max GC Capacity	5.43004 B	Texas	85.89%	Texas	89.33%	YTD Max GC Capacity	12.74879 B
MTD Est GC Output	4.88525 B	Louisiana	100.00%	Louisiana	100.00%	YTD Est GC Output	11.78113 B
MTD LBS OUT	0.54479 B	Gulf Coast	89.97%	Gulf Coast	92.41%	YTD LBS OUT	0.96766 B

CURRENT OUTAGES	SITE	MM LBS/DAY	% COUNTRY	START DATE	STATUS	PLANNED	TOTAL DAYS DOWN	EST. MM LBS OUT
Equistar Chemicals LP	LaPorte Olefins	7.36986	3.03%	22-Jan-22	Shut	P	33	243.20538
Formosa Plastics Corp. USA	Point Comfort Olefins III	7.53425	3.09%	14-Jan-22	Shut	P	41	308.90425
Bayport Polymers	Port Arthur	6.04005	2.48%	01-Aug-21	Restarting	P	207	1250.16615
Eastman Chemical Co.	Longview HCC-3	0.84932	0.35%	15-Oct-18	Idle	P	1228	1042.96496

PAST OUTAGES	SITE	MM LBS/DAY	% COUNTRY	START DATE	END DATE	PLANNED	TOTAL DAYS DOWN	EST. MM LBS OUT
Formosa Plastics Corp. USA	Point Comfort Olefins II	4.93151	2.03%	04-Feb-22	11-Feb-22	U	8	39.44816
Chevron Phillips Chemical Co. LP	Sweeny 24	4.10959	1.69%	09-Feb-22	09-Feb-22	U	1	4.10918
Westlake Petrochemicals Corp.	Lake Charles Petro 2	4.49315	1.85%	04-Sep-21	31-Dec-21	P	119	534.63130
Shell Chemicals Ltd.	Norco GO-1	3.83562	1.58%	27-Aug-21	31-Dec-21	U	127	370.13733
Shell Chemicals Ltd.	Norco OL-5	5.15068	2.12%	27-Aug-21	31-Dec-21	U	127	497.04062
Indorama	Lake Charles	2.23419	0.92%	01-Aug-20	30-Nov-21	U	487	1087.94339
Dow Chemical Co.	Freeport TX-9	9.04110	3.71%	15-Nov-21	15-Nov-21	U	1	9.04020
INEOS Olefins and Polymers USA	Chocolate Bayou OP-1	5.61644	2.31%	03-Nov-21	03-Nov-21	U	1	5.61588
INEOS Olefins and Polymers USA	Chocolate Bayou OP-2	5.82192	2.39%	03-Nov-21	03-Nov-21	U	1	5.82134
Chevron Phillips Chemical Co. LP	Cedar Bayou Olefins 1	5.04110	2.07%	21-Oct-21	31-Oct-21	P	11	55.44660

QUESTIONS

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EDITORIAL CONTACTS

Kathy Hall - General
+1-720-480-6288
kathy@petrochemwire.com

David Barry - Polymers
+1-803-740-2160
david@petrochemwire.com

Julia Giordano - Olefins
+1-503-791-9124
julia@petrochemwire.com

The MTD calendar average for Feb MtB-EPC PGP was 61.445 cpp. The MTD 30-day weighted average for Feb TX-All PGP was 60.822 cpp. The MTD 45-day weighted average for Feb TX-All PGP was 60.45 cpp. The MTD calendar average for Feb MtB-EPC pipeline RGP was 24.633 cpp. The MTD 30-day weighted average for Feb TX-All RGP was 36.466 cpp. The MTD 45-day weighted average for Feb TX-All RGP was 38.424 cpp.

No olefins operations news or updates were confirmed. For a visualization of current operations status as well as recent petrochemical news stories, please visit www.petrochemwire.com/storm-coverage.

Spot styrene prices were unchanged at 69.50 cpp (\$1532/mt) FOB USG for Feb and at 71.25 cpp (\$1570/mt) for Mar. Benzene was down: Bids or offers for Feb DDP HTC were not seen. Mar was bid at 369 cpg DDP HTC and offered at 373 cpg DDP HTC. Apr was bid at 369 cpg DDP HTC and offered at 373 cpg DDP HTC.

Mar NYMEX crude settled at \$92.10/bbl, up 19 cents from Tuesday's settle. Apr ICE Brent settled at \$96.84/bbl, unchanged. Mar NYMEX nat gas settled at \$4.623/mmBtu, up 12.5 cents.

Ethylene cash costs were mixed. Feb ethane-based costs were up 0.5 cent at 15.8 cpp. Feb propane-based costs were up 0.9 cent at 48.3 cpp. Feb butane-based costs were down 0.1 cent at 39.8 cpp. The ethane-ethylene spread moved from 23.2 cpp to 23 cpp. The spread between ethane and HDPE BM (FOB Houston) was 0.5 cent narrower at 41.2 cpp. The propane-PGP spread moved from 31.5 cpp to 31.2 cpp. The spread between propane and HoPP raffia (FOB Houston) was 1.5 cpp narrower at 43 cpp.

HDPE BM and HDPE film were at parity and steady from Friday at 55-56 cpp railcar FOB Houston. LLDPE butene film was ensconced at 65 cpp and LDPE film was unchanged from Friday at 63-65 cpp railcar FOB Houston. A second PE producer on Tuesday announced in a letter to customers that it would increase its price on all PE grades by 4 cpp effective Mar 1. In operations news, LyondellBasell has lifted force majeure on peroxide-based PP grades, the company said on Tuesday in a letter to customers. In Latin American markets, HDPE BM was available at \$1460-1520/mt (66.2-68.9 cpp) and HDPE IM was available at \$1480-1530/mt (67.1-69.4 cpp) CFR WCSA. In domestic resale markets, offgrade near-miss HDPE inj was available at about 90 cpp railcar delivered. HIPS generic prime for spot delivery remained tight and was last available at 111 cpp railcar delivered. In recycled plastics markets, the Solid Waste Authority of Palm Beach County, FL is offering ten truckloads of clear and green PET curbside bales, two truckloads of HDPE mixed colors (pigmented) curbside bales and a single truckload of HDPE natural (dairy) curbside bales for its Mar bid offering, the municipality said in a letter to potential bidders on Wednesday. Bids are due by 2 pm EST Feb 28.

OPIS NEWS: S Korea's YNCC Shuts No.1 Cracker, Aromatics Plant on Power Outage

South Korea's Yeochun NCC Co. (YNCC) shut down its No.1 naphtha cracker and aromatics plant, including its sole styrene unit, on Tuesday night following a power outage at its Yeosu site, market sources said.

The No.1 cracker will be restarted within this week, said a company source, without elaborating.

The electricity transformer unit at YNCC's No.1 complex failed after thunder and lightning on Tuesday evening and power supply is expected to be restored by Wednesday evening, said a market source.

At its No.1 site, YNCC operates its second-largest naphtha cracker with a capacity to produce 900,000 mt/yr of ethylene and 591,000 mt/yr of propylene, according to its corporate website.

Its No.1 aromatics plant has a capacity to manufacture 162,000 mt/yr of benzene, 107,000 mt/yr of toluene and 79,000 mt/yr of xylenes. Its sole 351,000 mt/yr styrene plant is also located at the No.1 site.

YNCC declared force majeure at its 470,000 mt/yr No.3 naphtha cracker, also in Yeosu, in a Feb 12 letter to customers following a fatal explosion on the morning of Feb 11, as reported by OPIS.

The unplanned No.3 cracker outage and the consequent tightening of its ethylene availability prompted YNCC to reduce the run rate at its styrene plant to 70-80% from 90% early this week, said another market source, although the plant is understood to be offline as of Wednesday.

The impact of YNCC's No.3 cracker outage was most apparent on the spot prices of light olefins. Spot ethylene prices rose to \$1,200-1,240/mt CFR Northeast Asia in the week to Feb 17 from \$1,140-1,200/mt CFR Northeast Asia the week prior, according to the latest IHS Markit Asia Light Olefins weekly report.

YNCC's No.2 naphtha cracker is its largest, with 915,000 mt/yr of ethylene and 458,000 mt/yr of propylene capacities. All of its plants are located in Yeosu.

Supply of styrene in South Korea has tightened after producers including YNCC and Hanwha Total Petrochemical Co. curtailed plant run rates because of margin concerns, as reported by OPIS.

Styrene paper discussions rose on Wednesday in response to the latest unplanned outage, with Mar bids advancing to \$1,286/mt by mid-afternoon from \$1,275/mt in the morning, according to brokers.

Hanwha Total Petrochemical will also shut its larger 650,000 mt/yr styrene line in Apr for 25 days of routine maintenance, as reported by OPIS. Its smaller line has a capacity to produce 400,000 mt/yr of styrene and both lines are located in Daesan.

--Reporting by Trisha Huang, Trisha.Huang@ihsmarkit.com; Editing by Yuanlin Koh, lin.koh@ihsmarkit.com and Donna Todd, donna@petrochemwire.com