

TODAY IN THE MARKETS

Ethylene prices were lower at the Enterprise hub and unchanged at the Choctaw hub. PGP prices were lower, and the RGP market was quiet. Energy futures were higher while ethylene cash costs were mostly lower. PE prices were steady, and PP was flat to lower.

Sep MtB-EPC ethylene was bid at 23 cpp and offered at 24.75 cpp, giving Sep an implied value of 24.75 cpp at market close. Sep last traded yesterday at 25.25 cpp for regular delivery and had ended the day yesterday assessed at an implied value of 24.875 cpp. The 4Q 2022 MtB-EPC ethylene strip traded at an OPIS ethane-based formula plus 3 cpp. Outside of the Enterprise hub, no markets emerged for Sep or Oct TX-Other ethylene. Sep last traded on Aug 25 at 28.875 cpp. In Louisiana, Sep Choctaw ethylene was bid at 23.5 cpp and offered at 24.5 cpp. Sep last traded yesterday at 24.25 cpp.

The MTD calendar average for Sep MtB-EPC ethylene was 25.063 cpp. The MTD calendar average for Sep Choctaw ethylene was 24.604 cpp. The MTD 30-day weighted average for Sep MtB-EPC ethylene was 25.127 cpp. The MTD 30-day weighted average for Sep Choctaw ethylene was 24.5 cpp. The MTD 30-day weighted average for Sep TX/LA ethylene was 25.005 cpp. The MTD 45-day weighted average for Sep MtB-EPC ethylene was 26.002 cpp. The MTD 45-day weighted average for Sep Choctaw ethylene was 26.12 cpp. The MTD 45-day weighted average for Sep TX/LA ethylene was 26.201 cpp.

Sep MtB-EPC PGP traded once at 42 cpp and then four times at 41.75 cpp. Sep last traded yesterday at 42 cpp. Sep was bid at 40 cpp and offered at 42 cpp. The 2Q 2023 paper PGP strip traded twice at 43.5 cpp; one of the deals was for small volume. The Calendar 2023 paper PGP strip traded at 44 cpp. No RGP markets emerged. Sep MtB-EPC pipeline RGP last traded on Sep 7 at 18 cpp. Sep TX-Other railcar RGP last traded on Aug 30 at 40 cpp. Sep TX-Other truck RGP last traded on Aug 31 at 38 cpp.

The MTD calendar average for Sep MtB-EPC PGP was 43.417 cpp. The MTD 30-day weighted average for Sep TX-All PGP was 42.85 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	SEP	CHANGE	MTD CAL AVG
Ethylene FOB MtB-EPC	0.24750	-0.00125	0.25063
Ethylene FOB Choctaw	0.24250	-- --	0.24604
PGP FOB MtB-EPC	0.41750	-0.00250	0.43417
RGP FOB MtB-EPC	0.18000	-- --	0.18000
Styrene FOB USG (US Gulf)	0.50580	-- --	0.49105

POLYMERS - FOB HOUSTON BULK RAIL	SEP	CHANGE	MTD CAL AVG
HDPE Blow Mold	0.38000	-- --	0.38333
LLDPE Film	0.38000	-- --	0.38667
HoPP Raffia	0.65000	-- --	0.65667
HoPP Inj	0.65000	-- --	0.65667

POLYMERS - DOMESTIC RESALE (DER)	SEP	CHANGE	MTD CAL AVG
HDPE Blow Mold	0.55000	-- --	0.55000
LDPE Film	0.73000	-- --	0.73000
HDPE Inj	0.57000	0.00500	0.56583
HMWPE Film	0.58000	-- --	0.58000
LLDPE Film	0.58000	-- --	0.58000
HoPP	0.74000	-0.02000	0.76333
CoPP	0.76000	-0.04000	0.80000
GPPS	1.01000	-- --	1.01000
HIPS	1.09000	-- --	1.09000

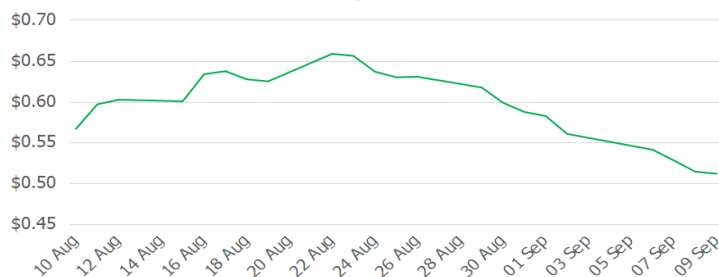
ETHYLENE CASH COSTS	SEP	CHANGE	MTD CAL AVG
Ethane - Based	0.20411	-0.00131	0.21460
Propane - Based	0.31542	-0.00449	0.32438
N.Butane - Based	0.26576	-0.01242	0.28351
C5 - Based	0.42603	0.02255	0.41531

Closing Bid/Ask (\$/lb)

MONOMERS	BID	ASK
Ethylene MtB-EPC Current Month	0.23000	0.24750
Ethylene MtB-EPC Next Month	----	----
Ethylene TX-Other Current Month	----	----
Ethylene TX-Other Next Month	----	----
Ethylene Choctaw FOB Current Month	0.23500	0.24500
Ethylene Choctaw FOB Next Month	----	----
RGP MtB-EPC Current Month	----	----
RGP MtB-EPC Next Month	----	----
PGP MtB-EPC Current Month	0.40000	0.42000
PGP MtB-EPC Next Month	----	----
Styrene FOB USG (US Gulf) Current Month	0.50000	0.51000
Styrene FOB USG (US Gulf) Next Month	0.49000	0.50000

POLYMERS	BID	ASK
HDPE BM FOB Houston	0.38000	0.40000
LLDPE Film FOB Houston	0.38000	0.41000
HoPP Raffia FOB Houston	0.64000	0.66000
HoPP Inj FOB Houston	0.64000	0.66000
HoPP Inj Domestic	0.72000	0.76000
CoPP inj Domestic	0.74000	0.78000
HDPE BM Domestic	0.53000	0.57000
HDPE Inj Domestic	0.56000	0.58000
LLDPE Film Domestic	0.57000	0.59000
HMWPE Film Domestic	0.57000	0.59000
LDPE Film Domestic	0.72000	0.74000
HIPS Domestic	1.08000	1.10000
GPPS Domestic	1.00000	1.02000

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

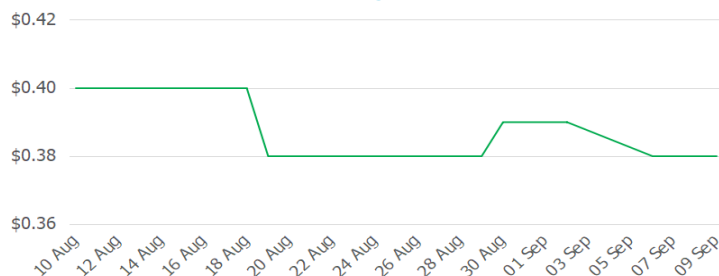


Forward Curve Spreads (\$/lb)

MONTH	ETHYLENE ETHANE	HDPE BM ETHANE	PGP PROPANE	HoPP PROPANE
SEP 22	0.07515	0.20765	0.17193	0.40443
OCT 22	0.07873	0.21123	0.17502	0.40502
NOV 22	0.07748	0.21123	0.17502	0.40502
DEC 22	0.07498	0.21123	0.17561	0.40561
JAN 23	0.07436	0.21186	0.18165	0.40665
FEB 23	0.07732	0.21607	0.18827	0.40827
MAR 23	0.09038	0.23038	0.20184	0.41684
APR 23	0.10177	0.24427	0.21056	0.42556
MAY 23	0.10537	0.25037	0.21514	0.43014
JUN 23	0.10434	0.25184	0.21751	0.43251
JUL 23	0.10372	0.25247	0.22140	0.43265
AUG 23	0.10415	0.25290	0.22530	0.43280

Ethylene = FOB MtB-EPC, HDPE BM = FOB Houston, Ethane = FOB MtB-EPC
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)	0.03149
Ethylene - (Ethane div. 2.97)	0.07515
Ethylene - Propane	0.00193
Ethylene - Butane	0.02150
Ethylene - Natural gasoline	-0.03640
Ethylene - PGP	-0.17000
Ethylene - RGP	0.06750
RGP - Propane	-0.06557
PGP - RGP	0.23750
LDPE Film - Ethylene	0.48250
LLDPE Film - Ethylene	0.33250
HDPE Blow Mold - Ethylene	0.30250
HDPE Inj - Ethylene	0.32250
HDPE HMW - Ethylene	0.33250
LDPE Film - Ethane	0.55765
LLDPE Film - Ethane	0.40765
HDPE Blow Mold - Ethane	0.37765
HDPE Inj - Ethane	0.39765
HDPE HMW - Ethane	0.40765
HoPP Inj - RGP	0.56000
CoPP - RGP	0.58000
HoPP Inj - Propane	0.49443
CoPP - Propane	0.51443
GPPS - Benzene	0.62348
GPPS - Ethylene	0.76250
HIPS - Benzene	0.70348
HIPS - Ethylene	0.84250

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
SEP 22	0.20411	0.31542	0.26576	0.42603	0.24750	0.24250	0.41750	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
OCT 22	0.19937	0.31301	0.26804	0.44342	0.24750	0.24500	0.42000	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
NOV 22	0.19922	0.31313	0.26805	0.44906	0.24625	0.24500	0.42000	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
DEC 22	0.19892	0.31189	0.26783	0.45462	0.24375	0.24500	0.42000	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
JAN 23	0.19772	0.30876	0.26652	0.45419	0.24250	0.24500	0.42500	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
FEB 23	0.19261	0.30551	0.26477	0.44949	0.24125	0.24500	0.43000	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
MAR 23	0.17662	0.29034	0.25540	0.44818	0.24000	0.24500	0.43500	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
APR 23	0.16230	0.27736	0.24825	0.44473	0.23750	0.24500	0.43500	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
MAY 23	0.15504	0.26924	0.24252	0.44066	0.23500	0.24500	0.43500	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
JUN 23	0.15315	0.26494	0.24148	0.43647	0.23250	0.24500	0.43500	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
JUL 23	0.15216	0.26392	0.24125	0.43354	0.23125	0.24500	0.43875	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
AUG 23	0.15149	0.26296	0.24132	0.43025	0.23125	0.24500	0.44250	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
SEP 23	0.15143	0.26324	0.24494	0.42747	0.23125	0.24500	0.44625	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
OCT 23	0.15093	0.26361	0.24525	0.42625	0.23125	0.24500	0.45000	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
NOV 23	0.15002	0.26401	0.24521	0.42067	0.23125	0.24500	0.45250	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
DEC 23	0.14920	0.26366	0.24498	0.41701	0.23125	0.24500	0.45500	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
JAN 24	0.14940	0.26152	0.24398	0.41650	0.23125	0.24500	0.45500	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
FEB 24	0.14698	0.25499	0.24017	0.40717	0.23125	0.24500	0.45500	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
MAR 24	0.14211	0.24006	0.23183	0.39837	0.23125	0.24500	0.45500	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
APR 24	---	---	---	---	0.23125	0.24500	0.45500	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
MAY 24	---	---	---	---	0.23125	0.24500	0.45500	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
JUN 24	---	---	---	---	0.23125	0.24500	0.45500	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
JUL 24	---	---	---	---	0.23125	0.24500	0.45500	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
AUG 24	---	---	---	---	0.23125	0.24500	0.45500	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
SEP 24	---	---	---	---	0.23125	0.24500	0.45500	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000

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 SEP	AUG	CHANGE
30-Day MtB-EPC	0.25063	0.26130	-0.01068
30-Day Choctaw	0.24604	0.25957	-0.01352

WEIGHTED AVERAGES	MTD OCT	MTD SEP	AUG
30-Day MtB-EPC	---	0.25127	0.25764
30-Day TX-Other	---	---	0.25773
30-Day TX All	---	0.25127	0.25765
30-Day LA All	---	0.24500	0.26671
30-Day TX/LA	---	0.25005	0.26041
45-Day MtB-EPC	---	0.26002	0.25704
45-Day TX-Other	---	0.28875	0.25773
45-Day TX All	---	0.26230	0.25713
45-Day LA All	---	0.26120	0.26285
45-Day TX/LA	---	0.26201	0.25919

SPOT VOLUMES (MM LBS)	MTD SEP	AUG
Current Mo. Phys 30d - TX & LA	93.0	223.0
Current Mo. Phys 30d - TX only	75.0	155.0
Current Mo. Phys 30d - LA only	18.0	68.0
Current Mo. Phys 45d - TX & LA	172.0	266.0
Current Mo. Phys 45d - TX only	126.0	170.0
Current Mo. Phys 45d - LA only	46.0	96.0
Next Month Phys 45d - TX & LA	0.0	79.0
Forward Phys - TX & LA	0.0	83.0
Spreads Phys - TX & LA	257.0	208.0
Index Phys - TX & LA	40.0	133.0
All Paper	28.2	26.7

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

MTD TRADING RANGES	LOW	HIGH	MIDPOINT
Ethylene TX	0.25000	0.25250	0.25125
Ethylene LA	0.24250	0.24750	0.24500

Spot Ethylene Trades

TRADE DATE	DEAL TYPE	PRICE	DELIVERY TIME	SYSTEM	MODE
09/09/2022	INDEX	OPIS Ethane + 0.03000	Q4'22	MtB-EPC	PIPE
09/08/2022	PHYSICAL	0.25250	Sep'22	MtB-EPC	PIPE
09/08/2022	PHYSICAL	0.25000	Sep'22	MtB-EPC	PIPE
09/08/2022	PHYSICAL	0.25250	Sep'22	MtB-EPC	PIPE
09/08/2022	PHYSICAL	0.25250	Sep'22	MtB-EPC	PIPE
09/08/2022	PHYSICAL	0.24500	Sep'22	Choctaw	PIPE
09/08/2022	SPREAD	0.00250	Sep'22/Oct'22	MtB-EPC	PIPE
09/08/2022	SPREAD	0.00125	Sep'22/Sep'22	MtB-EPC	PIPE
09/08/2022	SPREAD	0.00250	Sep'22/Sep'22	MtB-EPC	PIPE
09/08/2022	SPREAD	0.00125	Sep'22/Q4'22	MtB-EPC	PIPE
09/08/2022	SPREAD	0.00750	Sep'22	MtB-EPC vs Choctaw	PIPE
09/08/2022	SPREAD	0.00125	Sep'22/Sep'22	MtB-EPC	PIPE
09/08/2022	PHYSICAL	0.24250	Sep'22	Choctaw	PIPE
09/08/2022	PHYSICAL	0.25250	Sep'22	MtB-EPC	PIPE
09/08/2022	PHYSICAL	0.25000	Sep'22	MtB-EPC	PIPE
09/08/2022	PHYSICAL	0.25000	Sep'22	MtB-EPC	PIPE
09/08/2022	SPREAD	0.00125	Sep'22/Sep'22	MtB-EPC	PIPE
09/07/2022	PHYSICAL	0.25000	Sep'22	MtB-EPC	PIPE
09/07/2022	PHYSICAL	0.24750	Sep'22	Choctaw	PIPE
09/07/2022	PHYSICAL	0.25250	Sep'22	MtB-EPC	PIPE
09/07/2022	SPREAD	0.00125	Sep'22/Sep'22	MtB-EPC	PIPE
09/07/2022	SPREAD	0.00625	Sep'22	MtB-EPC vs Choctaw	PIPE
09/07/2022	PHYSICAL	0.25250	Sep'22	MtB-EPC	PIPE
09/07/2022	PHYSICAL	0.25250	Sep'22	MtB-EPC	PIPE
09/07/2022	SPREAD	0.00125	Sep'22/Sep'22	MtB-EPC	PIPE

Spot PGP Trade Data

TODAY'S TRADING RANGES	LOW	HIGH	MIDPOINT
PGP MtB-EPC	0.41750	0.42000	0.41875
PGP TX Non-MtB	----	----	----

MTD TRADING RANGES	LOW	HIGH	MIDPOINT
PGP MtB-EPC	0.41750	0.45000	0.43375
PGP TX Non-MtB	----	----	----

CALENDAR AVERAGES	MTD SEP	AUG	CHANGE
30-Day MtB-EPC	0.43417	0.45848	-0.02431

WEIGHTED AVERAGES	MTD OCT	MTD SEP	AUG
30-Day MtB-EPC	----	0.42850	0.46674
30-Day TX All	----	0.42850	0.46674
45-Day MtB-EPC	----	0.43472	0.46674
45-Day TX All	----	0.43472	0.46674

SPOT VOLUMES (MM LBS)	MTD SEP	AUG
Current Mo. Phys 30d	60.0	139.0
Current Mo. Phys 45d	90.0	139.0
Next Month Phys 45d	0.0	30.0
Forward Phys	0.0	55.0
Spreads Phys	0.0	53.0
Index Phys	0.0	0.0
All Paper	20.8	72.5

Spot Polymer Grade Propylene Trades

TRADE DATE	DEAL TYPE	PRICE	DELIVERY TIME	SYSTEM	MODE
09/09/2022	PHYSICAL	0.42000	Sep'22	MtB-EPC	PIPE
09/09/2022	PHYSICAL	0.41750	Sep'22	MtB-EPC	PIPE
09/09/2022	PHYSICAL	0.41750	Sep'22	MtB-EPC	PIPE
09/09/2022	PAPER	0.43500	Q2'23	MtB-EPC	PIPE
09/09/2022	PAPER	0.44000	Cal'23	MtB-EPC	PIPE
09/09/2022	PAPER	0.43500	Q2'23	MtB-EPC	PIPE
09/09/2022	PHYSICAL	0.41750	Sep'22	MtB-EPC	PIPE
09/09/2022	PHYSICAL	0.41750	Sep'22	MtB-EPC	PIPE
09/08/2022	PHYSICAL	0.42000	Sep'22	MtB-EPC	PIPE
09/08/2022	PHYSICAL	0.42000	Sep'22	MtB-EPC	PIPE
09/08/2022	PAPER	0.43500	Q1'23	MtB-EPC	PIPE
09/08/2022	PHYSICAL	0.42000	Sep'22	MtB-EPC	PIPE
09/08/2022	PHYSICAL	0.42000	Sep'22	MtB-EPC	PIPE
09/07/2022	PHYSICAL	0.42000	Sep'22	MtB-EPC	PIPE
09/07/2022	PHYSICAL	0.42000	Sep'22	MtB-EPC	PIPE
09/07/2022	PAPER	0.42000	Oct'22	MtB-EPC	PIPE
09/07/2022	PHYSICAL	0.42000	Sep'22	MtB-EPC	PIPE
09/07/2022	PAPER	0.43500	Q1'23	MtB-EPC	PIPE
09/06/2022	PHYSICAL	0.45000	Sep'22	MtB-EPC	PIPE
09/06/2022	PHYSICAL	0.45000	Sep'22	MtB-EPC	PIPE
09/01/2022	PHYSICAL	0.45000	Sep'22	MtB-EPC	PIPE
09/01/2022	PHYSICAL	0.45000	Sep'22	MtB-EPC	PIPE
08/31/2022	PHYSICAL	0.45000	Sep'22	MtB-EPC	PIPE
08/31/2022	PHYSICAL	0.45000	Sep'22	MtB-EPC	PIPE
08/31/2022	PHYSICAL	0.44750	Aug'22	MtB-EPC	PIPE
08/31/2022	SPREAD	-0.00250	Aug'22/Sep'22	MtB-EPC	PIPE
08/31/2022	SPREAD	-0.00250	Aug'22/Sep'22	MtB-EPC	PIPE
08/30/2022	PAPER	0.45750	Q4'22	MtB-EPC	PIPE
08/30/2022	PHYSICAL	0.45000	Aug'22	MtB-EPC	PIPE
08/30/2022	SPREAD	-0.00250	Aug'22/Sep'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	0.18000	0.18000	0.18000
RGP TX Non-MtB	----	----	----
RGP Non-TX	----	----	----

CALENDAR AVERAGES	MTD SEP	AUG	CHANGE
30-Day RGP Pipe	0.18000	0.18891	-0.00891

WEIGHTED AVERAGES	MTD OCT	MTD SEP	AUG
30-Day Pipe MtB-E	----	0.18000	0.18833
30-Day All TX	----	0.18000	0.25695
30-Day All TX/Non-TX	----	0.18000	0.25695
45-Day Pipe MtB-E	----	0.18000	0.18833
45-Day All TX	----	0.30396	0.28525
45-Day All TX/Non-TX	----	0.30396	0.28525

SPOT VOLUMES (K BBLs)	MTD SEP	AUG
Current Mo. Pipe 30d	75.0	150.0
Current Mo. Pipe 45d	75.0	150.0
Next Month Pipe 45d	0.0	0.0
Current Mo. All 30d	75.0	216.7
Current Mo. All 45d	185.2	273.2
Next Month All 45d	0.0	110.2
Forward Phys	0.0	110.2
Spreads Phys	0.0	0.0
Index Phys	0.0	17.5

Spot Refinery Grade Propylene Trades

TRADE DATE	DEAL TYPE	PRICE	DELIVERY TIME	SYSTEM	MODE
09/07/2022	PHYSICAL	0.18000	Sep'22	MtB-EPC	PIPE
09/06/2022	PHYSICAL	0.18000	Sep'22	MtB-EPC	PIPE
09/01/2022	PHYSICAL	0.18000	Sep'22	MtB-EPC	PIPE
08/31/2022	PHYSICAL	0.38000	Sep'22	TX-Other	TRUCK
08/30/2022	PHYSICAL	0.39000	Sep'22	TX-Other	RAIL
08/30/2022	PHYSICAL	0.40000	Sep'22	TX-Other	RAIL
08/29/2022	PHYSICAL	0.39000	Sep'22	TX-Other	RAIL
08/24/2022	PHYSICAL	0.18000	Aug'22	MtB-EPC	PIPE
08/23/2022	PHYSICAL	0.39000	Sep'22	TX-Other	RAIL
08/23/2022	PHYSICAL	0.18000	Aug'22	MtB-EPC	PIPE
08/18/2022	INDEX	PCW Calendar Avg. - 0.04000	Aug'22	TX-Other	RAIL
08/11/2022	PHYSICAL	0.41000	Aug'22	TX-Other	RAIL
08/05/2022	PHYSICAL	0.19000	Aug'22	MtB-EPC	PIPE
08/05/2022	PHYSICAL	0.41000	Aug'22	TX-Other	RAIL
08/04/2022	PHYSICAL	0.21000	Aug'22	MtB-EPC	PIPE
08/03/2022	PHYSICAL	0.41500	Aug'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	2.22265 B	Texas	97.23%	Texas	91.36%	YTD Max GC Capacity	62.23414 B
MTD Est GC Output	2.17802 B	Louisiana	100.00%	Louisiana	100.00%	YTD Est GC Output	58.34014 B
MTD LBS OUT	0.04463 B	Gulf Coast	97.99%	Gulf Coast	93.74%	YTD LBS OUT	3.89400 B

CURRENT OUTAGES	SITE	MM LBS/DAY	% COUNTRY	START DATE	STATUS	PLANNED	TOTAL DAYS DOWN	EST. MM LBS OUT
Formosa Plastics Corp. USA	Point Comfort Olefins I	4.10959	1.62%	20-Jul-22	Shut	P	52	213.69868
Eastman Chemical Co.	Longview HCC-3	0.84932	0.33%	15-Oct-18	Idle	P	1426	1211.13032

PAST OUTAGES	SITE	MM LBS/DAY	% COUNTRY	START DATE	END DATE	PLANNED	TOTAL DAYS DOWN	EST. MM LBS OUT
Chevron Phillips Chemical Co. LP	Cedar Bayou Olefins 2	9.04110	3.55%	26-Jul-22	26-Aug-22	U	32	289.28640
Chevron Phillips Chemical Co. LP	Cedar Bayou Olefins 1	5.04110	1.98%	26-Jul-22	14-Aug-22	U	20	100.81200
Motiva	Port Arthur Olefins	3.69863	1.45%	16-Jul-22	21-Jul-22	U	6	22.18956
Bayport Polymers	Port Arthur	6.04005	2.37%	01-Aug-21	mid-Jul-22	P	Reduced	2137.96530
Motiva	Port Arthur Olefins	3.69863	1.45%	01-Jul-22	05-Jul-22	P	5	18.49130
Motiva	Port Arthur Olefins	3.69863	1.45%	04-Jun-22	23-Jun-22	U	20	73.96520
Chevron Phillips Chemical Co. LP	Port Arthur Olefins	5.15068	2.02%	19-Jun-22	20-Jun-22	U	2	10.30032
Formosa Plastics Corp. USA	Point Comfort Olefins III	7.53425	2.96%	14-Jan-22	19-Apr-22	P	96	723.21600
Motiva	Port Arthur Olefins	3.69863	1.45%	05-Mar-22	31-Mar-22	P	27	99.85302
Equistar Chemicals LP	LaPorte Olefins	7.36986	2.90%	22-Jan-22	31-Mar-22	P	69	508.46928

QUESTIONS

If you have questions about your subscription, please [contact us](#).

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The MTD 45-day weighted average for Sep TX-All PGP was 43.472 cpp. The MTD calendar average for Sep MtB-EPC pipeline RGP was 18 cpp. The MTD 30-day weighted average for Sep TX-All RGP was 18 cpp. The MTD 45-day weighted average for Sep TX-All RGP was 30.396 cpp.

No olefins operations news or updates were confirmed.

Spot styrene was unchanged with Sep at 50.58 cpp (\$1115/mt) and Oct at 49.90 cpp (\$1100/mt). Benzene was up. Sep was bid at 283 cpg DDP HTC and offered at 288 cpg DDP HTC. Oct was bid at 287 cpg DDP HTC and was offered at 292 cpg DDP HTC. Nov was bid at 287 cpg DDP HTC and was offered at 292 cpg DDP HTC.

Oct NYMEX crude settled at \$86.79/bbl, up \$3.25 from Thursday's settle. Nov ICE Brent settled at \$92.84/bbl, up \$3.69. Oct NYMEX nat gas settled at \$7.996/mmBtu, up 8.1 cents.

Ethylene cash costs were lower. Sep ethane-based costs were down 0.1 cent at 20.4 cpp. Sep propane-based costs were down 0.4 cent at 31.5 cpp. Sep butane-based costs were down 1.2 cpp at 26.6 cpp. The ethane-ethylene spread moved from 7.6 cpp to 7.5 cpp. The spread between ethane and HDPE BM (FOB Houston) was 0.1 cent wider at 20.8 cpp. The propane-PGP spread moved from 17.3 cpp to 17.2 cpp. The spread between propane and HoPP raffia (FOB Houston) was 0.1 cent wider at 40.4 cpp.

Sep HDPE BM HIC was flat at 38 cpp railcar FOB Houston. HMWPE film was reported at 41 cpp railcar FOB Houston. LLDPE butene film offers were emerging at 41-45 cpp railcar FOB Houston, but no buying interest was confirmed. LDPE film export availability was at 42-45 cpp railcar FOB Houston. Sep HoPP raffia/IM was unchanged at 65 cpp railcar FOB Houston. In the domestic resale market, offgrade HDPE frac melt suitable for non-pressure pipe was at 43-46 cpp railcar delivered. Generic prime LLDPE butene film was steady at 58 cpp railcar delivered. Offgrade LDPE liner was still seen in the high 40s cpp railcar delivered. Generic prime HoPP IM was assessed lower at 72-76 cpp railcar delivered. Generic prime impact CoPP was also assessed lower at 74-78 cpp railcar delivered. On the Dalian Commodity Exchange, LLDPE futures were up RMB84/mt (1%) at RMB8135/mt. HoPP futures were up RMB104/mt (1.3%) at RMB8053/mt. For the week, LLDPE futures were up 5% and PP futures were up 3.7%.

OPIS NEWS: Ethylene Cash Costs Were Down Week Over Week Along US Gulf Coast

Ethylene steam cracker production cash costs for Sep were down on Thursday afternoon compared to last Thursday.

According to PetroChem Wire by OPIS, a Dow Jones company, costs were estimated at 20.542 cpp using ethane, down 2.478 cpp. The cost to use propane was lower by 0.425 cent at 31.99 cpp. The cost of using normal butane was at 27.818 cpp, lower by 0.859 cent, and the cost of using natural gasoline was down 0.752 cent at 40.348 cpp.

Sep month-to-date average costs were at 21.669 cpp for ethane, 32.618 cpp for propane, 28.706 cpp for normal butane and 41.317 cpp for natural gasoline.

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.

Based on the data, ethane remains the favorable feedstock at crackers along the US Gulf Coast with a theoretical revenue of 3.456 cpp in Texas and 3.006 cpp in Louisiana for Sep.

NGL prices were lower through Thursday, compared with a week earlier, according to OPIS data. Ethane fell to 51.4375 cpg from 58.25 cpg last week. Propane was lower at 105 cpg, versus 108.75 cpg the prior week. Non-TET normal butane moved down to 113.875 cpg from 119.25 cpg. Non-TET natural gasoline moved lower to 152.4375 cpg from 157.5 cpg.

In the ethylene markets, Sep ethylene at the Enterprise hub in Mont Belvieu, TX closed at 24.875 cpp on Thursday, with the month-to-date calendar average at 25.125 cpp.

In Louisiana, the Choctaw hub closed at 24.25 cpp for Sep on Thursday, with the month-to-date calendar average at 24.675 cpp.

US Gulf Coast steam cracker month-to-date operating rates were estimated at 98%.

--Reporting by Julia Giordano, jgiordano@opisnet.com; Editing by Donna Todd, dtodd@opisnet.com

OPIS NEWS: US Gulf Coast Olefins Markets See High Trading Activity This Week

A total of 394.1 million lbs traded in the past week across both the ethylene and polymer grade propylene (PGP) markets, representing high weekly trading volume compared to the 2021 weekly average of 257.4 million lbs, according to the latest data from PetroChem Wire by OPIS, a Dow Jones company.

The ethylene market was very active with a total of 383.2 million lbs trading as of Friday morning. The average weekly ethylene trading volume for 2021 was 153.1 million lbs.

The month-to-date 30-day physical TX/LA trading volume for Sep delivery was 93 million lbs. There has been no forward trading volume yet this month. Spread trading volume was 257 million lbs. Index trading volume was 25 million lbs. Paper trading volume was 28.2 million lbs.

US Gulf Coast steam cracker month-to-date operating rates were estimated at 98%.

The PGP market was quiet with 10.9 million lbs worth of trades this week. In 2021, the average weekly trading volume for PGP was 104.3 million lbs.

The month-to-date 30-day physical trading volume for Sep delivery was 43 million lbs. There has been no forward trading volume yet this month. There has been no spread trading volume yet this month. There has been no index trading volume yet this month. Paper trading volume was 7.9 million lbs.

US Gulf Coast propane dehydrogenation (PDH) unit month-to-date operating rates were estimated at 100%.

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OPIS NEWS: Investigation Underway into Louisiana Natural Gas Pipeline Explosion

The US Coast Guard said it is investigating what caused a natural gas pipeline to explode at Lake Lery, LA Thursday afternoon.

US Coast Guard Sector New Orleans responded to reports of a large fire at Lake Lery on Thursday afternoon and coordinated the launch of an Air Station New Orleans MH-60 Jayhawk helicopter air crew and a Station New Orleans 29-ft response boat.

The fire at the Toca pipeline is still burning, a Coast Guard spokesperson told OPIS. The affected section of pipeline has been isolated, and the remaining gas will be allowed to burn off. "PHMSA will continue to monitor this event," the agency said in a statement.

The pipeline was secured, with no reports of injuries, casualties or pollution occurring from the explosion, the US Coast Guard said in a Thursday press statement.

Preliminary information indicates a barge broke loose from its mooring and impacted the pipeline, the Pipeline and Hazardous Materials Safety Administration (PHMSA) said in a statement to OPIS.

The pipeline, operated by Third Coast High Point Gas Transmission LLC, had a capacity of 35 mcf of natural gas at the time it was shut off, the Coast Guard told OPIS.

The company could not be reached for comment as of press time.

The Coast Guard said it is coordinating its response with Plaquemines Parish, St. Bernard Parish, Louisiana Department of Environmental Quality and the state of Louisiana Governor's Office of Homeland Security and Emergency Preparedness.

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