

# Week in Review

September 9, 2022 | Volume 16: Issue 36

## ETHYLENE

Ethylene prices were lower in an active market, with 15 trades confirmed on Tuesday, 16 on Wednesday and 16 on Thursday.

Sep MtB-EPC ethylene was bid at 25 cpp and offered at 26 cpp on Tuesday. Sep last traded on Aug 26 at 27.25 cpp for regular delivery and was last assessed at 25 cpp. Sep MtB-EPC ethylene traded four times at 25 cpp for dated delivery. Oct was bid at 25 cpp against no offers. The Sep dated/any MtB-EPC ethylene exchange traded three times at a 0.125 cpp premium on the dated component and twice at a 0.25 cpp premium on the dated component. The Sep/Oct MtB-EPC ethylene spread traded at parity. The Sep/4Q 2022 MtB-EPC ethylene spread traded at parity. The 2Q 2022 paper ethylene strip traded at 24.125 cpp. The 2H 2023 paper ethylene strip traded at 23.75 cpp. On Wednesday, Sep MtB-EPC ethylene traded once at 25 cpp and then five times at 25.25 cpp. Sep was bid at 24.5 cpp and offered at 25.5 cpp. The Sep dated/any MtB-EPC ethylene spread and exchange both traded at a 0.125 cpp premium on the dated component. The Sep/Oct MtB-EPC ethylene spread traded at 0.25 cpp backward for dated delivery. The Sep/4Q 2022 MtB-EPC ethylene spread traded twice at 0.125 cpp backward. Sep MtB-EPC ethylene traded at parity to the PCW 30-day TX-All weighted average. The 2H 2023 paper ethylene strip traded at 23.5 cpp for small volume. On Thursday, Sep MtB-EPC ethylene traded for regular delivery at 25 cpp and then at 25.25 cpp. Sep MtB-EPC ethylene traded three times at 25.25 cpp and then twice at 25 cpp for dated delivery. Sep was bid at 24.25 cpp and offered at 24.875 cpp at market close, giving Sep an implied value of 24.875 cpp for the day. The Sep dated/any MtB-EPC ethylene exchange traded once at a 0.25 cpp premium on the dated component and three times at a 0.125 cpp premium on the dated component. The Sep/Oct MtB-EPC ethylene spread traded at 0.25 cpp backward for specified delivery dates. The Sep/4Q 2022 MtB-EPC ethylene spread traded at 0.125 cpp backward.

Outside of the Enterprise hub, no markets emerged for Sep or Oct TX-Other ethylene on Tuesday or Thursday. On Wednesday, Sep was offered at 26 cpp against no bids. Sep last traded on Aug 25 at 28.875 cpp.

In Louisiana, Sep Choctaw ethylene was bid at 23.5 cpp against no offers on Tuesday. Sep last traded on Sep 2 at 24.5 cpp. The Sep/Oct Choctaw ethylene exchange traded at 0.125 cpp contango, and the Sep/Oct Choctaw ethylene spread traded at 0.25 cpp contango. On Wednesday, Sep Choctaw ethylene traded at 24.75 cpp. The Sep MtB-EPC/Choctaw ethylene exchange traded twice at a 0.625 cpp premium on MtB-EPC, giving Sep Choctaw ethylene an implied value of 24.625 cpp at market close. Sep was bid at 23.5 cpp and offered at 25 cpp. Oct was offered at 25 cpp against no bids. On Thursday, Sep Choctaw ethylene traded at 24.5 cpp and then at 24.25 cpp. Sep was bid at 24 cpp and offered at 25 cpp. The Sep MtB-EPC/Choctaw ethylene exchange traded at a 0.75 cpp premium on MtB-EPC.

The MTD calendar average for Sep MtB-EPC ethylene was 25.125 cpp. The MTD calendar average for Sep Choctaw ethylene was 24.675 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.

# PETROCHEM WIRE

BY OPIS, A DOW JONES COMPANY

## ETHYLENE SPOT PRICES

(\$/lb)	Thursday	1-Week Δ	4-Week Δ
Sep MtB-EPC (TX)	0.24875	-0.00625	-0.01125
Sep Choctaw (LA)	0.24250	-0.01250	-0.01500

## TRADING RANGES (SEPTEMBER)

(\$/lb)	LOW	HIGH	MIDPOINT
Current Week TX	0.25000	0.25250	0.25125
Current Week LA	0.24250	0.24750	0.24500
30-Day TX	0.25000	0.25250	0.25125
30-Day TX/LA	0.24250	0.25250	0.24750
45-Day TX	0.25000	0.28875	0.26938
45-Day TX/LA	0.24250	0.28875	0.26563

## SEPTEMBER WEIGHTED SPOT AVERAGES

(\$/lb)	MTD avg	Monthly Δ	1-Year Δ
30-Day TX	0.25127	-0.00638	-0.17326
30-Day TX/LA	0.25005	-0.01036	-0.18732
45-Day TX	0.26230	0.00517	-0.16084
45-Day TX/LA	0.26201	0.00282	-0.17246

## SEPTEMBER CALENDAR SPOT AVERAGES

(\$/lb)	MTD avg	Monthly Δ	1-Year Δ
MtB-EPC	0.25125	-0.01005	-0.13429
Choctaw	0.24675	-0.01282	-0.26075

## MONTHLY CONTRACT PRICE

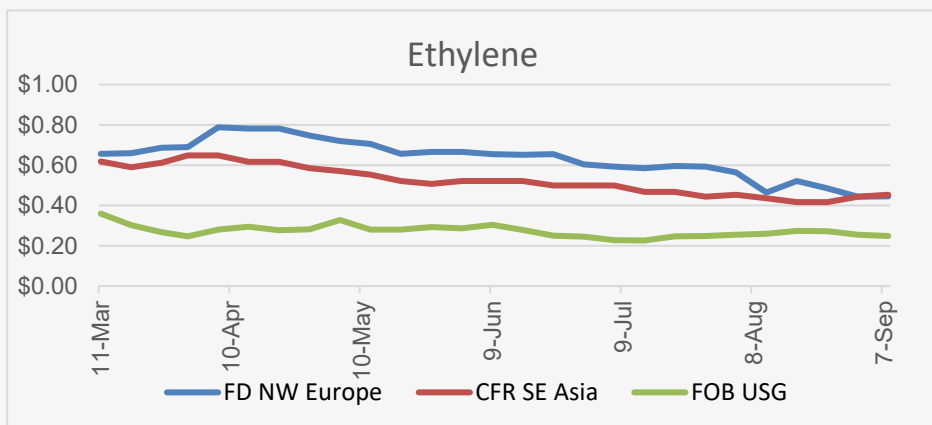
(\$/lb)	NTP	Monthly Δ	1-Year Δ
Jul	0.38250	-0.04250	-0.07000
Aug	0.40000	0.01750	-0.04250
Sep	NA	NA	NA

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

## ETHYLENE

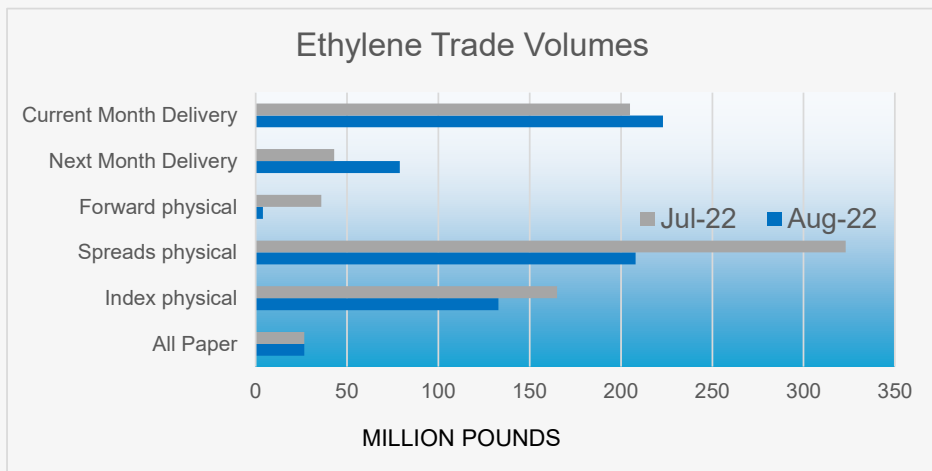
### EXPORTS

No Sep vessels were noted yet, according to shipbroker data. There were 11 known vessels for the month of Aug; five were understood to be headed for Europe and one was bound for Asia, while the other five were unknown.



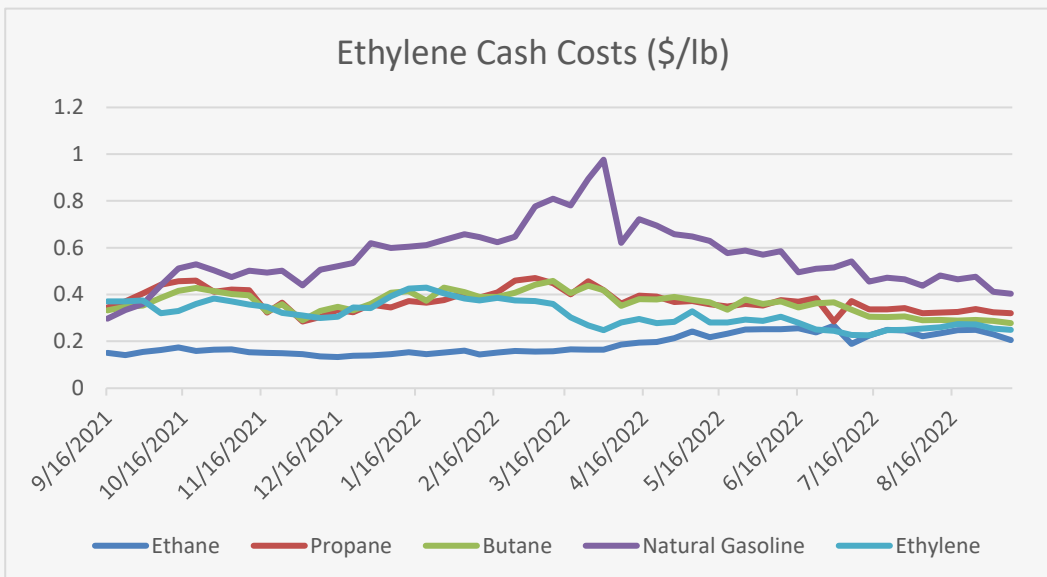
### TRADING VOLUME SUMMARY

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



### CASH COST SUMMARY

NGLs were lower this week, according to OPIS data. Ethane fell from 58.25 cpg last week to 51.4375 cpg this week. Propane was lower at 105 cpg, versus 108.75 cpg the prior week. Non-TET normal butane moved down from 119.25 cpg to 113.875 cpg. Non-TET natural gasoline moved lower from 157.5 cpg to 152.4375 cpg. As of Thursday afternoon, average ethylene production costs were 21.669 cpp using ethane, 32.618 cpp using propane, 28.706 cpp using normal butane and 41.317 cpp using natural gasoline.



## FEEDSTOCK INDICATORS

	SPOT	
	\$/MT	\$/LB
Naphtha FD Europe	607.50	0.27556
Naphtha CFR Japan	624.25	0.28316
Ethane USG	381.82	0.17319

## ETHYLENE FREIGHT RATE INDICATORS

	\$/MT	\$/LB
USG-Europe	240-260	0.109-0.118
USG-Asia	370-390	0.168-0.177
Brazil-USG	155-175	0.070-0.079
Brazil-Asia	360-370	0.163-0.168
Brazil-Europe	145-155	0.066-0.070

## Spot Ethylene Trade Data

CALENDAR AVERAGES	MTD SEP	AUG	CHANGE
30-Day MtB-EPC	0.25125	0.26130	-0.01005
30-Day Choctaw	0.24675	0.25957	-0.01282

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	25.0	133.0
All Paper	28.2	26.7

TODAY'S TRADING RANGES	LOW	HIGH	MIDPOINT	MTD TRADING RANGES	LOW	HIGH	MIDPOINT
Ethylene TX	0.25000	0.25250	0.25125	Ethylene TX	0.25000	0.25250	0.25125
Ethylene LA	0.24250	0.24500	0.24375	Ethylene LA	0.24250	0.24750	0.24500

## Spot Ethylene Trades

TRADE DATE	DEAL TYPE	PRICE	DELIVERY TIME	SYSTEM	MODE
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
09/07/2022	INDEX	PCW 30 Day Avg. + 0.0	Sep'22	MtB-EPC	PIPE

## POLYMER GRADE PROPYLENE

Spot PGP prices were lower.

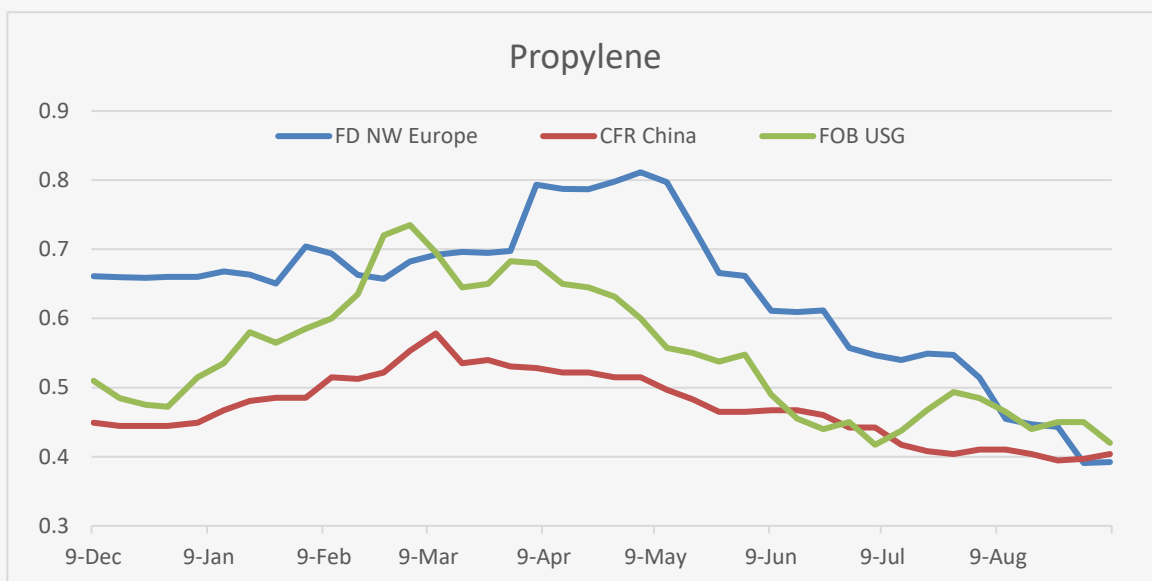
Sep MtB-EPC PGP was bid at 42 cpp and offered at 45.5 cpp on Tuesday. Sep MtB-EPC PGP last traded on Sep 1 at 45 cpp for regular delivery. Sep MtB-EPC PGP traded twice at 45 cpp for dated delivery. Sep MtB-EPC PGP traded twice at 42 cpp before market close on Wednesday. At market close, Sep was bid at 40.25 cpp and offered at 41.75 cpp, giving Sep an implied value of 41.75 cpp for the day. Late in the day, Sep MtB-EPC PGP traded for a third time at 42 cpp. Oct paper PGP traded at 42 cpp for small volume. Late in the day, the 1Q 2023 paper PGP strip traded at 43.5 cpp. On Thursday, Sep MtB-EPC PGP traded four times at 42 cpp. Sep was bid at 41.5 cpp and offered at 42 cpp. The 1Q 2023 paper PGP strip traded for small volume at 43.5 cpp.

The MTD calendar average for Sep MtB-EPC PGP was 43.75 cpp. The MTD 30-day weighted average for Sep TX-All PGP was 43.256 cpp. The MTD 45-day weighted average for Sep TX-All PGP was 43.856 cpp.

The MTD 30-day physical trading volume for Sep delivery was 43 million pounds. 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 pounds.

### IMPORT/EXPORT NEWS

No spot PGP vessels have been noted for Sep, according to shipbroker data.



### PGP SPOT PRICES

(\$/lb)	Thursday	1-Week Δ	1-Month Δ
Sep Mt B-EPC (TX)	0.42000	-0.03000	-0.04500
Oct Mt B-EPC (TX)	0.42250	-0.03000	-0.04250

### PGP TRADING RANGES (SEP)

(\$/lb)	LOW	HIGH	MIDPOINT
Current Week Mt B-EPC	0.42000	0.45000	0.43500
Current Week ALL TX	0.42000	0.45000	0.43500
30-Day MtB-EPC	0.42000	0.45000	0.43500
30-Day All TX	0.42000	0.45000	0.43500
45-Day MtB-EPC	0.42000	0.45500	0.43750
45-Day All TX	0.42000	0.45500	0.43750

### PGP WEIGHTED SPOT AVERAGES (SEP)

(\$/lb)	MTD avg	1-Month Δ	1-Year Δ
30-Day MtB-EPC	0.43256	-0.03418	-0.38491
30-Day All TX	0.43256	-0.03418	-0.38491
45-Day MtB-EPC	0.43856	-0.02818	-0.39981
45-Day All TX	0.43856	-0.02818	-0.40221

### PGP CALENDAR SPOT AVERAGE

(\$/lb)	MTD avg	1-Month Δ	1-Year Δ
Jul	0.45269	-0.02380	-0.30064
Aug	0.45848	0.00579	-0.45879
Sep	0.43750	-0.02098	-0.38506

### PGP MONTHLY CONTRACT PRICE

(\$/lb)	CP	1-Month Δ	1-Year Δ
Jul	0.47000	-0.04000	-0.29000
Aug	0.49000	0.02000	-0.38000
Sep	NA	NA	NA

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

## Spot PGP Trade Data

TODAY'S TRADING RANGES	LOW	HIGH	MIDPOINT
PGP MtB-EPC	0.42000	0.42000	0.42000
PGP TX Non-MtB	-----	-----	-----
MTD TRADING RANGES	LOW	HIGH	MIDPOINT
PGP MtB-EPC	0.42000	0.45000	0.43500
PGP TX Non-MtB	-----	-----	-----
CALENDAR AVERAGES	MTD SEP	AUG	CHANGE
30-Day MtB-EPC	0.43750	0.45848	-0.02098
WEIGHTED AVERAGES	MTD OCT	MTD SEP	AUG
30-Day MtB-EPC	-----	0.43256	0.46674
30-Day TX All	-----	0.43256	0.46674
45-Day MtB-EPC	-----	0.43856	0.46674
45-Day TX All	-----	0.43856	0.46674
SPOT VOLUMES (MM LBS)	MTD SEP	AUG	
Current Mo. Phys 30d	43.0	139.0	
Current Mo. Phys 45d	73.0	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	7.9	72.5	

## Spot Polymer Grade Propylene Trades

TRADE DATE	DEAL TYPE	PRICE	DELIVERY TIME	SYSTEM	MODE
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
08/30/2022	SPREAD	-0.00250	Aug'22/Sep'22	MtB-EPC	PIPE
08/30/2022	PAPER	0.46125	Feb'23	MtB-EPC	PIPE
08/30/2022	PAPER	0.46250	Mar'23	MtB-EPC	PIPE
08/30/2022	PHYSICAL	0.45000	Sep'22	MtB-EPC	PIPE
08/26/2022	PHYSICAL	0.45250	Aug'22	MtB-EPC	PIPE
08/26/2022	PHYSICAL	0.45500	Sep'22	MtB-EPC	PIPE
08/26/2022	PHYSICAL	0.45500	Sep'22	MtB-EPC	PIPE
08/26/2022	PAPER	0.47500	Q2'23	MtB-EPC	PIPE



## REFINERY GRADE PROPYLENE

### SPOT PRICE SUMMARY

Pipeline RGP prices were unchanged.

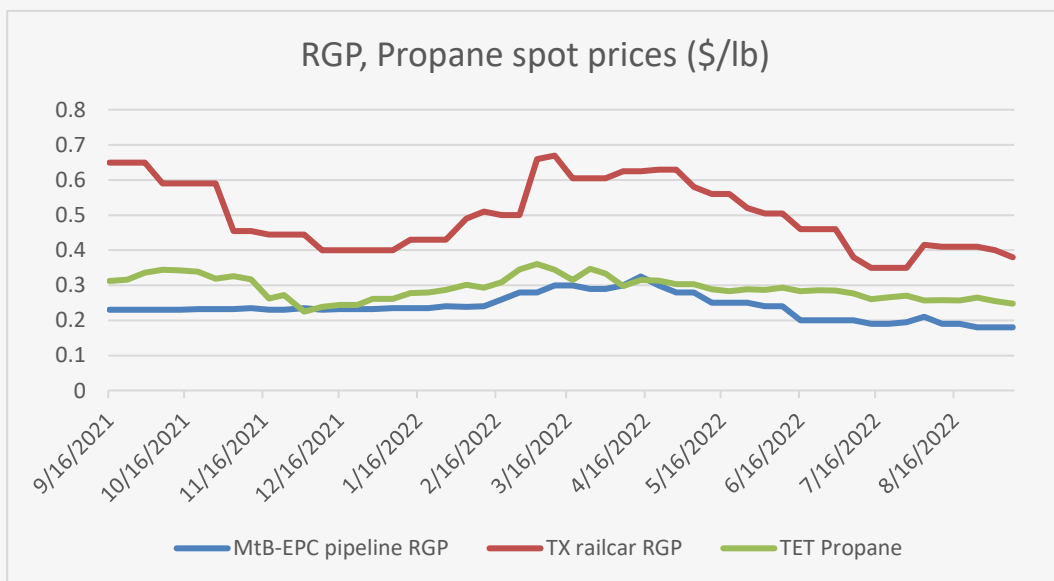
Sep MtB-EPC pipeline RGP traded at 18 cpp on Tuesday and Wednesday, at parity to the last traded level on Sep 1.

There was no activity in the Sep railcar or truck RGP markets this week. 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 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.

### DOWNSTREAM & ASSOCIATED MARKETS

PGP's premium to pipeline RGP was at 24 cpp, and splitter economics were positive. With prompt propane near 105 cpg (24 cpp), PDH economics were favorable. Ethylene prices at the Mont Belvieu hub were at 24.875 cpp, making metathesis use attractive.



### SPOT RGP & ALKY VALUE (SEP)

(\$/lb)	Thursday	1-Week Δ	4-Week Δ
RGP Mont Belvieu-EPC	0.18000	0.00000	-0.01000
RGP Implied Alky Value	0.52218	-0.02495	-0.23083

### RGP TRADING RANGES (SEP)

(\$/lb)	LOW	HIGH	MIDPOINT
Current Week Mt B	0.18000	0.18000	0.18000
Current Week All TX	0.18000	0.18000	0.18000
Current Week TX/Non-TX	0.18000	0.18000	0.18000
30-Day MtB-E pipe	0.18000	0.18000	0.18000
30-Day TX all	0.18000	0.18000	0.18000
30-Day TX/Non-TX all	0.18000	0.18000	0.18000
45-Day MtB-E pipe	0.18000	0.18000	0.18000
45-Day TX all	0.18000	0.40000	0.29000
45-Day TX/Non-TX all	0.18000	0.40000	0.29000

### RGP WEIGHTED SPOT AVERAGES (SEP)

(\$/lb)	MTD avg	1-Month Δ	1-Year Δ
30-Day MtB-E pipe	0.18000	-0.00833	-0.05000
30-Day TX all	0.18000	-0.07695	-0.05000
30-Day TX/Non-TX all	0.18000	-0.07695	-0.05000
45-Day MtB-E pipe	0.18000	-0.00833	-0.05045
45-Day TX all	0.30396	0.01871	-0.02466
45-Day TX/Non-TX all	0.30396	0.01871	-0.02466

### RGP CALENDAR SPOT AVERAGE

(\$/lb)	MTD avg	1-Month Δ	1-Year Δ
Jul	0.19250	0.00359	-0.05131
Aug	0.18891	-0.00359	-0.05223
Sep MTD	0.18000	-0.00891	-0.05048

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

## 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

## OLEFINS & REFINERY OPERATIONS

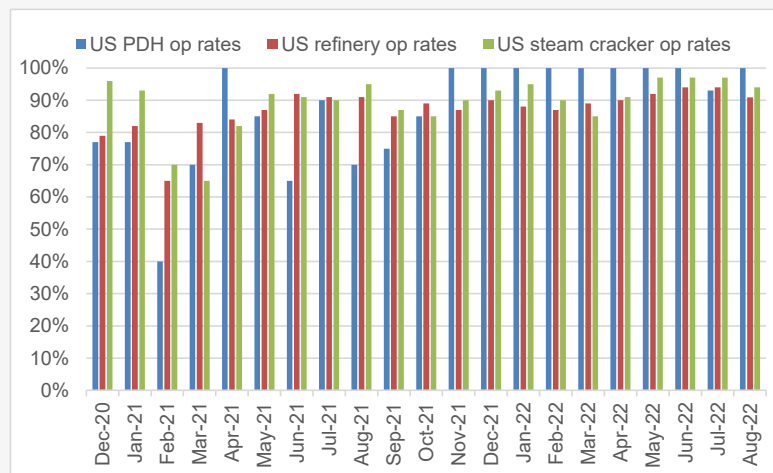
### OLEFINS UNITS

Maximum US Gulf steam cracker operating rates in Sep were estimated at 98% and maximum PDH operating rates were estimated at 100%.

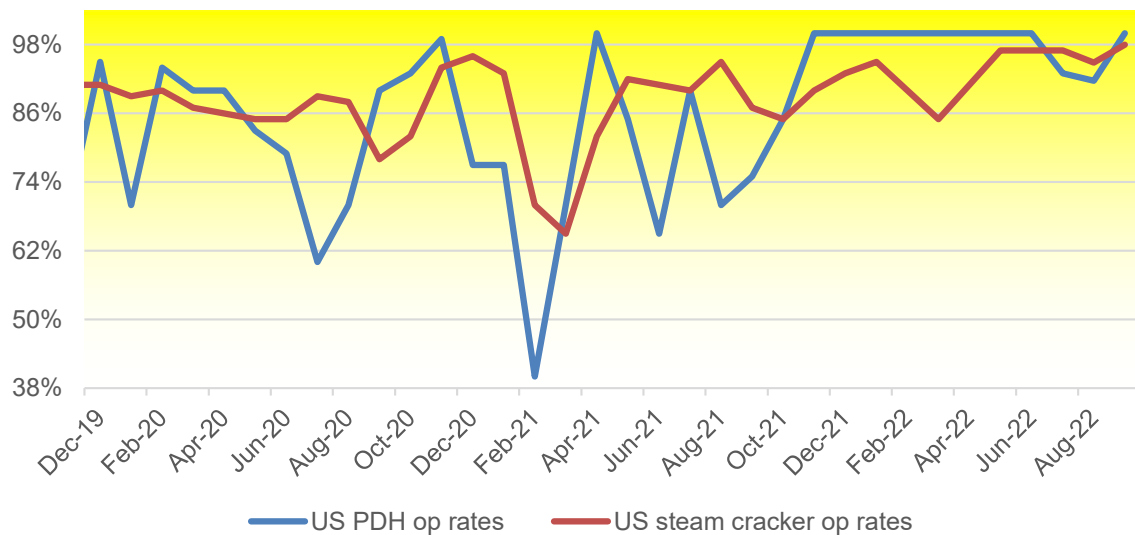
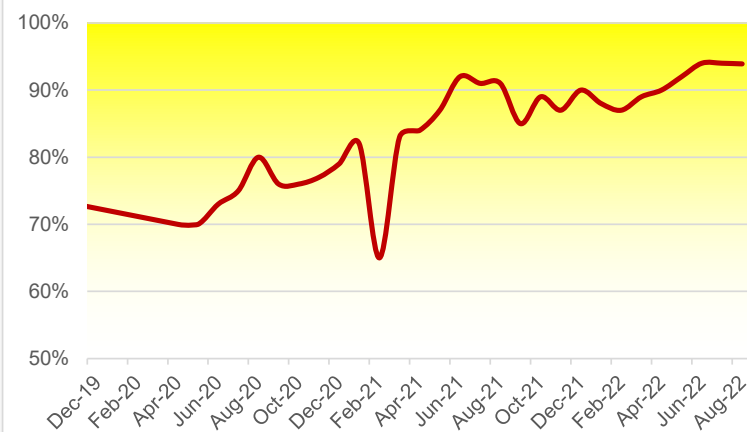
Chevron Phillips' EU-1594 unit at Cedar Bayou, TX was restarting on Sep 4 after a site-wide power outage, according to a TCEQ filing. The filing noted that the startup was expected to last 168 hours, or seven days.

### REFINERIES

The largest crude unit at BP's 440,000 bbl/day Whiting, Indiana, refinery returned to service over the weekend and the facility could resume normal operations within the next several days, following the Aug 24 fire and loss of electricity, a company spokesperson said Thursday.



US Refinery Run Rates (EIA)



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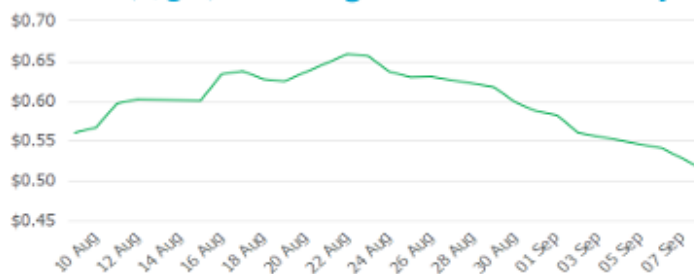


## Closing Bid/Ask (\$/lb)

MONOMERS	BID	ASK
Ethylene MtB-EPC Current Month	0.24250	0.24875
Ethylene MtB-EPC Next Month	----	----
Ethylene TX-Other Current Month	----	----
Ethylene TX-Other Next Month	----	----
Ethylene Choctaw FOB Current Month	0.24000	0.25000
Ethylene Choctaw FOB Next Month	----	----
RGP MtB-EPC Current Month	----	----
RGP MtB-EPC Next Month	----	----
PGP MtB-EPC Current Month	0.41500	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	0.40000
HoPP Raffia FOB Houston	0.64000	0.66000
HoPP Inj FOB Houston	0.64000	0.66000
HoPP Inj Domestic	0.75000	0.77000
CoPP inj Domestic	0.79000	0.81000
HDPE BM Domestic	0.53000	0.57000
HDPE Inj Domestic	0.55000	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	0.07556	0.20681	0.17251	0.40251
OCT 22	0.07724	0.20849	0.17974	0.40724
NOV 22	0.07641	0.20891	0.17974	0.40724
DEC 22	0.07412	0.20912	0.18018	0.40768
JAN 23	0.07435	0.21060	0.18747	0.40872
FEB 23	0.07962	0.21712	0.19579	0.41079
MAR 23	0.09310	0.23185	0.21120	0.41995
APR 23	0.10449	0.24574	0.21977	0.42852
MAY 23	0.10683	0.25058	0.22405	0.43280
JUN 23	0.10622	0.25247	0.22597	0.43472
JUL 23	0.10519	0.25269	0.22767	0.43517
AUG 23	0.10540	0.25290	0.22767	0.43517

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)	0.03168
Ethylene - (Ethane div. 2.97)	0.07556
Ethylene - Propane	0.00126
Ethylene - Butane	0.01595
Ethylene - Natural gasoline	-0.02691
Ethylene - PGP	-0.17125
Ethylene - RGP	0.06875
RGP - Propane	-0.06749
PGP - RGP	0.24000
LDPE Film - Ethylene	0.48125
LLDPE Film - Ethylene	0.33125
HDPE Blow Mold - Ethylene	0.30125
HDPE Inj - Ethylene	0.31625
HDPE HMW - Ethylene	0.33125
LDPE Film - Ethane	0.55681
LLDPE Film - Ethane	0.40681
HDPE Blow Mold - Ethane	0.37681
HDPE Inj - Ethane	0.39181
HDPE HMW - Ethane	0.40681
HoPP Inj - RGP	0.58000
CoPP - RGP	0.62000
HoPP Inj - Propane	0.51251
CoPP - Propane	0.55251
GPPS - Benzene	0.62755
GPPS - Ethylene	0.76125
HIPS - Benzene	0.70755
HIPS - Ethylene	0.84125

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	0.20542	0.31990	0.27818	0.40348	0.24875	0.24250	0.42000	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
OCT 22	0.20307	0.30955	0.27094	0.41036	0.24875	0.24500	0.42250	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
NOV 22	0.20238	0.30971	0.27100	0.41581	0.24750	0.24500	0.42250	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
DEC 22	0.20183	0.30883	0.27043	0.42142	0.24500	0.24500	0.42250	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
JAN 23	0.19952	0.30541	0.26871	0.42146	0.24375	0.24500	0.42875	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
FEB 23	0.19144	0.30094	0.26650	0.41766	0.24250	0.24500	0.43500	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
MAR 23	0.17490	0.28437	0.25525	0.41354	0.24125	0.24500	0.44125	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
APR 23	0.16056	0.27167	0.24807	0.41029	0.23875	0.24500	0.44125	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
MAY 23	0.15488	0.26417	0.24216	0.40552	0.23625	0.24500	0.44125	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
JUN 23	0.15246	0.26072	0.24087	0.40215	0.23375	0.24500	0.44125	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
JUL 23	0.15208	0.25973	0.24087	0.39923	0.23250	0.24500	0.44250	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
AUG 23	0.15182	0.25996	0.24201	0.39623	0.23250	0.24500	0.44250	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
SEP 23	0.15158	0.26083	0.24605	0.39607	0.23250	0.24500	0.44250	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
OCT 23	0.15094	0.26208	0.24699	0.39524	0.23250	0.24500	0.44250	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
NOV 23	0.15039	0.26210	0.24729	0.39319	0.23250	0.24500	0.44250	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
DEC 23	0.14967	0.26257	0.24721	0.39446	0.23250	0.24500	0.44250	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
JAN 24	0.14889	0.26016	0.24645	0.38907	0.23250	0.24500	0.44250	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
FEB 24	0.14727	0.25423	0.24265	0.37975	0.23250	0.24500	0.44250	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
MAR 24	0.14216	0.23932	0.23432	0.36892	0.23250	0.24500	0.44250	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
APR 24	----	----	----	----	0.23250	0.24500	0.44250	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
MAY 24	----	----	----	----	0.23250	0.24500	0.44250	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
JUN 24	----	----	----	----	0.23250	0.24500	0.44250	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
JUL 24	----	----	----	----	0.23250	0.24500	0.44250	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
AUG 24	----	----	----	----	0.23250	0.24500	0.44250	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000
SEP 24	----	----	----	----	0.23250	0.24500	0.44250	0.38000	0.38000	0.65000	0.52000	0.54000	0.71000

## POLYETHYLENE

**SUMMARY:** PE prices were relatively steady during the holiday-shortened week, with market participants gradually returning to business. HDPE BM continued to be viewed as one of the longest grades, while HDPE IM pricing has seen a slight rebound. In general, producers were understood to have cleared some excess inventory in Aug, setting the stage for a more balanced market dynamic in Sep. In the export market, some overseas buyers were starting to become more active after a destocking period, and Houston warehouse space was expected to be tight in Sep. There were reports of improving downstream converter operating rates in Asia, hinting at a revival of resin demand. Demand for resin exports to Europe was expected to remain healthy, but logistics factors limited how much PE could be shipped there.

**HOUSTON/MIDWEST:** Suppliers were just testing the waters in the Houston railcar market this week. Initial Sep export offers were up 1-2 cpp from Aug from some suppliers, but pricing varied depending on the particular supplier's inventory position. Sep HDPE BM HIC was mainly reported at 38-40 cpp railcar FOB Houston. HDPE IM offers were put at 38-41 cpp railcar FOB Houston, with a 1 cpp premium seen for HDPE crate with UV versus other grades. HMWPE film export prices were heard in a range of 38-44 cpp railcar FOB Houston, with most buying interest reported at 40-41 cpp. LLDPE butene film export availability was put at 36-40 cpp railcar FOB Houston, with the market assessed 1 cpp lower at 38 cpp to end the week. LDPE film was at 42-45 cpp railcar FOB Houston.

**CONTRACT:** Contract prices were reported to have decreased by at least 4-6 cpp in Aug.

**OPERATIONS:** No unplanned outages were confirmed, but suppliers were understood to have cut operating rates last month to control inventories.

**DOMESTIC RESALE:** Spot generic prime resale prices were unchanged this week, with limited activity observed. Generic prime HDPE BM HIC was at 55 cpp railcar delivered and HDPE IM pail was at 56-57 cpp railcar delivered, with some orders seen recently at 58 cpp railcar delivered. HMWPE film and LLDPE butene film were holding in the high 50s cpp railcar delivered. Generic prime LDPE clarity film was last seen in the upper 70s cpp railcar delivered.

**WIDE SPEC:** Offgrade HDPE frac melt suitable for non-pressure pipe ranged from 42-48 cpp railcar delivered. Offgrade HDPE IM moved up to around 50 cpp railcar delivered. Offgrade LLDPE butene film was steady at 45-47 cpp railcar delivered. Offgrade LLDPE octene was maintaining a strong premium to other LLDPE resins at 68-70 cpp railcar delivered. LLDPE and LDPE C&A film resin was last seen at around 40-42 cpp railcar delivered. Good quality offgrade LDPE liner was reported at 70 cpp bulk truck delivered, and around 64 cpp railcar delivered.

**SCRAP BALES:** Curbside HDPE natural (dairy) bales were available from a large-volume supplier at 42 cpp FOB east of the Rockies, up fractionally on the week; natural bales from MRFs in California were about a dime cheaper. Curbside HDPE mixed colors (frac melt) bales were available at 9 cpp FOB Memphis, Cincinnati, Charlotte, SC and other Midwest locations; prices as low as 3 cpp last week were no longer seen. HDPE "Z" bales,

## Spot Railcars

\$/lb	Thursday	1-Week Δ	4-Week Δ
<b>FOB HOUSTON</b>			
HDPE BM HIC	0.380	-0.010	-0.020
HDPE pail	0.390	-0.010	-0.010
LLDPE butene film	0.380	-0.010	-0.060
LDPE film	0.420	-	-0.040
HMWPE film	0.410	+0.010	-
<b>FOB MIDWEST</b>			
HDPE BM	0.520	-	-0.010
LLDPE butene film	0.540	-	-0.050

## Domestic Resale - Railcar Delivered

\$/lb	Thursday	1-Week Δ	4-Week Δ
<b>GENERIC PRIME</b>			
HDPE BM HIC	0.550	-	-0.050
HDPE pail	0.565	-	-0.045
LLDPE butene film	0.580	-	-0.070
HMWPE film	0.580	-	-0.070
LDPE clarity film	0.730	-	-0.050
<b>WIDE SPEC</b>			
HDPE pipe	0.430	-0.005	-0.040
HDPE pail	0.500	+0.020	-0.050
LLDPE butene film	0.450	-	-0.080
LDPE C&A film	0.410	-	-0.080
LDPE liner	0.490	-	-0.050

## International Price Indications

		\$/lb	1-week Δ	4-week Δ
<b>LATIN AMERICA</b>				
HDPE BM CFR WCSA	1175 \$/mt	0.533	-0.002	-0.020
LLDPE film CFR WCSA	1140 \$/mt	0.517	-0.027	-0.091
HMWPE film CFR WCSA	1175 \$/mt	0.533	-0.011	-0.020
LDPE film CFR WCSA	1250 \$/mt	0.567	-0.036	-0.077
<b>ASIA</b>				
LLDPE film CFR SE Asia	995 \$/mt	0.451	-	-0.018
LLDPE film CFR China	950 \$/mt	0.431	+0.008	-0.021
Dalian LLDPE futures	8051 Rmb/mt	0.527	+0.021	-0.001

## POLYETHYLENE

comingled natural and mixed colors units, were available from two suppliers at 20-22 cpp FOB Midwest. Mixed #3-7 bales were available at no cost or 1 cpp FOB US South and Midwest. Grade A LDPE film bales were available at 25 cpp and Grade B of the same, with 10-20% non-clear units, was at 10 cpp delivered Southern California from the Phoenix area. Sliced and stacked HMWPE intermediate bulk containers (IBCs) were available for a second consecutive week at 10 cpp FOB Memphis.

**REPRO/REGRIND:** The following HDPE post-consumer resin (PCR) was available for Sep, delivered east of the Rockies plus "adders": HDPE FM natural, 100 cpp; HDPE FM MC, 54 cpp; HDPE injection black, 60 cpp. Some PCR pricing is based on Aug's average costs of the underlying feedstock HDPE bales, typically taken from published indexes. The following post-industrial PE was available for Sep delivery, FOB Midwest: LD/LLDPE mixed colors at 48 cpp, white at 55 cpp, and natural at 59 cpp. HDPE mixed colors at 48 cpp and HDPE natural at 55 cpp. HDPE FM and HDPE crate mixed colors regrinds were available at 20-24 cpp FOB east of the Rockies, down a penny on the week. Isolated business for HDPE FM regrind was seen as high as 33 cpp delivered Midwest. LDPE IM mixed colors regrind was available at 20 cpp delivered US Gulf Coast region.

**LATIN AMERICA:** Pricing remained soft, but some traders were more confident that the bottom was near. HDPE BM selling prices were heard at \$1100-1140/mt (49.9-51.7 cpp) CFR WCSA. HMWPE film was at \$1150-1160/mt (52.2-52.6 cpp) CFR WCSA. LLDPE butene film was in the low- to mid-\$1100s/mt (about 50-52 cpp) CFR WCSA, and LDPE film was mainly selling at \$1200-1250/mt (54.4-56.7 cpp) CFR WCSA.

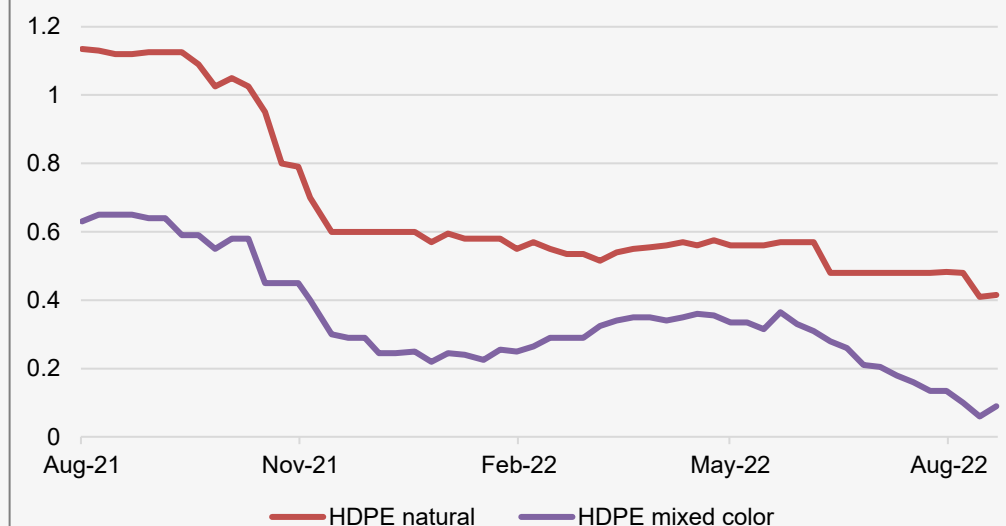
### IMPLIED VS. ACTUAL COMMODITY PRICES

	CRUDE (\$/bbl)	NATGAS (\$/mmBtu)	ETHANE (\$/gal)	ETHYLENE (\$/lb)	LLDPE (\$/lb)	HDPE BM (\$/lb)
<b>CRUDE</b>	<b>83.54</b>	14.339	0.95355	0.40240	0.56447	0.50021
<b>NATGAS</b>	46.11	<b>7.915</b>	0.52635	0.22212	0.37878	0.33435
<b>ETHANE</b>	45.06	7.735	<b>0.51438</b>	0.21707	0.37358	0.32970
<b>ETHYLENE</b>	51.64	8.864	0.58945	<b>0.24875</b>	0.40621	0.35885
<b>LLDPE</b>	50.39	8.649	0.57516	0.24272	<b>0.38000</b>	0.35330
<b>HDPE BM</b>	58.81	10.095	0.67133	0.28330	0.42180	<b>0.38000</b>

## Recycled Plastic - Truck Delivered

REPRO / PELLET (\$/lb)	Location	This Week	1-Week Δ	4-Week Δ
HDPE HMW	FOB Southeast	0.375	-	-0.075
HDPE Natural PCR	FOB Southeast	0.875	-	-0.1
HDPE MC PCR	FOB Southeast	0.525	-	-0.1
HDPE Natural PCR	FOB SoCal	0.525	-	-0.1
HDPE copolymer Black PI	FOB Southeast	0.310	-0.02	-0.12
LDPE film MC	FOB East of Rockies	0.400	-0.01	-0.06
LLDPE film MC	FOB East of Rockies	0.400	-0.01	-0.06
REGRIND / FLAKE (\$/lb)				
Dirty HDPE HMW Drums	FOB Southeast	0.150	-0.01	-0.075
HDPE PI Frac-melt	FOB East of Rockies	0.220	-0.01	-0.11
HDPE IM crate MC	FOB East of Rockies	0.220	-0.01	-0.11
LDPE IM MC	FOB East of Rockies	0.190	-	-0.03
SCRAP / BALES (\$/lb)				
HDPE natural	FOB East of Rockies	0.415	+0.005	-0.065
HDPE MC	FOB East of Rockies	0.090	+0.03	-0.045
Grade A LDPE film	FOB NY/NJ ports	0.240	-	-0.015

### HDPE scrap bales (\$/lb)





## POLYPROPYLENE

**SUMMARY:** PP spot prices were flat to lower amid sluggish demand. Jul 2022 PP exports totaled 120,468 mt, down slightly from 122,315 mt in Jun. PP imports (including propylene copolymers) were up 73% in Jul at 66,841 mt. Most of the month-to-month increase in Jul imports came from Canada (+17,608 mt) and Saudi Arabia (+9,023 mt).

**CONTRACT MARKET:** After falling by a net 1 cpp in Aug, PP contract prices were expected to fall again in Sep. Spot PGP price trends were pointing to a reversal of the Aug PGP contract price increase, and buyers expected to see additional margin compression for PP in Sep.

**OPERATIONS:** No unplanned outages were confirmed, but producers were expected to have cut operating rates in Aug-Sep.

**HOUSTON/MIDWEST:** Export channels remained quiet and Houston railcar pricing for HoPP IM/raffia was assessed at 65 cpp, based on indicated monomer spreads for shipments to Mexico. The Midwest railcar market for HoPP IM was notionally unchanged at 71 cpp.

**DOMESTIC RESALE:** Spot generic prime HoPP IM was down 1 cpp for the week at 75-77 cpp railcar delivered. Generic prime impact CoPP was assessed 1 cpp lower at 79-81 cpp railcar delivered. Generic prime random CoPP (clarified) was last seen around 81-83 cpp railcar delivered. Offgrade HoPP IM was steady in the upper 50s cpp railcar delivered. Offgrade impact CoPP with good izod was mostly selling in the low 60s cpp railcar delivered, with a few deals in the upper 50s cpp.

**RECYCLED:** Post-industrial PP bales were available at 8-10 cpp FOB Midwest. Post-consumer PP bales were available at 10 cpp FOB US South. Clean, once used PP super-sacks were available at 5 cpp FOB Chicago. PP PCR was available for Sep delivery east of the Rockies plus “adders” at the following: CoPP 12 melt black, 85 cpp; FDA PP 20 melt flow, light gray, 99 cpp. CoPP and HoPP IM regrind was at 30-32 cpp FOB east of the Rockies, including areas of the Deep South, a price level seen as possibly being a bottom for the year. Buying interest for HoPP extrusion white regrind was ensconced in the mid-30s cpp and at 29 cpp for mixed colors of the same, with no selling interest seen at these numbers.

**LATIN AMERICA:** HoPP raffia was heard at \$1250-1300/mt (56.7-59 cpp) CFR WCSA for prompt arrivals, and low- to mid-\$1200s/mt for further out shipments. HoPP raffia/IM from Asia was quoted as low as \$1180/mt (53.5 cpp) CIF Manzanillo on a direct basis; other direct offers were around \$1220/mt.

### FOB Railcar

(\$/lb)	Thursday	1-Week Δ	4-Week Δ
HoPP raffia (Houston)	0.65	-0.02	-0.03
HoPP IM (Houston)	0.65	-0.02	-0.03
HoPP IM (Midwest)	0.71	-	-0.03

### Domestic Resale - Railcar Delivered

(\$/lb)	Thursday	1-Week Δ	4-Week Δ
HoPP IM	0.76	-0.01	-0.02
HoPP IM (wide spec)	0.56	-	-0.05
CoPP IM	0.8	-0.01	-0.02

### Recycled - Truckloads

(\$/lb)	Thursday	1-Week Δ	4-Week Δ
Repro, black HoPP IM (FOB)	0.4	-	-0.01
Repro, black CoPP (Divd)	0.61	-	-0.13
Regrind, MC HoPP IM (FOB)	0.31	-	-0.04
Regrind, MC CoPP IM (FOB)	0.31	-	-0.04

### International Price Indications

	SPOT		1-Week Δ	4-Week Δ
	\$/MT	\$/LB	\$/MT	\$/MT
HoPP CFR SE Asia	1000	0.454	-	-35
HoPP CFR WCSA	1270	0.576	-10	-100
HoPP FOB Houston	1433	0.650	-44	-66
	RMB/MT	\$/LB	RMB/MT	RMB/MT
HoPP Dalian Futures	7949	0.521	+174	+37

## BENZENE-STYRENE-POLYSTYRENE

Spot benzene had its most active day on Tuesday as many returned from the holiday weekend. On Thursday, Sep traded at \$2.80/gal and \$2.86/gal DDP HTC. Oct DDP HTC traded at \$2.88/gal, while an Oct DDP LMR traded at \$2.90/gal. Spot benzene prices are below aromatics blend values and the forward market is in a contango. If benzene prices remain below blend values, cumene and ethylbenzene will continue to go into gasoline blending. Two of the smaller styrene plants in the US Gulf Coast have idled their plants due to poor economics. STDP and TDP economics remain negative as benzene is valued below blend values. Spot styrene prices had Sep at 50.58 cpp (\$1115/mt). Oct was at 49.90 cpp (\$1100/mt).

In the PS market, initial indications for Sep prime transaction pricing were 11 cpp down from Aug. Producers were still assessing demand, but early order patterns were suggesting a broad-based slowdown in demand. Feedstock costs were flat; the implied styrene cost based on a 30/70 formula of spot ethylene/benzene was at 34.2 cpp, unchanged from the prior week. No supply issues were reported in the PS market. In the domestic resale market, fresh offers were scarce and pricing was assessed flat for the week. Generic prime GPPS IM was at an average price of 101 cpp railcar delivered, and HIPS IM was at 109 cpp railcar delivered. Offgrade GPPS IM was notionally unchanged at 92 cpp railcar delivered, and offgrade HIPS was at 100 cpp railcar delivered.

## EIA SUMMARY & ENERGY FUTURES

After a lackluster start to trading following the Labor Day holiday, crude futures on the NY-MEX fell Wednesday to their lowest level since before Russia launched its invasion of Ukraine, while NYMEX gasoline futures approached a 2022 low. WTI fell by \$4.94 to \$81.94/bbl, which was the lowest settlement since Jan 11. Oct RBOB fell 10.82 cents to settle at \$2.3077/gal. RBOB's 2022 low was seen on Jan 3 at \$2.2104/gal. Despite a strong build in WTI and RBOB inventories reported by the US Energy Information Administration (EIA) on Thursday, both commodities settled higher. WTI settled up \$1.60/bbl at \$83.54/bbl. Brent crude oil settled up \$1.15/bbl at \$89.15/bbl. RBOB gasoline futures settled up 3.84 cents at \$2.3461/gal. ULSD futures had little change for much of the week and were down 4.59 cents at \$3.5401/gal on Thursday. NYMEX natural gas futures posted losses until settling up 7.3 cents at \$7.915/mmBtu on Thursday.

US refinery utilization was at 90.9% for the week ended Sep 2, down from 92.7% the prior week, as reported by the EIA. The Midwest had the biggest regional movement in utilization rates, down by 9.6 percentage points at 83.1%. In other regions, East Coast (PADD 1) refinery utilization was up by 2 percentage points at 99.6%. US Gulf (PADD 3) refinery utilization fell 0.2 percentage points at 94.2%. Rocky Mountain (PADD 4) utilization was at 93.5%, a gain of 0.1 percentage point. West Coast (PADD 5) utilization was up by 3.4 percentage points at 88.1%. Propane and propylene stocks were 1.9m bbl higher at 74.1 million bbl, the report showed. Year on year, stocks are 5.7 percentage points higher.

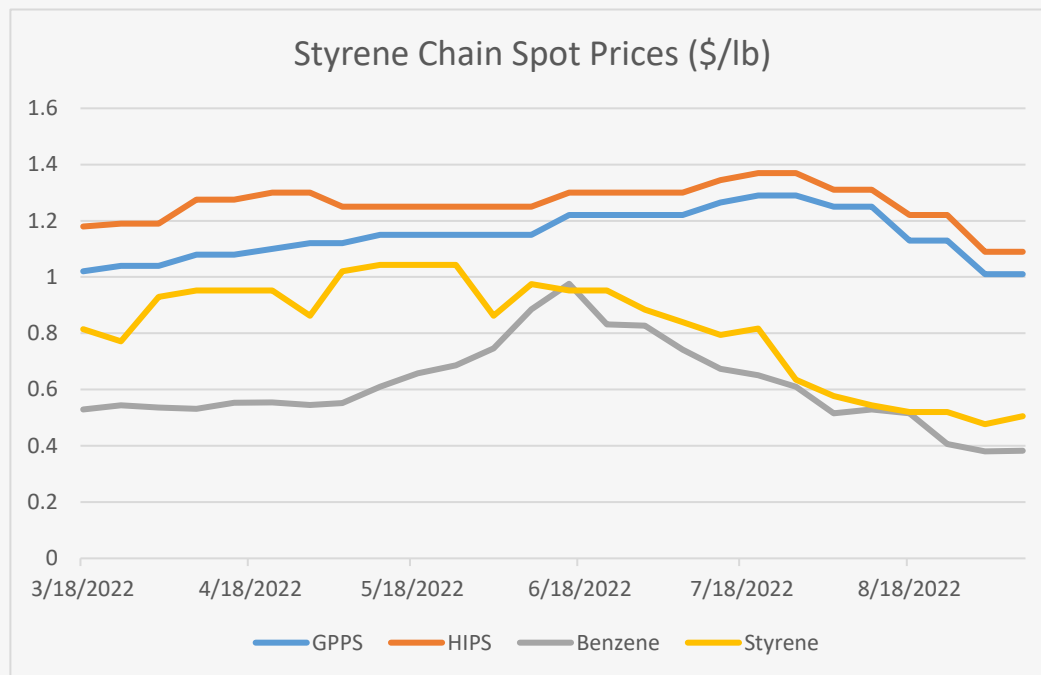
## DOMESTIC RESALE - RAILCAR DELIVERED

(\$/lb)	Thursday	1-Week Δ	4-Week Δ	1-Year Δ
<b>GENERIC PRIME</b>				
HIPS	1.0900	-	-0.2200	-0.0500
GPPS	1.0100	-	-0.2400	0.0300

## STYRENE

(\$/lb)	Thursday	1-Week Δ	4-Week Δ	1-Year Δ
Styrene FOB US Gulf (\$/lb)	0.5058	0.0295	-0.0385	-0.0932
Styrene Implied Price (70:30)*	0.3423	0.0000	-0.1059	-0.0608

\*70% benzene/30% ethylene



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## Steam Cracker Shutdown Summary

MTD EST ETHYLENE OUTPUT		MTD OVERALL OPERATING RATES		YTD OVERALL OPERATING RATES		YTD EST ETHYLENE OUTPUT	
MTD Max GC Capacity	1.97569 B	Texas	97.23%	Texas	91.33%	YTD Max GC Capacity	61.98718 B
MTD Est GC Output	1.93602 B	Louisiana	100.00%	Louisiana	100.00%	YTD Est GC Output	58.09813 B
MTD LBS OUT	0.03967 B	Gulf Coast	97.99%	Gulf Coast	93.73%	YTD LBS OUT	3.88904 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	51	209.58909
Eastman Chemical Co.	Longview HCC-3	0.84932	0.33%	15-Oct-18	Idle	P	1425	1210.28100

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

## OPIS NEWS

### **Anellotech Produces Petchems From Plastic Waste At Houston Pilot Plant**

U.S.-based sustainable technology company Anellotech has continuously produced olefins and aromatics from mixed plastic waste for the first time at its 0.5 mt/yr Houston pilot plant, the company announced on Aug. 29.

The company said it processed solid waste including all major plastic types except polyvinyl chloride (PVC), into petrochemicals using its catalytic pyrolysis technology.

Using a catalyst and fluid bed reactor-regenerator system, Anellotech said its technology can process polyolefins, polyamides (nylon), polyethylene terephthalate (PET), polycarbonate (PC) and polystyrene (PS) into benzene, toluene, xylene (BTX), ethylene, propylene and butylene.

This process uses one thermal catalytic reactor without the need for steam cracker furnaces, Anellotech said.

The company plans further, month-long 24/7 trials ahead of commercialization.

Anellotech's process has high olefin and aromatic hydrocarbon selectivity, is scalable, has broad feedstock tolerance, with CO2 emission savings over industrial steam crackers, President and CEO David Sudolsky said.

--Reporting by Chuan Ong, [cong@opisnet.com](mailto:cong@opisnet.com); Editing by Hanwei Wu, [hww@opisnet.com](mailto:hww@opisnet.com)

### **BASF, SABIC Start Building World's First Electrically-Heated Cracker Furnace**

BASF and SABIC said Thursday they have started building the world's first demonstration plant for large-scale electrically heated steam cracker furnaces.

By using electricity from renewable sources instead of natural gas, the new technology has the potential to reduce carbon dioxide emissions of one of the most energy-intensive production processes in the chemical industry by at least 90% compared to conventional technology, BASF and SABIC said in a joint press release Thursday.

Steam crackers require a significant amount of energy to break down hydrocarbons such as naphtha into olefins and aromatics.

Typically, the reaction is conducted in furnaces at temperatures of about 850 degrees Celsius. These temperatures are reached by burning fossil fuels and the prototype plant aims to replace fossil fuels with electricity, they said.

Targeted for start-up in 2023, the demonstration plant will be fully integrated into one of the existing steam crackers at BASF's Verbund site in Ludwigshafen, Germany.

The demonstration plant will test two different heating concepts and process around four metric tons of hydrocarbon per hour and consume 6 megawatts of renewable energy.

BASF and SABIC are co-investors in the project and BASF will operate the demonstration plant. Linde will undertake the project engineering, procurement and construction works and will in the future commercialize the developed technologies, the press release said.

The German Federal Ministry for Economic Affairs and Climate Action has granted the furnace technology development €14.8 million (\$14.8 million) in project funding under its "Decarbonization in Industry" program which is aimed at supporting energy-intensive industries in Germany to achieve carbon neutrality.

BASF operates two naphtha-fed steam crackers at the Ludwigshafen site, one with an ethylene capacity of 420,000 mt/year and another with a capacity of 240,000 mt/year, according to data from Chemical Market Analytics by OPIS.

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### **Bowling Green, Ohio Plastic Recycling Plant to Start Operations Next Summer**

A polyethylene terephthalate (PET) plastic recycling plant under construction in Bowling Green, Ohio should be operating by July, Lori Carson, director of new market development for Phoenix Technologies, said on Thursday.

The plant's capacity will be 70-78 million lbs/year of rPET letter of non-objection (LNO) pellet, roughly doubling what's now produced at an existing plant. Work began on the plant last month.

Phoenix is owned by Taiwan's chemical giant Far Eastern New Century.

About 99% of Phoenix's rPET is sold for use in production of food packaging, including bottles, Carson said. LNO means the U.S. Food & Drug Administration has approved its use for this purpose.

The plant will cost \$30-35 million to build, include equipment manufactured in Europe, and provide 25-30 jobs. The raw material, as in the existing plant, will be PET scrap bales, comprised mostly of bottles and containers. Phoenix sources bales from every state except Alaska and Hawaii. All its rPET is sold domestically.

The new plant underscores rising U.S. demand for rPET amid calls from governments, environmental groups and others to recycle more plastic. The U.S. PET recycling rate in 2021 was about 27%, based on industry data estimates.

rPET and bales are large-volume commodities in the PET sub-sector of the plastic recycling industry. rPET food grade pellet was assessed on Thursday at 76-82cts/lb FOB U.S. South, down 11cts/lb in the previous week, while curbside PET bales were assessed at 8-10cts/lb, up 1ct, according to PetroChem Wire by OPIS, a Dow Jones company.

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## ETHYLENE OPERATIONS MAP



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