PLATTS PETROCHEMICAL ANALYTICS

SHALE GAS TO POLYETHYLENE

Global outlook to 2023

Featuring Bentek Energy’s 10-year Price Forecast
The shale gas revolution is rapidly changing the US ethane, ethylene and polyethylene supply equation, with direct implications for global trade flows of polyethylene between key production and consumption regions. Find out more in this unique, in-depth report created by Platts’ experienced market analysis team, leveraging the NGL forecasting excellence of US-based analytics company Bentek Energy.

**North America**
- US ethylene capacity to climb to 38.5 million mt by 2020, up from 27.7 million mt in 2013
- US ethylene run-rates are expected to fall to 83% in 2018 as new units are brought online
- North American PE production to climb to 24.7 million mt/year by 2022, up from 18.6 million mt in 2013
- North American PE demand to climb 39% to 22.2 million mt/year by 2023
- North American PE surplus to peak at 3.5 million mt/year in 2017

**Western Europe**
- European HDPE production will increase in 2017, 2018 and 2019, with increases in capacity in Russia, overshadowing plant closures in Western Europe, namely in Belgium and Germany.
- Europe LDPE production is to dip in 2015 due to plant closures in Central Europe and Italy but increase again in 2018, with additional capacity coming on stream in Serbia.
- Europe LLDPE is currently in deficit of 459,000 mt/year, and this deficit is set to remain, but narrow a balanced position in 2019 as capacity comes on stream.

**Central & South America**
- Central and South America facing polyethylene deficits of more than 2 million metric tons starting in 2015
- Those deficits are expected to peak at 3.2 million metric tons in 2018
- North America can fill nearly all of the Central and South American need.

**Africa**
- Africa PE demand growth is expected to average 7.1% annually from 2012 to 2023. As a result, the deficit is set to increase from 1.8 million mt/year to 3.2 million mt/year from 2013 to 2023. Operating rates as a total for all PE resins produced will average 84% in the outlook period.
- Additional polyethylene capacity will focus around Algeria and Egypt, as more HDPE and LLDPE additions are expected to come online. LDPE capacity will remain flat.
- Africa HDPE is expected to grow faster than HDPE and LLDPE, averaging 7.1% annually. LDPE will command the highest deficit for the region, accounting for 1.4 million mt/year by 2023

**Asia Pacific**
- Asia is projected to be PE net short by 13 million tons by 2023 and through the forecast period, China will be the main driver.
- SE Asia will continue to face feedstock challenge due to high cost naptha.
- The total ethylene capacity from CTO/MTO projects is expected to be 15.5 million tons, while the PE capacity is 11.5 million tons.
- The Middle East will still remain the main supplier to Asia.
United States

- For how long will cheap US gas ensure competitive feedstock?
- Are all US planned cracker projects going to be built?
- Which consumers will absorb US exports of PE?

Middle East

- What PE export markets globally can the Middle East defend?
- Will new Middle East capacity use naphtha or gas feedstock?
- Do any Middle East PE producers risk run cuts on tight gas feed?

Latin America

- How much Asian PE will the US displace in Latin America?
- Will Latin American PE demand outpace GDP growth?
- How much ethylene growth can we anticipate?

Africa

- How much surplus US polyethylene will Africa soak up?
- Which Middle East & Asian producers will challenge for Africa markets?
- Can Africa significantly develop its petchem industry?

Europe

- How many European crackers will remain competitive?
- Are there more asset rationalizations in sight?
- Will Europe still have a PE supply deficit by 2023?

Asia

- Is MTO the saviour for Asian ethylene, or a pipe dream?
- Will China’s new PE plants add to a global supply excess?
- Can S.E. Asian PE producers compete with the US and Middle East?
Platts Global Outlook for Shale Gas to Polyethylene helps you understand:

- Clear implications of cheaper US ethylene, ethane and PE, from NGL price forecasts out to 2023
- Market implications of a potential oversupply of ethylene beginning in 2017
- Incremental US exports of PE increasing competition in the global marketplace

Featuring a quarterly executive summary, in-depth regional reviews and global market outlook on prices, supply & demand, key projects and trade flows and including:

- Global Ethylene Cracker Projects Table
- Global Cracker Projects GANTT Chart
- Global Cracker Projects Map
- US Ethylene Cracker Projects Map
- China CTO/MTO Ethylene Projects Table
- China CTO/MTO Ethylene GANTT Chart
- Ethylene Variable Cost Curve
- PE consumption per capita Bubble Chart

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Or to speak to one of our petrochemical specialists:

**Asia**

- Ihsan Rahim
  - +65 6532 6429
  - ihsan.rahim@platts.com

- James Doo
  - +61 3 4550 8300
  - james.doo@platts.com

**EMEA**

- Maria Vasari
  - +44 20 7176 6294
  - maria.vasari@platts.com

- Olivier Geleoc
  - +44 20 7176 3856
  - olivier.geleoc@platts.com

**Americas**

- Angie Joe
  - +1 713 658 3239
  - angela.joe@platts.com

- Andrew Aitken
  - +1 713 655 2221
  - andrew.aitken@platts.com