

Argus report sample

Argus Olefins Outlook

May 2024

Olefins Outlook executive summary

Market sentiment remains cautious, but steps to rebalance supply and demand are beginning with cracker closure announcements in Europe and Japan

What's changed

- North America ethylene balance improves with the start-up of new derivative capacity in 4Q23.
- North America propylene spot prices were down by 25pc in March, with a further price erosion expected in the second quarter.
- Demand stable in the short term — longer term the balance will tighten as capacity closures take effect.
- The northeast Asian outlook sees a slight softening in the market due to emerging supply.

Monthly regional ethylene prices

\$/t

Monthly regional propylene prices


\$/t

Olefins Outlook
10 May 2024




Now available


Talk to our olefins experts



Craig Barry heads up the global ethylene team focused on integrated global forecasts. He has over 30 years experience in the olefins industry including with Dow Chemical and ExxonMobil. Throughout his career Craig has worked across the world with major olefins and derivative producers. His experience also includes olefins feedstocks and refinery integration with the petrochemical industry. He holds a chemical engineering degree from The Ohio State University and an MBA from Rice University.



Sarah Rae is Argus' propylene consultant focusing primarily on Europe and the Middle East. For 17 years prior to joining Argus, Sarah held senior strategic purchasing management positions at Ineos, Tessenderlo and Rhodia, responsible for a wide range of materials including olefins, fertilizers and commodity raw materials. Before this, Sarah held various management and project roles covering most aspects of the chemical business including business management, sales, planning and logistics. She graduated with a degree in geology from Leicester University.



Craig Fisher is a member of the Argus Media olefins team focusing on propylene and associated derivatives. He contributes to the monthly Argus Olefins Outlook.

3-Month forecast snapshot

| Description | Units | Price | Date |
|-------------------------|-------|-------|-----------|
| NE Asia Ethylene cfr M1 | USD/t | 861 | 12 Jan 24 |
| NE Asia Ethylene cfr M2 | USD/t | 857 | 12 Jan 24 |
| NE Asia Ethylene cfr M3 | USD/t | 878 | 12 Jan 24 |
| NE Asia PGP cfr M1 | USD/t | 848 | 12 Jan 24 |

Latest olefins news

| Feedstocks | Olefins | Download |
|------------|---|-----------|
| 11:38 | Japan's petchem output slides in 2023 | 12 Jan 24 |
| 11:38 | Enterprise's PDH rates to rise | |
| 11:37 | Azoto to ramp up Police PDH | 08 Dec 23 |
| 05 Feb 24 | Europe PE, PP to stay challenging in 2024: Borealis | |
| 05 Feb 24 | Azoto's Polish PDH/PP completion delayed again | 10 Nov 23 |
| 02 Feb 24 | US ethylene inventories build in 4Q: AFPM | |
| 20 24 | LyondellBasell sees 1Q cracker rates at 80pc in NorthAm | 13 Oct 23 |
| 24 | US ethylene January contract settles 1¢/lb higher | |
| 24 | Higher PDH utilization in 2024: Enterprise | 22 Sep 23 |
| 24 | Chemical waste water treatment at Rozenburg back | |
| 24 | Asia-Pacific Olefins Snapshot 1 Feb | |
| 24 | Europe ethylene: Market stable and balanced | 07 Sep 23 |
| 24 | Asia-Pacific ethylene: Rates stabilize after 2023 | |

Customers can access the new interactive Olefins Outlook Workspace on Argus Direct

Plan ahead using our olefins forecast services

Argus anticipates uncertain global demand for olefins over the next 3 to 6 months as global economic growth continues to disappoint expectations.

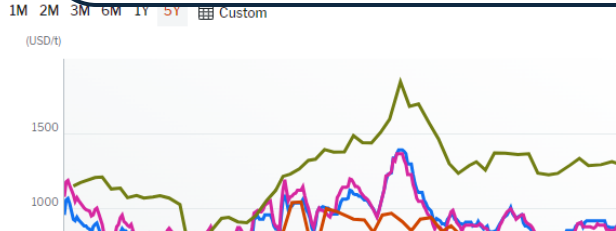
Discover more insight from our olefins experts in our monthly [Argus Olefins Outlook](#).

For our long term viewpoints including a 10-year fundamentals forecast read our [Argus Ethylene Analytics](#) and [Argus Propylene Analytics](#).

You can learn about our forecast coverage and how to access this

5-Year forecast

1M 2M 3M 6M 1Y 5Y Custom



Global olefins prices

| Description | Units | Price |
|---|--------|----------|
| Ethylene pipeline USGC net transaction contract month 1 | USC/lb | 29.50 |
| Propylene polymer grade fob US contract month 1 | USC/lb | 51.00 |
| Ethylene del NWE contract month 1 | Euro/t | 1,190.00 |
| Propylene polymer grade del Europe contract (MCP) month 1 | Euro/t | 1,065.00 |
| Ethylene cfr northeast Asia | USD/t | 927.50 |
| Propylene polymer grade cfr northeast Asia | USD/t | 850.00 |

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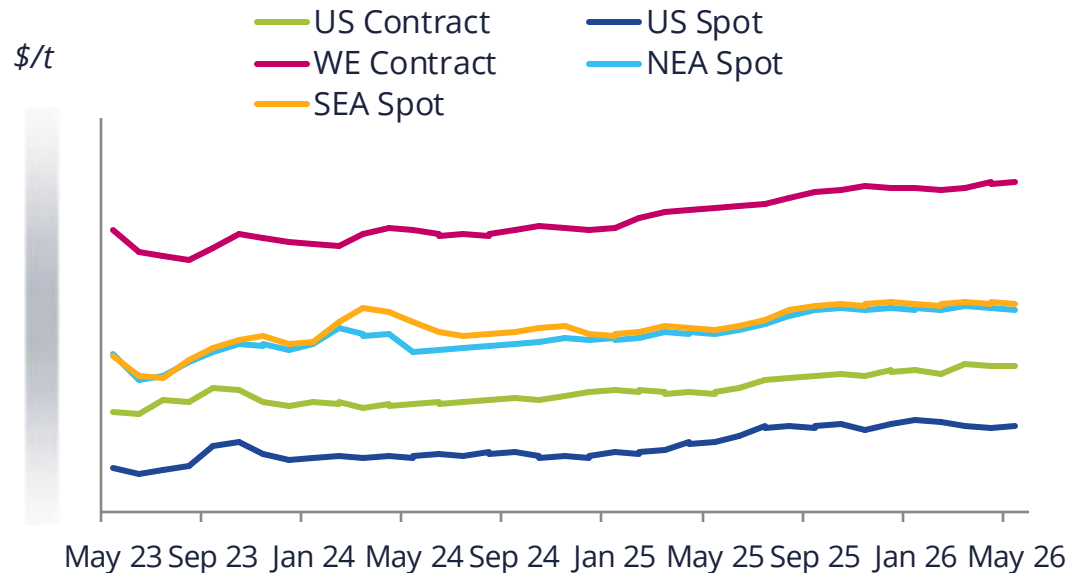
Olefins Outlook executive summary

Market sentiment remains cautious, but steps to rebalance supply and demand are beginning with cracker closure announcements in Europe and Japan

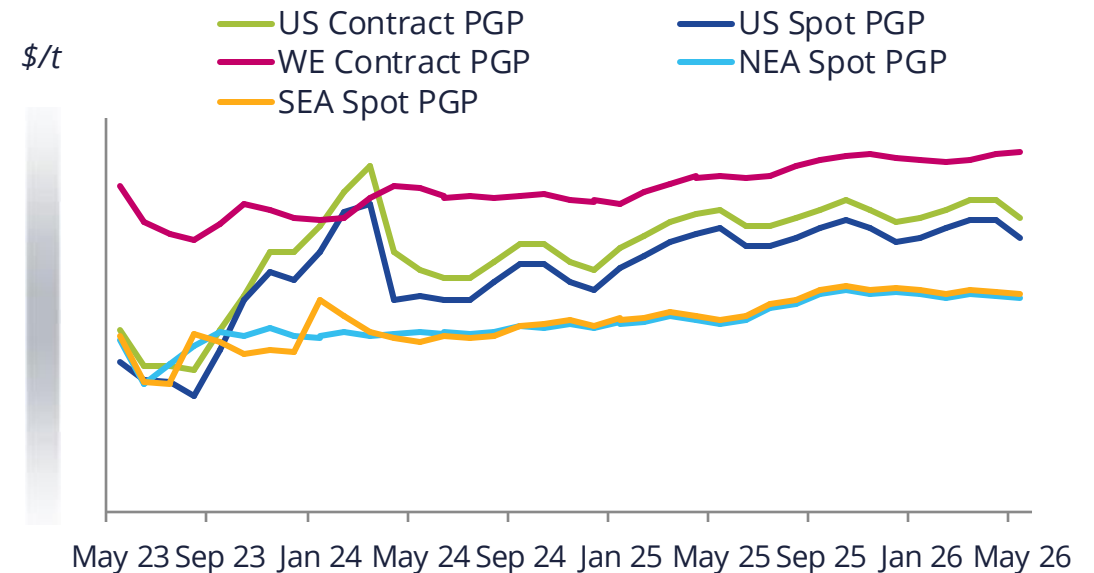
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Monthly regional ethylene prices



Monthly regional propylene prices



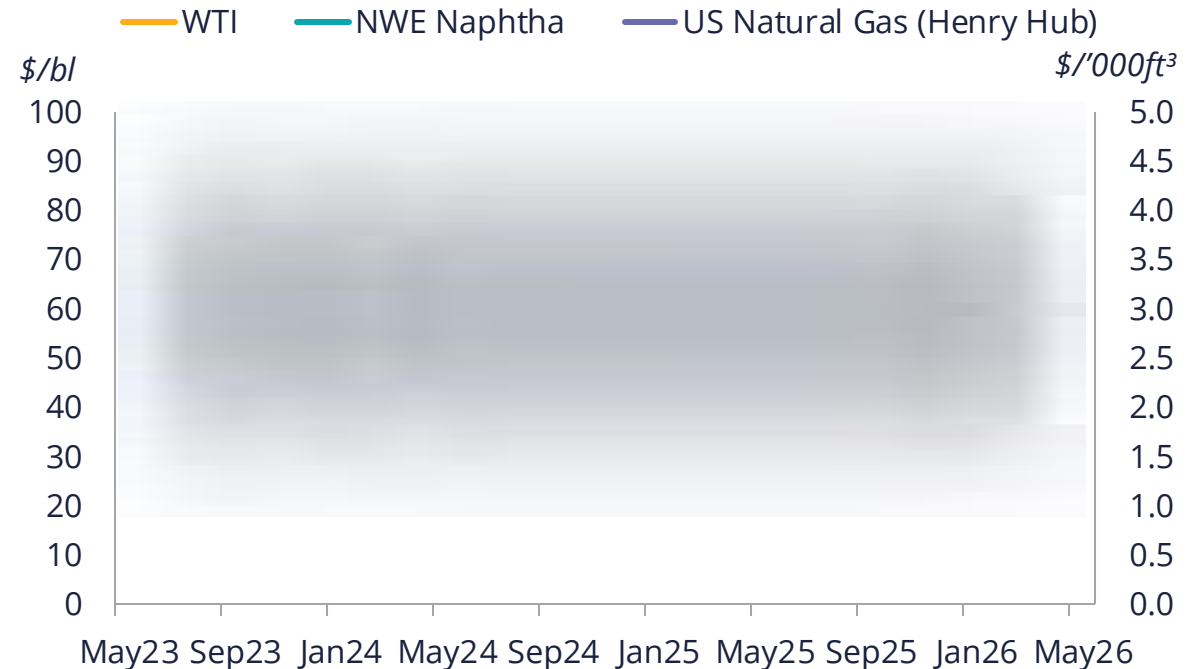
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Energy and feedstocks

North Sea Dated forecasts have been revised down in the very short term, as net length is being stripped out and refining margins have weakened

- Argus have revised down the North Sea Dated forecasts for May and June – by \$6/bbl and \$2/bbl respectively to \$86/bbl and \$88/bbl – to reflect the recent market developments.
- The de-escalation of tensions between Israel and Iran means the market is no longer pricing in the possible loss of up to 2mn b/d of Iranian crude and condensate exports, nor the potential disruption of up to 20mn b/d of crude and products which flow through the Strait of Hormuz.
- Refining margins contracted on the month in all four of the major hubs in April, driven by weakening middle distillate, LPG and naphtha cracks.
- Petrochemical demand for naphtha weakened in Asia, with refinery and cracker outages, and in Europe, as derivatives imports arrived from Asia, weighing on prices.
- Naphtha prices are also weighed on by rising exports from Russia and strong octane prices over the summer months.
- In April, gasoline cracks rose in three of the four main refining regions, only falling for the US Gulf Coast. Moving forward, cracks are expected to rise as the summer driving season demand growth outweighs increased supplies when refineries come back on line in all regions.
- LPG prices will ease as we head towards summer because of declining heating demand and growing inventories, but prices will turn bullish in the mid-term as fundamentals tighten.

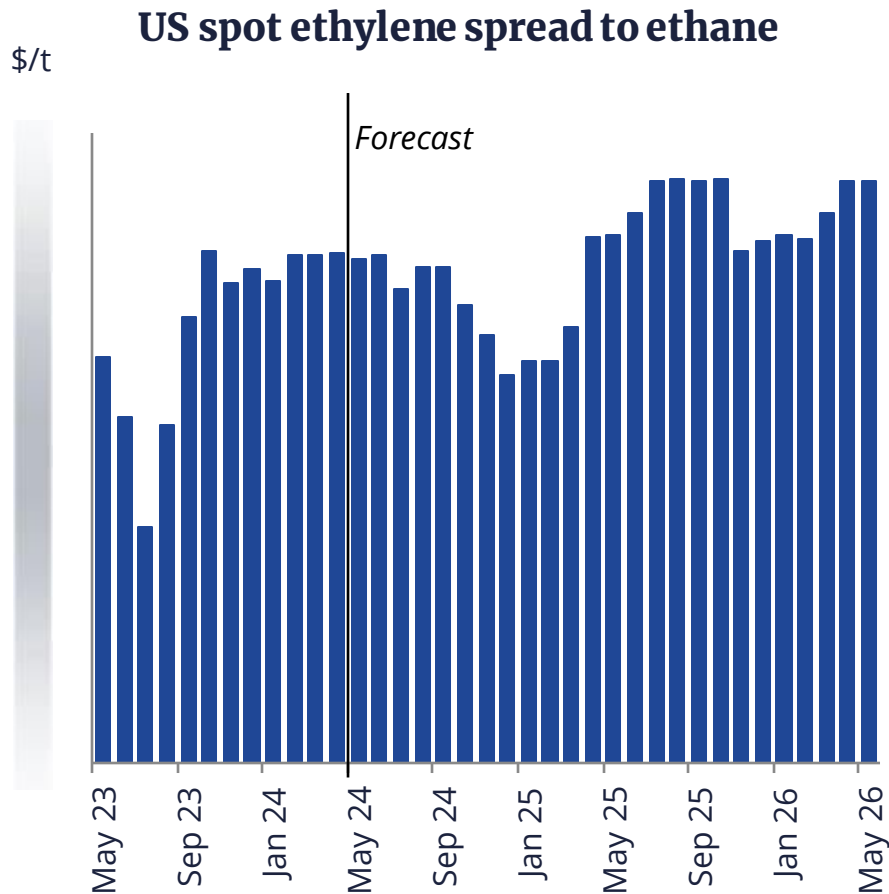
Energy Price Forecast



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Americas: Ethylene

Operating rates and integrated ethylene chain margins move higher over the outlook forecast period

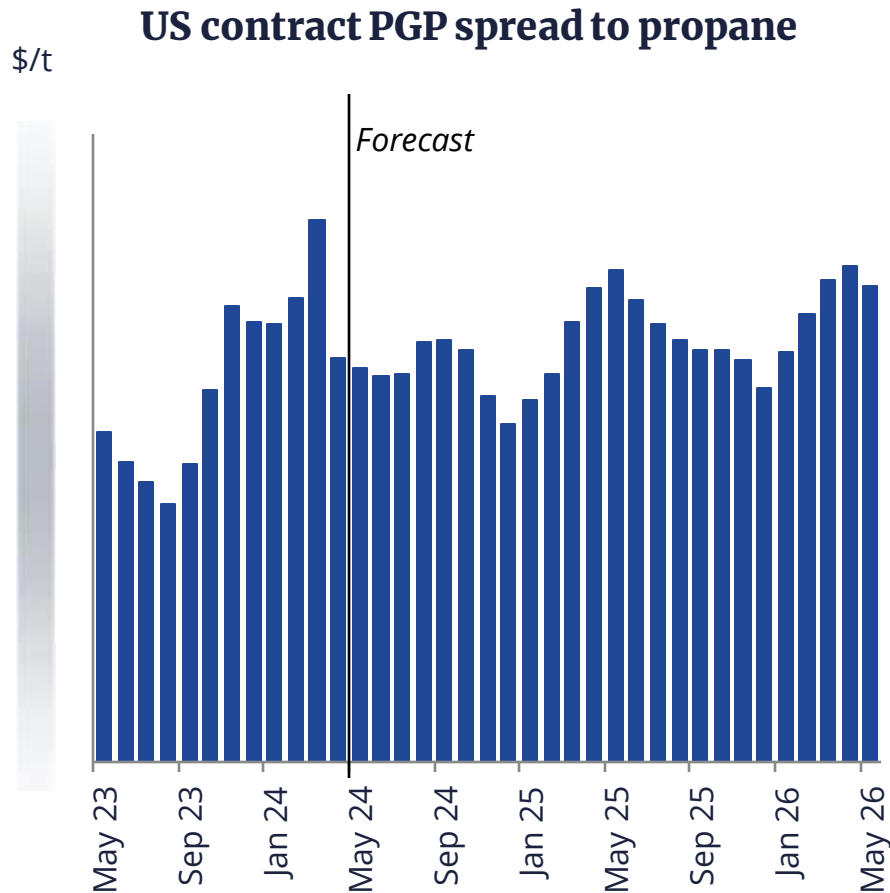


| | Apr 24 | May 24 | Jun 24 | Jul 24 | Aug 24 | Sep 24 | Oct 24 |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|
| US contract ethylene, \$/t | | | | | | | |
| US spot ethylene, \$/t | | | | | | | |

- The start-up of new ethylene derivative capacity in 4Q23 will improve the region's ethylene balance. This new derivative capacity is in attractive product markets like linear alpha olefins and ethylene-to-alkylate.
- North America producers retain their cash advantage over other regions except the Middle East. Exports of ethylene, polyethylene and ethylene glycol will continue to grow.
- New infrastructure projects to support ethylene exports come on line 2H 2024 and 2025.
- Global ethylene and derivative capacity additions slow until 2027-2028.
- Economic conditions improve as inflation recedes, and the US job market remains resilient.

Americas: Propylene

Contract prices nosedive in April amid improved supply and weak spot market; further price erosion expected through end Q2



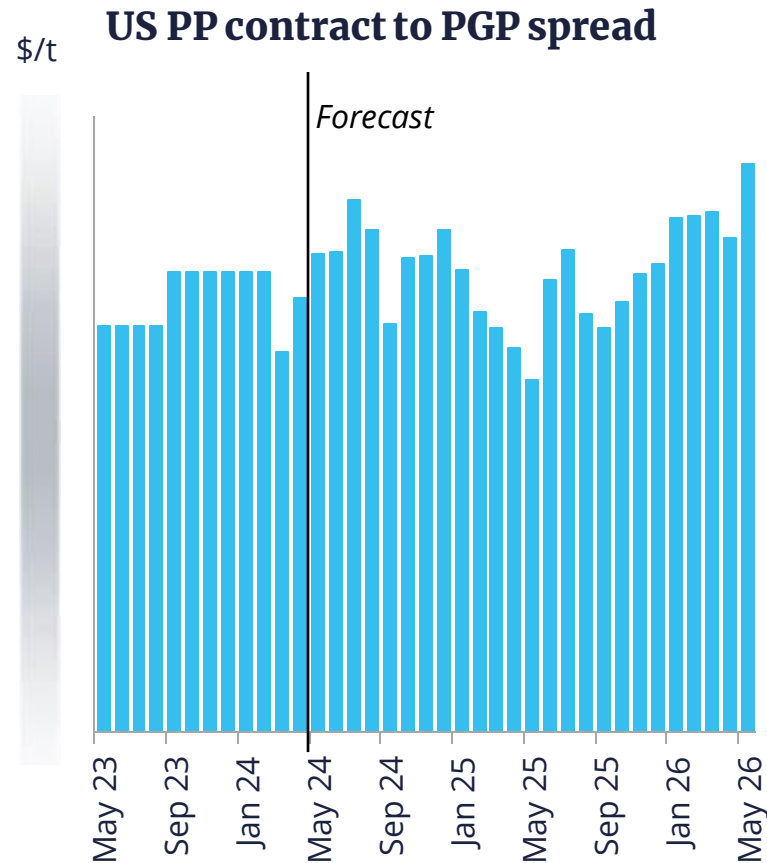
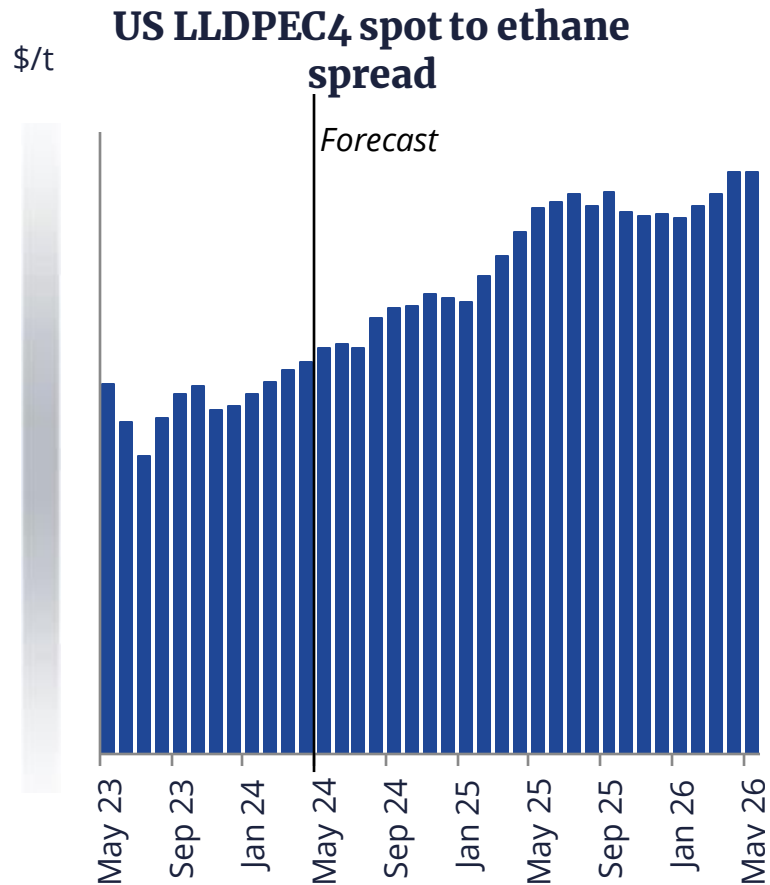
| | Apr 24 | May 24 | Jun 24 | Jul 24 | Aug 24 | Sep 24 | Oct 24 |
|-----------------------|--------|--------|--------|--------|--------|--------|--------|
| US contract PGP, \$/t | | | | | | | |

- US PGP contracts for April experienced a sharp correction, settling down at \$220/t and halting a six-month run-up in prices. The April settlement was mixed, with most buyers accepting a [redacted] reduction, while others were able to secure a price drop of more than \$300 [redacted].
- Dow's [redacted] t in Freeport, Texas experienced an unplanned shutdown on April 27. The unit was restarted on May 3 with minimal impact on spot prices during the outage.
- One US Gulf coast propylene oxide producer is currently down for maintenance, and another is planning a mid-May turnaround. The outages are having little, if any, effect on propylene spot prices.
- The US propylene market will continue to experience supply constraints into the third quarter, with a propane dehydrogenation (PDH) plant turnaround at Enterprise's [redacted].
- Polypropylene (PP) contract prices in April mirrored the PGP settlement for the month. PP demand remained muted in April as buyers were largely on the sidelines in anticipation of further price relief in the May-June timeframe.

Americas: Polymers

Severe Weather Impacting Export Demand

More details available in [Argus Polyethylene Outlook](#) and [Argus Polypropylene Outlook](#)

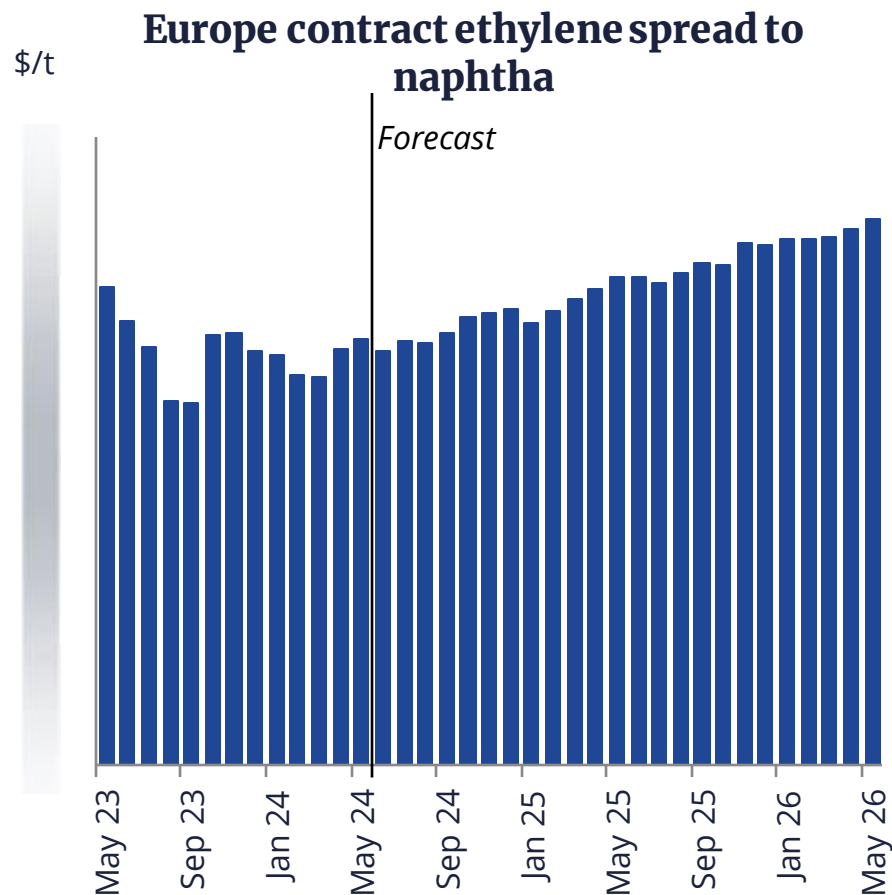


- Braskem had to shut down all of its operations in Rio Grande do Sul state after extreme flooding in recent days, but said its polymer inventories are safe and protected from the damage caused by heavy rainfall at its operations in southern Brazil during the past two weeks. Braskem operates eight industrial units in Rio Grande do Sul that make 5mn metric tonnes/yr of basic petrochemicals, polyethylene and polypropylene.
- PE operations continue upwards with March rates around 87%. Year-to-date production is up 7% versus 2023. YTD exports are up 47%, but days of inventory continue to climb (46) as production exceeds total sales.
- PP demand is expected to improve as prices dropped 10 cpp this month based on PGP price declines. Nevertheless, exports remain non-competitive, but traders in Mexico expect to see more interest in US product as Asian freight rates move higher.

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Europe: Ethylene

Short term demand has plateaued, but is expected to rise in the second half of 2024 and into 2025. Cracker closures will tighten the balance and support margin improvement



| | Apr 24 | May 24 | Jun 24 | Jul 24 | Aug 24 | Sep 24 | Oct 24 |
|--------------------------------|--------|--------|--------|--------|--------|--------|--------|
| Europe contract ethylene, \$/t | | | | | | | |

- Ethylene feedstock differentials remain under despite significant contract price rises across the cracker product suite and the recent fall in crude oil prices.
- Feedstock differentials will remain narrow in the short term, as producers struggle to convince downstream buyers the market fundamentals have changed, but the closure of a cracker in June will tighten the market and could give sellers some pricing power.
- Demand is higher than 2023, supported by restocking and logistics issues affecting imports through the Red Sea, but that improvement has stalled into summer 2024. Cracker operating rates have increased, but producers remain cautious and ready to react if their order intake falls. The downstream market remains cautious and although inflation and interest rates may have peaked, it will take time for this to feed into consumer behaviour.
- Planned maintenance will offer limited support to European ethylene prices in 2024, but 2025 looks more challenging. The closure of two crackers in northern Europe this year will test the flexibility of the European system. We believe the restart of a unit in the UK following major project work is delayed to 2025.
- In the short term, producers will be able to adjust contract prices in line with feedstock movements but will struggle to increase margins. In the longer term and into the second half of the forecast period, producers will increase margins as the market tightens, with further support from a more significant cracker maintenance program in 2025.
- Economic indicators are starting to improve and this will improve growth/margins, but long-term higher energy costs and investment need to meet carbon reduction targets will be a challenge without political support.
- A more balanced global market and improved economic performance within Europe will support margin gains in the second half of the forecast period.

Europe: Propylene

The short-term market balance remains tight but the planned start-up of a PDH in mid 2025 will rebalance the market but test existing logistics.



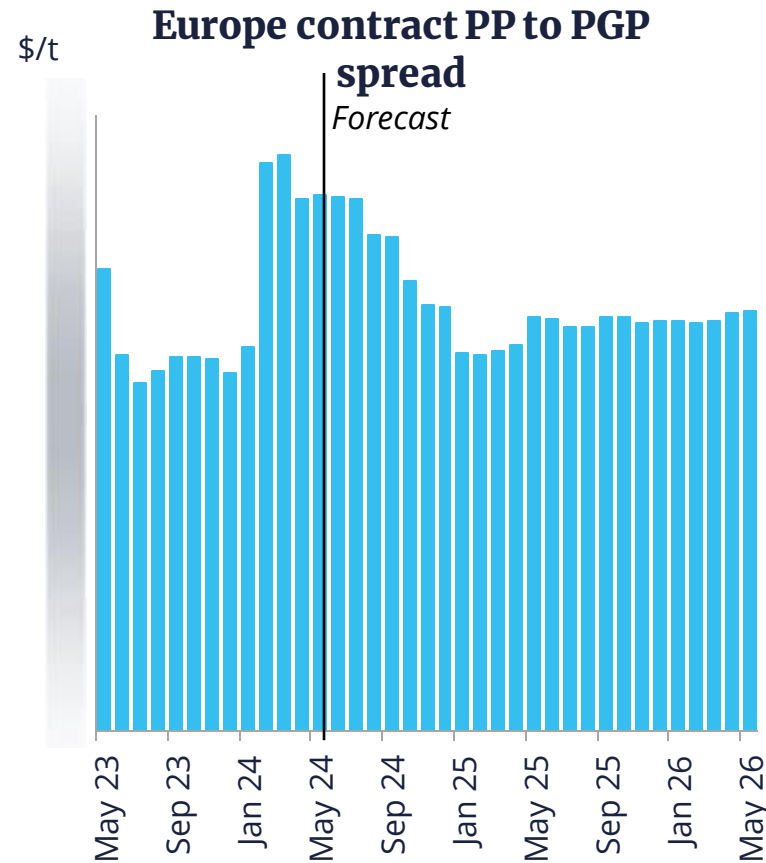
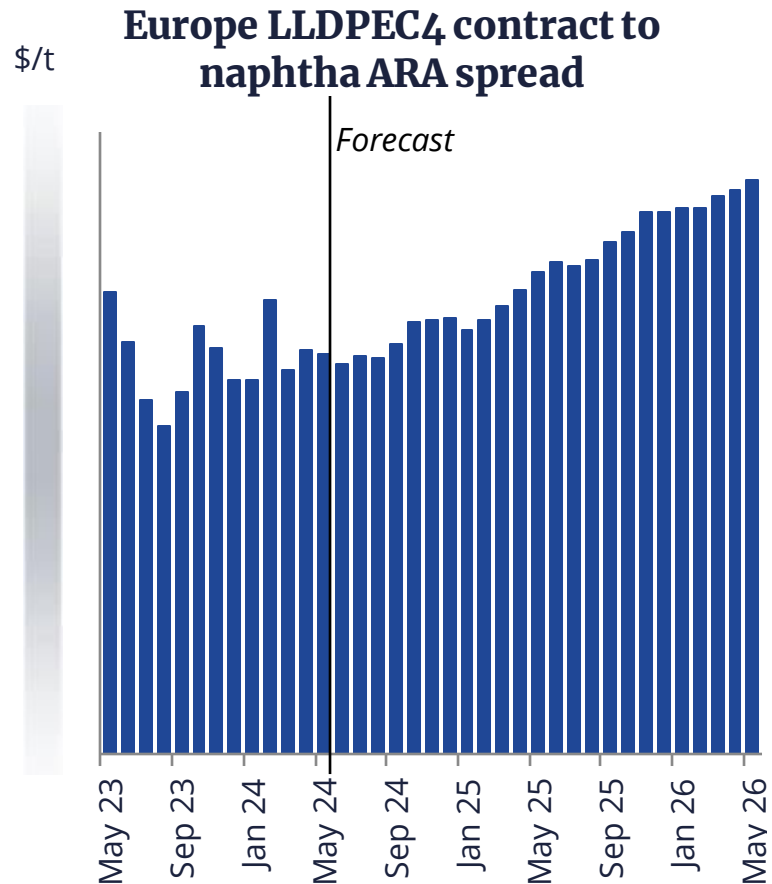
| | Apr 24 | May 24 | Jun 24 | Jul 24 | Aug 24 | Sep 24 | Oct 24 |
|---------------------------|--------|--------|--------|--------|--------|--------|--------|
| Europe contract PGP, \$/t | | | | | | | |

- PP demand increased significantly in the first quarter but imports and a well-supplied global market will reassert themselves in the longer term. Margin gains in the first quarter will be hard to fend.
- Propylene will remain tight as cracker/refinery closures take effect as long as the European net contract price is competitive, so imports are manageable and derivative exports flow.
- European producers — crackers and refineries — have changed their operations to reduce the excess supply which hampered them through much of 2023. Producers remain unwilling to structurally increase output, despite the short-term tightness. Derivative shut-downs are providing a short-term respite, but the market will tighten as units restart.
- Announced cracker closure in France and the Netherlands will further reduce propylene production, but will be balanced by some derivative closure.
- Refinery operators will be reluctant to increase production in a structural way until they are convinced it will not restrict their ability to produce non-propylene products.
- Regional price competitiveness has been addressed by higher discounts, which will reduce imports and allow derivative producers to compete in the export market.
- We expect it to take some time for the propylene market to become better balanced, given the forecast growth in propylene and derivative capacity in Asia. Global rebalancing may be difficult for all market participants and is likely to take most of this forecast period to get under way.
- Refinery capacity will decline in the longer term as fuel demand falls and producers adapt to meet emission reduction targets, but this will be balanced by the start of a PDH unit in mid-2025, which will put pressure on the market balance.

Europe: Polymers

More details available in [Argus Polyethylene Outlook](#) and [Argus Polypropylene Outlook](#)

Short-term polymer demand has stabilised – the Red Sea disruption has been absorbed but a settlement to that dispute could lengthen the market as the supply chain adjusts

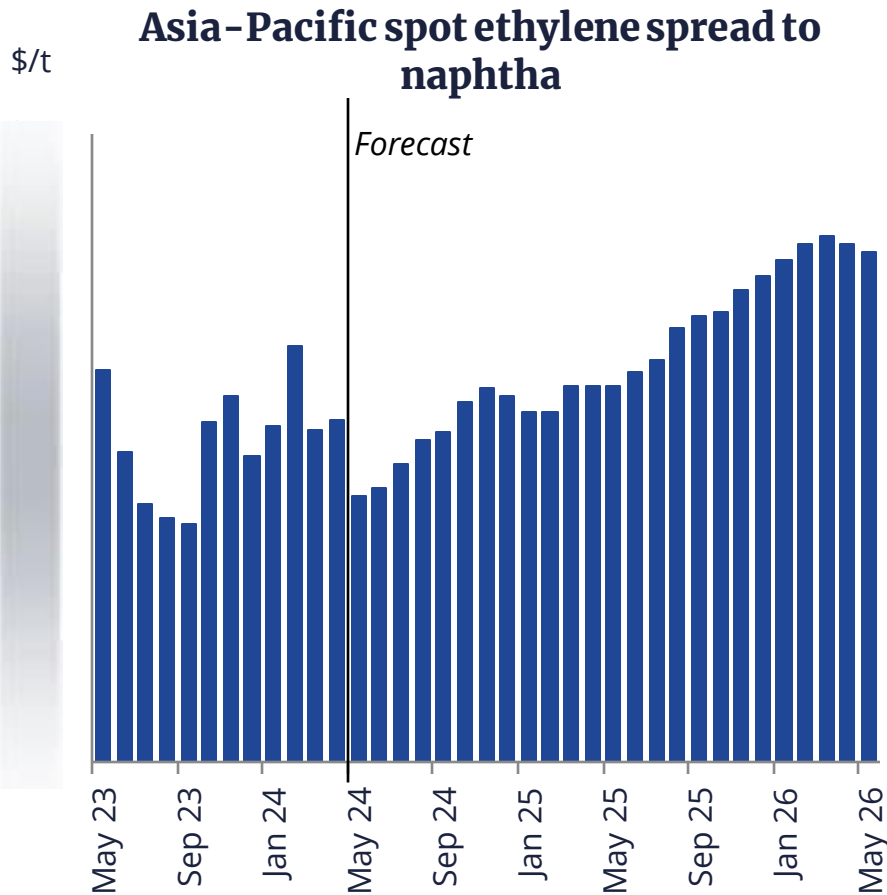


- Producers have increased margins in the first quarter, but now face stronger competition from imports.
- Short term, demand has stabilised as buyers anticipate lower feedstock costs to translate to lower polymer prices.
- The impact of the Red Sea disruption has been normalised, a settlement to the dispute in the ME will lengthen the market as logistics readjust.
- Global PE capacity will rebalance through the **second half of 2024**, allowing European producers to structurally increase margins.
- PP capacity additions are continuing, and global balances will take longer to improve. European producers will continue to export co-polymer grades but be vulnerable to homopolymer imports.
- PVC demand will increase only when the European economy and construction sector recover. Europe will remain a target for exports from the US, where energy costs are structurally lower.

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Asia-Pacific: Ethylene

The market outlook softened in May because of oversupply across the region

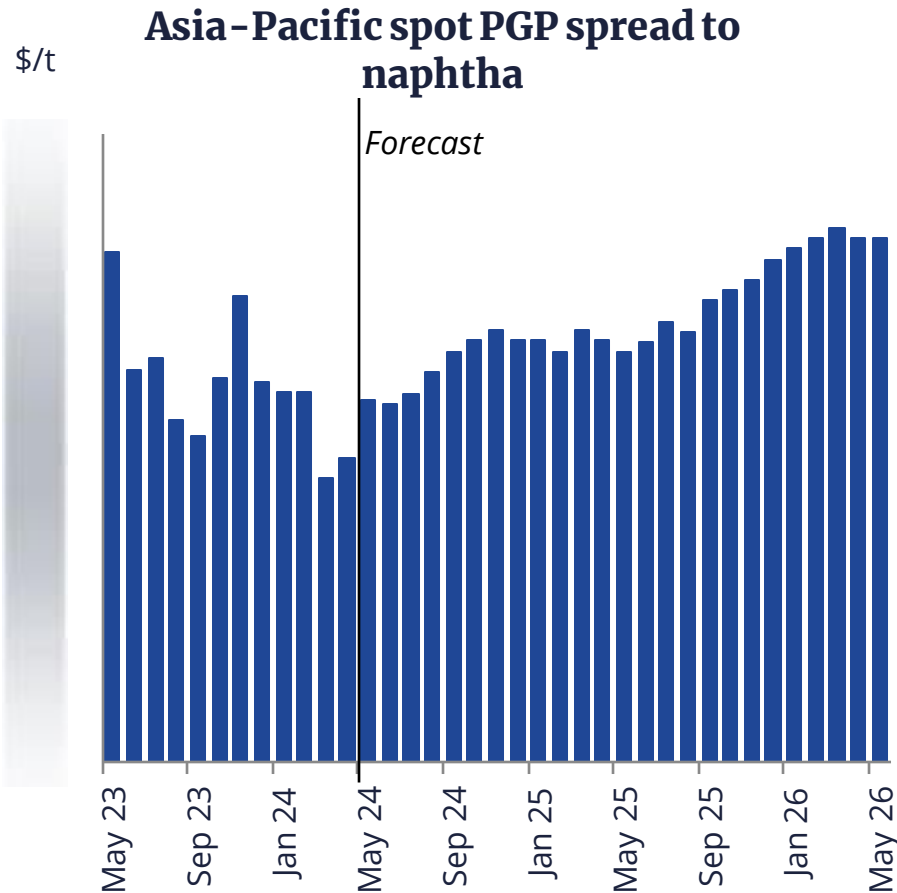


| | Apr 24 | May 24 | Jun 24 | Jul 24 | Aug 24 | Sep 24 | Oct 24 |
|-------------------------|--------|--------|--------|--------|--------|--------|--------|
| NEA spot ethylene, \$/t | | | | | | | |
| SEA spot ethylene, \$/t | | | | | | | |

- Short term ethylene outlook is facing pressures driven by oversupply. Seasonal turnarounds in China and southeast Asia are coming into the end in May-June. Ample spot cargoes from Korea since April kept easing supply tightness across Asia. Overall expectation tends to be weak unless the market rebalances again.
- South Korean producers kept running at high rates as lower feedstock costs supported firmer margins. The country exported extra ethylene cargoes to China and southeast Asia. But the South Korean producers' margins are also eroded due to recent poor ethylene value. They might consider to cut rates soon to protect margins. Then the Asian market is expected to rebalance again.
- Crackers in southeast Asia plan to restart in May-June, which will narrow the price spread to northeast Asia.
- However, improving downstream margins will cap the floor for ethylene value. Slumping ethylene is providing opportunities for downstream producers improving their margins, which will boost downstream to raise their run rates. But the overall consumption is still recovering slowly, mainly because of the gloomy real estate industry, especially in northeast Asia.
- Medium-term sentiment remains firm against balanced market fundamentals. Capacity expansions will slow in 2024. It will start the downstream units first, bringing about 2-3 months of ethylene demand.
- Shell Singapore announced on 8 May the sale of its refinery and chemicals assets to a joint venture between Indonesian petrochemical producer Chandra Asri and Swiss trading firm Glencore. The sale process is expected to be completed by the end of this year.
- China will continue to build new cracker capacity in 2024-26, indicating another cracker expansion peak in 2025. Less competitive crackers and stand-alone ethylene derivative units to maintain the market balance.

Asia-Pacific: Propylene

The regional tightness is expected to ease in the near-term



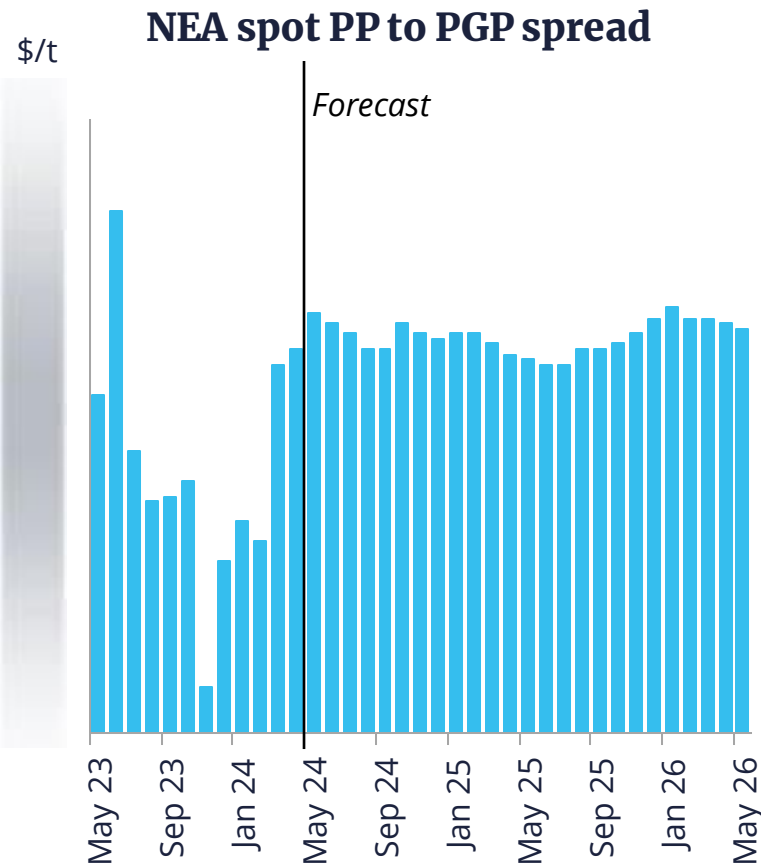
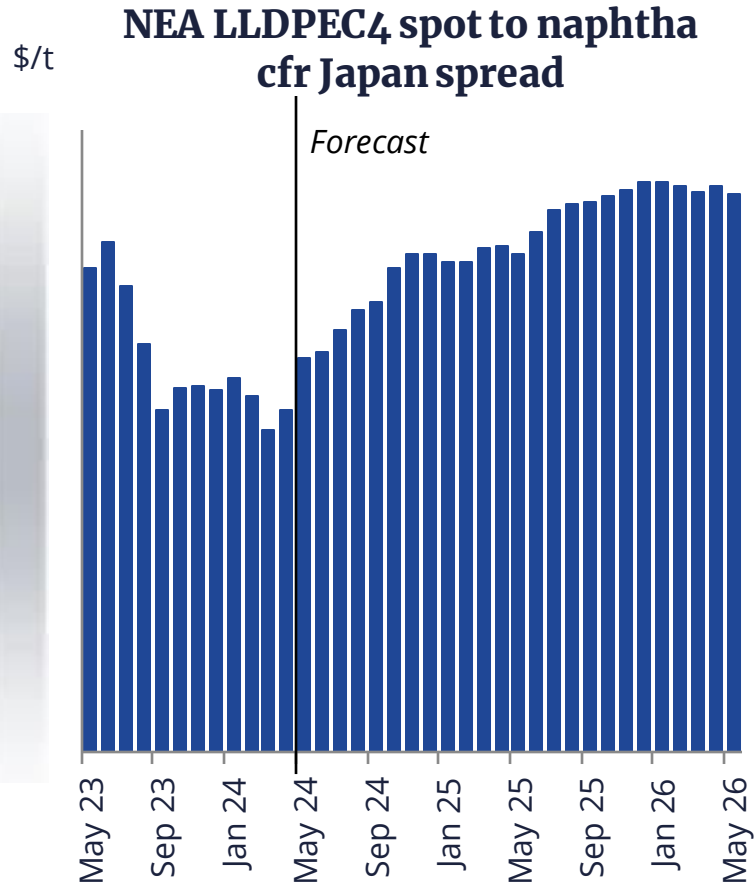
| | Apr 24 | May 24 | Jun 24 | Jul 24 | Aug 24 | Sep 24 | Oct 24 |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|
| NEA spot propylene, \$/t | | | | | | | |
| SEA spot propylene, \$/t | | | | | | | |

- Overall supply is still tightened in northeast Asia. Regional propylene supply has tightened so far this year, but more supplies are emerging from mid-April onwards. Chinese PDH operating rates increased that have been shut because of margin concerns restarted in late April, weighing on propylene values. Some new capacity will come on line this year, exerting renewed pressure on the price outlook, although expectations for lower propane prices over the next three months will protect propane crackers and PDH plants from deeper losses to some extent.
- South Korean producers maintained their high cracker run rates in response to firmer margins since February, which were supported by lower naphtha feedstock costs. But they are cutting production because of limited offers in the market. Poor margins are forcing them to reduce their operating rates as well.
- Downstream demand remained stable, providing support to prices despite incremental in supplies. Buyers were procuring domestic propylene on a need-to basis, and the restart of downstream plants also led to a recovery in demand.
- Propylene may experience a longer downturn than ethylene because of the greater extent of oversupply. The wave of investment in cracker projects and PDH capacity, particularly in China in 2020-24, will result in lower overall operating rates and weak margins for Asia-Pacific propylene plants for an extended period, which is likely to

Asia-Pacific: Polymers

More details available in [Argus Polyethylene Outlook](#) and [Argus Polypropylene Outlook](#)

The polymers market is entering into a seasonal lull through the second quarter, with turnarounds season coming to the end in June-July



- Current polymer prices have held steady owing to the turnaround season in China and southeast Asia, taking place mainly in the second quarter, which will tighten supply for a limited time.
- The low demand season through the second quarter exerted pressure on the price outlook.
- PE capacity expansions are set to slow from 2024. But China will add of PE capacity this year, while Southeast Asia will contribute a further
- China will build of new PP capacity over the next three years. PP capacity expansions in northeast Asia are projected to peak this year.
- The PVC outlook remains subdued in the short term, owing to falling exports and weaker domestic downstream demand.

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craig.barry@argusmedia.com

Craig Barry **Lead Consultant, Ethylene and Derivatives**

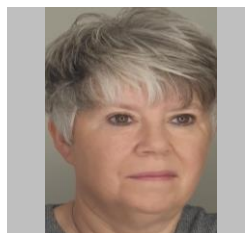
Craig leads the global ethylene team focused on integrated global forecasts. He has more than 30 years of experience in the olefins industry including with Dow Chemical and ExxonMobil. Throughout his career, Craig has worked across the world with major olefins and derivative producers. His experience also includes olefins feedstocks and refinery integration with the petrochemical industry. He holds a chemical engineering degree from The Ohio State University and an MBA from Rice University.



becky.zhang@argusmedia.com

Becky Zhang **Editor, Olefins and Methanol**

Becky works as an editor for Asian olefins and methanol markets. She has 10 years of experience of real-time market editor work. She also spent two years in consulting services as a project manager focusing on the Chinese market and led projects in various industries, including refining, olefins, polymers, coal and methanol. Becky is a chemical engineering graduate from the East China University of Science and Technology and has two masters' degrees, in environmental and energy engineering from the University of Sheffield and in entrepreneurship from the University of Nottingham.



sarah.rae@argusmedia.com

Sarah Rae **Vice-President, Propylene and Derivatives**

Sarah Rae is Argus' propylene consultant focusing primarily on Europe and the Middle East. For 17 years prior to joining Argus, Sarah held senior strategic purchasing management positions at Ineos, Tessenderlo Chemie and Rhodia, responsible for a wide range of materials including olefins, fertilizers and commodity raw materials. Before this, Sarah held various management and project roles covering most aspects of the chemical business, including business management, sales, planning and logistics. She graduated with a degree in geology from Leicester University.



josie.jiang@argusmedia.com

Josie Jiang **Analyst, Olefins and Polyolefins**

Josie is an analyst in Shanghai focused on olefins and polyolefins markets. Her experience includes working at Pacific Gas as a market analyst in the strategic department, focusing on LPG, ethane, shipping and financial markets. Josie is a chartered financial analyst and holds a bachelor's degree in economics, and a master's in finance and investment from the University of Bristol.



craig.fisher@argusmedia.com

Craig Fisher **Lead Consultant, Propylene**

Craig is a member of the Argus olefins team focusing on propylene and associated derivatives. He contributes to the monthly Olefins Outlook report, the biannual Propylene Analytics report, and provides support to both internal stakeholders and external clients. Craig has nearly 25 years' experience in the petrochemical industry including roles with producers and consultants. The variety of products covered in his career include polymers, olefins, aromatics, asphalt, methanol, inorganics, oxo alcohols and electricity.



anna.fittock@argusmedia.com

Anna Fittock **Analyst, Petrochemicals**

Anna is an analyst in the London office focusing on olefins and co-products modelling. Her experience includes working at Ovation Data where she managed and analysed seismic data and deliverables on behalf of a global geophysical company. She holds a BA in geography with international study from the University of Manchester.

Registered office

Lacon House, 84 Theobald's Road,
London, WC1X 8NL
Tel: +44 20 7780 4200

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Global compliance officer

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Jo Loudiadis

President, Expansion sectors

Christopher Flook

SVP Chemicals

Chuck Venezia

Customer support and sales:

support@argusmedia.com

sales@argusmedia.com

London Tel: +44 20 7780
4200

Houston Tel: +1 713 968 0000

Singapore Tel: +65 6496 9966