

Argus report sample

Argus Methanol Outlook

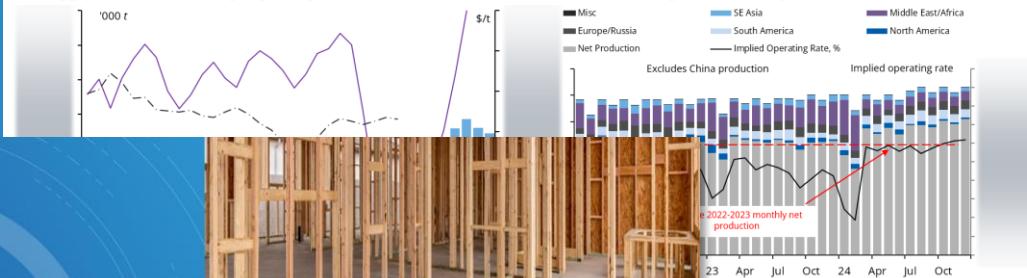
May 2024



Global supply and demand

- Methanol demand slowly improving. Slowing MTO production hindered by rising methanol prices is concerning, as MTO producers cut rates.

Supply/demand versus spot pricing



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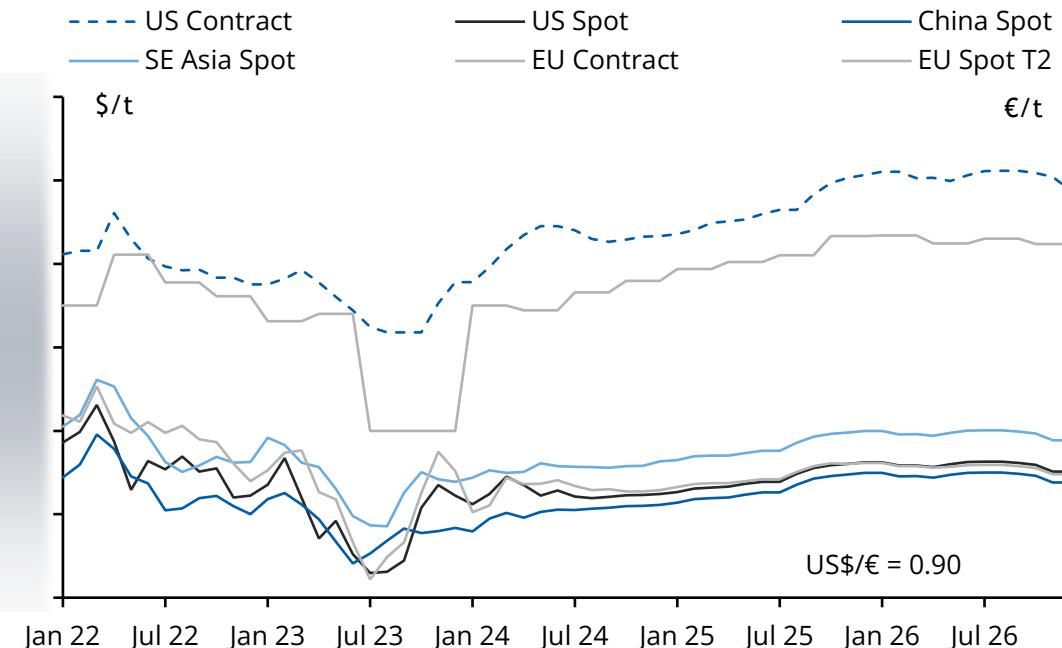
Methanol Outlook global overview

- China olefin/derivative prices rebounding, but strong methanol prices crush MTO economics. **Atlantic basin sees outages again spark spot price strength.**
- For May we see a bit of a mixed path forward—at least in the near term.
- Methanol demand has yet to see a real boost, and now China's large MTO sector is succumbing to poor margins—the result of lackluster olefin/derivative pricing against strong methanol raw material costs.
- MTO operating rates have now slipped to “any” gain the industry accomplished in Q1. Depending on the length of time MTO rates remain reduced, this lack of demand further hurts projections for the year forecast to see This reduction in methanol demand likely offsets
- At least two new methanol units commissioning in 2H'24 likely add more excess to industry supply. If China olefin/derivative prices don't start showing strength, methanol prices will likely come under pressure.
- The Atlantic basin has saw spot and posted prices rise in April, underpinning a further increase in posted prices for May. Although May spot prices weakened through much of the month, late strength is not expected to drive posted increased for June, but this Outlook publishes before June announcements are made.
- Methanol production continues to see puts-and-takes. Iran production is directionally improving, but still sees blips. As mentioned, planned/unplanned outages in the US and a Q2 planned outage in Europe are ongoing, underpinning weekly spot price volatility, with marketer/producer buying still boosting spot prices. Methanex Geismar 3 tried to commission their new unit in February but encountered technical issues, which now push the planned start-up to late Q3. Malaysia new capacity still on track for Q3 startup.

Methanol Outlook what's changed

- Methanol prices reversed upwards as China's olefin/derivative prices rebound as much 7pc, offsetting last month's drop and underpinning methanol price strength.**

Spot/contract methanol prices: history/forecast



- Near-term oil forecast adjusted slightly lower across the board, and then mostly unchanged from last month.
- Methanol prices move higher, again underpinned by expectations of rising (China) olefin/derivative prices.

Pricing: current forecast vs prior forecast change

Forward Months	1-3	4-6	7-12	13-24
Crude Oil Benchmarks				
WTI				
Brent/NSD				
Dubai				
US/NAM Methanol Prices				
Contract				
Spot				
Europe Methanol Prices				
Contract				
Spot				
Asia-Pacific Methanol Prices (spot)				
China				
South Korea				
Taiwan				
Southeast Asia				
India				
China Ethylene/Propylene Index				

- A flag at least "has to be raised" regarding expectations of higher China olefin/derivatives prices in the forecast underpinning higher prices through 2024 and 2025. Ample olefin supplies in China appear to be keeping prices suppressed.

| Global supply and demand - Outages

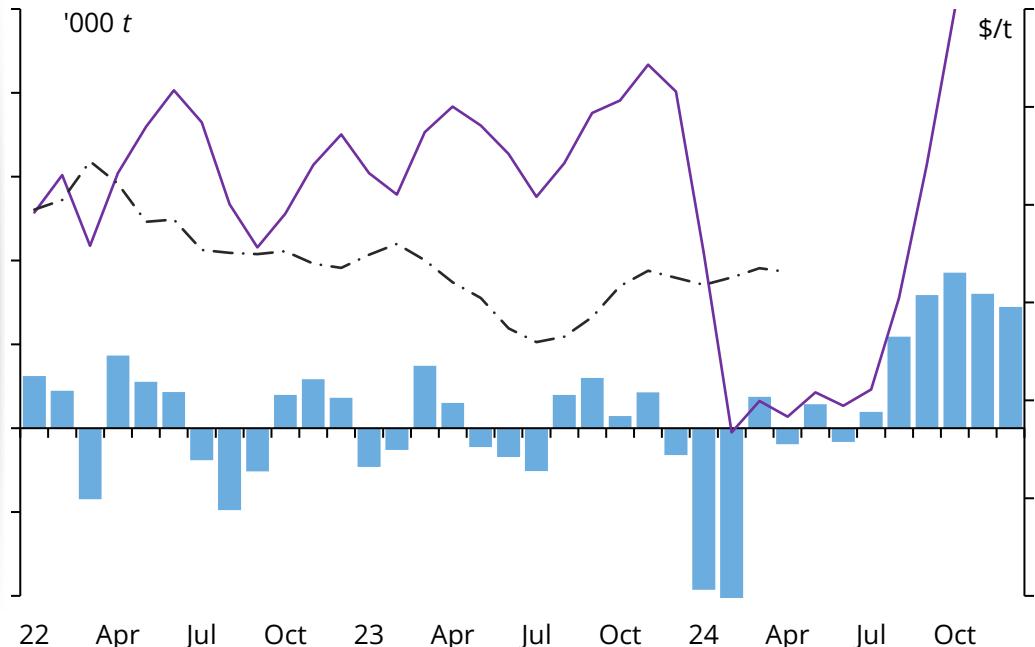
- Outages have been common into May 2024. Iran and China methanol production improving. Start-up of Methanex Geismar 3 now delayed to late Q3'24. Sarawak target's Q3 start as well.

2024 METHANOL UNIT OPERATING SCHEDULE (Lost Volumes, -000- Metric Tons)													
Region	Capacity	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
North America													
South America													
Europe/Central Europe													
Russia/CIS													
ME/Africa													
SEA/Oceania													
India													
China													
Total Capacity - Wld													
Lost Production - Wld													
Eff. Capacity - Wld													
Op Rates - Wld													
Total w/o China													
Lost w/o China													
Eff. Capacity - w/o China													
Op Rates - w/o China													

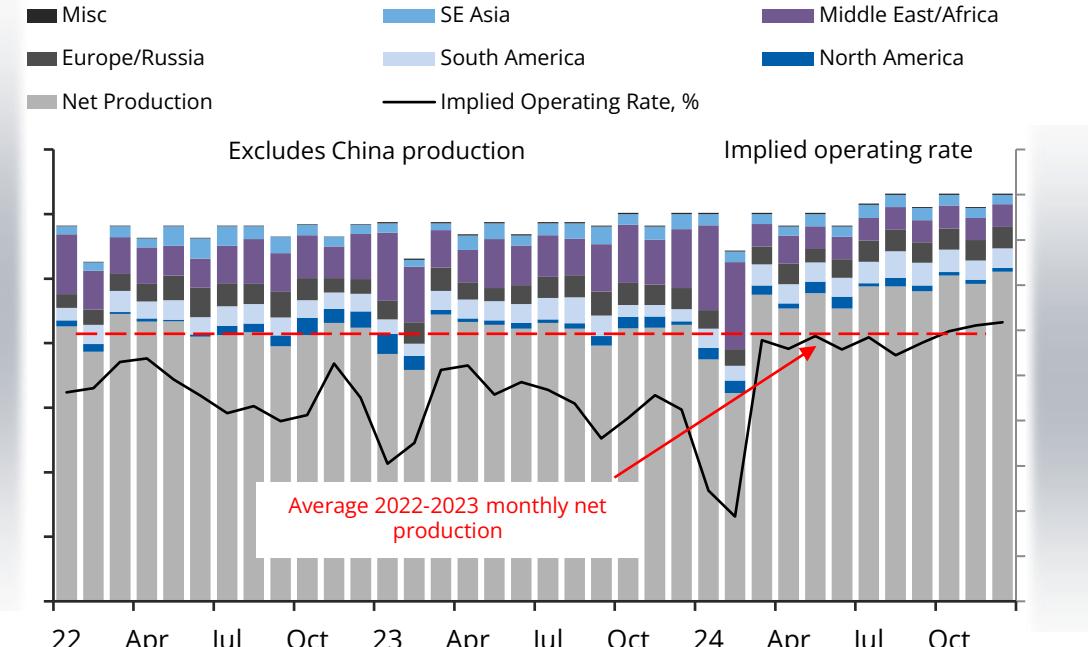
Global supply and demand

- Methanol demand slowly improving. Slowing MTO production hindered by rising methanol prices is concerning, as MTO producers cut rates.**

Supply/demand versus spot pricing



Global methanol production/regional losses



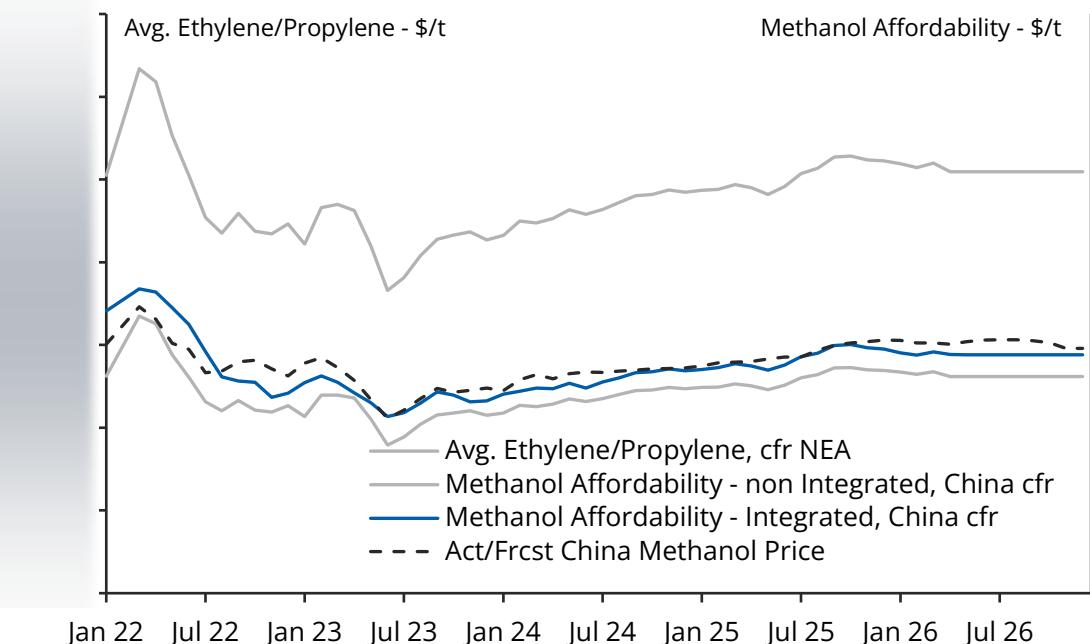
- Atlantic basin prices have seemingly steadily risen since the beginning of the year, as Q1 planned/unplanned outages drove producers into spot arenas. This is again the situation as May ends.
- Winter's demand slowdown (ex China's MTO) and the China Lunar New Year appear to have underpinned a slower rise in Asia prices and now

- reduced MTO rates may pressure China methanol prices downward.
- The ongoing strength seen in the US/Europe may have about run its course, with spot prices "softening" some in May prior to late May unexpected methanol production issues. Again, assuming the upsets are short-lived, prices should weaken some.

Global pricing outlook

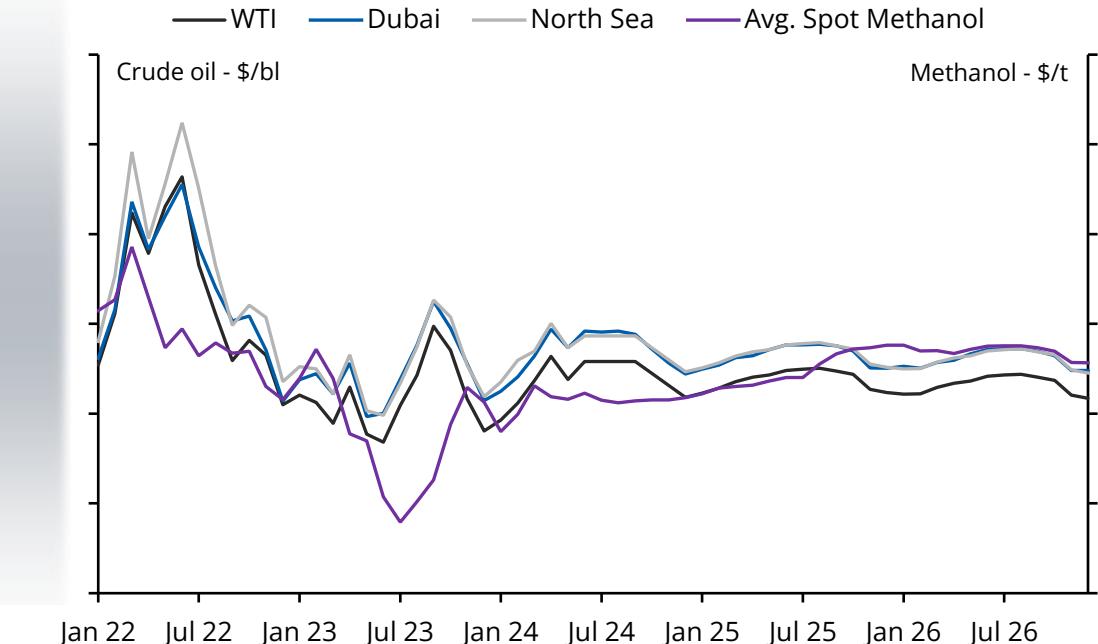
- Methanol prices supported by production issues and directionally improving China olefin/derivative prices. Last month's softer methanol outlook rebounds this month.**

Methanol affordability into MTO



- YTD Argus forecasts for methanol prices to April/May saw olefin/derivative prices stalling, pulling MTO methanol affordability prices down as well.

Crude oil vs methanol pricing – energy equivalence



- The methanol industry sees lingering outages in the Atlantic basin, while Iran looks poised to boost China exports in the coming months. The faceoff between reduced MTO-driven demand and firming methanol prices is coming.

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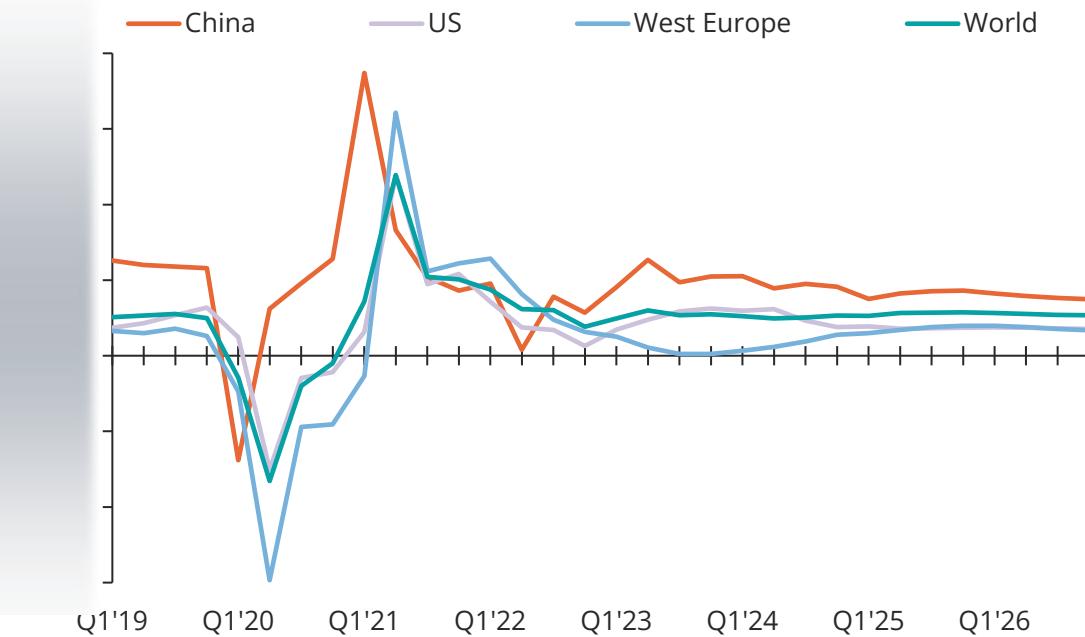
| Economy and Energy

- Economic growth sees slight momentum in some regions/countries. Oil price outlook mostly flat post near month revisions.
- Oxford Economics (OE) still anticipates a [REDACTED] in global economic activity this year. Their world GDP growth forecasts are only slightly changed, at [REDACTED] pc in 2024 and [REDACTED] pc in 2025. While recent inflation data has given some policymakers pause for thought, OE still expects the ECB and Bank of England to cut policy rates in June, while the Federal Reserve now looks likely to follow in September.
- Recent activity data has not significantly altered our baseline view for growth prospects. Although the US economy grew a little bit more slowly than anticipated in Q1, the big picture remains that the US is in the midst of a soft economic landing.
- Both China and the eurozone posted positive growth surprises in Q1. On a seasonally-adjusted basis, the China economy expanded by a healthy [REDACTED] pc in Q1. But the unexpected strength was down to increased production, which may ultimately raise the risk of destocking in the months ahead—the data for March already shows signs momentum has slowed.
- The eurozone returned to growth after a year and half of near stagnation, with slightly better-than-anticipated [REDACTED] pc q/q gain suggesting the economy has a bit more momentum than anticipated, prompting a modest upward revision to the forecast for growth in 2024 to [REDACTED] pc, from [REDACTED] pc projected last month.
- Argus has revised down the North Sea Dated forecasts for May and June – [REDACTED] respectively, to [REDACTED] to [REDACTED] to reflect the recent selling of long positions.
- 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.

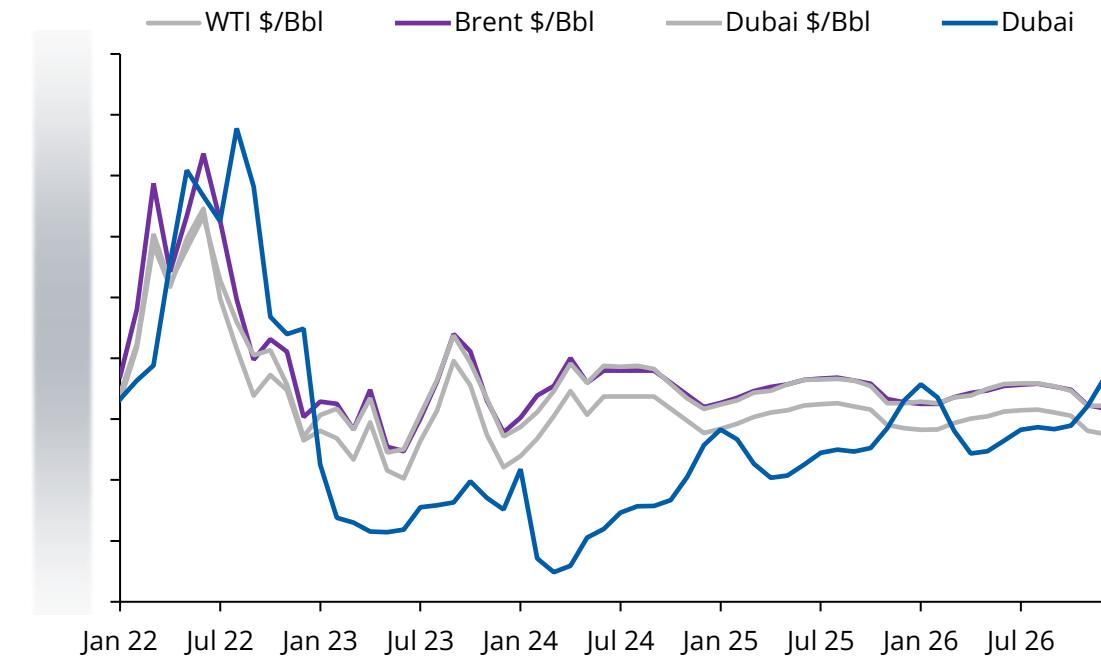
| Economy and Energy

- GDP forecasts see minor improvement, but still reserved. Cautious oil price strength in the early months fail to alter forward month forecast prices.**

Economic indicators: Y-o-Y quarterly GDP



Crude oil and natural gas price history/forecast



- In the absence of a substantial downside growth surprise, inflation and labor market developments remain key to when and how quickly advanced economies lower policy rates.
- The Fed can take heart from the recent labor data, which suggest the risks of a renewed pick-up in wage growth are easing. But this only partially counters the concerns raised by the upside inflation surprises at the start of the year.

- The latter development means OE now expects the Fed to wait until September, rather than June, to cut rates.
- Both the ECB and the Bank of England can be more confident underlying inflation pressures will ease further. OE expects both will cut rates in June, before the Fed's next move.
- Flat oil prices expected in 2024 (so far) do little to boost methanol prices.

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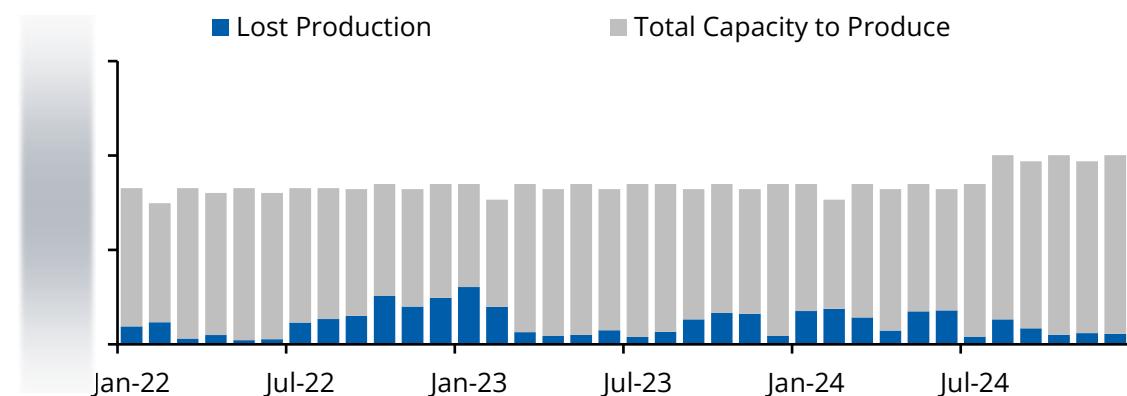
- **May posted prices continue to rise, with both moving [REDACTED] 4¢ and 3¢, respectively, to [REDACTED] 4¢/USG.**
- As well noted, North America saw several planned/unplanned outages in Q1. Issues have continued (sporadically), helping underpin "stronger" spot prices, which then drove higher posted prices. Operating issues continue into May. However, "assuming" issues are resolved in June, the run of steadily increasing spot/posted prices looks poised to end.
- Methanex announced its Geismar 3 unit start-up will be delayed to late Q3 due to reformer damage. There have been no further updates.
- Marketer/producers have been active in the spot arena since mid-February, keeping the spot arena relatively active and "boosting" spot prices. Spot values ended February at [REDACTED] /USG highs, with March hovering slightly higher, at [REDACTED] /USG levels. April slipped slightly, averaging [REDACTED] ¢/USG, May slipped further for three weeks, but Gulf coast issues late month fueled marketer/producers buying, firming prices some, but still expected to average a lower [REDACTED] USG. Some had failed to understand the justification for further May posted price increase. We are calling for [REDACTED] but as always, these settlements are concluded between buyers and sellers.
- Methanol demand was expectedly lackluster in Q1, typical of winter. Most hoped spring would see rebounding demand, but disposable income is still stretched thin with ongoing high fuel and food costs. We still see the Celanese acetic acid expansion [REDACTED] There is an MMA expansion mid year which, too, [REDACTED] With the return of driving seasons in other countries, MTBE production (for export) is expected to improve also. Strong tornadic activity across the Midwest the last two months likely fuels some reconstruction spending, but also hurts disposable spending in other areas.

Americas

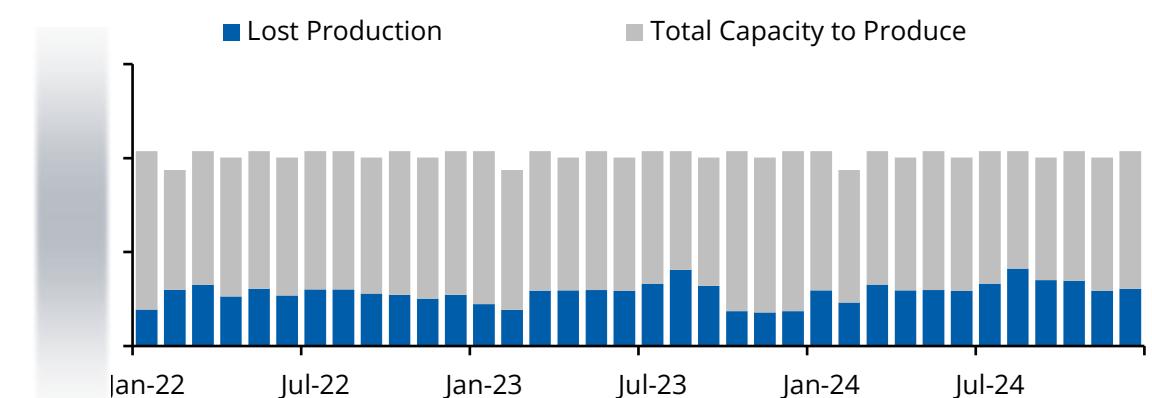
- **Q1 operational issues end, but planned outages in Q2 are on the books, pressuring Atlantic basin prices even higher. The run of higher prices may extend into July.**

2024 METHANOL UNIT OPERATING SCHEDULE : NORTH AMERICA/SOUTH AMERICA											Major facilities - '000t			
COMPANY	LOCATION	CAPACITY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Methanex #3	Canada, Medicine Hat													
Texmex	Texmex, MEX													
OCI North America	Beaumont, TX													
Natgasoline LLC	Beaumont, TX													
Fairway LLC	Clear Lake, TX													
Eastman	Kingsport, TN													
Lyondell/Basell	Channelview, TX													
Lyondell/Basell (Millennium Deer Park, TX)														
Methanex Geismar #1	Geismar, LA													
Methanex Geismar #2	Geismar, LA													
Methanex Geismar #3	Geismar, LA													
Pampa Fuels LLC	Pampa, TX													
Praxair	Geismar, LA													
US Methanol Institute	Institute, WVA													
West Virginia Methanol														
Koch Methanol One	St. James Parish, Argentina													
YPF														
Methanex #1	Chile													
Methanex #4	Chile													
CMC (M2)	Trinidad													
Methanol IV (M4)	Trinidad													
TTMC #1 (M1)	Trinidad													
TTMC #2 (M3)	Trinidad													
MHTL (M5)	Trinidad													
Titan - Methanex	Trinidad													
Atlas Methanex/Ineos	Trinidad													
CGCL/Mitsubishi	Trinidad													
Metor	Venezuela													
Metor 2	Venezuela													
Supermetanol	Venezuela													
Total Nameplate Capacity														
Lost Capacity/Production														
Effective Capacity/Production														
I = Idled Unit														
R = Reduced Rate Operation >25%														
S = Standby (Mothballed)														
r = Reduced Rate Operation <25%														
M = Planned Maintenance														
UC = Under Construction														
O = Operational Problem														

US methanol production losses/capacity - '000t



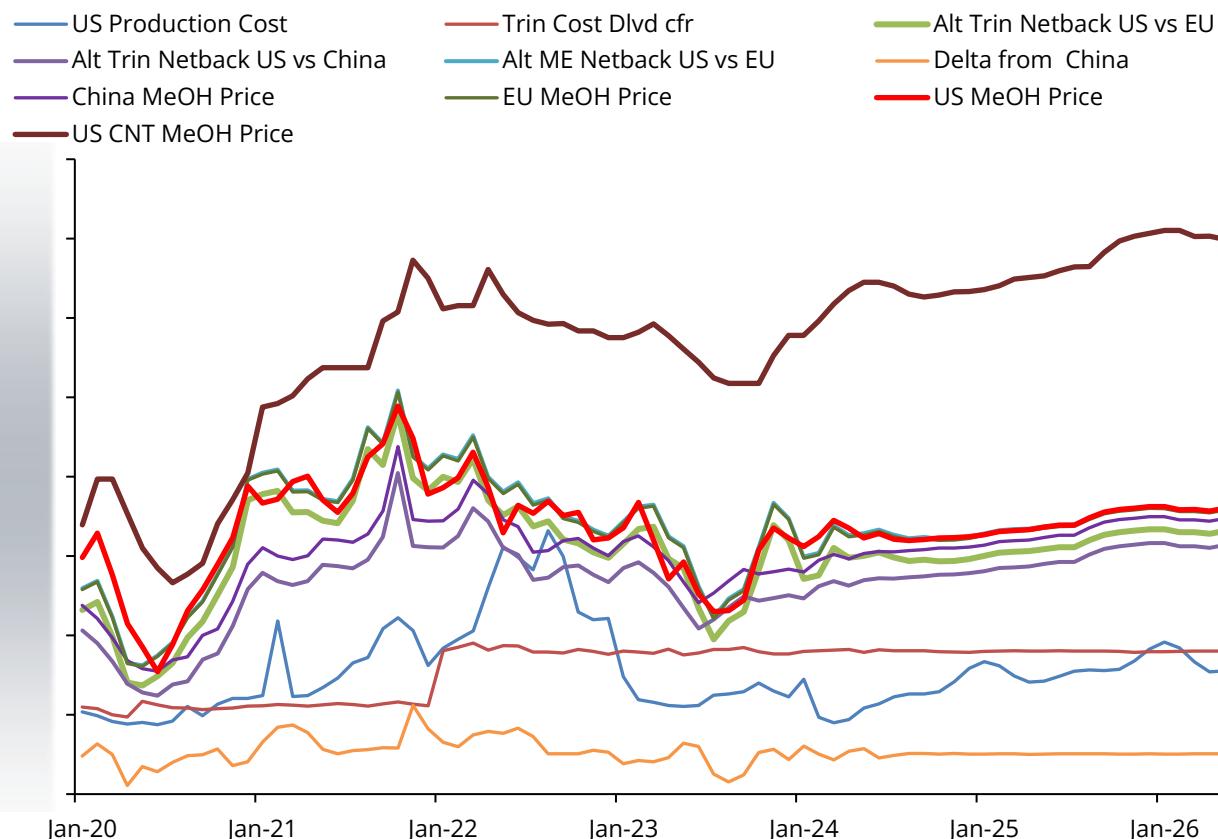
S. America methanol production losses/capacity - '000t



North America

- Argus examines a myriad of potential cost/price drivers to ultimately forecast North America methanol prices.

US methanol price driver analysis

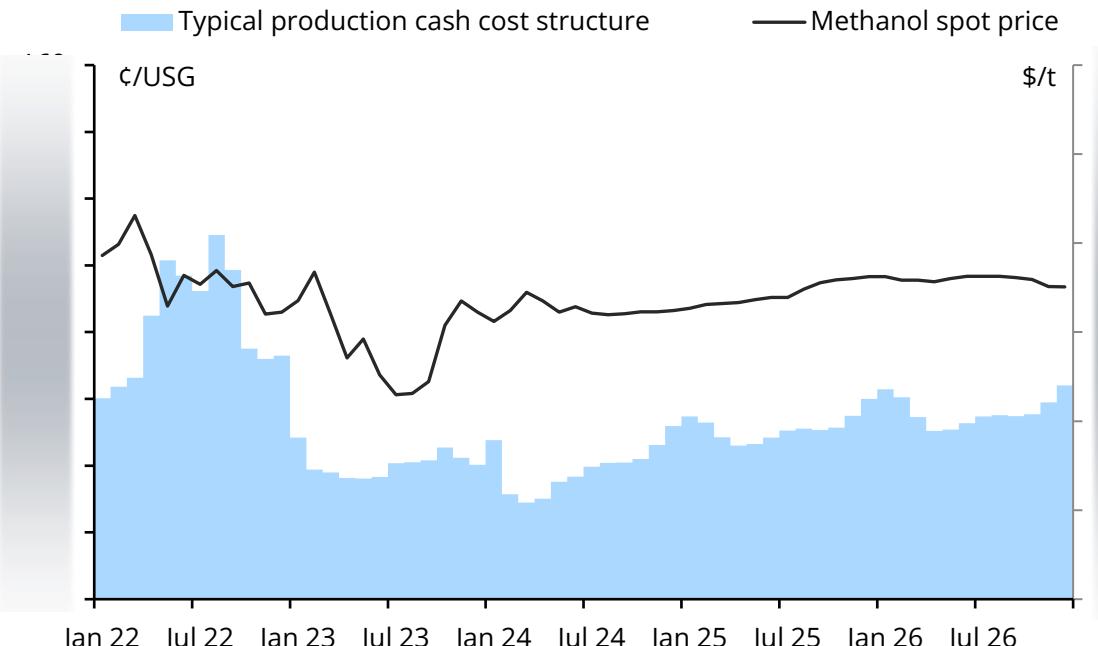


- North America methanol prices have to address competitiveness with Europe and Asia methanol prices, but at the end of the day this region is a "price taker."
- As a net exporter, the region must also be priced competitively with other major markets to insure a steady flow of exports.
- To determine the spot methanol price for North America, Argus considers the following potential drivers:
 - Cash cost of US methanol production, fob US Gulf.
 - Cash cost of Trinidad methanol production delivered, fob US Gulf.
 - China methanol price and delta.
 - Europe methanol price.
 - Alternate Middle East netback, US versus EU.
 - Alternate Trinidad netback, US versus EU.
 - Alternate ME netback, US versus EU.
 - Of course, there can be others.
- North America contract prices are simply ratioed higher based on assumed discounts.

North America

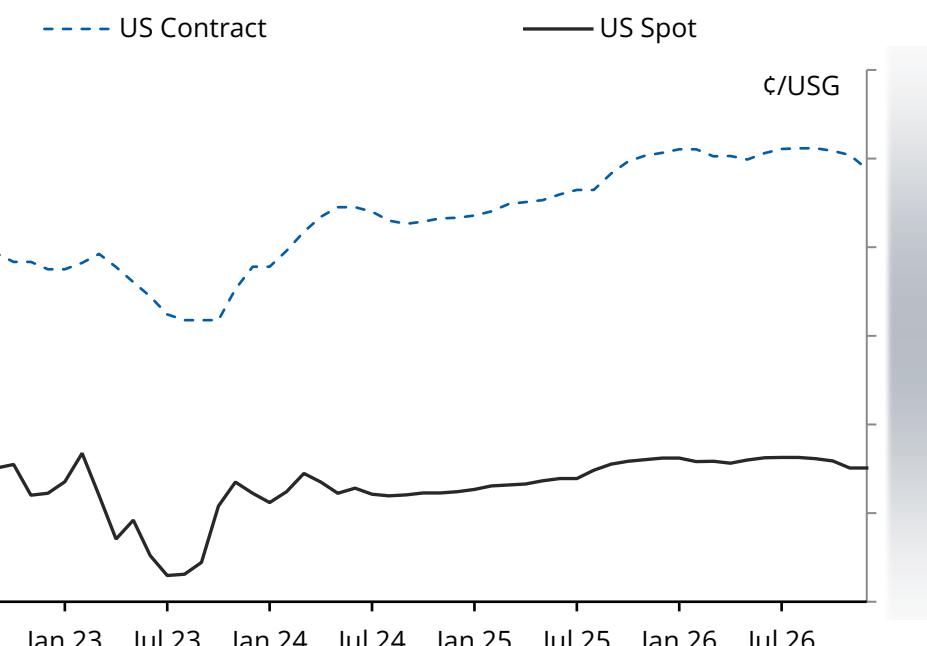
- The US remains a price taker, with cash cost of production almost always far under spot price levels. May sees both postings increase to 194¢/USG.

US methanol production costs



- \$/t or ¢/USG

US methanol pricing



- \$/t or ¢/USG

- Spot methanol prices have risen steadily since the beginning of the year, underpinned by T/A's and new capacity delay, forcing market/producers to enter the spot arena.
- We expect [REDACTED] will pull Atlantic basin prices

China in the coming months

- The spot to contract-posting spread is expected to generally stay at [REDACTED]
- With natural gas costs expected to remain [REDACTED] /mmBtu through the forecast period, spot prices are [REDACTED] to near production cash cost levels.

Asia-Pacific - China

- **Asia (China) still viewed as the industry price driver, with MTO methanol affordability the key. Winter saw little boost in demand and now the combination of higher Iran exports soon expected and poorer MTO methanol affordability are slightly bearish.**
- When fundamentals are “more balanced”, the China methanol market drives the industry. The market, however, seldom sees balanced fundamentals. Intra-regional (supply) upsets always seem to drive disconnects in spot methanol prices, albeit mostly for short periods of time—which was the case in the Atlantic basin through Q1, with supply-side issues causing spot price fly-up. North America spot prices remain high, while Europe has given back much of the spot price run-up in February/March.
- China pins hopes on springs uptick in demand. MTO production has been leading the improvement, but now lackluster olefin/derivative prices versus “strong” methanol prices have forced several MTO producers to idle—dropping operating rates to 62% which is the lowest for the year. We had MTO methanol demand to be up as much as 1-2mn t in 2024, which will represent the backbone of total industry growth of 3-4mn t this year. Now, this projected increase is in jeopardy at least for a while. Further MTO methanol demand (above the stated growth) will be challenged, although there is new capacity in 2025 and 2026 planned. Still, MTO remains the incremental appetite and MTO methanol affordability the “price setter” for China.
- Argus has been calling for directionally higher olefin/derivative values for many months, which often seemingly stall. Argus still expects upward trending olefin/derivative values to driver higher China methanol prices (and thus underpin world price strength) through 2024 and 2025—there now just looks to be further delay.
- Southeast Asia follows the China market and with regional production back at full strength (after an extended Kaltim outage), the previous (Q1) run-up in spot prices is adjusting downward. But as noted, as China spot methanol values move up or down, the rest of Asia will follow.
- The new Sarawak methanol unit is expected to commission mid-year, which will likely bring some bearish sentiment and possibly weaken pricing in the region.

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Dave McCaskill **Vice President Global Methanol and Derivatives**

Dave McCaskill is responsible for managing *Argus' Global Methanol Services* with individual emphasis on methanol and downstream derivative activities in the Americas. Dave has nearly 45 years of experience in the petrochemical industry, beginning at Celanese Chemical Company as a chemical engineer. In 2000, Dave moved to serve as Global Business Director of Methanol & Derivatives for two private petrochemical consulting firms for almost 13 years, developing extensive knowledge of the methanol industry. He has participated in many methanol industry conferences sharing his views of the methanol industry. Dave holds an undergraduate degree in Chemical Engineering from the University of Kansas.



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Roel Salazar **Lead Consultant, Fuels and Octanes**

Roel Salazar is the Lead Consultant for Fuels and Octane for *Argus*. Roel is responsible for covering the US and Latin American MTBE markets and the weekly Fuels & Octane Report. Roel is also instrumental in preparing the global Fuels and Oxygenates Annual. Roel joined *Argus* in 2005 as an Olefins Analyst and joined the Fuels and Octane team in 2011. His petrochemical experience includes working at one of Mobil's ethylene crackers in Houston between 1996-97. He holds an undergraduate degree in Information Systems from the University of Houston.



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Becky Zhang **Editor, Olefins and Methanol**

Becky works as an editor for Asian olefins and methanol markets. She has 10 years 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.



Victoria Baghdjian **Head of European Methanol**

Victoria Baghdjian joined *Argus* in 2020 and is Head of the European Methanol markets. She contributes to benchmark spot price assessments, as well as supply and demand analytics for the *Argus Methanol* and *Argus Fuels and Octanes* services. Victoria has more than 10 years of experience covering the methanol and fuel octanes markets, in various pricing and consulting roles at *Platts* and *IHS Markit*. She holds MA and MPhil degrees from Trinity College, University of Cambridge.



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Cassidy Staggers **Analyst, Polymers and Methanol**

Cassidy is an analyst in Houston focused on polymers and methanol markets, data science initiatives, product development and content creation. Prior to joining the Chemicals team, she led various operation roles at *Argus* and *McKinsey*. Cassidy holds a degree from The University of Michigan and an MBA from University of Houston.

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