



argusmedia.com

February 2024

# Argus Methanol Analytics – Fall Update

*A global supply/demand analysis for 2018 through 2032*



Petrochemicals  
illuminating the markets

Market Reporting

**Consulting**

Events

# Methanol Analytics Fall Update 2023

## Disclaimer and notices

This presentation (the “Report”) is confidential, made available strictly under license and has been prepared solely for the internal use of the applicable Argus licensee (a “Client”). Any use or disclosure of this Report and its contents without specific written permission from Argus is strictly prohibited. No duty of care is owed by Argus to any third party and Argus disclaims all liability in relation to any third party who seeks to rely upon or use the Report or any of its contents. The Report, including the Argus trademarks and logo/legal notices, may not be altered. Derivative works of all or part of the Report may not be created without prior written permission.

The data, information or opinions contained in this Report are provided on an “as is” basis without any warranty, condition or other representation as to its accuracy, completeness, or suitability for any particular purpose and shall not confer rights or remedies upon the recipients of this presentation or any other person. Data and information contained in the Report come from a variety of sources, some of which are third parties outside Argus’ control and some of which may not have been verified. Argus does not warrant that this Report is in all respects accurate and complete and does not warrant any results obtained or conclusions drawn from the use of this Report. Argus has no obligation to maintain or update this Report.

All analysis and opinions, data, projections and forecasts provided may be based on assumptions that are not correct or which change, being dependent upon fundamentals and other factors and events subject to change and uncertainty; future results or values could be materially different from any forecast or estimates described in the Report.

Subject to any agreement between Argus and its Client, Argus expressly disclaims any and all liability for any direct, indirect or consequential loss or damage, claims, costs and expenses, whether arising in negligence or otherwise, in connection with access to, use or application of these materials or suffered by any person as a result of relying on any information included in, or omission from, this Report and related materials or otherwise in connection therewith, to the maximum extent permitted by law.

The Client’s use of the Report is entirely at the Client’s own risk. This Report does not offer or provide financial, tax or legal advice.

### **Copyright notice**

Copyright © 2024 Argus Media group. All rights reserved. All intellectual property rights in this presentation and the information herein are the exclusive property of Argus and and/or its licensors and may only be used under license from Argus. Without limiting the foregoing, you will not copy or reproduce any part of its contents (including, but not limited to, single prices or any other individual items of data) in any form or for any purpose whatsoever without the prior written consent of Argus.

### **Trademark notice**

ARGUS, the ARGUS logo, Argus publication titles, and Argus index names are trademarks of Argus Media Limited. For additional information, including details of our other trademarks, visit [argusmedia.com/trademarks](https://argusmedia.com/trademarks).

# Executive Summary - Methanol Analytics Fall 2023 Update

## Argus Methanol Analytics Service

This presentation package is based on an up-date of the Argus Methanol Analytics 10-year supply/demand forecast, which was first published in May of 2023. Fall changes were limited, with small changes in methanol demand and the delay of a few methanol projects. This package highlights (at a global level), the differences between the May version and this past November update.

Detailed data downloads of the supply/demand files are available at the following links: [Balance](#) & [Capacity](#)

Acronyms, a complete listing of Argus Methanol and Derivative Service offerings and methodology is provided in the Appendix

*Note: The analytics and discussions presented excludes China's captive CTO/CTP (coal-to-olefin/coal-to-propylene) sector. This sector has its own captive methanol exclusively for the production of olefins and is thus not considered merchant methanol. For reference, the first graphic (to the right) shows the contribution of the CTO/CTP sector to total methanol demand. The remainder of this presentation package excludes the CTO/CTP sector and volumes from analysis and/or discussion.*

*Further, while this study acknowledges a potentially large market for methanol as a bunker replacement, Argus believes the bulk of this new demand will be based on "green" methanol, and not existing "fossil" methanol. There is a small amount of methanol to bunkers included in this study, but this is more as future proof demonstration.*

# Executive Summary – Methanol Analytics Fall Update 2023

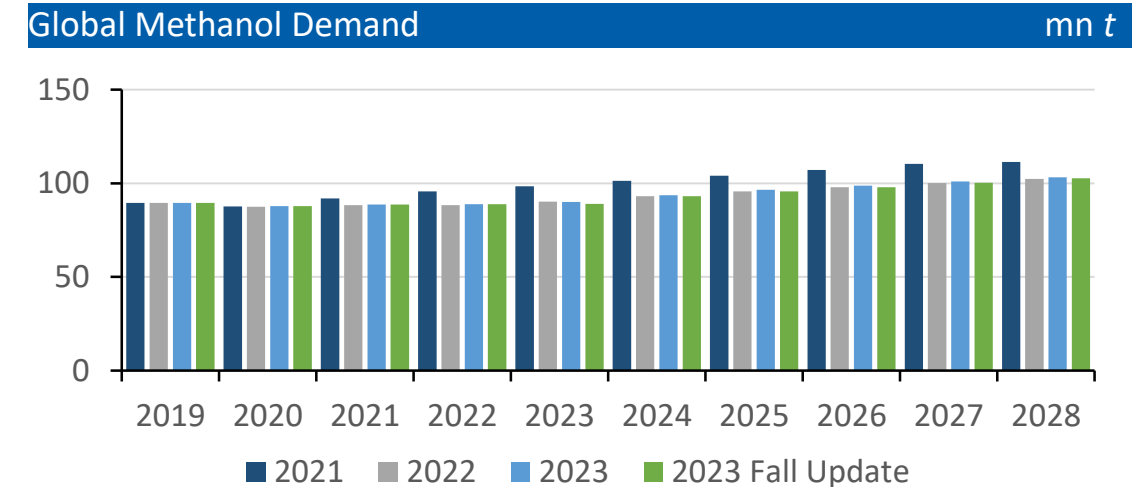
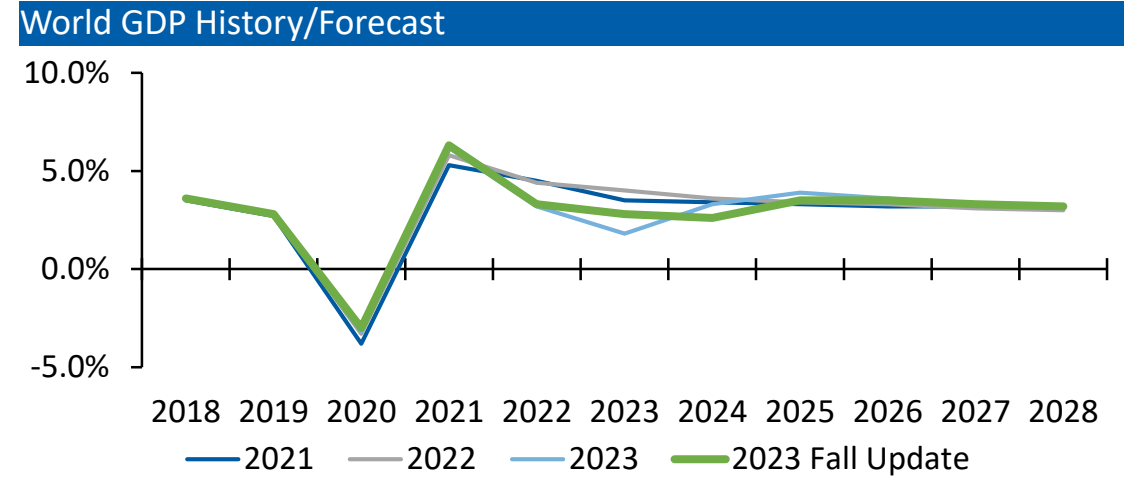
All are well aware methanol demand growth has slowed as Covid-19, the Russia-Ukraine conflict drove inflation and recession fears. MTO demand nearing a plateau. The industry lacks the next big demand bump to mitigate new capacity.

- The global economic outlook worsened some since the previous update in May and as a result the demand outlook for methanol derivatives has also weakened some.
- Global planned new capacity through 2025 sees minor delay in Malaysia, the US and Iran, but still outpaces demand growth over the forecast period.
- With as much as 50pc of world methanol demand driven by GDP (consumer spending), and MTO methanol demand plateauing, methanol growth slows compared to history.
- Major new capacity is expected in the US, southeast Asia, China and most notably Iran. Should Iran capacity slip appreciably, industry supply and demand will be much more balanced.
- While the long-term vision is for e-methanol (green methanol) to be the methanol fuel of choice for bunker substitution, some fossil methanol (and blue produced in existing fossil methanol units) is and will be used in bunker application and/or as a future proof fuel through the decade. These volumes, reaching 2-3mn t/yr of methanol demand, are included in the forecast.
- Overall, the differences between the official spring Methanol Analytics and the fall update are minor.

# What's Changed – Methanol Analytics Fall Update 2023

Methanol demand growth slows as Covid-19, the impact of the Russia-Ukraine conflict, inflation, stagnation, recession fears. The large MTO demand is plateauing. The industry lacks the next big demand bump to mitigate new capacity.

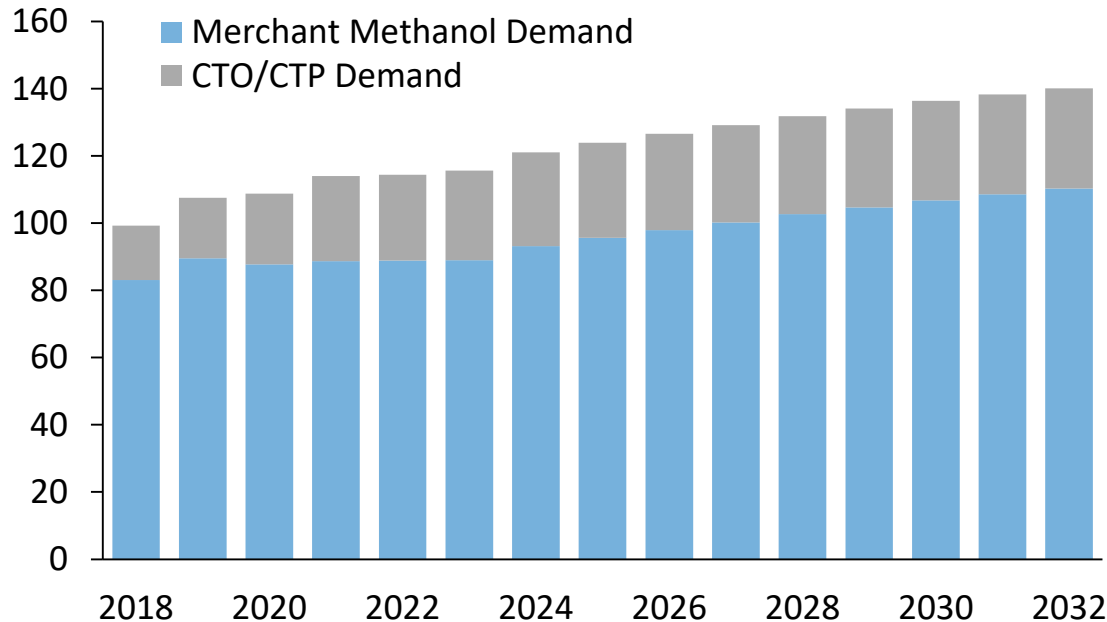
- Covid-19, geopolitical events, inflation/recession fears have resulted in lower economic outlooks for the world and most all countries.
- The latest fall update from Oxford Economics is less pessimistic than thinking early in the year—but is less optimistic until the 2025 timeframe.
- Almost 50pc of methanol demand is tied to GDP and as such the last two years Analytics have reflected a lower demand outlook.
- The outlook for methanol demand has fallen since 2021, with cumulative losses of nearly 65mn t.
- Global methanol demand will not return to 2019 levels until the 2024-2025 timeframe.
- At the same time, while methanol capacity additions are slowed as well, the slowdown is slight compared to demand losses.
- Russia had aggressive plans to add many new methanol units intended for the export market. These have all been shelved into the next decade.
- While Iran continues with very aggressive expansion plans, here too timing has been pushed-back a few years on units under construction.



# Executive Summary – Methanol Analytics Fall Update 2023

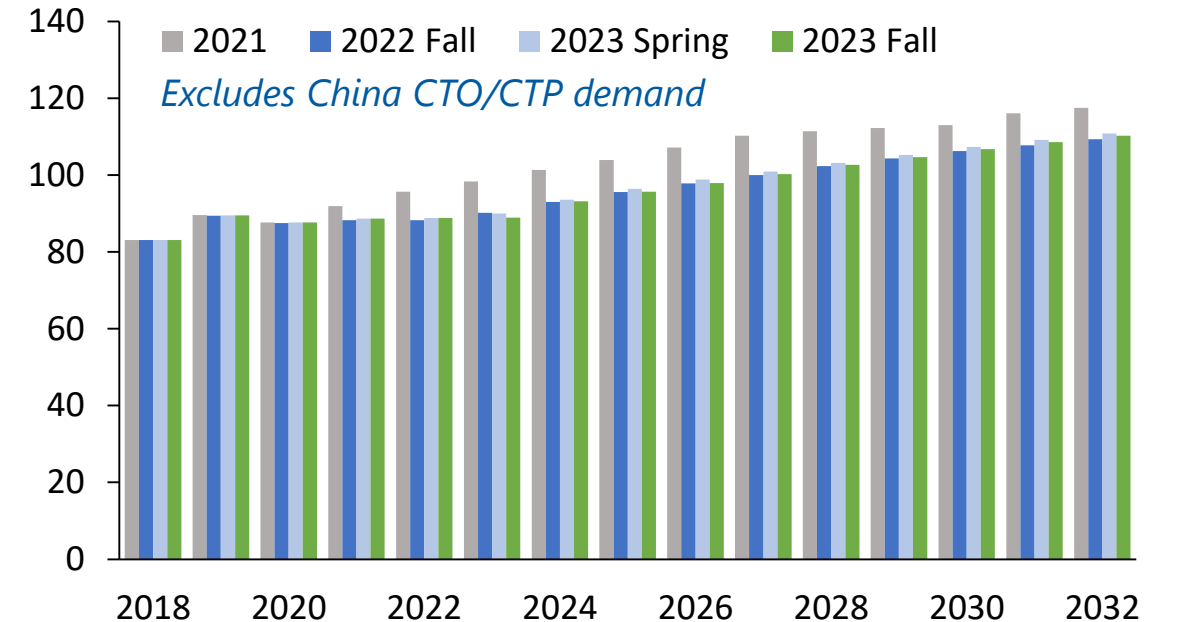
Methanol demand growth slows as Covid-19, the Russia-Ukraine conflict drive inflation and recession fears. MTO demand has is plateauing. The industry lacks the next big demand bump to mitigate new capacity.

Methanol Industry Demand/Forecast mn t



- The fall update follows the post Covid trend. Demand for methanol has since reduced and now is expected to grow at a slower pace.
- Past strong growth in China methanol-based olefins production (naphtha cracking alternative), plus steady penetration into a number of energy substitution applications have underpinned methanol industry average annual growth. In the run up to 2020, industry annual growth rates averaged 6pc (2014-2019). The methanol industry has yet to return to 2019 demand levels through 2023, but hopefully in 2024 will.

Methanol Industry Demand/Forecast, 2023 versus prior mn t



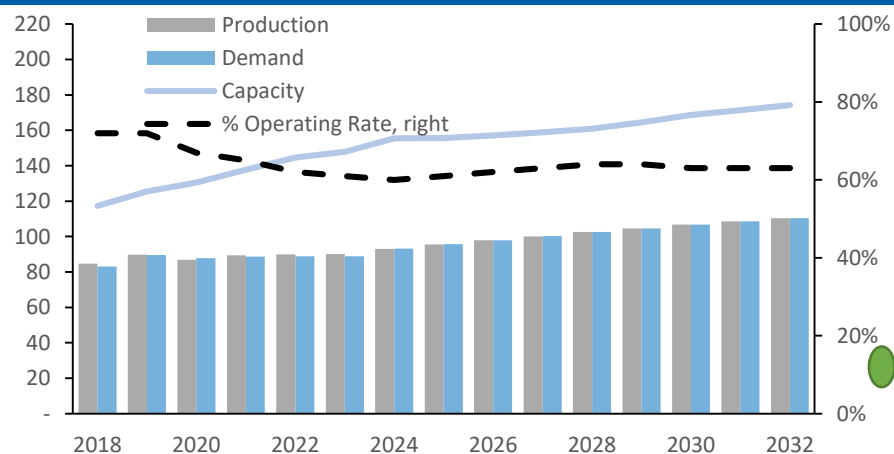
- With the industry having to rely more on GDP-driven products for growth (with GDP forecasts lowered), and/or further fuel substitution arenas, methanol demand growth is projected to decline to year-over-year rates of just 2.9pc (2023-2028). Again, this includes only a small amount of methanol bunker demand from the fossil-based methanol sector,
- Looking forward, limited economic growth, compounded by oversupply in olefins and olefin derivative sectors will limit further notable growth in China’s MTO demand. China continues to further diversifying olefin production with a new ethane-based crackers as well as continue to expand naphtha-based cracking—likely at the expense of MTO.

# Executive Summary - Methanol Analytics Fall Update 2023

Industry oversupply (although slowed) may continue to limit higher pricing (based on fundamentals), forcing rationalization of “higher-cost” producers to return the industry to better balance. The industry will find balance.

- Industry overcapacity is envisioned through the decade. Reduced demand has and will slow expansion plans for some. Previous analysis included significant methanol expansion from Russia and Iran. The new outlook has indefinitely delayed all new Russia capacity and slowed many of the planned additions expected from Iran as well. Still, supply is expected to outpace demand growth, leading to ongoing oversupply conditions and reduced operating rates.
- For the US, current methanol demand of 6.5-7mn t/yr is being satisfied by increased domestic production, now exceeding 10mn t. with more capacity expected in early 2024. Most traditional imports from Latin America and Caribbean, the Middle East and Africa have been re-directed to other consuming regions.
- With industry capacity outpacing slowed demand growth, this imbalance will limit price strength for years. China prices will again challenge incremental, high-cost producers, forcing reduced rates or shutdown to bring the industry into better balance. Globally, this will challenge new-build economics, particularly for those projects requiring lender financing. Conversely, as the olefin/derivative sectors continue to work-off oversupply, olefin/derivative prices will improve, providing strength to MTO methanol prices, which in turn underpin global methanol price strength.
- Aggressive ongoing expansion plans in Iran cause significant oversupply concerns through the decade. Conversely, should these plans not materialize, the industry will be much more tightly balanced late in the decade.

**Methanol Industry Supply/Demand** mn t / %



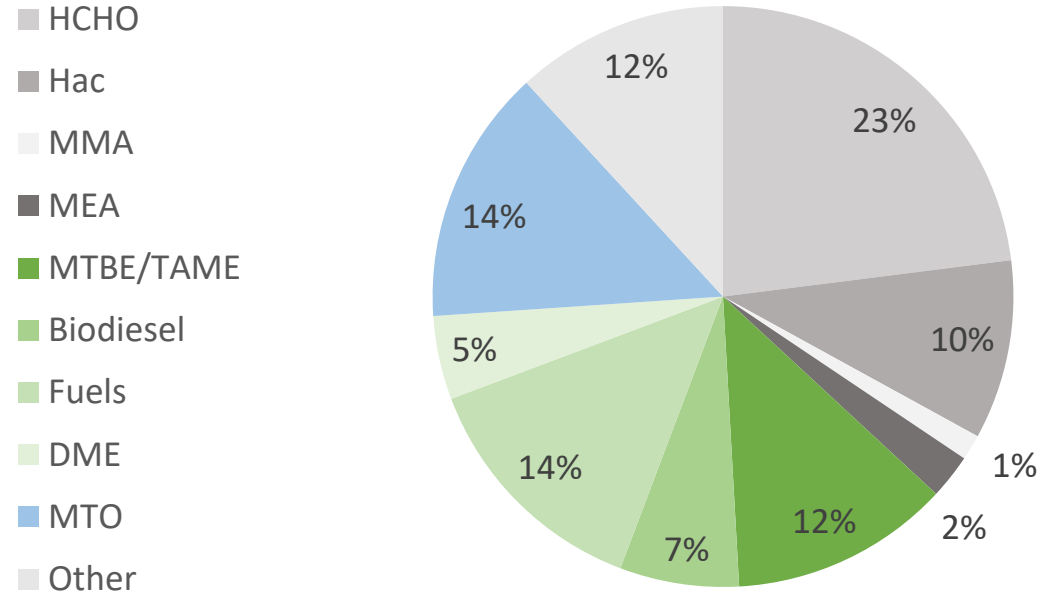
**Global capacity changes (excluding CTO/CTP), year over year** mn t

Region/Country	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
North America	850	1,120	140	1,040	1,000	115	2,315	0	0	1,800	1,000	1,800	0	0	1,000
America/Caribbe	250	590	160	510	390	0	0	0	0	0	0	0	0	0	0
West Europe	0	0	156	0	60	0	0	0	0	0	0	0	0	0	0
Russia	310	480	150	220	400	100	0	0	0	0	0	0	1,600	0	0
Middle East	500	2,600	2,575	1,875	1,450	2,400	2,550	0	500	0	0	800	1,650	1,650	850
Australasia	0	0	0	0	0	0	0	0	0	0	1,000	0	0	0	0
South Asia	0	0	0	0	0	67	75	0	0	0	0	0	0	0	0
Southeast Asia	0	0	0	0	0	0	1,650	0	0	0	0	0	0	0	0
China	3,425	3,375	1,865	3,620	3,555	600	1,000	0	1,000	0	0	1,000	1,000	1,000	1,000
<b>Total</b>	<b>7,353</b>	<b>10,184</b>	<b>7,066</b>	<b>9,286</b>	<b>8,877</b>	<b>5,305</b>	<b>9,614</b>	<b>2,025</b>	<b>3,526</b>	<b>3,827</b>	<b>4,028</b>	<b>5,629</b>	<b>6,280</b>	<b>4,681</b>	<b>4,882</b>

# World Methanol Industry Overview, Methanol Analytics Fall Update 2023

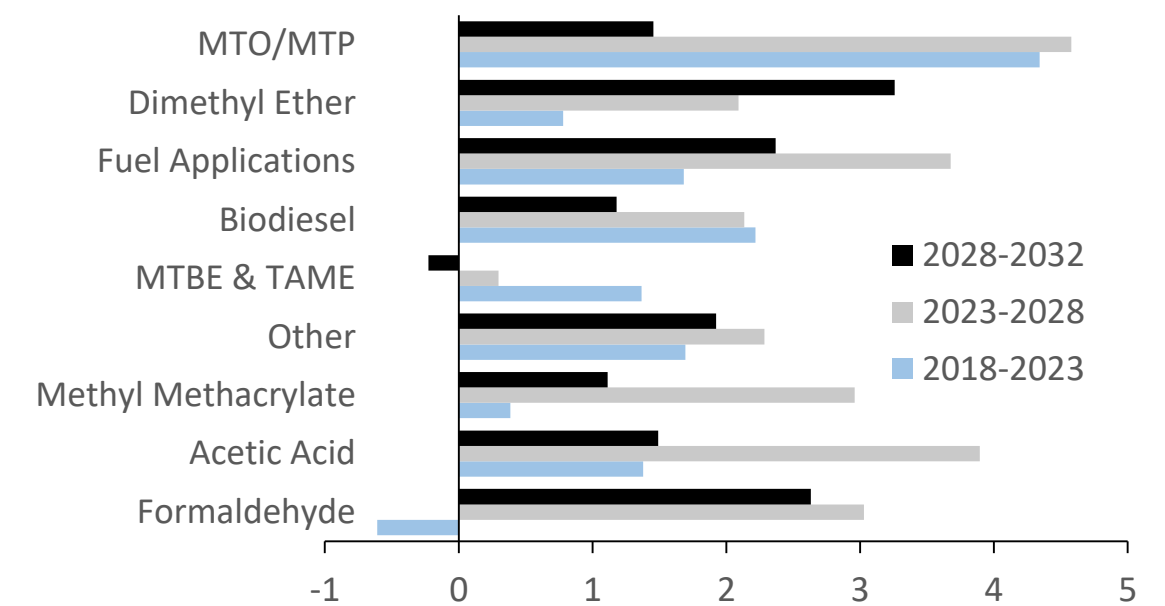
Including the MTO sector, methanol as an oil-derivative (naphtha)/fuel substitution product accounts for 51pc of total industry demand, often linking methanol prices to the price of crude oil.

## Industry Derivative Demand, fall 2023 = 88.9mn t



- Noted earlier, excluding China's captive CTO/CTP sector, global merchant methanol demand totalled 88.9mn t in 2023, just slightly up from 88.7mn t in 2022. 2019 and prior years strong growth in olefins production from methanol, plus ongoing penetration into a number of energy substitution applications have underpinned average annual growth of 6pc (2014-2019), prior to turndown post 2020.
- Traditional GDP-driven products (formaldehyde, acetic acid, methyl methacrylate, solvents, etc.) now represent 50% of methanol industry demand and have been the core of industry demand for decades. However, these products are very much connected with the housing, automotive, paints/coatings and appliance industries and thus are more driven by GDP, which

## Derivative Growth CAGR / %



- saw demand weaken since 2020 and mostly flat the last three years. The forward outlook is now more reserved as well, as GDP growth expectations have been trimmed.
- The next five years see rebound across all sectors, with some recovery from the last three years slowed demand. The last half of this decade, however, captures the true impact of expected lower GDP growth projections.
- Growth in the fuels arena is expected to help drive much of the increase in demand through the next five-year period, helping to offset higher past growing MTO methanol demand.

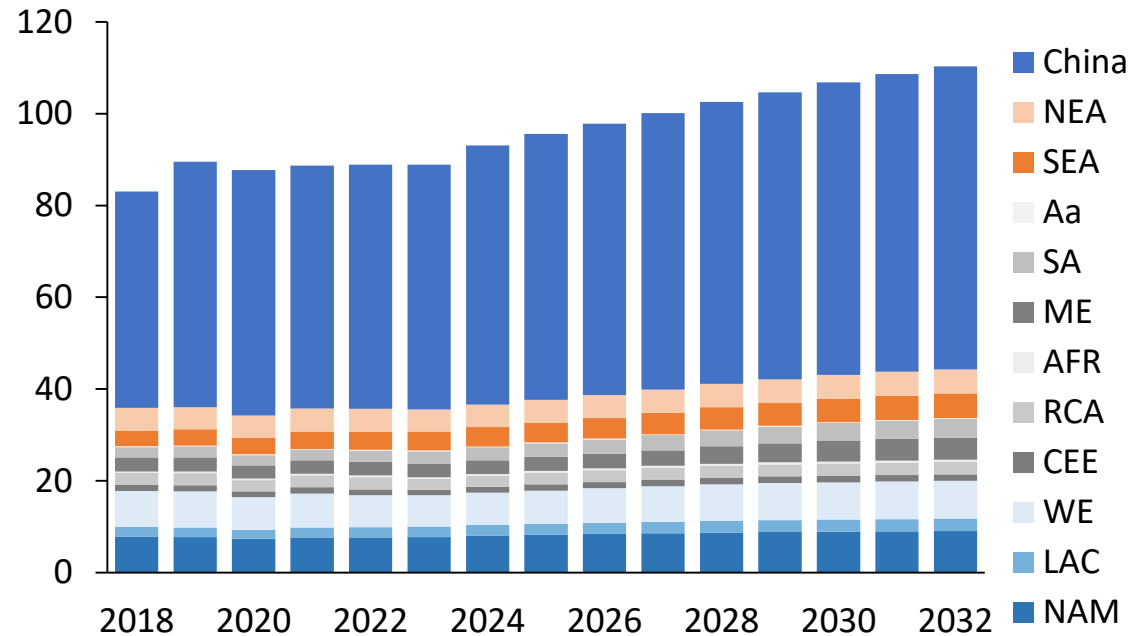
## — Petrochemicals



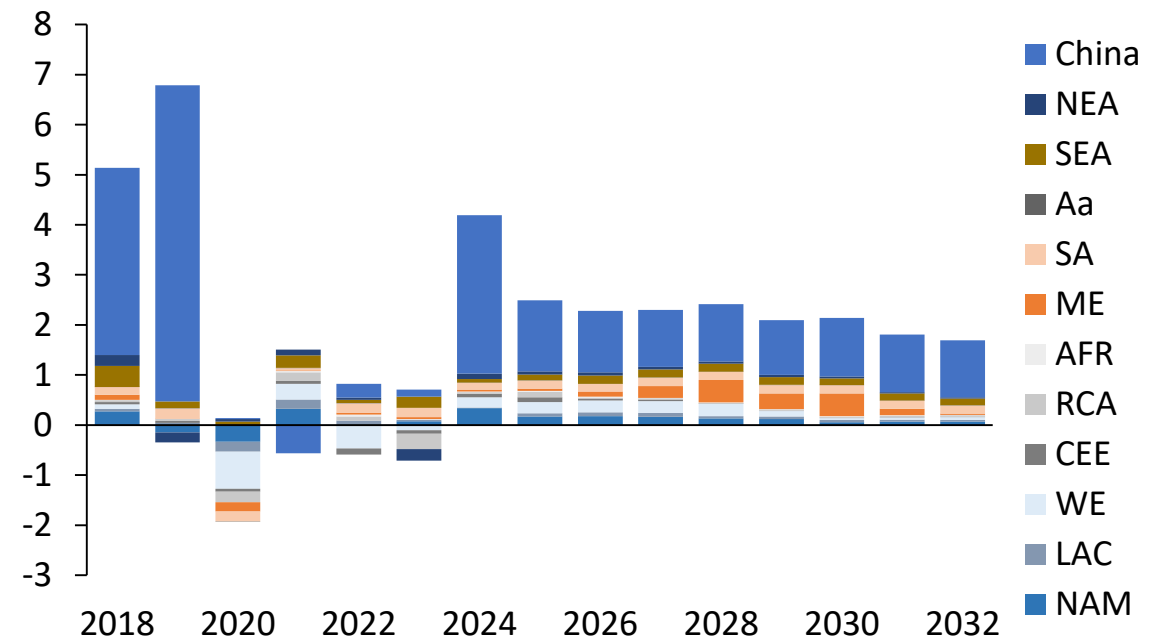
# World Methanol Demand Metrics Actual/Forecast, Methanol Analytics Fall Update 2023

China continues to dominate methanol industry demand, helping underpin growth through the forecast period. However, the olefins industry “downcycle” caps MTO methanol demand for several years.

Regional Methanol Demand Actual/Forecast (excludes CTO/CTP) mn t



Regional Demand, yr-on-yr (excluded CTO/CTP) mn t



- China has and continues to be the largest methanol consuming country in the world, accounting for as much as 50pc of total world demand. However, looking ahead, world growth will be more driven by GDP growth (non-China) and growing fuels applications.
- China, the US and West Europe combine to account for just over 75pc of world methanol consumption.
- Through the 2018-2022 period, global methanol demand saw a cumulative

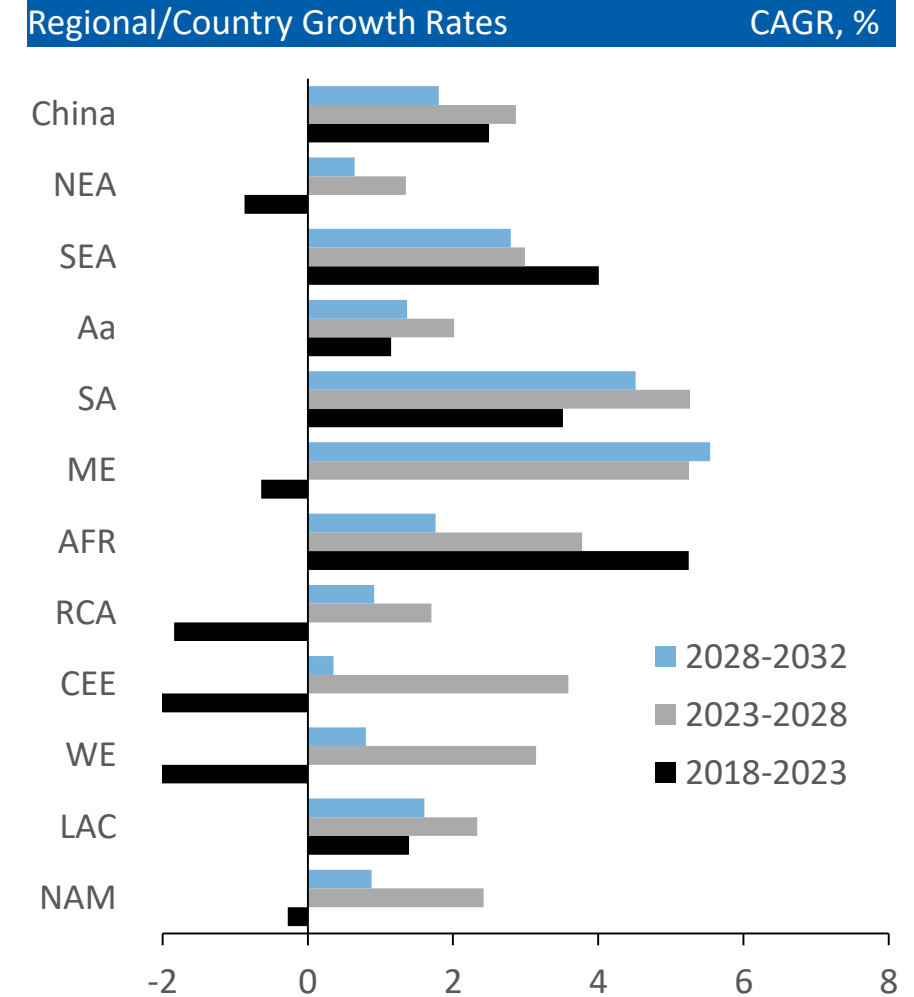
- The spillover of the Covid-19 (and variants), Russian sanction and other geopolitical events have weighed heavy on demand growth, with the industry growing just 1.1mn t since 2020.

— Petrochemicals

# World Methanol Demand Metrics Actual/Forecast, Methanol Analytics Fall Update 2023

Country growth rates driven by lowered GDP forecasts. China sees its dominant annual growth slow as MTO demand growth slows—but aided by increasing fuel usage.

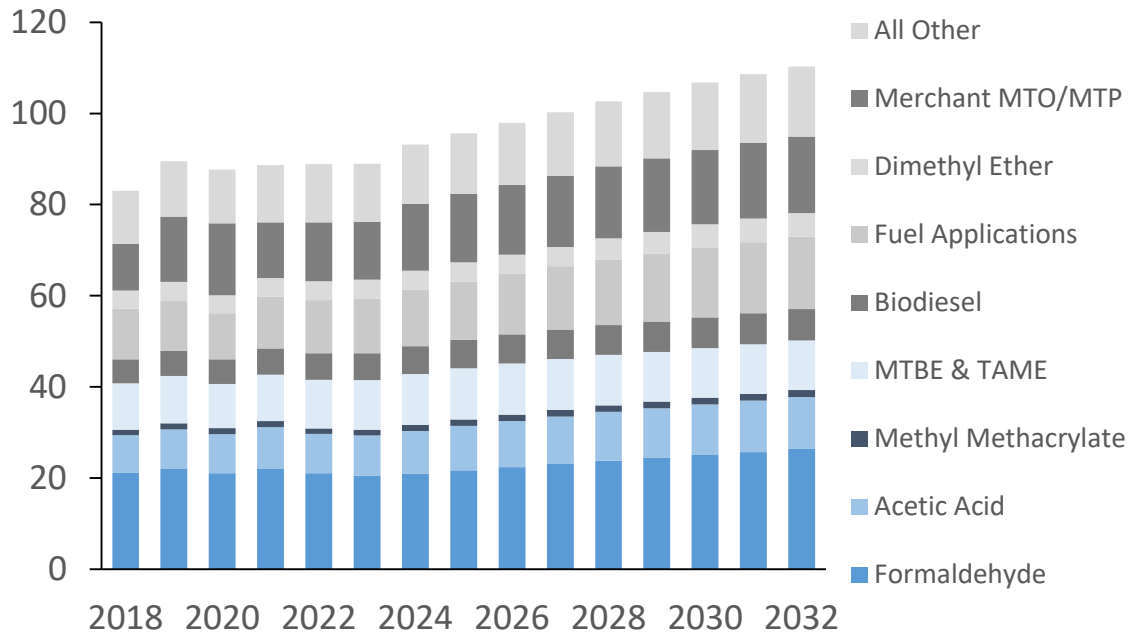
Region and key country demand (excluding CTO/CTP)															'000t
Region/Country	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
<b>World</b>	<b>83,064</b>	<b>89,505</b>	<b>87,709</b>	<b>88,651</b>	<b>88,886</b>	<b>88,884</b>	<b>93,078</b>	<b>95,567</b>	<b>97,849</b>	<b>100,148</b>	<b>102,561</b>	<b>104,657</b>	<b>106,799</b>	<b>108,608</b>	<b>110,299</b>
<b>North America</b>	<b>7,835</b>	<b>7,683</b>	<b>7,349</b>	<b>7,674</b>	<b>7,655</b>	<b>7,728</b>	<b>8,067</b>	<b>8,240</b>	<b>8,414</b>	<b>8,581</b>	<b>8,710</b>	<b>8,831</b>	<b>8,888</b>	<b>8,954</b>	<b>9,021</b>
US	7,063	6,938	6,669	6,962	6,917	6,997	7,325	7,489	7,654	7,814	7,935	8,051	8,101	8,160	8,222
<b>Latin America</b>	<b>2,109</b>	<b>2,150</b>	<b>1,953</b>	<b>2,137</b>	<b>2,225</b>	<b>2,260</b>	<b>2,270</b>	<b>2,330</b>	<b>2,410</b>	<b>2,486</b>	<b>2,536</b>	<b>2,586</b>	<b>2,628</b>	<b>2,669</b>	<b>2,703</b>
Argentina	376	363	279	304	330	317	318	326	334	342	349	357	364	373	379
Brazil	1,226	1,291	1,234	1,337	1,307	1,357	1,361	1,396	1,446	1,490	1,520	1,548	1,574	1,596	1,617
<b>Western Europe</b>	<b>7,838</b>	<b>7,840</b>	<b>7,094</b>	<b>7,408</b>	<b>6,957</b>	<b>6,853</b>	<b>7,059</b>	<b>7,286</b>	<b>7,523</b>	<b>7,760</b>	<b>8,000</b>	<b>8,111</b>	<b>8,153</b>	<b>8,200</b>	<b>8,259</b>
France	654	628	481	443	440	479	450	456	457	455	454	452	451	446	443
Germany	2,717	2,721	2,523	2,633	2,422	2,383	2,428	2,487	2,514	2,526	2,525	2,526	2,527	2,525	2,530
Netherlands	895	931	904	946	957	1,042	1,114	1,206	1,317	1,460	1,591	1,708	1,753	1,798	1,846
Spain	588	587	544	601	576	485	528	513	505	498	490	479	469	468	466
United Kingdom	917	924	820	839	717	675	709	749	835	922	1,043	1,053	1,061	1,073	1,083
<b>CE Europe</b>	<b>1,328</b>	<b>1,369</b>	<b>1,317</b>	<b>1,375</b>	<b>1,255</b>	<b>1,182</b>	<b>1,249</b>	<b>1,340</b>	<b>1,375</b>	<b>1,407</b>	<b>1,410</b>	<b>1,414</b>	<b>1,419</b>	<b>1,423</b>	<b>1,430</b>
Poland	388	411	390	410	403	381	396	411	417	420	421	425	427	428	430
<b>Russia and C Asia</b>	<b>2,616</b>	<b>2,651</b>	<b>2,438</b>	<b>2,610</b>	<b>2,690</b>	<b>2,384</b>	<b>2,417</b>	<b>2,531</b>	<b>2,554</b>	<b>2,574</b>	<b>2,594</b>	<b>2,616</b>	<b>2,637</b>	<b>2,663</b>	<b>2,690</b>
Russia	2,508	2,539	2,322	2,487	2,557	2,249	2,278	2,389	2,408	2,427	2,444	2,462	2,480	2,502	2,525
<b>Africa</b>	<b>285</b>	<b>291</b>	<b>289</b>	<b>313</b>	<b>357</b>	<b>368</b>	<b>381</b>	<b>399</b>	<b>420</b>	<b>432</b>	<b>443</b>	<b>451</b>	<b>459</b>	<b>468</b>	<b>475</b>
<b>Middle East</b>	<b>3,068</b>	<b>3,069</b>	<b>2,884</b>	<b>2,899</b>	<b>2,934</b>	<b>2,971</b>	<b>3,013</b>	<b>3,058</b>	<b>3,155</b>	<b>3,388</b>	<b>3,837</b>	<b>4,149</b>	<b>4,603</b>	<b>4,736</b>	<b>4,761</b>
<b>South Asia</b>	<b>2,256</b>	<b>2,463</b>	<b>2,263</b>	<b>2,309</b>	<b>2,495</b>	<b>2,681</b>	<b>2,821</b>	<b>2,981</b>	<b>3,134</b>	<b>3,304</b>	<b>3,465</b>	<b>3,635</b>	<b>3,803</b>	<b>3,969</b>	<b>4,134</b>
India	2,210	2,425	2,225	2,269	2,450	2,634	2,775	2,934	3,084	3,252	3,410	3,576	3,740	3,904	4,066
<b>Northeast Asia</b>	<b>52,158</b>	<b>58,280</b>	<b>58,350</b>	<b>57,903</b>	<b>58,223</b>	<b>58,135</b>	<b>61,410</b>	<b>62,893</b>	<b>64,189</b>	<b>65,378</b>	<b>66,567</b>	<b>67,704</b>	<b>68,912</b>	<b>70,093</b>	<b>71,255</b>
China	47,163	53,481	53,496	52,934	53,214	53,354	56,523	57,939	59,171	60,311	61,454	62,549	63,721	64,872	66,009
Japan	1,792	1,694	1,640	1,645	1,645	1,573	1,578	1,587	1,600	1,608	1,614	1,621	1,624	1,629	1,629
South Korea	1,762	1,819	1,840	1,867	1,935	1,861	1,910	1,943	1,972	1,998	2,021	2,041	2,057	2,072	2,086
Taiwan	1,441	1,286	1,374	1,457	1,429	1,347	1,399	1,424	1,446	1,461	1,478	1,493	1,510	1,520	1,531
<b>Southeast Asia</b>	<b>3,418</b>	<b>3,554</b>	<b>3,620</b>	<b>3,865</b>	<b>3,933</b>	<b>4,160</b>	<b>4,228</b>	<b>4,341</b>	<b>4,504</b>	<b>4,663</b>	<b>4,820</b>	<b>4,978</b>	<b>5,113</b>	<b>5,248</b>	<b>5,382</b>
Indonesia	897	1,069	1,171	1,350	1,393	1,441	1,500	1,574	1,655	1,738	1,822	1,904	1,980	2,055	2,132
Malaysia	836	825	860	819	830	1,019	1,031	1,048	1,064	1,077	1,090	1,104	1,116	1,128	1,140
Singapore	570	559	495	576	607	627	590	573	600	624	648	674	687	698	710
Thailand	767	781	761	777	747	680	700	718	736	755	772	788	801	816	827
<b>Australasia</b>	<b>153</b>	<b>155</b>	<b>152</b>	<b>158</b>	<b>162</b>	<b>162</b>	<b>163</b>	<b>168</b>	<b>171</b>	<b>175</b>	<b>179</b>	<b>182</b>	<b>184</b>	<b>185</b>	<b>189</b>



# World Methanol Demand Metrics Actual/Forecast, Methanol Analytics Fall Update 2023

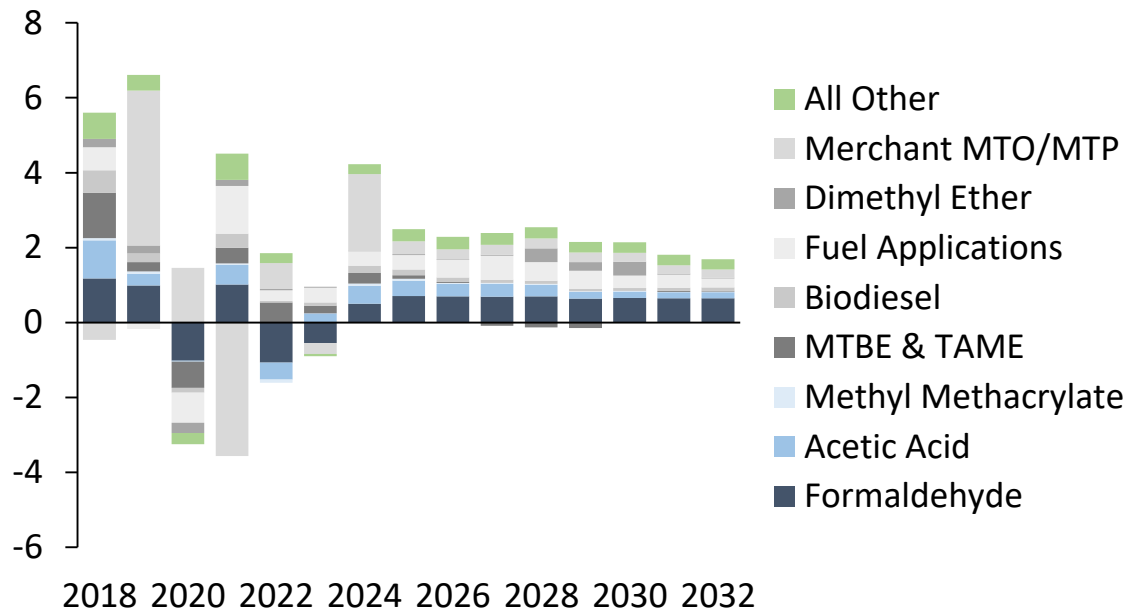
All regions negatively impacted by Covid-19 (2020), continuing in 2021 and into 2022 only to be further impacted by the Russia-Ukraine conflict. Industry demand growth fails to return to pre-Covid levels for years.

Global methanol derivative demand, actual/forecast mn t



- Fuel substitution applications (gasoline blending and DME) brought significant change to the methanol industry some 10 years ago. In 2023, total fuel related applications (including biodiesel, MTBE/TAME, boiler fuel and cook stove fuel substitution) comprised 38pc of industry methanol demand (~33mn t). MTO/MTP technology and applications emerged in the 2010 timeframe and in 2023 accounted for 14pc of industry demand (~13mn t).

Global methanol derivative demand, yr-on-yr, actual/forecast mn t



- The traditional methanol derivatives such as formaldehyde, acetic acid, methyl methacrylate (MMA), methylamines, etc., still represent solid core demand, but as always, are driven by GDP-type growth. As such, these products will be driven by more conservative GDP forecasts than last year's *Analytics*, forecast to grow at near 3pc across the forecast period.
- Industry growth drivers will see a change from reliance on the large MTO sector, to fuels and the core GDP-driven products.

# World Methanol Supply Metrics Actual/Forecast, Methanol Analytics Fall Update 2023

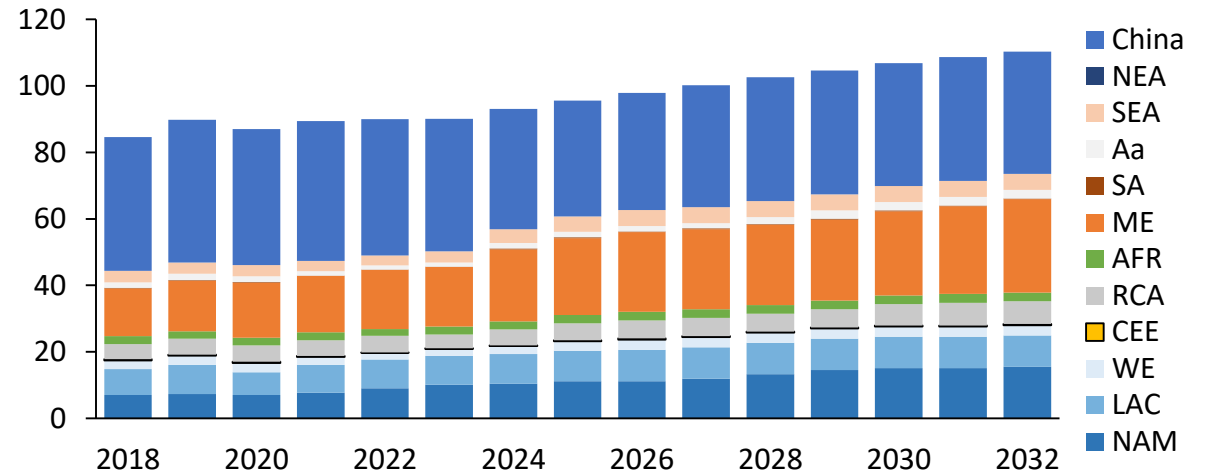
Supply has historically struggled to keep up with demand, but this changed in 2020. Capacity growth will continue to outpace demand, but less so for five years.

- Global methanol capacity in 2023 totaled nearly 145mn t (excluding CTO/CTP), with China accounting for 52pc (75mn t). The Middle East has the second largest capacity base, with 25mn t (17pc of world capacity). Latin America and Caribbean is the home of the industry's third largest capacity base, with 11.8mn t (12pc of world total), although several units were idled at times in 2020/2021 and since, resulting in actual production less than their capacity.
- Whereas northeast Asia (China) dominated year-over-year growth in methanol supply prior to 2020, the last three years and looking ahead will see China domestic

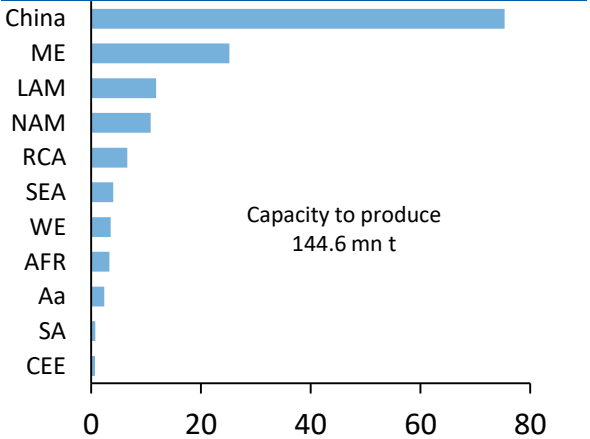
methanol production reduced as new capacity from the rest of the world will target the excess to China.

- The forecast indicates industry oversupply. Although now slowed, capacity expansion is forecast to remain in excess of demand growth. Industry demand was negatively impacted by the Covid-19 pandemic in 2020, recovering through 2021 but to be negatively impacted again in 2022 by the Russia-Ukraine conflict. Slowed MTO demand also hinders the industry growth outlook, while countries continue to push capacity expansion plans.

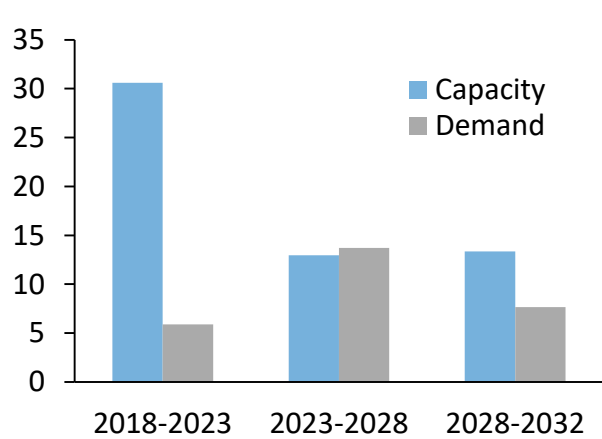
Regional Methanol Supply Actual/Forecast mn t



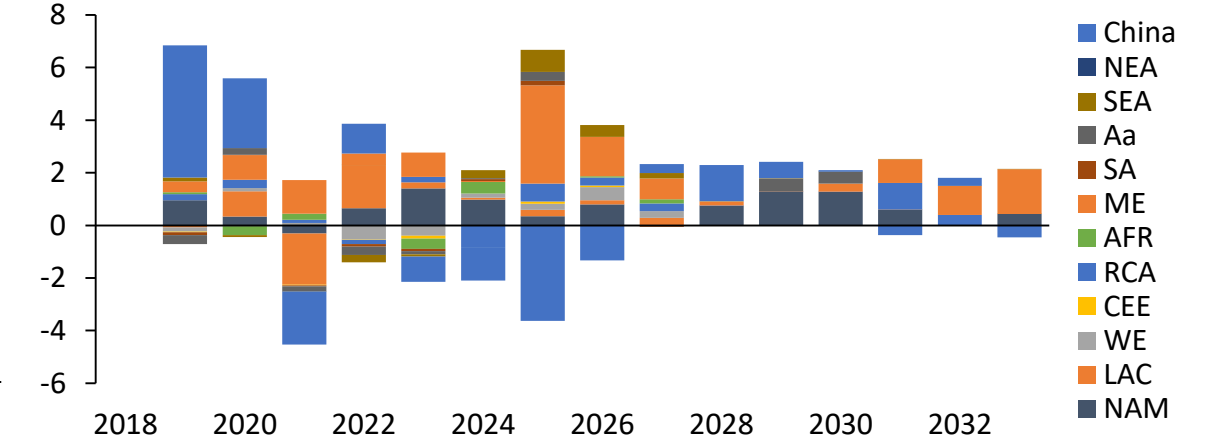
Capacity to Produce Methanol, 2023 mn t



Capacity vs. Demand Growth mn t



Regional Methanol Supply, yr-on-yr, Actual/Forecast mn t



# World Methanol Supply Metrics Actual/Forecast, Methanol Analytics Fall Update 2023

The industry sees slower capacity addition across 2022-2027, dominated by the Middle East and China, with small additions in southeast Asia and the US, outpacing demand growth by 2mn t over the period.

Major Global Capacity Additions																-000t
Company Name	Country	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Theoretical	Australia											1,000				
China	Various	3,425	3,375	1,865	3,620	3,555	1,000	4,200	300	1,000			1,000	1,000	1,000	1,000
Methanex Chile - 3	Chile	840		10												
Bushehr Petrochemical	Iran			825	825											
Dena Petrochemical	Iran						800	850								
Kaveh Methanol Co	Iran		1,800	500												
Kimiya Pars PC	Iran			800	850											
Marjan PC	Iran	1,650														
Sabalan Petrochemical	Iran				200	1,450										
Siraf Petrochemical	Iran						800	850								
Di Polymer Aryan	Iran						800	850								
Theoretical	Iran													1,650	1,650	850
Theoretical	Israel									500						
Sarawak Methanol	Malaysia							1,650								
Shchekinoazot	Russia	150	300		100	400										
Theoretical	Russia													1,600	1,600	1,600
MHTL - M1	Trinidad															
Caribbean Gas	Trinidad			100	900											
Fairway LLC	US		200					200								
Methanex - Geismar 3	US							1,800								
Natgasoline LLC	US	1,650														
US Methanol	US				50	150	115									
Koch Methanol One	US				800	800										
Theoretical	US									1,800		1,800				
Miscellaneous	Worldwide	260	300	496	310	110	100		50							
<b>Total</b>		<b>7,975</b>	<b>5,975</b>	<b>4,596</b>	<b>7,655</b>	<b>6,465</b>	<b>3,615</b>	<b>10,400</b>	<b>350</b>	<b>1,500</b>	<b>1,800</b>	<b>1,000</b>	<b>2,800</b>	<b>4,250</b>	<b>4,250</b>	<b>3,450</b>
<b>Total w/o China</b>		<b>4,550</b>	<b>2,600</b>	<b>2,731</b>	<b>4,035</b>	<b>2,910</b>	<b>2,615</b>	<b>6,200</b>	<b>50</b>	<b>500</b>	<b>1,800</b>	<b>1,000</b>	<b>1,800</b>	<b>3,250</b>	<b>3,250</b>	<b>2,450</b>

- During the 2018-2023 timeframe, nearly 20mn t of new methanol capacity was commissioned, excluding China. Much of these additions were seen prior to 2023, with world scale units starting up in Iran (5), the US (2) and Trinidad (1). Through this same 2018-2023 time period, China's expansions alone totaled some 17mn t of new capacity (again excluding captive CTO/CTP capacity). World methanol consumption increased 11mn t across this same time period.
- Looking ahead, further capacity additions are expected in China, Iran and to a lesser degree the US and southeast Asia. In the latest forecast, Russia capacity expansion plans have been delayed for many years (2030 and beyond), with Iran expansion plans delayed some as well.
- The nearly 10mn t of new methanol capacity expected across the 2024-2028 (ex China) time period will be seen in Iran, the US and Malaysia.
- The timing of such large portions of global capacity additions may be critical. Should Iran capacity enter the industry as planned, the industry will remain in a large excess supply position, particularly with expectations of a slowing MTO sector. As well, with Iran capacity targeting China and/or India as major outlets, these additional large supplies place downward pressure on methanol prices. Low prices hinder expansion plans in other countries—particularly the US, where financing requirements seem to be more challenging than in other locales.
- However, should Iran (or other) new capacity fail to materialize as planned, the industry could return to a more balanced-to-tight scenario by not being able to quickly backfill a potential Iran supply shortfall.

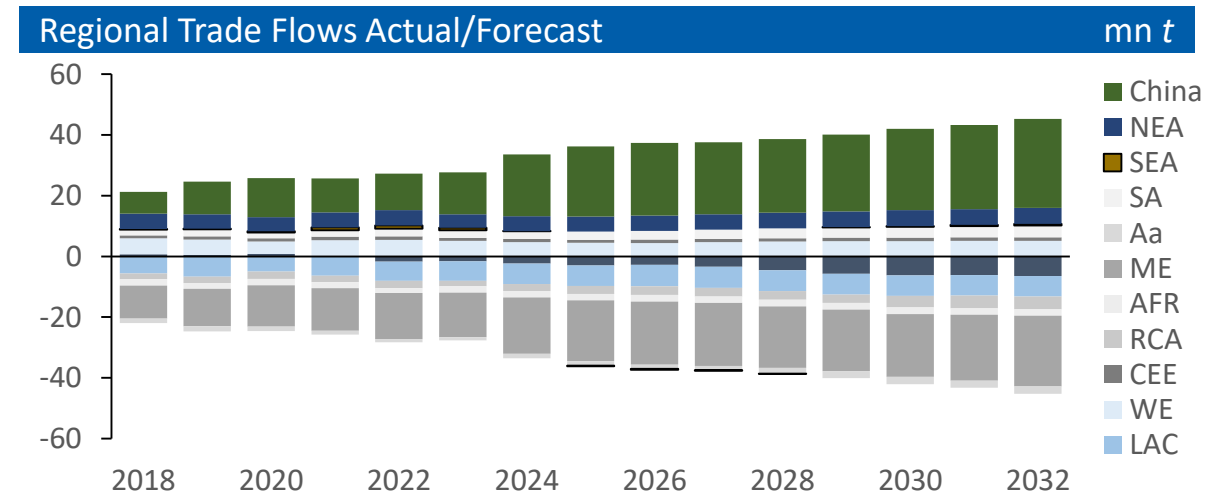
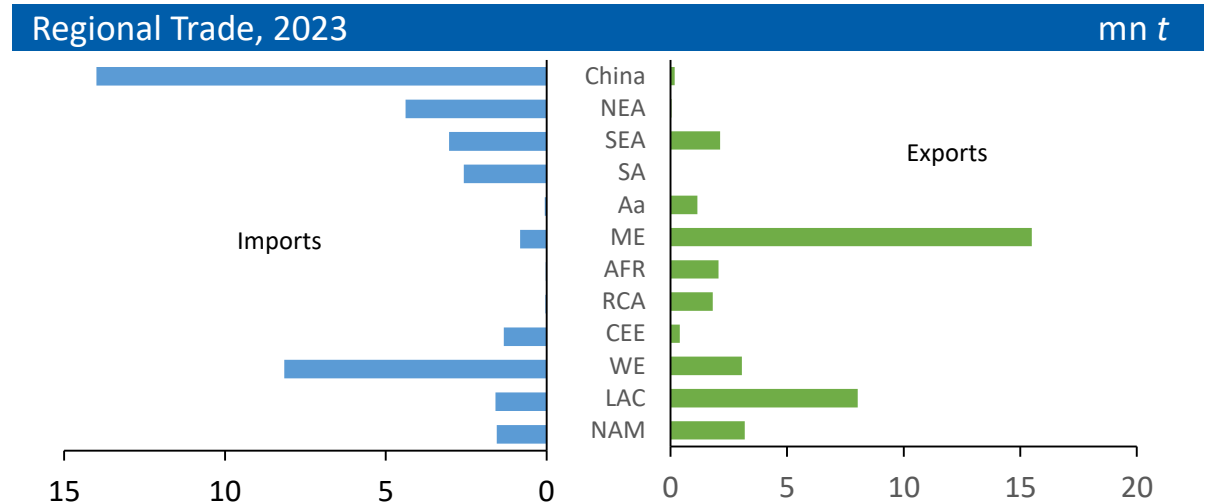
# World Methanol Industry Trade Metrics Actual/Forecast, Methanol Analytics Fall Update 2023

China, west Europe and North America combined represent 76pc of industry demand, with little change through the forecast. The next five years sees capacity additions outpace demand growth and more so the following five.

- International trade of methanol continues to be a prominent part of supply for the global methanol industry. Both in history and forecast, the shipping of methanol from one country or region to another has represented 40-45pc of world demand. Across the 2018-2023 timeframe, trade grew from ~32mn t/yr to ~38mn t/yr in 2023. Through the forecast period, methanol trade is expected to continue to grow as world capacity expands, reaching 50mn t in 2028 and 56mn t in 2032, at which time trade will represent over 50pc of total methanol demand.
- The Middle East and Latin America and Caribbean export the bulk of the world's methanol through the forecast period. Their combined volumes represented 63pc of total exports in 2023. As capacity additions increase in the North America and the Middle East, volumes drop to about 55pc of total exports by the end of the forecast period (2032).
- The largest methanol importing regions have been northeast Asia, North America and western Europe, totalling about 60pc of all imports across the 2018-2023

period. While Europe imports grow minimally through the forecast period, North America imports continue to decline (result of capacity additions) while northeast Asia (China) imports rise significantly, absorbing capacity additions from the rest of the world.

- China has the largest methanol capacity and consumption in the world. The rest of the world essentially exports excess production/supply to China. China's domestic production supplies the difference (to meet domestic demand), thus serving to balance the industry. As China represents the high cost incremental supplier to the industry, China becomes a huge export target for lower cost producers in the Middle East, Latin America and Caribbean and southeast Asia. As the US continues to produce methanol in excess of domestic demand, excess volumes will target other regions of the world as well, including China.



# Argus Methanol and Derivative services

Argus experts combine decades of experience and insight in analysing the global markets for methanol, formaldehyde, MTBE, acetic acid and other key end use applications.

## An Argus market service

### Weekly Methanol Report

- Ongoing commercial analysis of events and trends
- Current contract and spot pricing for key markets

### Daily Spot Pricing Report

- Europe, US Gulf, China
- Methanol futures on CME for the US and Rotterdam

### Monthly Market Outlook

- 24-month rolling price forecast for all major regions

### Methanol Analytics

- 5-year history, 10-year forward global methanol supply/demand
- 80+ countries. All major derivatives. Production.
- Trade Capacity data/forecast for methanol and all major derivatives
- Quarterly updates addressing key industry trends
- Argus analyst access provides customers with tailored support

### Audience

- Anyone associated with the global methanol industry including producers, consumers, end users, traders, shippers or investors will find this service essential

### Consulting

- Lending institutions now request Argus for 3rd party methanol industry analysis and price forecasting

### Indexation examples

- Argus postings dominate contract settlement pricing in the US. Monthly weighted spot average included in a number of US contracts in the trading arena
- Argus daily methanol price is the settlement basis for the CME futures trading platform in the US. EU likely soon to follow
- Argus weekly prices penetrating Middle East/Asia-Pacific contract settlement reference pricing beginning in 2019

# Argus Methanol experts



**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 America's. Dave offers support to *Argus MTBE & Fuel Service*, as well as coordinates the annual *Methanol/Fuel Conferences* offered around the world each year. Dave has 46 years of experience in the petrochemical industry, beginning his stint with Celanese Chemical Company as a chemical engineer in Texas, followed by roles in capital planning, hydrocarbon purchasing and operations planning/support. Dave served in field sales before assuming business management of the Celanese ethylene oxide/ethylene glycol product area and then Business Manager for their methanol and formaldehyde product line. Following this, Dave served as Global Business Director of Methanol & Derivatives for two other well-established private petrochemical consulting firms for almost 13 years, developing extensive knowledge of the methanol industry, including global supply and demand, trade flows and has authored numerous World Analyses and 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.



**Becky Zhang**  
Asia/Pacific

Becky Zhang joined *Argus* in April 2014 and covers Asia-Pacific methanol, ethylene and propylene markets. Becky has eight years of price reporting and market research experience, specializing in the petrochemical industry with an in-depth focus on market fundamentals and time market intelligence. Becky maintains a vast contact base in Asia-Pacific and is a regular presenter at methanol and olefins conferences. Prior to joining *Argus*, Becky worked for ICIS from 2005-13, covering Asia-Pacific MEG/PTA/polyester markets. Becky graduated from East China University of Science and Technology with a degree in chemical engineering and holds master's degrees in environmental and energy engineering from the University of Sheffield (2001-02) and entrepreneurship from the University of Nottingham (2002-03).



**Roel Salazar**  
Americas

Roel Salazar is a Methanol & Derivatives Consultant and Fuels and Octane Consultant 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 supporting the Ethylene, Propylene and Butadiene services. Mr. Salazar joined the Fuels and Octane team in 2011 and has steadily built key client relationships with US MTBE consumers, producers and traders, while helping them analyze the global MTBE and Octane markets. Roel's previous experience includes managing system development projects in several industries. His petrochemical experience includes working at one of Mobil's ethylene crackers in Houston between 1996-97. Mr. Salazar holds an undergraduate degree in Information Systems from the University of Houston.



**Victoria Baghdjian**  
Europe

Victoria Baghdjian joined *Argus* in 2020 and is Head of European Methanol and MTBE/ETBE 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.



# Argus Acronyms

- Aa – Australasia
- AFR – Africa
- ARA – Amsterdam Rotterdam Antwerp
- b/d – barrels per day
- bl – barrel
- bn – billion
- Btu – British thermal unit
- CAGR – Compound annual growth rate
- CEE – Central and Eastern Europe
- CTO/CTP – Coal to olefins/Coal to propylene
- DME – Dimethyl Ether
- DMT – Dimethyl terephthalate
- EIA – Energy Information Administration
- EPA – US Environmental Protection Agency
- ETBE – Ethyl tertiary butyl ether
- HAc – Acetic acid
- HCHO – Formaldehyde
- INO – Indonesia
- kl – Kiloliter
- LAC – Latin America and Caribbean
- LPG – Liquid petroleum gas
- ME – Middle East
- MDF – Medium density fiberboard
- MDI – Methylene diphenyl diisocyanate
- MEA – Methylamines
- MeOH – Methanol
- MMA – Methyl methacrylate
- mn – million
- MTBE – Methyl tert-butyl ether
- MTO/MTP – Methanol to olefins/Methanol to propylene
- NAM – North America
- NEA – Northeast Asia
- NZE – New Zealand
- OSB – Oriented strand board
- PET – Polyethylene terephthalate
- POM – Polyoxymethylene
- PBT – Polyethylene butyl terephthalate
- pc – percent
- RCA – Russia and Central Asia
- RFS – Renewable Fuels Standard
- ROW – Rest of world
- SEA – Southeast Asia
- SA – South Asia
- t – metric ton
- t/yr – metric tons per year
- TAME – Tertiary amyl methyl ether
- VAM – Vinyl acetate monomer
- WE – Western Europe
- yr – year