January 2024

IEF Comparative Analysis

Of Monthly Oil Market Reports

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Oil Market Context

Oil prices remain range-bound despite rising geopolitical risk in the Middle East

More shippers are avoiding the Red Sea following a series of attacks on transiting ships by Yemen-based Houthis. The Suez Canal and Bab al-Mandeb Strait carried nearly 10% of all seaborne oil trade last year. Several oil companies have suspended shipments through the area and elected to reroute cargos around Africa's Cape of Good Hope, adding 10-14 days to the voyage time. As a result of the attacks, a US-led coalition has launched a series of strikes on Houthi targets in Yemen.

Additionally in the region, Iran carried out strikes in Iraq, Syria, and Pakistan earlier this week. Pakistan then carried out a retaliatory strike into Iran.

Despite the geopolitical escalation, physical oil and gas production have not yet been impacted and Brent crude prices have remained range-bound in the upper-$70s. Economic headwinds and negative sentiment have helped keep prices capped.

Extreme cold and winter weather disrupt US production and refineries

Oil production in North Dakota, the US' third largest producing state, has fallen by nearly 50% (~700 kb/d) this week because of operational challenges from extreme cold temperatures. Freezing weather in Texas has also resulted in reduced operations at numerous refineries. US physical oil prices have seen some upward pressure, but the outage is expected to be temporary, and the futures market remains largely unaffected.

Angola leaves OPEC

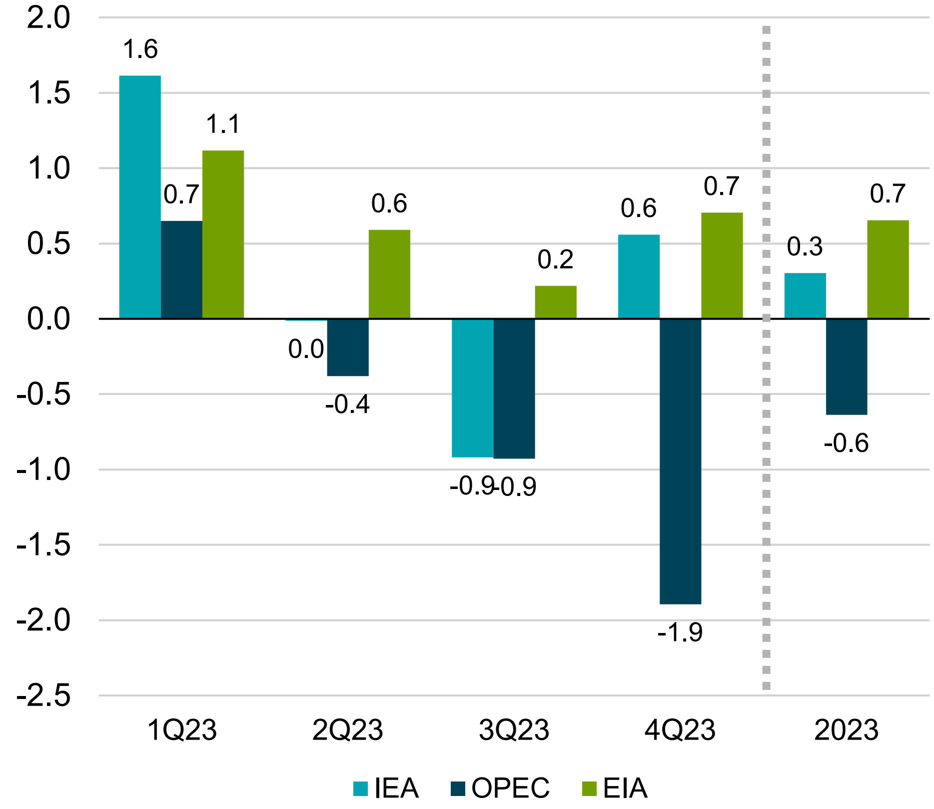
Angola announced in late December it was leaving OPEC after 16 years of membership. Angola was the 7th largest OPEC member, producing ~1.1 mb/d of crude. There are now 12 OPEC members.

This edition of the Comparative Analysis report includes Angola in non-OPEC production figures and has adjusted the month-on-month revisions to account for its reclassification from OPEC to non-OPEC.

2023 has come to an end, but oil balances still show unusually large divergences

- Data, particularly for demand, is revised routinely for years to come, but this large of a divergence at the end of the year is uncommon.
- The 2023 annual balances from IEA, OPEC, and EIA imply global oil inventories either *grew* by 0.3-0.7 mb/d or *drew* by 0.6 mb/d.
- This is a 1.3 mb/d range for 2023 and is more than 3x the range in estimates for 2022 (a 0.4 mb/d gap).
- 4Q23 data is still considered a forecast and the current estimates of the global supply-demand balance diverge by 2.6 mb/d.
- However, data for 1Q23 is 9+ months old and balance estimates still diverge by 0.9 mb/d.
- All three forecasters are fairly aligned on non-OPEC production estimates for the year, but their estimates on global demand levels differ by 1 mb/d and on OPEC supply differ by 0.6 mb/d.

2023 Global Liquids Stock Change
million barrels per day



Source: IEF, IEA OMR, OPEC MOMR, EIA STEO

Summary of 2024-2025 Balances

OPEC and EIA published inaugural 2025 forecasts this month. IEA is scheduled to introduce its 2025 forecast in April.

- Demand growth forecasts diverge by 1.0 mb/d in 2024 and 0.6 mb/d in 2025. OPEC sees the most robust growth both years. IEA sees OECD demand contracting this year and EIA sees it contracting next year.
- OPEC and EIA's 2025 global demand level forecasts diverge by 2.5 mb/d – roughly equivalent to the current consumption levels of South Korea or Canada.
- Non-OPEC supply is forecast to grow by 0.9-1.4 mb/d in both 2024 and 2025.
- OPEC and EIA both see the call on OPEC rising in 2024 and 2025 as demand growth outpaces non-OPEC supply growth in both years.

		2024 & 2025 Balance Summary											
	lowest forecast	2024						2025					
	highest forecast	1Q24	2Q24	3Q24	4Q24	2024	2024 Y/Y	1Q25	2Q25	3Q25	4Q25	2025	2025 Y/Y
Global Demand	**IEA**	101.7	102.7	103.7	103.8	103.0	1.2						
	OPEC	103.3	103.9	104.9	105.3	104.4	2.2	105.2	105.7	106.9	107.0	106.2	1.8
	EIA	102.1	102.1	102.8	102.8	102.5	1.4	103.2	103.4	104.0	104.1	103.7	1.2
OECD Demand	**IEA**	45.4	45.5	45.6	45.9	45.6	-0.1						
	OPEC	45.6	45.9	46.3	46.2	46.0	0.3	45.7	46.0	46.5	46.3	46.1	0.1
	EIA	46.1	45.6	46.2	46.3	46.1	0.1	45.9	45.5	46.2	46.3	46.0	-0.1
Non-OECD Demand	**IEA**	56.3	57.3	58.0	57.9	57.4	1.4						
	OPEC	57.7	58.0	58.5	59.1	58.3	2.0	59.4	59.7	60.5	60.8	60.1	1.7
	EIA	56.1	56.6	56.5	56.5	56.4	1.3	57.3	57.9	57.8	57.8	57.7	1.3
Non-OPEC Supply* and OPEC NGLs	**IEA**	75.0	75.9	76.3	76.5	75.9	1.4						
	OPEC	75.4	75.5	76.0	76.6	75.9	1.4	77.1	76.9	77.2	77.7	77.2	1.4
	EIA	75.3	75.5	75.9	76.1	75.7	0.9	76.0	76.4	76.8	77.2	76.6	0.9
Call on OPEC	**IEA**	26.7	26.8	27.3	27.3	27.0	-0.2						
	OPEC	27.9	28.4	28.9	28.7	28.5	0.8	28.1	28.7	29.7	29.3	29.0	0.5
	EIA	26.8	26.6	26.8	26.7	26.8	0.5	27.3	27.0	27.2	26.9	27.1	0.3

* Includes biofuels and processing gains

Source: IEF, IEA OMR, OPEC MOMR, EIA STEO

2024 Outlook Comparison

Summary of 2024 Balances and Revisions

- All three forecasters revised up 2024 non-OPEC supply on stronger US outlooks. OPEC also revised up its Russian outlook by 0.2 mb/d.
- IEA and EIA also revised up their global demand outlook by 0.1-0.2 mb/d on stronger US and Europe forecasts.
- Despite the upward revisions, demand forecasts continue to diverge sharply. IEA sees only 1.2 mb/d of global demand growth next year while OPEC continues to see 2.2 mb/d.
- EIA continues to see 0.5 mb/d less non-OPEC supply growth than IEA and OPEC due to a lower US and Kazakhstan forecast.

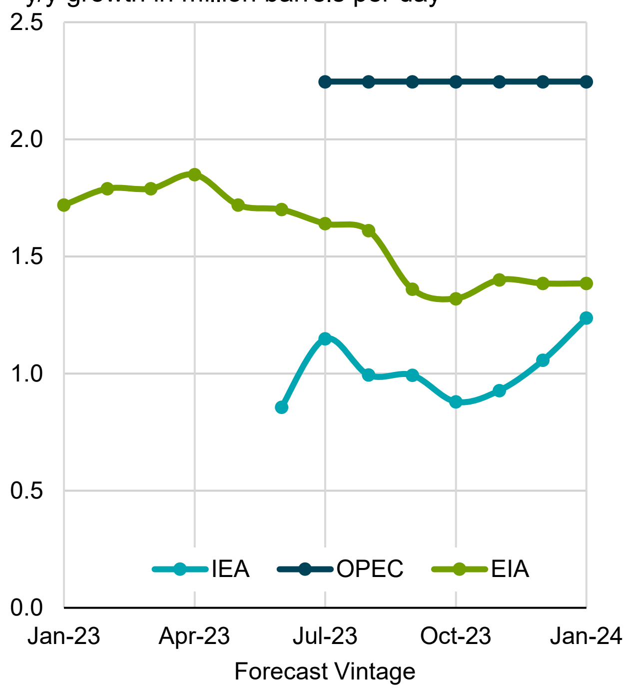
		2024 Balance Summary											
		Updated Forecast						*Revisions to Last Month's Forecast*					
		1Q24	2Q24	3Q24	4Q24	2024	2024 Y/Y	*1Q24*	*2Q24*	*3Q24*	*4Q24*	*2024*	*2024 Y/Y*
Global Demand	**IEA**	101.7	102.7	103.7	103.8	103.0	1.2	*0.2*	*0.3*	*0.3*	*-0.2*	*0.2*	*0.2*
	OPEC	103.3	103.9	104.9	105.3	104.4	2.2	*-0.3*	*0.3*	*0.1*	*-0.1*	*0.0*	*0.0*
	EIA	102.1	102.1	102.8	102.8	102.5	1.4	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.0*
OECD Demand	**IEA**	45.4	45.5	45.6	45.9	45.6	-0.1	*0.1*	*0.1*	*0.2*	*0.0*	*0.1*	*0.1*
	OPEC	45.6	45.9	46.3	46.2	46.0	0.3	*-0.1*	*0.0*	*-0.2*	*0.0*	*-0.1*	*0.0*
	EIA	46.1	45.6	46.2	46.3	46.1	0.1	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*
Non-OECD Demand	**IEA**	56.3	57.3	58.0	57.9	57.4	1.4	*0.2*	*0.2*	*0.1*	*-0.2*	*0.1*	*0.1*
	OPEC	57.7	58.0	58.5	59.1	58.3	2.0	*-0.2*	*0.3*	*0.3*	*-0.1*	*0.1*	*0.0*
	EIA	56.1	56.6	56.5	56.5	56.4	1.3	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Non-OPEC Supply* and OPEC NGLs	**IEA**	75.0	75.9	76.3	76.5	75.9	1.4	*0.2*	*0.2*	*0.2*	*0.6*	*0.3*	*0.2*
	OPEC	75.4	75.5	76.0	76.6	75.9	1.4	*0.4*	*0.3*	*0.3*	*0.3*	*0.3*	*0.0*
	EIA	75.3	75.5	75.9	76.1	75.7	0.9	*0.1*	*0.2*	*0.2*	*0.2*	*0.1*	*0.0*
OPEC Crude	**EIA**	26.0	26.8	26.9	26.8	26.6	-0.3	*0.0*	*0.0*	*0.0*	*-0.1*	*0.0*	*0.0*
Call on OPEC	**IEA**	26.7	26.8	27.3	27.3	27.0	-0.2	*0.0*	*0.1*	*0.0*	*-0.7*	*-0.1*	*0.0*
	OPEC	27.9	28.4	28.9	28.7	28.5	0.8	*-0.7*	*0.0*	*-0.2*	*-0.4*	*-0.3*	*0.0*
	EIA	26.8	26.6	26.8	26.7	26.8	0.5	*0.0*	*-0.1*	*-0.1*	*0.0*	*0.0*	*0.0*
Global Stock Change and Misc to Balance	**EIA**	-0.8	0.1	0.1	0.0	-0.1		*0.0*	*0.1*	*0.1*	*-0.1*	*0.0*	

* Includes biofuels and processing gains
** Only EIA publishes a forecast of OPEC crude production and global stock change
Source: IEF, IEA OMR, OPEC MOMR, EIA STEO

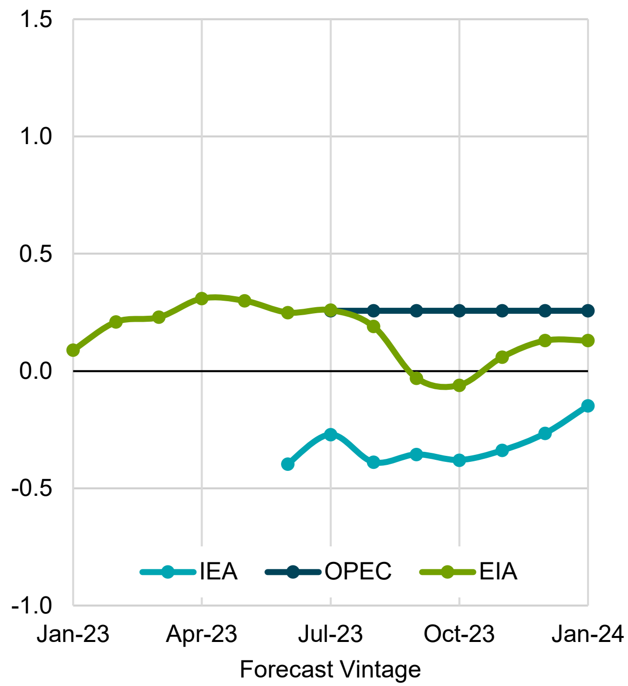
Evolution of 2024 Annual Demand Growth Forecasts

- OPEC's 2024 global demand growth forecast is 1.0 mb/d higher than IEA's due to a higher OECD, Middle East, and Russian forecasts.
- IEA sees OECD demand declining by 0.1 mb/d next year, while OPEC sees 0.3 mb/d growth.

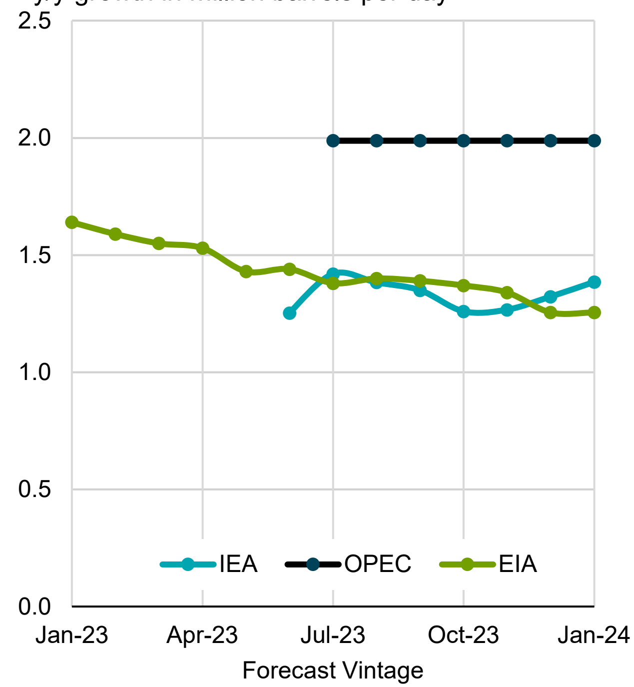
Global Demand Growth
Evolution of 2024 Forecasts
y/y growth in million barrels per day



OECD Demand Growth
Evolution of 2024 Forecasts
y/y growth in million barrels per day



Non-OECD Demand Growth
Evolution of 2024 Forecasts
y/y growth in million barrels per day

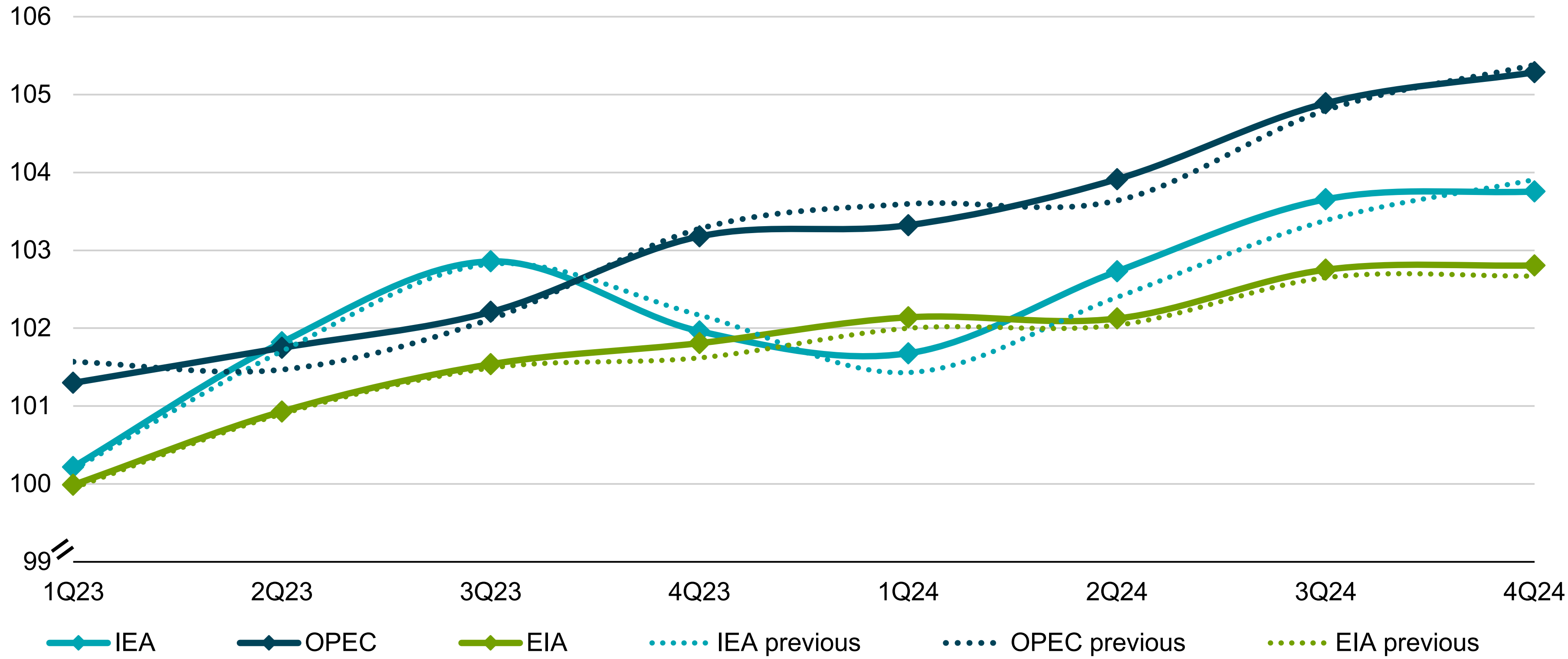


Source: IEF, IEA OMR, EIA STEO, OPEC MOMR

OPEC continues to see consistently higher demand levels through 2024, ending the year above 105 mb/d

2023-24 Global Demand

demand in million barrels per day

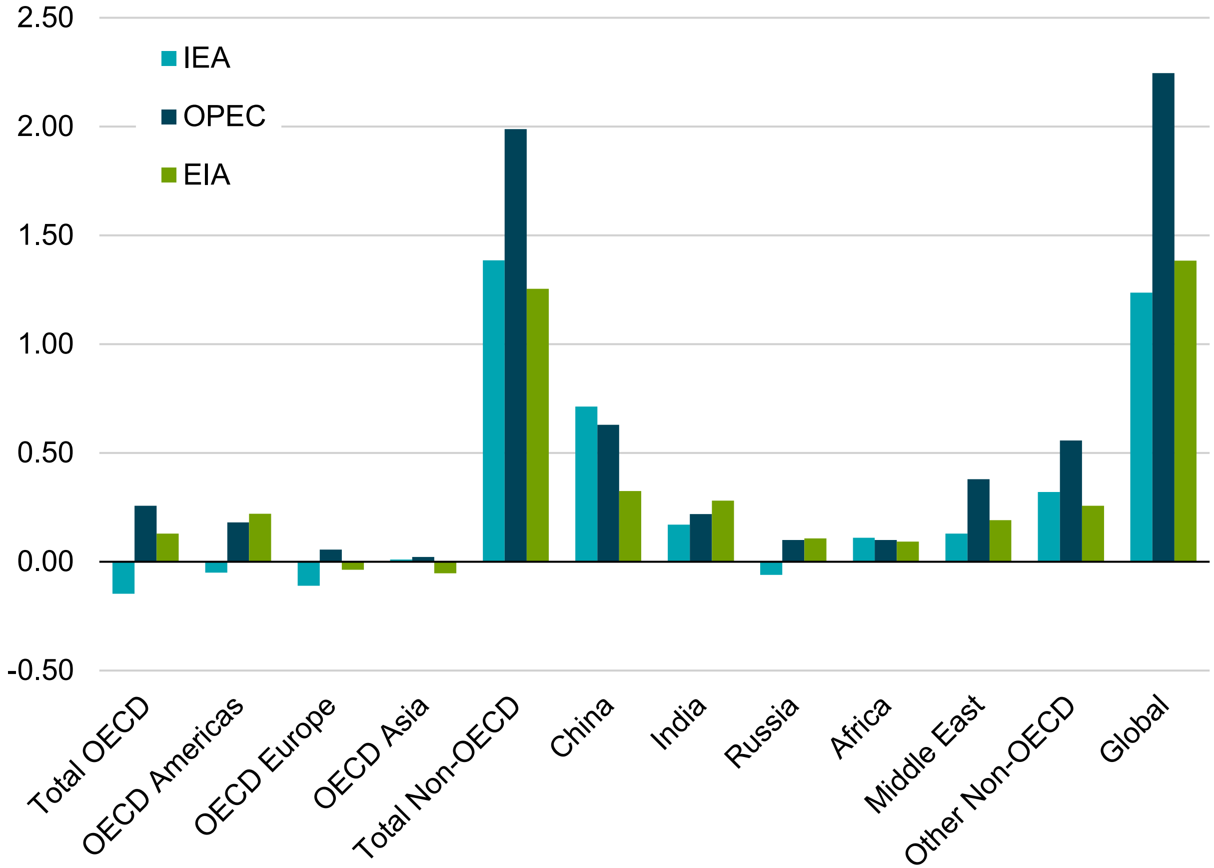


Source: IEF, IEA OMR, EIA STEO, OPEC MOMR

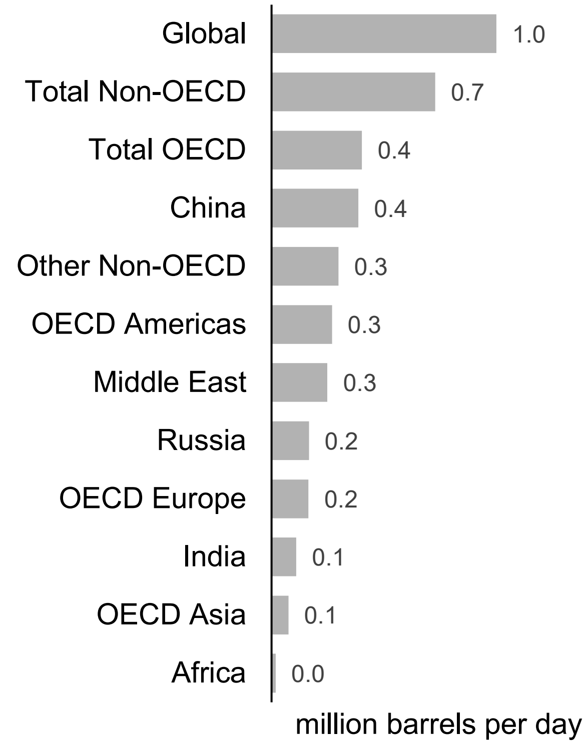
OPEC sees more robust demand growth than IEA in the OECD, India, Russia, and the Middle East

2024 Demand Growth Forecasts by Region

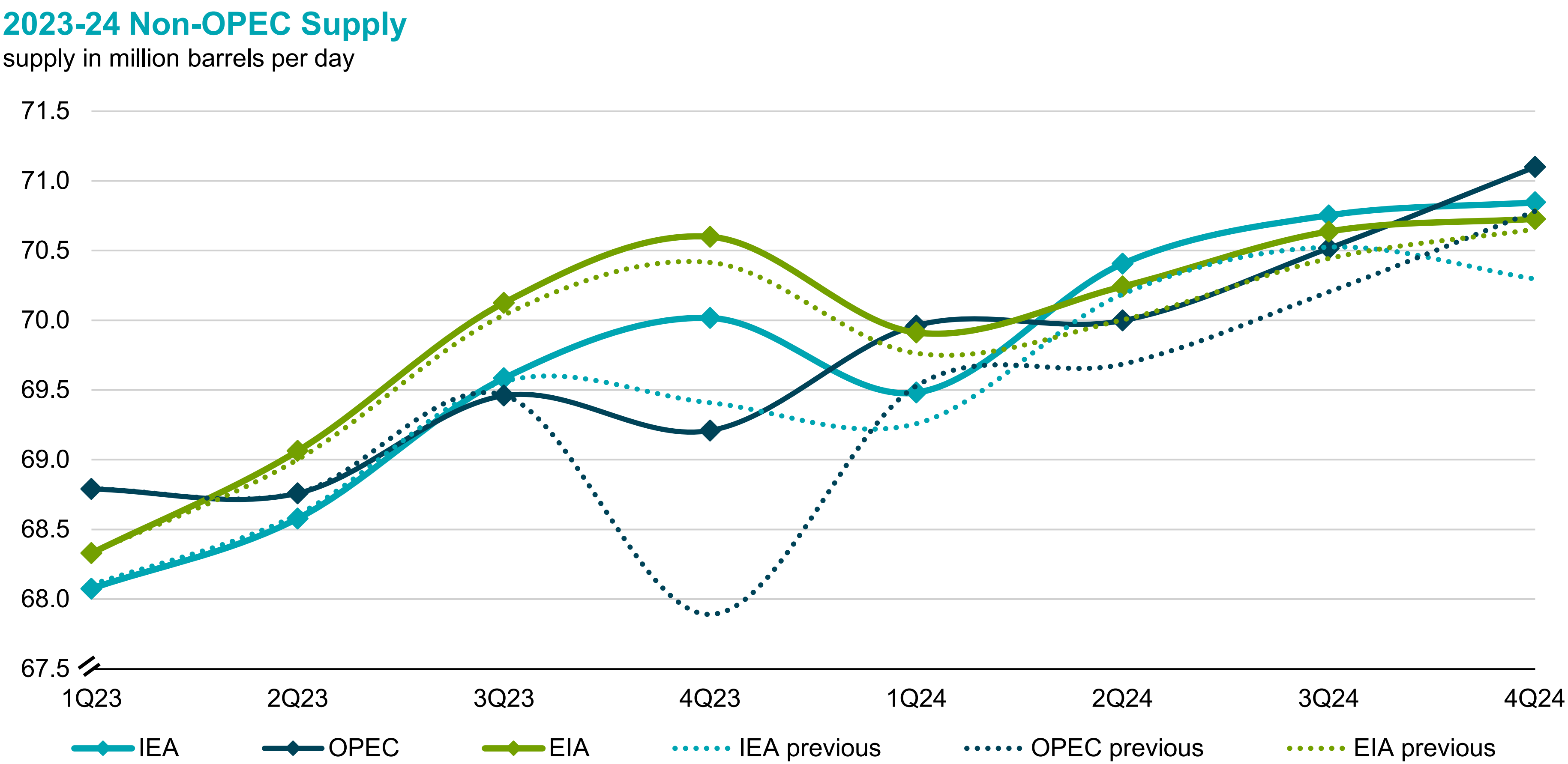
y/y growth in million barrels per day



Range in 2024 Demand Growth Forecasts



Non-OPEC supply forecasts for 2024 are significantly more aligned than 2023 estimates



Source: IEF, IEA OMR, EIA STEO, OPEC MOMR

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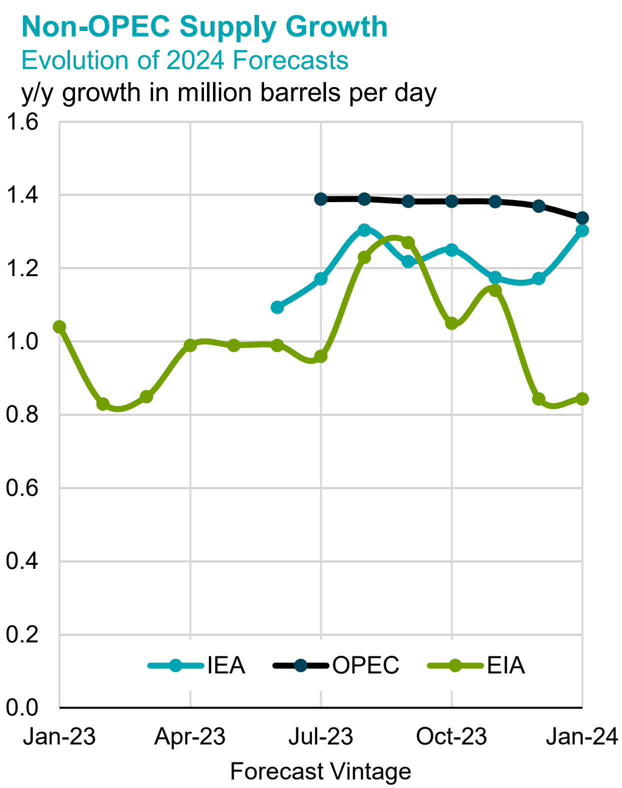
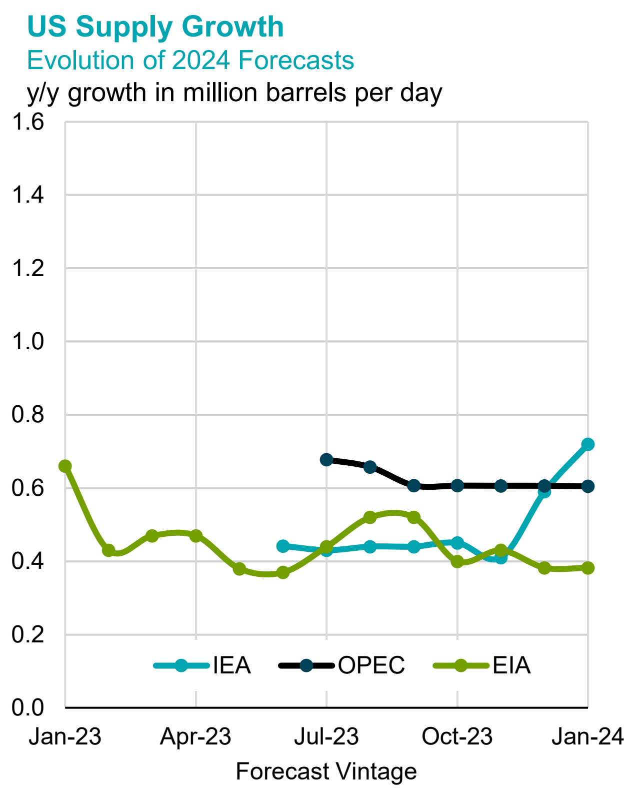
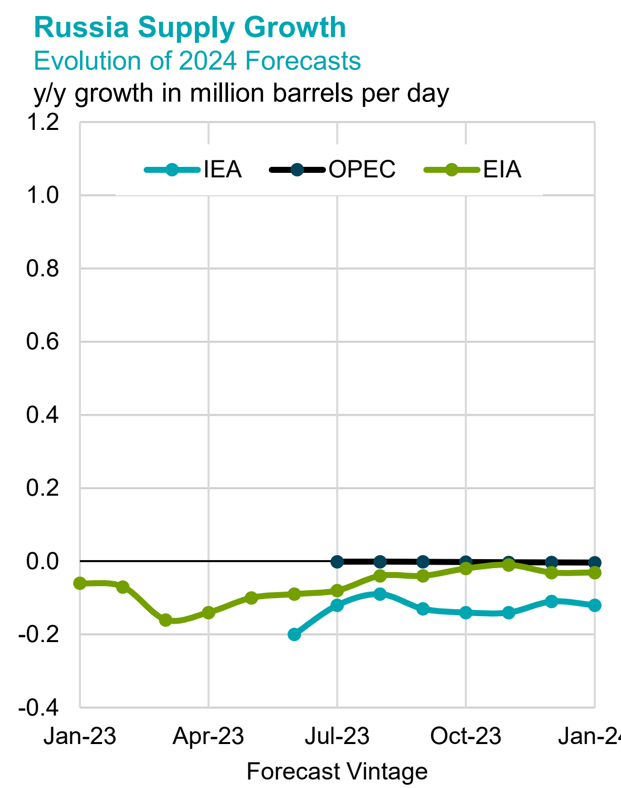
Evolution of 2024 Annual Non-OPEC Supply Growth Forecasts

- EIA continues to see lower non-OPEC supply growth than IEA and OPEC due to a weaker US, Canada, Norway, and Kazakhstan outlook.
- IEA has revised up US supply growth by 0.3 mb/d over the past two months.





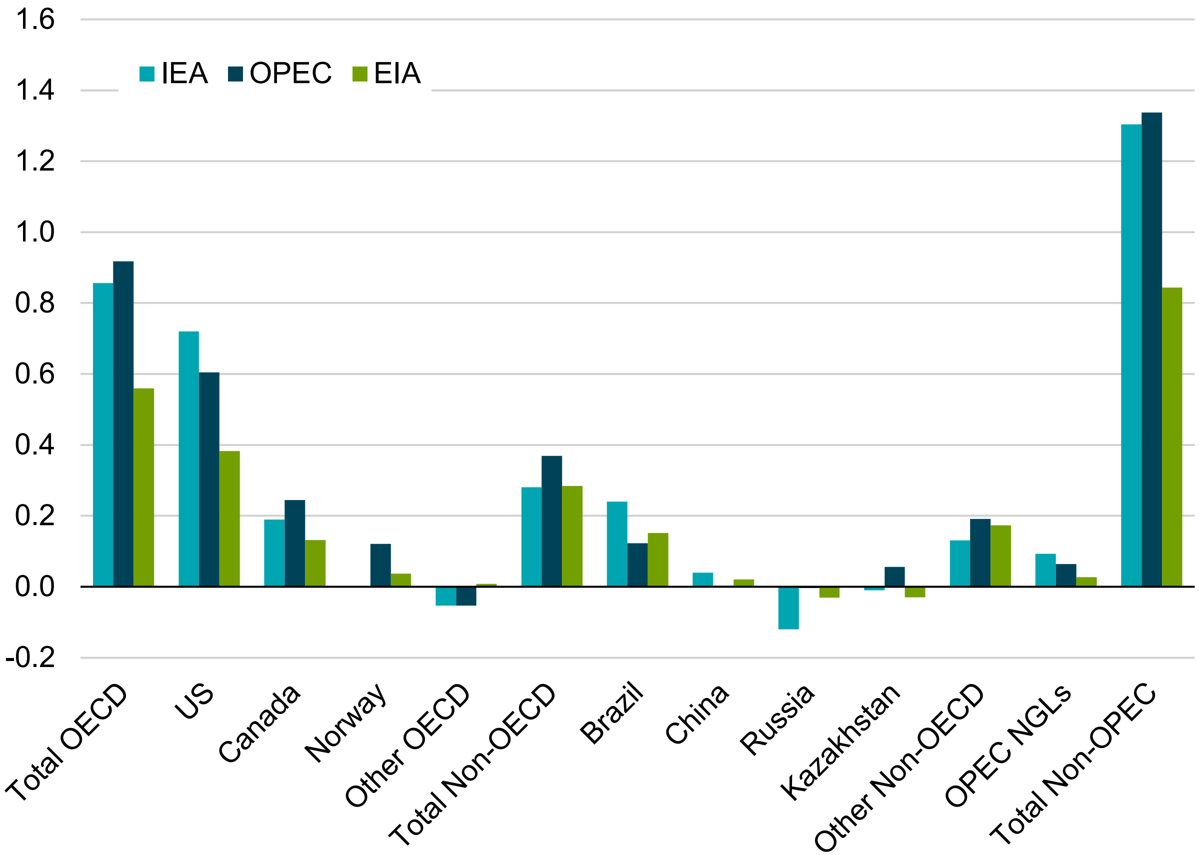


Source: IEF, IEA OMR, EIA STEO, OPEC MOMR

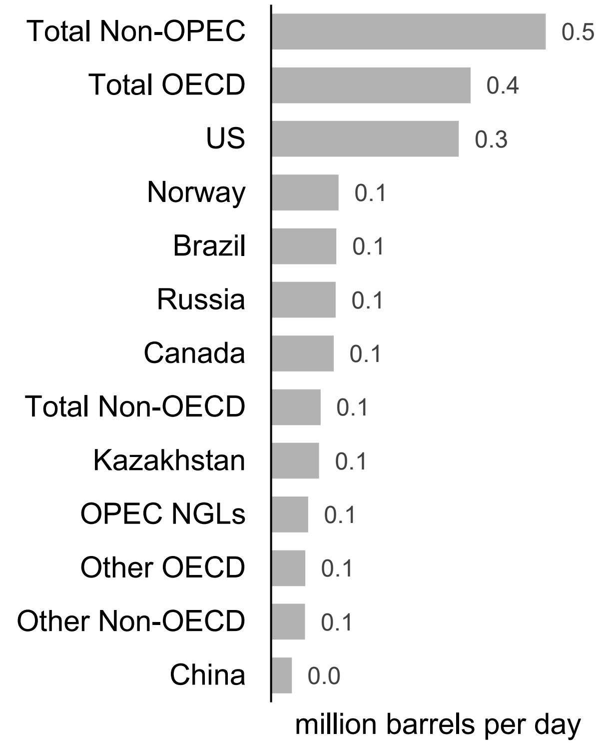
EIA sees the weakest non-OPEC supply growth largely due to a lower US, Canada, Norway, and Kazakhstan forecast

2024 Supply Growth Forecasts by Region

y/y growth in million barrels per day



Range in 2024 Supply Growth Forecasts

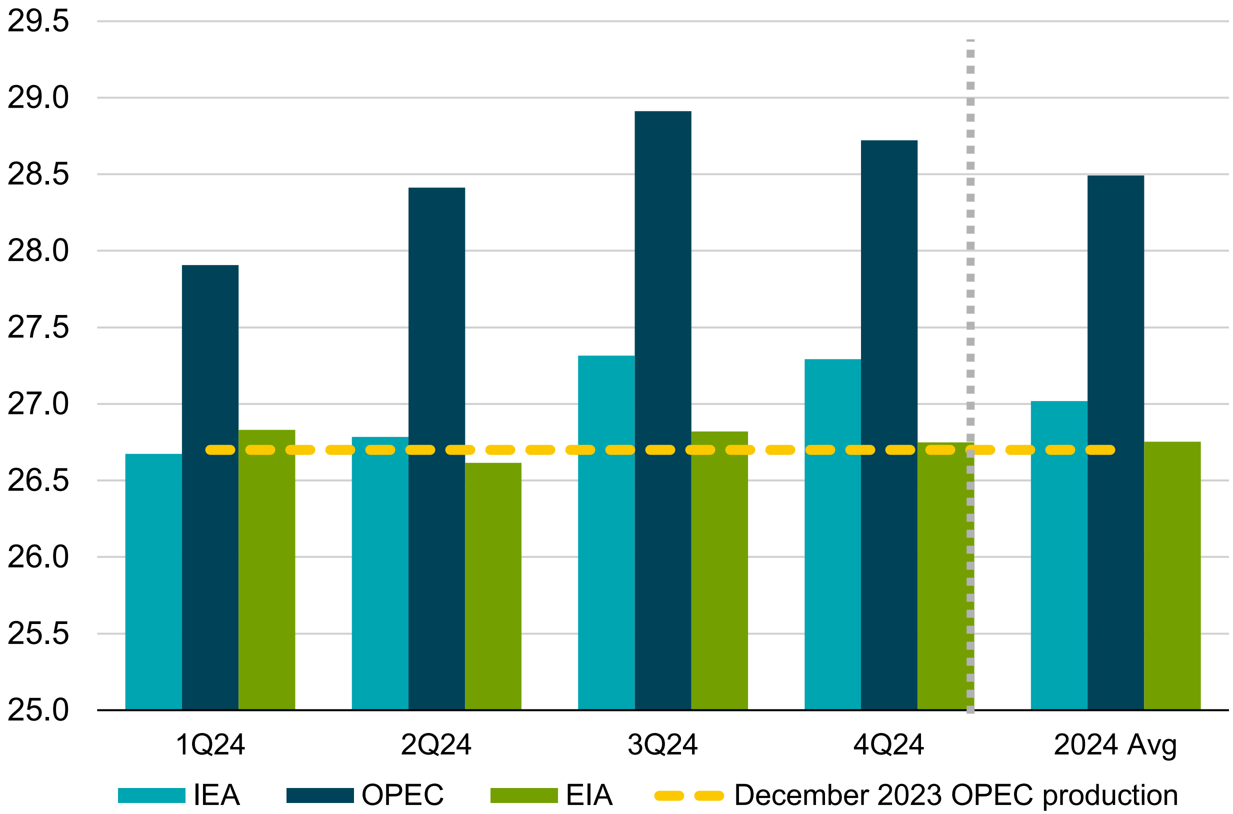


Source: IEF, IEA OMR, EIA STEO, OPEC MOMR

OPEC sees a much higher "call on OPEC" vs. IEA and EIA due to a more robust demand outlook

2024 Call on OPEC and Recent OPEC Production Levels

million barrels per day



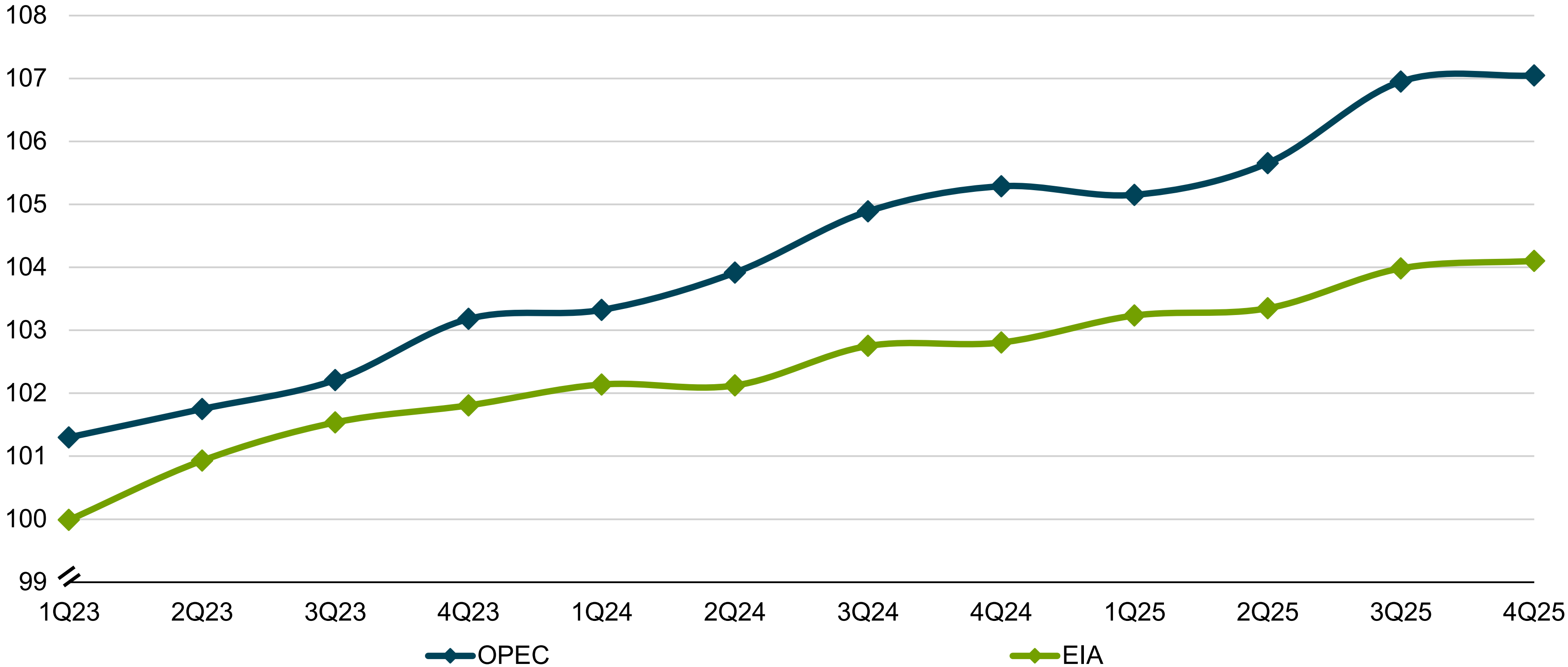
- The "call on OPEC crude" is a calculation and not a forecast of actual OPEC production.
- The "call on OPEC" estimates what OPEC would need to produce to balance global supply and demand.
- It is estimated by subtracting a forecast for non-OPEC production and OPEC NGLs from global demand.

Source: IEF, IEA OMR, EIA STEO, OPEC MOMR

2025 Outlook Comparison

OPEC continues to see consistently higher demand levels through next year, ending 2025 at 107 mb/d

2023-25 Global Demand
demand in million barrels per day



Source: IEF, IEA OMR, EIA STEO, OPEC MOMR

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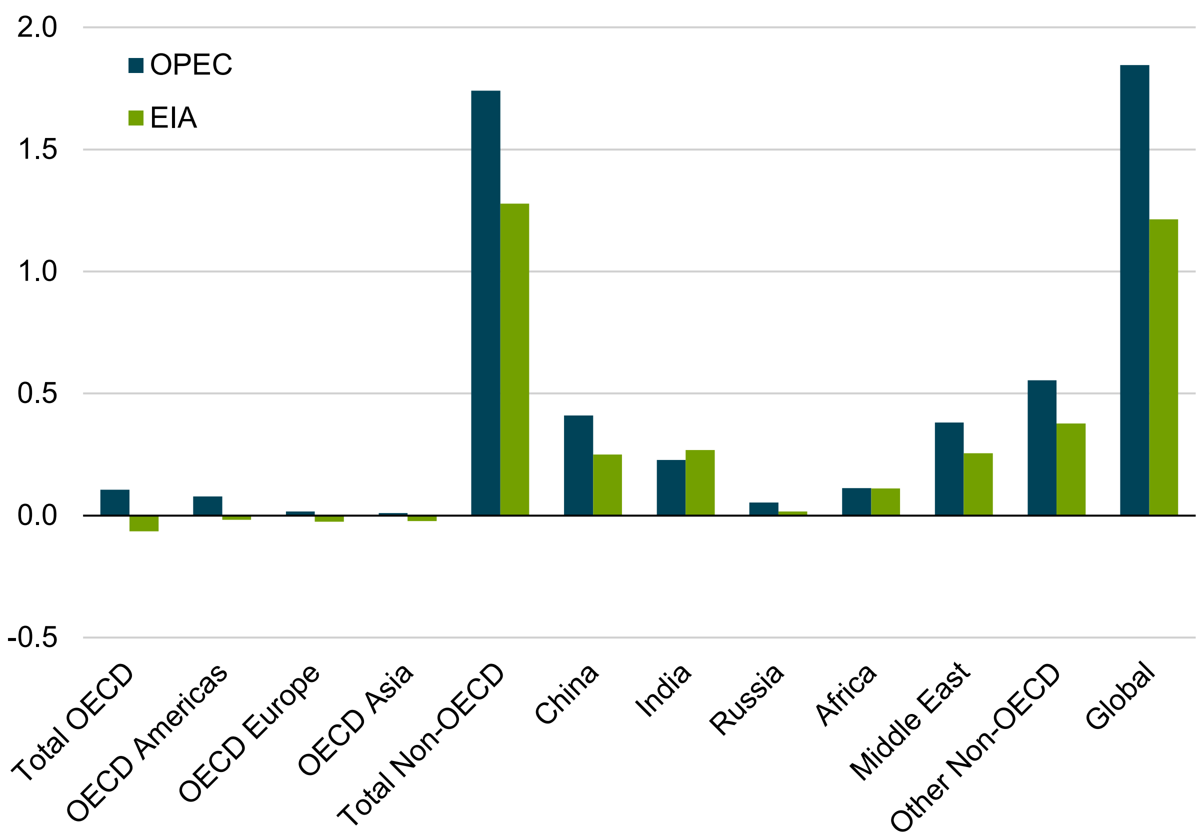
China, India, Middle East, Africa, and other non-OECD are expected to drive demand growth next year

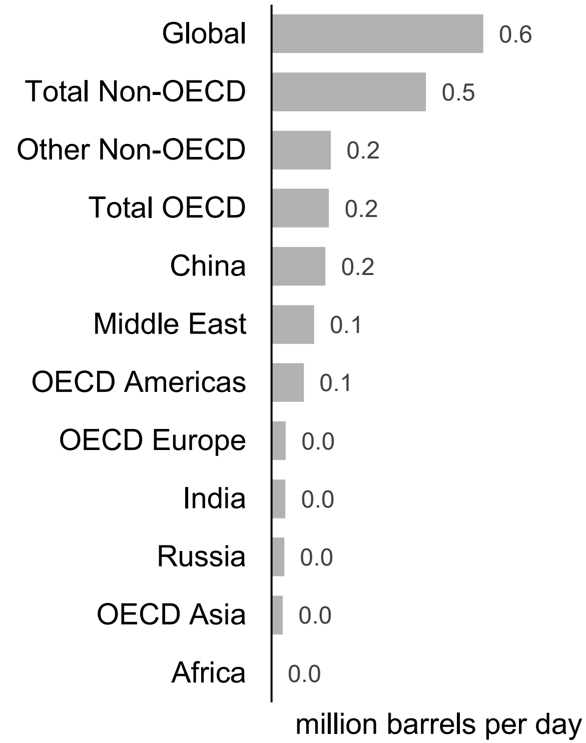
2025 Demand Growth Forecasts by Region

y/y growth in million barrels per day



Source: IEF, EIA STEO, OPEC MOMR

Range in 2025 Demand Growth Forecasts



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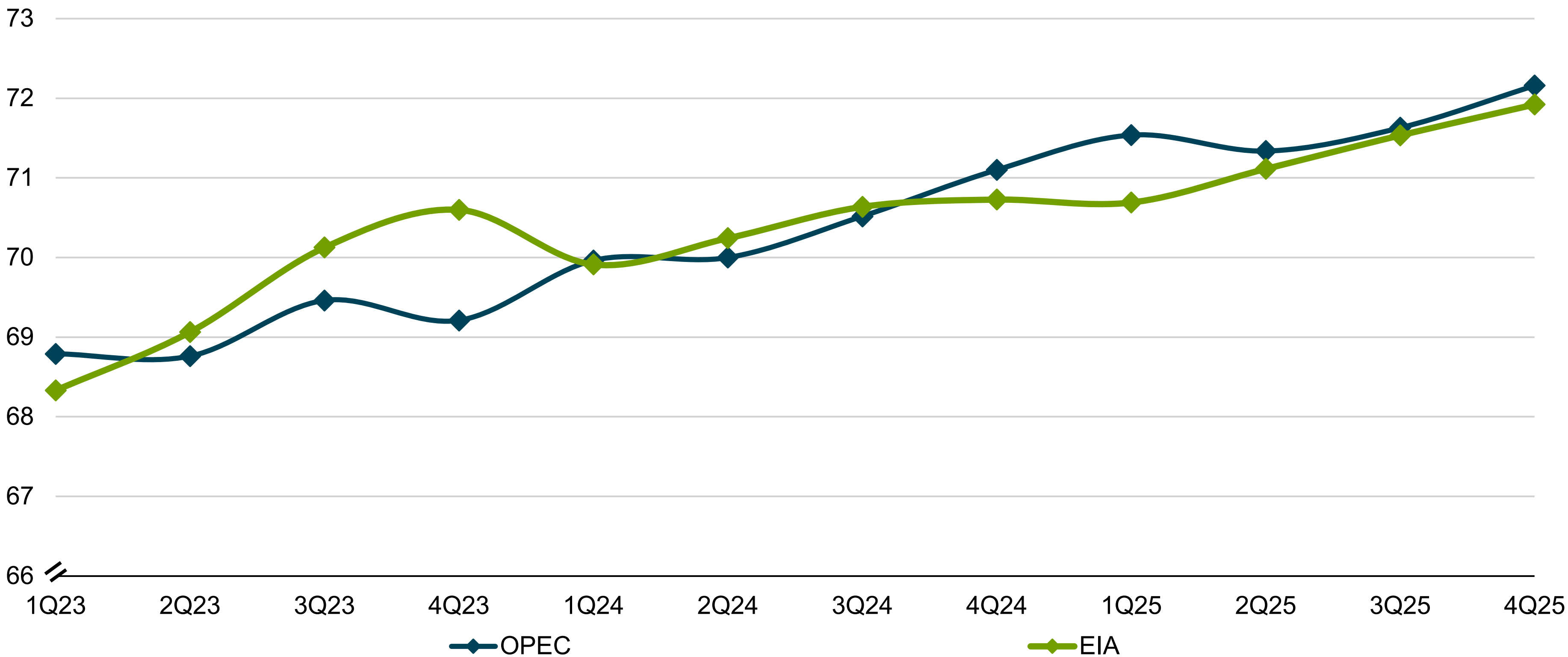
Non-OPEC supply forecasts for 2025 are surprisingly more aligned than 2023 historic estimates

2023-25 Non-OPEC Supply

supply in million barrels per day

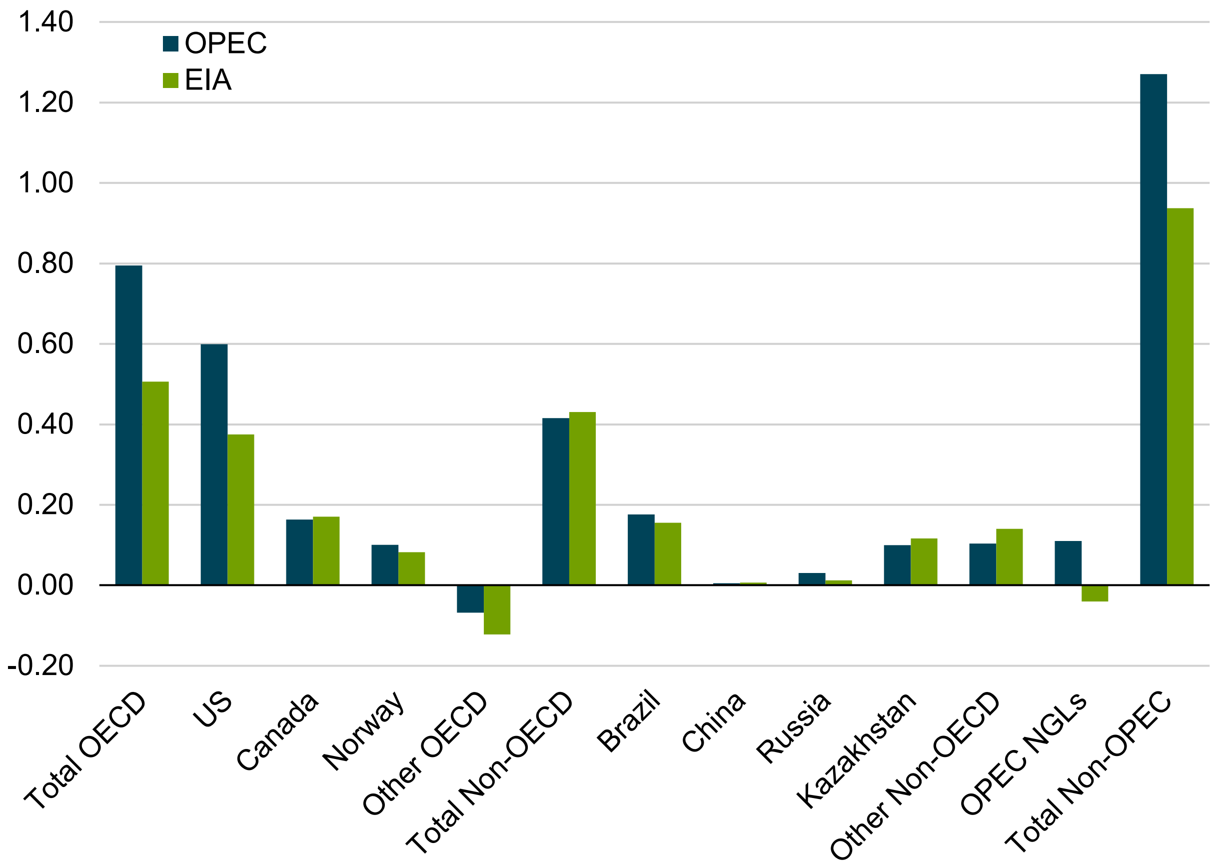


Source: IEF, IEA OMR, EIA STEO, OPEC MOMR

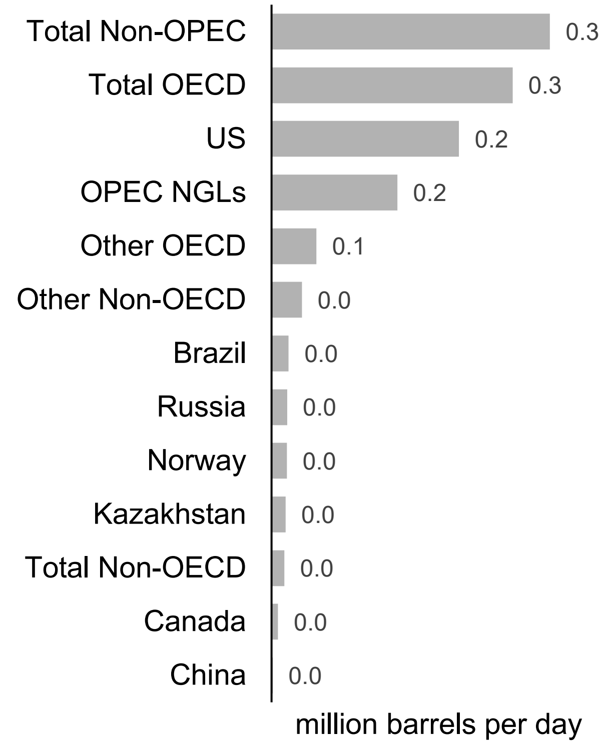
The US accounts for >40% of 2025 non-OPEC supply growth forecasts

2025 Supply Growth Forecasts by Region

y/y growth in million barrels per day



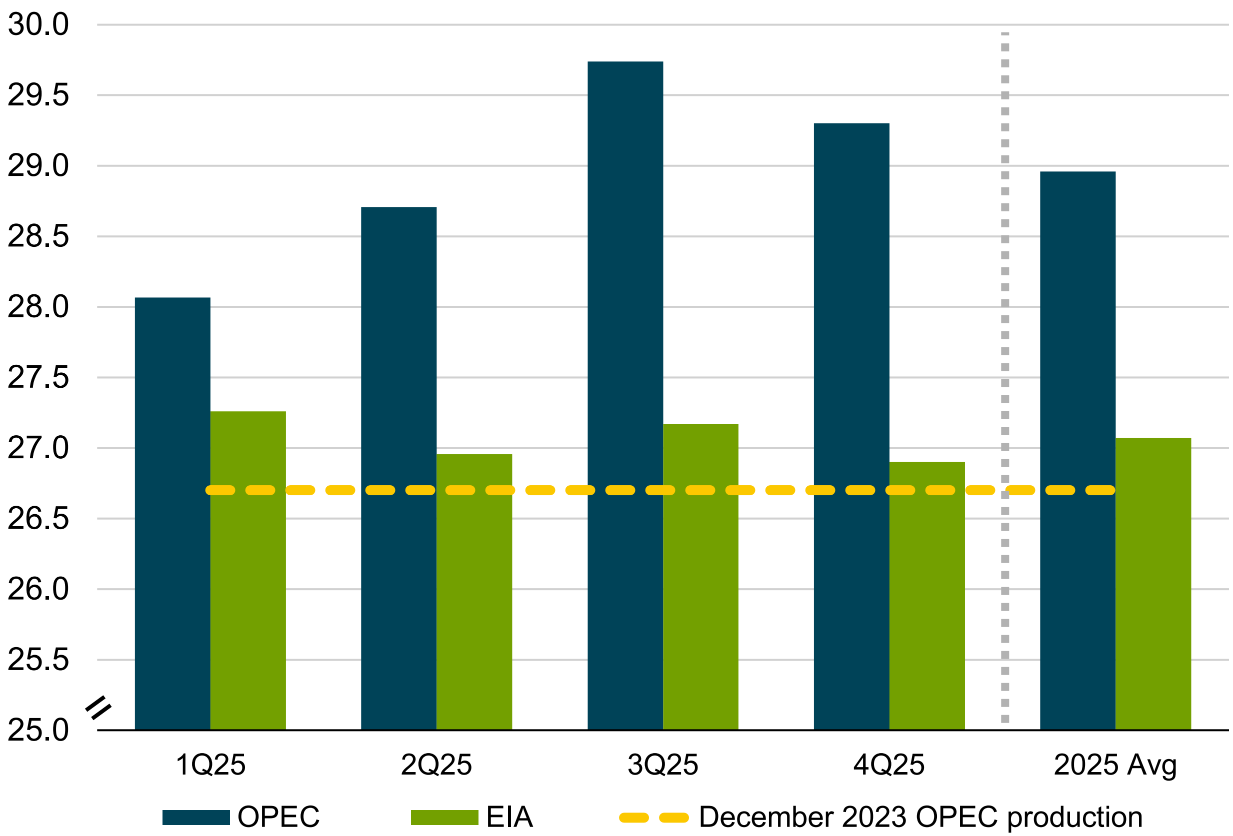
Range in 2025 Supply Growth Forecasts



Source: IEF, EIA STEO, OPEC MOMR

OPEC sees a much higher "call on OPEC" vs. EIA due to a more robust demand outlook and a tighter baseline

2025 Call on OPEC and Recent OPEC Production Levels
million barrels per day



Source: IEF, EIA STEO, OPEC MOMR

- The "call on OPEC crude" is a calculation and not a forecast of actual OPEC production.
- The "call on OPEC" estimates what OPEC would need to produce to balance global supply and demand.
- It is estimated by subtracting a forecast for non-OPEC production and OPEC NGLs from global demand.

Appendix

2023 Outlook Comparison

Summary of 2023 Balances and Revisions

- All three forecasters revised up 4Q23 non-OPEC supply significantly on stronger US, Brazil, and Russian supply.
- Annual demand growth estimates still diverge by 0.6 mb/d with OPEC seeing the strongest growth and EIA the weakest.
- The estimate of the annual stock change diverges by 1.3 mb/d. 1Q23 estimates are the most aligned, but still differ by 0.9 mb/d.

		2023 Balance Summary											
		Updated Forecast						***Revisions to Last Month's Forecast***					
		1Q23	**2Q23**	**3Q23**	**4Q23**	**2023**	**2023 Y/Y**	***1Q23***	***2Q23***	***3Q23***	***4Q23***	***2023***	***2023 Y/Y***
Global Demand	**IEA**	100.2	101.8	102.9	102.0	101.7	2.3	*0.0*	*0.1*	*0.0*	*-0.2*	*0.0*	*0.0*
	OPEC	101.3	101.8	102.2	103.2	102.1	2.5	*-0.3*	*0.3*	*0.1*	*-0.1*	*0.0*	*0.0*
	EIA	100.0	100.9	101.5	101.8	101.1	1.9	*0.0*	*0.0*	*0.0*	*0.2*	*0.1*	*0.1*
OECD Demand	**IEA**	45.4	45.7	46.0	45.9	45.7	0.1	*0.0*	*0.0*	*0.0*	*-0.1*	*0.0*	*0.0*
	OPEC	45.4	45.7	46.0	46.0	45.8	0.1	*-0.1*	*0.0*	*-0.2*	*0.0*	*-0.1*	*0.0*
	EIA	45.3	45.7	46.2	46.5	45.9	0.3	*0.0*	*0.0*	*0.0*	*0.2*	*0.0*	*0.0*
Non-OECD Demand	**IEA**	54.9	56.1	56.8	56.1	56.0	2.2	*0.0*	*0.1*	*0.0*	*-0.1*	*0.0*	*0.0*
	OPEC	55.9	56.1	56.2	57.2	56.3	2.4	*-0.2*	*0.3*	*0.3*	*-0.1*	*0.1*	*0.0*
	EIA	54.7	55.2	55.3	55.3	55.1	1.7	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Non-OPEC Supply* and OPEC NGLs	**IEA**	73.5	74.0	75.1	75.5	74.5	2.4	*0.0*	*0.0*	*0.0*	*0.6*	*0.1*	*0.2*
	OPEC	74.2	74.2	74.9	74.6	74.5	2.1	*0.0*	*0.0*	*0.0*	*1.3*	*0.3*	*0.3*
	EIA	73.7	74.3	75.4	75.9	74.8	2.4	*0.0*	*0.1*	*0.1*	*0.3*	*0.1*	*0.1*
OPEC Crude**	**IEA**	28.3	27.8	26.9	27.0	27.5	-0.5	*0.0*	*0.0*	*0.0*			
	OPEC	27.8	27.2	26.4	26.7	27.0	-0.7	*0.0*	*0.0*	*0.0*			
	EIA	27.4	27.2	26.4	26.6	26.9	-0.6	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Call on OPEC	**IEA**	26.7	27.8	27.8	26.5	27.2	-0.1	*0.1*	*0.1*	*0.0*	*-0.8*	*-0.2*	*-0.2*
	OPEC	27.1	27.6	27.4	28.6	27.6	0.3	*-0.3*	*0.3*	*0.1*	*-1.4*	*-0.3*	*-0.3*
	EIA	26.3	26.6	26.2	25.9	26.2	-0.4	*0.0*	*0.0*	*0.0*	*-0.1*	*0.0*	*0.0*
Global Stock Change and Miscellaneous to Balance**	**IEA**	1.6	0.0	-0.9	0.6	0.3		*-0.1*	*-0.2*	*-0.1*			
	OPEC	0.7	-0.4	-0.9	-1.9	-0.6		*0.2*	*-0.3*	*-0.1*			
	EIA	1.1	0.6	0.2	0.7	0.7		*0.0*	*0.0*	*0.1*	*0.1*	*0.0*	

* Includes biofuels and processing gains
** Only EIA publishes a forecast of OPEC crude production and global stock change
Source: IEF, IEA OMR, OPEC MOMR, EIA STEO

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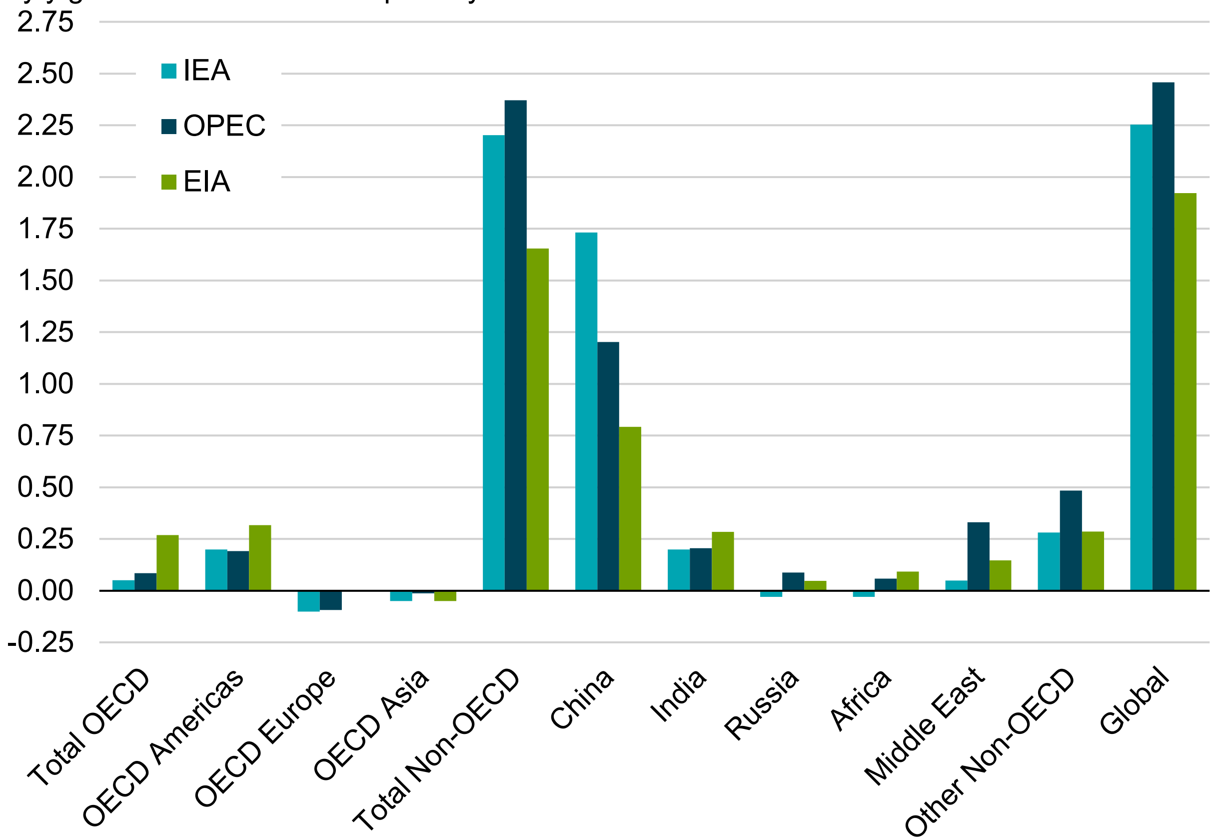
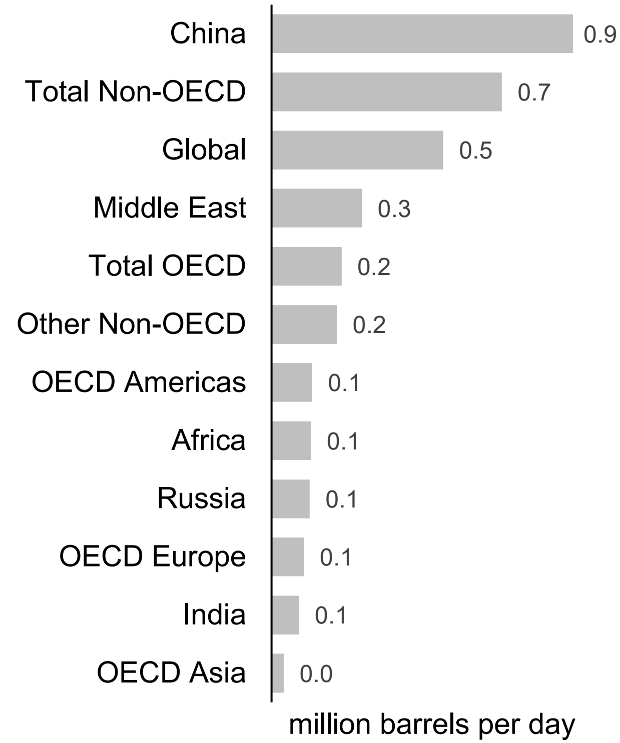
China drives the largest demand growth forecast divergence with IEA seeing 1 mb/d higher growth vs. EIA

2023 Demand Growth Forecasts by Region

y/y growth in million barrels per day



Range in 2023 Demand Growth Forecasts

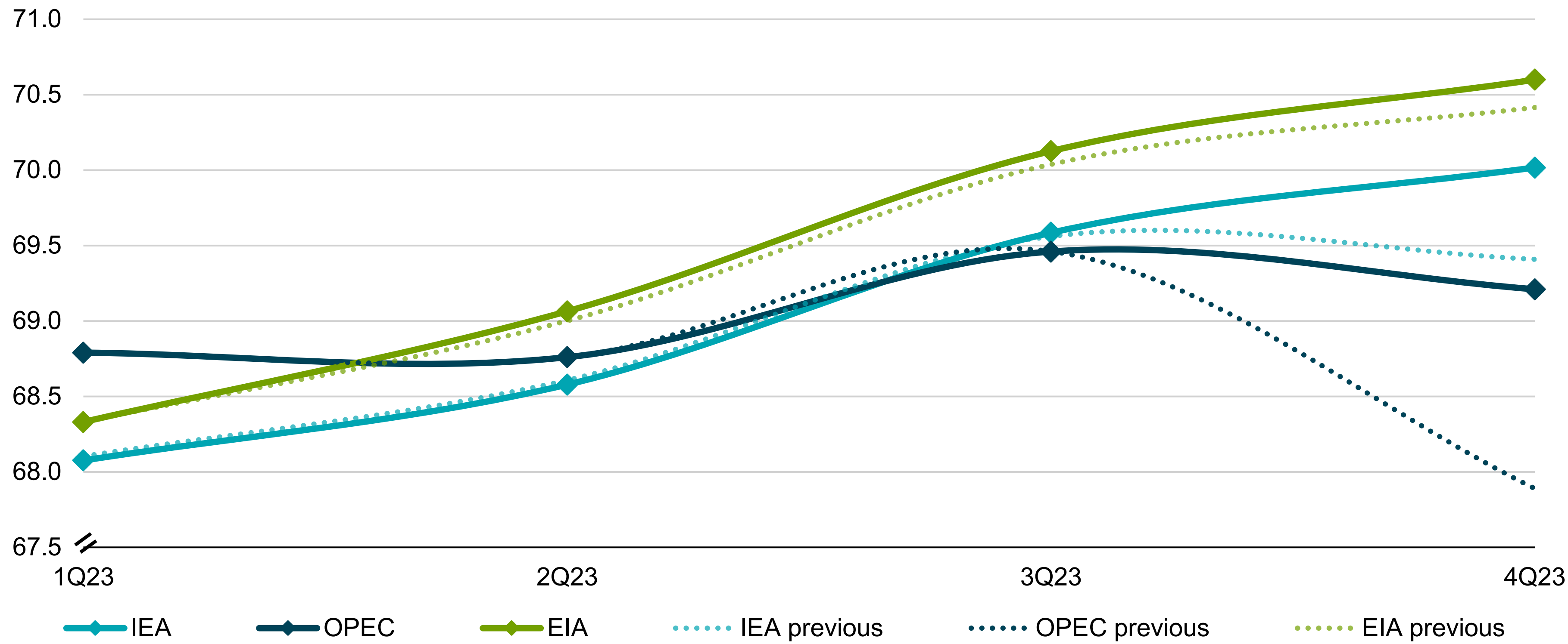


Source: IEF, IEA OMR, OPEC MOMR, EIA STEO

OPEC revised up its 4Q23 non-OPEC supply forecast by 1.3 mb/d, but it remains 1.3 mb/d below EIA's estimate and 0.9 mb/d below IEA's estimate

Non-OPEC Supply

supply in million barrels per day



Source: IEF, IEA OMR, OPEC MOMR, EIA STEO

Notes:

- The IEF conducts a comprehensive comparative analysis of the short-, medium-, and long-term energy outlooks of the IEA, OPEC, and the EIA to inform the IEA-IEF-OPEC Symposium on Energy Outlooks that the IEF hosts annually in Riyadh as part of the trilateral work program.
- To inform IEF stakeholders on how perspectives on the oil market of both organizations evolve over time regularly, this monthly summary provides a snapshot overview of data points gained from comparing basic historical data and short-term forecasts of the IEA Oil Market Report, the OPEC Monthly Oil Market Report, and the EIA Short-term Energy Outlook.
- Data in tables and charts may not sum due to rounding.
- Some differences in regional/country supply figures may stem from different conventions in reporting processing gains and biofuels. EIA country-level data includes biofuels and processing gains, while OPEC only includes biofuels and IEA excludes both. All total non-OPEC production figures include biofuels and processing gains.

Upcoming Publication Dates

	IEA OMR	OPEC MOMR	EIA STEO	JODI
January	18th (Thursday)	17th (Wednesday)	9th (Tuesday)	22nd (Monday)
February	15th (Thursday)	13th (Tuesday)	6th (Tuesday)	19th (Monday)
March	14th (Thursday)	12th (Tuesday)	12th (Tuesday)	18th (Monday)

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