

August 2023

IEF Comparative Analysis

Of Monthly Oil Market Reports

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Oil Market Context

Key indicators show oil markets tightening on record high demand

Crude oil prices rallied in July and early August, approaching their highest level for the year. Brent's time spreads (prompt, 6-month and 12-month) have also become more bullish with steepening backwardation, indicating tightening supply for prompt delivery. This is a pivot from the end of June where the prompt and 6-month spreads were in contango. Similarly, diesel crack spreads have soared over the past month to the highest level in history, excluding 2022's volatility.

Robust demand has helped support prices. The IEA estimates global demand rose to an all-time record high of 103 mb/d in June and it expects another peak in August.

US final demand data for May, published on July 31st, came in ~970 kb/d above the estimate implied by US EIA weekly data. May demand was at an all-time seasonal high of 20.78 mb/d and was up 700 kb/d from year ago levels. US commercial crude inventories saw the largest week-on-week drop in history at the end of July. They fell by 17 mb and are now at their lowest level since 1985.

China's oil demand was at its second-highest level on record in May, according to data reported to JODI. It was up more than 2 mb/d year-on-year. Implied demand continued to be robust in June as crude imports soared 45% year-on-year. July crude imports softened but remained 17% above year ago levels.

Meanwhile, the IMF raised its outlook for global growth in its July update and it now anticipates 3.0% global GDP growth this year (vs. 2.8% expected in its April update).

Saudi Arabia and Russia extend voluntary production cuts through September

On August 3rd, Saudi Arabia announced an extension of its voluntary 1 mb/d production cut through September. The press release noted that the cuts could be extended or deepened in the future. This will be the third consecutive month where the Kingdom's crude production is expected to be at ~9 mb/d – a two-year low. Simultaneously, Russia announced it would be cutting 300 kb/d from crude exports in September, tapering down from the announced 500 kb/d cut for August.

US postpones SPR buyback

The US Department of Energy cancelled a solicitation for buying 6 mb of crude for the SPR for delivery in October and November due to rising crude prices. The US SPR has fallen to a 40-year low of 347 mb following a ~250 mb drawdown over the past 20-months.

2023 Forecast Highlights:

- **Global demand:**

- IEA estimates global demand exceeded 103 mb/d in June, reaching a record high. The agency revised up its 2Q23 demand forecast by a significant 0.5 mb/d on higher-than-expected demand in North America, Europe, and China.
- IEA and OPEC remain fairly aligned on global demand growth (~2.2-2.4 mb/d), while EIA sees lower growth (1.8 mb/d). IEA continues to see ~0.8 mb/d higher Chinese demand growth this year vs. EIA and OPEC. Meanwhile, OPEC sees more robust demand in Russia, Africa, the Middle East and other non-OECD countries compared to IEA and EIA.

- **Non-OPEC and OPEC NGL supply:**

- OPEC revised up 3Q23 non-OPEC supply by 0.5 mb/d primarily on higher Russian supply. EIA revised up 2H23 supply on a higher US outlook and now sees US crude averaging a record high of 12.76 mb/d this year.
- IEA and EIA both now see non-OPEC supply growing this year by 1.9-2.0 mb/d. OPEC sees lower growth at 1.6 mb/d.
- The largest divergence in supply forecasts is for Russian production. OPEC sees a 0.65 mb/d decline in Russian output this year vs. IEA's and EIA's forecast of a 0.2-0.3 mb/d annual decline.
- All three forecasters expect the US to be the largest driver of non-OPEC supply growth, adding ~1.1-1.3 mb/d of supply this year.

- **“Call on OPEC”:**

- IEA and OPEC see the “call on OPEC” rising to 29.9-30.2 mb/d in the second half of the year. This implies a >2.5 mb/d global supply shortfall in 2H23 if OPEC production were to remain constant at July levels (27.31 mb/d). Notably, July production levels include a 1.0 mb/d voluntary cut from Saudi Arabia that may be extended or rescinded after September.

- **July OPEC production:**

- OPEC secondary sources show OPEC production fell by 0.84 mb/d in July to 27.31 mb/d led by a 968 kb/d decrease from Saudi Arabia as it implemented a voluntary cut. IEA estimates show OPEC crude production fell by 0.95 mb/d to 27.86 mb/d. IEA estimates a higher production figure for Iran and UAE vs. OPEC secondary sources.

- **OECD inventories:**

- IEA estimates OECD commercial inventories fell by 14.7 mb in June to 2,787 mb and stood 115.4 mb below the five-year average. OPEC estimates OECD commercial stocks rose by 4.2 mb in June to 2,828 mb and stood 74 mb below the latest five-year average and 119 mb below the 2015-2019 average.

2024 Forecast Highlights:

- **Global demand:**

- IEA revised down its 2024 global demand growth forecast by 0.2 mb/d to 1.0 mb/d y/y. This is 1.2 mb/d lower than OPEC's forecast (2.2 mb/d) and 0.6 mb/d lower than EIA's forecast (1.6 mb/d).
- IEA sees OECD demand *declining* by 0.4 mb/d next year while OPEC and EIA both forecast 0.2-0.3 mb/d *growth*. Additionally, OPEC sees 0.2 mb/d stronger demand growth in the Middle East next year compared to both IEA and EIA.
- Notably, OPEC shows quarterly demand reaching 105.3 mb/d by 4Q24 – which is ~4 mb/d higher than the most recent quarter, 2Q23.
- Despite having a lower y/y demand growth forecast, IEA sees higher demand levels than EIA for most of 2024 due to a higher 2023 baseline forecast. IEA sees quarterly demand rising to 104.3 mb/d by 4Q24 vs. EIA's 103.2 mb/d.

- **Non-OPEC and OPEC NGL supply:**

- IEA, OPEC, and EIA all revised up non-OPEC supply forecasts for 2024.
- EIA revised up non-OPEC supply by 0.4 mb/d on higher US, Brazil and Guyana forecasts; IEA revised its forecast up by 0.2 mb/d on higher Brazil, OPEC NGLs, China, and US; OPEC revised its forecast higher by 0.1 mb/d on Russia.
- All three now see 1.3-1.5 mb/d of growth next year.
- Notably, IEA and EIA both see US production growth slowing to 0.4-0.5 mb/d next year from >1.0 mb/d this year. Despite a significant slowdown, the US is still the strongest driver of non-OPEC supply growth in 2024.

- **“Call on OPEC”:**

- The “call on OPEC” for next year ranges from 28.3 mb/d (EIA) to 30.1 mb/d (OPEC). IEA falls in the middle at 29.0 mb/d. All three implied figures are above July's actual OPEC production of 27.3 mb/d, implying 1.0-2.8 mb/d of global inventory draws if OPEC production remained constant. Notably, July's OPEC production figure includes a 1.0 mb/d voluntary cut from Saudi Arabia that is currently extended through September and be extended or rescinded.
- OPEC's 2024 balance is ~1 mb/d tighter than IEA's primarily due to a higher demand forecast.

2023 Outlook Comparison

Summary of 2023 Balances and Revisions

- The most significant revisions this month include (1) IEA's 0.5 mb/d upward revision to 2Q23 demand driven by stronger-than-expected demand in Canada, Europe, US, and China; (2) OPEC's 0.5 mb/d upward revision to 3Q23 non-OPEC supply led by a 0.38 mb/d revision to Russia; and (3) EIA's 0.3 mb/d upward revision to 2H23 non-OPEC supply driven by a higher US shale outlook.
- The balance's implied "call on OPEC" for 2H23 range from 28 mb/d (EIA) to 30.2 mb/d (OPEC). Despite a wide range, all three forecasts show the "call on OPEC" exceeding July OPEC production levels of 27.3 mb/d, implying global inventory draws if OPEC production remains constant.

		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	100.6	102.0	102.9	103.1	102.2	2.2	0.1	0.5	-0.1	-0.2	0.1	0.0
	OPEC	101.7	101.2	102.0	103.2	102.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0
	EIA	100.2	101.0	101.7	102.0	101.2	1.8	0.1	0.0	-0.1	0.1	0.0	0.0
OECD Demand	IEA	45.6	45.9	46.7	46.3	46.1	0.1	0.1	0.3	-0.1	-0.2	0.0	0.0
	OPEC	45.5	45.5	46.8	46.2	46.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	EIA	45.5	45.6	46.3	46.6	46.0	0.1	0.0	0.0	-0.1	0.1	0.0	0.0
Non-OECD Demand	IEA	55.0	56.1	56.2	56.8	56.0	2.1	0.1	0.2	0.0	-0.1	0.1	0.0
	OPEC	56.1	55.6	55.1	57.1	56.0	2.4	0.0	-0.1	0.0	0.0	0.0	0.0
	EIA	54.6	55.4	55.4	55.3	55.2	1.7	0.1	0.0	0.1	0.1	0.1	0.0
Non-OPEC Supply* and OPEC NGLs	IEA	72.4	72.7	73.0	73.3	72.8	1.9	0.1	0.0	0.0	0.2	0.0	0.0
	OPEC	73.1	72.9	72.4	72.5	72.7	1.6	0.0	0.0	0.5	0.0	0.1	0.1
	EIA	72.5	72.9	73.5	73.9	73.2	2.0	0.0	0.2	0.3	0.3	0.2	0.1
OPEC Crude**	IEA	29.4	28.8					0.0	0.1				
	OPEC	28.8	28.3					0.0	0.0				
	EIA	28.5	28.4	27.5	27.9	28.1	-0.6	0.0	0.0	0.0	0.1	0.0	0.0
Call on OPEC	IEA	28.2	29.3	30.0	29.8	29.3	0.3	0.1	0.6	-0.1	-0.4	0.0	0.0
	OPEC	28.5	28.3	29.6	30.8	29.3	0.9	0.0	-0.1	-0.4	0.0	-0.1	-0.1
	EIA	27.6	28.0	28.1	28.0	28.0	-0.3	0.1	-0.2	-0.3	-0.1	-0.1	-0.1
Global Stock Change and Miscellaneous to Balance**	IEA	1.1	-0.4					-0.1					
	OPEC	0.3	-0.1					0.0					
	EIA	0.8	0.3	-0.6	-0.1	0.1		-0.1	0.2	0.4	0.3	0.2	

* Includes biofuels and processing gains

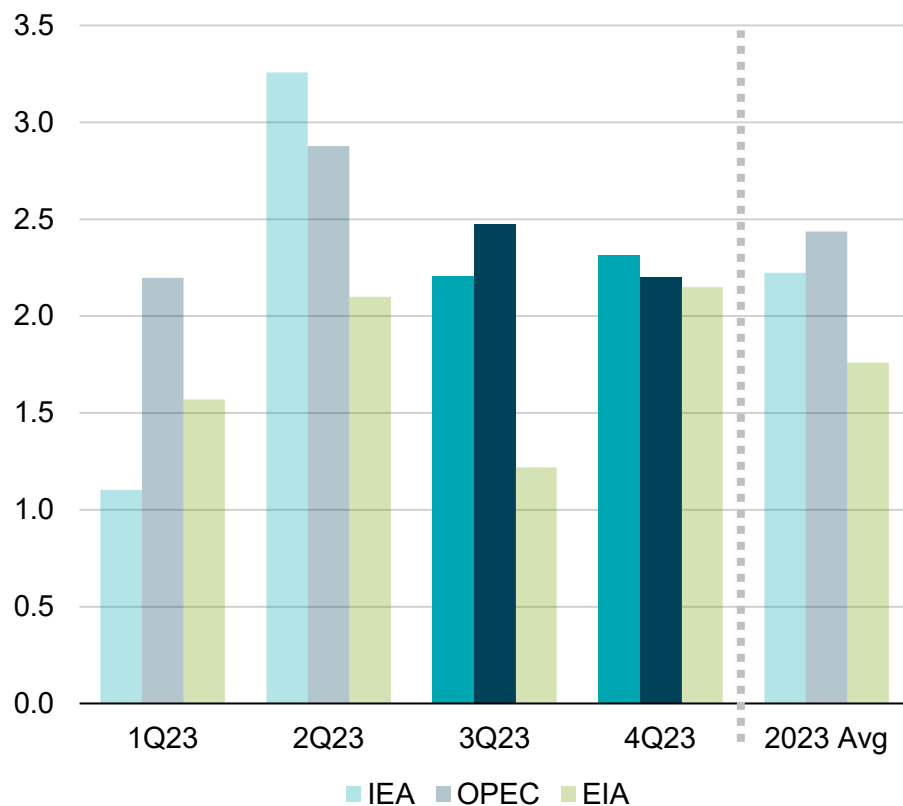
** Only EIA publishes a forecast of OPEC crude production and global stock change

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

IEA and OPEC both see global demand growth exceeding 2 mb/d y/y in 2H23 while non-OPEC supply growth falls below 1.5 mb/d

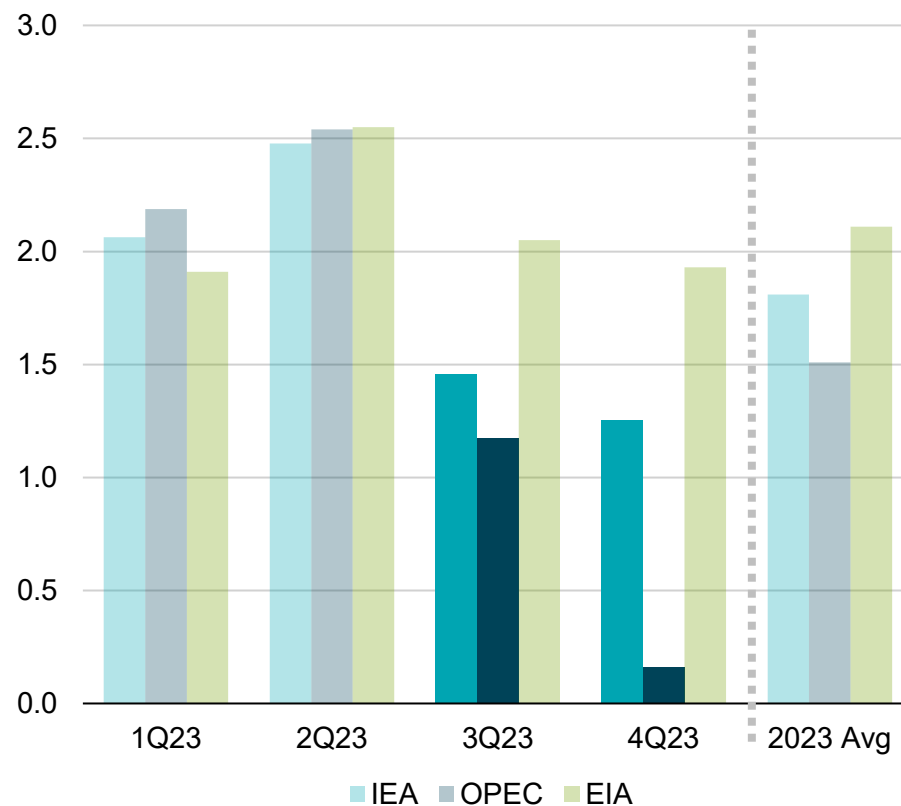
Global Demand Y/Y Growth

y/y growth in million barrels per day



Non-OPEC Supply Y/Y Growth

y/y growth in million barrels per day

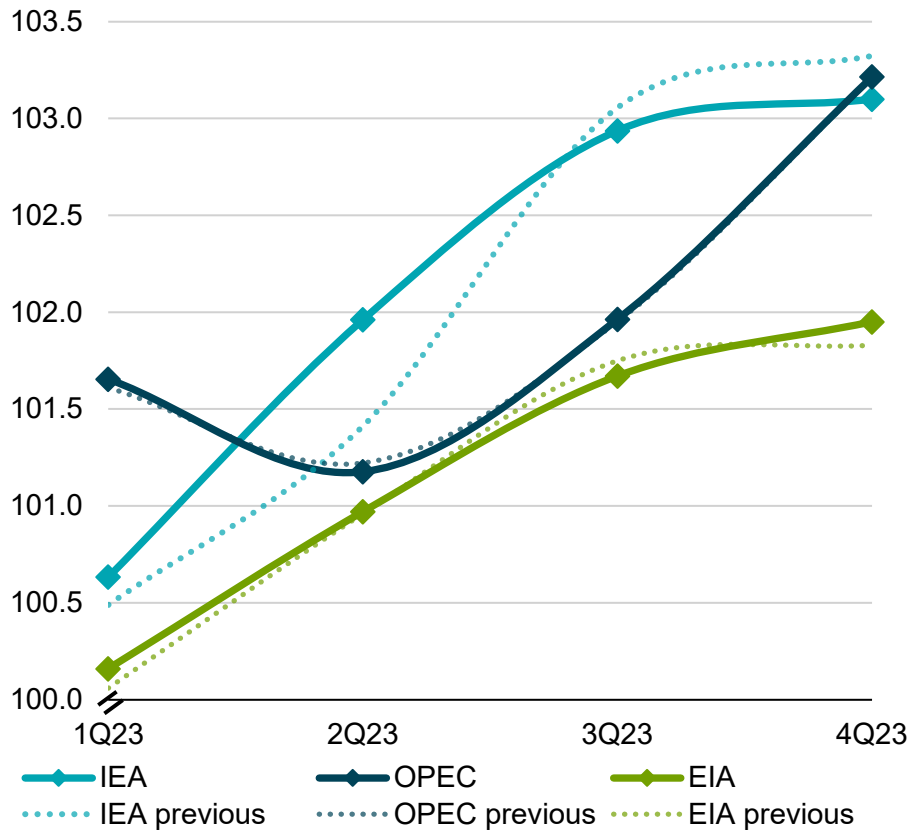


Source: IEF, IEA OMR, OPEC MOMR, EIA STEO

IEA and OPEC see global demand surpassing 103 mb/d by the end of 2023; EIA sees the weakest demand and strongest non-OPEC supply

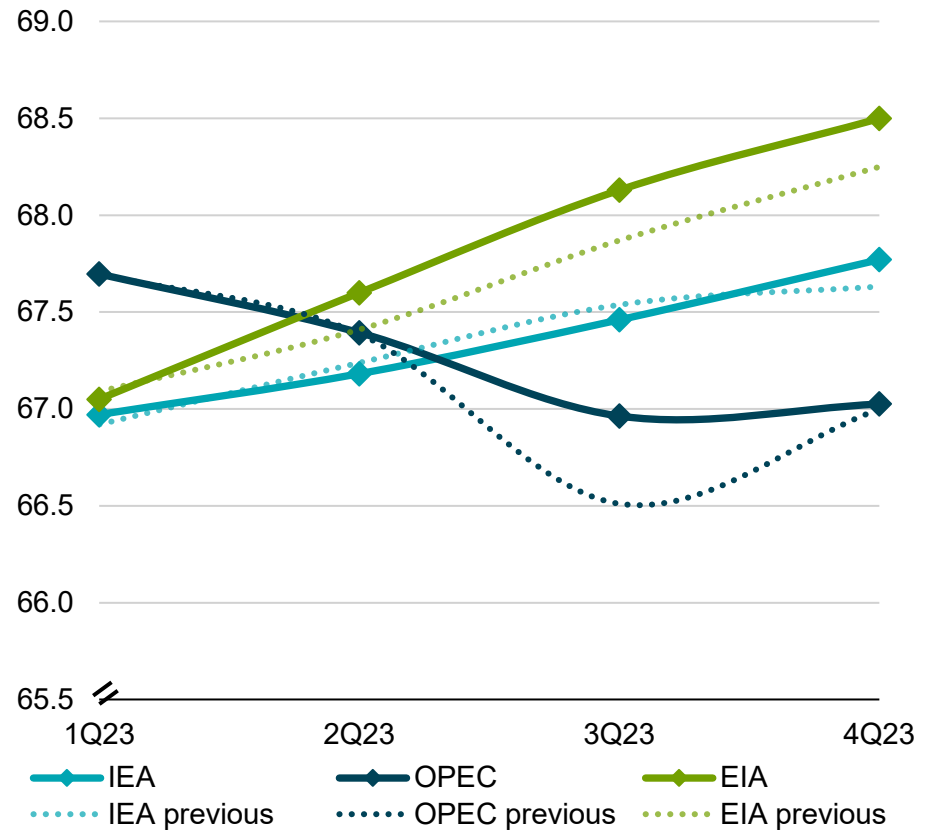
Global Demand

demand in million barrels per day



Non-OPEC Supply

supply in million barrels per day



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

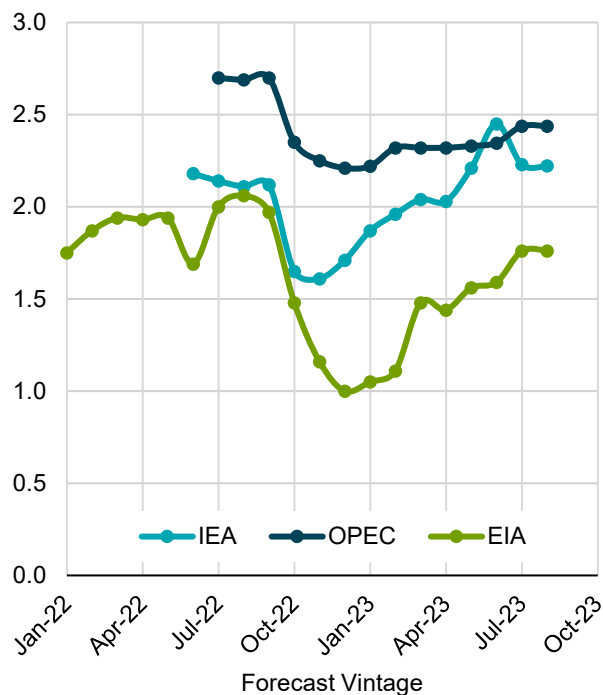
Evolution of 2023 Demand Growth Forecasts

- Annual global demand growth forecasts were largely unchanged this month. IEA revised up 2Q23 demand by a significant 0.5 mb/d, but this was offset by downward revisions to its 2H23 demand outlook.
- EIA continues to see the weakest demand growth this year, driven by a lower non-OECD demand forecast.
- OECD demand growth forecasts are converging at ~0.1 mb/d.

Global Demand Growth

Evolution of 2023 Forecasts

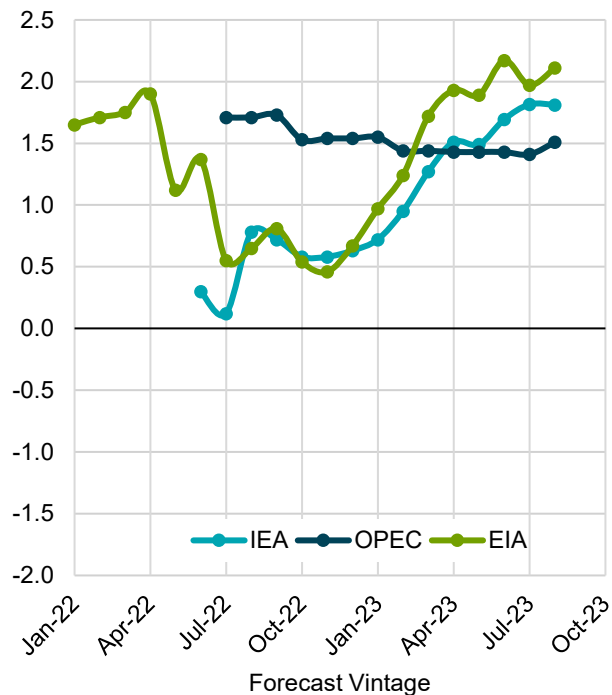
y/y growth in million barrels per day



Non-OPEC Supply Growth

Evolution of 2023 Forecasts

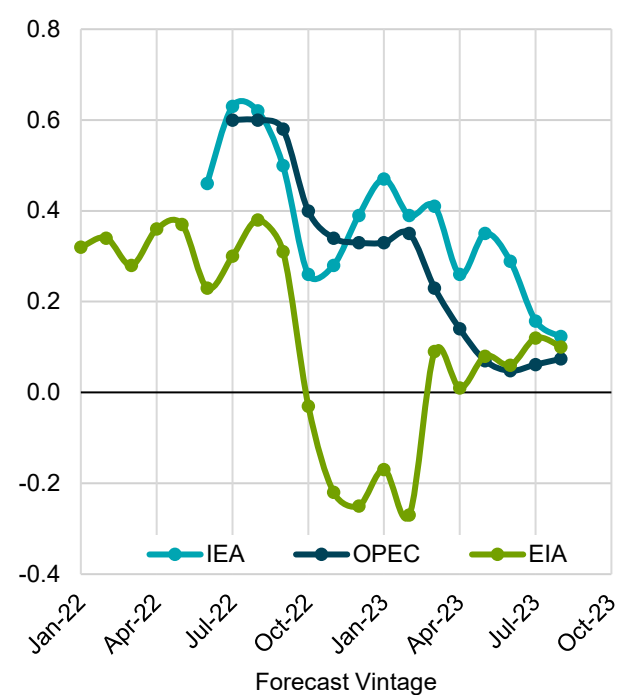
y/y growth in million barrels per day



OECD Demand Growth

Evolution of 2023 Forecasts

y/y growth in million barrels per day

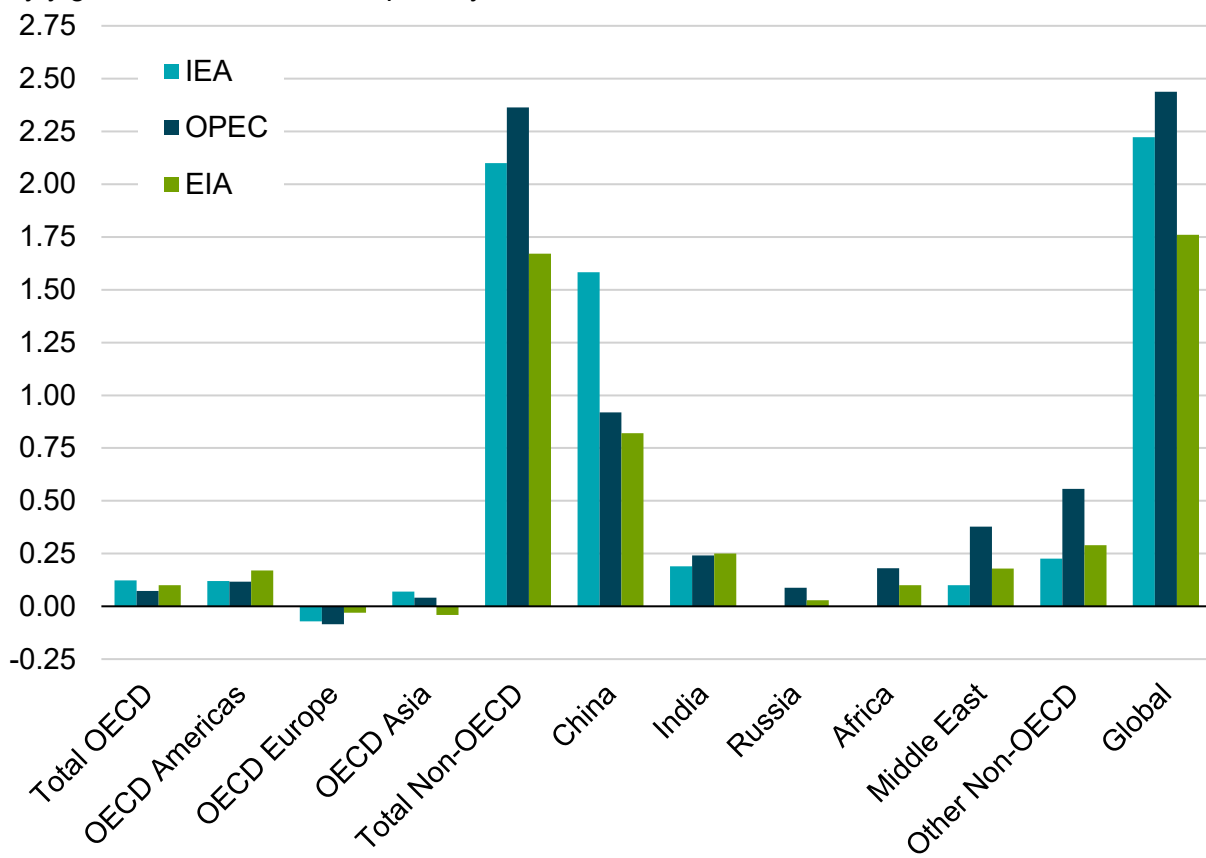


Source: IEF, IEA OMR, OPEC MOMR, EIA STEO

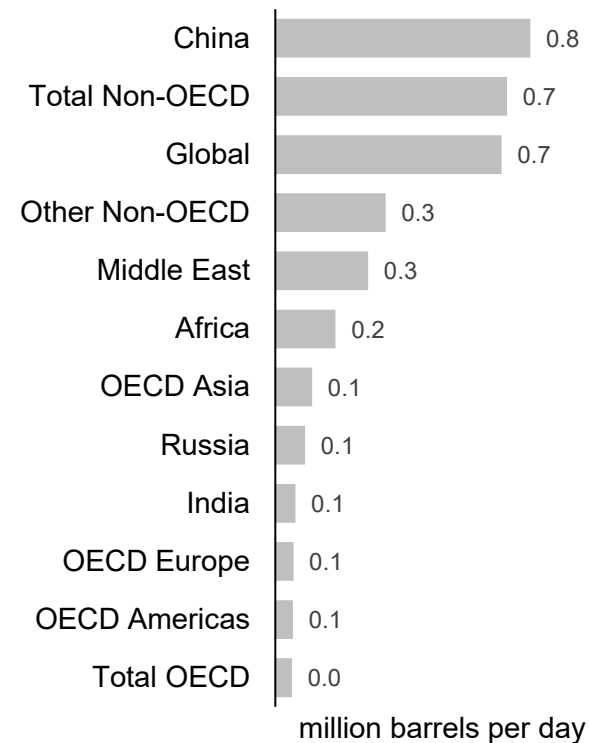
China drives the largest demand growth forecast divergence with IEA seeing the most robust growth

2023 Demand Growth Forecasts by Region

y/y growth in million barrels per day



Range in 2023 Demand Growth Forecasts



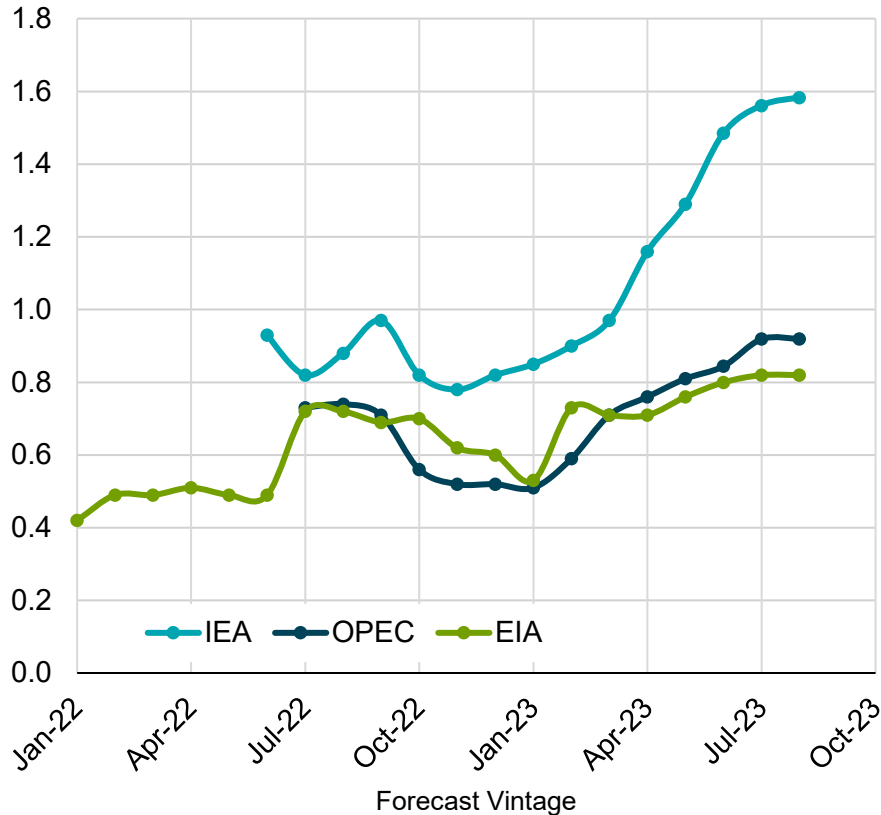
Source: IEF, IEA OMR, OPEC MOMR, EIA STEO

IEA sees ~0.7-0.8 mb/d stronger Chinese demand growth this year compared to OPEC and EIA

Chinese Annual Average Demand Growth

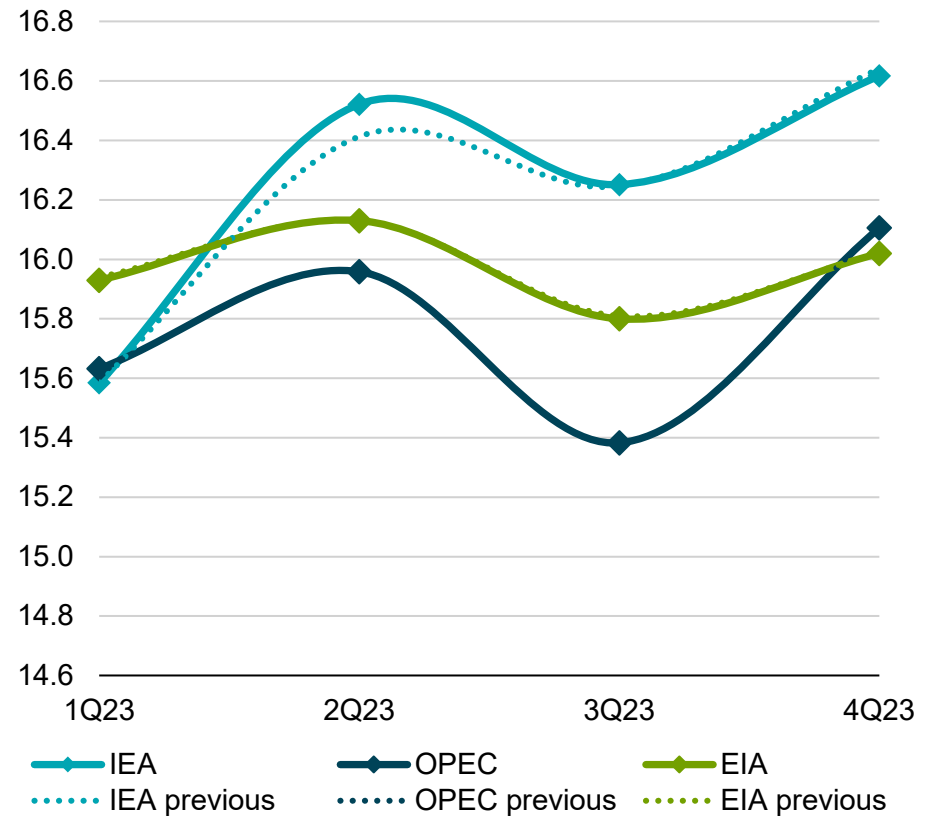
Evolution of 2023 Forecasts

y/y growth in million barrels per day



Chinese Quarterly Demand

million barrels per day



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

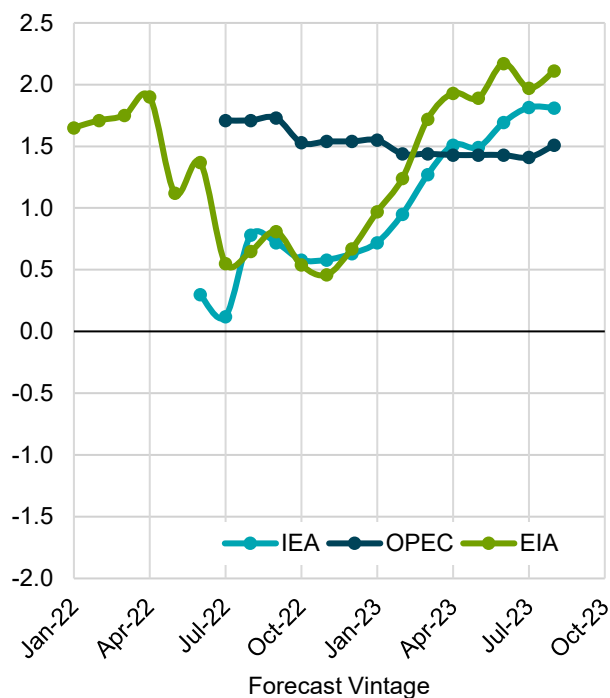
Evolution of 2023 Non-OPEC Supply Growth Forecasts

- EIA revised up non-OPEC supply growth by 0.2 mb/d on a stronger 2H23 US outlook.
- OPEC revised up non-OPEC supply growth by 0.1 mb/d on higher Russian supply. Despite the upward revision, OPEC continues to see the weakest non-OPEC growth this year largely due to a lower Russia forecast.

Non-OPEC Supply Growth

Evolution of 2023 Forecasts

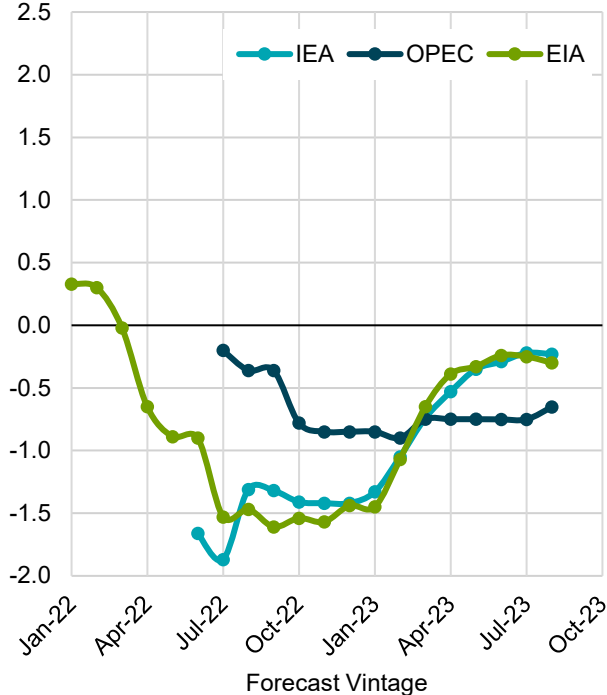
y/y growth in million barrels per day



Russia Supply Growth

Evolution of 2023 Forecasts

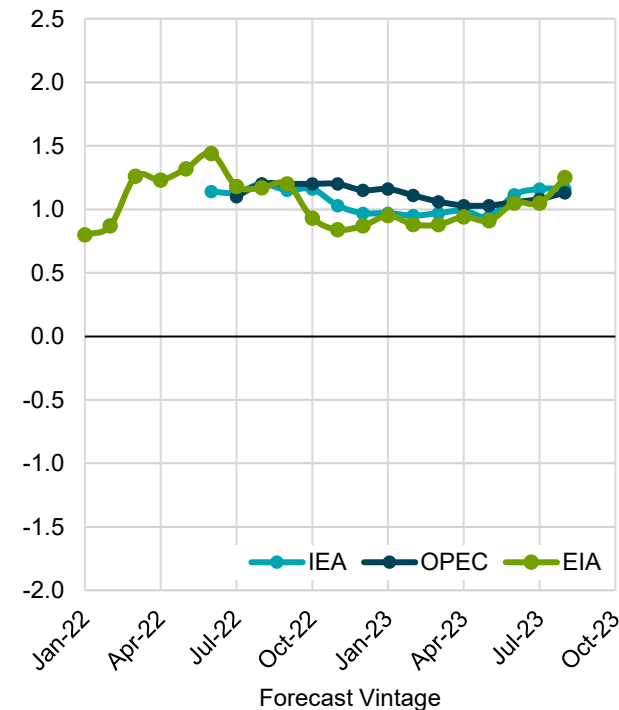
y/y growth in million barrels per day



US Supply Growth

Evolution of 2023 Forecasts

y/y growth in million barrels per day

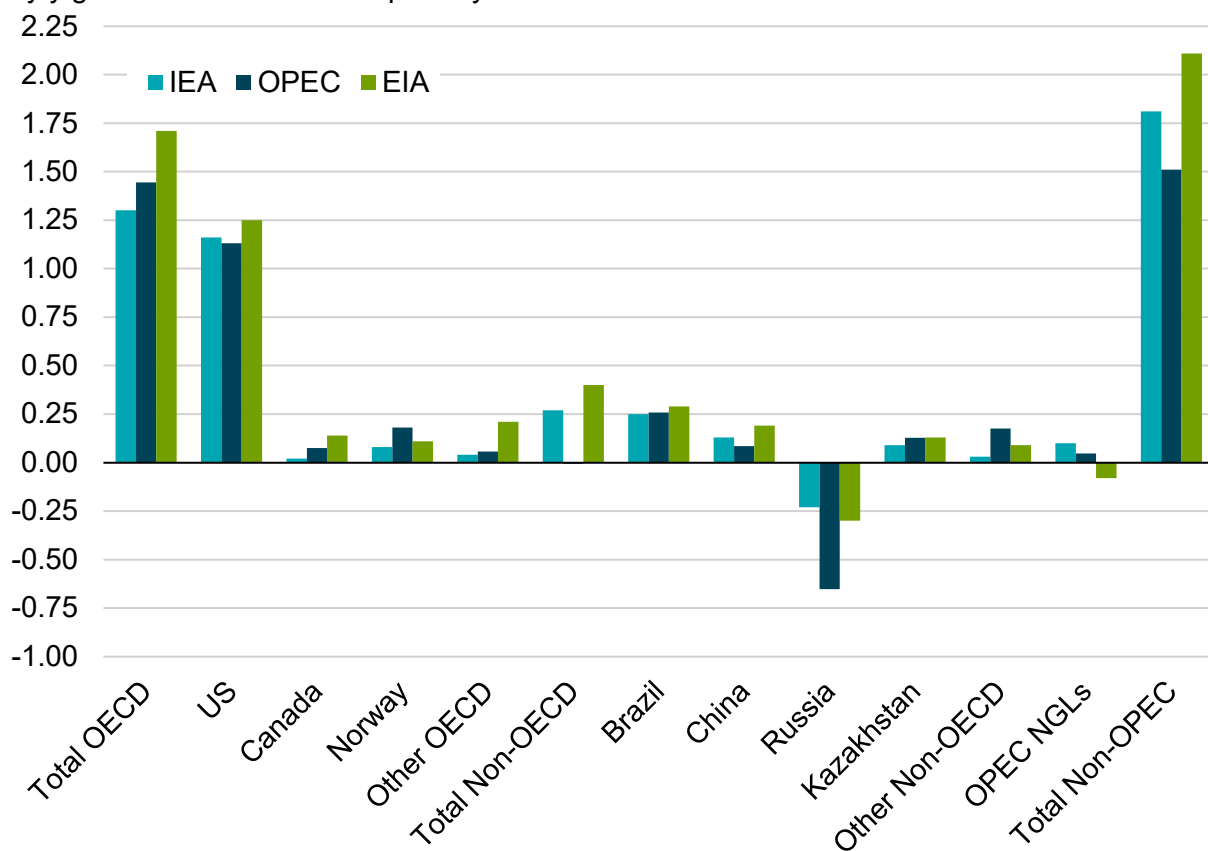


Source: IEF, IEA OMR, OPEC MOMR, EIA STEO

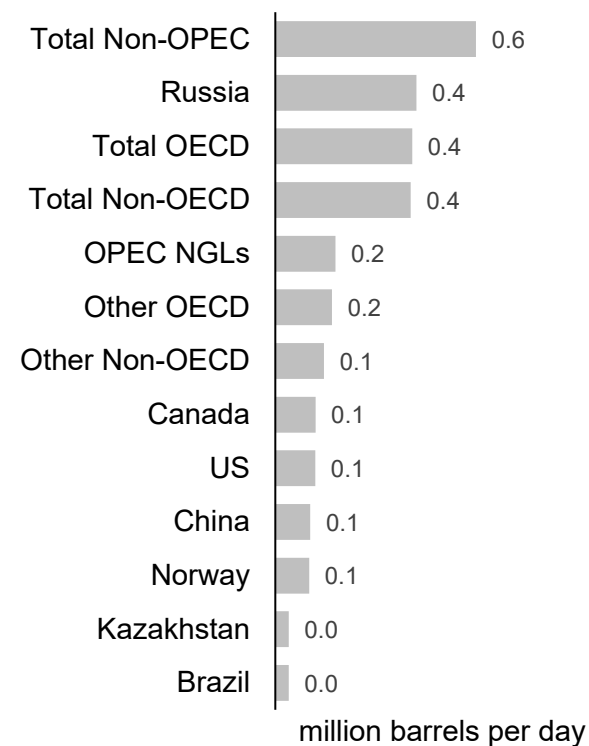
Russia drives the largest supply growth forecast divergence with OPEC seeing the steepest decline

2023 Supply Growth Forecasts by Region

y/y growth in million barrels per day



Range in 2023 Supply Growth Forecasts



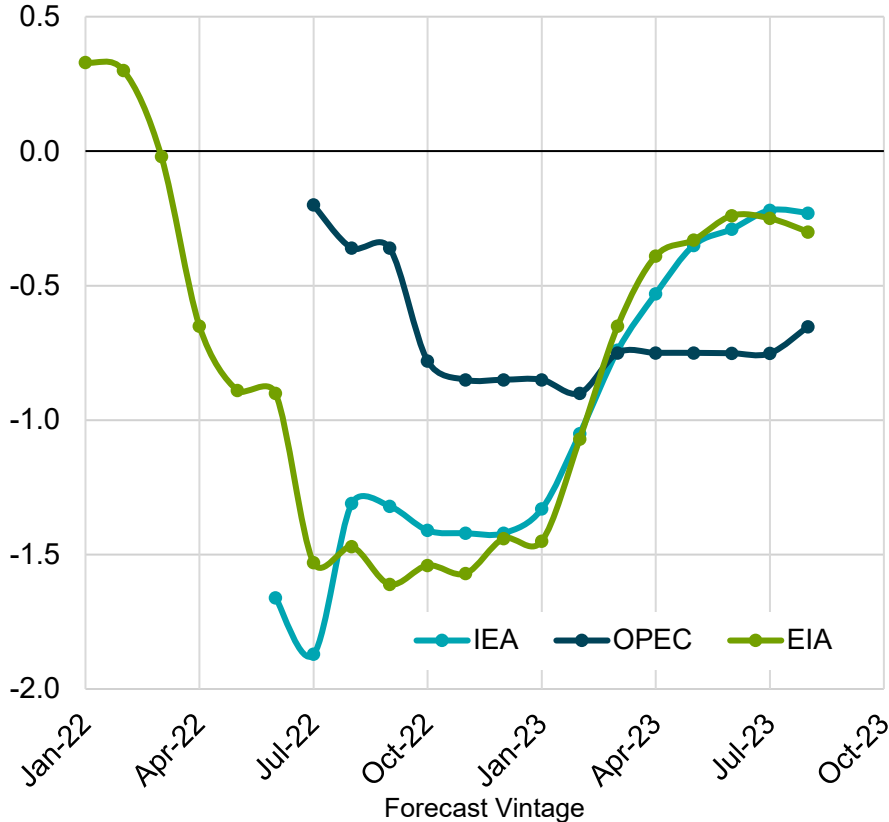
Source: IEF, IEA OMR, OPEC MOMR, EIA STEO

OPEC continues to see a much steeper drop in Russian supply in 2H23 despite a sizable upward revision to its 3Q23 forecast

Russia Supply Growth

Evolution of 2023 Forecasts

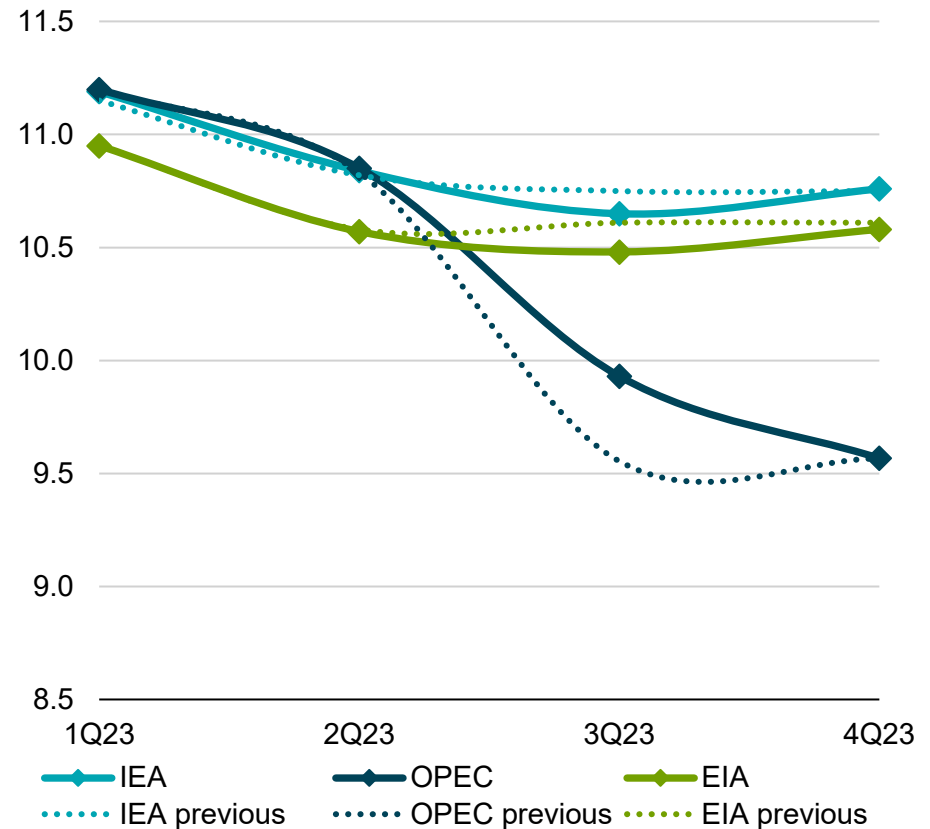
y/y growth in million barrels per day



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

Russia Quarterly Production

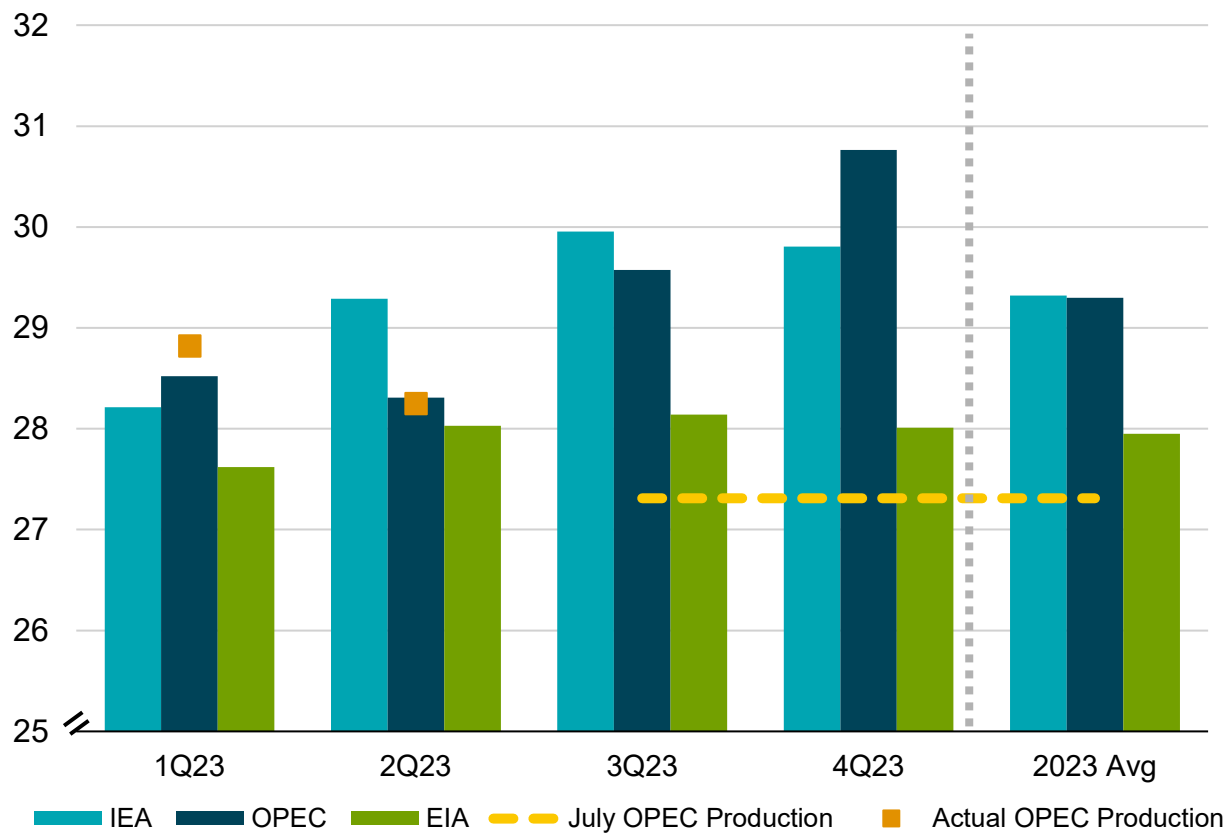
million barrels per day



IEA and OPEC balances imply a >2.5 mb/d global supply shortfall in 2H23 if OPEC production were to remain at July levels

2023 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.
- Notably, July OPEC production includes a 1.0 mb/d voluntary cut from Saudi Arabia which may be extended to rescinded in 4Q23.

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

2024 Outlook Comparison

Summary of 2024 Balances and Revisions

- IEA, OPEC, and EIA all revised up non-OPEC supply forecasts for 2024. All three see 1.3-1.5 mb/d of annual growth next year.
- While supply forecasts converged this month, demand forecasts diverged. IEA revised down its 2024 global demand growth forecast by 0.2 mb/d. Demand growth forecasts now diverge by 1.2 mb/d with IEA on the low end (1.0 mb/d y/y) and OPEC on the high end (2.2 mb/d y/y).

		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	101.5	102.6	104.2	104.3	103.2	1.0	0.1	-0.1	-0.1	-0.2	-0.1	-0.2
	OPEC	103.7	103.3	104.6	105.3	104.3	2.2	0.0	0.0	0.0	0.0	0.0	0.0
	EIA	102.3	102.4	103.3	103.2	102.8	1.6	0.0	0.0	0.0	0.0	0.0	0.0
OECD Demand	IEA	45.0	45.2	46.6	46.0	45.7	-0.4	-0.1	0.0	-0.2	-0.1	-0.1	-0.1
	OPEC	45.8	45.8	47.1	46.4	46.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0
	EIA	46.1	45.6	46.6	46.6	46.2	0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Non-OECD Demand	IEA	56.5	57.4	57.5	58.3	57.4	1.4	0.2	0.0	0.0	-0.1	0.0	0.0
	OPEC	57.9	57.6	57.5	59.0	58.0	2.0	0.0	-0.1	0.0	0.0	0.0	0.0
	EIA	56.2	56.8	56.7	56.7	56.6	1.4	0.1	0.1	0.1	0.1	0.1	0.0
Non-OPEC Supply* and OPEC NGLs	IEA	73.5	74.2	74.6	74.5	74.2	1.4	0.2	0.2	0.2	0.2	0.2	0.1
	OPEC	73.6	73.7	74.3	75.0	74.2	1.5	0.1	0.1	0.1	0.1	0.1	0.0
	EIA	73.9	74.3	74.8	75.1	74.5	1.3	0.4	0.8	0.4	0.1	0.4	0.3
OPEC Crude**	IEA												
	OPEC												
	EIA	28.4	28.6	28.6	28.3	28.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Call on OPEC	IEA	28.1	28.4	29.6	29.8	29.0	-0.4	-0.1	-0.2	-0.3	-0.4	-0.2	-0.3
	OPEC	30.1	29.6	30.3	30.3	30.1	0.8	-0.1	-0.2	-0.1	-0.1	-0.1	0.0
	EIA	28.4	28.1	28.5	28.1	28.3	0.3	-0.4	-0.8	-0.4	-0.1	-0.4	-0.3
Global Stock Change and Miscellaneous to Balance**	IEA												
	OPEC												
	EIA	0.0	0.5	0.1	0.2	0.2		0.5	0.8	0.4	0.1	0.4	

* 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

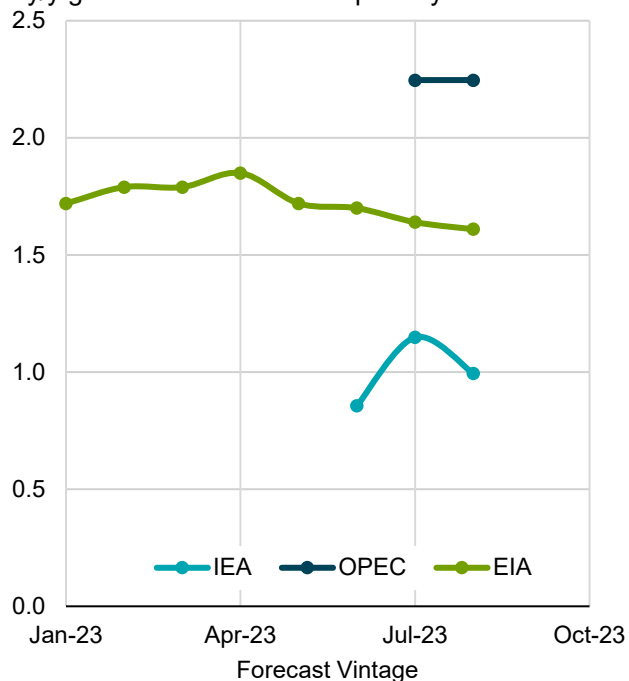
Evolution of 2024 Annual Demand Growth Forecasts

- OPEC’s 2024 global demand growth forecast is more than double IEA’s due to a higher OECD, Middle East, and Russian forecasts.
- IEA sees OECD demand declining by 0.4 mb/d next year. Meanwhile, OPEC and EIA both see OECD growing by 0.2-0.3 mb/d.

Global Demand Growth

Evolution of 2024 Forecasts

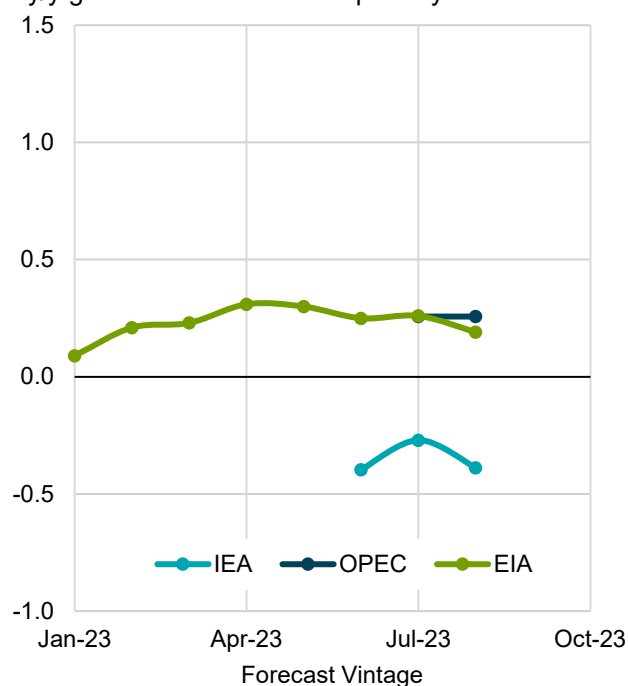
y/y growth in million barrels per day



OECD Demand Growth

Evolution of 2024 Forecasts

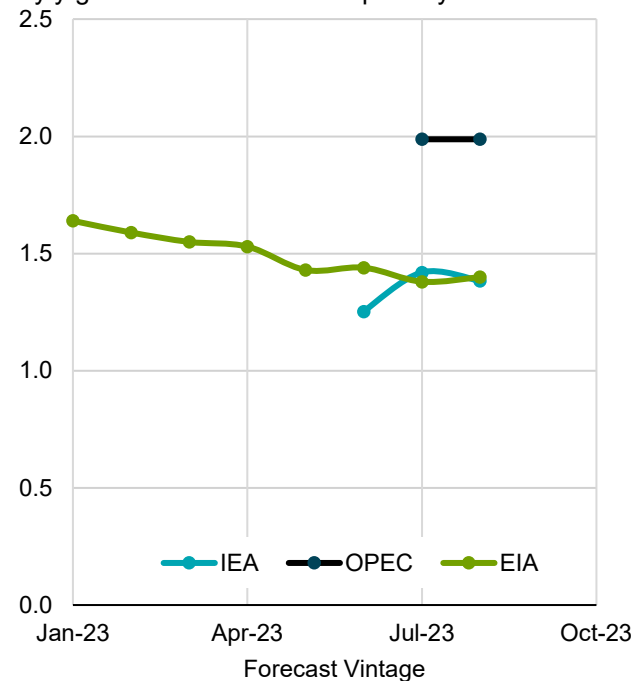
y/y growth in million barrels per day



Non-OECD Demand Growth

Evolution of 2024 Forecasts

y/y growth in million barrels per day

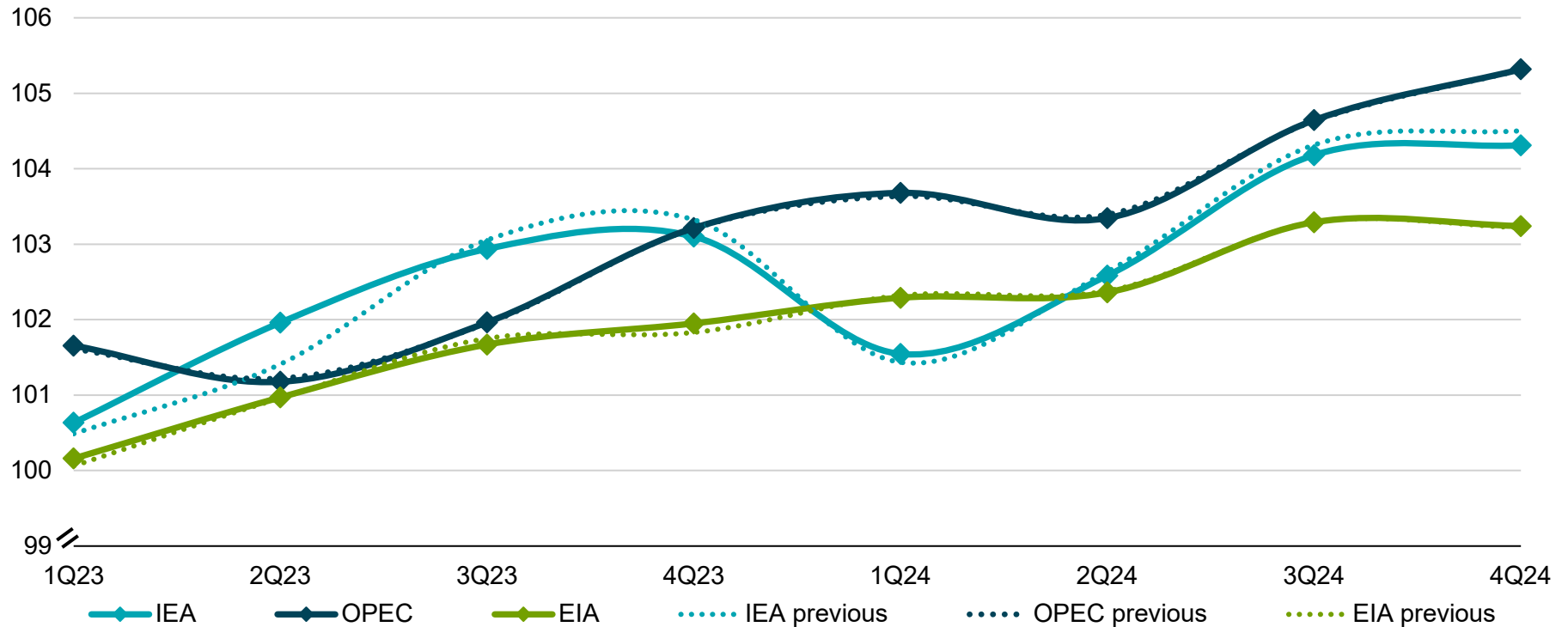


Source: IEF, IEA OMR, EIA STEO, OPEC MOMR

OPEC sees global demand climbing to >105 mb/d by the end of next year – soaring ~4 mb/d above the most recent quarterly estimate (2Q23)

2023-24 Global Demand

demand in million barrels per day

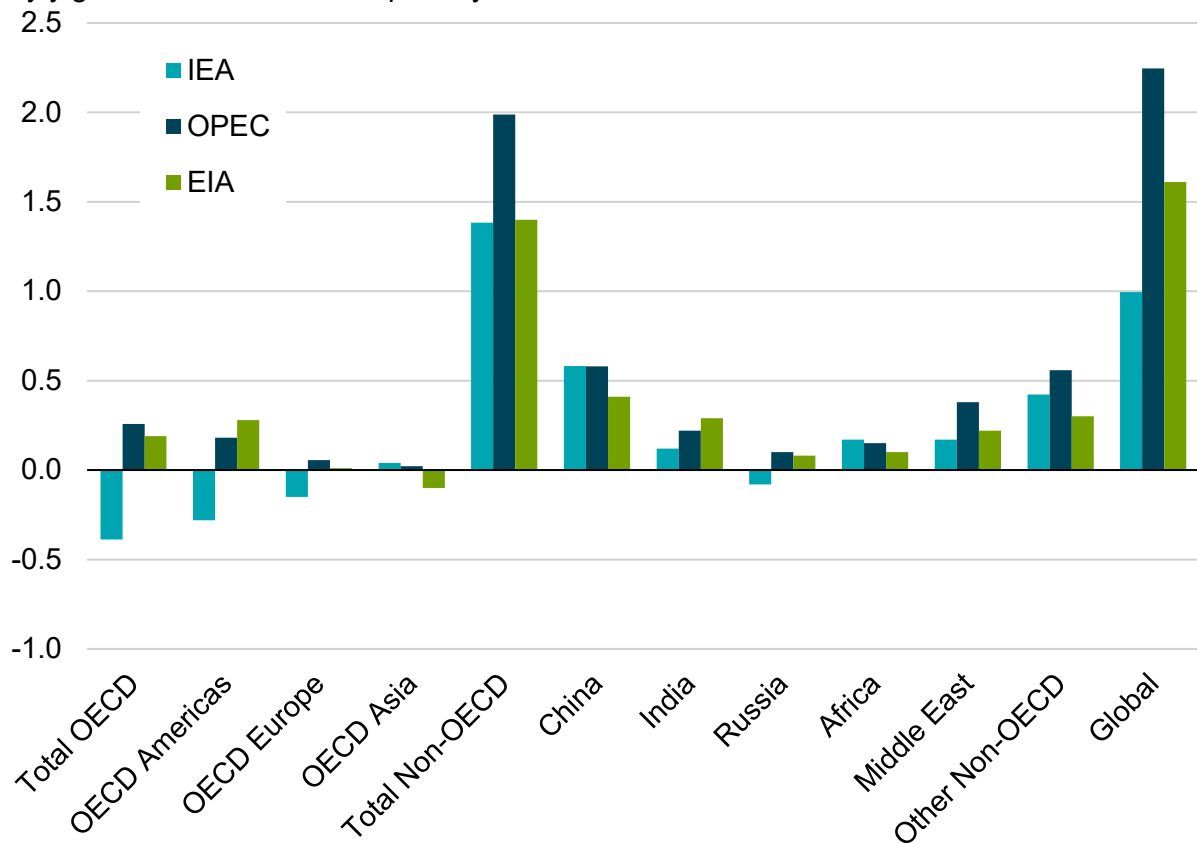


Source: IEF, IEA OMR, EIA STEO, OPEC MOMR

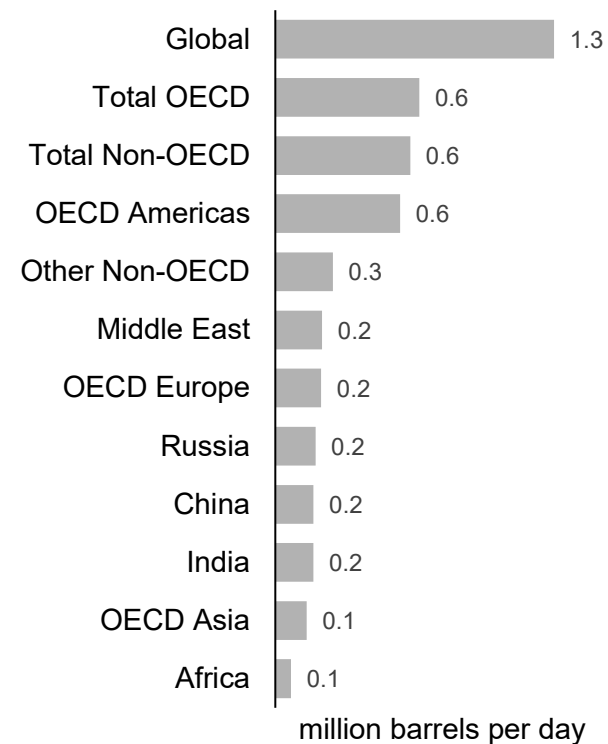
OPEC sees more robust demand growth than IEA in the OECD region, India, Russia, and the Middle East

2024 Demand Growth Forecasts by Region

y/y growth in million barrels per day



Range in 2024 Demand Growth Forecasts

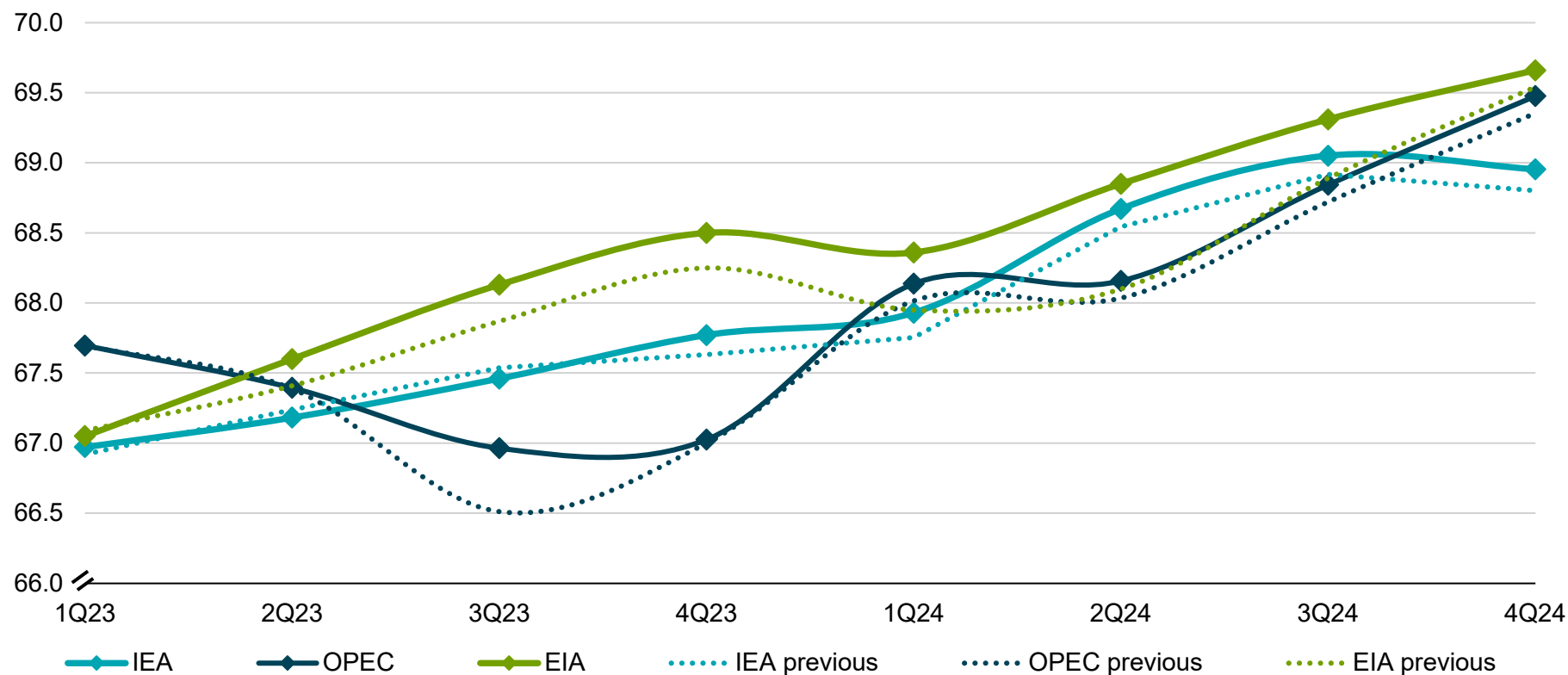


Source: IEF, IEA OMR, EIA STEO, OPEC MOMR

The non-OPEC supply forecasts for 2024 are significantly more aligned than 2H23 projections

2023-24 Non-OPEC Supply

supply in million barrels per day



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

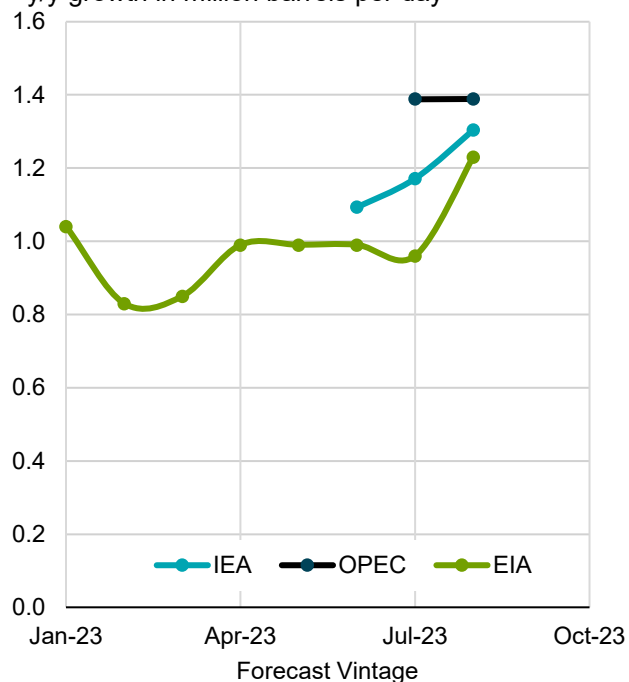
Evolution of 2024 Annual Non-OPEC Supply Growth Forecasts

- OPEC sees the most robust growth due primarily to a higher US forecast.
- While all three forecasts see US supply growth slowing substantially from 2023's >1 mb/d growth, the US is still expected to be the largest contributor to non-OPEC growth next year.

Non-OPEC Supply Growth

Evolution of 2024 Forecasts

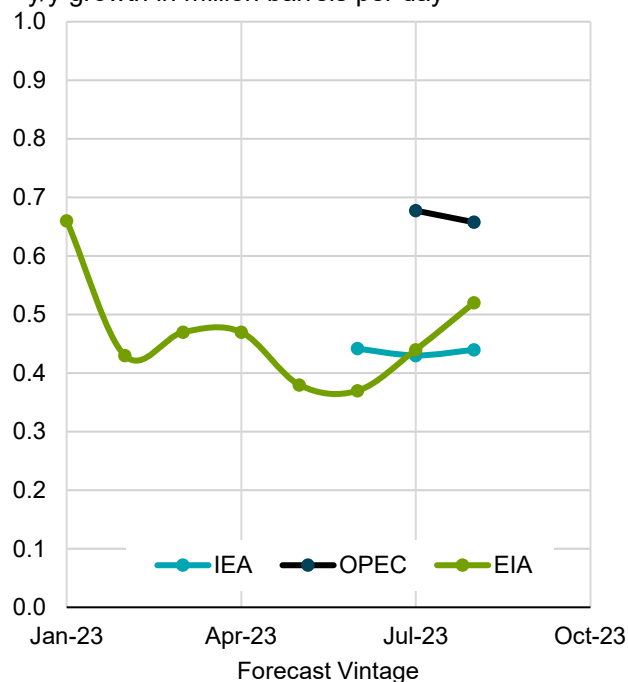
y/y growth in million barrels per day



US Supply Growth

Evolution of 2024 Forecasts

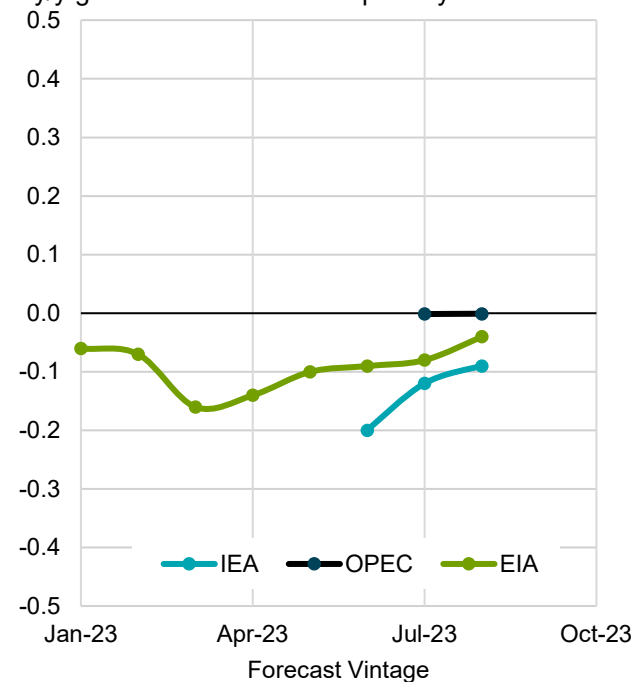
y/y growth in million barrels per day



Russia Supply Growth

Evolution of 2024 Forecasts

y/y growth in million barrels per day

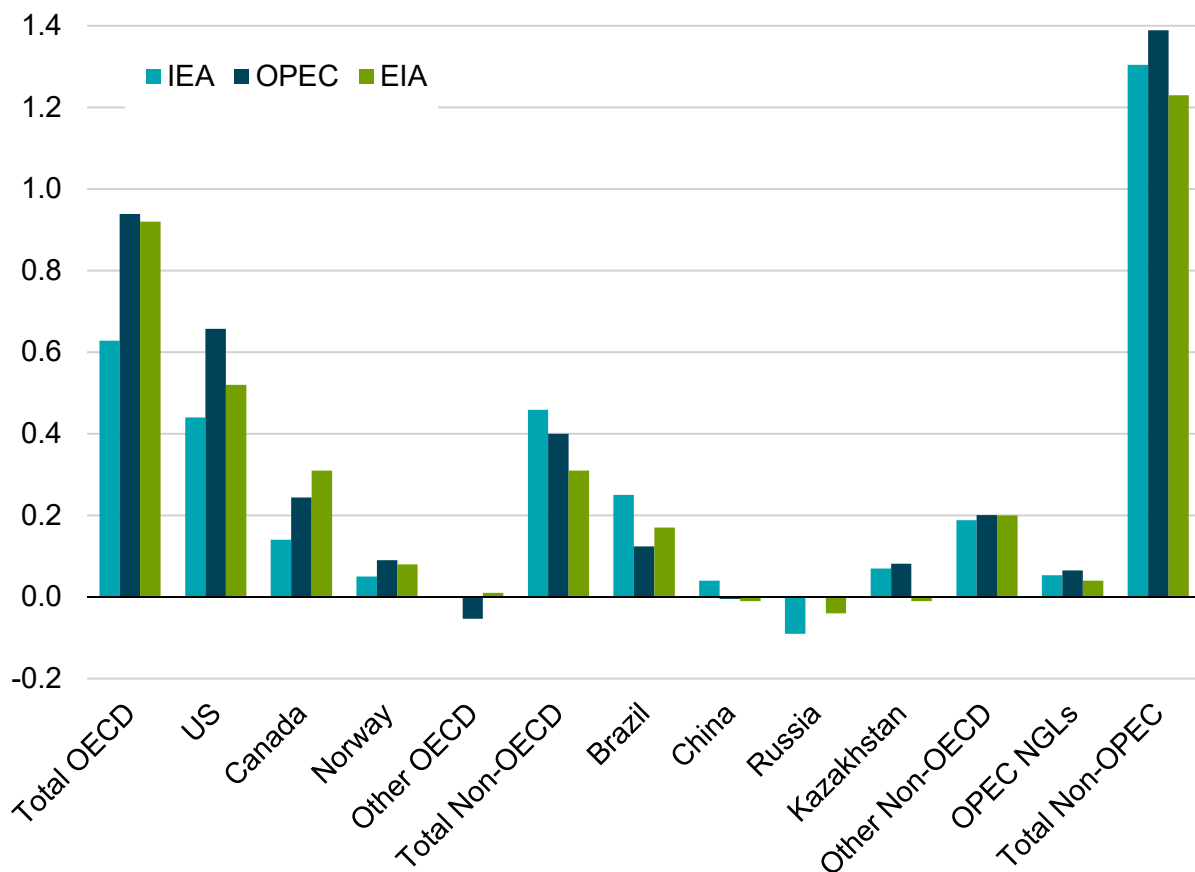


Source: IEF, IEA OMR, EIA STEO, OPEC MOMR

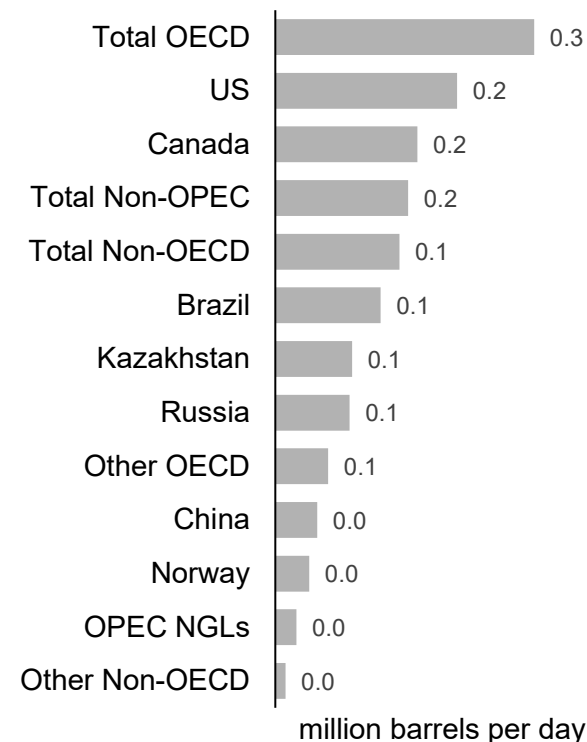
OPEC sees the strongest non-OPEC supply growth in 2024 due largely to a higher US forecast

2024 Supply Growth Forecasts by Region

y/y growth in million barrels per day



Range in 2024 Supply Growth Forecasts

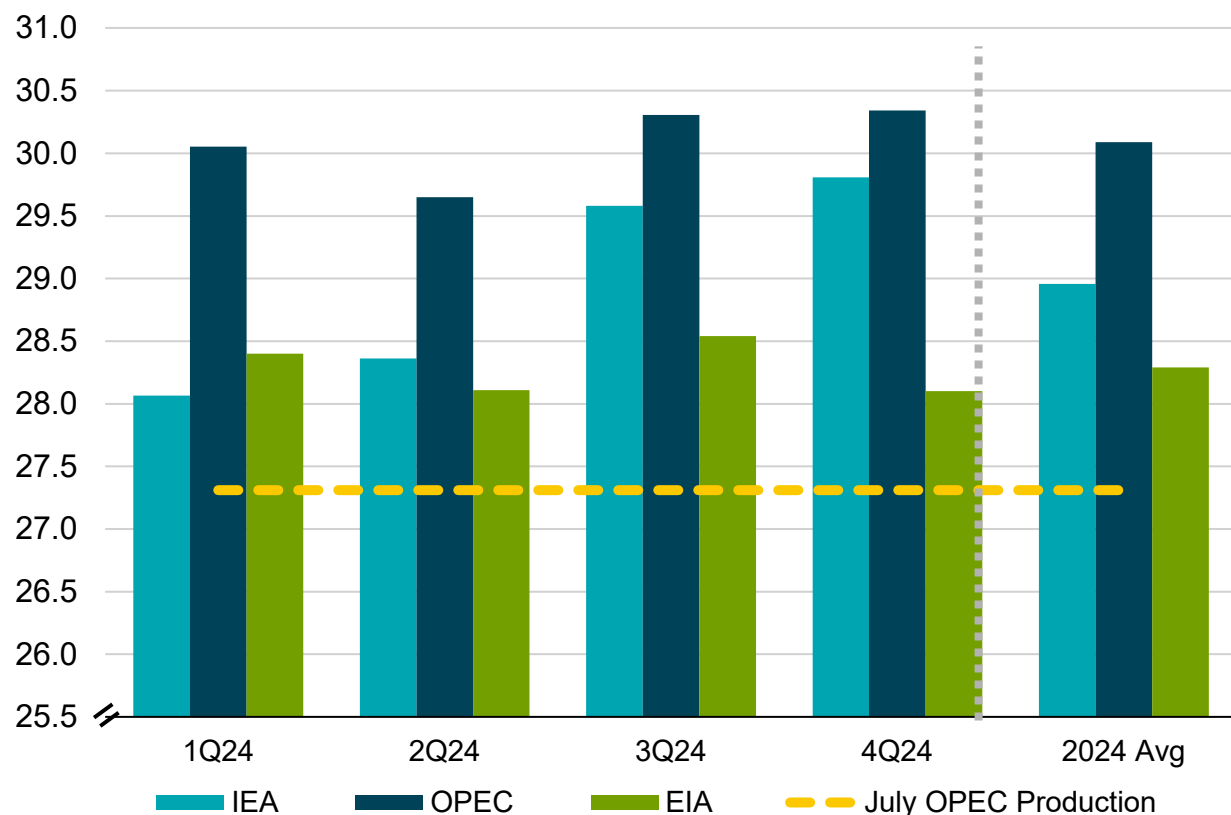


Source: IEF, IEA OMR, EIA STEO, OPEC MOMR

All three balances show the “Call on OPEC” exceeding July 2023 OPEC production levels by 1.0-2.8 mb/d

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.
- OPEC’s balance is tighter than IEA and EIA’s primarily due to a stronger demand outlook.
- Notably, July OPEC production includes a 1.0 mb/d voluntary cut from Saudi Arabia which may be extended to rescinded in 4Q23 and 2024.

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

Appendix

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
August	11 th (Friday)	10 th (Thursday)	8 th (Tuesday)	16 th (Wednesday)
September	13 th (Wednesday)	12 th (Tuesday)	12 th (Tuesday)	18 th (Monday)
October	12 th (Thursday)	12 th (Thursday)	11 th (Wednesday)	16 th (Monday)
November	14 th (Tuesday)	13 th (Monday)	7 th (Tuesday)	16 th (Thursday)



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