



# OPEC Short-, Medium- and Long-term Energy Outlook

Presented by:  
**OPEC Secretariat**

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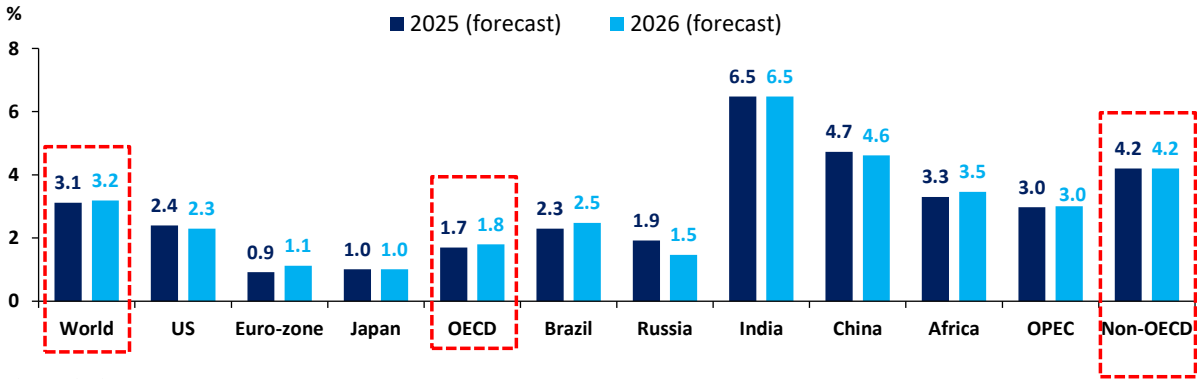
## Outline



- **Short-term market outlook**
  - Short-term oil market outlook
  - Economy, demand, supply and stock assessments
- **Medium- and Long-term Market Outlook**
  - Key assumptions
  - Energy outlook
  - Oil outlook

## World economic growth: 3.1% in 2025 and 3.2% in 2026

GDP percentage change, y-o-y



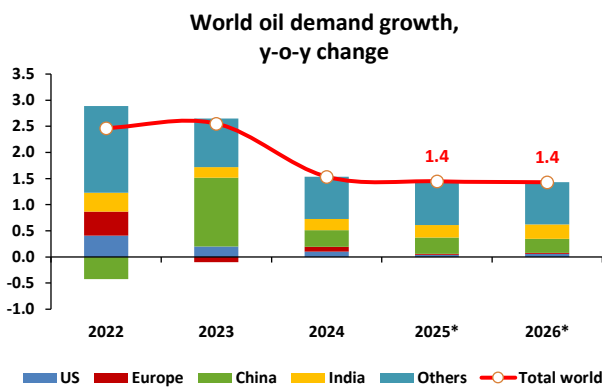
Sources: OPEC

- The **global economy** is forecast to grow at **3.1%** in **2025** and **3.2%** in **2026**. However, uncertainties such as the impact of monetary tightening, high global debt levels, and ongoing geopolitical risks remain.

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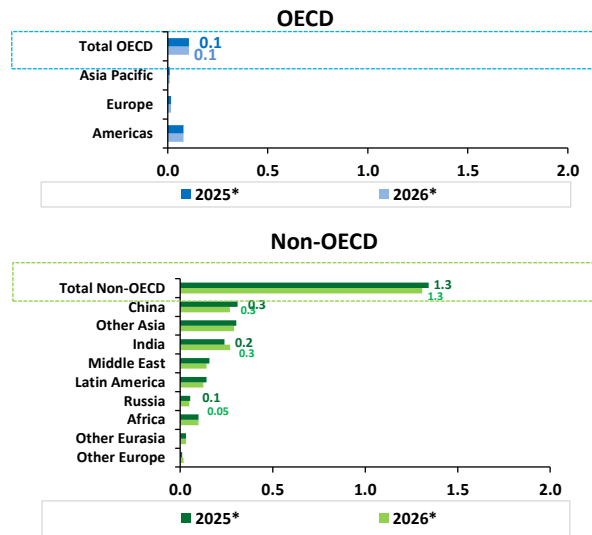
## Global oil demand continues to recover in 2025 & 2026

y-o-y change, mb/d



Note: \* 2025-2026 = Forecast. Sources: OPEC

- World oil demand** is forecast to increase by **1.4 mb/d** in **2025** and in **2026**.

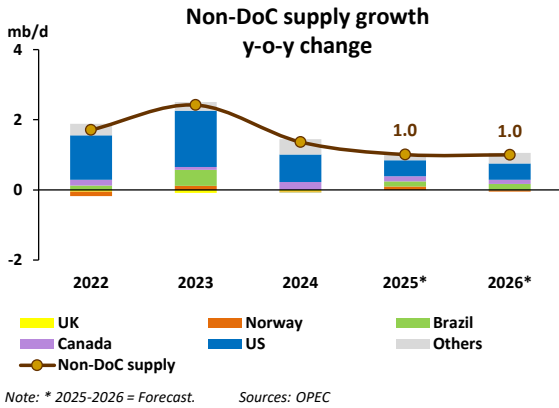


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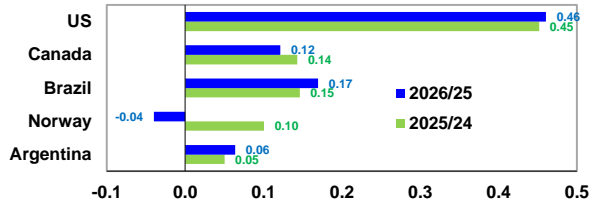
# Non-DoC supply recovery slows in 2025 & 2026

y-o-y change, mb/d



Note: \* 2025-2026 = Forecast. Sources: OPEC

Annual growth for selected countries y-o-y change, 2025 and 2026



US liquid production breakdown

	2024	2024/23	2025*	2025/24	2026*	2026/25
Tight crude	8.81	0.26	9.05	0.24	9.19	0.14
Gulf of Mexico crude	1.79	-0.08	1.88	0.09	1.92	0.04
Conventional crude oil	2.63	0.11	2.54	-0.09	2.53	-0.01
<b>Total crude</b>	<b>13.23</b>	<b>0.29</b>	<b>13.47</b>	<b>0.24</b>	<b>13.64</b>	<b>0.17</b>
Unconventional NGLs	5.76	0.40	5.97	0.21	6.23	0.26
Conventional NGLs	1.16	0.02	1.14	-0.02	1.12	-0.02
<b>Total NGLs</b>	<b>6.92</b>	<b>0.42</b>	<b>7.11</b>	<b>0.19</b>	<b>7.35</b>	<b>0.24</b>
Biofuels + Other liquids	1.61	0.07	1.63	0.02	1.68	0.05
<b>US total supply</b>	<b>21.76</b>	<b>0.78</b>	<b>22.21</b>	<b>0.45</b>	<b>22.67</b>	<b>0.46</b>

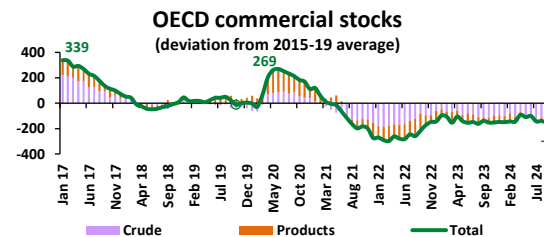
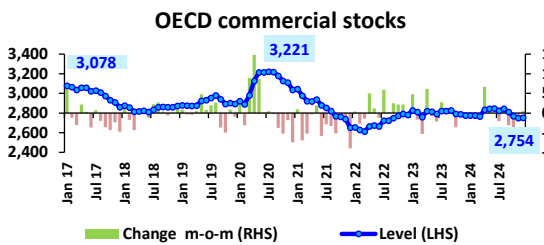
- Non-DoC liquids production is forecasted to increase by 1.0 mb/d in 2025 and in 2026.

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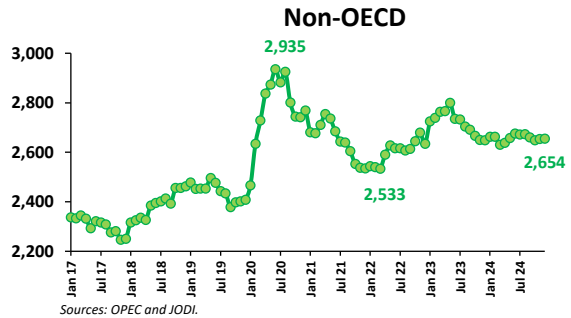
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# In December, OECD and non-OECD stocks increased slightly compared to the previous month



Sources: OIIX, IEA, METI, OPEC and EIA.



Sources: OPEC and JODI.

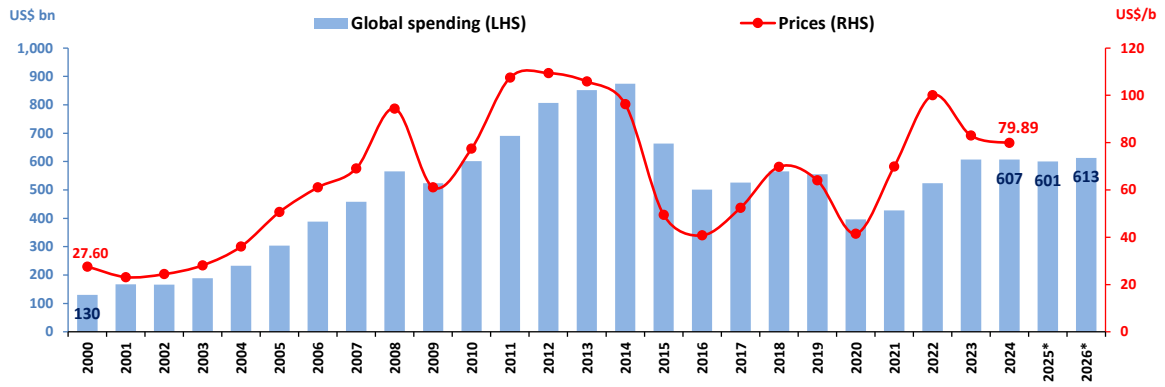
- OECD commercial stocks rose m-o-m in December to 2,754 mb, which is 172 mb below the 2015-2019 average – crude (-121 mb) and products (-51 mb).
- Non-OECD stocks also increased slightly m-o-m in December to stand at 2,654 mb.

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## Global E&P spending lags behind historical levels



- Global spending is expected to grow at a slower pace in 2025 and 2026 compared to recent years.

\* Global spending 2025-2026 = Forecast.  
Sources: OPEC.

## Outline

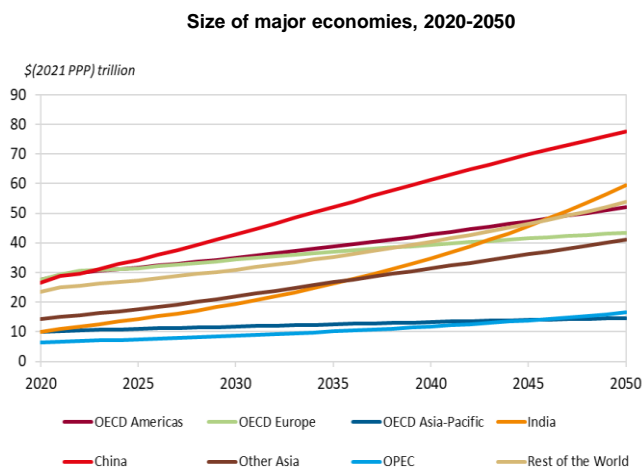


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## Key assumptions on demographics, economy, policy and technology underpin the medium and long-term outlook



- **Global population** to rise from 8.1 billion in 2023 to **9.7 billion in 2050**, overwhelmingly driven by non-OECD countries
- **Global GDP more than doubles** to \$358 trillion in 2050 (2021 PPP) from \$165 trillion in 2023; growth averages 2.9% p.a. over the entire forecast period
- The WOO takes into account a **widespread pushback** on overly ambitious energy policy goals, even while many targets remain in place
- It recognizes **incremental technological progress** that helps to improve efficiency and reduce costs, but does not assume sudden technology breakthroughs.



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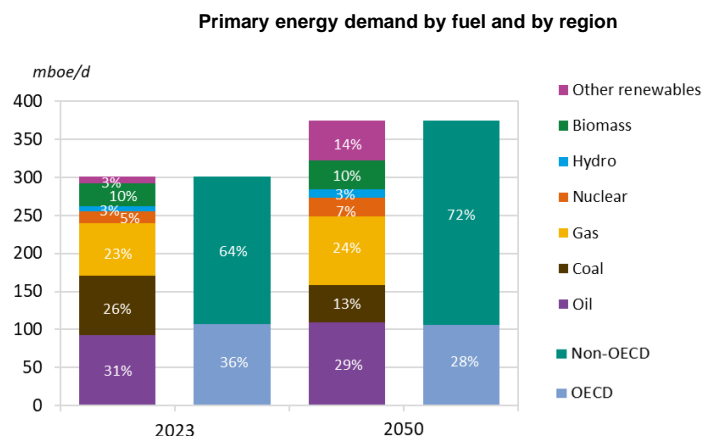
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## Global primary energy demand is forecast to increase by 24% in the period to 2050



- Energy demand increases from 301 mboe/d in 2023 to **374 mboe/d in 2050**
- **Oil will retain the largest share** of the energy mix through 2050
- Energy demand is almost entirely driven **by non-OECD countries**. Their share in global energy demand increases to **72% in 2050**, up from 64% in 2023
- **India's demand** increases at the **fastest rate**, around 2.7% p.a. on average



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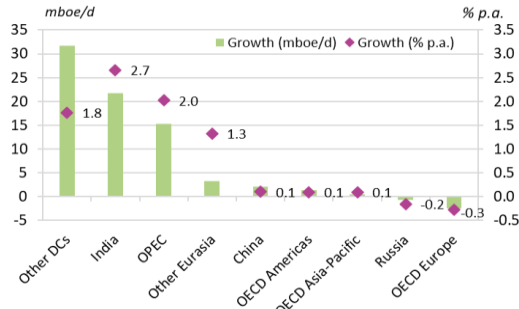
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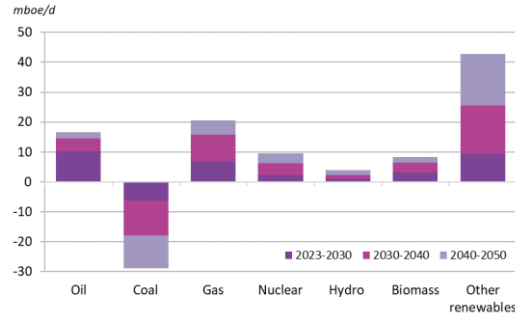
# Solar, wind, natural gas and oil lead the growth in primary energy demand to 2050



Growth in primary energy demand by region, 2023-2050



Growth in primary energy demand by fuel, 2023-2050



- **Other renewables**, mainly wind and solar, will have the **largest and fastest growth**, adding 43 mboe/d to 2050
- **Natural gas** shows the **second-largest** growth of 21 mboe/d between 2023 and 2050
- Oil gains around **17 mboe/d**
- **Coal expected** to decrease by **29 mboe/d**, due to restrictive policies and push for renewables in power generation

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# Global long-term oil demand projected to increase by almost 18 mb/d, rising to 120 mb/d in 2050



- Oil demand will continue **growing** in the long-term
- Oil demand projected to **reach 120 mb/d** in 2050
- **Growth in non-OECD** region (+28 mb/d) will be partly offset by **declines in the OECD** (-10 mb/d)
- **Largest incremental demand in India** (+8 mb/d), **Other Asia** (+5.2 mb/d), **Middle East** (+4.4 mb/d) and **Africa** (+4.4 mb/d)

Long-term oil demand by region (mb/d)

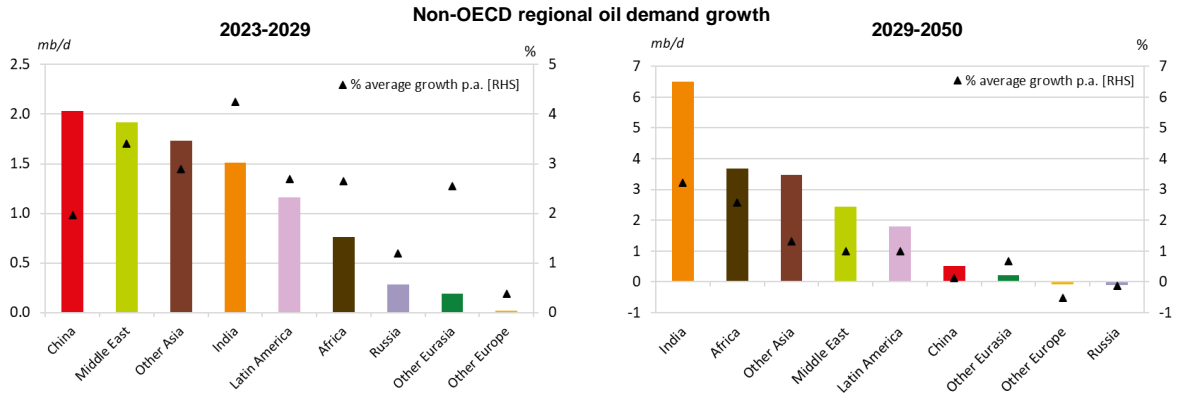
	2023	2030	2035	2040	2045	2050	Growth 2023-2050
OECD Americas	25.0	25.6	24.9	23.5	22.2	21.1	-3.8
OECD Europe	13.4	13.1	12.1	11.0	10.0	9.2	-4.2
OECD Asia-Pacific	7.2	7.2	6.7	6.1	5.7	5.2	-2.0
<b>OECD</b>	<b>45.7</b>	<b>45.9</b>	<b>43.7</b>	<b>40.6</b>	<b>37.9</b>	<b>35.6</b>	<b>-10.1</b>
China	16.4	18.6	19.0	19.2	19.1	18.9	2.5
India	5.3	7.1	8.6	10.2	11.8	13.3	8.0
Other Asia	9.3	11.2	12.3	13.1	13.8	14.5	5.2
Latin America	6.7	8.0	8.8	9.2	9.5	9.7	3.0
Middle East	8.6	10.7	11.5	12.1	12.6	13.0	4.4
Africa	4.5	5.4	6.2	7.0	7.9	8.9	4.4
Russia	3.8	4.1	4.1	4.1	4.1	4.0	0.2
Other Eurasia	1.2	1.4	1.5	1.5	1.6	1.6	0.4
Other Europe	0.8	0.8	0.8	0.8	0.8	0.7	-0.1
<b>Non-OECD</b>	<b>56.6</b>	<b>67.4</b>	<b>72.7</b>	<b>77.2</b>	<b>81.1</b>	<b>84.6</b>	<b>28.0</b>
<b>World</b>	<b>102.2</b>	<b>113.3</b>	<b>116.4</b>	<b>117.8</b>	<b>118.9</b>	<b>120.1</b>	<b>17.9</b>

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## Long-term oil demand growth will increasingly come from India, Africa and Other Asia



- In the **medium-term** period, demand growth will be driven by **China**
- In the **long-term**, **India** will take over the leading role
- Significant growth is also projected for **Africa**, **Other Asia** and the **Middle East** due to economic progress, urbanization, industrialization and expansion of the vehicle fleet

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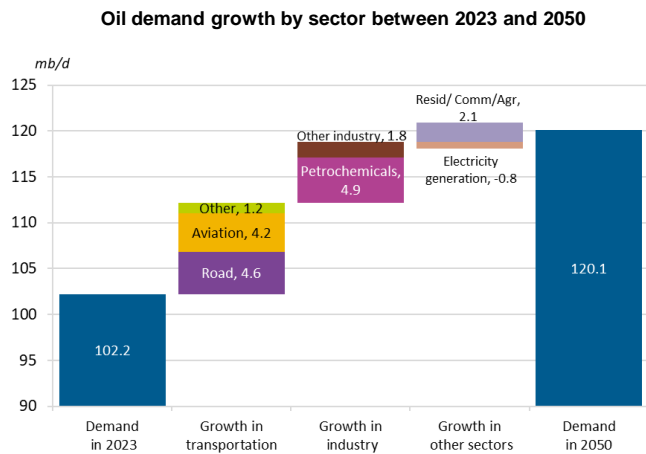
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## Petrochemicals, road transportation and aviation will drive future oil demand growth



- **Largest contributions** to future demand growth:
  - **Petrochemicals** +4.9 mb/d
  - **Road transportation** +4.6 mb/d
  - **Aviation** +4.2 mb/d
- Overall demand increases in **other sectors** (except electricity generation) in the range of 1.2 mb/d to 2.1 mb/d
- Oil used for **electricity generation** declines by 0.8 mb/d between 2023 and 2050



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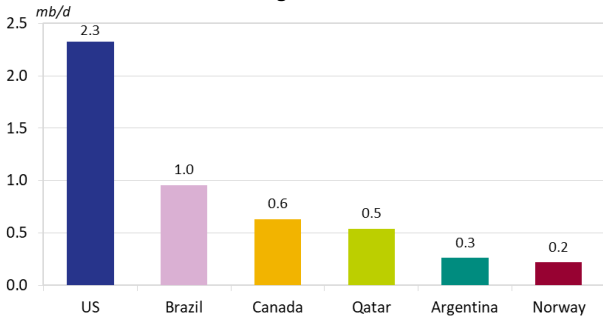
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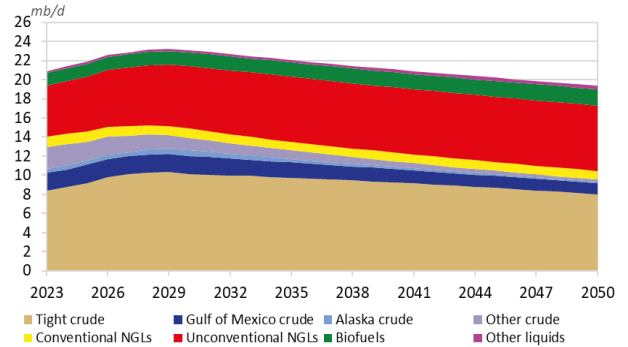
# Moderate medium-term non-DoC supply growth is expected



Select contributors to non-DoC total liquids change 2023-2029



US total liquids supply outlook

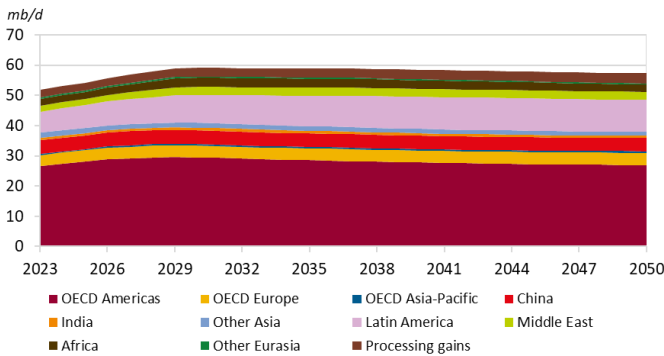


- **Non-DoC liquids supply to increase by 7.1 mb/d in 2023-2029**, from 51.7 mb/d to 58.8 mb/d, supported by robust fundamentals, numerous new field start-ups and a pick-up in upstream investment
- **Growth is driven by US (+2.3 mb/d), Brazil (+1.0 mb/d), Canada (+0.6 mb/d), Qatar (+0.5 mb/d), Argentina (+0.3 mb/d) and Norway (+0.2 mb/d).**

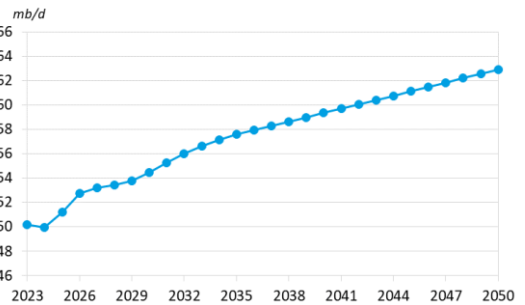
# In the long-term, DoC supply to play growing role



Long-term non-DoC liquids supply outlook



Long-term DoC total liquids supply



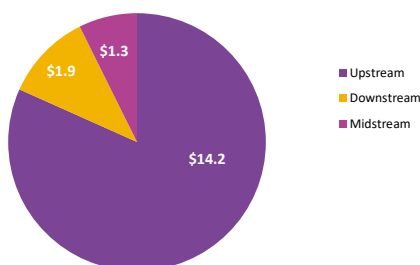
- After non-DoC liquids supply peaks in the early 2030s, DoC liquids supply keeps growing, **rising to almost 63 mb/d by 2050.**
- DoC's **share** in global liquids supply **rises from 49% in 2023 to 52% in 2050**



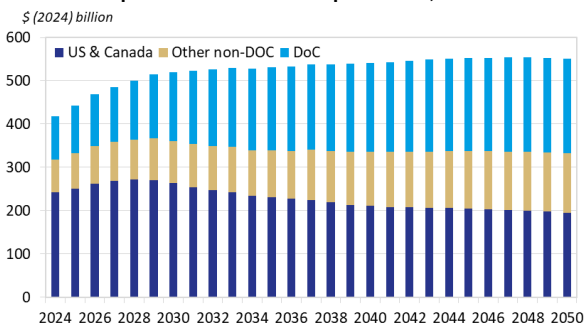
## Investment needs to be sustained



Cumulative oil-related investment requirements by sector, 2024-2050



Annual upstream investment requirements, 2024-2050



- **Total cumulative investment requirements in the oil sector in 2024-2050 are estimated at \$17.4 trillion**, or around \$640 billion per annum on average (all in US\$2024)
- **The bulk of this is required in the upstream**, where total investment needs are **estimated at \$14.2 trillion**, or around \$525 p.a. Downstream and midstream investment needs over the long-term are projected to be \$1.9 and \$1.3 trillion respectively.

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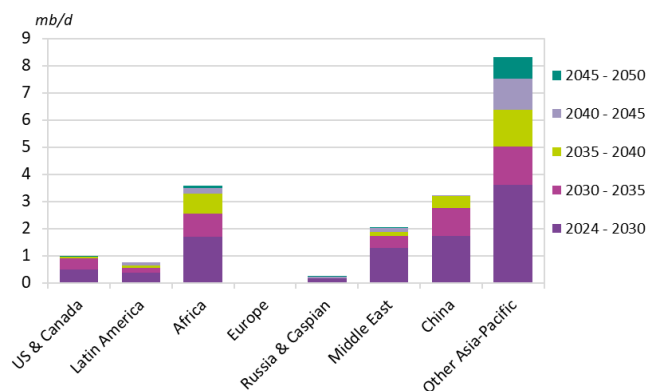
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## Long-term refining capacity additions expected at 19.2 mb/d



- On top of **6.3 mb/d** of medium-term capacity additions, a further **12.9 mb/d** are required in the period to 2050
- Additions are **front-loaded** in line with oil demand growth
- The largest refinery capacity increment by far is expected in **Asia-Pacific**
- Significant additions are also expected in **Africa** (+3.6 mb/d) and the **Middle East** (+2.1 mb/d)

Distillation capacity additions, 2023–2050



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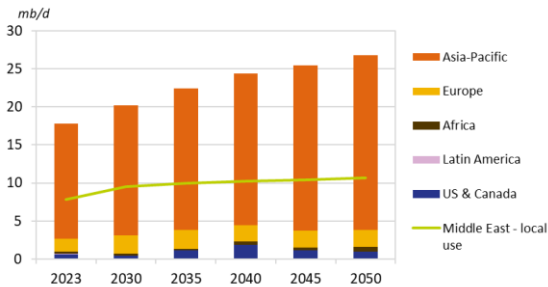
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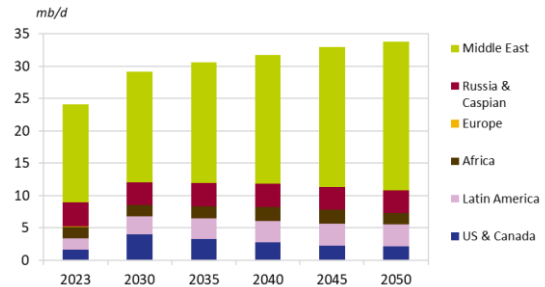
## Global crude and condensate trade to increase by almost 10 mb/d over the outlook period



Crude and condensate exports from the Middle East by destination, 2023–2050



Crude and condensate imports to Asia-Pacific by origin, 2023–2050



- Crude and condensate trade increases from 36.5 mb/d in 2023 to **46.2 mb/d in 2050**
- **Middle East** is the major contributor to the global trade growth, with volumes increasing from 17.8 mb/d in 2023 to **26.8 mb/d in 2050**
- **Asia-Pacific** remains the **most important destination** with total imports increasing from 24 mb/d in 2023 to **33.8 mb/d in 2050**

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## Alternative scenarios indicate range of uncertainty for future oil demand



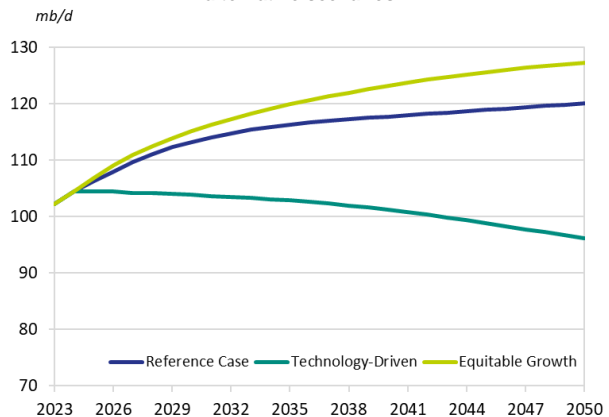
### Technology-Driven Scenario

- oil demand will **stabilize at levels above 100 mb/d** in the period to around 2040
- demand moderately declines towards **96 mb/d** during the last decade of the forecast period

### Equitable Growth Scenario

- oil demand projected to move **consistently above** the Reference Case levels
- oil demand tops **115 mb/d by 2030** and continues growing to **127 mb/d in 2050**

Global oil demand in the Reference Case and in alternative scenarios



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