

9th IEA-IEF-OPEC Symposium on Energy Outlook

Wednesday, 27 February 2019

IEF Headquarters, Riyadh, Saudi Arabia

OPEC Oil & Energy Market Outlook

**Prepared by the
OPEC Secretariat**





- **Short-term Market Outlook**
 - Review of the oil market in 2018
 - Projections for the oil market in 2019
 - Supply/demand balances in the short-term

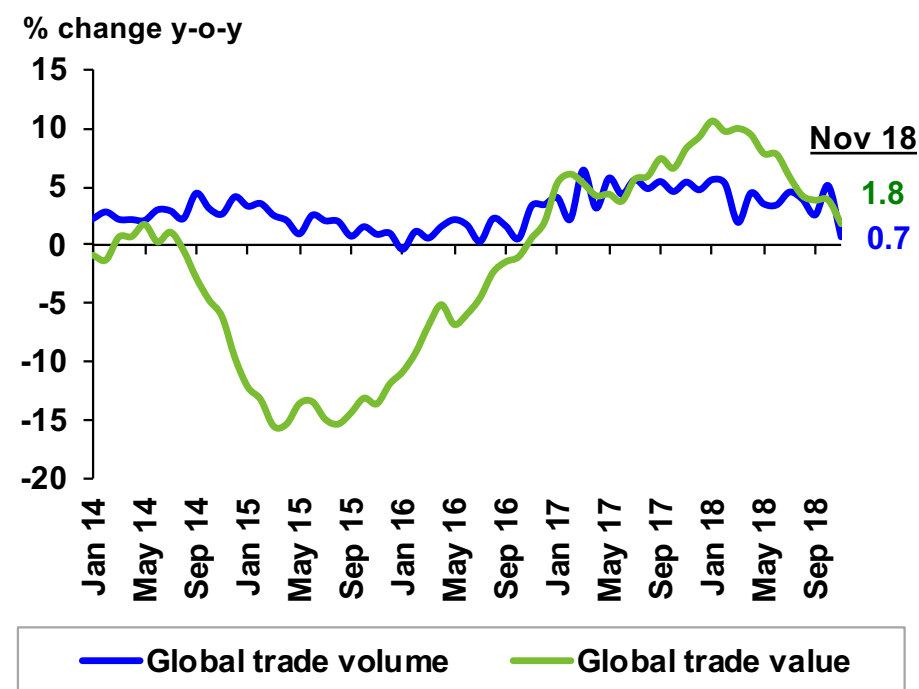
- **Medium- and Long-term Market Outlook**
 - Key assumptions
 - Energy outlook
 - Oil outlook
 - WOO 2018 key messages - short video

World real GDP growth remains above trend, yet easing

GDP growth by region

Unit: %	2017	2018	2019	Average 2014-18
OECD	2.5	2.3	1.9	2.3
- US	2.2	2.9	2.5	2.4
- Euro-zone	2.5	1.8	1.3	1.9
- Japan	1.9	0.8	1.0	1.0
DCs	3.6	3.9	3.8	3.6
OPEC	0.5	1.1	0.7	1.5
Brazil	1.0	1.1	1.8	-0.9
Russia	1.5	1.6	1.6	0.2
India	6.3	7.5	7.2	7.3
China	6.9	6.6	6.1	6.9
World	3.7	3.6	3.3	3.4

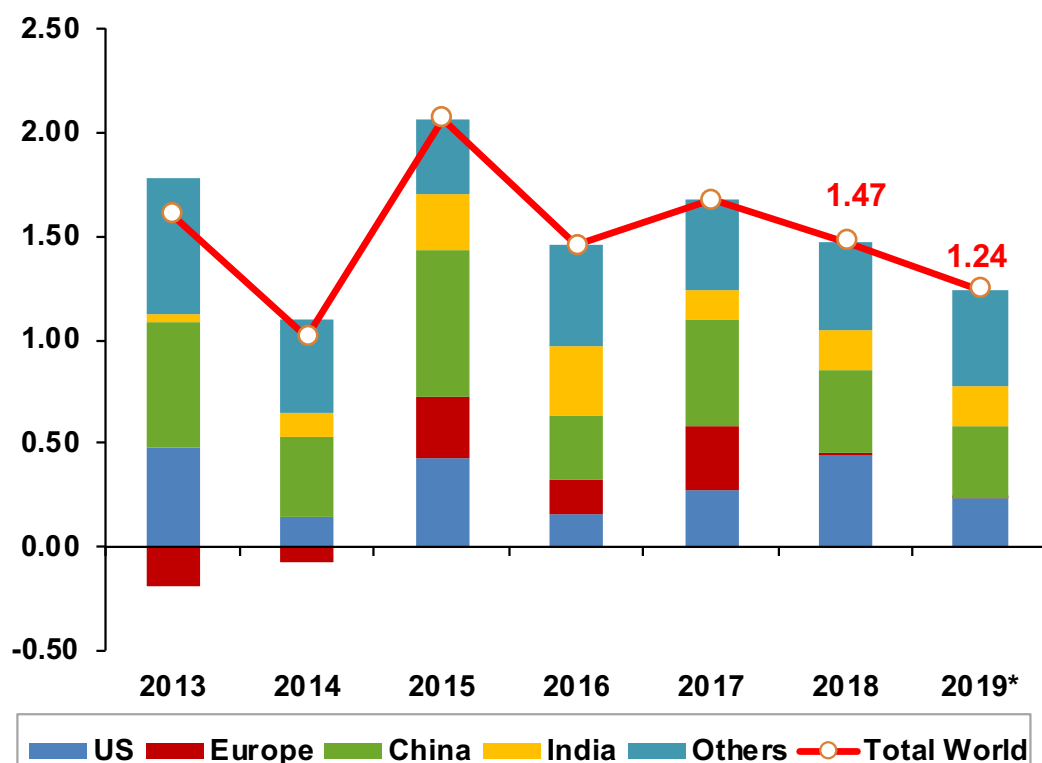
Global trade volume and value



Sources: Netherlands Bureau for Economic Policy Analysis and Haver Analytics.

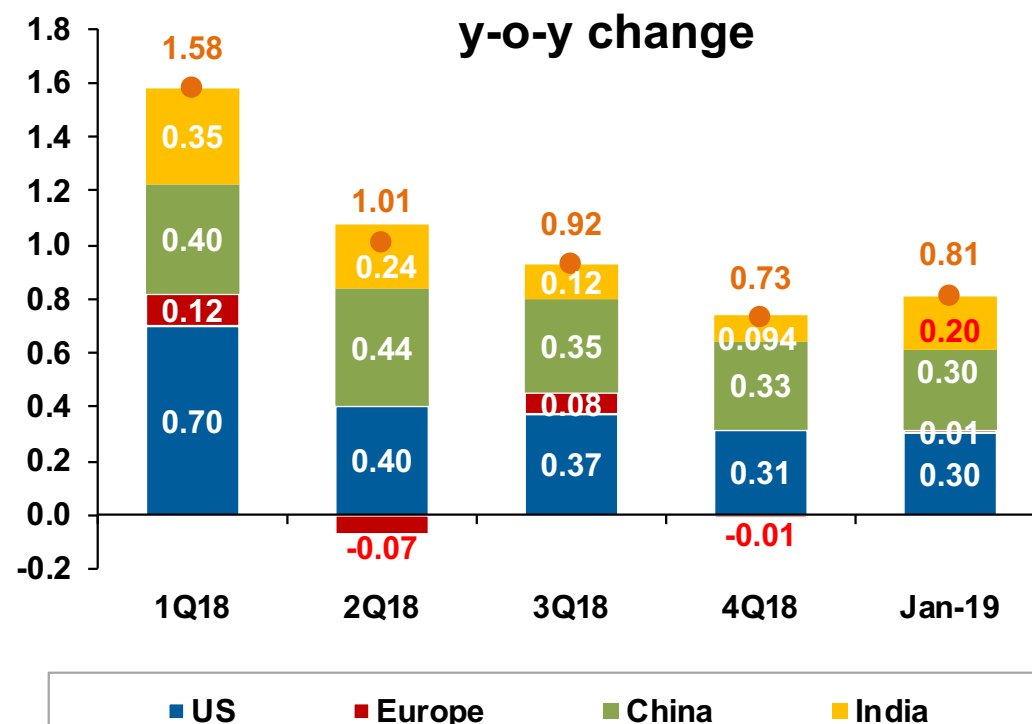
World oil demand growth in 2018-2019

y-o-y change, mb/d



Note: * 2019 = Forecast.

2018-2019 oil demand growth for selected countries, y-o-y change

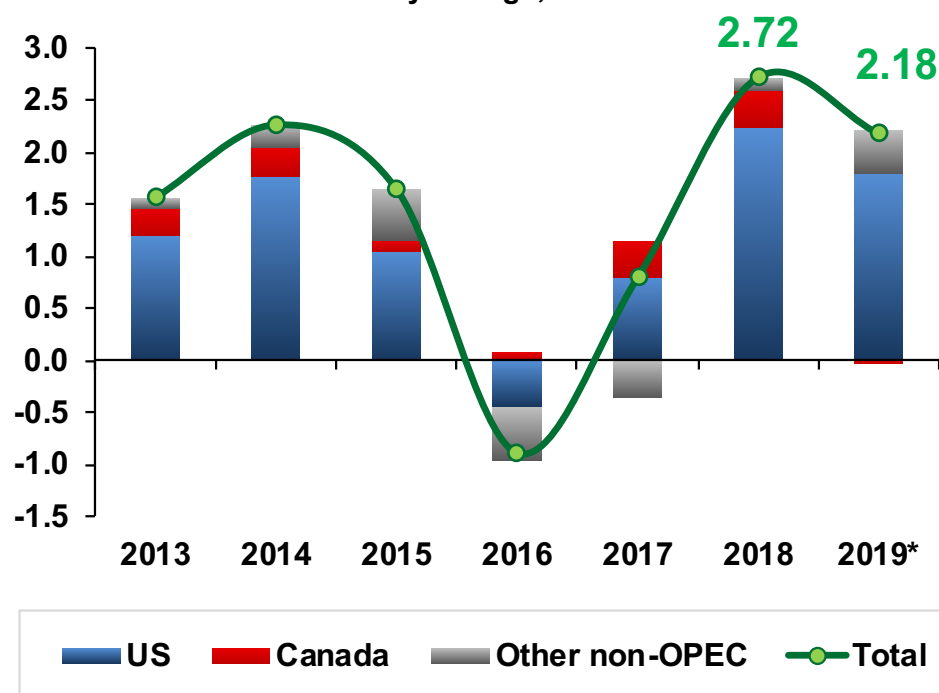


Note: * Jan 19 preliminary/estimated.

Oil demand growth remains healthy in 2018-2019, while non-OPEC supply recovers during the same period



Non-OPEC supply growth
Y-o-y change, mb/d



Note: * 2019 = Forecast.

US liquids production forecasts
2018-2019, mb/d

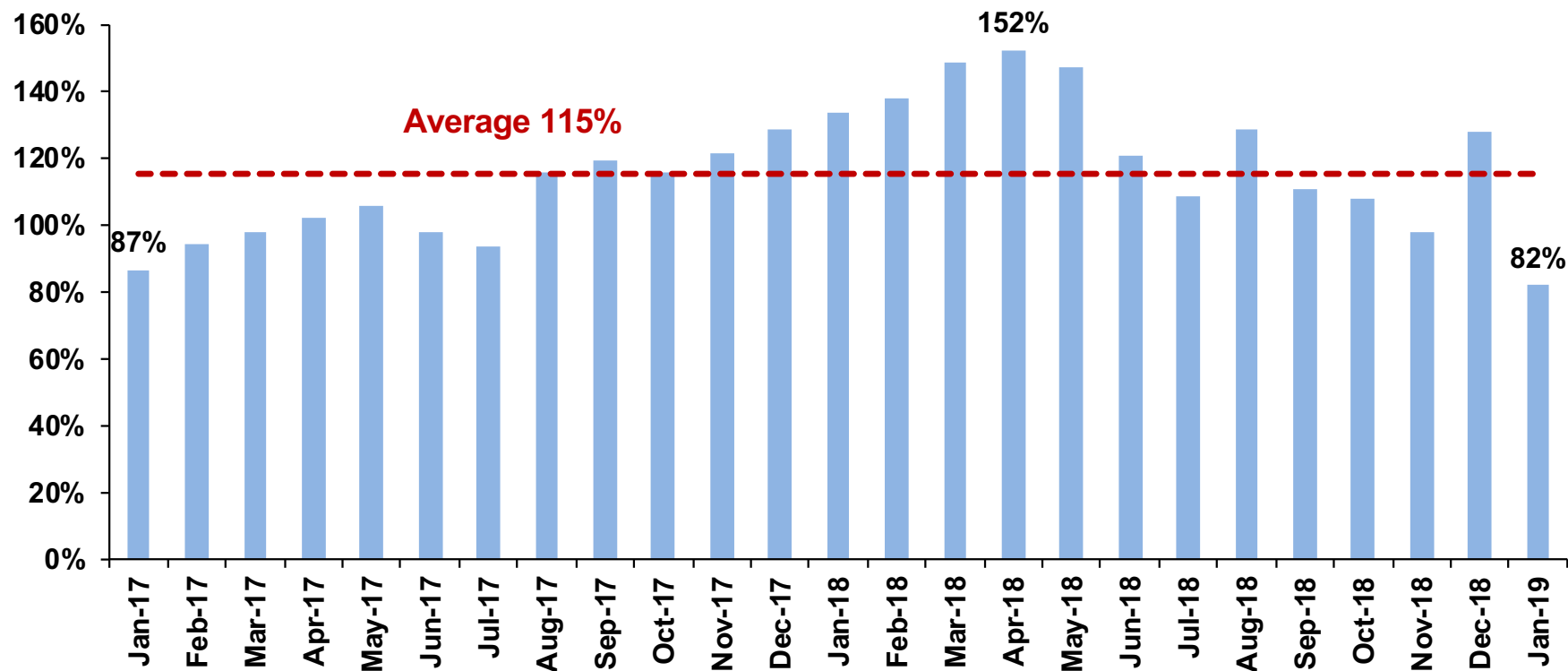
	2018	Change 2018/17	2019*	Change 2019/18
Tight crude	6.27	1.56	7.44	1.17
Gulf of Mexico crude	1.74	0.06	1.89	0.15
Conventional crude oil	2.94	-0.02	2.91	-0.03
Unconventional NGLs	3.26	0.49	3.69	0.43
Conventional NGLs	1.10	0.09	1.15	0.05
Biofuels + Other liquids	1.33	0.06	1.36	0.03
US total supply	16.64	2.24	18.44	1.80

Note: * 2019 = Forecast.

Overall conformity, performance and gains: January 2017 – January 2018



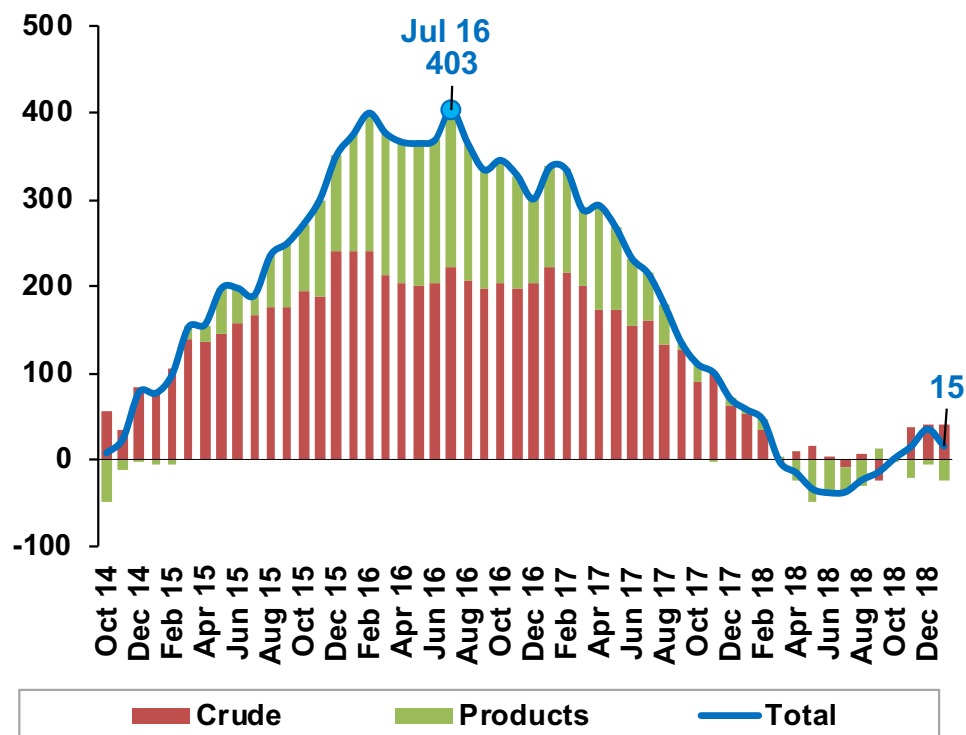
Conformity under the Declaration of Cooperation



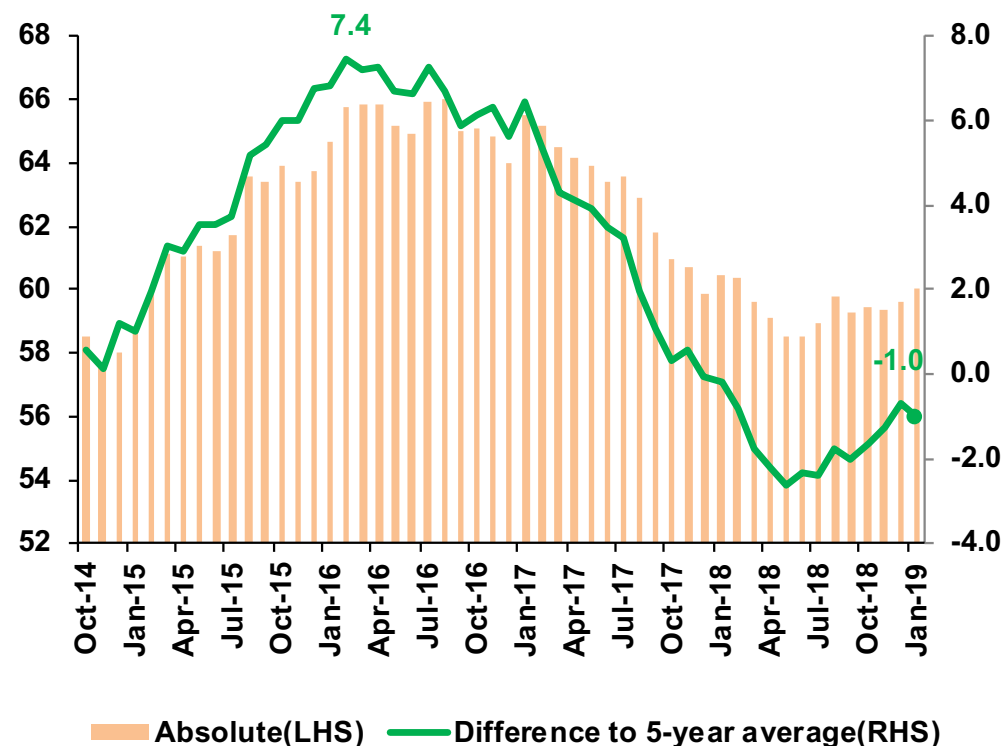
OECD commercial oil stocks on the rise again



OECD commercial oil stocks
(deviation from 5-year average, mb)



OECD commercial oil stocks
Day of forward cover



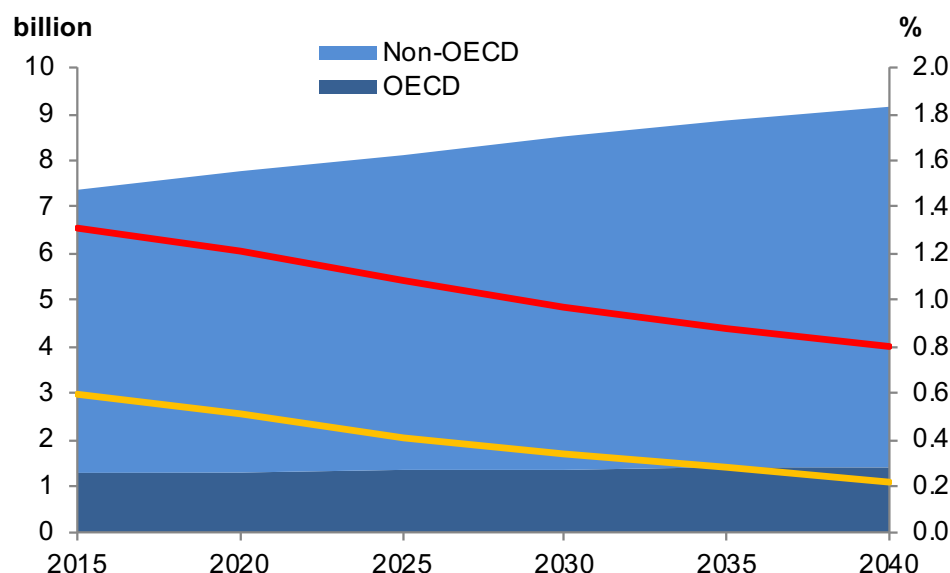


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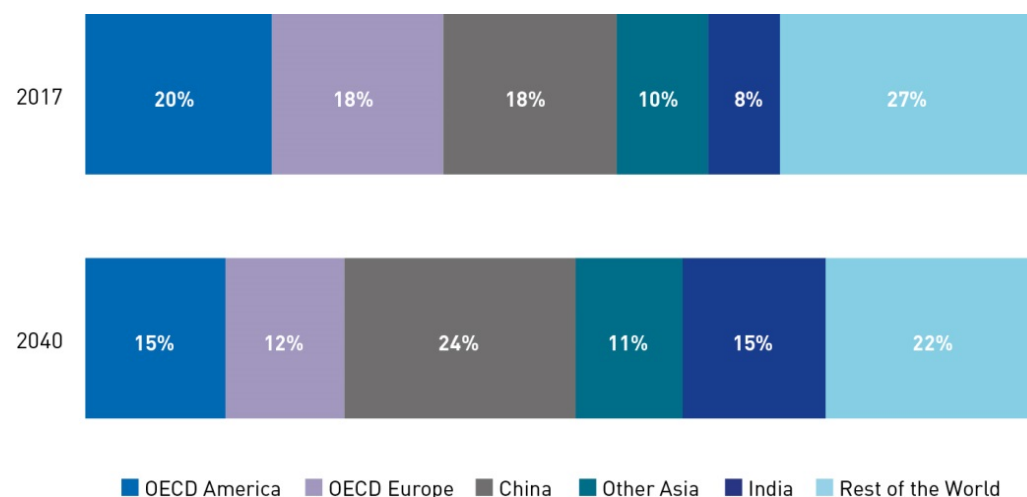
Key assumptions



Population by region, 2015–2040

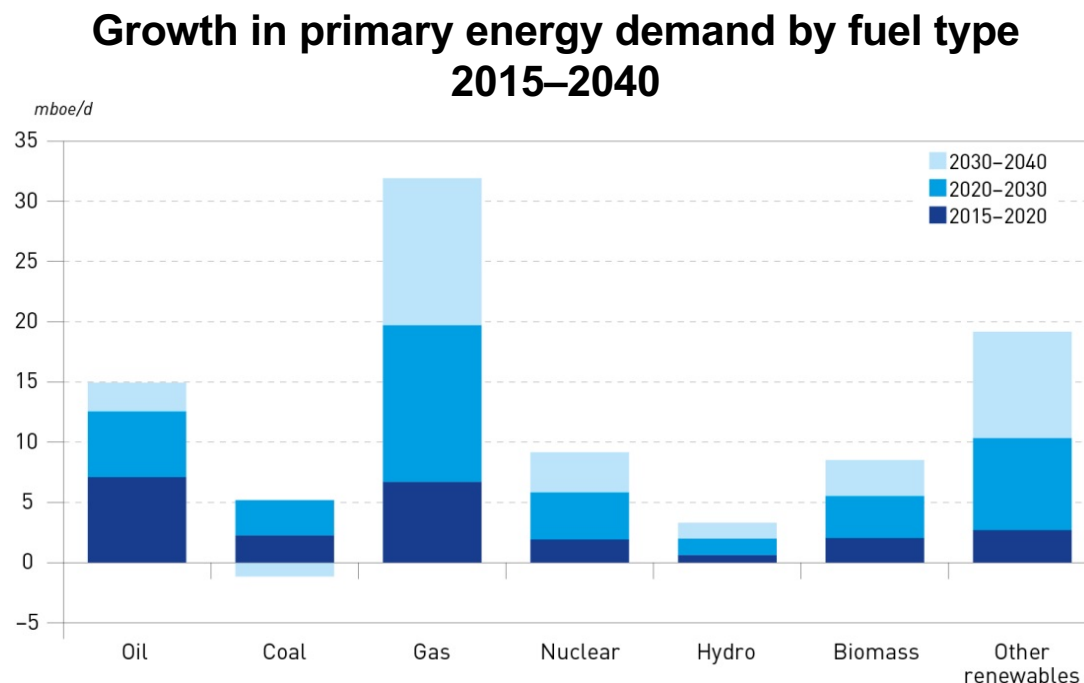
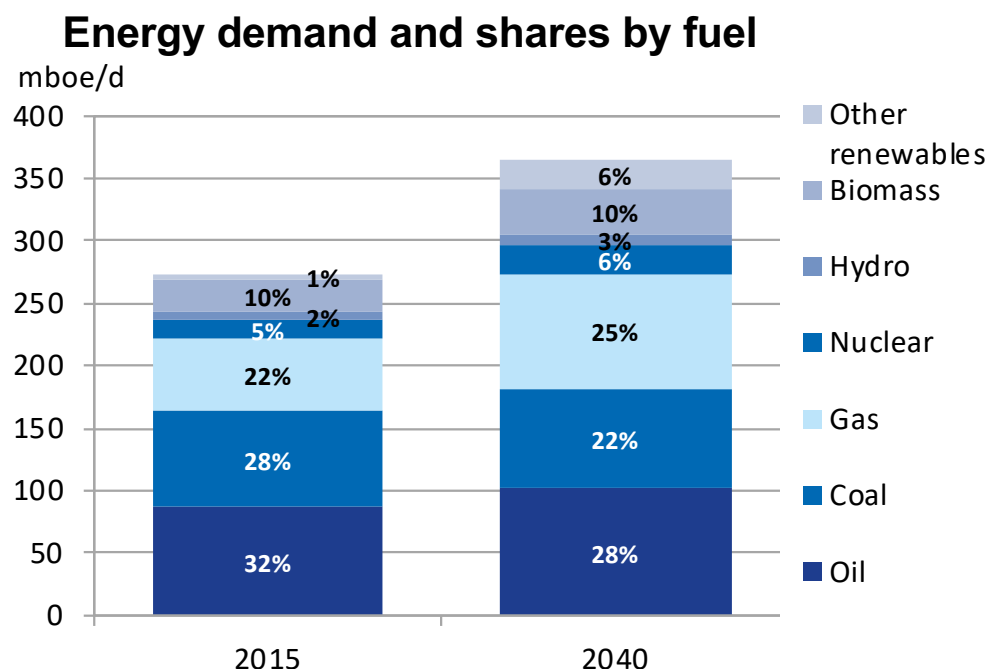


Distribution of the global economy, 2017 and 2040



- Global population is expected to increase from around 7.6 billion in 2017 to 9.2 billion in 2040.
- Global GDP growth to average 3.4% p.a. between 2017 and 2040.
- Reference Case reflects evolutionary development in technology and policies.

In absolute terms, natural gas expands the most in the long-term, followed by 'other renewables'

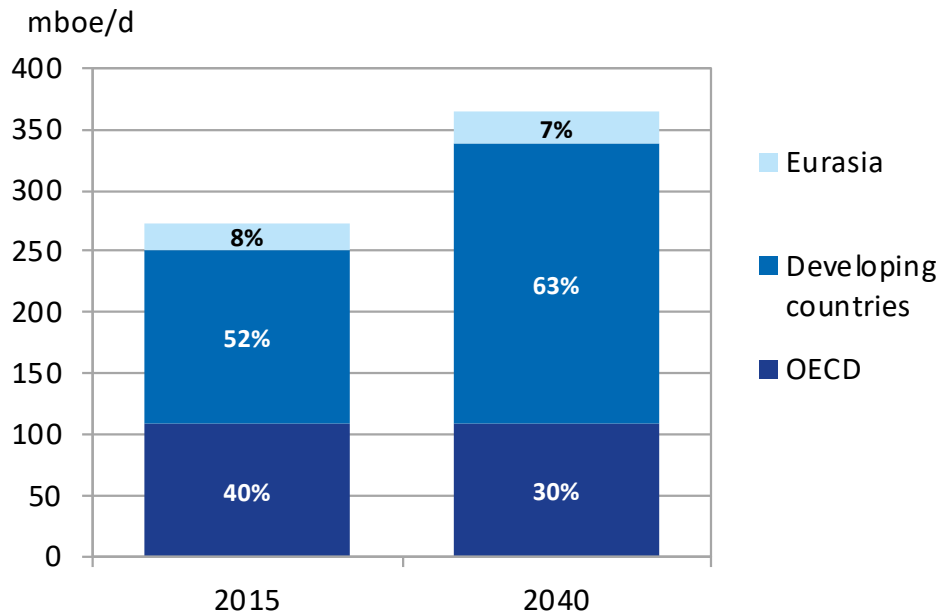


- Energy demand will increase by 91 mboe/d, or 33%, to reach the level of 365 mboe/d by 2040.
- Natural gas and 'other renewables' show the largest growth in the long-term.
- Oil retains the highest share in the global energy mix throughout the forecast period.

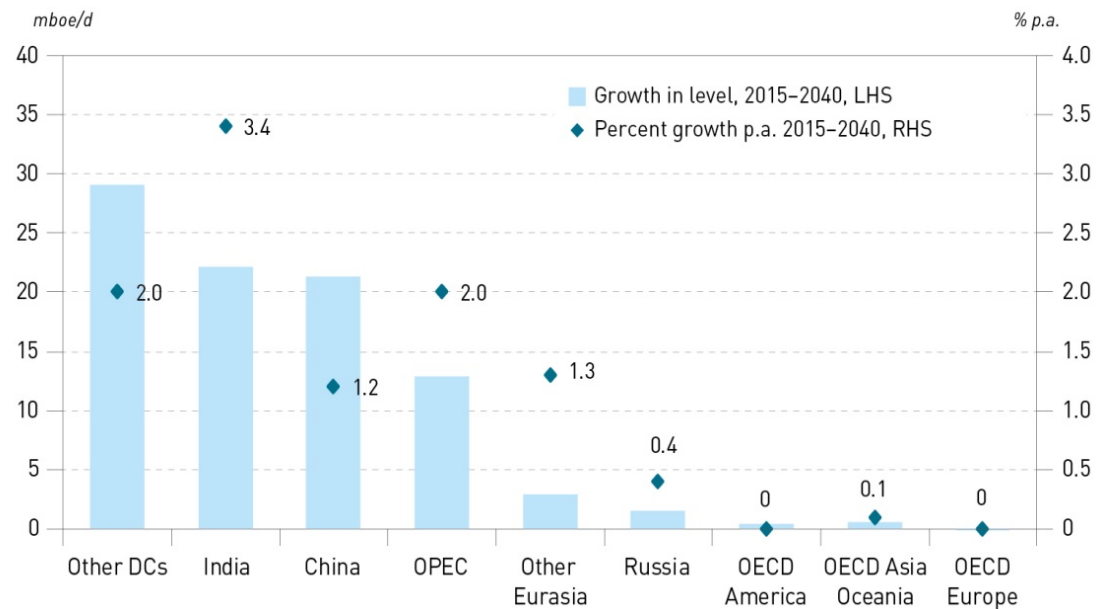
Overall energy demand increases along with changes in regional distribution



Energy demand by region



Growth in primary energy demand by region 2015–2040

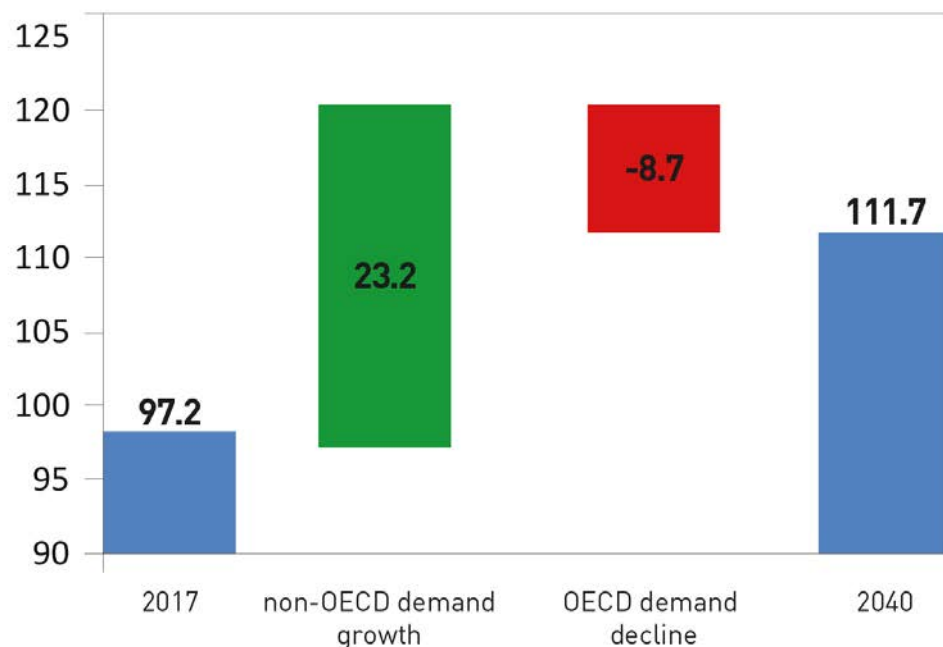


- Energy demand in China and India will grow by more than 20 mboe/d each.
- The share of Developing countries in total demand increases by 10 percentage points.

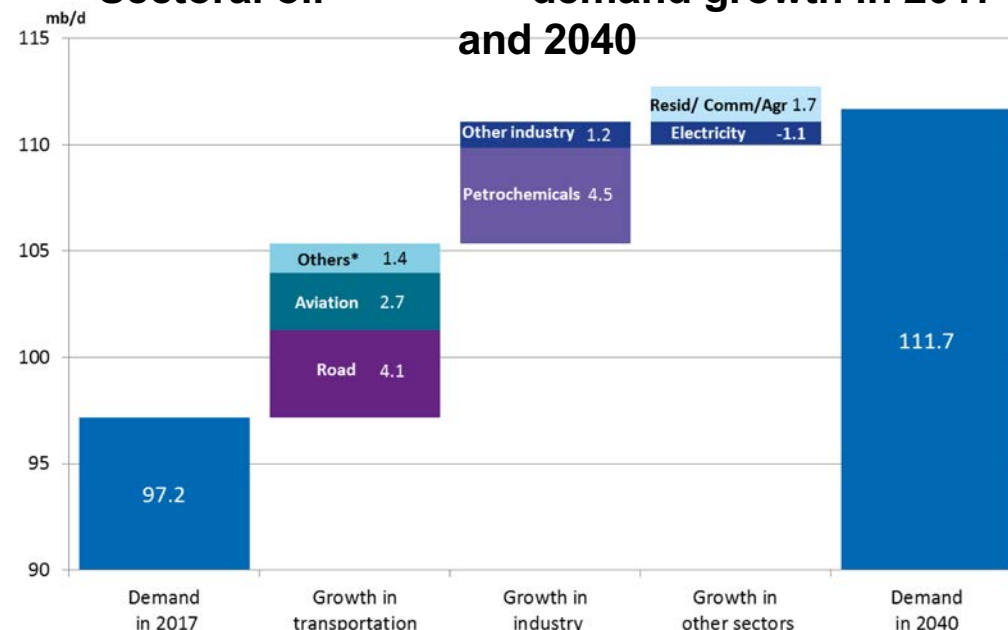
Long-term oil demand projected to increase by 14.5 mb/d to reach 111.7 mb/d in 2040



Regional oil demand growth in 2017 and 2040



Sectoral oil demand growth in 2017 and 2040

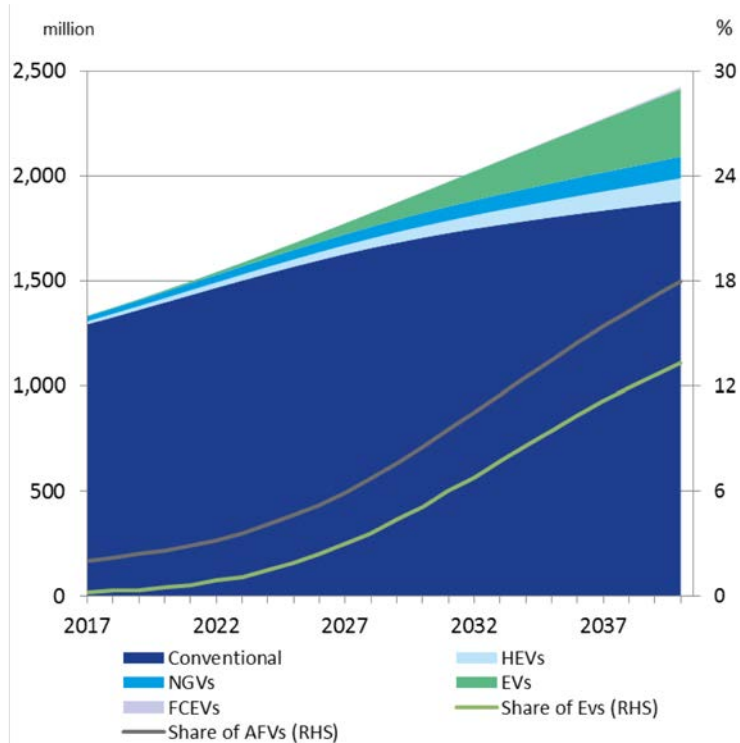


- Oil demand in Developing countries to increase by more than 22 mb/d between 2017 and 2040.
- Road transportation remains the largest oil demand sector, but petrochemicals see the largest increase.

Interplay of multiple factors shapes oil demand growth in the road transportation sector

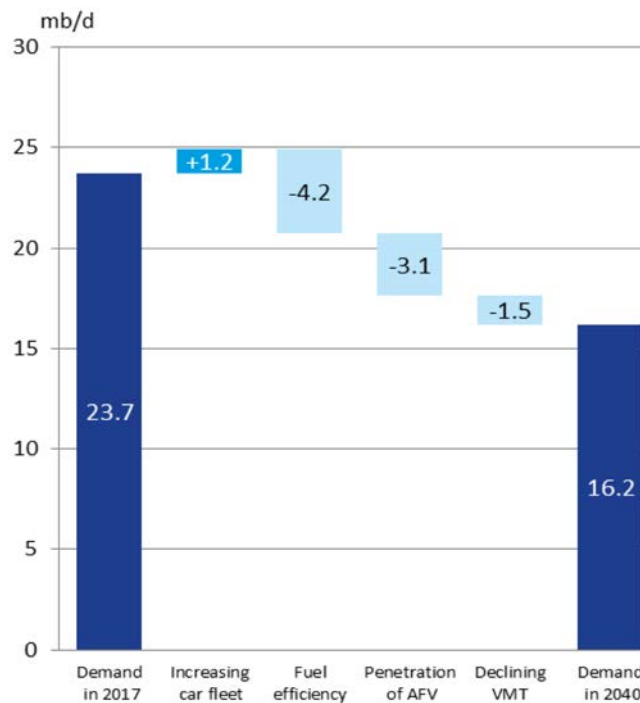


Global road vehicle fleet composition 2017–2040

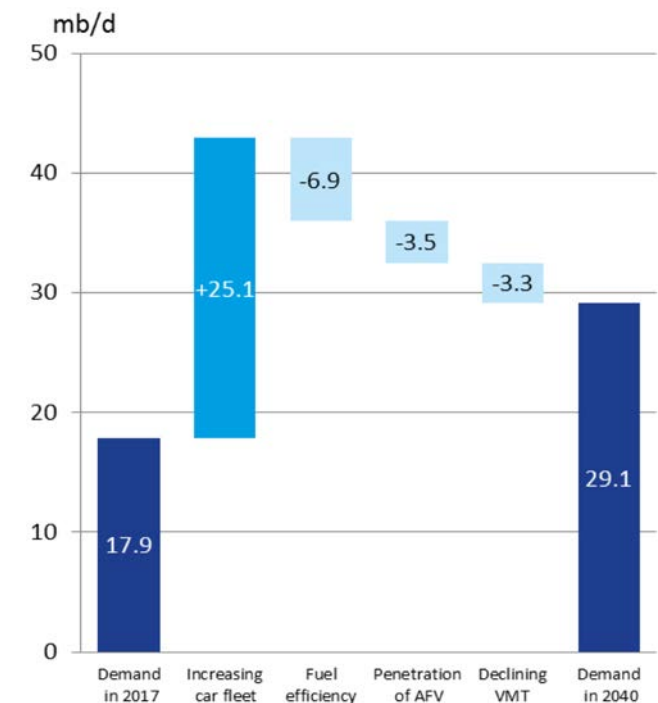


Demand in road transportation in 2017 and 2040

OECD



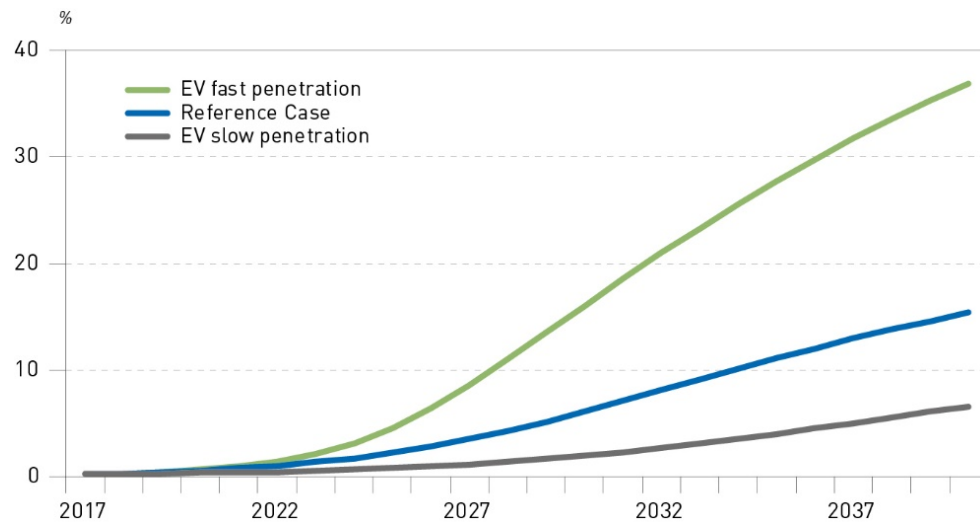
Developing countries



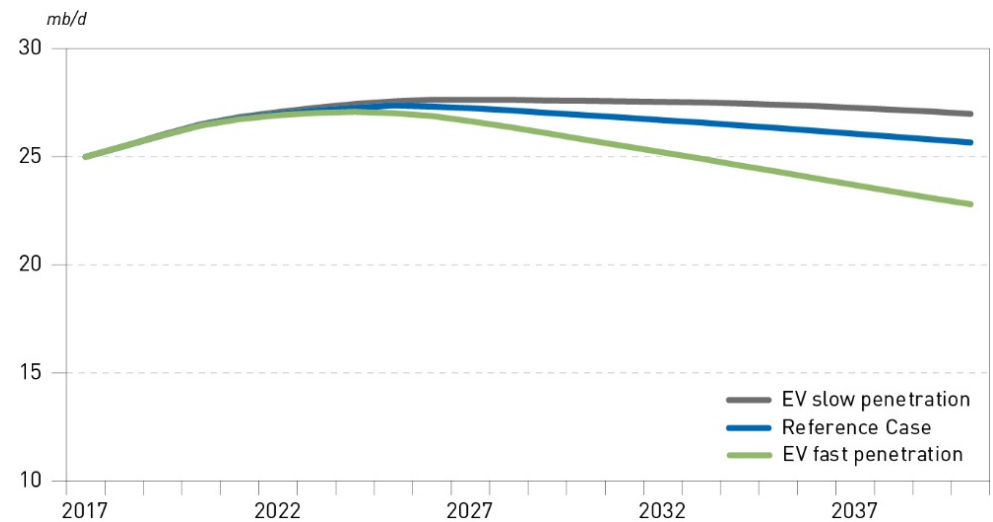
Road transportation oil demand is sensitive to the expansion of electric vehicles



Electric vehicle penetration in the car fleet in the different sensitivities

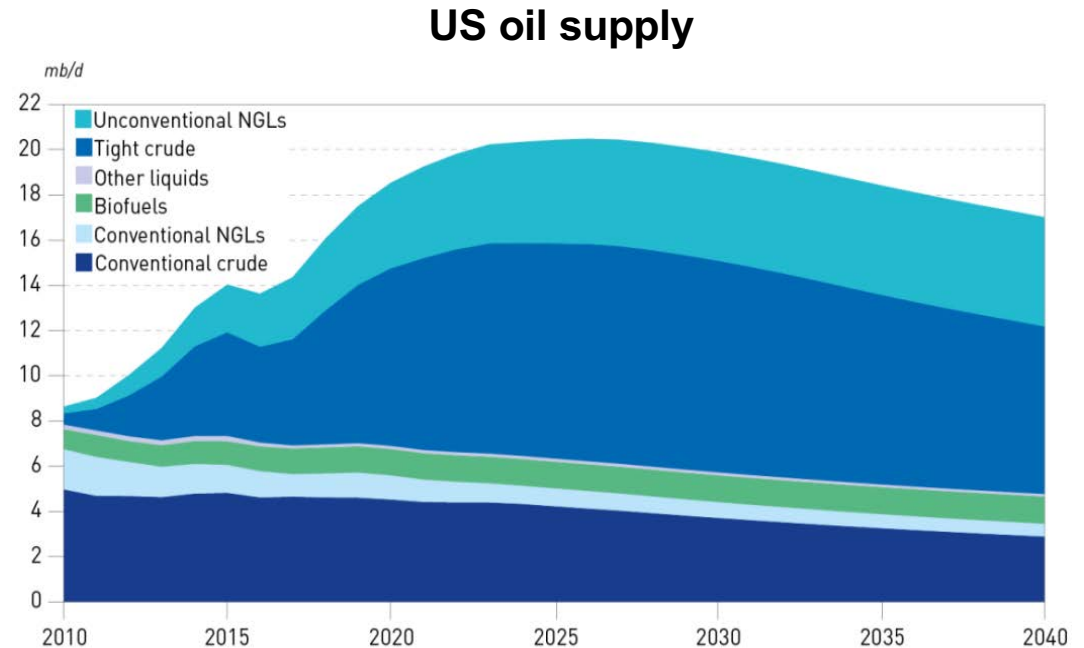
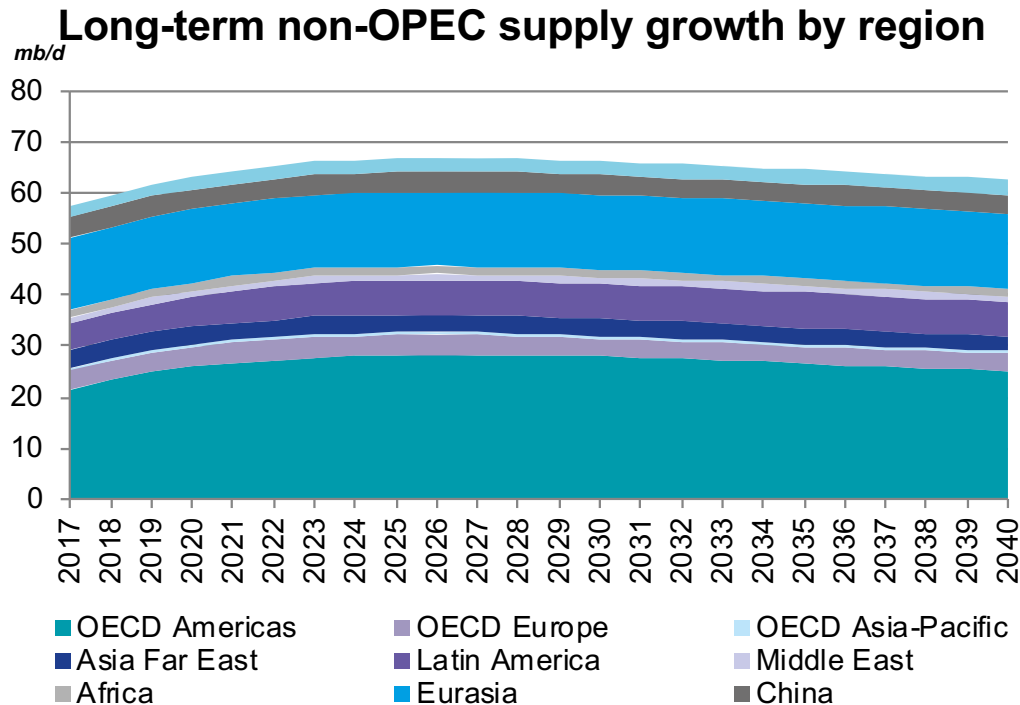


Oil demand in the passenger car segment in the different sensitivities



- Demand implication is fairly limited over the next ten years, within the range of 1 mb/d, but start widening during the last decade of the forecast period
- The range of uncertainty is more than 4 mb/d by 2040

Non-OPEC supply peaks in late 2020s when US tight oil plateaus



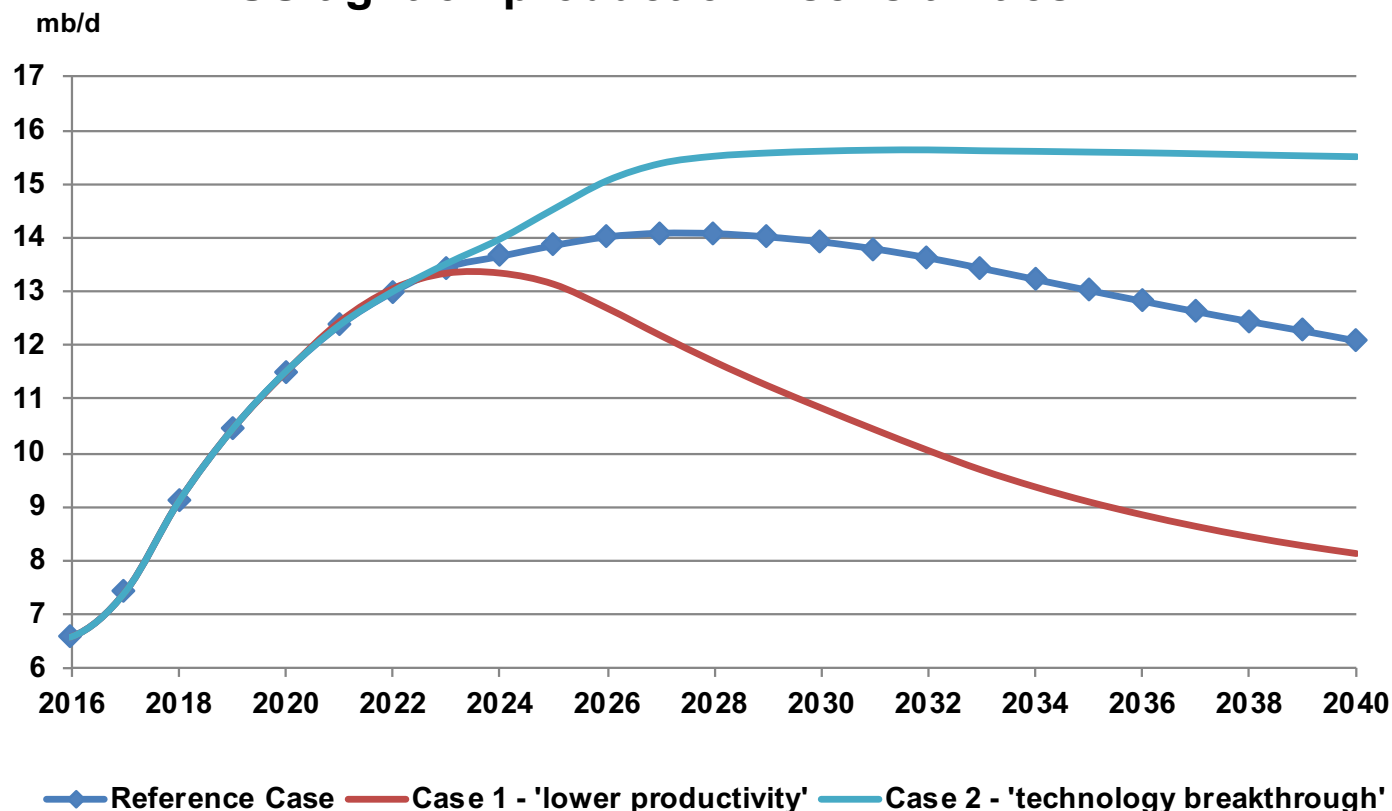
- Demand for OPEC crude only exceeds current levels after US tight oil peaks in the late 2020s. Thereafter, however, it grows continuously and reaches almost 40 mb/d by 2040.

US tight oil: sensitivities illustrate uncertainty and a wide range of possible outcomes



US tight oil production - sensitivities

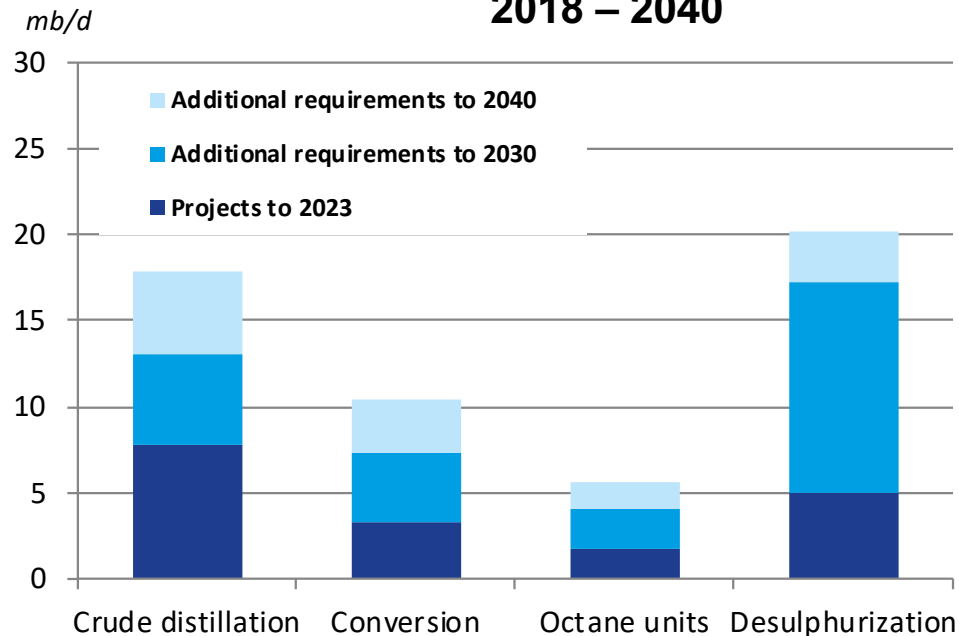
- Sensitivities show a range of +/- 1-2 mb/d relative to the Reference Case peak, and +/- 3-4 mb/d by 2040.
- Any such outcome would have a meaningful impact on non-OPEC supply and oil markets in general.



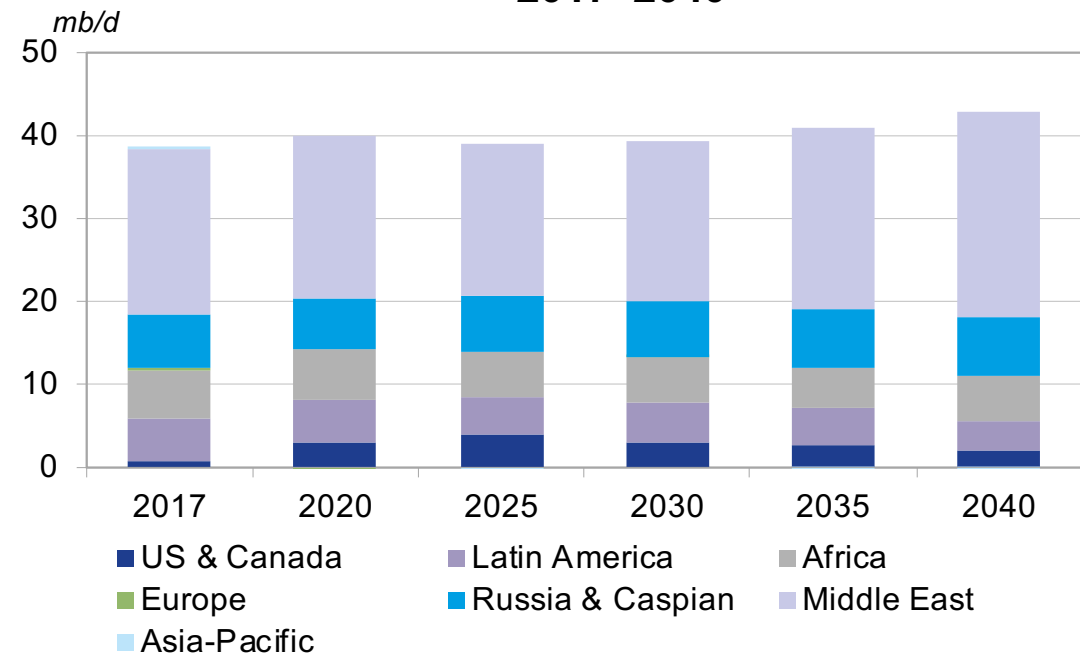
Substantial expansion of the downstream sector required



**Global capacity requirements by process type
2018 – 2040**



**Global crude oil exports by origin*
2017–2040**

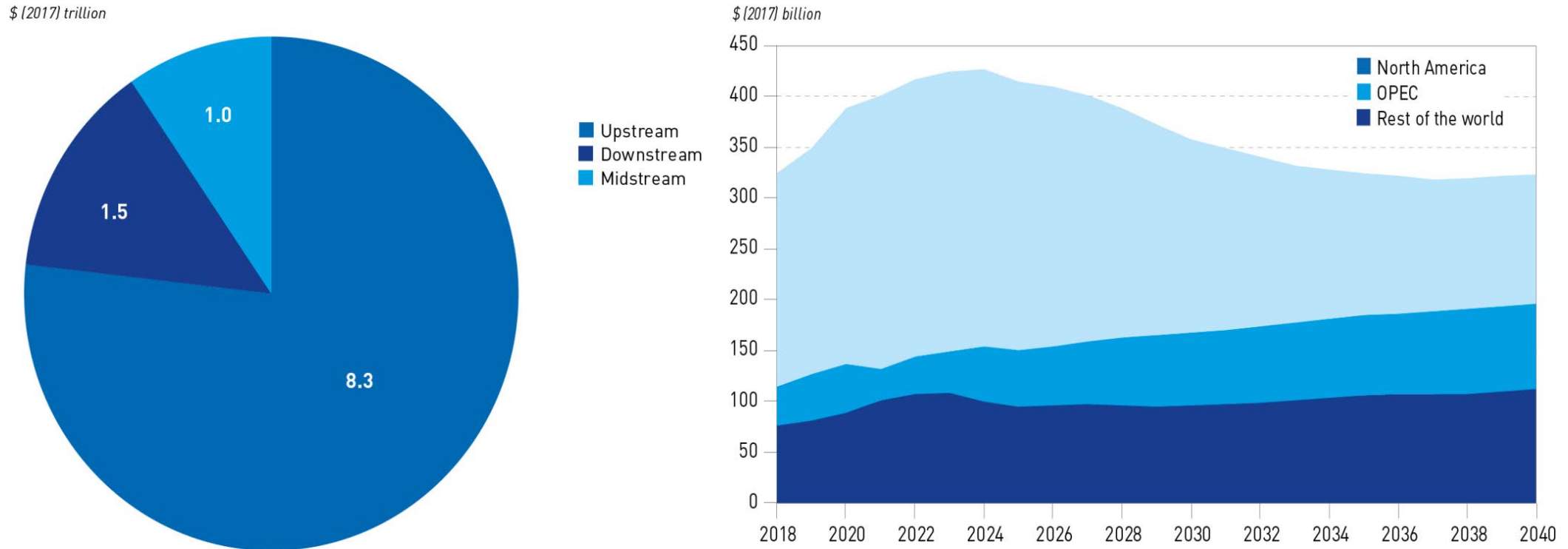


- Long-term distillation capacity additions projected at 17.8 mb/d.
- Global crude oil exports increase over the long-term, with the Middle East remaining dominant.

Oil sector requires investment of \$11 tn by 2040



Cumulative oil-related investment requirements by sector, 2018-2040



- The majority of investments will be in the upstream, much of which in North America.



Thank you



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