

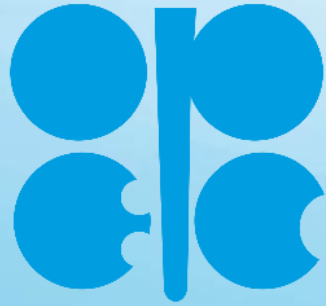
World Oil Outlook 2040

Launch of 2019 edition

Presented by the OPEC Secretariat
Vienna, 5 November 2019



World Oil Outlook 2040



Launch presentation sponsored by OMV



OPEC WOO - essential and detailed analysis of the prospects for the global oil industry



The WOO is one of OPEC's **flagship** publications, combining the **expertise** of the OPEC Secretariat and **professionals** in OPEC Member Countries.

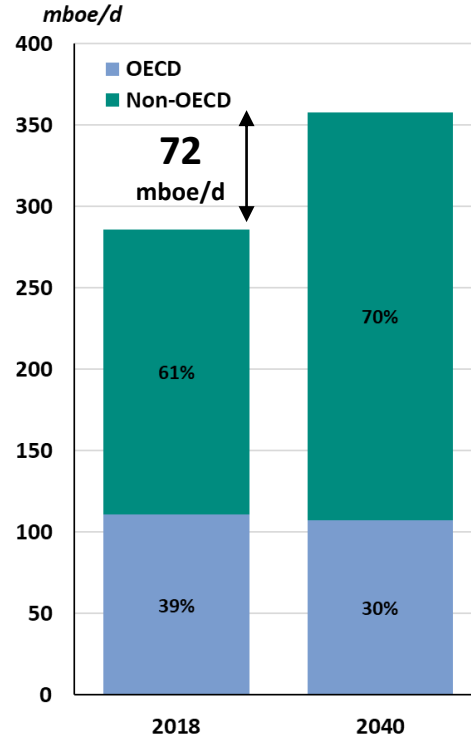
The WOO is now also available as an **APP for Android and iOS**.

Total global primary energy demand is forecast to reach 357 mboe/d by 2040

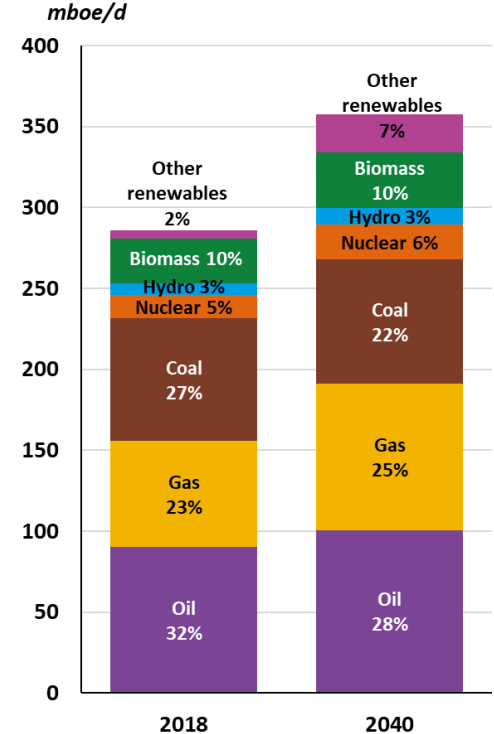


- Total primary energy demand increases by 72 mboe/d (25%) between 2018 and 2040
- Demand growth seen mostly in **non-OECD regions**, predominantly in Asia
- Oil maintains its leading role in the global energy mix (28% by 2040)

Primary energy demand by region



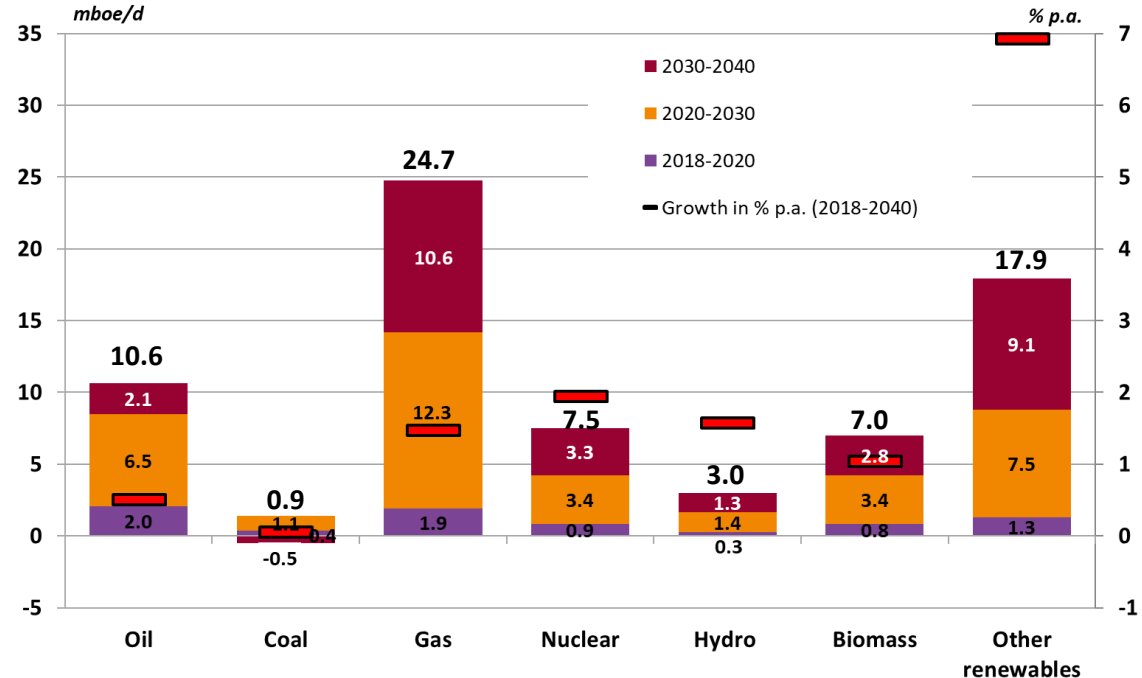
Primary energy demand by fuel



All forms of energy will be required

- **‘Other renewables’**
(including solar, wind and geothermal)
 - largest growth in percentage terms
(+6.9% p.a., or +17.9 mboe/d)
- **Gas**
 - largest increase in demand by volume
(+24.7 mboe/d)
- **Oil**
 - demand remains at relatively healthy levels (+10.6 mboe/d)

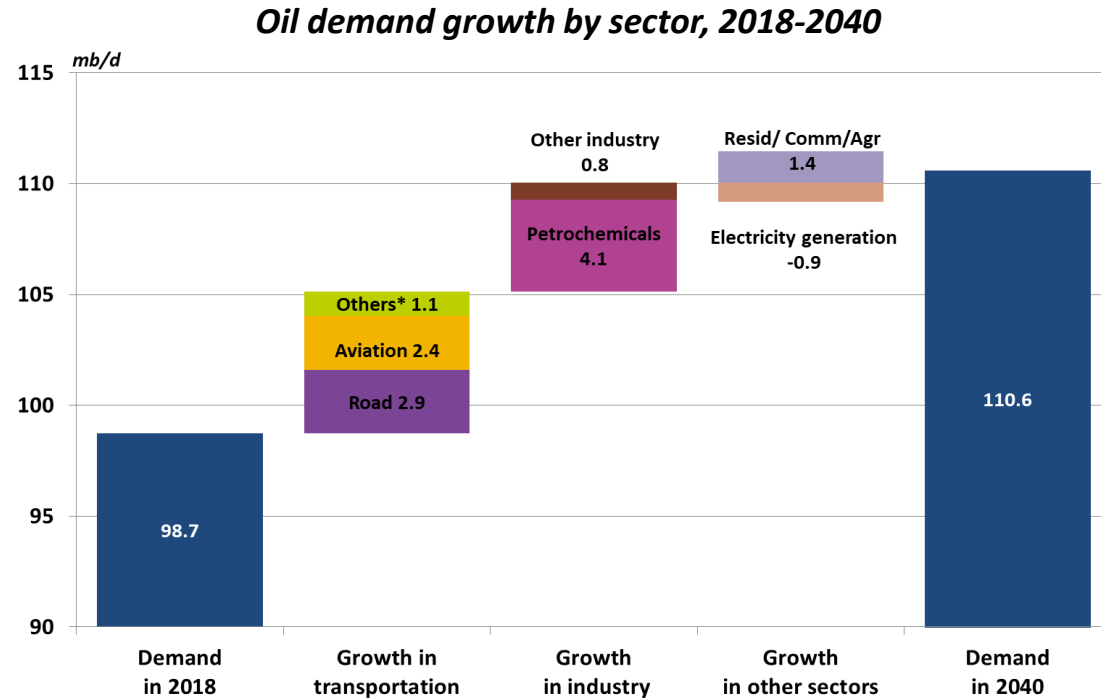
Growth in primary energy demand by fuel type, 2018-2040



Long-term oil demand to reach 110.6 mb/d in 2040



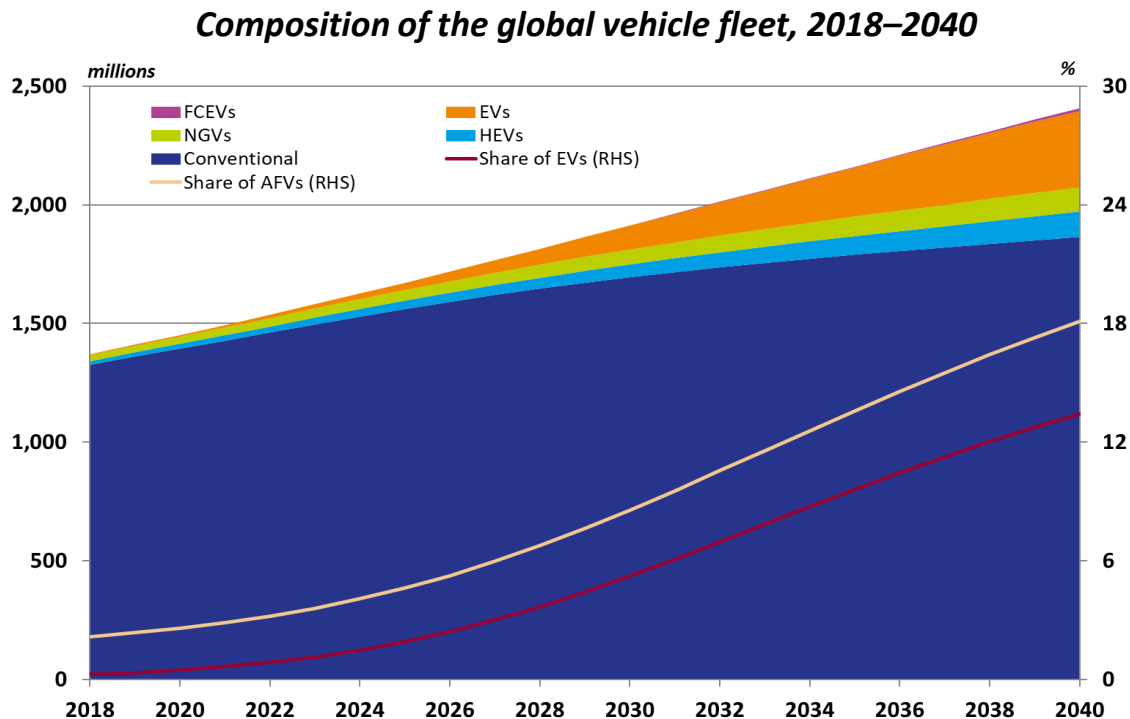
- **Non-OECD** drives oil demand growth (+21.4 mb/d by 2040)
- Demand in the **OECD** is estimated to contract (-9.6 mb/d by 2040)
- Largest demand increase comes from **petrochemicals** (+4.1 mb/d)
- The largest portion of oil demand will continue to be for **transportation** (63.2 mb/d by 2040)



Vehicle fleet will continue shifting towards AFVs



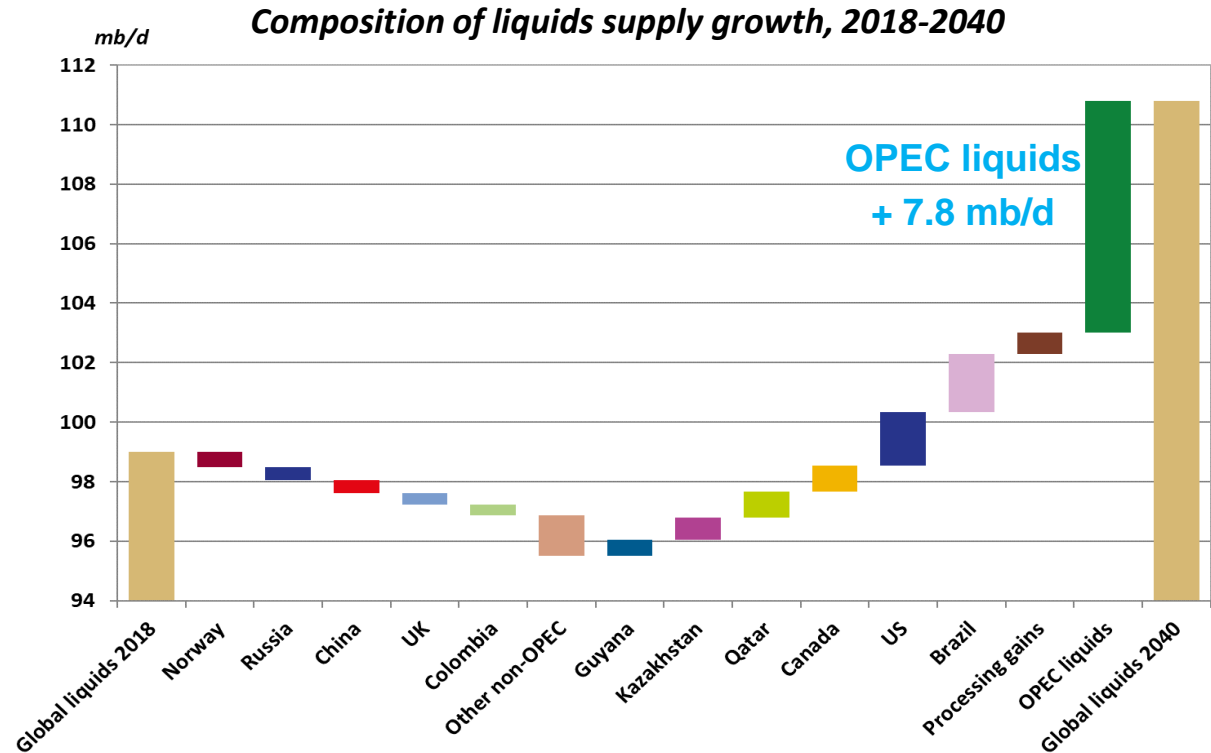
- Conventional **ICEs** will continue to dominate road transportation through to 2040
- Increasing penetration of alternatively-fuelled vehicles (AFVs) will **accelerate after 2030**
- Electric vehicles (EVs)** constitute only 13% of the total fleet in 2040.



OPEC Members remain key providers of oil to market



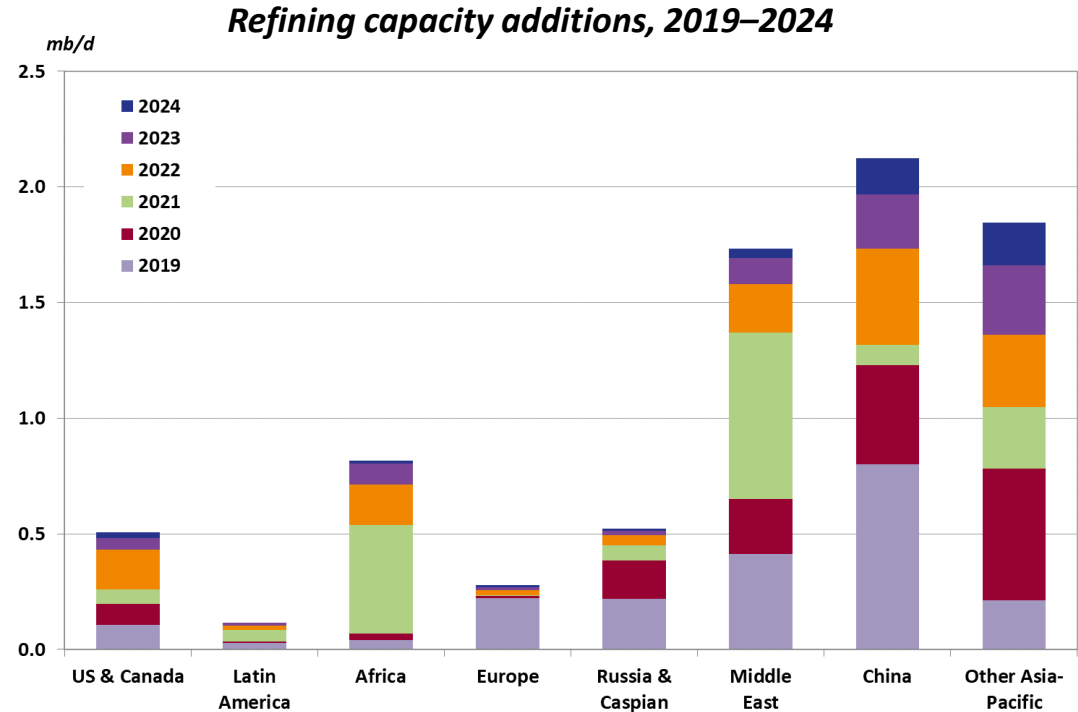
- Robust medium-term non-OPEC supply growth dominated by **US tight oil**
- US total liquids supply **peaks** in mid-2020s
- Long-term, only a few other non-OPEC sources keep growing
- **OPEC total liquids to increase by 7.8 mb/d to 44.4 mb/d by 2040**



Long-term distillation capacity additions projected at around 16.5 mb/d



- **8 mb/d** of new refining capacity projected online **by 2024**
- **70%** of the medium-term expansions in the **Asia-Pacific** and the **Middle East**
- **US & Canada** to increase crude and condensate exports in the medium-term
- **Middle East crude** exports to increase by around 7 mb/d in the long-term



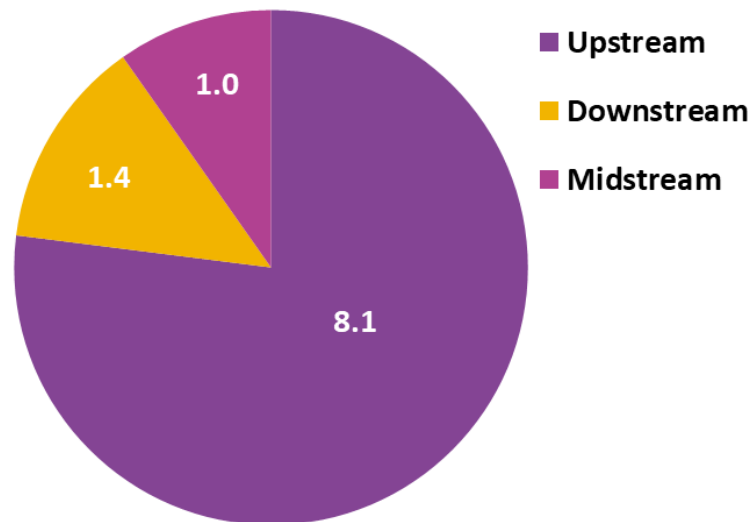
Long-term oil investment requirements of \$10.6 tn



- **Global upstream capex investment requirements** to average **\$370 bn p.a.**
- The bulk will be required in North America due to:
 - high share of growth
 - relatively high cost
- **OPEC Member Countries remain fully committed** to investments across the whole industry value chain

Oil investment requirements to 2040, by sector

\$(2019) trillion

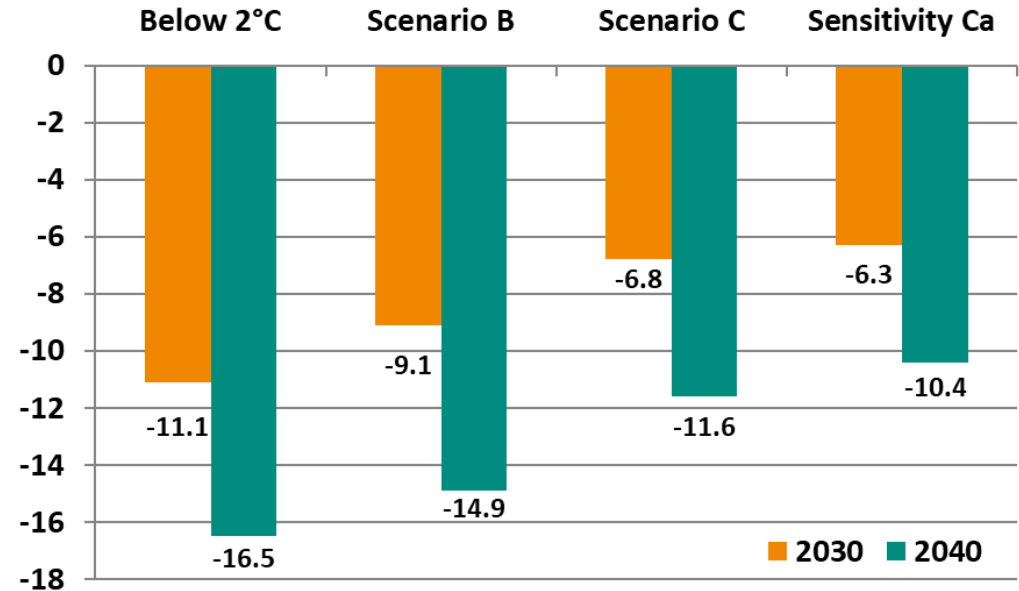


Diversification and adverse effects of climate change measures on energy-exporting developing countries



- OPEC is **fully supportive** of the Paris Agreement
- Energy-exporting developing countries likely to be **disproportionately affected** by the impacts of climate response measures
- **Economic diversification** options within and outside the energy sector indicate that generated benefits would not compensate for the adverse impacts

Percentage change in OPEC economies' GDP compared to the Reference Case

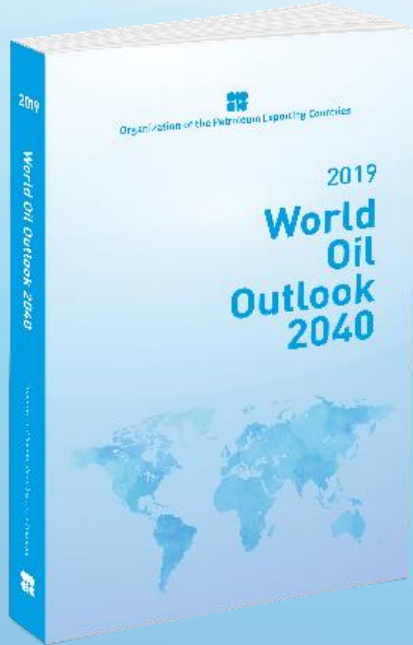


Available as:
Book
Interactive version
Smart app



Available for iOS and Android





Thank you.