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How does the energy outlook evolve up to 2040?
How does the oil market outlook evolve up to 2040?
How could future energy policy changes affect the energy outlook?
How does the energy outlook evolve up to 2040?

How does the oil market outlook evolve up to 2040?

How could future energy policy changes affect the energy outlook?
Energy demand will increase by 40%

- Energy demand to reach 382 mboe/d by 2040. The bulk of the increase to come from Developing countries
- Energy demand in OECD regions expected to peak around 2030
Shift from fossil fuels to renewables continues

- Fossil fuels continue to dominate the global energy mix
- Fastest growth for other renewables, albeit from low base
- Oil remains the most important fuel until the late 2030s
Shift from fossil fuels to renewables continues

- Fossil fuels continue to dominate the global energy mix
- Fastest growth for other renewables, albeit from low base
- Oil remains the most important fuel until the late 2030s
- Majority of energy demand growth comes from gas, followed by oil and other renewables
- Oil and gas to satisfy 53% of world’s energy needs by 2040
• How does the energy outlook evolve up to 2040?
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Oil demand reaches 109.4 mb/d by 2040

- Oil demand increases by 16.4 mb/d to reach 109.4 mb/d in 2040

[Bar graph showing world oil demand from 2015 to 2040]
Oil demand reaches 109.4 mb/d by 2040

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  - Growth is driven by DCs while demand in OECD drops

![Graph showing oil demand by region]
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- Growth **decelerates** in the long-term
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  - Growth is driven by DCs while demand in OECD drops
- Growth decelerates in the long-term
- One-third of total growth comes from the road transportation sector
- Strong growth is also foreseen in petrochemicals and aviation
Car fleet: increasing (mainly in DCs) and changing

- The number of passenger cars is expected to **double** up to 2.1 billion by 2040
Car fleet: increasing (mainly in DCs) and changing

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Most of the increase comes from DCs (additional 916 million cars).

Non-conventionals (NGV, HEV, PHEV, BEV and FCV) will represent **22%** of the car fleet.

109 million HEVs, 125 million PHEVs and 141 million BEVs are expected.
Non-OPEC supply: recovers to then fall

- Slow road to **recovery** for non-OPEC supply in the medium-term
  - Growth coming mainly from Latin America and US & Canada
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- Thereafter, non-OPEC supply remains fairly flat, but declines post-2030
  - Tight crude is the main source of growth initially. Oil sands and biofuels take over in the longer term
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  - Tight crude is the main source of growth initially. Oil sands and biofuels take over afterwards
- OPEC crude rises to 41 mb/d in 2040, accounting for 37% of world liquids
Tight crude growth comes back...for some time

- North American tight crude increases to 6.3 mb/d in 2030 and then declines to 5.4 mb/d in 2040
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Some long-term tight crude supply is anticipated from Argentina and Russia. Globally, it reaches 6.7 mb/d in 2030 and then declines to 6 mb/d in 2040.
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- Some long-term tight crude supply is anticipated from Argentina and Russia
  - Globally, it reaches 6.7 mb/d in 2030 and then declines to 6 mb/d in 2040
- Total tight oil reaches a high of 10 mb/d in 2029. It plateaus and then declines below 9 mb/d by 2040
How does the energy outlook evolve up to 2040?

How does the oil market outlook evolve up to 2040?

How could future energy policy changes affect the energy outlook?
Broad-based nature of INDCs adds uncertainty

- Two alternative scenarios were developed
  - Scenario A: faster tightening of emission reduction policies compared to the RC
  - Scenario B: timely implementation of conditional and unconditional INDCs supported by faster technology development
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Global energy demand declines
Demand for fossil fuels is reduced with coal being the most affected fuel
Increase in renewables and nuclear
Broad-based nature of INDCs adds uncertainty

- Two alternative scenarios were developed
  - Scenario A: faster tightening of emission reduction policies compared to the RC
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- Global energy demand declines
- Demand for fossil fuels is reduced with coal being the most affected fuel
- Increase in renewables and nuclear
- Total energy-related CO₂ emissions could be 14% lower compared to the RC

% change in total CO₂ emissions relative to the RC
Takeaways from the WOO 2016

- Energy demand increases by 40%, reaching 382 mboe/d by 2040.
- Energy mix to continue its shift from fossil fuels to renewables.
- Oil demand reaches 109.4 mb/d in 2040 but growth decelerates over the long-term.
- Non-OPEC supply recovers in the medium-term and then remains fairly flat before declining.
- Demand for OPEC crude rises to 41 mb/d in 2040.
- Changes in energy policies could reduce energy demand and further shift the energy mix towards renewables.
Thank you.

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