OPEC Oil Market Outlook

Prepared by OPEC Secretariat
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Outline

• **Short-term Market Outlook**
  – Review of the oil market 2014-2016
  – Declaration of Cooperation
  – Projection for the oil market in 2018
  – Supply/demand balance in 2018
  – Concluding remarks

• **Medium to Long-term Market Outlook**
  – Key assumptions
  – Energy outlook
  – Oil outlook
  – Key takeaways
World oil supply growth outpaced oil demand growth during 2014-2016, y-o-y change, mb/d

From 2014 to 2016, world supply grew by 5.5 mb/d, while world oil demand increased by 4.1 mb/d.

Source: OPEC Secretariat.
Rise in OECD commercial inventories, mb

OECD commercial inventories at the end of the year

Difference to 5-year average

Source: OPEC Secretariat.
OPEC landmark decisions in 2016

Algiers Accord

- 170th (Extraordinary) Meeting of the Conference – 28 September 2016; Algiers

Vienna Decision

- 171st Meeting of the Conference – 30 November 2016; Vienna
  - Adjustment of 1.2 mb/d from OPEC-11 countries

Joint Declaration of Cooperation

- OPEC and non-OPEC Ministerial Meeting – 10 December 2016; Vienna
  - Adjustment of 0.6 mb/d from 11 non-OPEC participating countries
Drop in OECD commercial oil stock since Declaration of Cooperation by component and region

**Percentage conformity**

Yearly average 107%

**By component**

Jan 17: 339
Dec 17: 109
-231 mb

**By region**

Jan 17: 339
Dec 17: 109
-231 mb

Sources: Euroilstock, IEA, METI, OPEC Secretariat and US EIA.
Crude oil prices improved
Driven by a sizeable stocks draw as well as signs of bullish market sentiment

Sources:
- CFTC
- CME Group
- Intercontinental Exchange
- OPEC Secretariat.
Performance of the world economy
GDP change from the previous year, %

GDP growth in selected countries

<table>
<thead>
<tr>
<th>Country</th>
<th>2017</th>
<th>2018*</th>
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Note: * 2018 = Forecast.
Sources: OPEC Secretariat, IMF, Markit and Haver Analytics.
Oil demand growth remains healthy in 2017-2018, while non-OPEC supply recovers during the same period.

**World oil demand growth**

Y-o-y change, mb/d

- 2014: 1.0
- 2015: 1.40
- 2016: 0.86
- 2017: 1.60
- 2018*: 1.59

**Non-OPEC supply growth**

Y-o-y change, mb/d

- 2013: 1.00
- 2014: 1.40
- 2015: 0.86
- 2016: -0.86
- 2017: 0.00
- 2018*: 1.00

Note: * 2018 = Forecast.

Source: OPEC Secretariat.
Medium- and Long-term outlook

- **Short-term market outlook**
  - Review of the oil market 2014-2016
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- **Medium- and Long-term Market Outlook**
  - Key assumptions
  - Energy outlook
  - Oil outlook
  - Key takeaways
The world is experiencing an era of demographic change

- Global population to increase by 1.8 billion, reaching almost 9.2 billion in 2040
- India to become the most populated country in the early 2020s and population in China peaks in 2028
- Population growth in OECD supported by migration
- Population growth will decelerate
Economic growth in the long-term

- Long-term global GDP growth estimated at an average rate of 3.5% p.a.
- Long-term economic growth will be driven by Developing Countries, with growth in the OECD constrained by weaker demographics
- The size of the global economy in 2040 is estimated to be 126% that of 2016
- The Reference Case assumes an evolutionary development of technology and energy policy in the long-term

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Global primary energy demand will increase by 35%

- Energy demand increases by 96 mboed and oil remains dominant
- Gas contributes most to future demand growth and coal peaks
- Renewables record the fastest growth rate (6.8%)
Energy demand will be driven by non-OECD countries

- Energy demand increases by 96 mboed and oil remains dominant
- Gas contributes most to future demand growth and coal peaks
- Renewables record the fastest growth rate (6.8%)
- Growth is concentrated in non-OECD countries
- India & China are the two largest contributors to demand growth

Growth in primary energy demand by region & Fuel, 2015–2040

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Oil demand in the long-term

- In long term, global oil demand will increase by 15.8 mb/d, reaching 111.1 mb/d by 2040.
- The transportation sector will remain the main consumer of oil.
- Strong growth is also foreseen in the petrochemicals sector.
- Demand growth decelerates over the long-term.
Liquids supply in the long-term

- Non-OPEC liquids supply peaks at close to 64 mb/d in 2025-2030
- In the long-term, non-OPEC liquids modestly decline to 60.4 mb/d by 2040
- US tight oil is the most important contributor to non-OPEC supply, but peaks after 2025
- Demand for OPEC crude rises steadily after 2025 to reach 41.4 mb/d by 2040
The majority of new refining capacity expansion located in Developing countries

- Total capacity additions until 2040 estimated at 19.6 mb/d
- The majority of new refining capacity expansion located in Developing countries, driven by rising oil demand
- Expansion led by Asia-Pacific and the Middle East accounting for almost 70% of the total
Key takeaways

- During 2014 – 2016 global oil supply outpaced world oil demand growth, leading to excess supply in the market and a strong deterioration in oil prices.
- The Declaration of Cooperation was a necessary response to the growing market imbalance.
- Assuming OPEC and non-OPEC continue at full conformity in the coming months, the market rebalancing is expected by the end of the year.
- In the long-term, energy demand increases by 35% between 2015 and 2040
- Global oil demand will increase by 15.8 mb/d, reaching 111.1 mb/d by 2040
- US tight oil is the most important contributor to non-OPEC supply, but peaks after 2025, raising the need for more OPEC crude
- Refining capacity expansion takes place predominantly in developing countries, led by Asia-Pacific and the Middle East
Thank you

A comprehensive interactive version of the WOO is available at www.opec.org
Market balance expected by the end of 2018

OPEC-12 and non-OPEC participants produce at full conformity

Note: * 1Q18-4Q18 = Forecast.

Source: OPEC Secretariat.
Oil demand in the Economic Growth sensitivities

- Two alternative sensitivities:
  Higher GDP growth (HG) and Lower GDP growth (LG)

- Demand in 2040:
  - Reference Case: 111.1 mb/d
  - HG: 113.8 mb/d
  - LG: 107.5 mb/d

- Overall uncertainty from GDP growth is in the range of 6 mb/d in 2040
Oil demand in the penetration of EVs Sensitivity Case

- Sensitivity Case: Penetration of EVs is higher than in the reference case.
- Annual EV sales reach 80 million by 2040.
- Oil demand in 2040 is reduced by 2.5 mb/d compared to the Reference Case, to total 108.6 mb/d.
- Global oil demand plateaus around this level in the second half of the 2030s.
Oil demand in the efficiency improvements Sensitivity Case

- **Accelerated Efficiency (AE) Case** assumes more aggressive efficiency improvements
- **Overall demand reduction** in the AE case is 3.2 mb/d by 2040, reaching 107.9 mb/d
- Two-thirds of the demand reduction takes place in DCs
Liquids supply in the Upside/Downside Sensitivities

- Based on the **Upside Sensitivity**, demand for OPEC crude would be curbed in the medium-term; reaching 36.8 mb/d by 2040

- By contrast, in a **Downside Sensitivity** Case, demand for OPEC crude stays relatively flat at 33 mb/d until mid-2020s; then rises to 45 mb/d by 2040
# Deep cut in global E&P spending, 2014 - 2016

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<thead>
<tr>
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<th>Spending (US$ bn)</th>
<th>Change (2016/14)</th>
<th>ICE Brent</th>
<th>Yearly average (US$/b)</th>
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Source: Barclays, IHS, WM, Rystad, OPEC Secretariat.