

COMPARATIVE ANALYSIS OF MONTHLY REPORTS ON THE OIL MARKET

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SUMMARY FINDINGS FROM A COMPARISON OF DATA AND FORECAST ON THE OIL MARKET BY THE INTERNATIONAL ENERGY AGENCY (IEA) AND ORGANIZATION OF THE PETROLEUM EXPORTING COUNTRIES (OPEC).

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1. NOTE BY THE SECRETARY GENERAL

This summary report by the International Energy Forum (IEF) builds on the outcomes and insights gained from the comparative analysis of short-term reports on the oil market released by the International Energy Agency (IEA) and the Organization of the Petroleum Exporting Countries (OPEC) on a monthly basis.

The IEF conducts a comprehensive comparative analysis of IEA and OPEC short-, medium-, and long-term energy outlooks to inform the IEA-IEF-OPEC Symposium on Energy Outlooks, annually hosted by the IEF in Riyadh as part of the trilateral work programme.

This monthly summary highlights key findings gained from the comparison of IEA and OPEC historical data and short-term forecasts provided in the IEA Oil Market Report, and the OPEC Monthly Oil Market Report, enhancing market transparency by informing IEF stakeholders on how perspectives on the oil market of both organisations evolve over time.

Moreover, this month's comparative analysis is conducted in the context of key international developments on which I observe the following impacts on energy markets:

Middle East

- Ongoing geopolitical issues in the Middle East create the potential for a rebound in oil market volatility.

Asia

- The prospect of a trade war between China and the U.S. may adversely affect oil demand growth but enhance opportunities for Middle East petrochemical exports.

North America

- Pipeline politics across North America may hamper investment in the infrastructure required to effectively move resource wealth to markets.

Europe

- Russia remains committed to its agreement with OPEC, and also continues to supply increasingly import-dependent markets in Europe, despite tensions.

I trust this month's analysis helps to sharpen focus on evolving short term market perspectives.



Dr Sun Xiansheng
Secretary General
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2. KEY POINTS

2.1 DEMAND

- World oil demand growth is beyond recovery, rising fast at 1.5 mb/d on average per year since 2015; a trend that IEA and OPEC project to last at least to the end of 2018. OPEC expects 2018 oil demand to grow at about 1.63 mb/d, slightly up from March's estimate, with total global demand amounting to 98.70 mb/d. IEA's demand growth outlook projects an increase of around 1.5 mb/d to reach 99.3 mb/d total world oil demand in 2018, unchanged from the last month's report.
- OPEC's OECD oil demand growth was revised marginally higher compared to OPEC's March data, now showing growth of 0.36 mb/d for 2018 while projections for the non-OECD region grew by 0.01 mb/d to 1.27mb/d. IEA's demand growth assessment for OECD countries sees a similar marginal increase to 0.28 mb/d but adjusts non-OECD demand growth down 0.04 mb/d to 1.19 mb/d from last month's estimate of 1.23 mb/d.

2.2 SUPPLY

- Compared to last month's projections, OPEC and IEA again revised up non-OPEC supply forecasts for 2018 to average 59.61 and 59.93 mb/d respectively, representing year-on-year growth of 1.71 and 1.79 mb/d, narrowing differences in strong growth estimates that have seen four consecutive monthly upward revisions since the start of the year.
- IEA data for OPEC crude oil production in March 2018 shows a decline in month-on-month output by 0.2 mb/d to average 31.83 mb/d while, according to OPEC secondary sources, OPEC-14 crude oil supply also decreased by 0.2 mb/d over the previous month to average 31.96 mb/d.

2.3 STOCKS

- OPEC and IEA data shows strong convergence in OECD total commercial stock estimates at 2854 mb and 2841 mb for February 2018, indicating a sharp decline against the latest five-year average. The sustained draw down of global oil inventories exerts upward pressure on oil price formation and increases oil market volatility. However, stocks remain above levels seen before the market down-cycle.
- Though both IEA and OPEC can report closely aligned data on OECD stocks based on a continuous and reliable data stream, comprehensive data on stocks for non-OECD countries remains problematic, despite collective efforts led by initiatives such as JODI.
- Total US crude inventories in April stand at about 428 mb which is down by 0.74 mb since March and close to 105 mb since last year according to the US Energy Information Administration (EIA). Although total OECD stocks are still above the OECD five-year average, US stocks are now below the US five-year moving average by about 15 mb.

3. GLOBAL ANALYSIS

The latest data indicates oil market balances tightening further as OECD total commercial stocks declined to their lowest level since April 2015 and just 30 mb and 43 mb above their five-year average basis, according to preliminary February data reported by IEA and OPEC respectively. Global demand continues to show sustained and robust growth underpinned by solid economic expansion which is estimated to be maintained at 3.8% and 3.9% in 2018 according to OPEC and IEA March reports. While economic growth parameters are steadily trending upwards, lead and sentiment indicators point to some moderation of the growth dynamic. Disruptive global trade tensions, rising volatility in asset markets and a step up in efforts to escape the era of quantitative easing may mute near-term economic and associated oil demand growth potential.

3.1 DEMAND DATA

The IEA expects global oil demand to rise by 1.47 mb/d to 99.3 mb/d in 2018, unchanged from the March report. OPEC's global demand outlook takes a more bullish stance, projecting world demand growth at 1.63 mb/d, also unchanged from previous month's data, leading to a projected total global consumption of around 98.7 mb/d. OPEC-IEA divergence in 2018 overall demand growth now stands at 0.16 mb/d, slightly up from 0.11 mb/d in March 2018.

The IEA continues to see robust OECD oil demand growth at 0.28 mb/d, similar to last month's figure of 0.26, anticipating total OECD consumption of 47.69 mb/d in 2018. OPEC marginally revised up its growth projection for the OECD region to 0.36 mb/d from 0.33 mb/d with total OECD demand now standing at 47.76 mb/d, with a difference of 0.07 mb/d between both organisations. IEA reports a slight upward revision in OECD Americas demand growth from 0.17 mb/d in last month's report to 0.26 mb/d, while OPEC's estimate changed from 0.23 mb/d to 0.26 mb/d.

Both, IEA and OPEC anticipate strong growth in non-OECD demand for this year at 1.19 mb/d and 1.27 mb/d respectively, with total demand forecasts averaging 51.60 mb/d and 50.94 mb/d. OPEC's growth projection remains largely unchanged from its March forecast with a revised growth estimate up by 0.01 mb/d to 1.27 mb/d. Similarly, the IEA revised its figure down by 0.04 mb/d to 1.19 mb/d. IEA and OPEC assessments for 2018 OECD and non-OECD demand differ by 0.07 mb/d and 0.66 mb/d in absolute values.

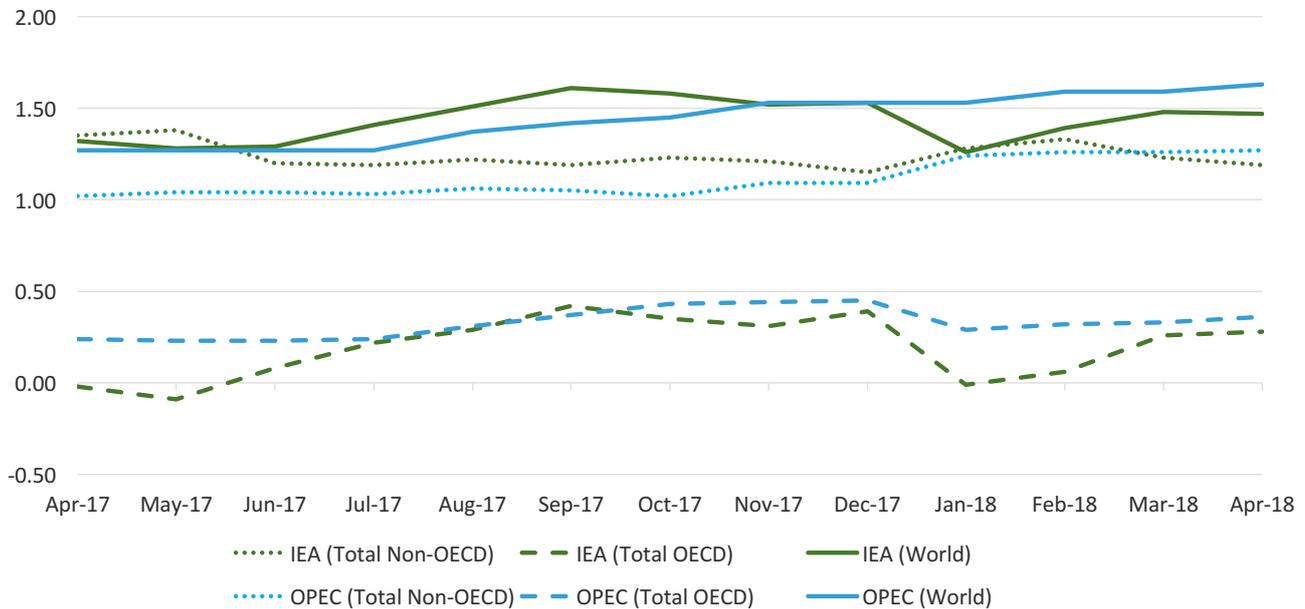
Both reports anticipate most of 2018 total global oil demand growth to originate from non-OECD Asia, led by China and followed by India. OPEC's regional demand growth adjustments in 2018 reflect a solid pace of growth for China reported at 0.42 mb/d year over year, modestly below the IEA's assessment of 0.45 mb/d year over year, with total Chinese consumption expected to reach around 12.7 mb/d and 12.9 mb/d in 2018, respectively. The IEA maintains that overall demand growth in India will accelerate to 0.31 mb/d in 2018 to achieve 5 mb/d. Meanwhile, OPEC reported growth in 2018 by 0.20 mb/d for a total consumption of 4.66 mb/d in India. Projections for non-OECD Asia, as a whole, continue to show growth at 0.81 mb/d according to OPEC and 0.88 mb/d according to IEA April data. In other Non-OECD countries, it is notable that for instance in Egypt and Pakistan, the switch to natural gas has accelerated and is displacing oil even faster than initially expected, according to the IEA.

See the followign graph for the monthly revisions of IEA and OPEC annual estimates for 2017 and new estimates for 2018 demand, and the tables for annual estimates for total demand.

OPEC and IEA demonstrate equally strong demand growth figures

Both IEA and OPEC shows little deviation from last month's data

Monthly Revisions of Annual Estimates for Oil Demand Growth 2017/16 and 2018/17 from April 2018



IEF comparative analysis of IEA and OPEC Monthly Reports on the Oil Market April 2018

*monthly estimates rounded to the nearest barrel.

IEA Report Total Demand (mb/d)

	2017	2018	Difference
OECD	47.41	47.69	0.28
Non-OECD	50.41	51.60	1.19
TOTAL	97.82	99.29	1.47

OPEC Report Total Demand (mb/d)

	2017	2018	Difference
OECD	47.40	47.76	0.36
Non-OECD	49.67	50.94	1.27
TOTAL	97.07	98.70	1.63

Data obtained from IEA Oil Market Report, April 2018; OPEC Monthly Oil Market Report, April 2018

*Totals in table may not exactly reflect content due to independent rounding.

3.2 SUPPLY DATA

Based on IEA projections, global oil supply data for March 2018 shows a decrease by 0.12 mb/d month-on-month to average 97.8 mb/d but indicates 1.4 mb/d year-on-year growth. According to preliminary OPEC data, world oil supply grew by 0.18 mb/d month-on-month to reach 98.15 mb/d, representing an increase of 2.15 mb/d year-on-year.

OPEC's April assessment of total non-OPEC supply for 2018 sees an upward revision of 0.08 mb/d to reach 59.61 mb/d, indicating robust year-on-year growth of 1.71 mb/d, driven by the US (1.5 mb/d), Canada (0.29 mb/d) and Brazil (0.21 mb/d). Growing output from these countries is offset by declining production from Russia (0.15 mb/d), Mexico (0.11 mb/d) and China (0.11 mb/d). Similarly, IEA reports a marginal growth revision in 2018 March non-OPEC supply by 0.01 mb/d to average 59.93 mb/d for 2018, suggesting a yearly increase of nearly 1.8 mb/d.

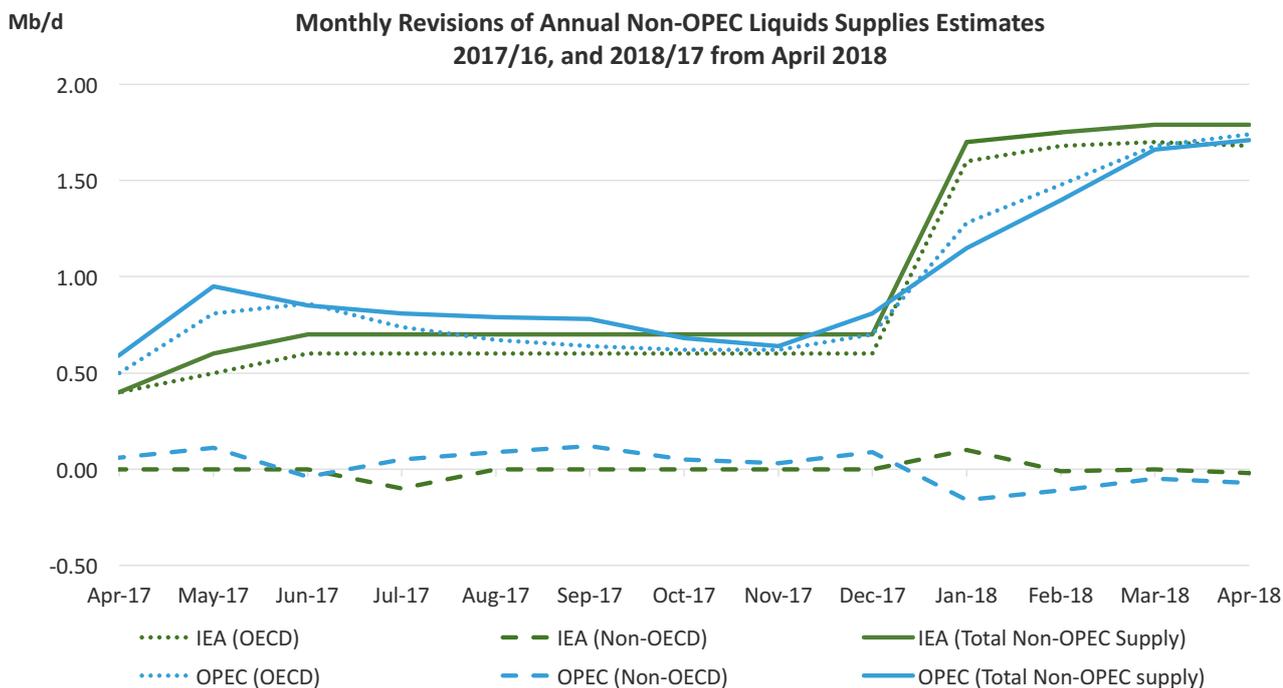
Both OPEC and IEA project solid OECD supply growth in 2018 at 1.74 mb/d and 1.68 mb/d respectively, with total supply standing at 27.35 and 25.81 mb/d according to April estimates. IEA data shows a slight downward revision of OECD Americas liquids supply growth to 1.61 mb/d at 21.87 mb/d total supply, while in a reversal of roles, OPEC reports stronger growth close to 1.69 mb/d and robust total liquids supply at 23.12 mb/d for 2018. Growth within the region is led by the US, for which OPEC revised its liquid supply forecast of 1.5 mb/d up to 15.83 mb/d, while IEA projects similar growth of 1.52 mb/d to amount to 14.71 mb/d total supply. Based on OPEC's April forecast, production of US tight crude in 2018 is now expected to increase by 1.07 mb/d year-on-year to average 5.76 mb/d with an estimated 94 % of US liquids supply growth to come from tight and shale formations.

Total OPEC-14 crude oil production averaged 31.96 mb/d in March 2018 which marked a decrease of 0.20 mb/d over the previous month, according to OPEC secondary data. OPEC sees decreasing output from Angola, Venezuela, Algeria and Saudi Arabia partially offset by higher production in the UAE, Nigeria and Qatar. Similarly, IEA estimates OPEC crude production down by nearly 0.20 mb/d in March 2018 to 31.83 mb/d, led by declines in Venezuela and lower output from African countries.

See the following graph for the monthly revisions of IEA and OPEC annual estimates for 2017 and new estimates for 2018 supply, and the tables for annual estimates for total supply.

IEA reports non-OPEC supply growth unchanged from March 2018

Both IEA and OPEC continue to show strong convergence in supply data



IEF comparative analysis of IEA and OPEC Monthly Reports on the Oil Market April 2018

*monthly estimates rounded to the nearest barrel.

IEA Report Total Supply (mb/d)

	2017	2018	Difference
Non-OPEC	58.14	59.93	1.79
Non-OECD	29.32	29.30	-0.02
OECD	24.13	25.81	1.68

OPEC Report Total Supply (mb/d)

	2017	2018	Difference
Non-OPEC	57.90	59.61	1.71
Non-OECD	30.09	30.02	-0.07
OECD	25.60	27.35	1.75

Data obtained from IEA Oil Market Report, April 2018; OPEC Monthly Oil Market Report, April 2018

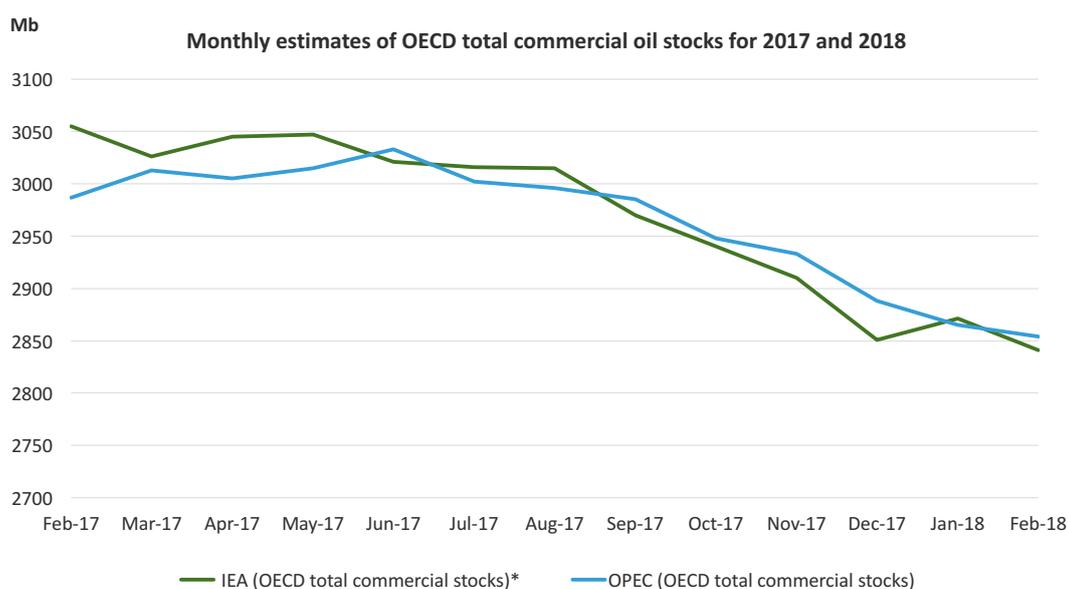
*Totals in table may not exactly reflect content due to independent rounding.

3.3 STOCK DATA

OECD commercial stocks fell by 25.6 mb month-on-month to 2841 mb in February 2018 based on IEA's April estimate. Preliminary OPEC data for February shows a more moderate decline at 17.4 mb to reach 2854 mb total OECD stocks. Inventories declined sharply against the latest five-year average trending at just 30 mb (IEA) and 43 mb (OPEC) above. While both organisations report closely aligned data on OECD stocks due to continuous data harmonisation efforts, comprehensive data on stock developments for non-OECD countries is lacking.

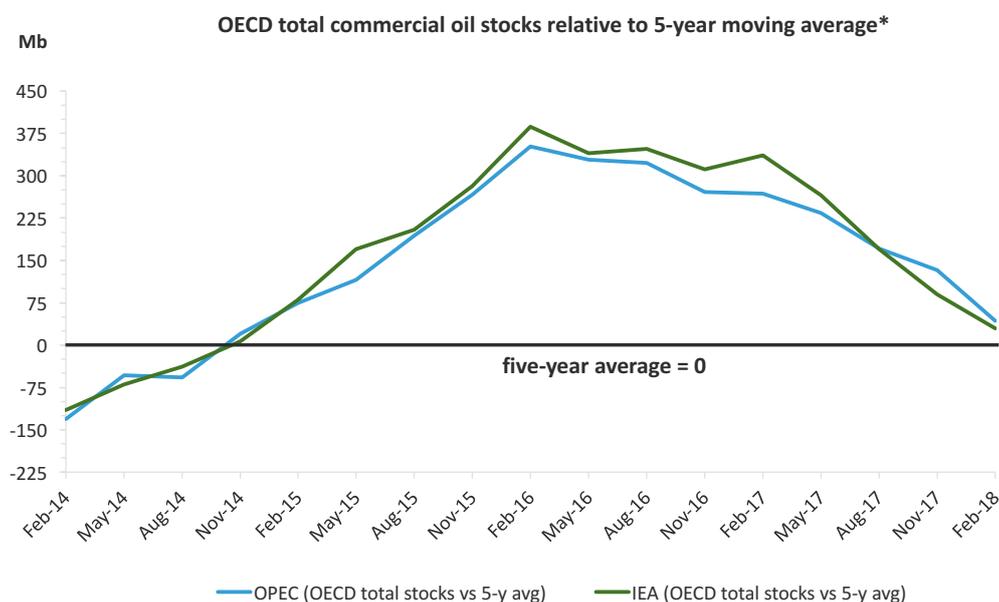
See the following graphs for monthly estimates of OECD total commercial oil stocks for 2017 and 2018 and OECD total commercial oil stocks relative to 5-year moving average.

IEA and OPEC data shows convergence on OECD stock draws Comprehensive non-OECD stock data remains missing



IEF comparative analysis of IEA and OPEC Monthly Reports on the Oil Market April 2018
*monthly estimates rounded to the nearest barrel.

IEA and OPEC report closely aligned OECD stock balances Surplus stocks data came down to 30 and 43 mb respectively in February



IEF comparative analysis of IEA and OPEC Monthly Reports on the Oil Market April 2018