Comparative Analysis of Monthly Reports on the Oil Market

Summary Findings from a Comparison of Data and Forecasts on the Oil Market

by IEA and OPEC
1. NOTE BY THE SECRETARY GENERAL

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

To inform IEF stakeholders on how perspectives on the oil market of both organisations evolve over time more regularly, this monthly summary provides:

- Key findings and a snapshot overview of data points gained from comparing basic historical data and short-term forecasts of the IEA Oil Market Report and the OPEC Monthly Oil Market Report.

- A comparative analysis of oil inventory data reported by JODI, the IEA, OPEC and secondary sources in collaboration with the Rapidan Energy Group.

Moreover, international developments this month that will have an impact on oil market balances are as follows:

**Oil Demand Recovery**

- According to the IEA, although 2020 will see a historic demand decline of 8.11 mb/d in 2020, it will be followed with a forecasted recovery of 5.7 mb/d in 2021. With an anticipated supply growth of 1.7 mb/d in 2021, production could ramp up quicker than expected to meet additional demand.

**11th OPEC and non-OPEC Ministerial Meeting and Voluntary Production Adjustments**

- In addition to reaffirming the production adjustments undertaken as part of the April agreement, participating countries from OPEC and non-OPEC agreed to extend the 9.7 mb/d production adjustment by one month. This means that OPEC and its non-OPEC countries will adjust production by 9.7 mb/d in July rather than the scheduled 7.7 mb/d. Voluntary production adjustments by Saudi Arabia, UAE and Kuwait that took effect in June will end next month.

**Reversal of Non-OPEC Production Shut-ins**

- The re-opening of economies and the associated increase in economic activity and oil prices is encouraging some producers to gradually reverse production shut-ins implemented in April and May.

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

Dr Sun Xiansheng
Secretary General
International Energy Forum
2. KEY POINTS

2.1 DEMAND

- The IEA reports a smaller decline while OPEC remains steady.
  - The IEA's world demand assessments increased by 520 kb/d to reach an overall demand decline of\textbf{-8.11 mb/d} – marginally less than last month's supply decline of -8.63 mb/d.
  - OPEC’s demand forecast remains the same as last month at \textbf{-9.07 mb/d}. The IEA and OPEC estimates for absolute world demand are now \textbf{91.72 mb/d} and \textbf{90.59 mb/d}, respectively.

- The IEA reports less OECD demand decline than OPEC while there is consensus on non-OECD decline.
  - The IEA's OECD demand assessment increased by 310 mb/d for a total demand decline of \textbf{-4.21 mb/d}, while OPEC’s decline remains the same as last month at \textbf{-5.19 mb/d}.
  - The IEA’s estimate for non-OECD demand increases by 210 kb/d to reach a total decline of \textbf{-3.90 mb/d} for 2020. OPEC’s estimate remains the same at \textbf{-3.88 mb/d}.
  - The IEA and OPEC differ by \textbf{0.47 kb/d} and \textbf{0.67 kb/d} on absolute non-OECD and OECD demand, respectively.

2.2 SUPPLY

- Both the IEA and OPEC overall supply projections move up slightly in June.
  - The IEA's June assessment for non-OPEC supply is up by 180 kb/d to reach a total decline of \textbf{-3.09 mb/d} while OPEC’s assessment has also increased by 300 kb/d for a total decline of \textbf{-3.23 mb/d}. In absolute values, the IEA and OPEC estimate non-OPEC supply at \textbf{62.46 mb/d} and \textbf{61.80 mb/d} respectively for 2020.
  - The IEA reports OECD supply decline at \textbf{-1.01 mb/d}, up by 250 kb/d. OPEC records OECD decline at \textbf{-1.57 mb/d}, an increase of 50 kb/d from last month. In absolute values, the IEA and OPEC estimate OECD supply estimates at \textbf{27.56 mb/d} and \textbf{28.40 mb/d}, respectively.

- The IEA reports slightly greater non-OECD supply decline in June.
  - The IEA's supply assessment decreased by 100 kb/d for a total decline of \textbf{-1.62 mb/d} while OPEC revised its assessment up by 240 kb/d to reach \textbf{-1.48 mb/d}.
  - In absolute values, the IEA and OPEC non-OECD supply estimates are \textbf{30.21 mb/d} and \textbf{31.31 mb/d} respectively for 2020.
2.3 STOCKS

- The IEA and OPEC continue to report strong alignment on stock figures. The IEA reports OECD stock levels at 3137 mb, which is close to OPEC’s assessment of 3069 mb for OECD stock that is 208.3 mb and 140.6 mb above the five-year average, respectively. The divergence between OPEC and the IEA stands at 68 mb for June. Total US crude inventories (excluding SPR) amount to about 541 mb according to the US Energy Information Administration (EIA). The EIA reports U.S. crude oil inventories are 16 percent above the five-year average for this time of year. OPEC reports US commercial crude stocks at 532 mb that are above the five-year average by about 54 mb.

2.4 SNAPSHOT (mb/d)

<table>
<thead>
<tr>
<th>Demand</th>
<th>OECD</th>
<th>Growth</th>
<th>Δ m/m</th>
<th>Non-OECD</th>
<th>Growth</th>
<th>Δ m/m</th>
<th>World</th>
<th>Growth</th>
<th>Δ m/m</th>
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<td>0.21</td>
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<td>0.47</td>
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<td>0.21</td>
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<th>Supply</th>
<th>OECD</th>
<th>Growth</th>
<th>Δ m/m</th>
<th>Non-OECD</th>
<th>Growth</th>
<th>Δ m/m</th>
<th>NOPEC</th>
<th>Growth</th>
<th>Δ m/m</th>
<th>OPEC</th>
<th>Growth</th>
<th>Δ m/m</th>
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<td>30.21</td>
<td>-1.62</td>
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<td>0.12</td>
<td>0.10</td>
<td>0.36</td>
<td>0.94</td>
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<table>
<thead>
<tr>
<th>Stocks (mb)</th>
<th>OECD</th>
<th>US</th>
<th>OECD to 5-Year Average</th>
<th>US to 5-Year Average</th>
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</thead>
<tbody>
<tr>
<td>IEA</td>
<td>3137</td>
<td>-</td>
<td>208.3 mb above</td>
<td>-</td>
</tr>
<tr>
<td>OPEC</td>
<td>3069</td>
<td>532</td>
<td>140.6 mb above</td>
<td>54 mb above</td>
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<tr>
<td>EIA</td>
<td>541</td>
<td>-</td>
<td>16 percent above</td>
<td>-</td>
</tr>
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*Totals in table may not exactly reflect content due to independent rounding.
3. GLOBAL ANALYSIS

3.1 DEMAND DATA

See the graph below for the monthly revisions of IEA and OPEC annual estimates for 2019 and new estimates for 2020 demand.

*monthly estimates rounded to the nearest barrel.

**IEA reports less demand decline in June while OPEC remains steady**

**IEA and OPEC converge on Non-OECD demand**

- **Absolute Demand**
  - The IEA’s estimate for global demand growth increased by 520 kb/d to **-8.11 mb/d** for an absolute demand of **91.72 mb/d** in 2020. Demand in 2020 will continue to depend on the extent and severity of the novel coronavirus that has significantly impacted the world economy and continues to erode global demand.
  - As the traditional driver of demand growth, non-OECD Asia demand has been revised up from **-2.17 mb/d** to **-1.81 mb/d** in June according to the IEA.
  - OPEC’s global demand outlook remains the same as last month for a total demand decline of **-9.07 mb/d** in 2020. Absolute demand is below the 100 mb/d mark at **90.59 mb/d**.
  - Global demand is expected to rebound by 5.7 mb/d to 97.42 mb/d in 2021.

- **OECD Demand**
  - The IEA sees OECD oil demand decline to **-4.21 mb/d**, up from last month’s figure of -4.52 mb/d with the Americas comprising most of the decrease at -2.28 mb/d. The IEA anticipates total OECD consumption for 2020 at **43.38 mb/d**.
OPEC’s demand projection for the OECD region remains the same as last month with a demand decline of \(-5.19 \text{ mb/d}\) with total OECD demand for 2020 at \(42.71 \text{ mb/d}\).

Non-OECD Demand

The IEA and OPEC anticipate demand declines in non-OECD demand for this year at \(-3.90 \text{ mb/d}\) and \(-3.88 \text{ mb/d}\) respectively driven largely by Asia, Middle East, and the Americas. Total non-OECD demand forecasts average \(48.35 \text{ mb/d}\) and \(47.88 \text{ mb/d}\), respectively.

China Demand

- Demand increased by 2.7 mb/d (27 percent) month-on-month in March and 1.1 mb/d (9 percent) in April, and down just 50 kb/d below the previous year in April according to the IEA. The demand increase is primarily driven by gasoline and diesel due to an increase in transport and a gradual revival of manufacturing. Chinese demand is expected to contract by 380 kb/d in 2020 and recover by 750 kb/d in 2021.
- According to OPEC, demand declined 1.4 mb/d y-o-y in April but less than in previous months. Vehicle sales rose by 4 percent showing growth for the first time since mid-2018. The lifting of movement restrictions will improve demand, but results will be gradual and may show positive increases towards the end of 2020. For 2020, demand is forecast to contract by 0.95 mb/d.

India Demand

- Indian oil demand rebounded in May by 1.1 mb/d after declining by 670 kb/d y-o-y in March and 2.1 mb/d in April, during the country’s lockdown as reported by the IEA. Diesel and gasoline demand increased while jet and kerosene levels remain below normal levels. Overall, Indian demand is expected to drop by 460 kb/d in 2020 with a recovery by 620 kb/d in 2021.
- According to OPEC, India’s oil demand fell by 2.3 mb/d y-o-y in April due to lockdown measures that have reduced consumption at historical levels primarily due to plummeting gasoline and diesel demand. Meanwhile LPG demand increased by 90 kb/d as lockdowns have increased demand for cooking in households.
3.2 SUPPLY DATA

See the graph below for the monthly revisions of IEA and OPEC annual estimates for 2019 and new estimates for 2020 supply.

*monthly estimates rounded to the nearest barrel.

IEA and OPEC report a slight uptick to overall supply in June
IEA is more optimistic than OPEC on OECD supply declines

![Graph showing monthly revisions of annual non-OPEC liquids supplies estimates](image)

- **Non-OPEC Supply**

  - The IEA forecasts non-OPEC supply at **62.46 mb/d** with a supply decline of **-3.09 mb/d** for 2020, 180 kb/d more than last month.
    - In May, production fell by nearly 12 million b/d versus April, through the combination of OPEC+ adjustments and extensive shut-ins by US producers.
    - Global supply will recover to 1.7 mb/d year-on-year (y-o-y) in 2021, assuming a gradual easing of OPEC+ production adjustments, continued growth in Norway, Brazil, and Guyana along with stability in Libya.
    - However, this increase will not be able to meet the 5.7 mb/d y-o-y growth in oil demand which could mean swift inventory draws and production ramping up faster to meet additional demand.
    - Non-OPEC supply decline has eased by 180 kb/d from -3.27 mb/d last month to **-3.09 mb/d** in June.

  - OPEC’s June assessment of total non-OPEC supply for 2020 stands at **61.80 mb/d**. Supply growth increases by 300 kb/d with a total decline of **-3.23 mb/d**. Most of the decrease comes from the US (-1.43 mb/d), Russia (-1.14 mb/d) due to its role in the OPEC+ agreement, and Canada (-0.42 mb/d). Norway, Brazil, and Guyana are forecast to be the key drivers of growth.
• OECD Supply

  o The IEA forecasts OECD supply decline at **-1.01 mb/d** for 2020 while OPEC reports a slightly larger decline at **-1.57 mb/d** with total supply reaching **27.56 mb/d** and **28.40 mb/d** respectively in 2020.

  o The IEA’s data also shows OECD Americas oil supply declines by -1.31 mb/d to reach 23.39 mb/d in total. OPEC reports a larger decline at -1.90 mb/d with total oil supply reaching 23.84 mb/d in 2020.

  o OPEC’s assessment for total OECD Europe production in 2020 is 3.99 mb/d with a growth of 0.28 mb/d after a decline from last year. The IEA’s assessment for OECD Europe supply records an increase by 0.26 mb/d for lower total production of 3.60 mb/d led primarily by Norway.

• OPEC Supply

  o The IEA reports that OPEC production decreased by -6.66 mb/d month-on-month (m-o-m) in May to reach total production of **24.09 mb/d** as the OPEC+ production adjustment went into effect.

  o OPEC reports that total OPEC-14 preliminary crude oil production averaged **24.19 mb/d** in May according to secondary sources. This is a decrease of -6.30 mb/d m-o-m as ten OPEC Member Countries have agreed to adjust down their production from May 2020. Crude oil output in May decreased almost in all Member Countries mainly in Saudi Arabia, the UAE, and Kuwait.

3.3 STOCK DATA

See the graphs below for monthly estimates of OECD total commercial oil stocks and the monthly comparison versus the five-year average.

*monthly estimates rounded to the nearest barrel.

  • IEA data shows OECD commercial inventories rose by 148.7 mb m-o-m in April to **3137 mb** and are 208.3 mb above the five-year average.

  • According to OPEC, preliminary data for April showed that total OECD commercial oil stocks rose by 107.7 mb m-o-m to **3069 mb** and are now 140.6 mb above the latest five-year average.

  • While both organisations report closely aligned data on OECD stocks due to a continuous and reliable data stream and data harmonisation efforts, comprehensive data on stock developments for non-OECD countries is still work in progress.
IEA and OPEC data show alignment on OECD stock builds
Comprehensive non-OECD stock data remains missing

IEA and OPEC begin to diverge on stock balances over time
IEA and OPEC stocks are climbing above the five-year average
3.3.1 GLOBAL STOCK ANALYSIS

IEA and JODI inventory data imply crude and product stocks surged by 61.5 mb in April and 123.8 mb in 1Q20

- IEA estimates OECD inventories soared by 148.7 mb (4.9 mb/d) in April to 208.3 mb above the latest 5-year average at 3,137 mb. Notably, IEA also revised up its estimate of March OECD stock levels by 27.1 mb. The agency has also estimated global crude inventories stood at 5.1 billion bbls at the end of May, which is ~76% of total capacity (IEA estimates max operational utilization is 75%-85% of capacity).

- OPEC estimates OECD inventories built by 107.7 mb in April to 3,069 mb and now stand 140.6 mb above the five-year average. OPEC estimates a smaller build in OECD Europe inventories in April compared to IEA (3.3 mb vs. 53.7 mb).

- JODI non-OECD* data for April imply crude stocks drew by 30.1 mb and product stocks drew by 3.7 mb. Crude draws in China (28.7 mb) and Saudi Arabia (12.7 mb) more than offset builds in Thailand (10.0 mb). The largest product draw occurred in China (5.0 mb).

- IEA’s OECD and JODI’s non-OECD* inventory data imply global crude and product stocks built by 61.5 mb in April. However, it is worth noting a striking divergence in China’s reported crude stock builds in JODI and IEA’s estimate of implied Chinese crude builds. JODI shows China crude stocks drew by 28.7 mb in April, while IEA’s crude balance implies a 10.8 mb build. For 1Q20, JODI Chinese data shows a 33.3 mb build and IEA shows a massive 172.8 mb build.

* Non-OECD data is the aggregate of country-level data through JODI. Not all non-OECD countries report inventory data and the countries in the aggregate may vary monthly depending on regularity of individual country reporting.

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<tr>
<th></th>
<th>Crude</th>
<th>Products</th>
<th>Total</th>
<th>Crude</th>
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<th>Total</th>
<th>Crude</th>
<th>Products</th>
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<td>-3.7</td>
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<td>52.6</td>
<td>15.9</td>
<td>68.5</td>
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<td>Total</td>
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<td>61.5</td>
<td>102.8</td>
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<td>123.8</td>
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<td>705.3</td>
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* Aggregate of all non-OECD data available through JODI. Not all non-OECD countries report inventory data and the countries in the aggregate may vary monthly depending on the regularity of individual country reporting.

Source: IEA, JODI, OPEC, Rapidan Energy Group.
COMPARATIVE ANALYSIS OF MONTHLY REPORTS ON THE OIL MARKET
RIYADH, SAUDI ARABIA
JUNE 2020

Monthly Change in OECD and Non-OECD* Crude + Product Inventories

Accumulative OECD and Non-OECD* Crude + Product Builds Since End-2014

* Aggregate of all non-OECD data available through JODI. Not all non-OECD countries report inventory data and the countries in the aggregate may vary monthly depending on the regularity of individual country reporting.

Source: IEA, JODI, Rapidan Energy Group