Oil markets -- a view from EIA

for

State of the Oil Markets Panel Discussion

Center for Strategic and International Studies

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by

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Global supply has consistently exceeded demand since the start of 2014; EIA forecasts a return to market balance in the second half of 2017.

Source: EIA, Short-Term Energy Outlook, February 2016
EIA expects WTI oil prices to remain low compared to recent history, but the market-implied confidence band is very wide

Source: EIA, Short-Term Energy Outlook, February 2016
Long lead times and past investment are contributing to growth from the Gulf of Mexico as Lower 48 production declines

U.S. crude oil production growth by area change from fourth quarter, 2014 (million barrels per day)

Source: EIA, Short-Term Energy Outlook, February 2016
Continued rise in drilling productivity has slowed decline in new-well production despite reduced drilling; declines in legacy production also beginning to slow

Bakken

Niobrara

Permian

Eagle Ford
Relationship among actual, no rig decline, and no drilling output trajectories vary across 3 key tight oil regions
Crude supply trends outside the United States (red areas below) are key to future oil market balance: geopolitical developments, exporter decisions, and the timing and magnitude of supply effects stemming from reduced investment all matter.

2016 oil production, million barrels per day -- EIA Feb STEO

- Shale regions, 4.74
- Other lower 48, 1.85
- AK, 0.48
- GOM, 1.63

REST OF WORLD = 72.22

2017 oil production, million barrels per day – EIA Feb STEO

- Shale regions, 4.46
- Other lower 48, 1.74
- AK, 0.47
- GOM, 1.79

REST OF WORLD = 72.84

Source: EIA, Short-Term Energy Outlook and Drilling Productivity Report, February 2016; International Energy Agency
EIA forecasts global liquids consumption growth at 1.3 million bbl/d in 2016 and 1.5 million bbl/d in 2017.

Source: EIA, Short-Term Energy Outlook, February 2016
Non-OECD economic growth projections, a key driver of oil demand, have been reduced over the course of recent STEO forecasts.

GDP growth in non-OECD countries
annual expectations by date of forecast

Source: EIA, Short-Term Energy Outlook
LONGER TERM PERSPECTIVE: Can OPEC cohere? – Change in world liquid fuel balances for two 12-year historical periods with EIA projections for 2013-25 from AEO2015 (million barrels per day)

<table>
<thead>
<tr>
<th></th>
<th>Actual</th>
<th>Projected AEO 2015 Reference &amp; HOGR Cases</th>
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<tbody>
<tr>
<td></td>
<td>1973–85</td>
<td>2000–12</td>
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<tr>
<td>World Liquids Demand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OECD</td>
<td>+3</td>
<td>+12</td>
</tr>
<tr>
<td>Non-OECD</td>
<td>+7</td>
<td>+15</td>
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<tr>
<td>World Liquids Supply</td>
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<td>+12</td>
</tr>
<tr>
<td>Non-OPEC Supply</td>
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<td>+6</td>
</tr>
<tr>
<td>OPEC Production</td>
<td>-14</td>
<td>+6</td>
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</tbody>
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Source: EIA, Annual Energy Outlook 2015, April 2015
Low oil prices put non-OPEC producers at financial risk as borrowing costs have increased.

Bloomberg Corporate Bond Index
Option adjusted spread (basis points)

Source: EIA, Bloomberg
Completions have mostly tracked drilling activity

Source: Baker Hughes & FracFocus.org

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