Shale and Conventional Oil – Impacts on Market Volatility and Security of Supply

Robert McNally
President, Rapidan Energy Group

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Is shale price stabilizing or destabilizing?

Is shale swing production?

Does shale provide additional spare capacity?
The Recent History: Shale Stabilized and Destabilized

US Crude Production and WTI Crude Prices

stabilizing

De- stabilizing

- WTI
- US Crude Production
Shale Oil Emerged and Surged In a Tight and Disrupted Market

Data: Rapidan Energy Group, EIA, BP, St. Louis Fed, US

VZ '02 '03, Iraq '03, Nigeria '03 ->, Libya '16 ->, Iran '12 -> and
OPEC Spare Capacity Projections Prior to 2014 Price Bust

![Graph showing OPEC spare capacity projections from 2003 to 2025. The graph indicates a forecast for the years 2014 and beyond.](image)

Swing Production, Spare Capacity, and Geopolitical Disruption

Oil Disruptions, Spare Capacity, and Crude Prices

- Threatened Oil Supply
- Disrupted Oil Supply
- Global Spare Capacity
- US Spare Capacity
- Crude Oil Price (RHS)

Seven Sisters’ Middle East concessions

TX and other US oil states

Suez Canal

Six Day War

After 1972, OPEC

Iran Revolution

Arab Oil Embargo

Iran-Iraq Threatened by Iran/Iraqi Tanker War

Gulf War I

Gulf War II

Data: Rapidan Energy Group, EIA, BP, St. Louis Fed, US

VZ ’02–’03, Iraq ’03, Nigeria ’03 –, Libya ’10 –, Iran ’12 – and
## Shale is Not Swing

<table>
<thead>
<tr>
<th></th>
<th>Texas Railroad Commission &amp; Seven Sisters</th>
<th>OPEC</th>
<th>Shale</th>
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<tbody>
<tr>
<td>Members willing to subordinate maximum production to the goal of stabilizing oil prices</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Members able and willing to decide and implement supply adjustments in days to weeks</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
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<tr>
<td>Legal authority to manage supply for the purpose of price stability</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
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<tr>
<td>Willing and able to sustain supply changes long term</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Coherent institutional structure, decision making process</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
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