



World Oil and Gas Outlook

NASEO 2009-2010 Winter Fuels Outlook Conference

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Short-Term Oil Market

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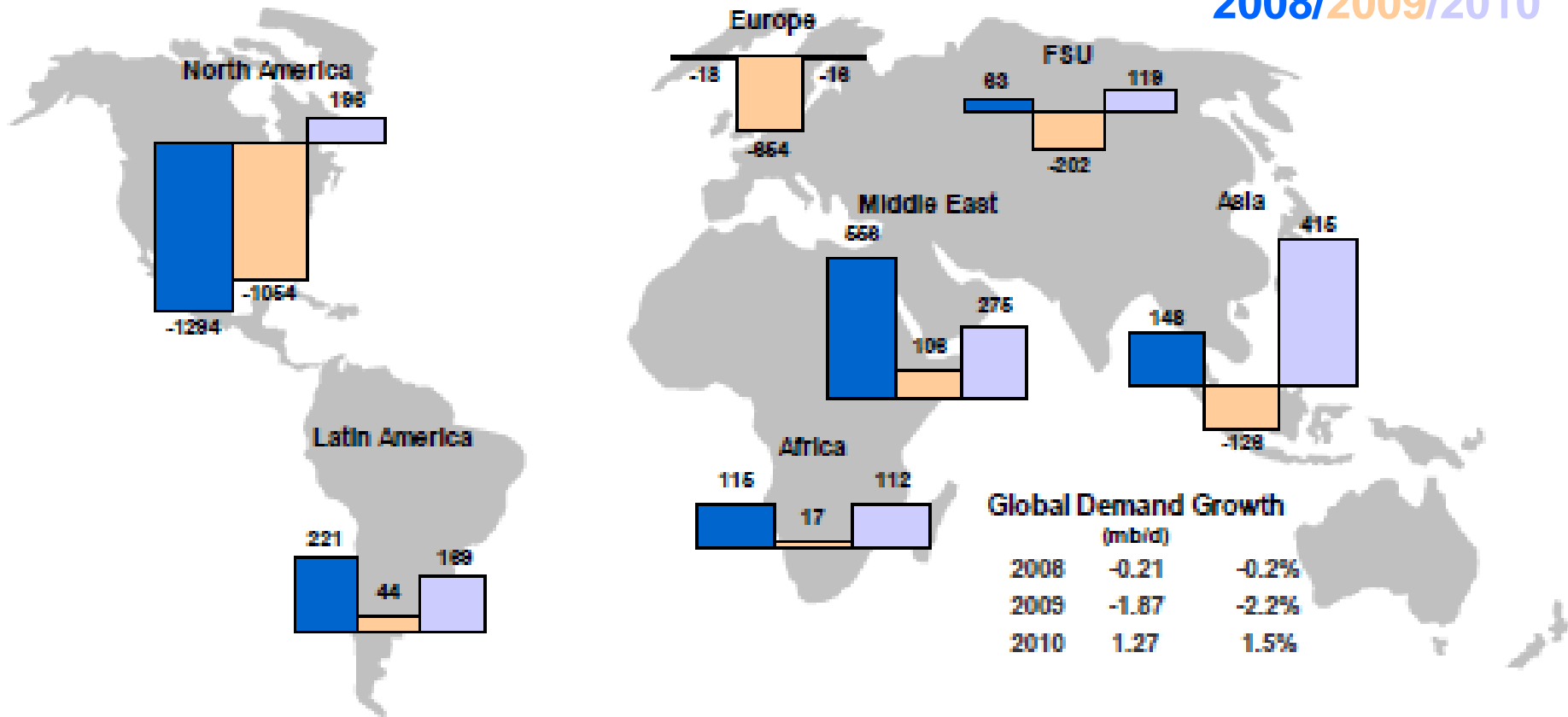
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World oil consumption is expected to recover in 2010, driven by growth in developing economies

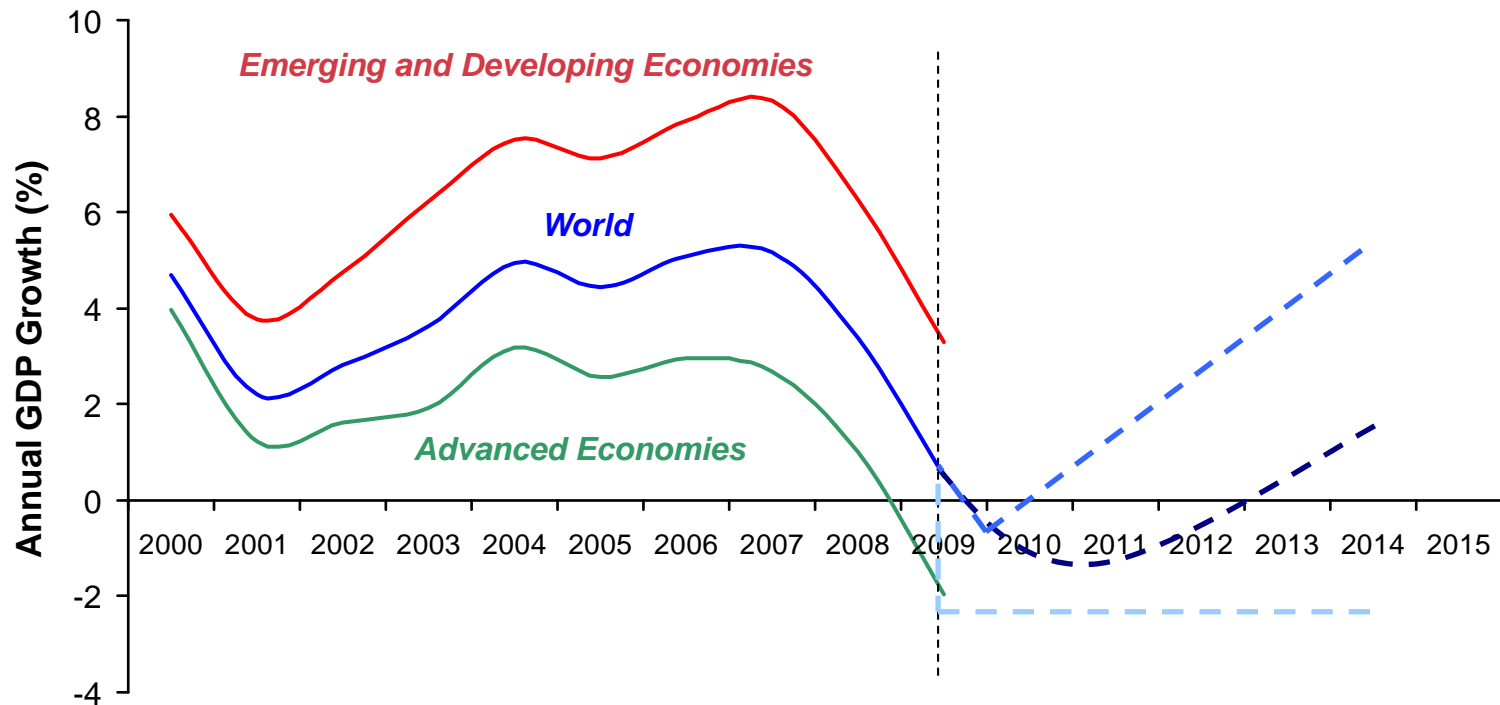
(change from previous year, kb/d)

2008/2009/2010

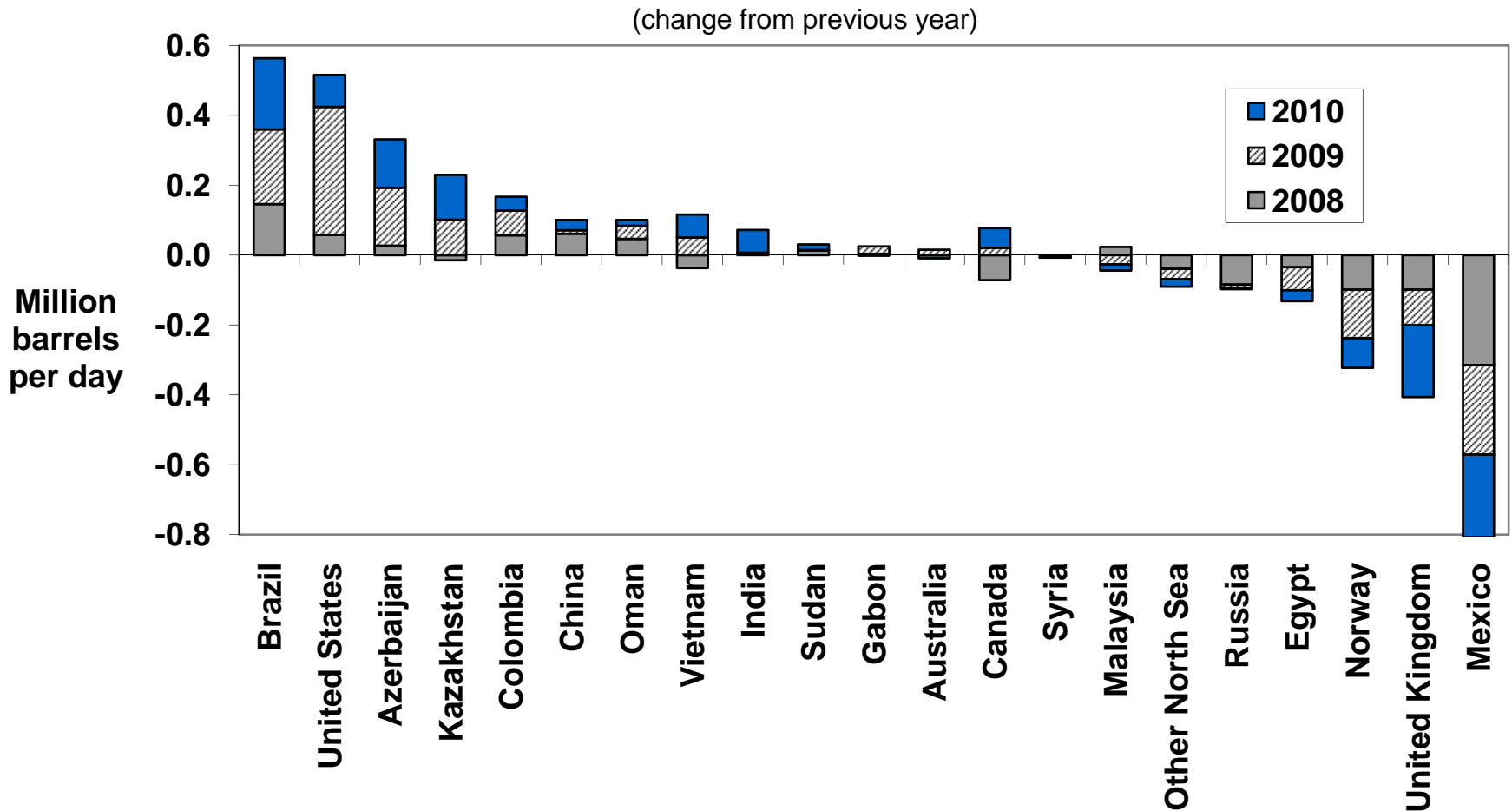


Source: IEA, Monthly Oil Market Report September 2009

...but the shape of the economic recovery matters



Non-OPEC oil production looks flat



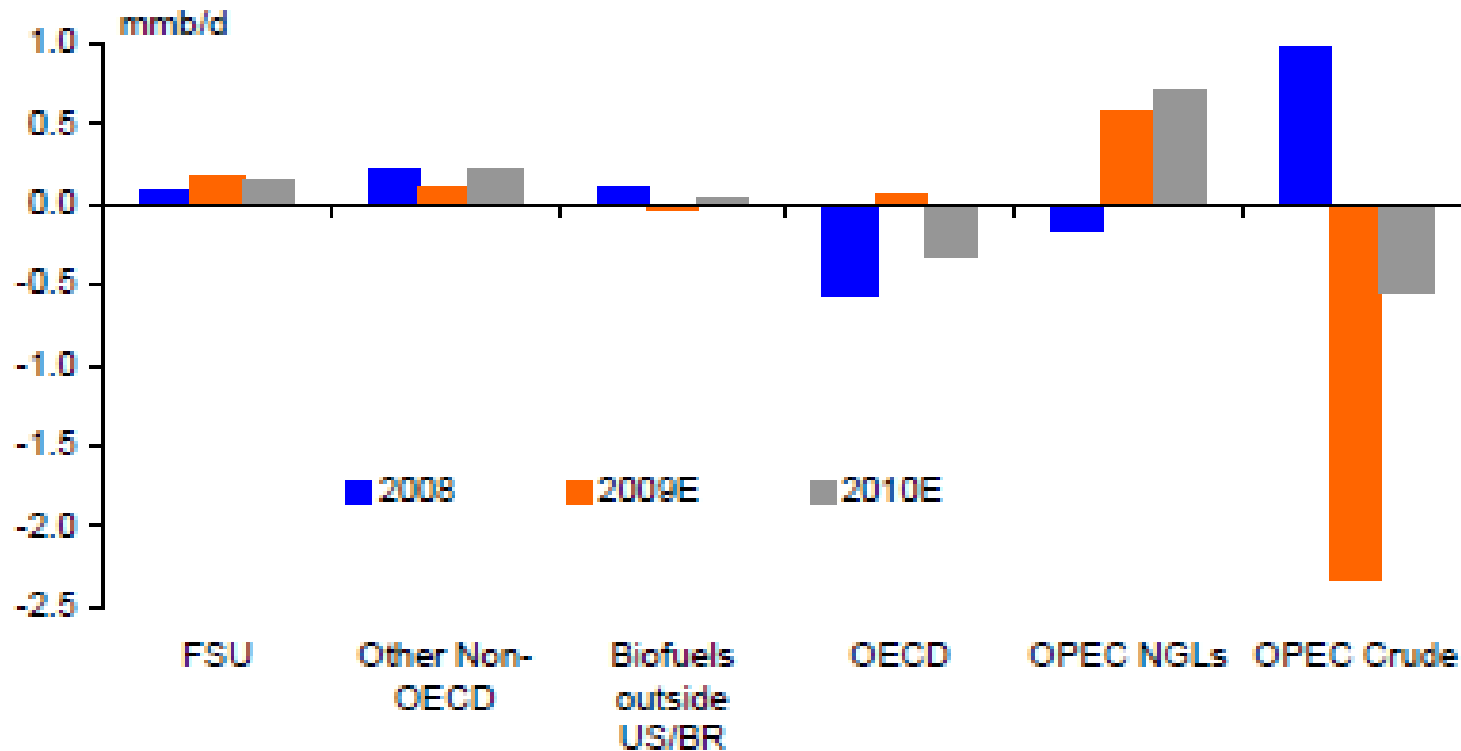
Source: EIA, STEO September 2009

Projecting the quarterly call on OPEC (EIA)

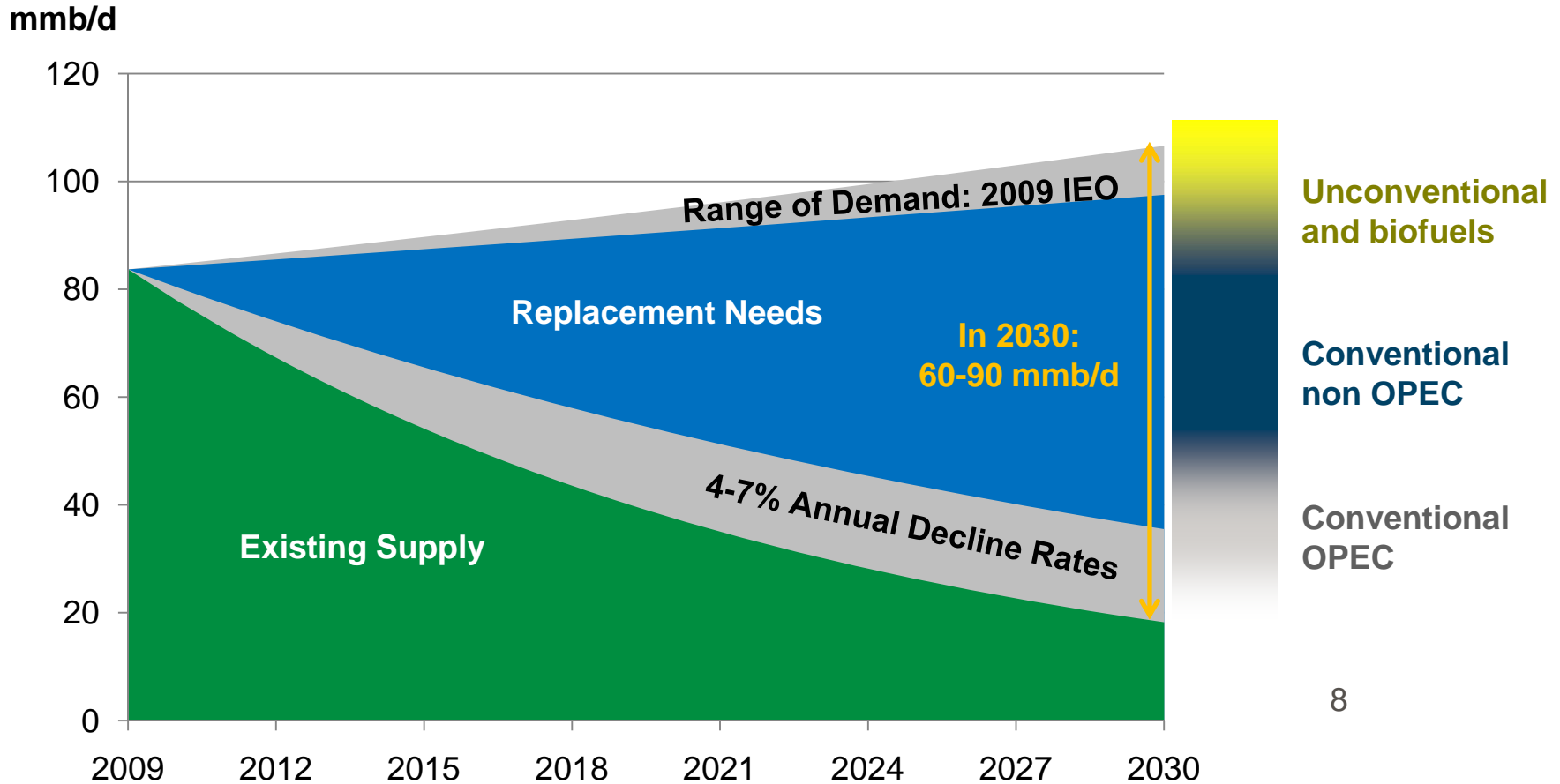
<i>(in million barrels per day)</i>	2009Q3	2009Q4	2010Q1	2010Q2
Demand	84.3	84.5	84.4	83.8
Non-OPEC Supply	49.7	50.1	50.5	50.4
OPEC NGLs	5.0	5.2	5.4	5.6
Call on OPEC*	29.6	29.2	28.5	27.8
Stock build/draw		+	+	+

**includes production from Iraq (2.38 mmb/d in 2Q)*

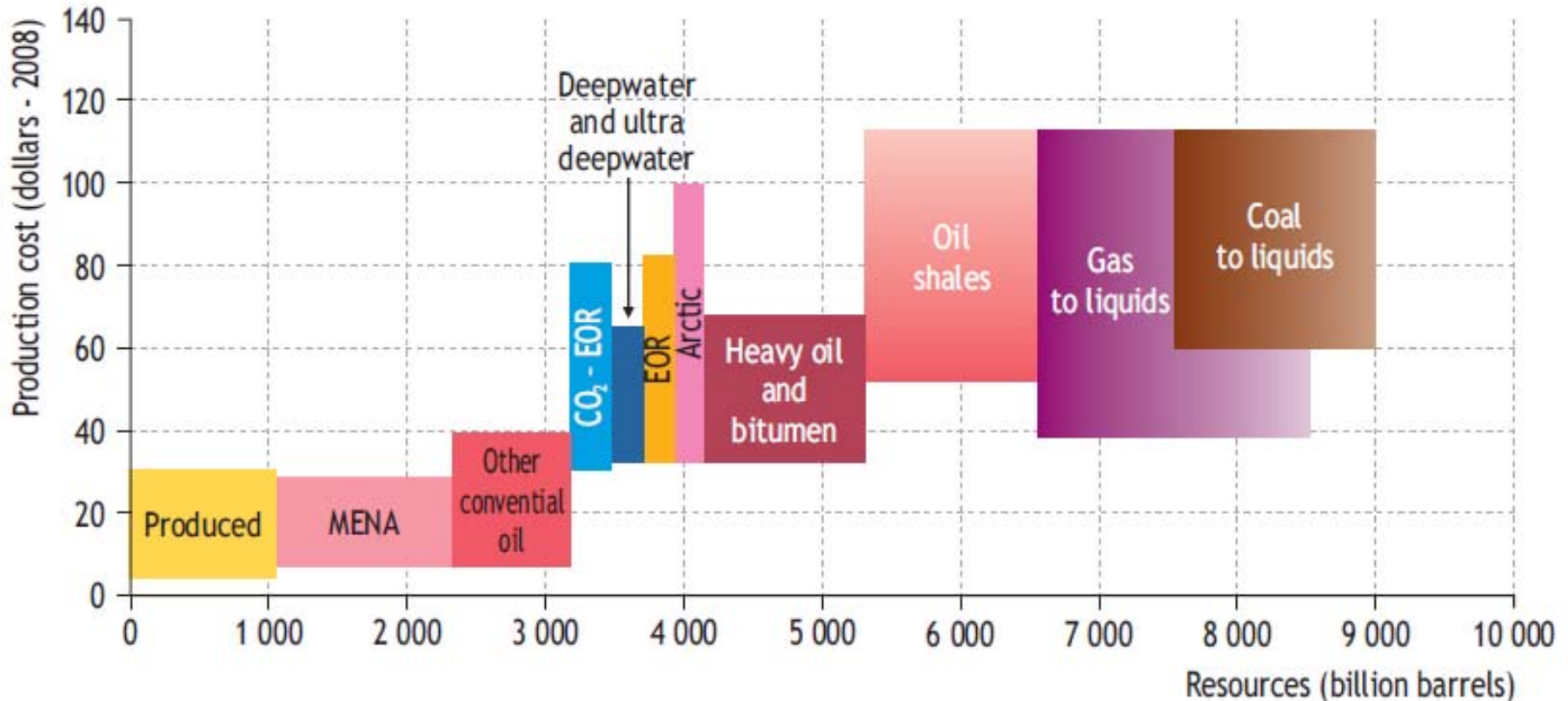
Significant supply growth is expected from OPEC natural gas liquids in 2010



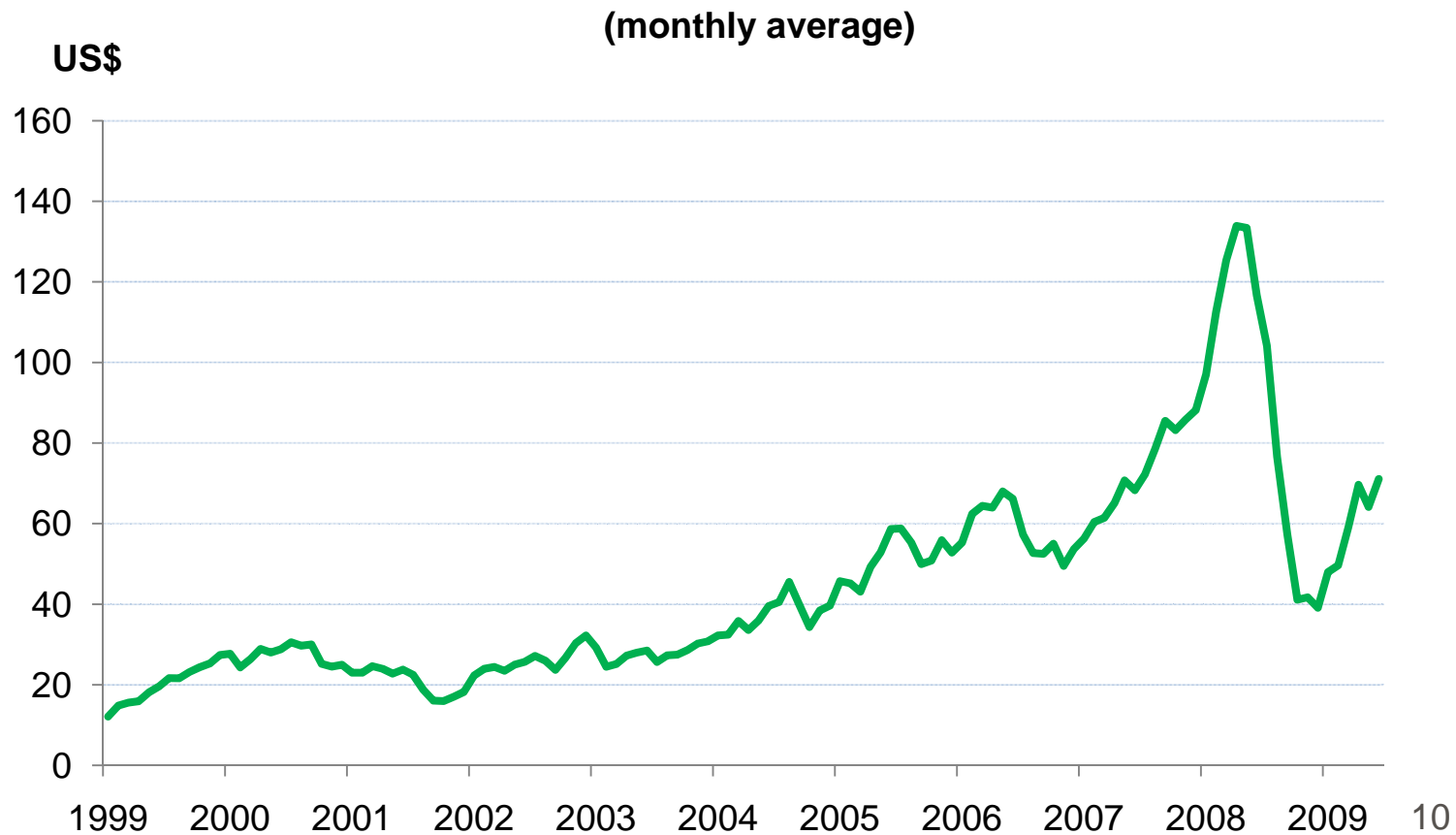
Replacing and expanding global liquids supply will require continued investment



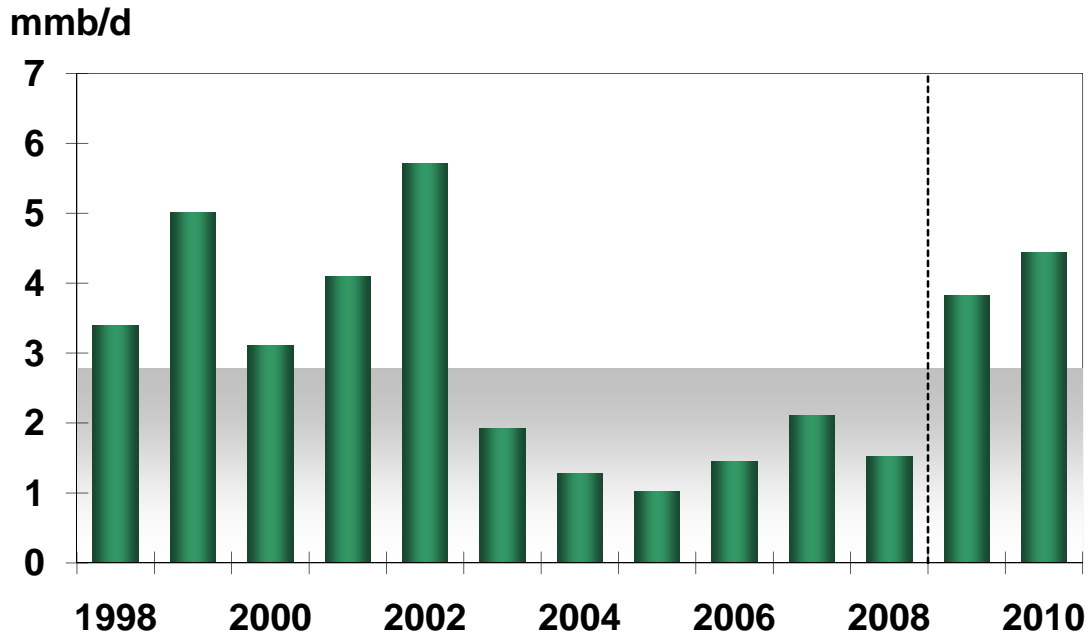
Remember that cost (and investment) profiles change as contracts are renegotiated



10-Year Price Series (WTI Spot)

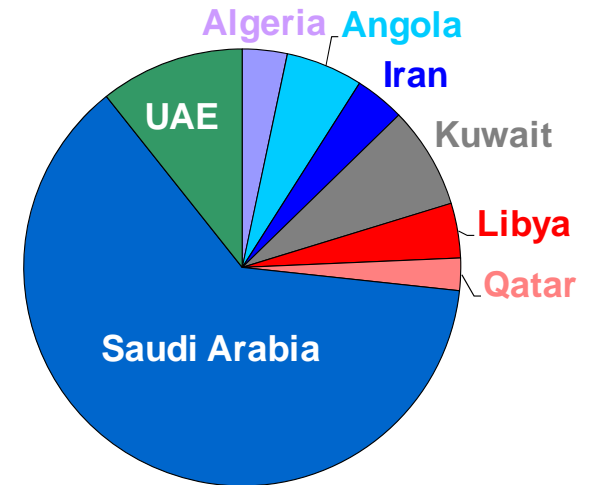


OPEC maintains high levels of surplus production capacity

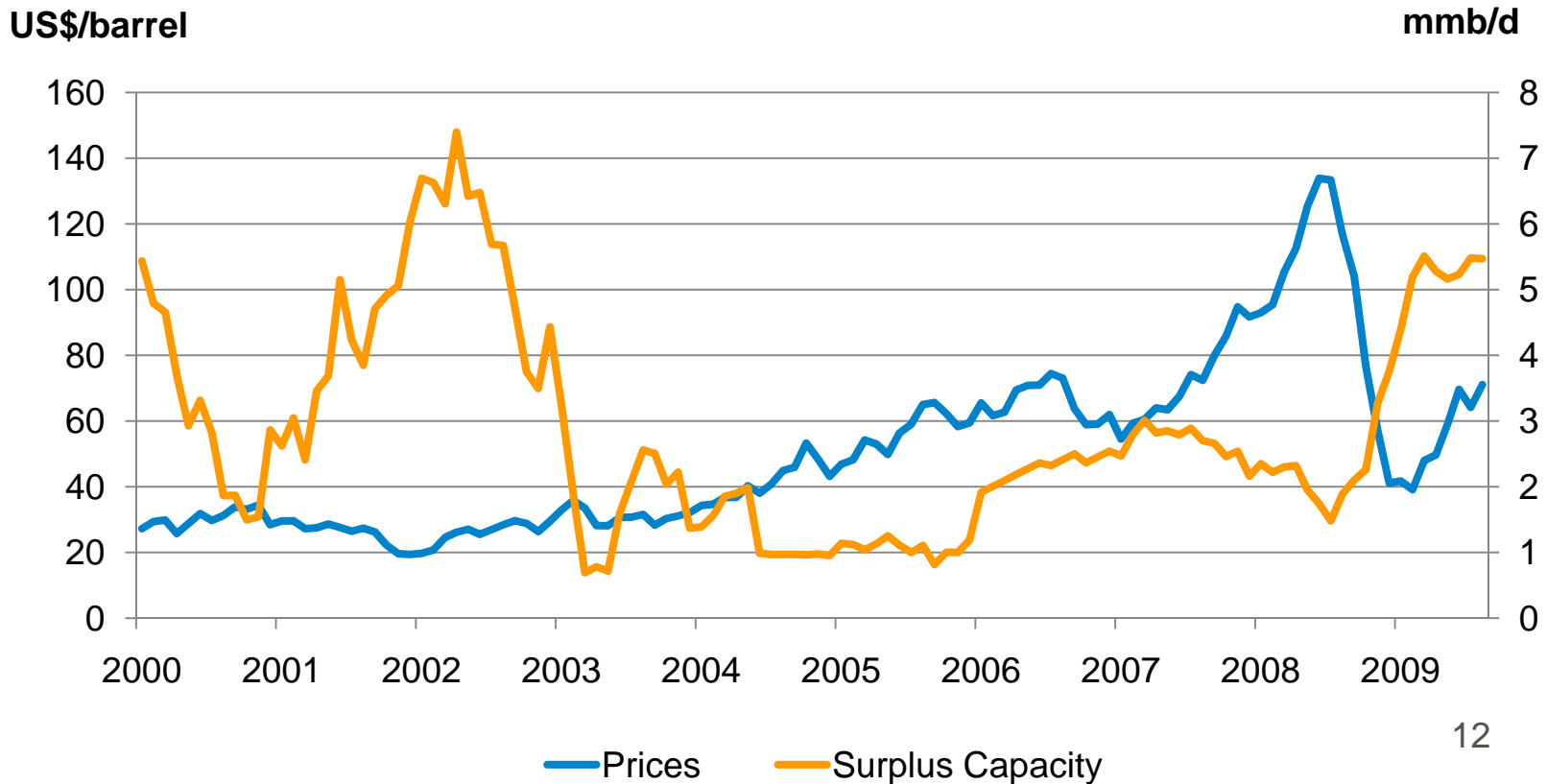


Note: Shaded area represents 1998-2008 average (2.8 million barrels per day)

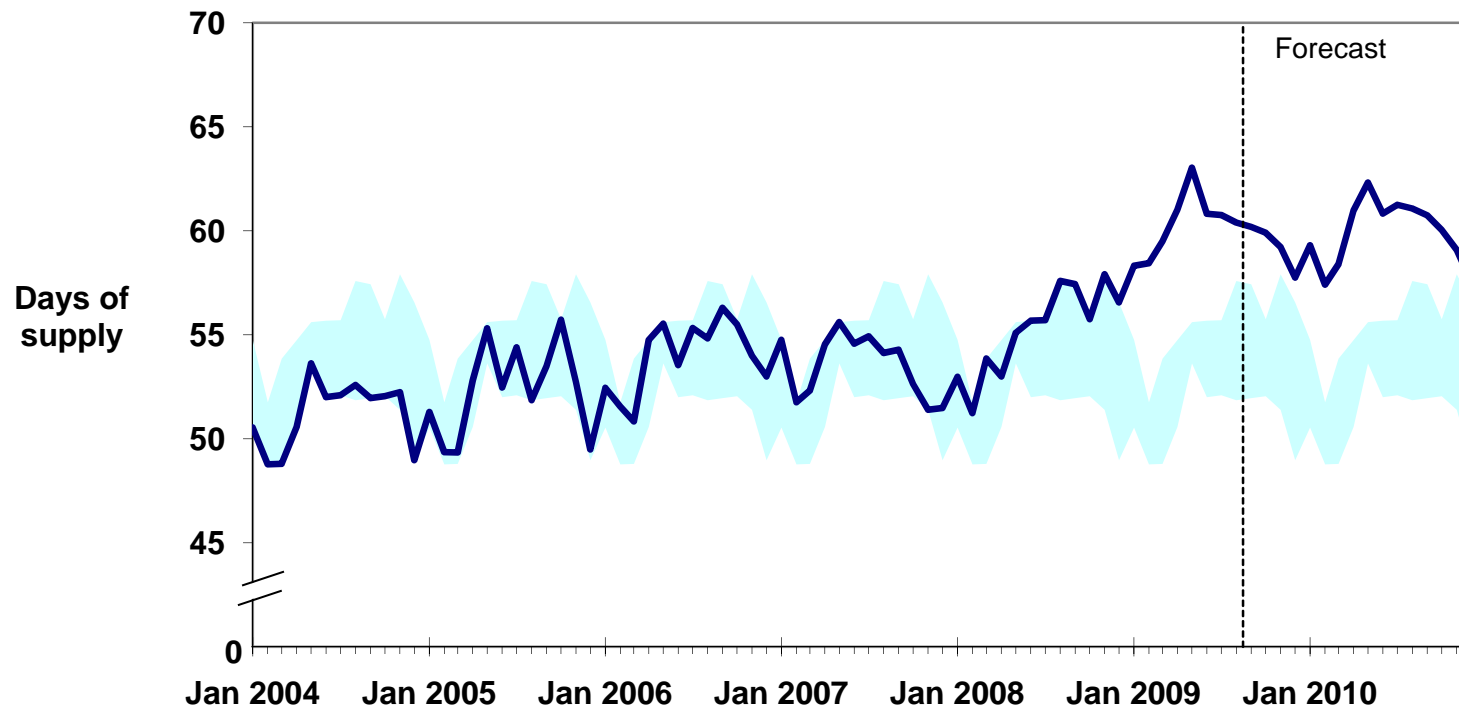
Surplus Capacity, by Country
Total Current (est.): 5.5 mmb/d



Higher prices persisting despite excess spare capacity

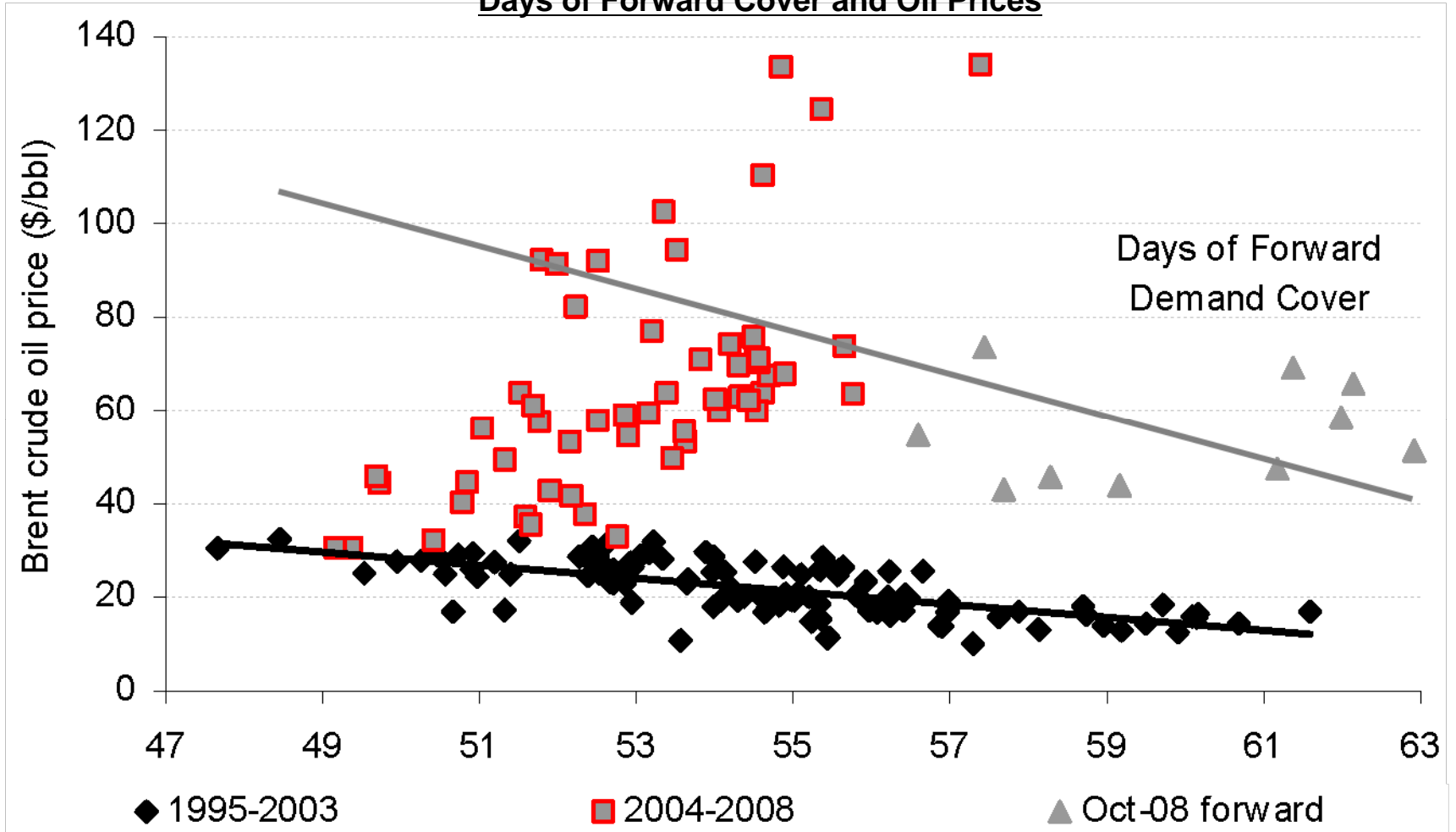


OECD crude oil inventories remain far above the 5-year range



Are there “new fundamentals” at work?

Days of Forward Cover and Oil Prices



Geopolitical and governance risks persist, but are not as disruptive in a soft market



Keys to the Short-Term Market

Upward Pressure On Price:

- Non-OPEC supply weakness
- OPEC Cohesion

Downward Pressure:

- High Crude Inventories
- Growing Unused Productive Capacity

Major Uncertainty:

- Global Economic Growth



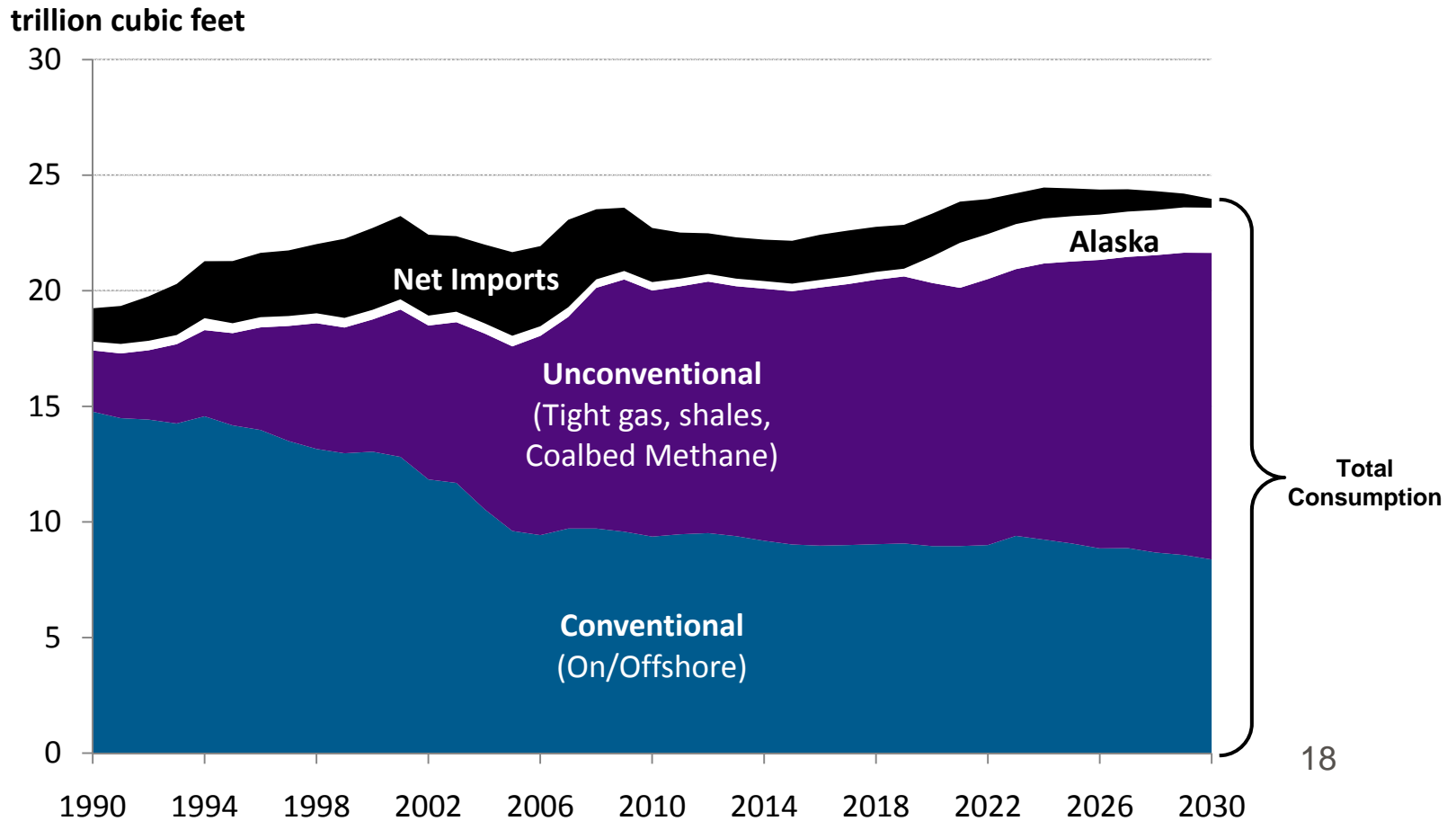
Natural Gas

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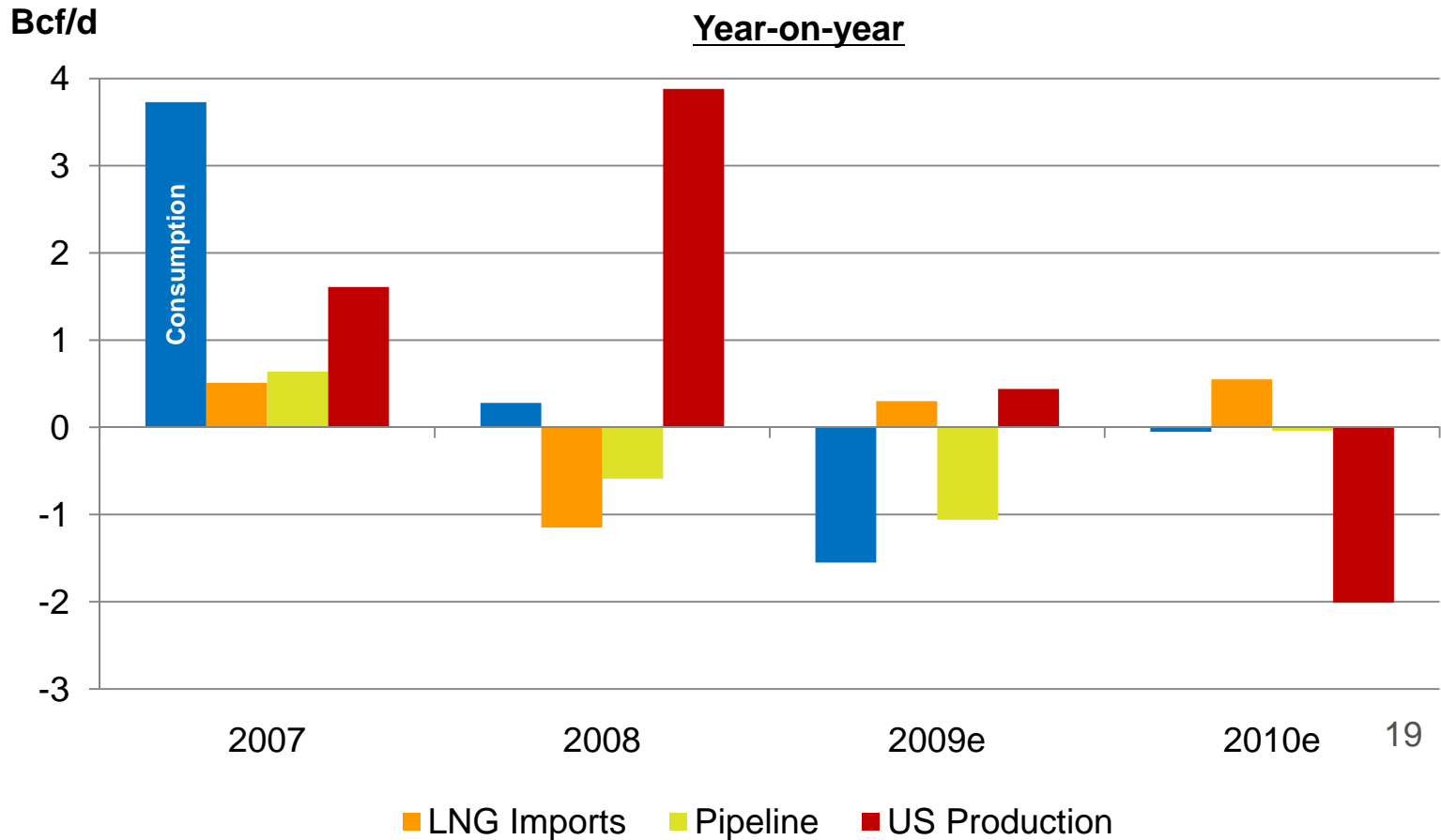
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Sources of U.S. Gas Supply (to 2030)



Changes in U.S. Gas Supply (short-term)



Source: EIA STEO 2009, CSIS

The Big Question – What is the Outlook for Shale Gas?

Technical/Economic Variables

- All shales are not alike; application of drilling/reservoir fracturing technology & operational experience matters
- Steep decline rates require ongoing investment and drilling; and repeated fracturing
- Up front investment (lease acreage and pilot wells) not insignificant vs. cost basis relative to commodity price/value

Environmental/Regulatory/Societal Variables

- Uncertain regulation (hydraulic fracturing, water, land use, permits), “industrialization” of areas unfamiliar with development plans and associated impacts
- Location, location, location – shale resources are, at times, proximate to and distant from delivery infrastructure and demand centers – both present problems



Questions?

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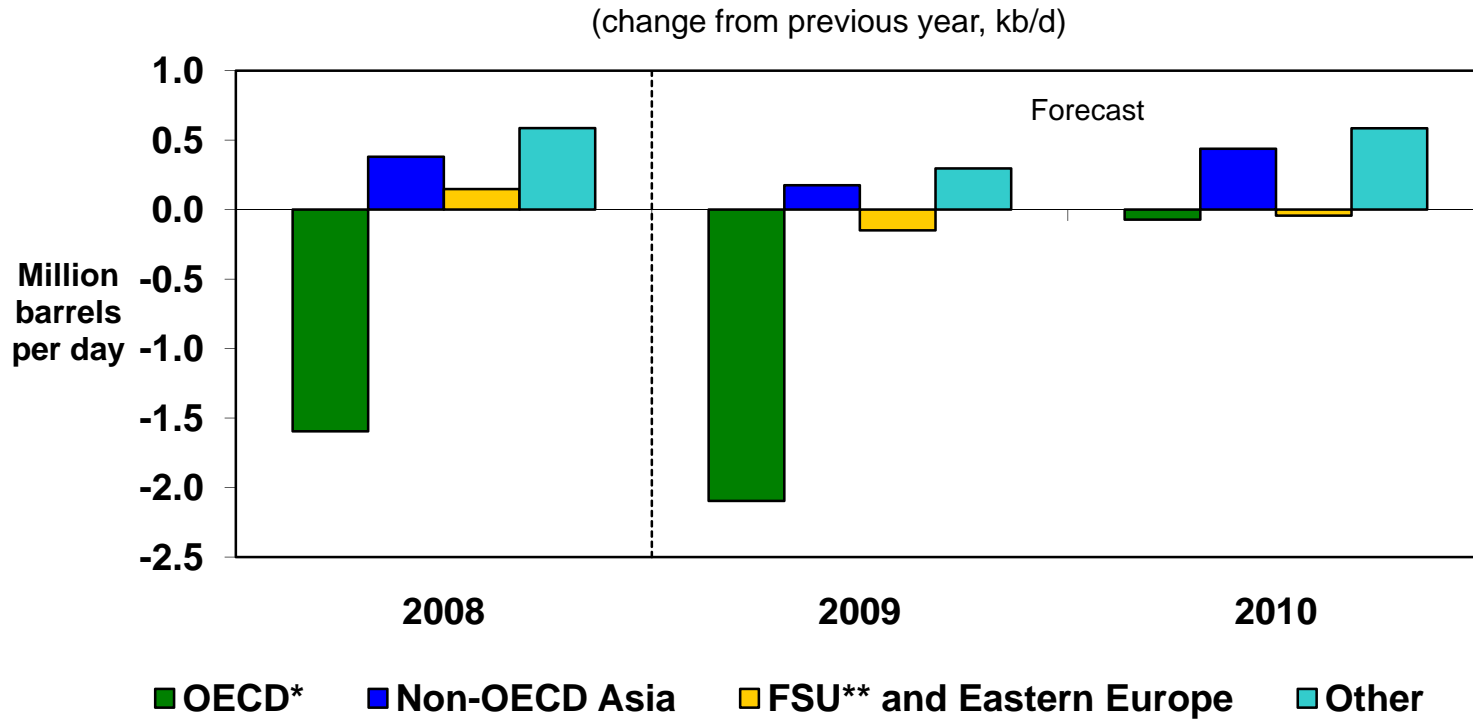
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Projecting the quarterly call on OPEC (IEA)

<i>(in million barrels per day)</i>	2009Q3	2009Q4	2010Q1	2010Q2
Demand	84.4	84.7	86.0	85.1
Non-OPEC Supply	50.8	51.2	51.8	51.2
OPEC NGLs	5.4	5.6	5.7	6.0
Call on OPEC*	28.2	27.9	28.5	27.9
Stock build/draw		+	-	+

**includes production from Iraq (2.38 mmb/d in 2Q)*

World oil consumption is expected to recover in 2010, driven by growth in developing economies



* Countries belonging to Organization for Economic Cooperation and Development

** Former Soviet Union

North American Gas Rig Count

