Gas Markets Review

Working Party on Gas

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Anne-Sophie Corbeau
Senior gas expert

Current Gas Market Developments

2009 – A Turning Point?

- Gas demand in OECD countries and major economies has been declining sharply
  - But last months have seen a lower relative decline
  - A few notable exceptions: China, India
- Over 60 bcm of new liquefaction capacity have come on line in 2009
  - This has started to translate into additional LNG volumes during the second half of 2009
- Unconventional gas developments in North America have changed the scene
- Spot prices have collapsed since mid 2008
  - Oil-linked gas prices are twice as high as spot prices
  - All prices are on an increasing trend since fall 2009
- Gas markets are becoming more interdependent

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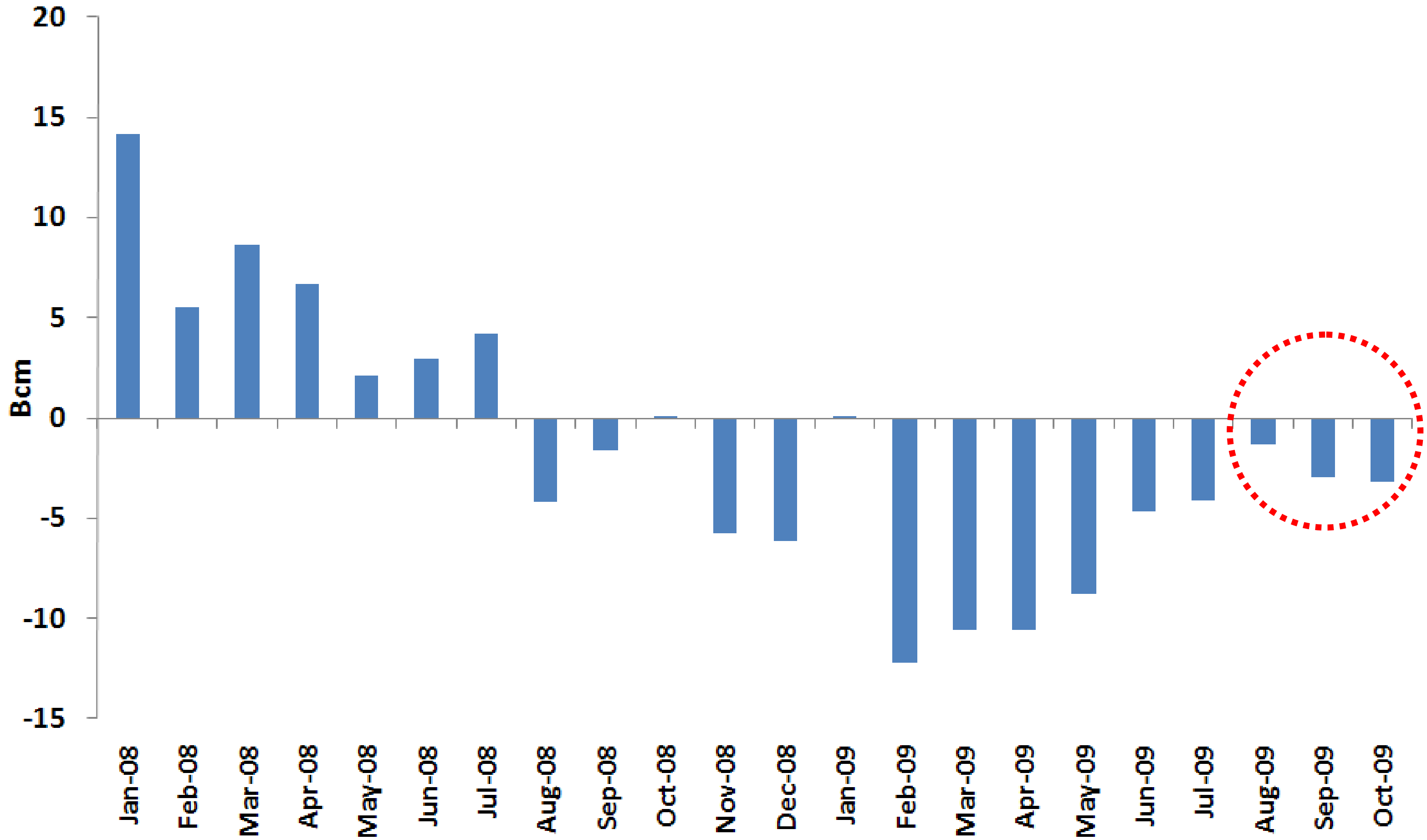
Gas demand highlights

- During 2008, we moved from a relatively tight supply and demand balance to an easing one
  - Gas demand increased by 3% worldwide and by 1.8% in OECD countries in 2008
- World gas demand is expected to decline by 4% in 2009
  - Only a few countries will see demand increasing
  - In OECD Europe, demand has declined in the industrial sector and in the power generation as gas-fired plants are at the margin
  - In the US, industrial gas use collapsed but use in the power generation sector actually increased due to low gas prices
- Demand is expected to recover in the medium term
  - Driven by the power generation sector
  - Incremental demand will come from non-OECD countries

OECD Gas Demand

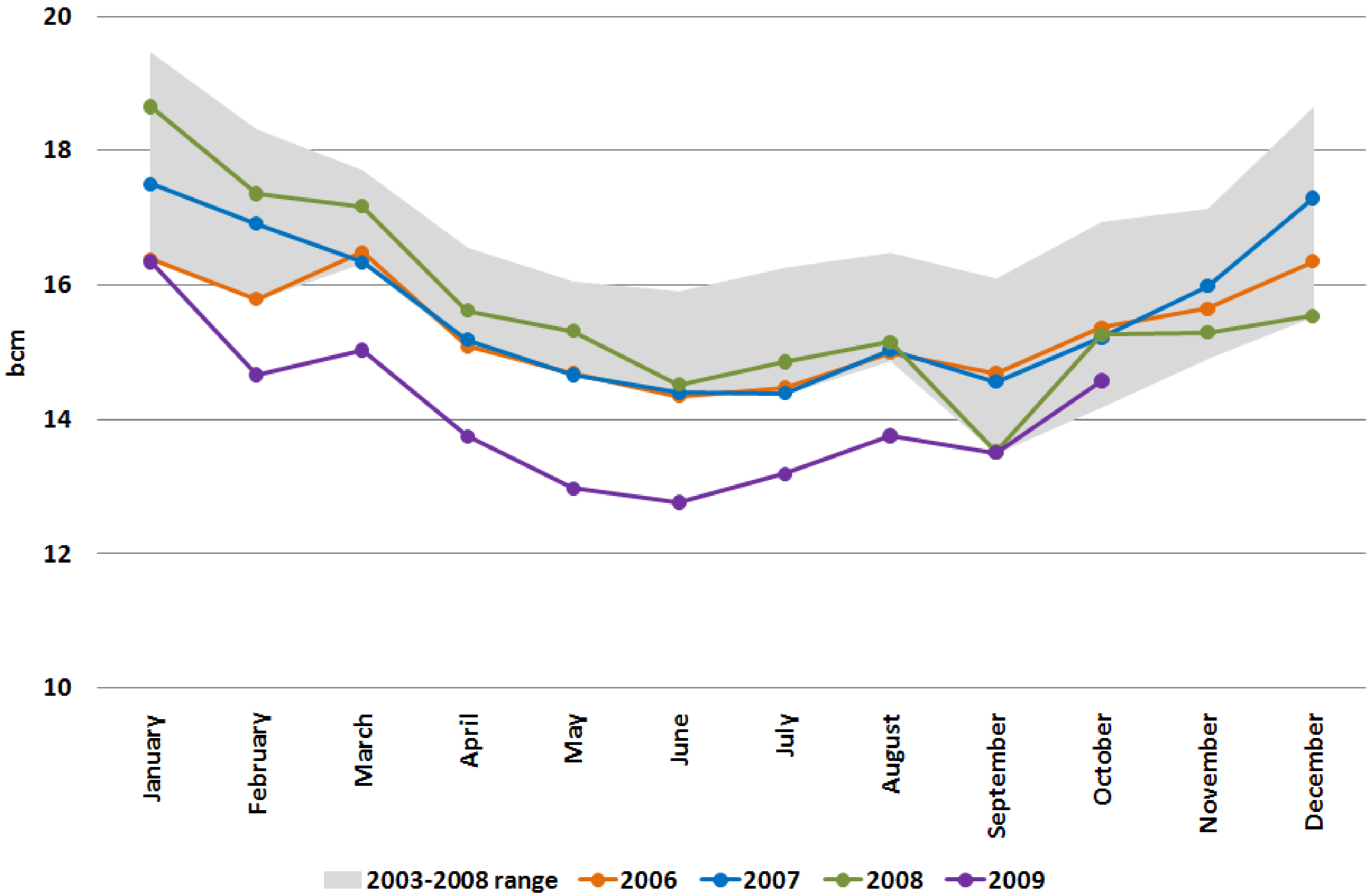
Some green shoots have appeared



Source: IEA, Monthly Gas Data

United States industrial demand

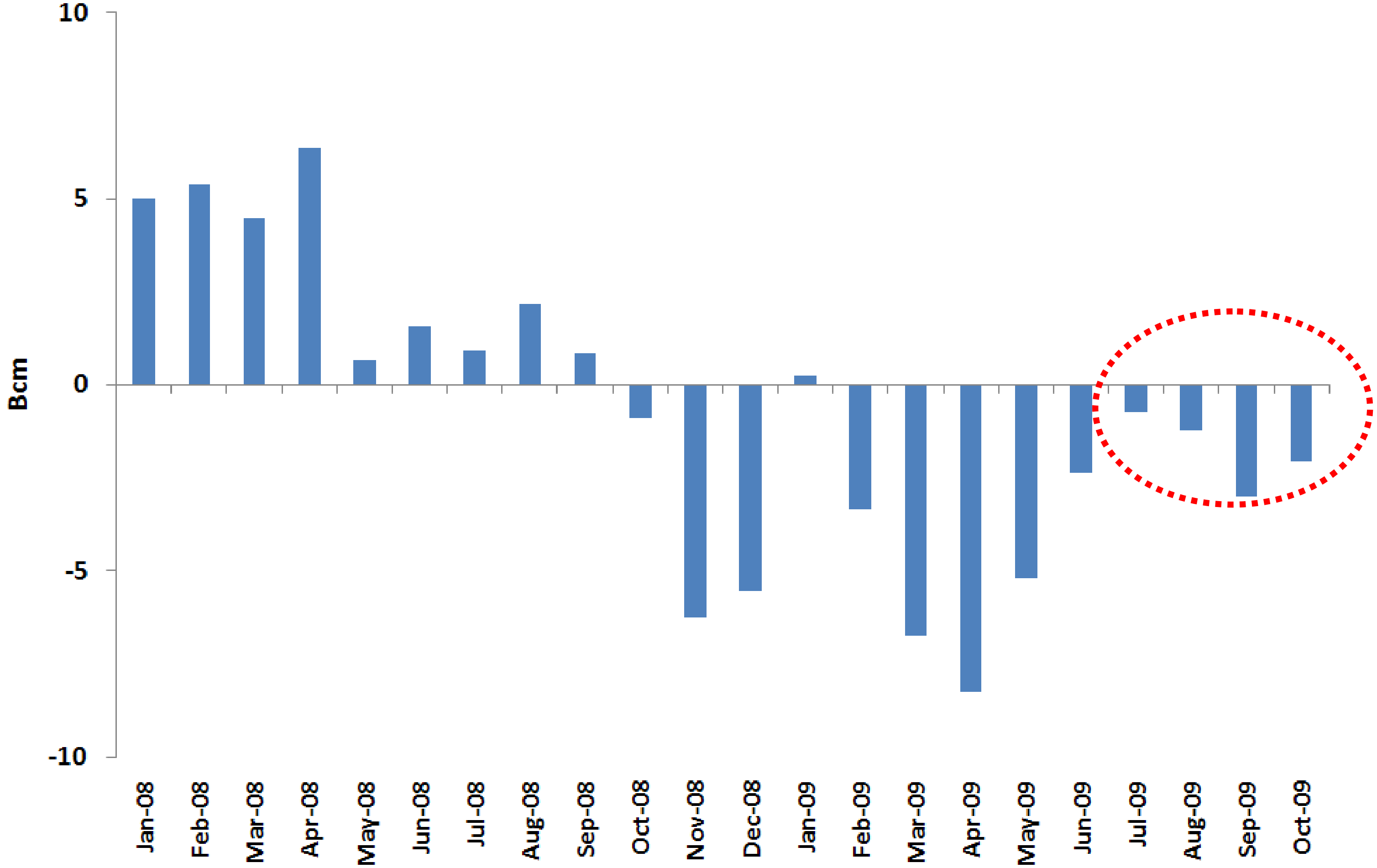
11% below 2008



Source: EIA

OECD Europe Gas Demand

Gas demand is expected to decline by 7% in 2009



Source: IEA, Monthly Gas Data

Gas price environment

- Two price systems

- Spot prices are at $6-7/MBtu early January 2010
  - HH reached a low point of $2/MBtu in September – a first since 2002
  - High volatility of HH gas prices – decrease from $4.9 mid October to $3 mid November and up to $6 now
  - NBP and HH gas prices are showing a greater degree of convergence due to an easing supply and demand balance and more LNG available

- Oil-linked gas prices in Continental Europe and Japan have declined more slowly between 2008 and 2009
  - They were at $7-8/MBtu during summer 2009, but are now rising again to $10
  - This makes LNG spot cargoes and other spot gas more interesting than oil-linked gas for European buyers

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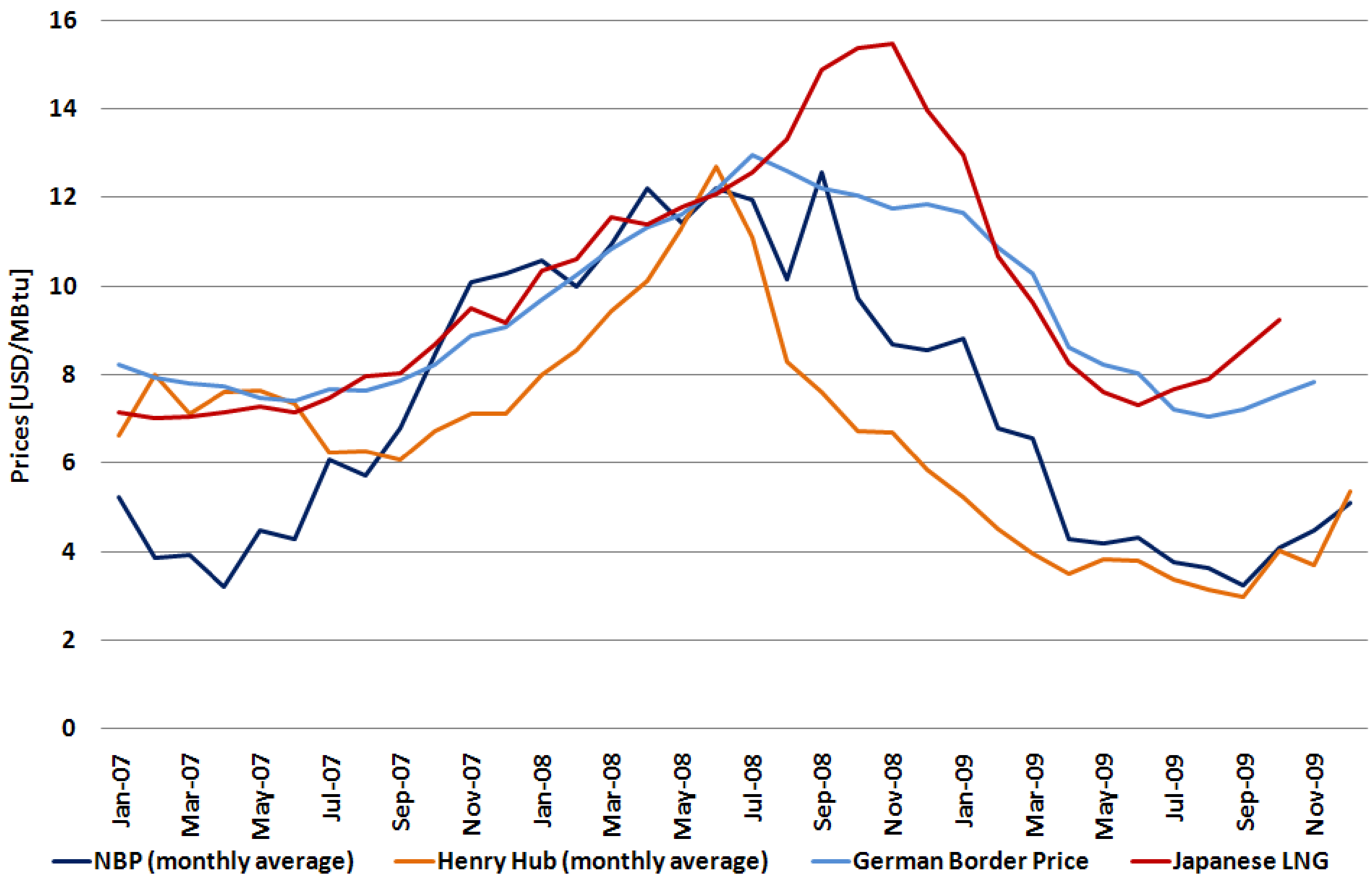
Two distinct groups of prices have emerged
Spot prices have converged



Source: Bundesamt für Wirtschaft und Ausfuhrkontrolle (BAFA), ICE, Trade Statistics of Japan (Ministry of Finance), European Central Bank, Federal Reserve.

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Gas supply highlights

- OECD Production has been stable so far in 2009
  - -0.2% over Jan-Oct (+4% in 2008)
  - Production increased in North America and Pacific
  - But declined in Europe (except Norway: +5%)
- Non-OECD gas production represented 63% of global production in 2008
  - Production increased by 3.5% in 2008
    - Middle East countries were the biggest contributor to this incremental production growth
  - The year 2009 will show a contrasted picture
    - Russian production declined by 13% to 582 bcm
    - Production increase in Qatar
- Two major changes
  - The unconventional gas revolution in the US
  - The massive expansion of liquefaction capacity over 2008-2013
- ➢ Global surplus expected for the upcoming years

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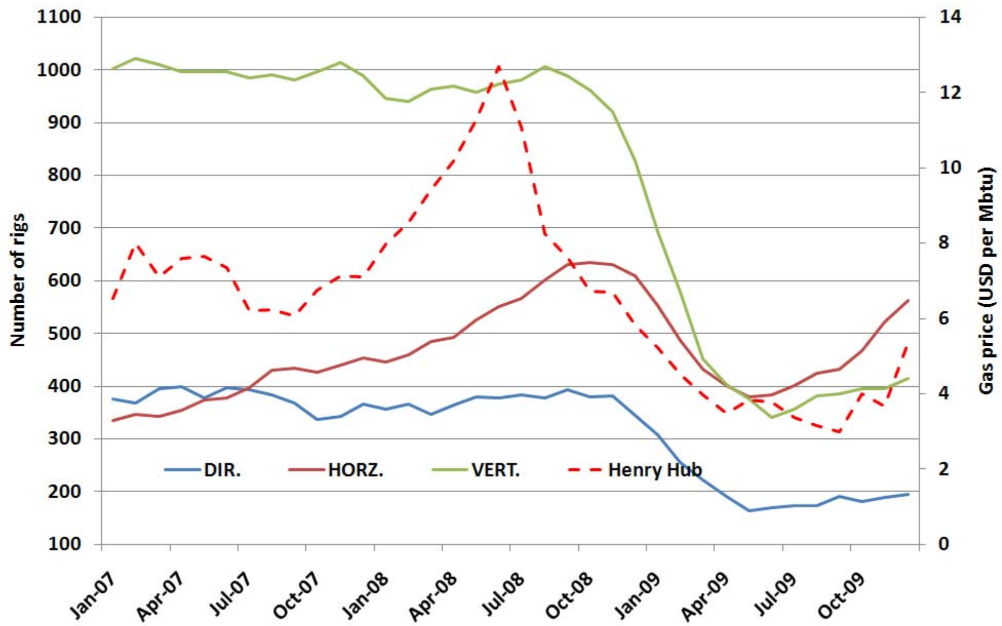
Unconventional gas revolution
Still going on…

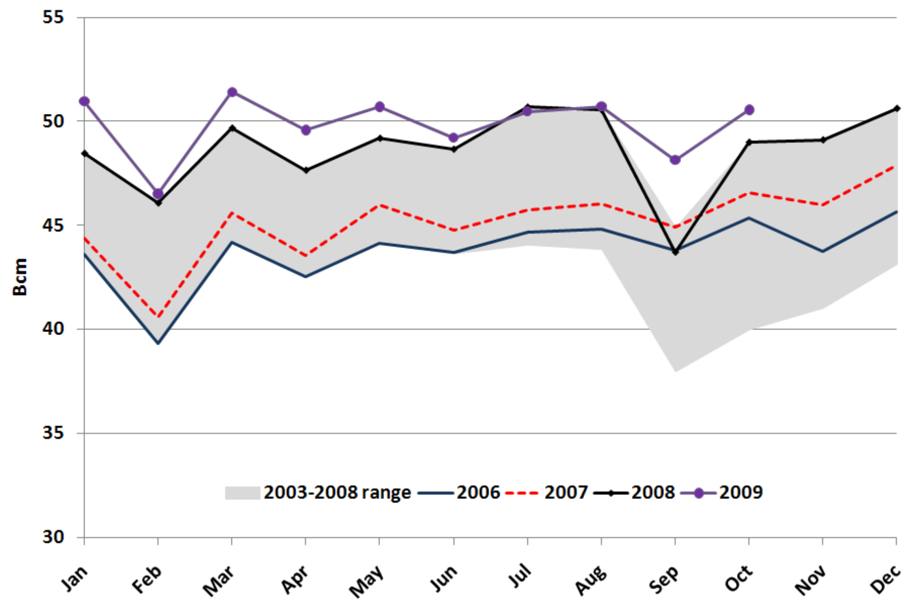
Number of rigs vs. HH prices



Source: IEA, Baker Hughes

Note: rigs in North America, Nov: partial data

US gas production



Source: IEA, EIA

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LNG Markets
A look back at 2009, what to expect for 2010

- Problems are now common in new and existing liquefaction plants
- There was little growth of LNG trade in 2008 and during the first half of 2009
  - Output has been improving during the second half of 2009
- Regional LNG imports show a contrasting picture (Jan-Sep 09)
  - LNG imports in Japan and Korea declined by 8 and 18% respectively
  - UK imports increased by more than 10
  - US LNG imports increased by 30%
  - China LNG imports increased by 50%
  - New players are appearing: Kuwait starting importing in July
- The year 2010 will see the actual ramp up of production
  - All facilities will progressively increase output
  - Peru and further Qatari plants expected to start

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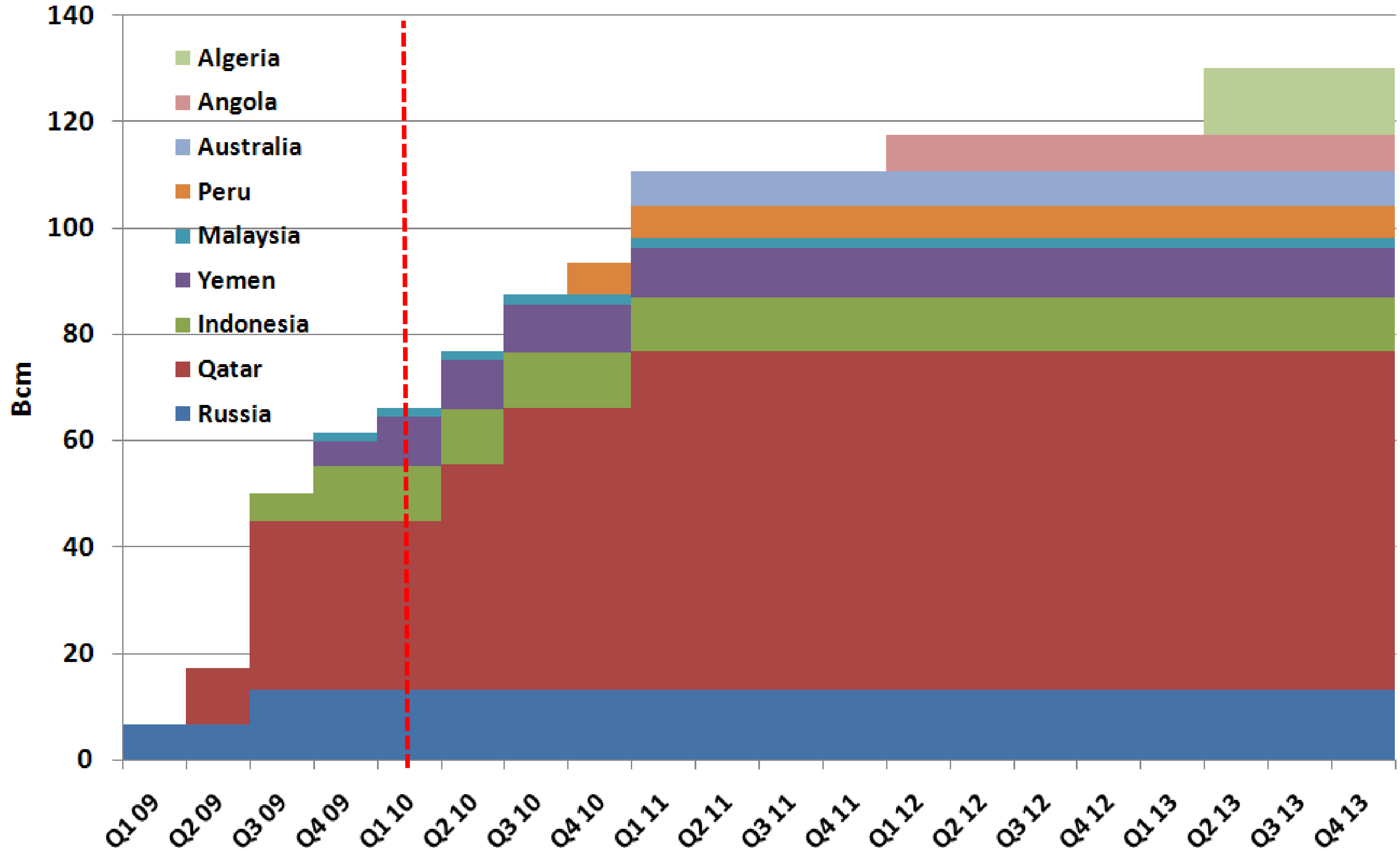
Significant expansion of LNG capacity

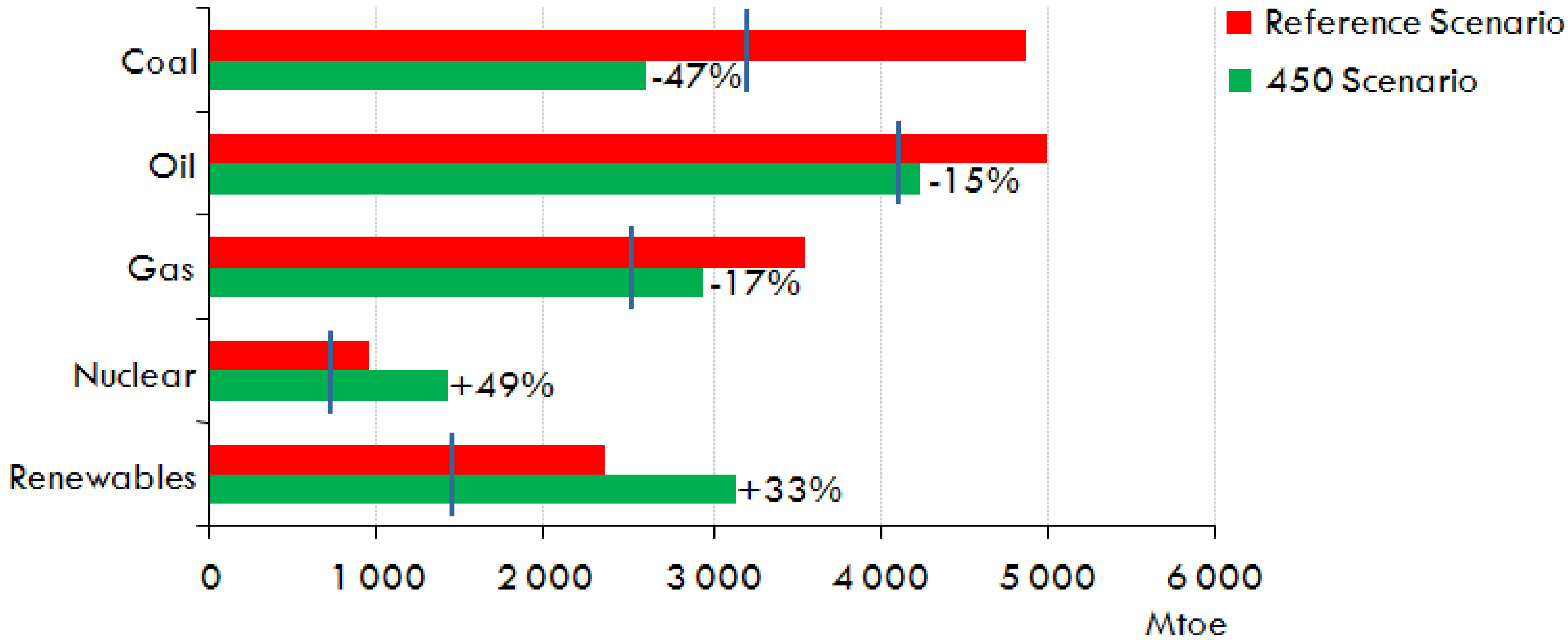
But many delays or technical difficulties



Source: IEA, NGMR 09

Long-term Outlook

World primary energy demand by fuel and scenario in 2030



Source: WEO 2009

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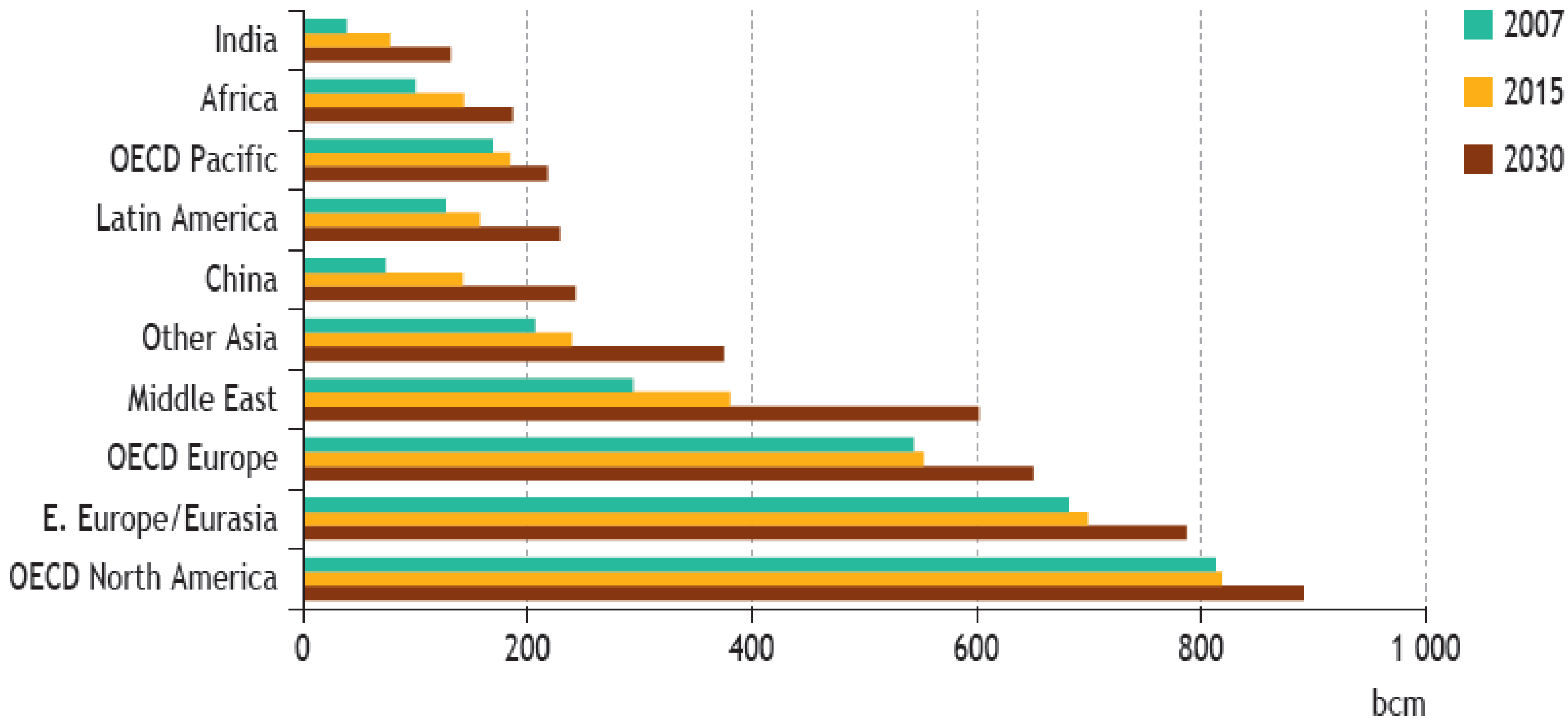
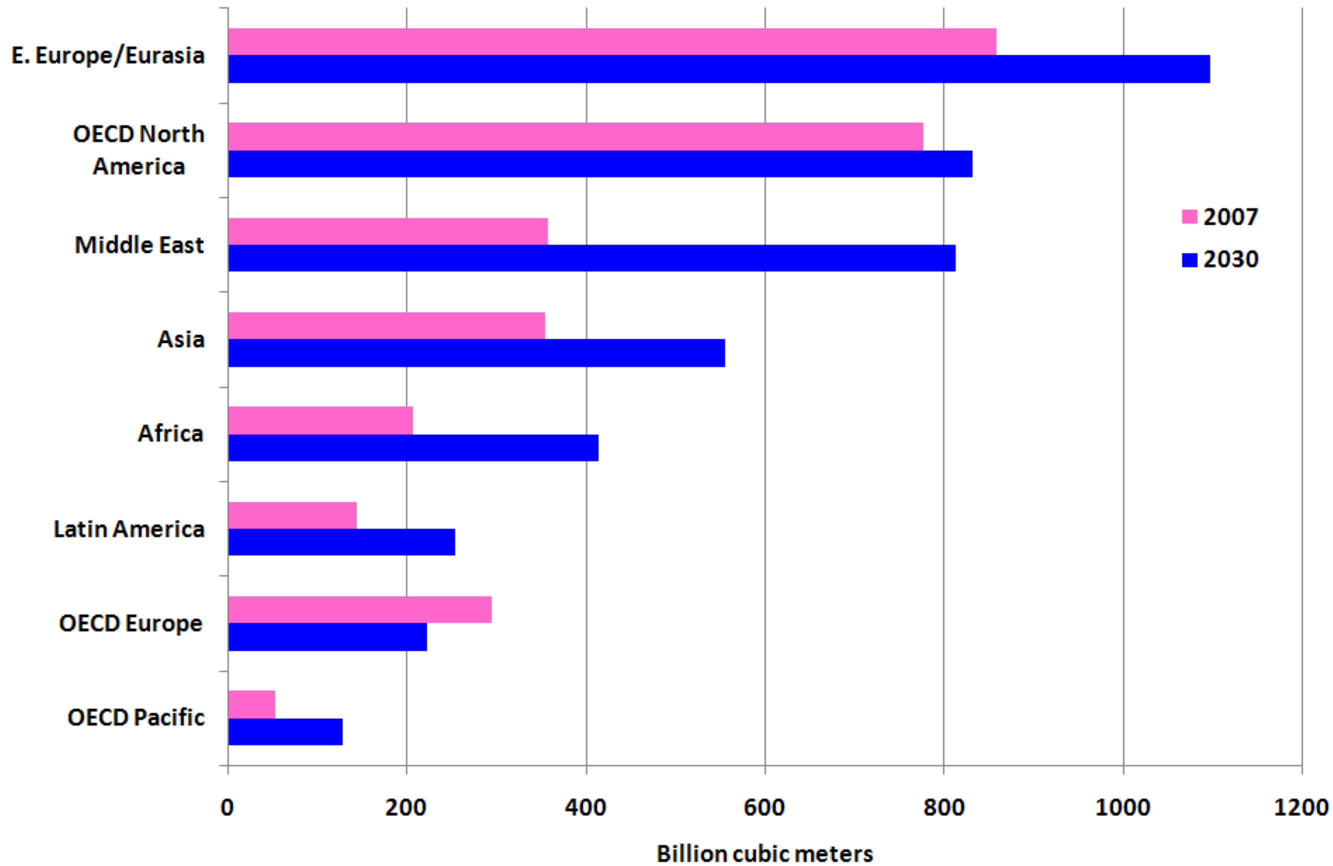
Gas Demand in the Reference Scenario



World primary demand for natural gas is projected to expand by 41% between 2007 & 2030

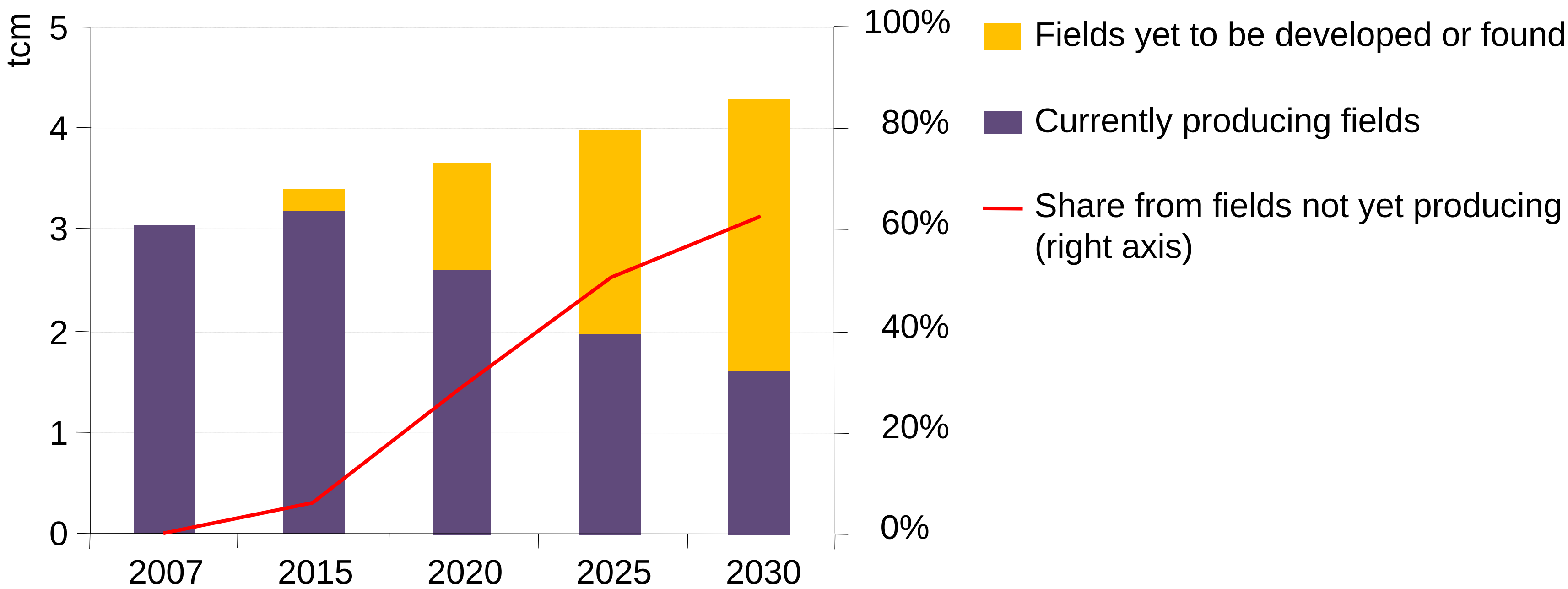
Source: WEO 2009

Natural gas production in the Reference Scenario



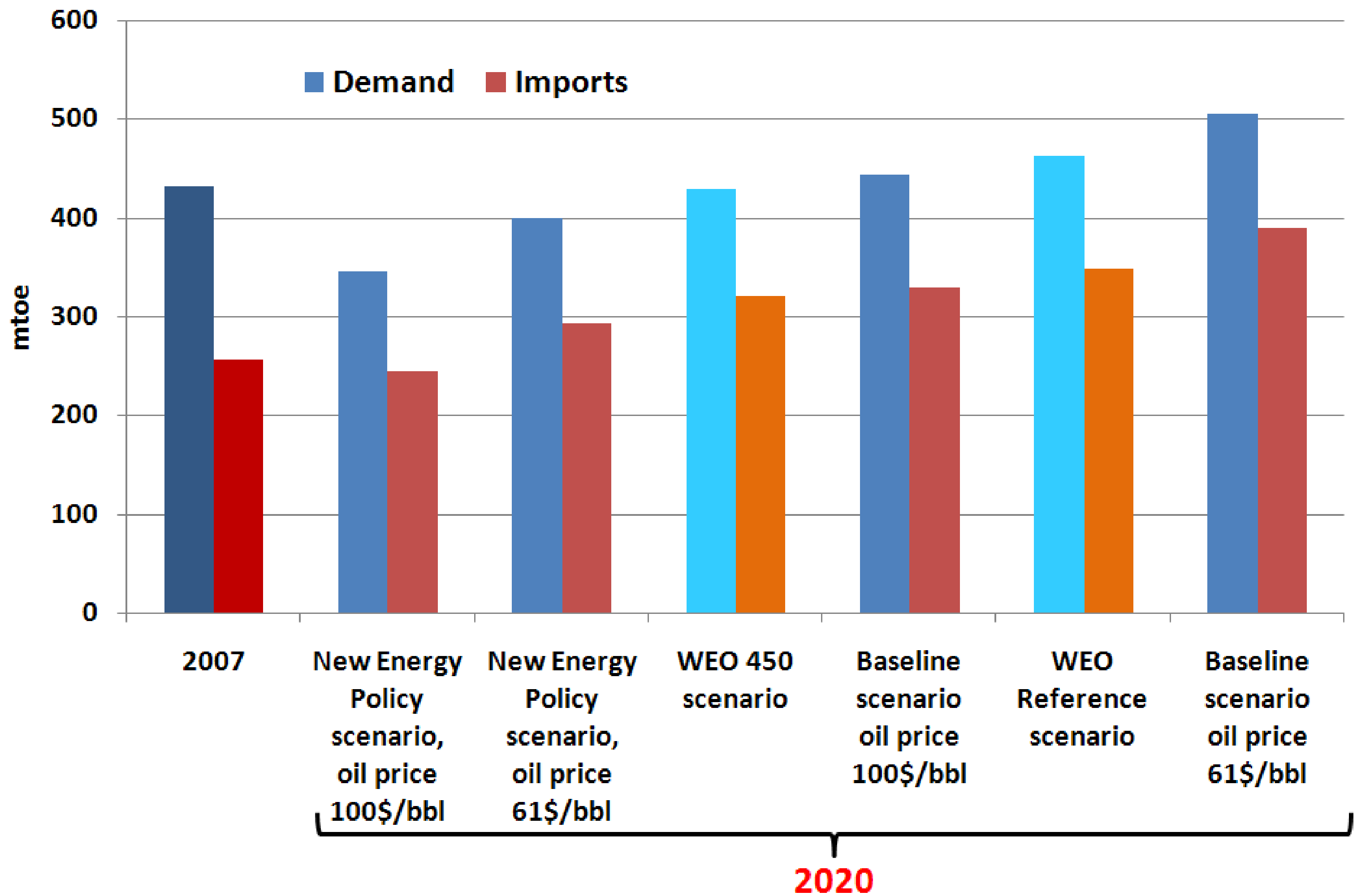
Gas production is set to become concentrated in the most resource-rich regions, with 36% of the growth to 2030 coming from the Middle East

Impact of decline on world natural gas production in the Reference Scenario



Additional capacity of around 2 700 bcm, or 4 times current Russian capacity, is needed by 2030 – half to offset decline at existing fields & half to meet the increase in demand

EU27 gas demand and imports by 2020



Source: WEO 2009, EU Second Strategic Energy Review

Thank you for your attention

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