

“Are High Oil Prices Here to Stay?”

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Presentation Outline




- **Why oil and why oil prices**
- **Can we predict oil prices?**
- **Key Points**
- **Brent Crude Futures and Prices**
- **Spot crude prices**
- **Short & Long Term Price Pressures**
- **Oil Price Scenarios**
- **Energy and the Economy**
- **Global Fuel Mix**
- **Energy and Carbon Emissions**
- **Global Fuel Mix & Emerging Energy Patterns**



Why Oil and Why Oil Prices

- i. Oil will continue to be a prime fuel over next 30-40 years
- ii. Oil will continue to be a key economic parameter which affects global economic developments
- iii. Oil prices affect cost of natural gas, petrochemicals, food (through fertilizers and pesticides) the automotive industry and transportation in general

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- iv. Oil prices today affect a lot less certain important economic parameters such as inflation and wage indexation
 - v. Oil prices are part of mechanism for the massive transfer of funds from consumer to producing countries and hence to global financial imbalances.

Can we predict oil prices?

- Yes, and no
- Prognosis is possible on a short and medium term basis
- Prices prediction can be achieved under specific set of assumptions using various models
- Long term price prediction is exceedingly difficult if not foolish because of the large number of variables involved and their unpredicted behaviour
- However, we can identify trends
- Geopolitics will come increasingly into play as a paragon affecting price volatility and price formation



Key Points

- International oil prices appear resilient to adverse market pressures and are moving comfortably above the \$100 per barrel region.
- 2011 will be first year in history that such high average yearly oil prices will have been recorded.

Main Upward pressures

- High demand outside the OECD area, low international stocks, occasional disruptions in supply (i.e. Libya, Syria, Yemen, Nigeria)
- Emerging geopolitical uncertainty due to Iran's advancing nuclear programme
- Need of certain OPEC members to maintain high oil prices in order to fund extensive welfare programmes

Main Downward pressures

- Great uncertainty in the financial markets, due to the eurozone crisis act as a destabilizer thus helping maintain strong price volatility
- Dollar/ Euro parity favours dollar linked oil transactions
- Outlook for slower global economic growth

ICE Brent Crude Futures – 3 months (Aug-Nov. 2011)





ICE Brent Crude Futures – 1 year (2011)

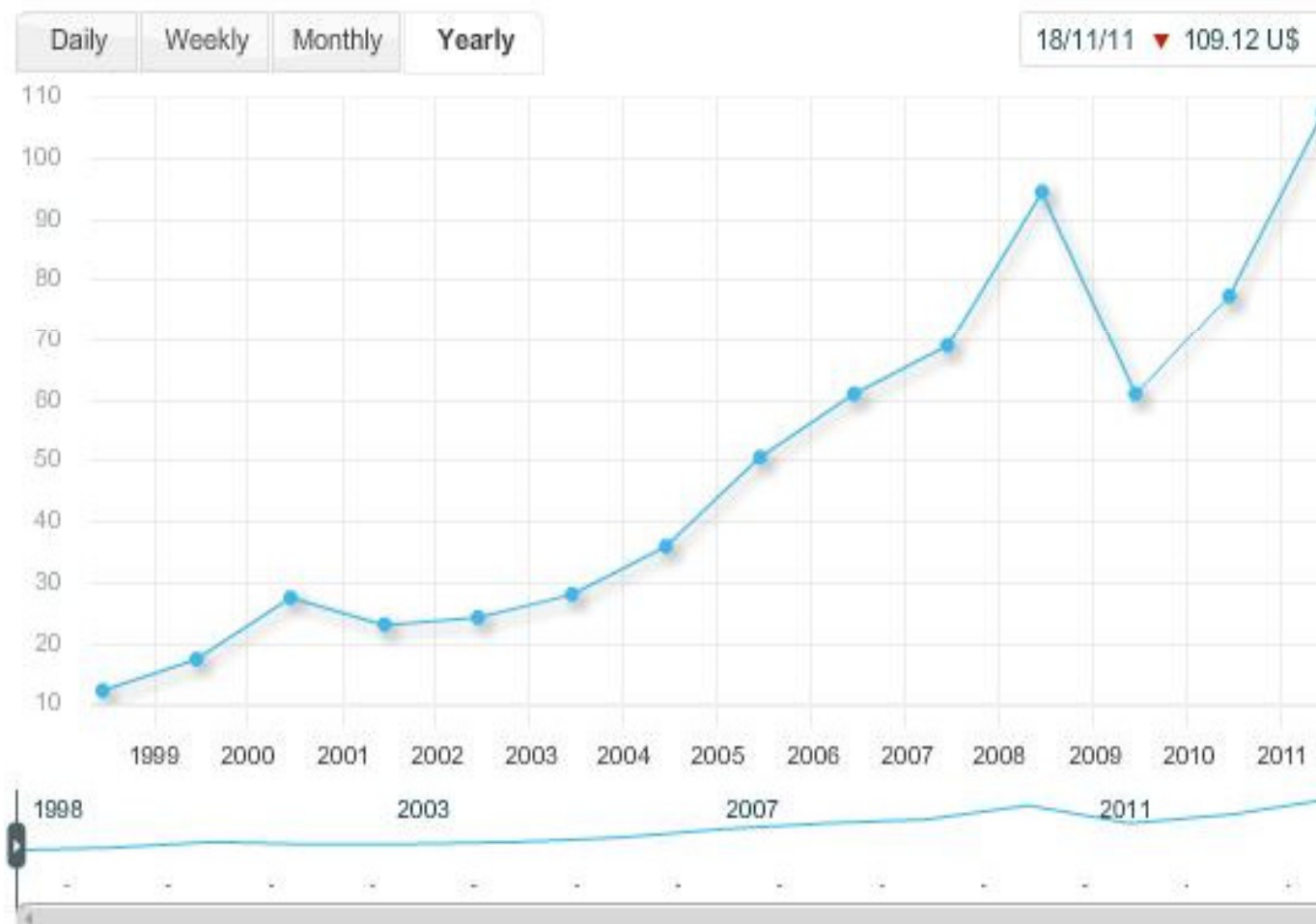


ICE Brent Crude Futures – 2 years 2010-2011)





OPEC Basket Price (1999-2011)



YEARLY BASKET PRICE

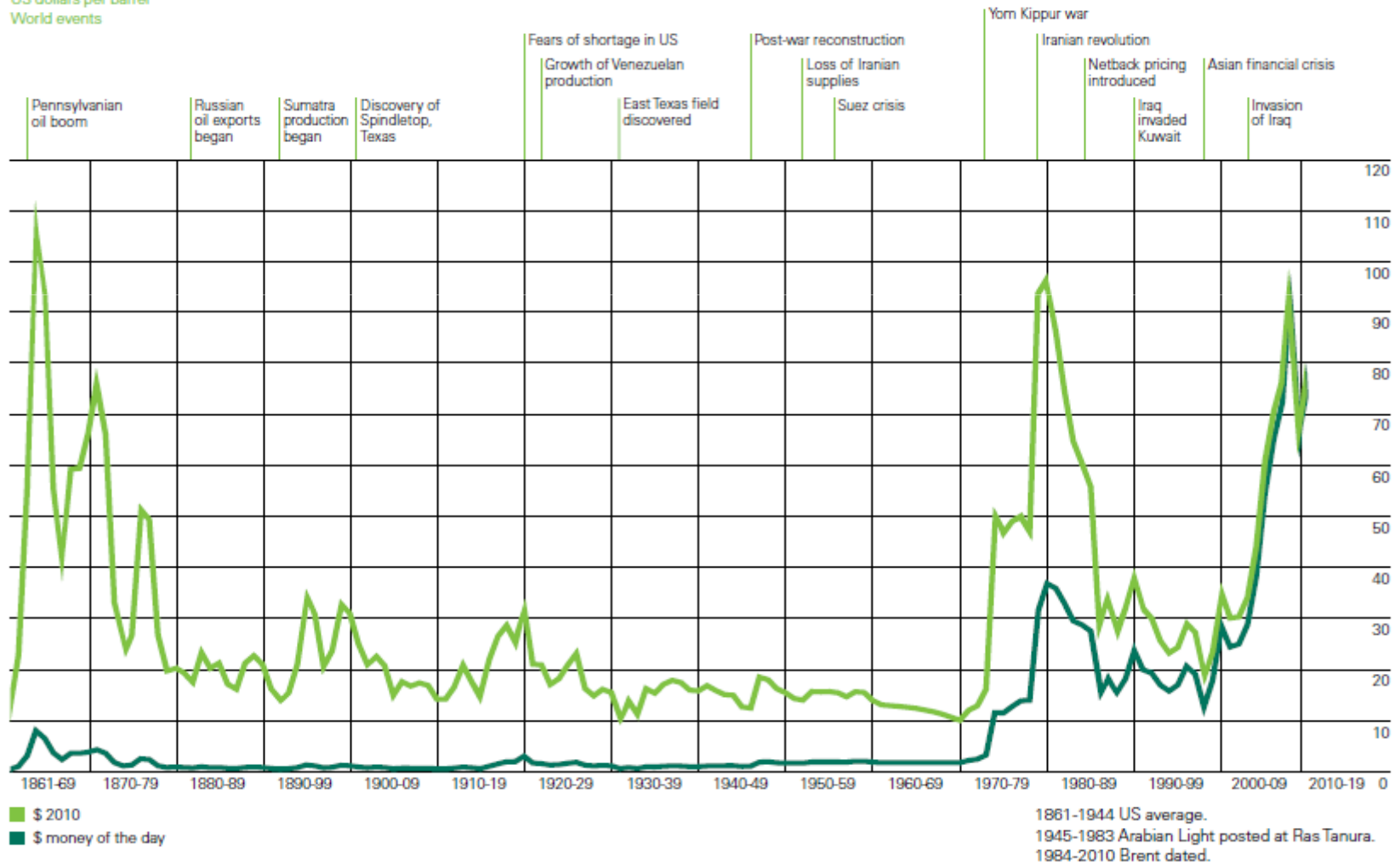
2011	107.43
2010	77.45
2009	61.06
2008	94.45
2007	69.08
2006	61.08
2005	50.64
2004	36.05
2003	28.10
2002	24.36
2001	23.12
2000	27.60
1999	17.48



Historical Variation of Crude Oil Prices

Crude oil prices 1861-2010

US dollars per barrel
World events





Spot crude prices (1998 – 2010)

<u>US dollars per barrel</u>	<u>Dubai \$/bbl</u>	<u>Brent \$/bbl</u>	<u>Nigerian Forcados \$/bbl</u>	<u>West Texas Intermediate \$/bbl</u>
<u>1998</u>	<u>12.21</u>	<u>12.72</u>	<u>12.62</u>	<u>14.39</u>
<u>1999</u>	<u>17.25</u>	<u>17.97</u>	<u>18.00</u>	<u>19.31</u>
<u>2000</u>	<u>26.20</u>	<u>28.50</u>	<u>28.42</u>	<u>30.37</u>
<u>2001</u>	<u>22.81</u>	<u>24.44</u>	<u>24.23</u>	<u>25.93</u>
<u>2002</u>	<u>23.74</u>	<u>25.02</u>	<u>25.04</u>	<u>26.16</u>
<u>2003</u>	<u>26.78</u>	<u>28.83</u>	<u>28.66</u>	<u>31.07</u>
<u>2004</u>	<u>33.64</u>	<u>38.27</u>	<u>38.13</u>	<u>41.49</u>
<u>2005</u>	<u>49.35</u>	<u>54.52</u>	<u>55.69</u>	<u>56.59</u>
<u>2006</u>	<u>61.50</u>	<u>65.14</u>	<u>67.07</u>	<u>66.02</u>
<u>2007</u>	<u>68.19</u>	<u>72.39</u>	<u>74.48</u>	<u>72.20</u>
<u>2008</u>	<u>94.34</u>	<u>97.26</u>	<u>101.43</u>	<u>100.06</u>
<u>2009</u>	<u>61.39</u>	<u>61.67</u>	<u>63.35</u>	<u>61.92</u>
<u>2010</u>	<u>78.06</u>	<u>79.50</u>	<u>81.05</u>	<u>79.45</u>



Short Term Price Pressures (4Q2011)

Downward

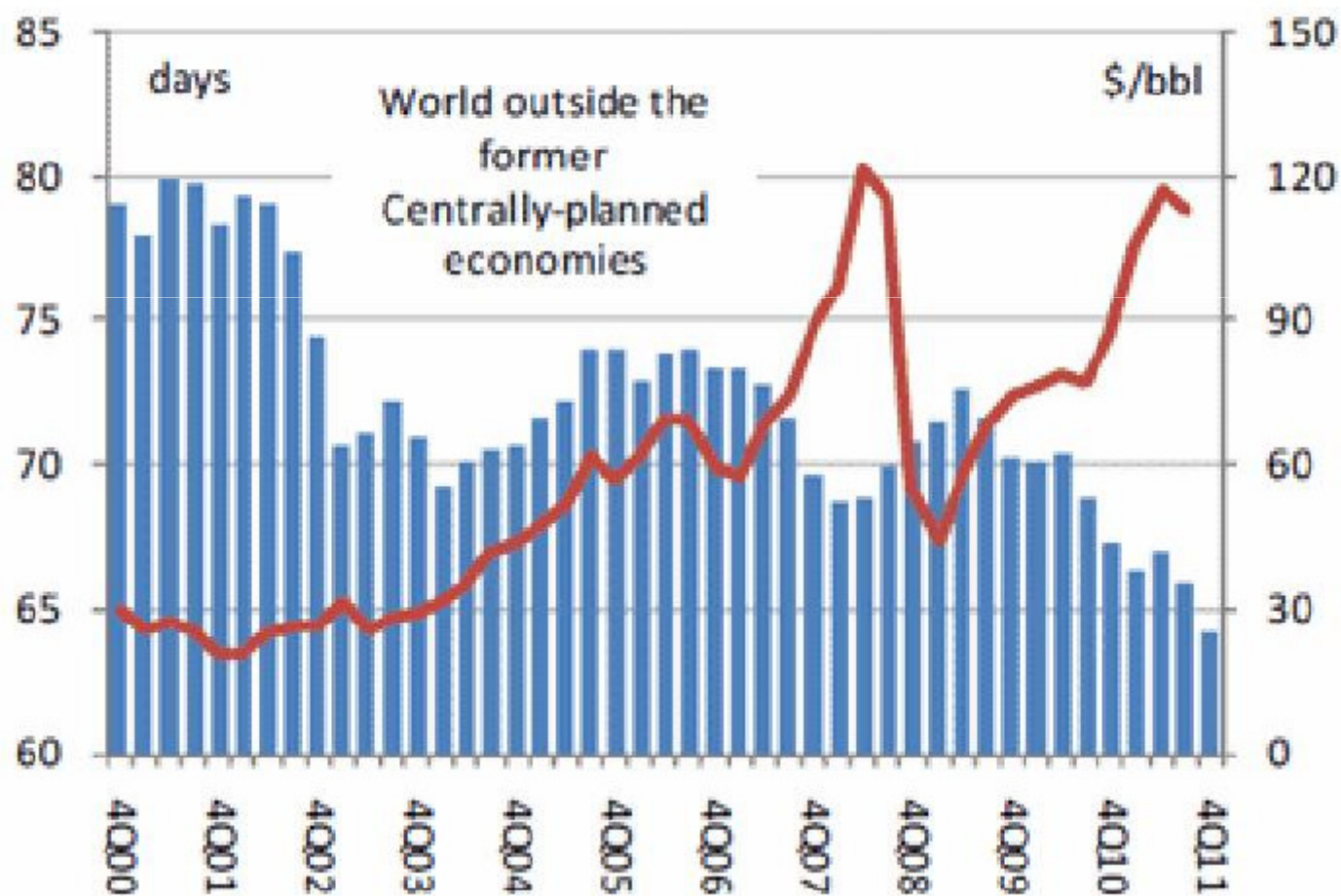
- Eurozone crisis- rising yields on Italian and Spanish 10 year bonds
- Greek default fears could lead into full scale systemic crisis
- Weak eurozone consumer confidence figures published on November 22nd
- Disappointing German GDP figures for 3Q11, released on November 15th
- Reduced estimates on YoY global oil demand growth for both 2011 and 2012
- Libyan production outpaces forecast
- Increased North Dakota oil production and drilling

Upward

- Increase in Chinese diesel imports could lead to tightening market
- Improving US industrial production in October
- Increasing middle distillate demand in the US
- Further declines in US crude and oil product inventories
- Slight reduction in OPEC oil supply (October figures)
- Continuing decrease of FSU net exports of crude and petroleum products
- Terrorist attacks on oil installations in Nigeria
- Persisting Syria unrest
- Mounting fears of Israeli strike against Iranian nuclear facilities

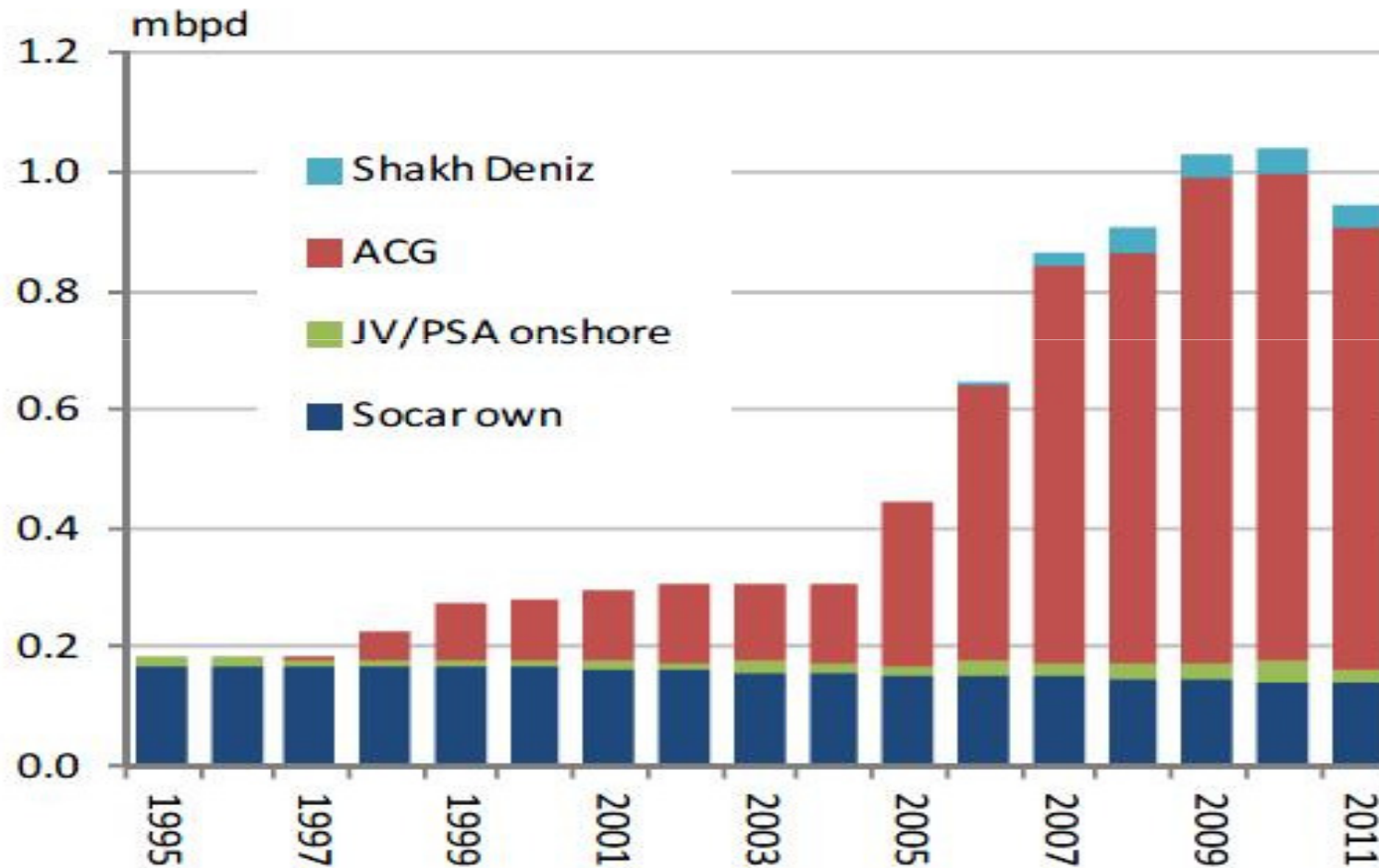


Oil Prices and Global Stock Cover



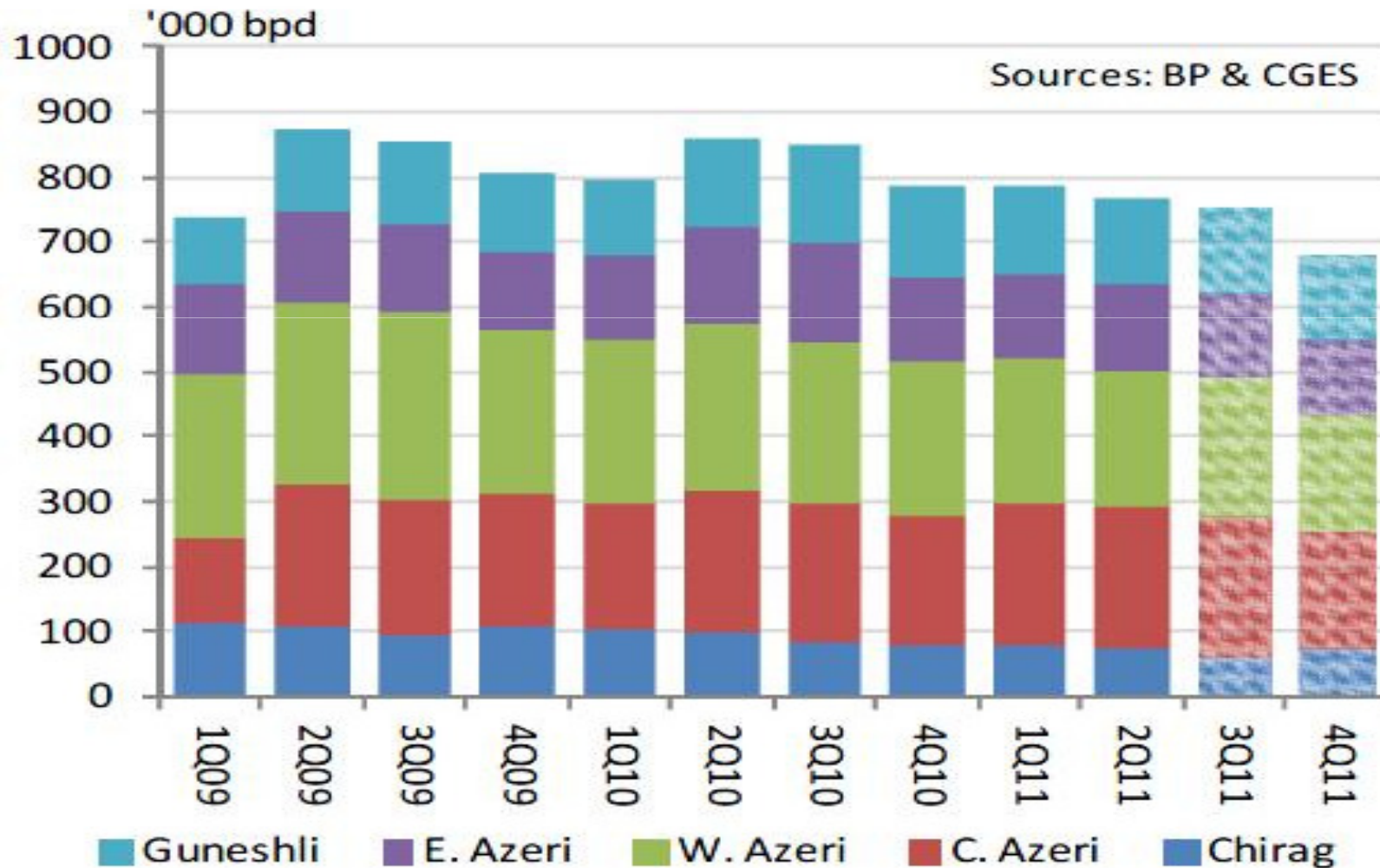
Diminishing FSU Oil Exports

Azerbaijan's Oil Production





ACG Quarterly Oil Production



Long Term Price Pressures

Downward

- Eurozone crisis spreads through contagion
- Double dip recession takes hold
- Further downward revision of global economic growth
- BRIC's loose development momentum
- Drop in global oil demand
- Increase of global oil stock cover
- Increase of Iraq output above 5.0 mb/day
- Drastic increase of indigenous USA oil production
- Substantial overall supply increase from non OPEC countries (i.e. Brazil, Canada, FSU, China)

Upward

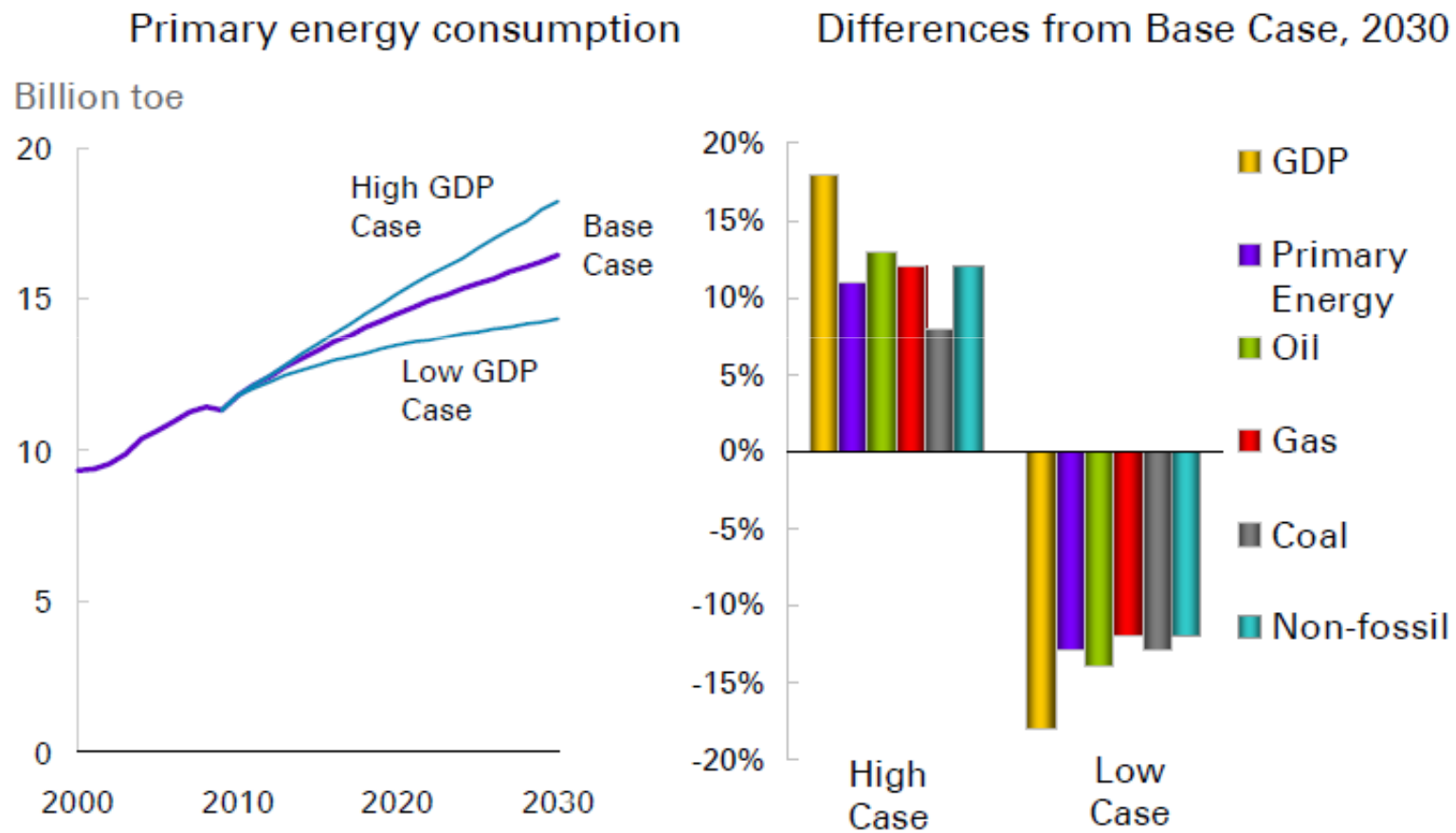
- Double dip recession avoided and global economic growth continues unabated
- OPEC reduces supply
- FSU oil exports decline continues
- Persian Gulf becomes war zone following Israeli attacks and Iranian retaliation
- Iran successfully closes Straits of Hormuz
- Al Queda regroupes and attacks Saudi oil fields and industrial oil installations
- Major hurricanes strike US East Coast disrupting oil supplies
- Prolonged severe winters in northern hemisphere increase oil demand



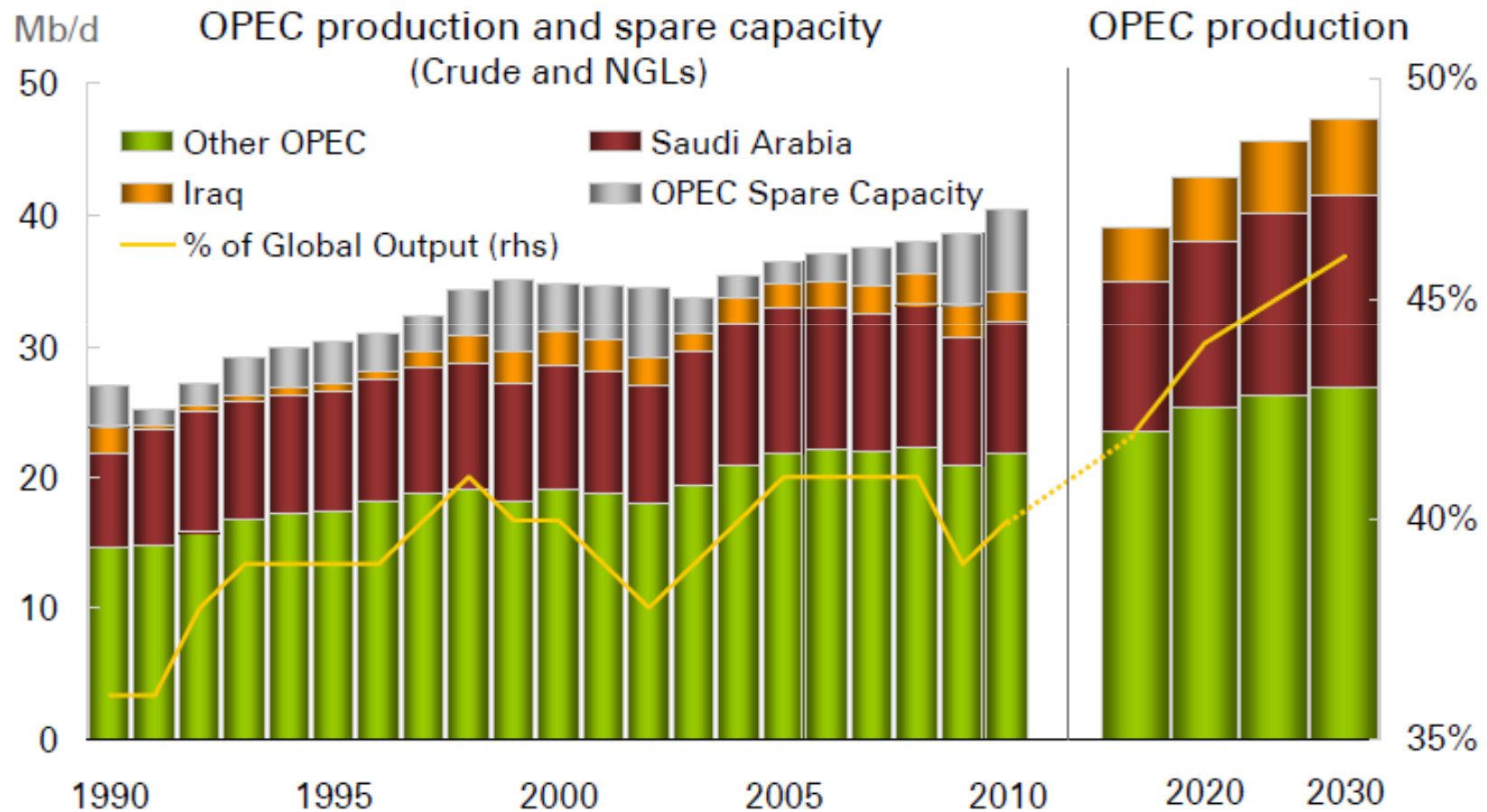
Required global gross additions to oil reserves, 2010 - 2020



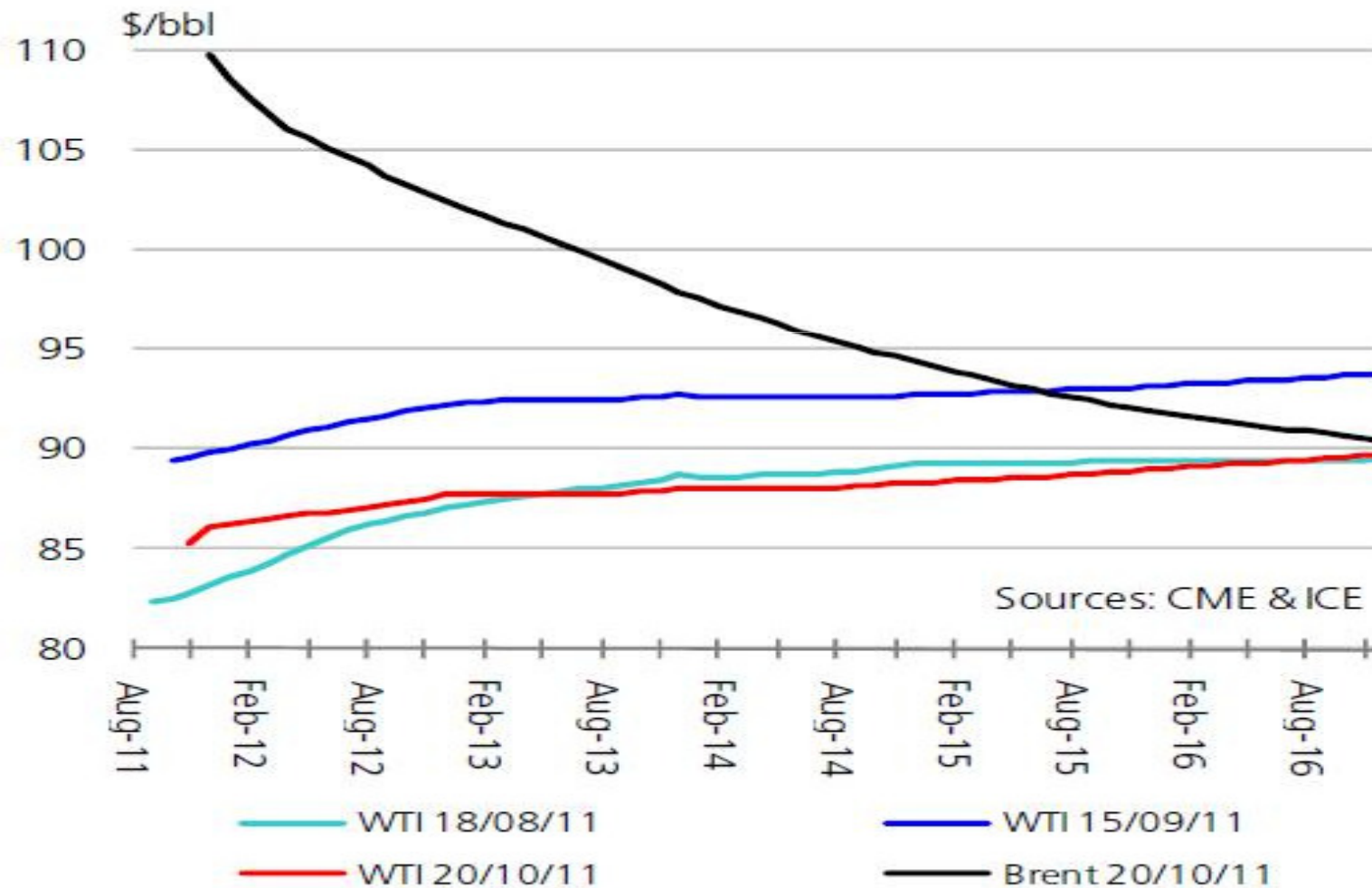
The Future Path of Global Economic Growth



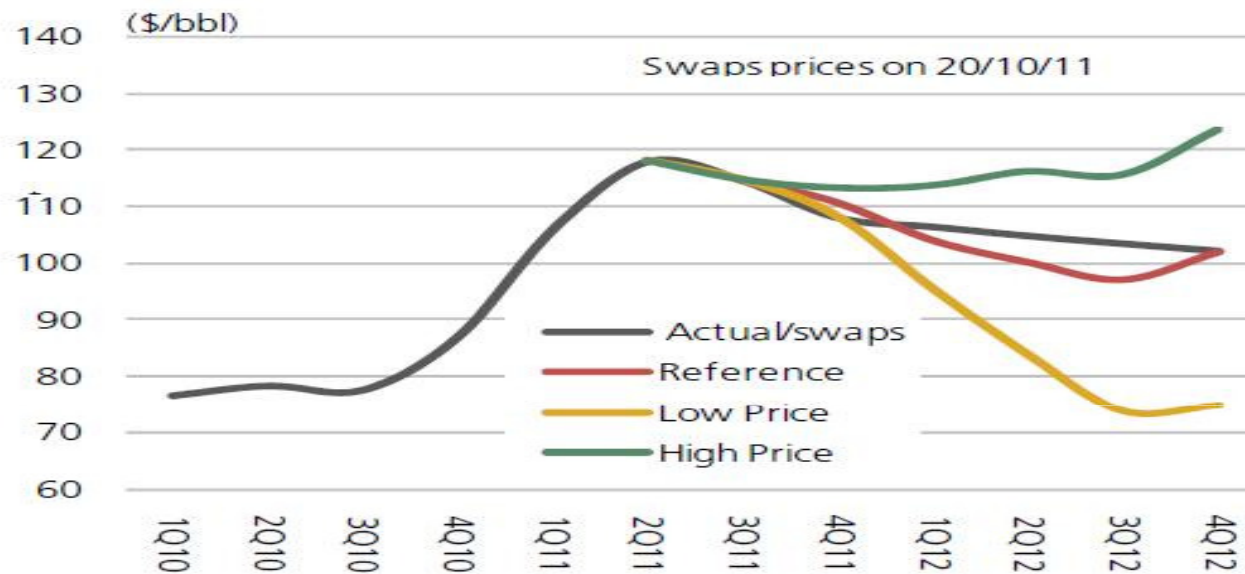
OPEC's critical role in the oil market



WTI and Brent forward price curves



CGES Oil Price Scenarios



Price pressures in the month ahead

-  Further deterioration in the Eurozone sovereign debt crisis.
-  Continued return of Libyan crude oil to the world market.
-  Further output cuts by Saudi Arabia.
-  A further fall in US and European oil inventories.
-  Expected balance of pressures

Long Term Oil Price Pressures

- **Energy and the Economy**
- **Global fuel mix**
- **Energy and carbon emissions**
- **Emerging energy patterns**
- **Geopolitical considerations**

Energy and the Economy

- Global energy consumption growth continues, driven by industrialisation in the developing world – but efficiency improvements are likely to accelerate.
 - World primary energy use is projected to grow by an annual average of 1.7% (or a total of 40%) in 2010-30, not much lower than during the previous two decades (1.9% p.a. or 45%).
 - 93% of global growth is accounted for by non-OECD economies; their share of global consumption is likely to reach two-thirds by 2030, from about half today and 43% in 1990.
 - Energy efficiency, broadly defined as the ratio of energy to GDP, is set to accelerate, facilitating faster income growth over the next 20 years. Efficiency improves faster in the non-OECD economies.
 - Energy consumption growth is driven by power generation and industry in the developing world. Transport growth slows because of a decline in the OECD.



Global Fuel Mix

- The global fuel mix continues to diversify – and for the first time, non-fossil fuels will be major sources of supply growth.
 - The contribution of fossil fuels to primary energy growth is projected to fall from 83% (1990-2010) to 64% (2010-2030).
 - The contribution of renewables to energy growth increases from 5% (1990-2010) to 18% (2010-2030).
 - The contribution of all non-fossil fuels combined (including nuclear and hydroelectricity) is larger than any fossil fuel for the first time.
 - Coal and oil are losing market share, as all fossil fuels experience lower growth rates; gas is the fastest growing fossil fuel.

Energy and Carbon Emissions

- Energy policy and technology lead to a slow-down in the growth of CO₂ emissions from energy use – but not fast enough to put the world on a safe carbon trajectory.
 - Global emissions growth decelerates from 1.9% p.a. in 1990-2010 to 1.2% p.a. for 2010-30; OECD emissions are lower in 2030 than 2010, but this decline is more than offset by the growth in non-OECD emissions.
 - More aggressive policies could see CO₂ emissions from energy use starting to fall after 2020, with richer countries cutting emissions and developing countries more likely to reduce carbon intensity.
 - Globally, the greatest scope for emission reduction remains in power generation.



Emerging Energy Patterns

- Energy policy is driven by security as well as by climate change concerns – with diverse outcomes across fuels and regions.
 - OECD oil demand has peaked in 2005 and by 2030 will roughly be back at the level of 1990. Biofuels will account for 9% of global transport fuels.
 - OPEC's share in global oil production is set to increase to 46% by 2030, a share not seen since 1977. China will be the world's largest oil consumer.
 - Unconventional gas (shale and CBM) may contribute nearly 40% to global gas growth; LNG trade is set to grow twice as fast as gas production; the US may choose to become a LNG exporter.
 - The share of natural gas in China's energy mix will rise from 4% today to 9% in 2030; coal demand in China will no longer be rising.
 - Oil and gas import dependency in the US will fall to levels not seen since the 1980s.



**Thank you
for your attention**