

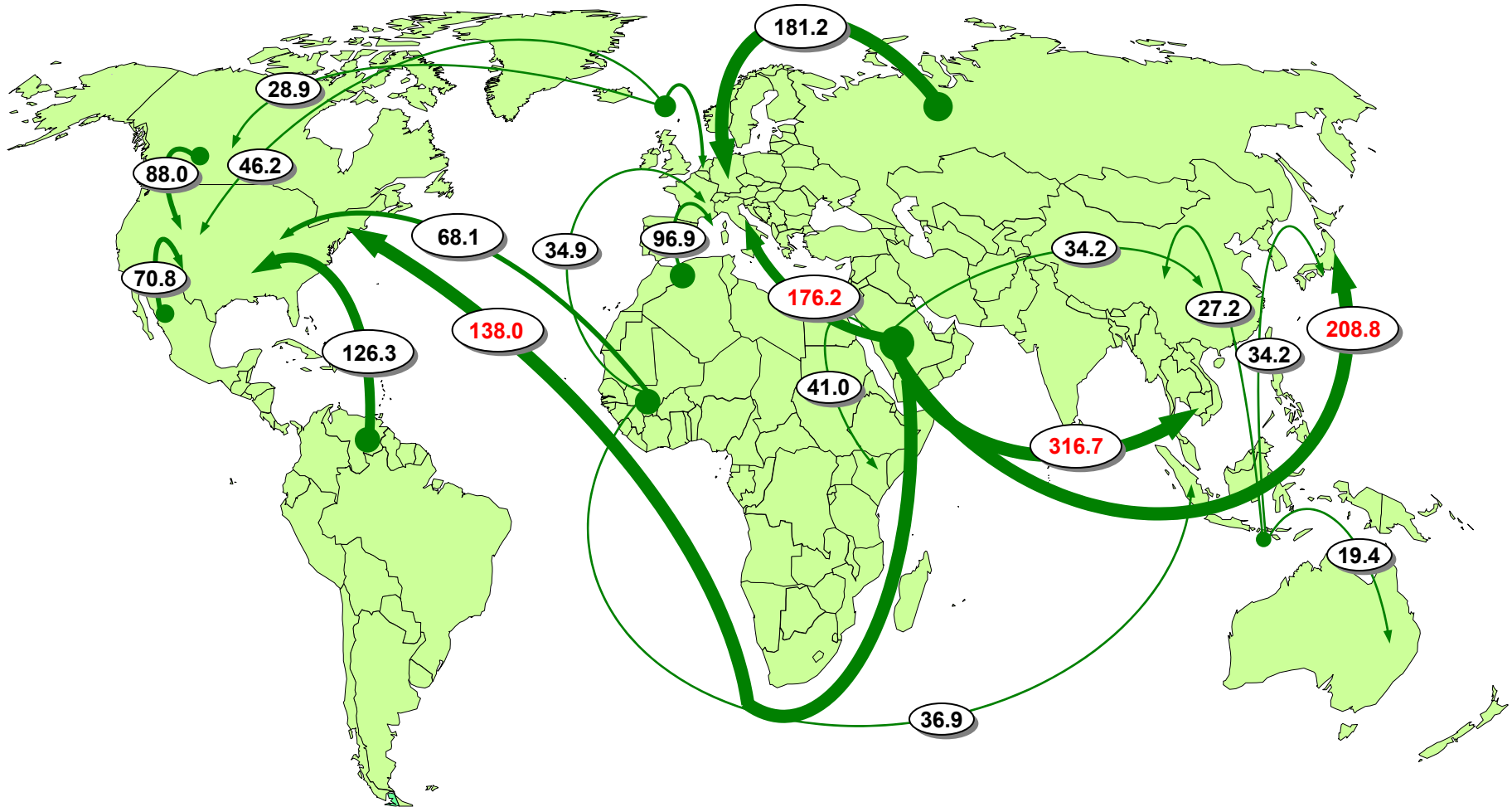


Russia, the Persian Gulf, and World Oil Supply

**Mikhail Khodorkovsky
Washington, 7 February 2003**

The picture today: Main crude oil flows come from Middle East

2001 global commercial flows of crude oil (MMT)





The West has begun to recognize that Russia's oil reserves are much greater than previously thought

Internationally audited reserves of just a few top companies have demonstrated that Western appraisals of Russia's oil reserves have been historically underestimated



**Russia's
proved
reserves**

(World Energy
Council, 1998)

**Internationally audited
(1999-2000) proved
reserves of Top 4*
companies**

* Lukoil, YUKOS, Surgutneftegas,
TNK (without Onako)



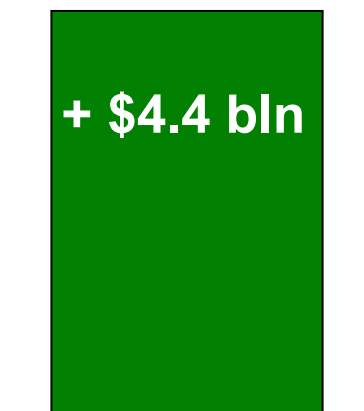
Russian oil industry has internal resources to finance production growth at lower than expected cost

Oil industry
production increase



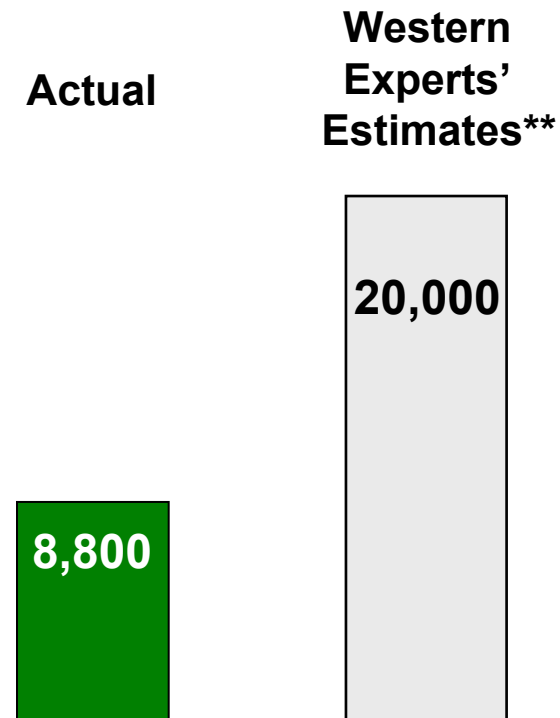
2001

Oil industry
CAPEX increase



2001

CAPEX necessary to
increase production
(\$ per bpd)



2001

2001

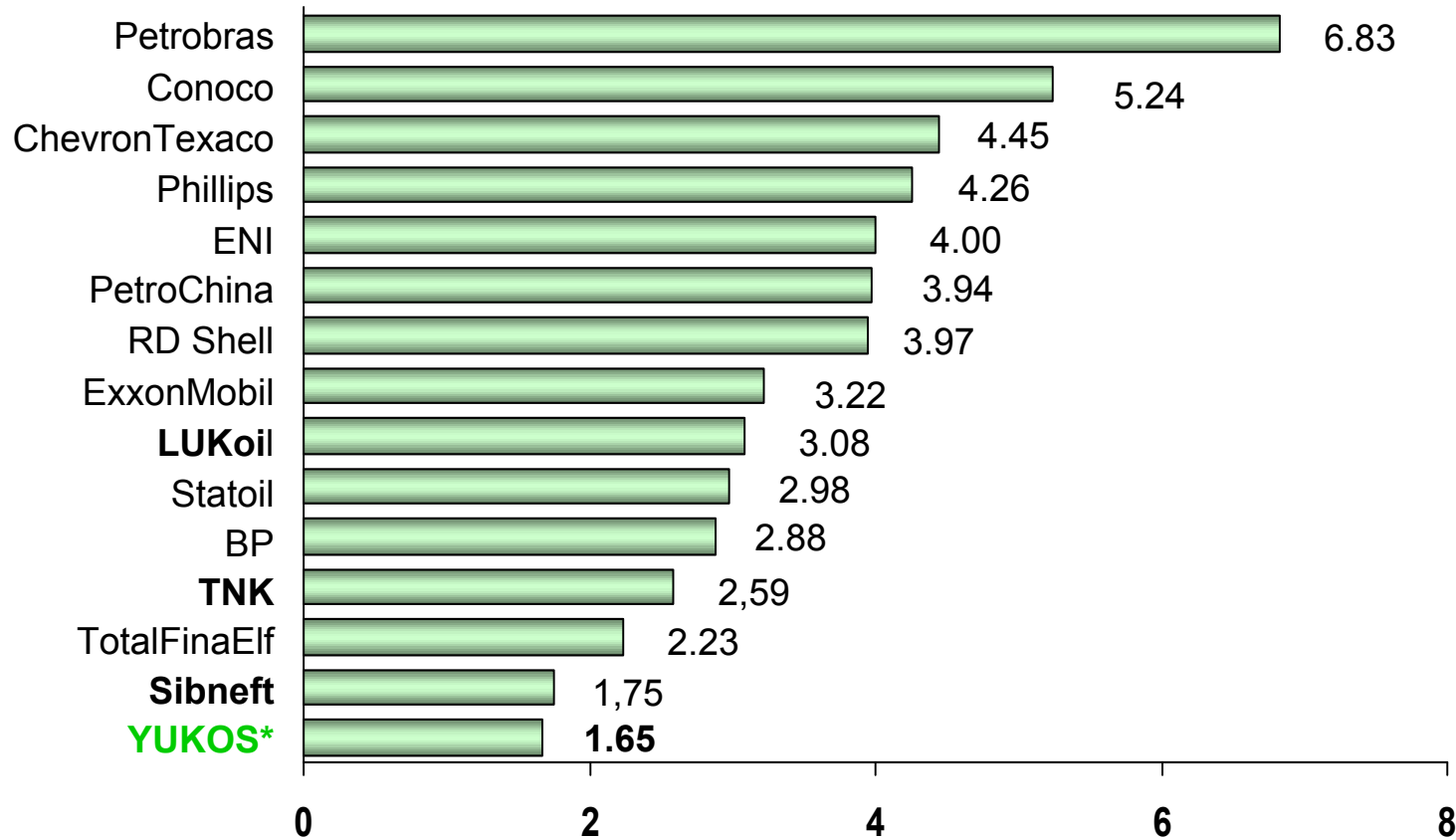
* RF Minenergo

** Richard Matzke, former VP Chevron/Texaco, 2002



Russia's most advanced oil companies intend to maintain operating costs at or near 2001-02 levels

E&P Operating Expenses in 2001, USD per boe

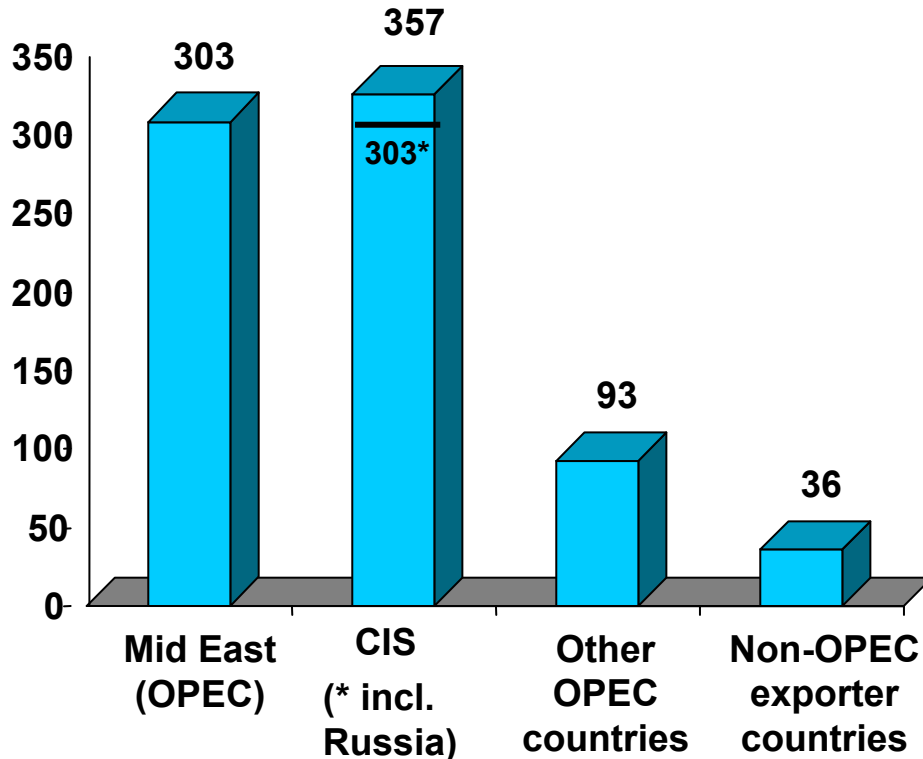


Source: Company Data, estimates based on SFAS 69

* Excludes Veteran Petroleum accrual

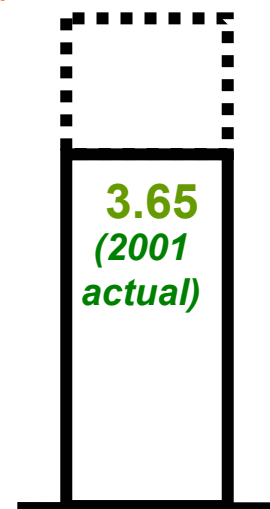
An indisputable fact: the gas reserves of Russia and the CIS are the largest in the world

Traditional gas reserves
(bn boe)



Russian gas production
(bln boe per year)

4.1
(forecast for 2005)



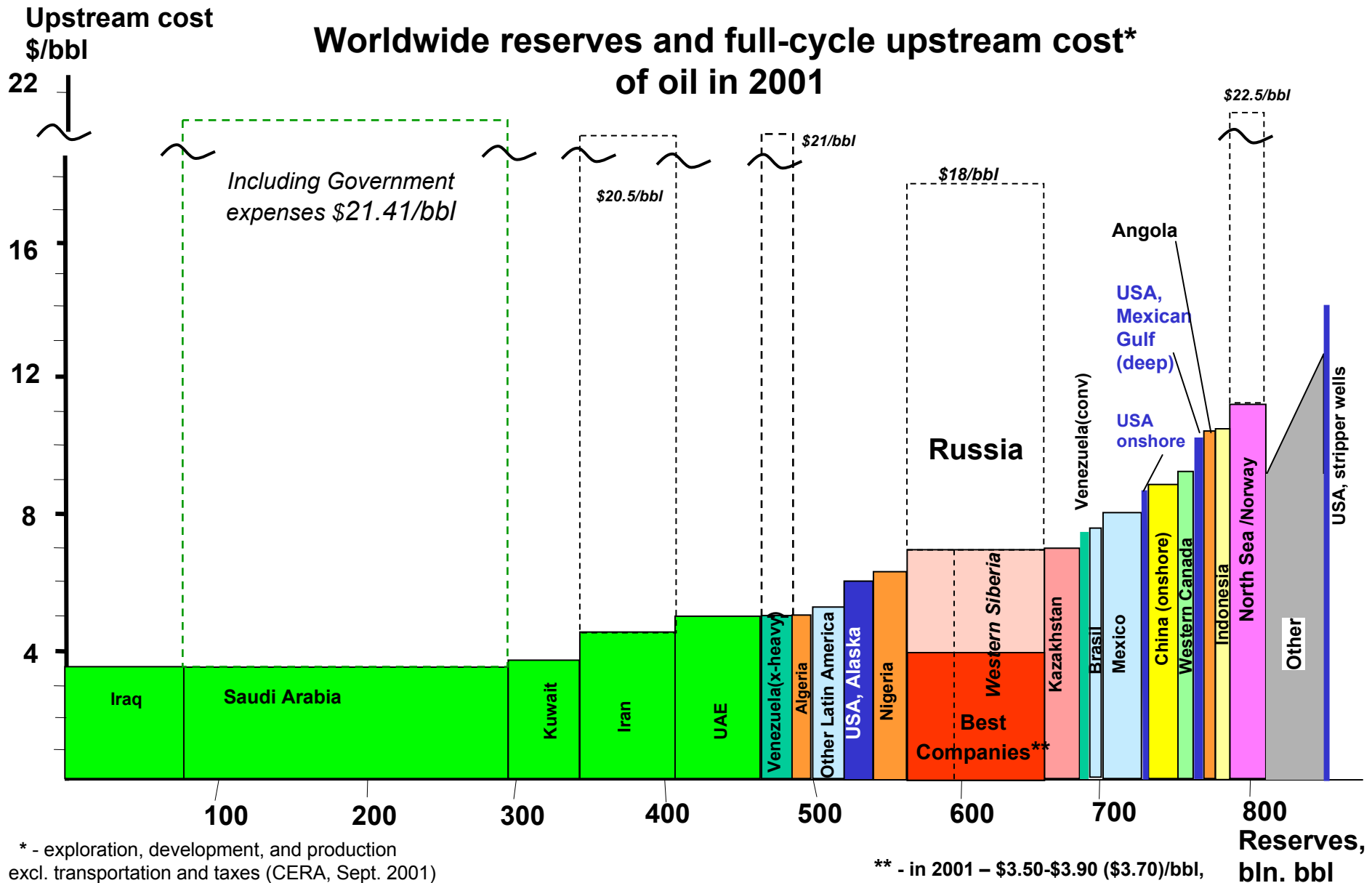
3.65
(2001 actual)

Number of years' supply

74

83

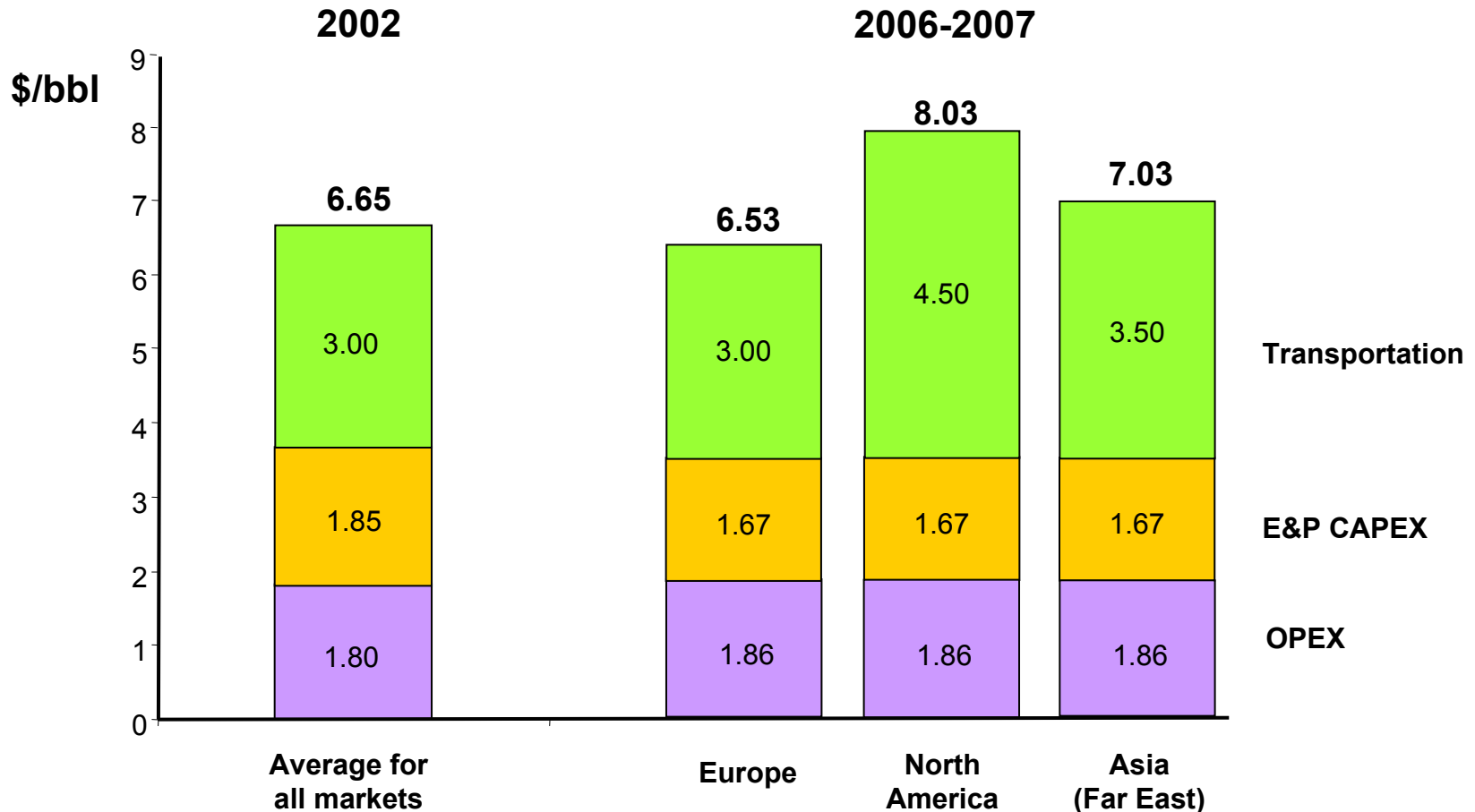
Russian oil exploration and production costs are competitive today





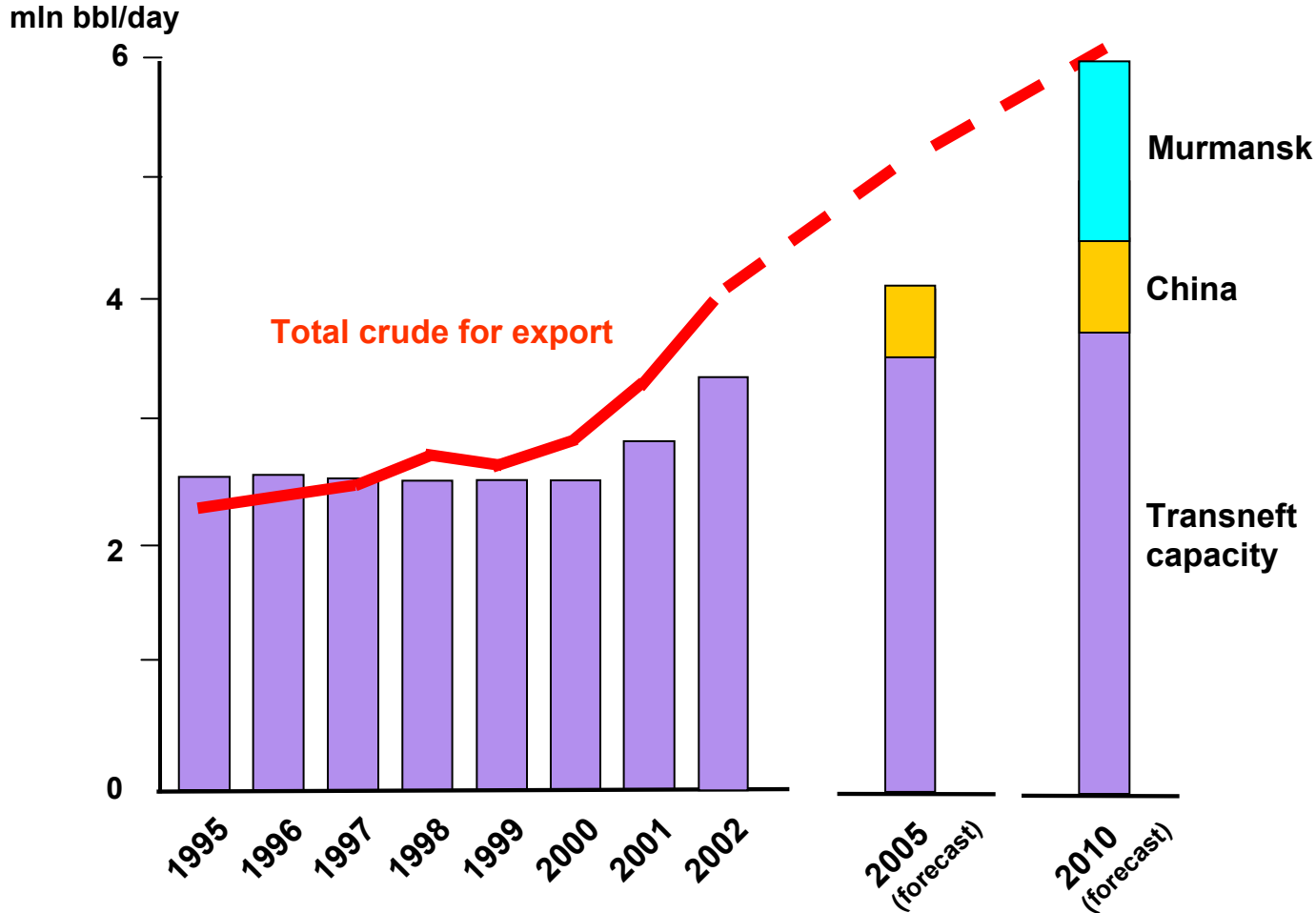
Russia's most advanced oil companies intend to maintain operating costs at or near 2002 levels

Russian oil companies' total costs for bringing crude to market

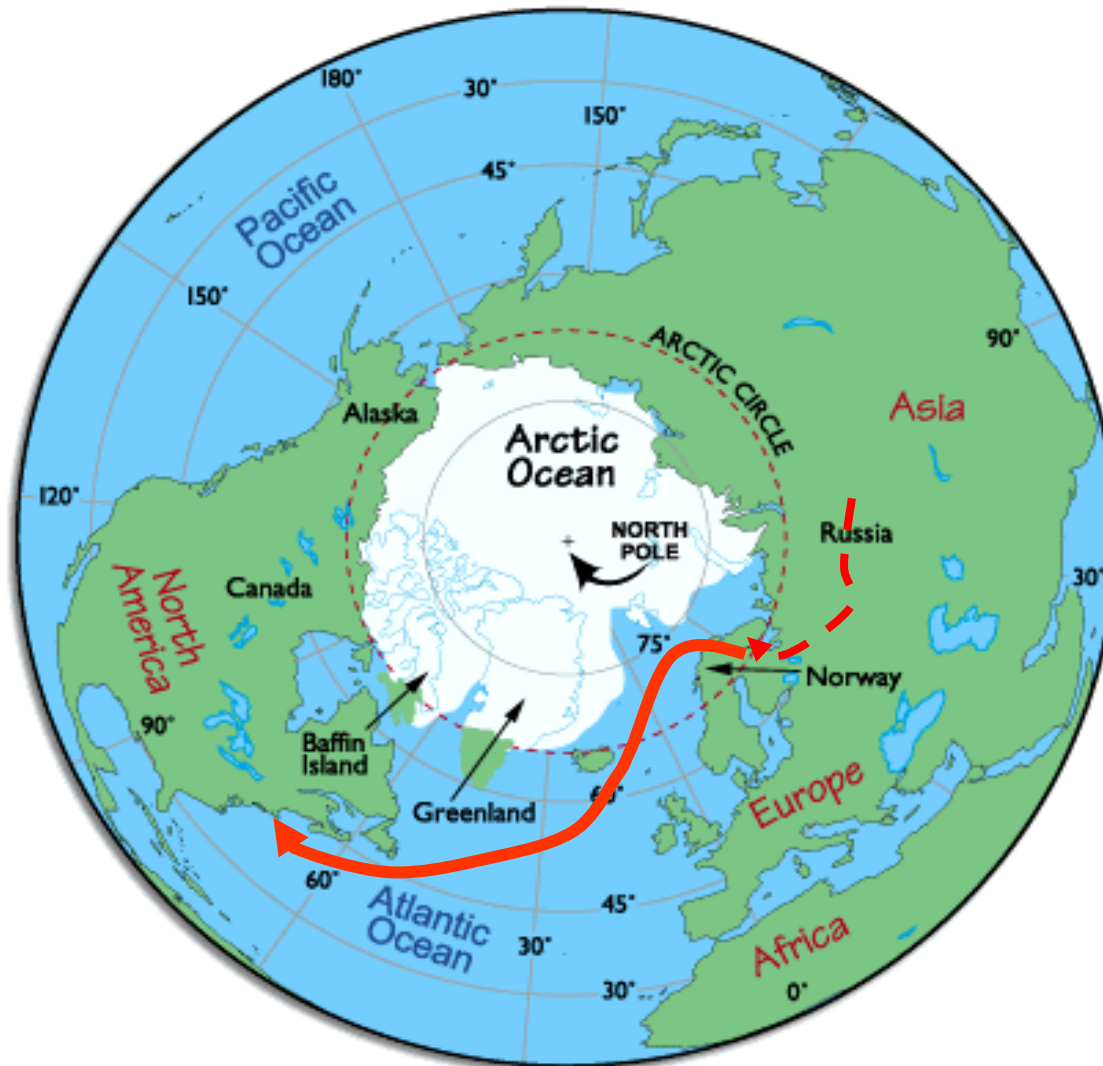


Removing the bottlenecks to the development of Russia's hydrocarbon exports

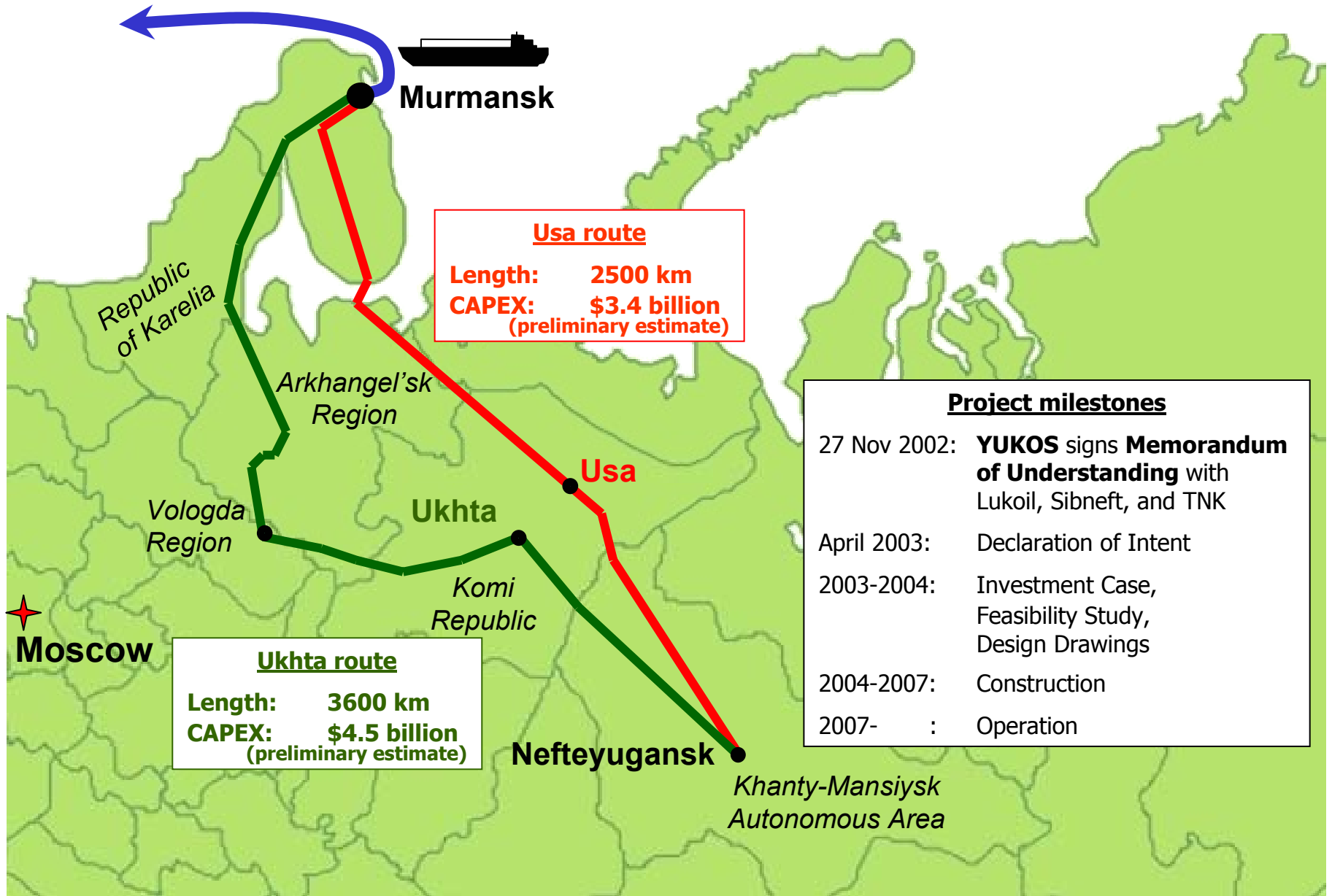
Development of oil export infrastructure



Oil can be transported from Russia to the US by a shorter route than the one used for transporting crude from the Middle East



The Murmansk Pipeline Project



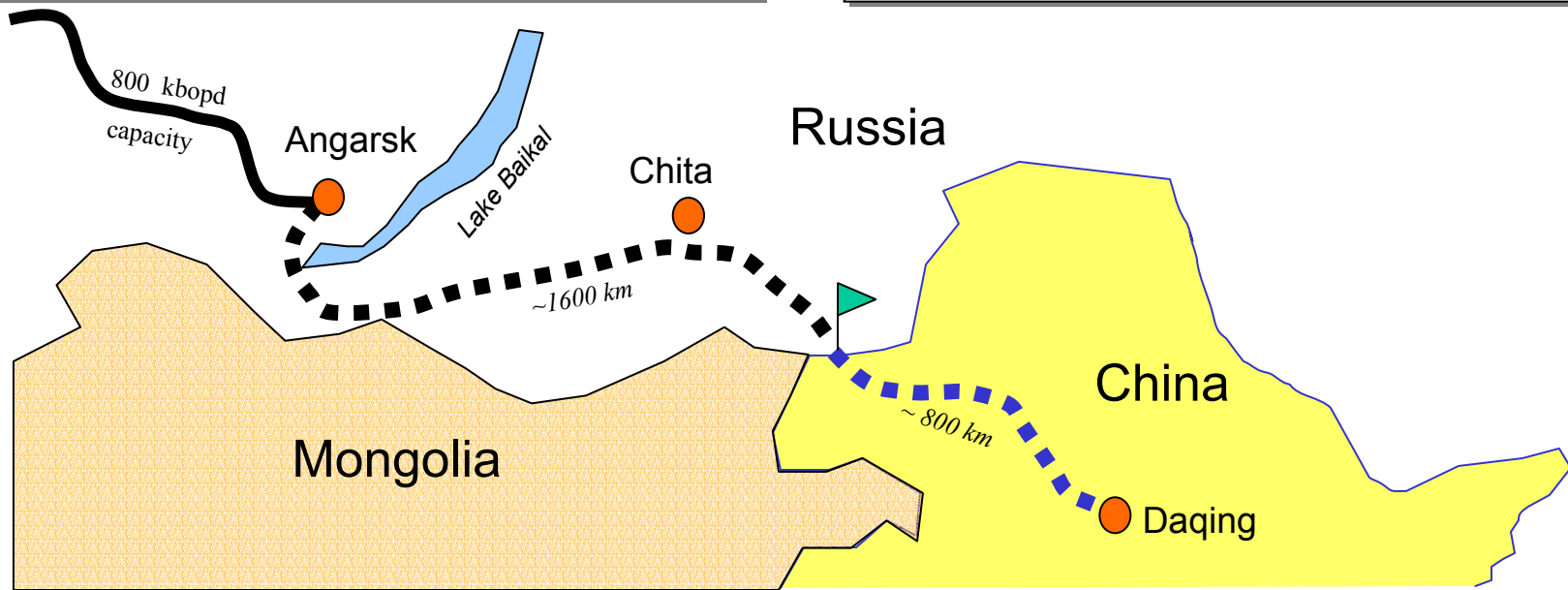
The most promising projects to the Far East: a pipeline to China

Timetable

- July 2002 - Feasibility study
- 2003 - Detailed project
- 2003-2005 - Construction
- 2005-2009 - 400 kbopd shipments
- 2010-2030 - 600 kbopd shipments

Facts and figures

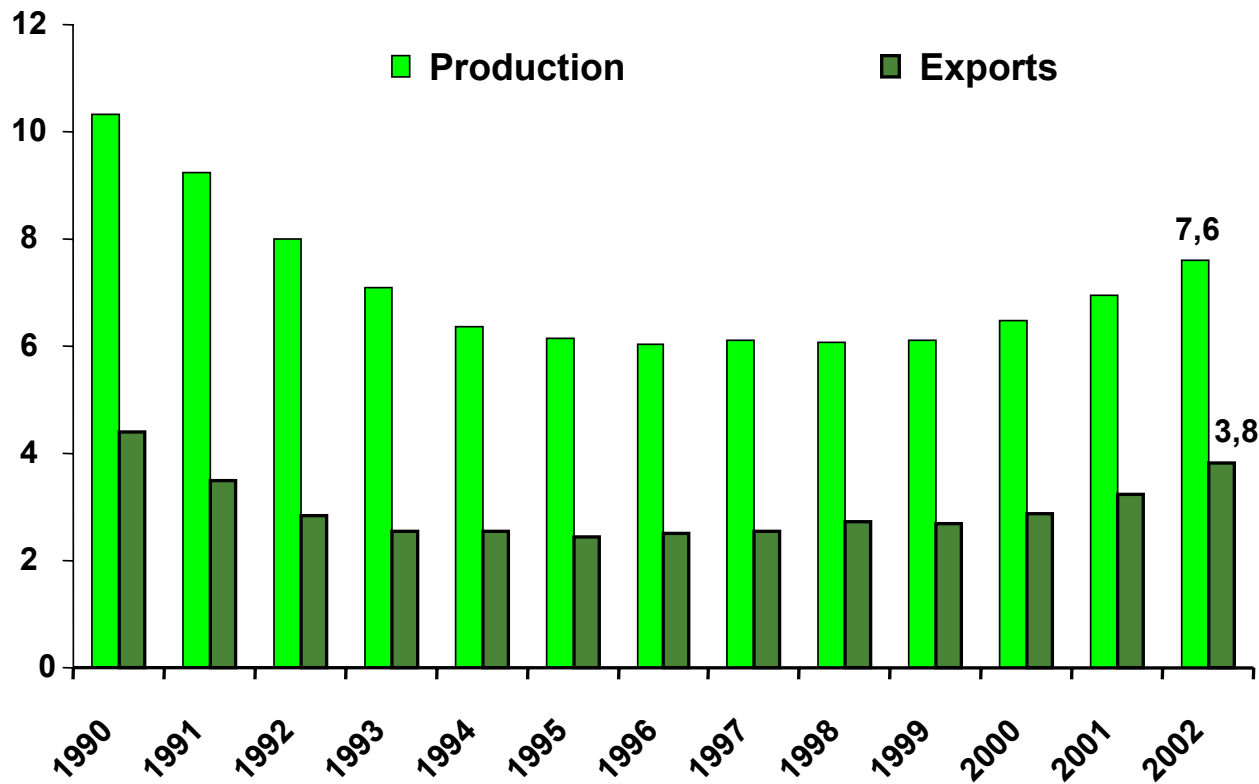
- Length ~ 2400 km (1500 miles)
- Initial capacity 400 k bopd
- Estimated cost ~ 1.7 bln USD
- Agreed: pricing formula, volumes, delivery guarantees
- Operator - Transneft



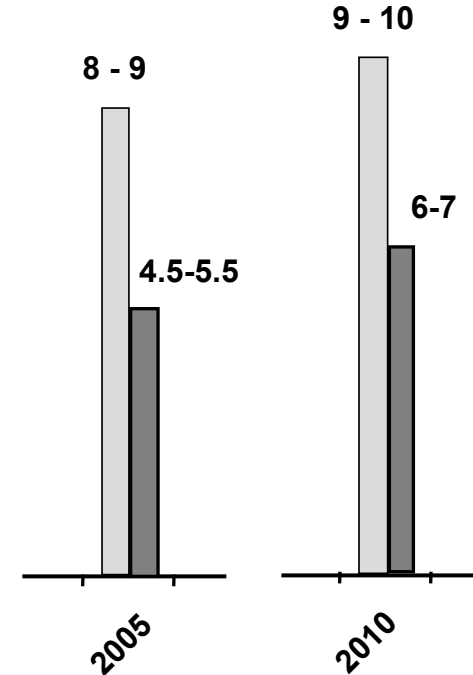
Continued growth of Russian oil production and export is limited by market opportunities

Russian crude production and exports outside the FSU

mln bbl per day

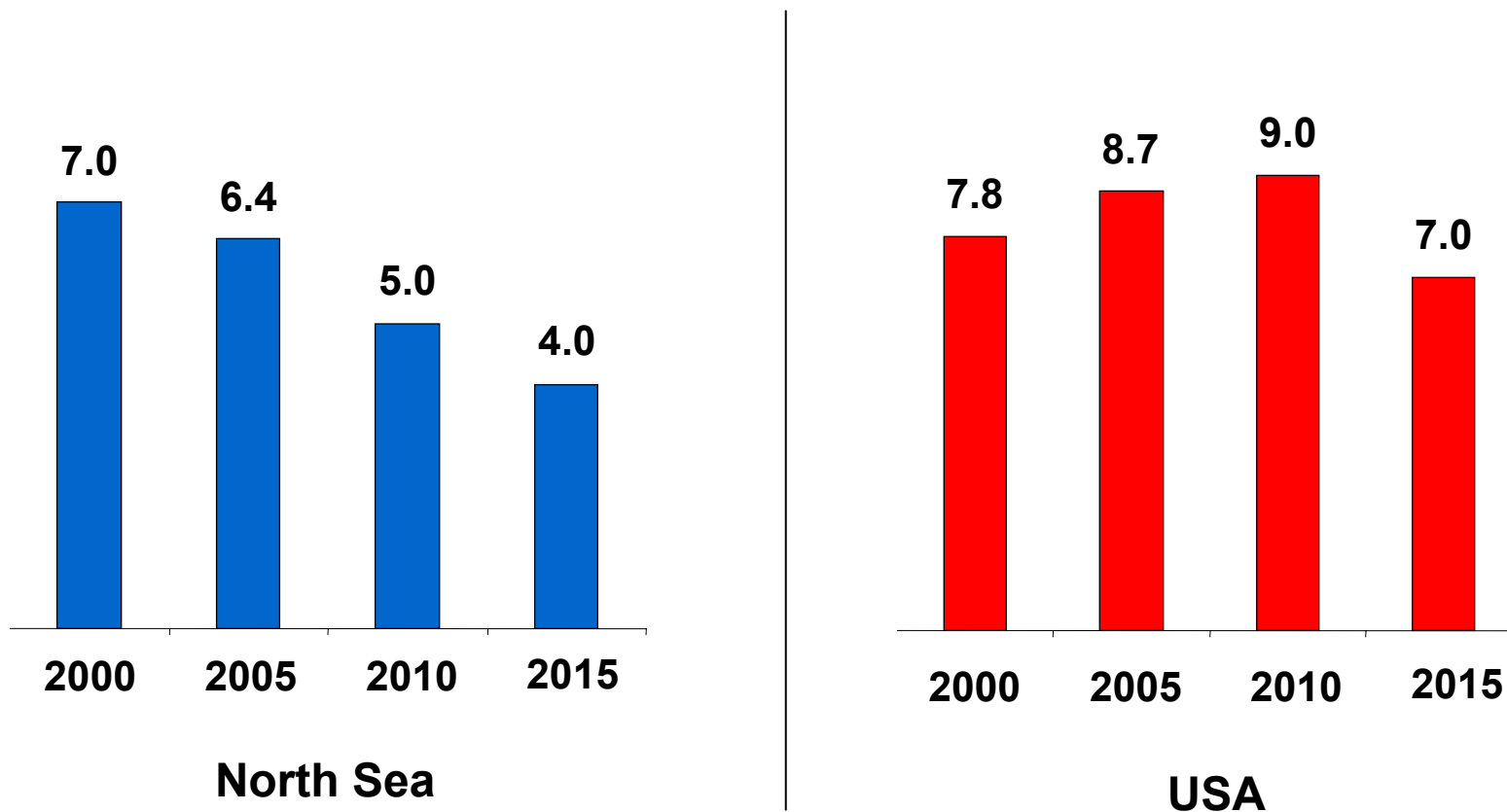


Market ceiling



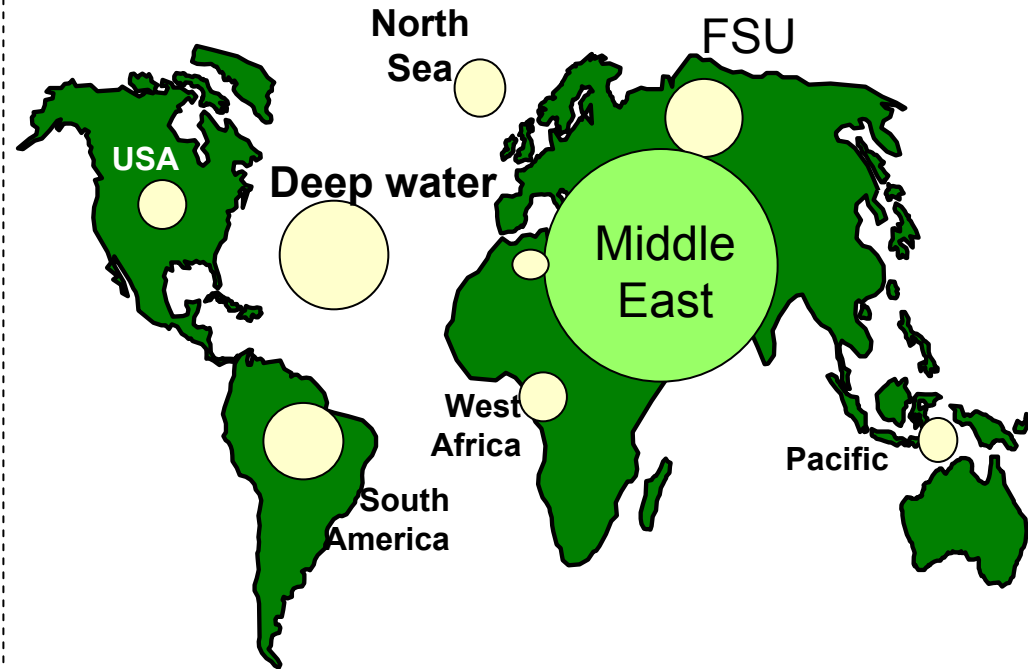
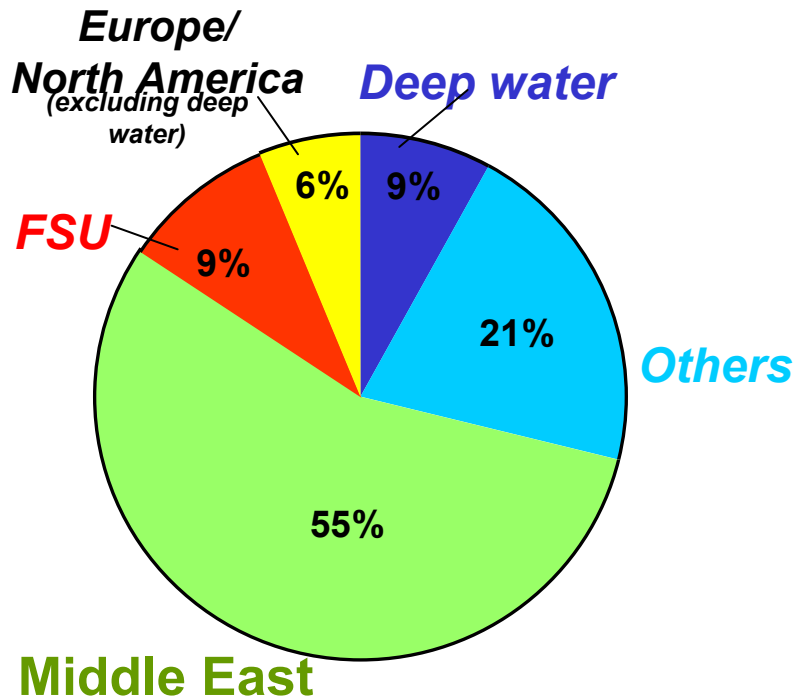
Reduction in oil production and reserves is forecasted in politically stable regions

Liquid hydrocarbons output (mln bpd)



If past evaluations are taken into account, the geopolitical picture of the oil industry in 10 years will be determined by the Middle East

Western estimates of world's oil reserves distribution in late 90's

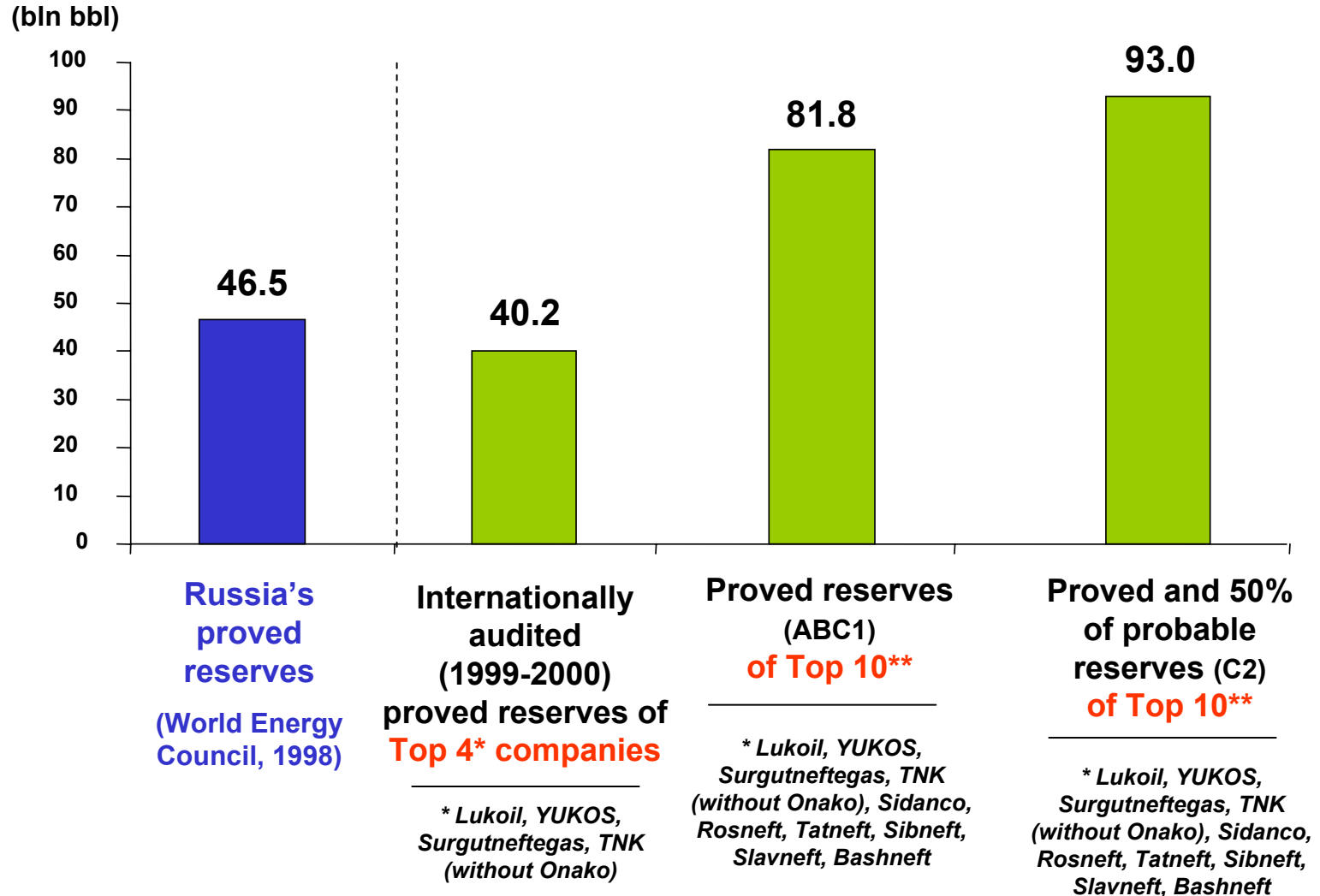


Relative size of global oil sources (reserves and production)



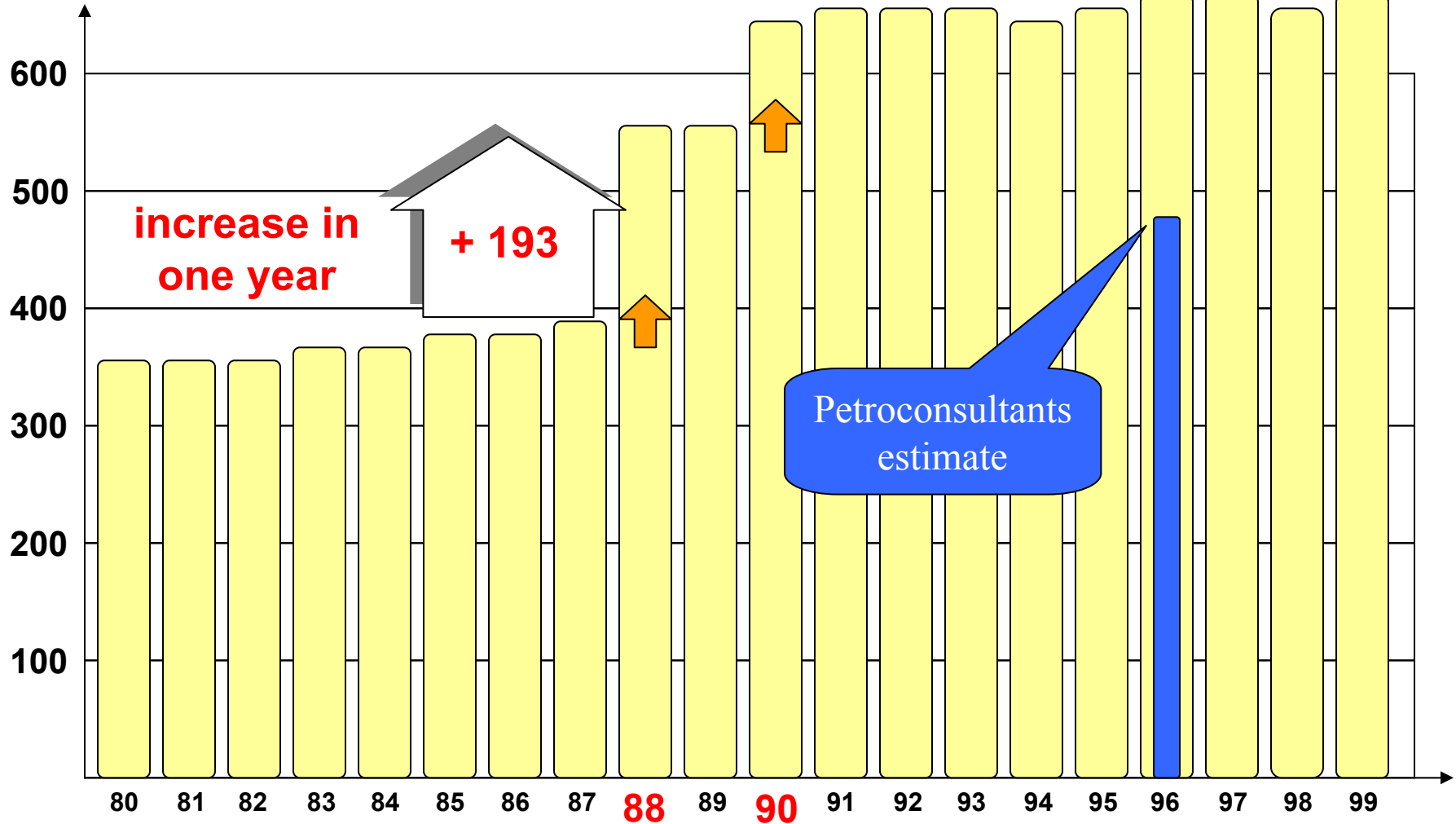
Western appraisals of Russia's oil reserves have been historically underestimated

Oil reserves of Russia and top Russian oil companies



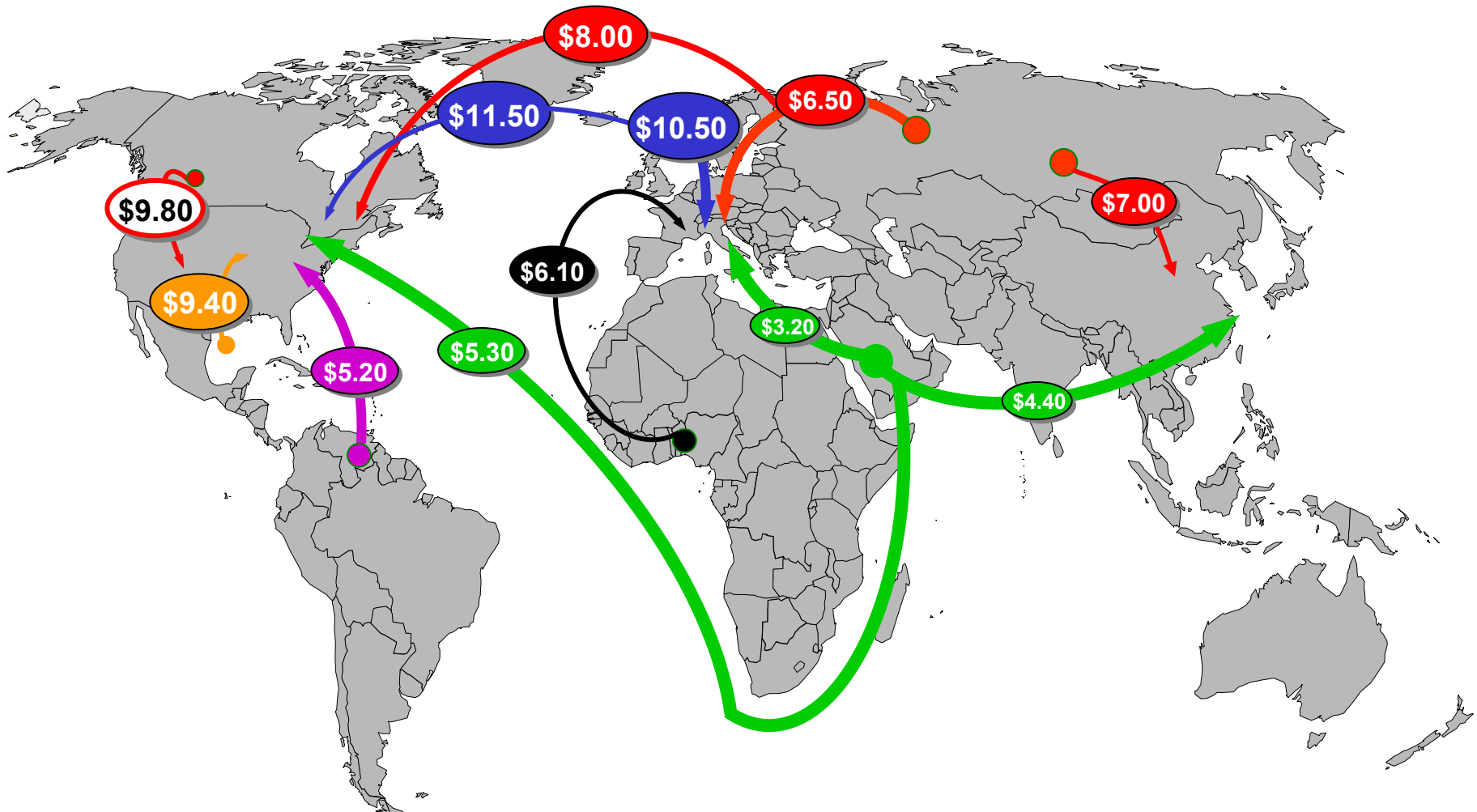
There are grounds to believe that Middle Eastern reserves may be overstated

Sudden statistical leaps in combined oil reserve figures for Abu Dhabi, Dubai, Iran, Iraq, Kuwait, and Saudi Arabia



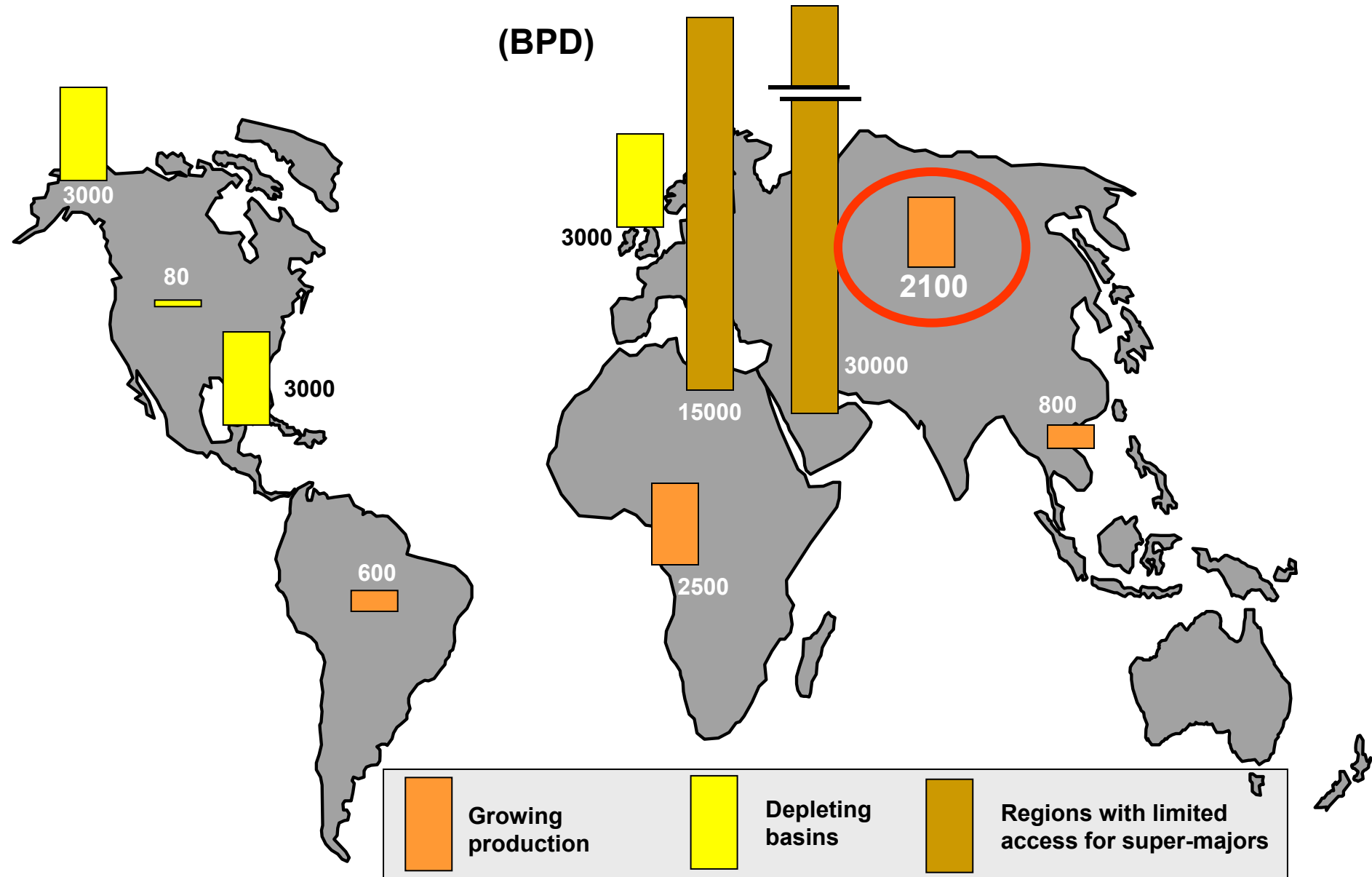
Russian oil is competitive in Europe, the USA, and interior regions of the Far East

Total cost of one barrel of crude shipped to principal world markets in 2006-2007



Average new oil well potential in Russia is actually quite attractive compared with the rest of the world oil industry

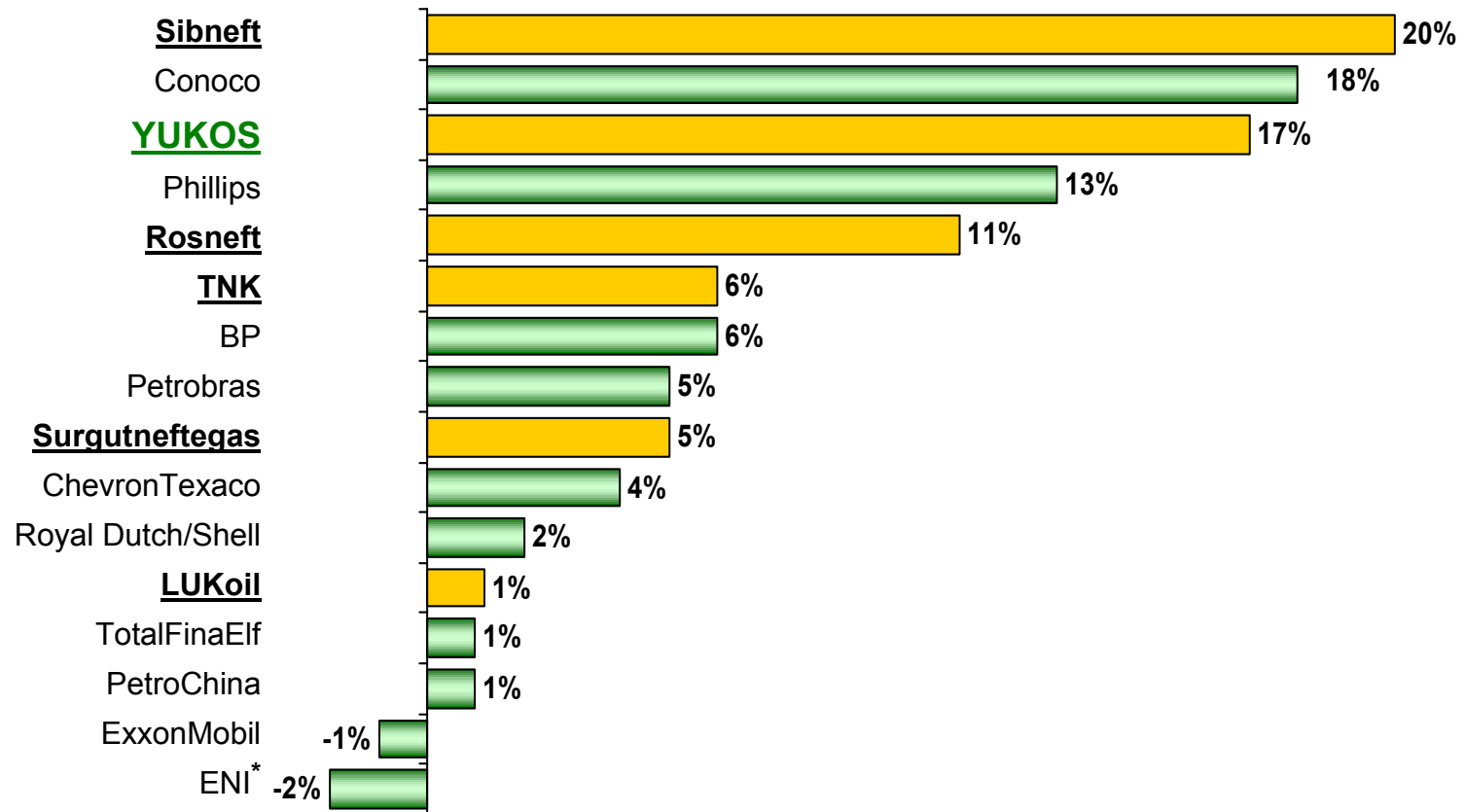
(BPD)





Several Russian companies are among the world leaders in oil industry production growth

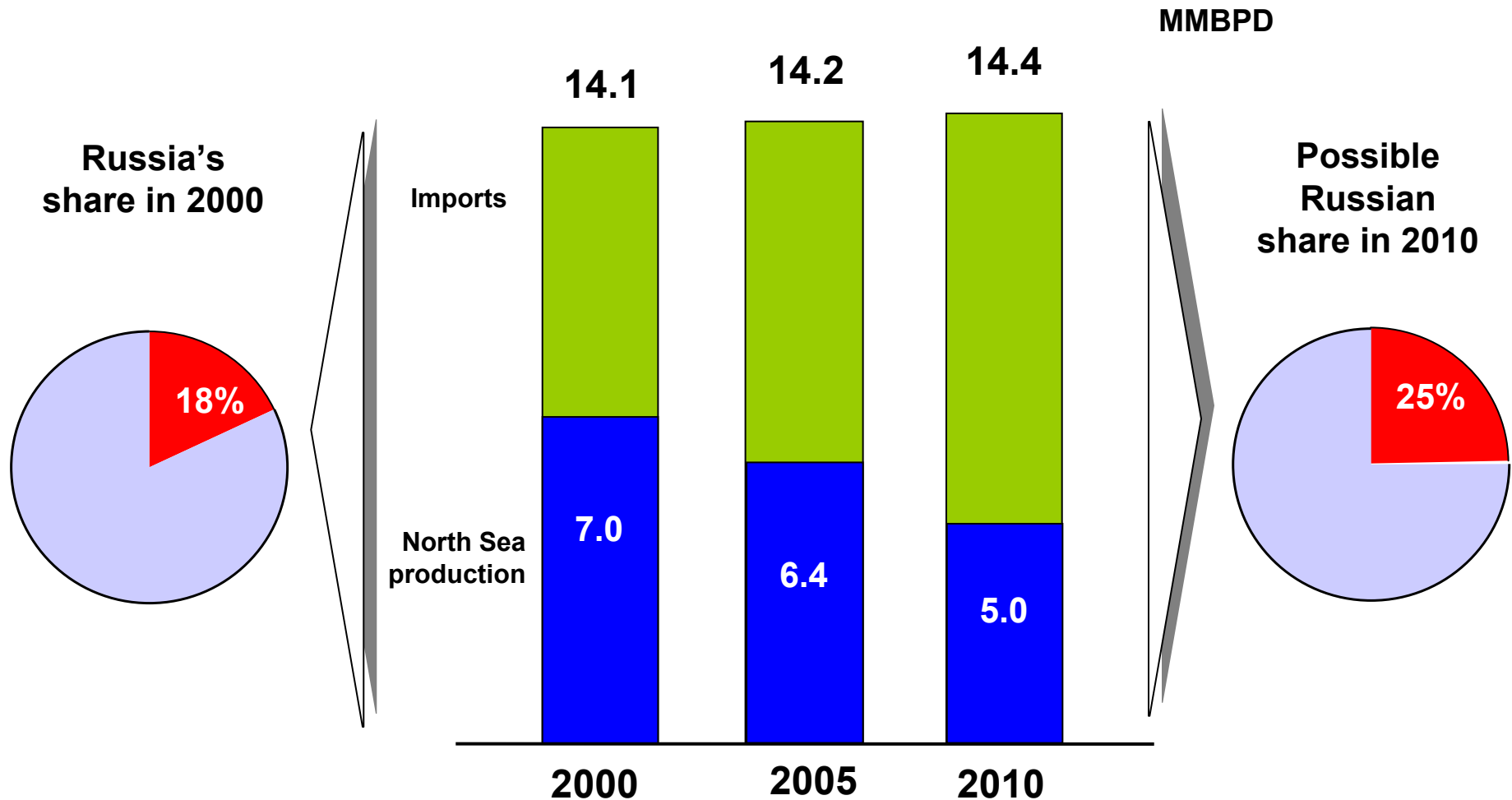
Relative Production change for selected companies, 2001/2000, %



* - excl. Lasmo

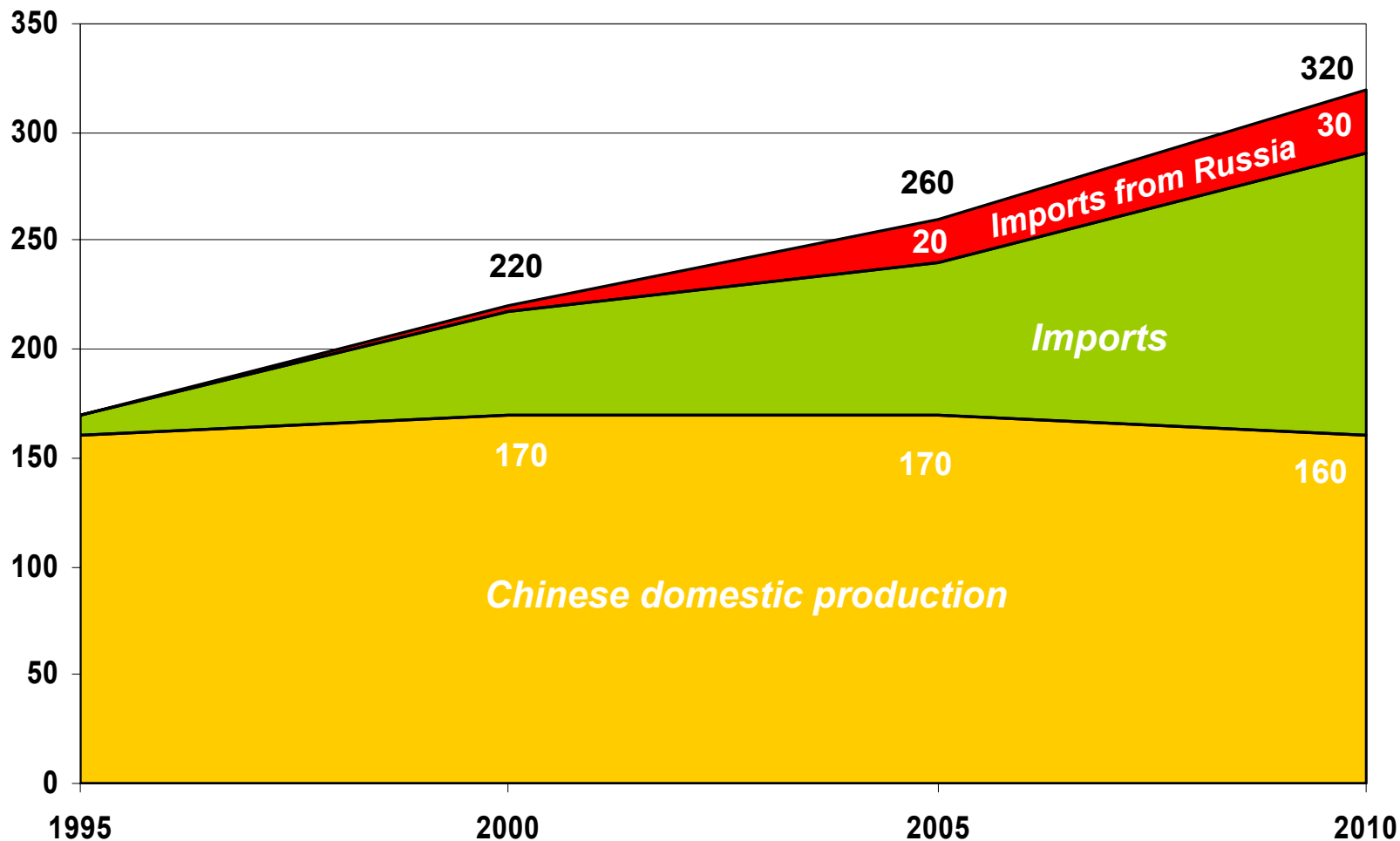
Russia can become a reliable source of crude for Europe for many years to come

Western European oil consumption will be more and more dependent on imports in the future



Russia can meet 10% or more of China's oil import requirements

China's crude requirements (MMT)



The geopolitical imperative for today is to diversify energy sources and concentrate on the most reliable ones

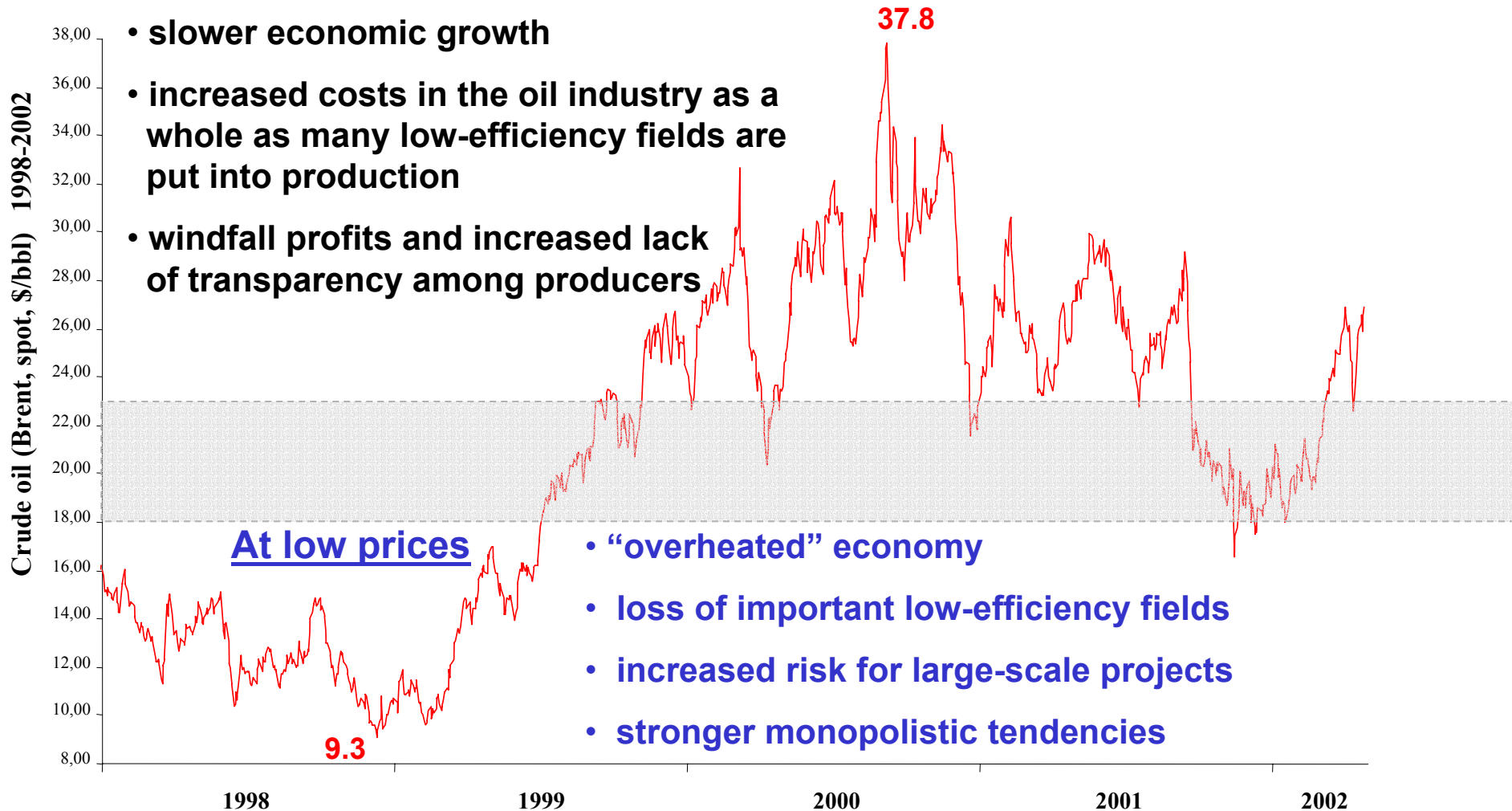
Reducing oil market volatility mitigates the negative effects of price pressure:

At high prices

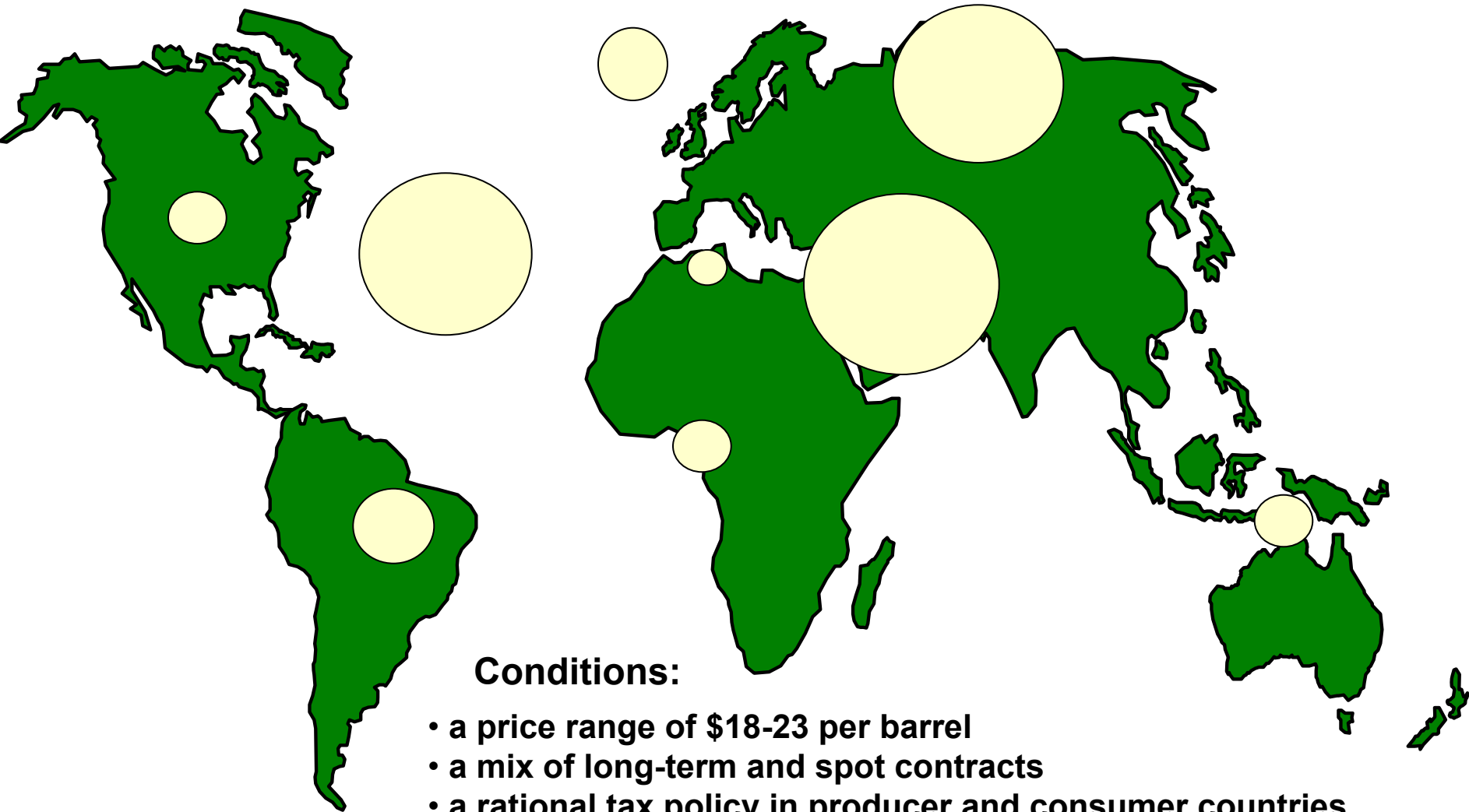
- slower economic growth
- increased costs in the oil industry as a whole as many low-efficiency fields are put into production
- windfall profits and increased lack of transparency among producers

At low prices

- “overheated” economy
- loss of important low-efficiency fields
- increased risk for large-scale projects
- stronger monopolistic tendencies



A multi-polar geopolitical picture is optimal





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Russian oil companies' total costs for bringing crude to market

