



Reflections on key oil challenges and opportunities

Abdalla Salem El Badri
Secretary General for OPEC

Rome, 20-22 April 2008



Energy interdependence: key to integration and stability

Strong link between energy sources and uses: “integration”

- The role of oil is as important to its economic growth and prosperity of consuming/importing countries, as it is to the development and social progress of producing/exporting countries

Evolving understanding on energy security

- It is crucial for both sides to take into account demand as well as supply perspectives

Convergence on issues of mutual concern

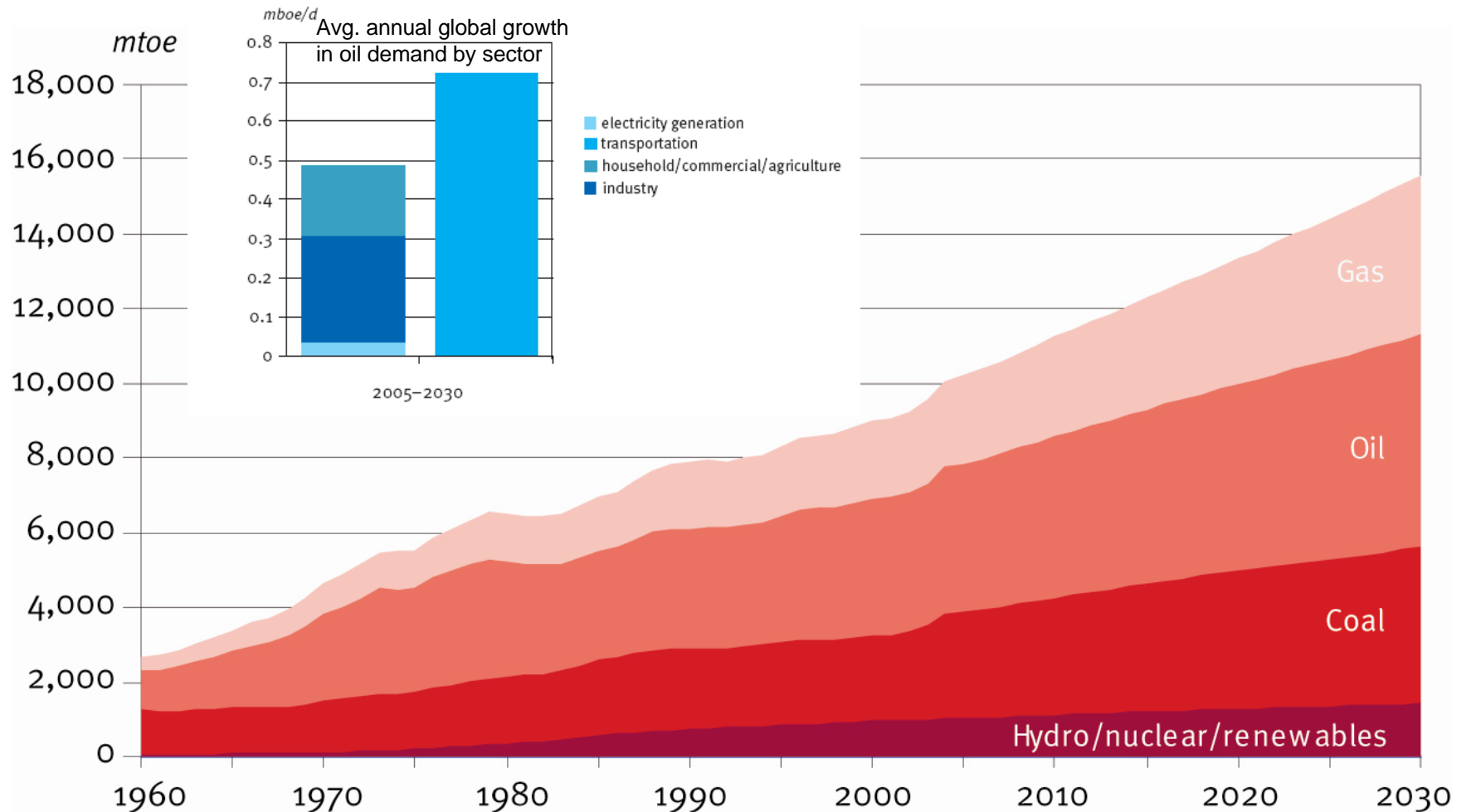
- Security of supply and demand; market stability; enhanced transparency and predictability of fundamentals; upstream and downstream investments; technology



Energy and oil demand is set to grow

(demand by fuel type, mtoe)

- Fossil fuels will continue to satisfy the bulk of world's energy needs
- Oil is set to retain greatest share; fast growth of natural gas
- Low base for renewables – limited impact on mix

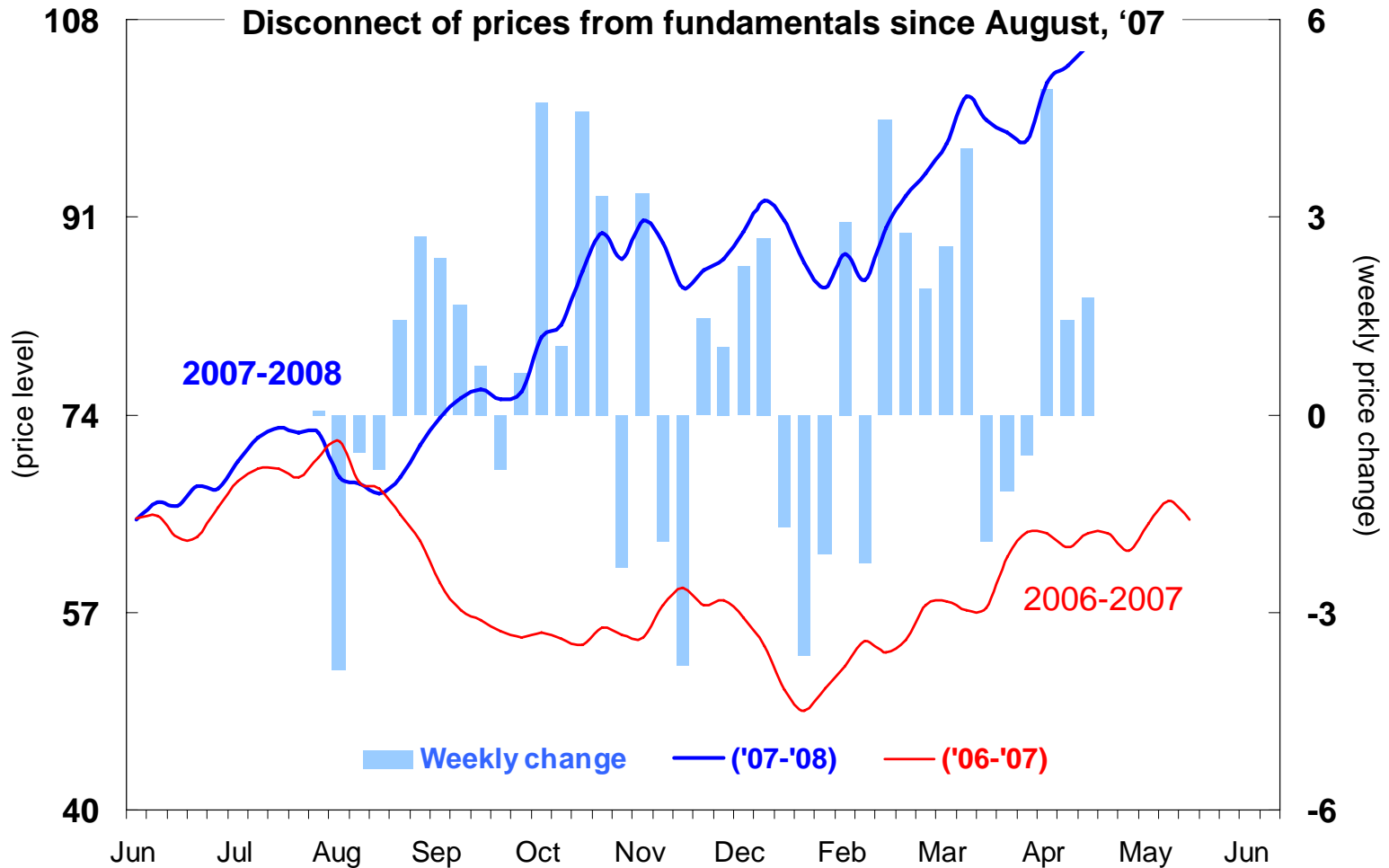




Strong price volatility

(Weekly prices of the OPEC Reference Basket, US\$/b)

- Fund-driven price hike on back of weak dollar and increased financial market speculation
- Perceived market tightness and bottlenecks in refining sector
- Geopolitical concerns

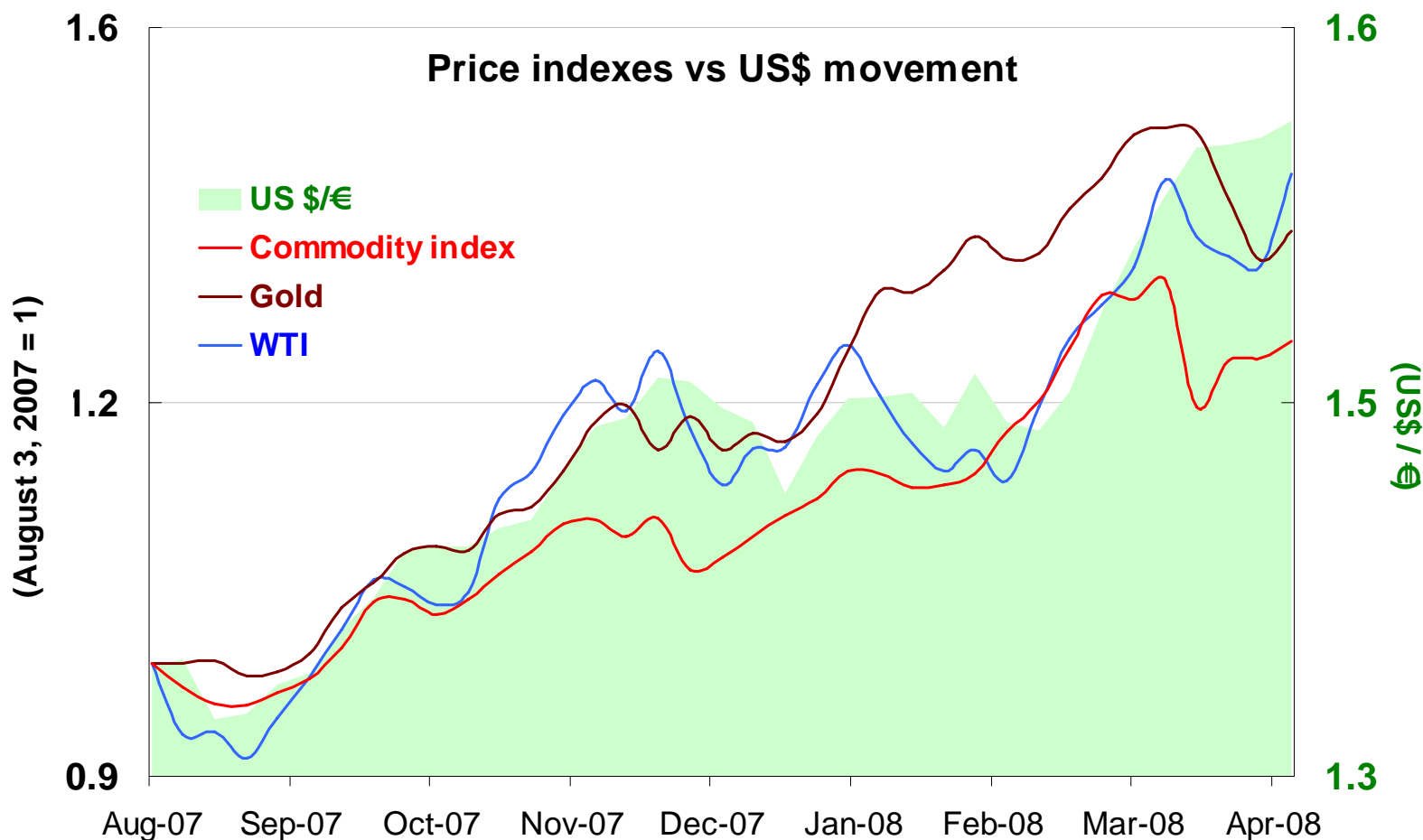


Weak US dollar pressuring oil and commodity markets

(weekly average)



- Depreciation of the US dollar has led to significant shift of capital in financial markets to commodities: high correlation between the dollar movement and gold, oil & other commodity prices
- Overall price surge in all commodity groups: energy, precious and industrial metals, agriculture





● Upstream

- Over 120 development projects
- Cumulative investments in new capacity of more than \$150 billion
- OPEC crude capacity expected to increase by more than 4 mb/d by end 2012 from current levels

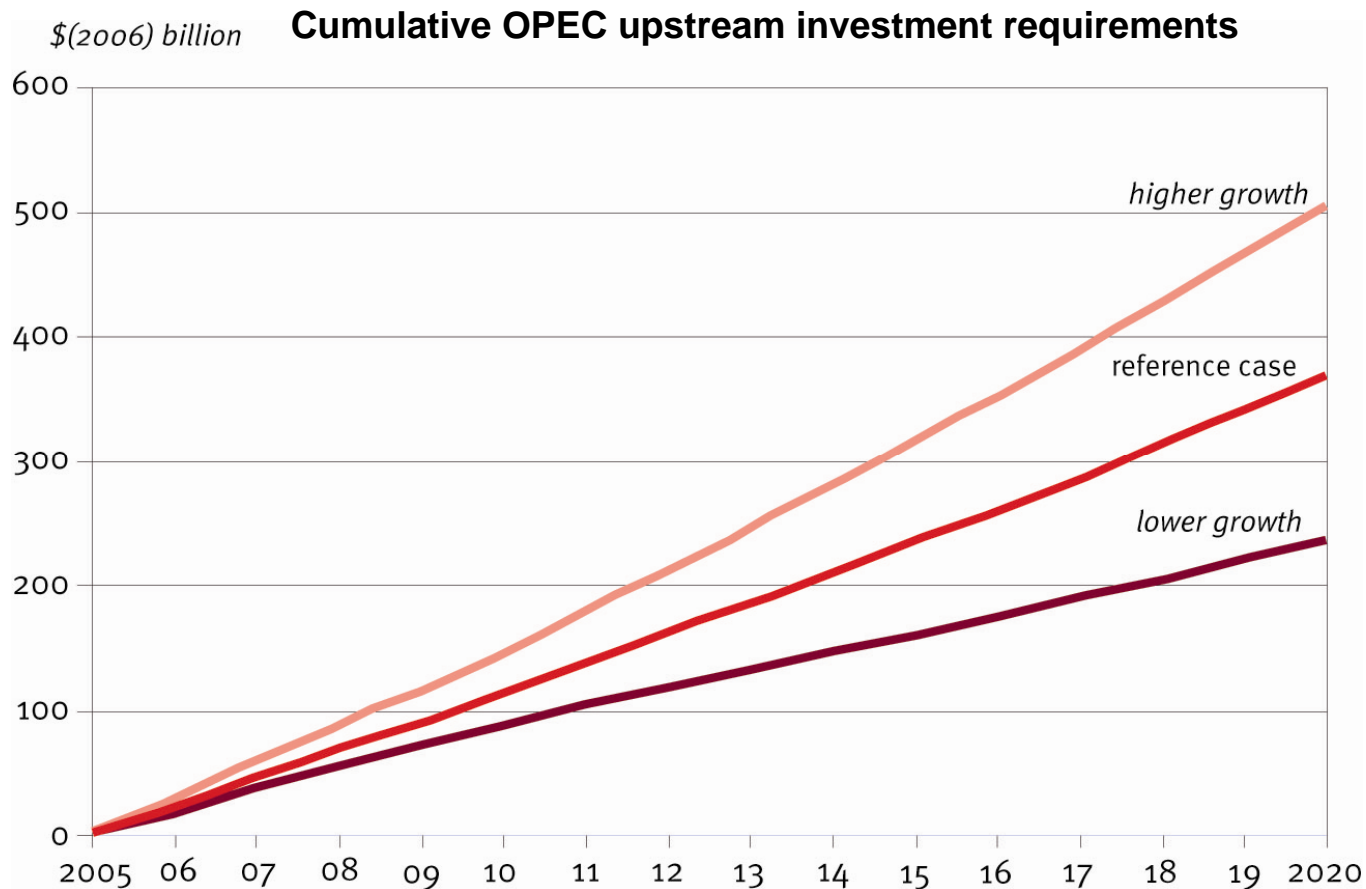
● Downstream

- More than \$60 billion of refining investments
- Above 3 mb/d of additional distillation capacity expected on stream by 2012

Uncertainties pose investment risks for OPEC Members



- Significant uncertainties over upstream and downstream investments
- Over- and under-investment: waste of precious resources and negative effect on future investments
- Security of demand is as important as security of supply

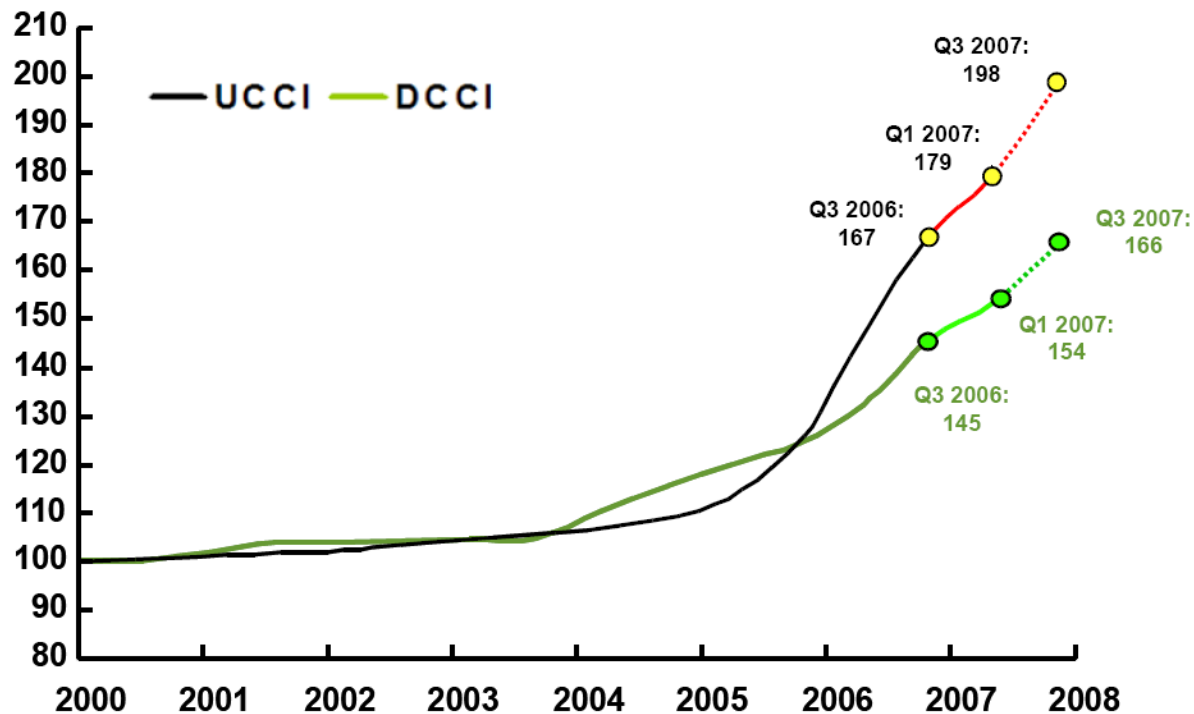


Rising costs and skill shortages



- Huge increase in costs of petroleum projects
- Skilled labour shortages: a major impediment for construction and operations
- Industry should be made more attractive to prospective graduates

Capital cost index in upstream (UCCI) and downstream (DCCI)



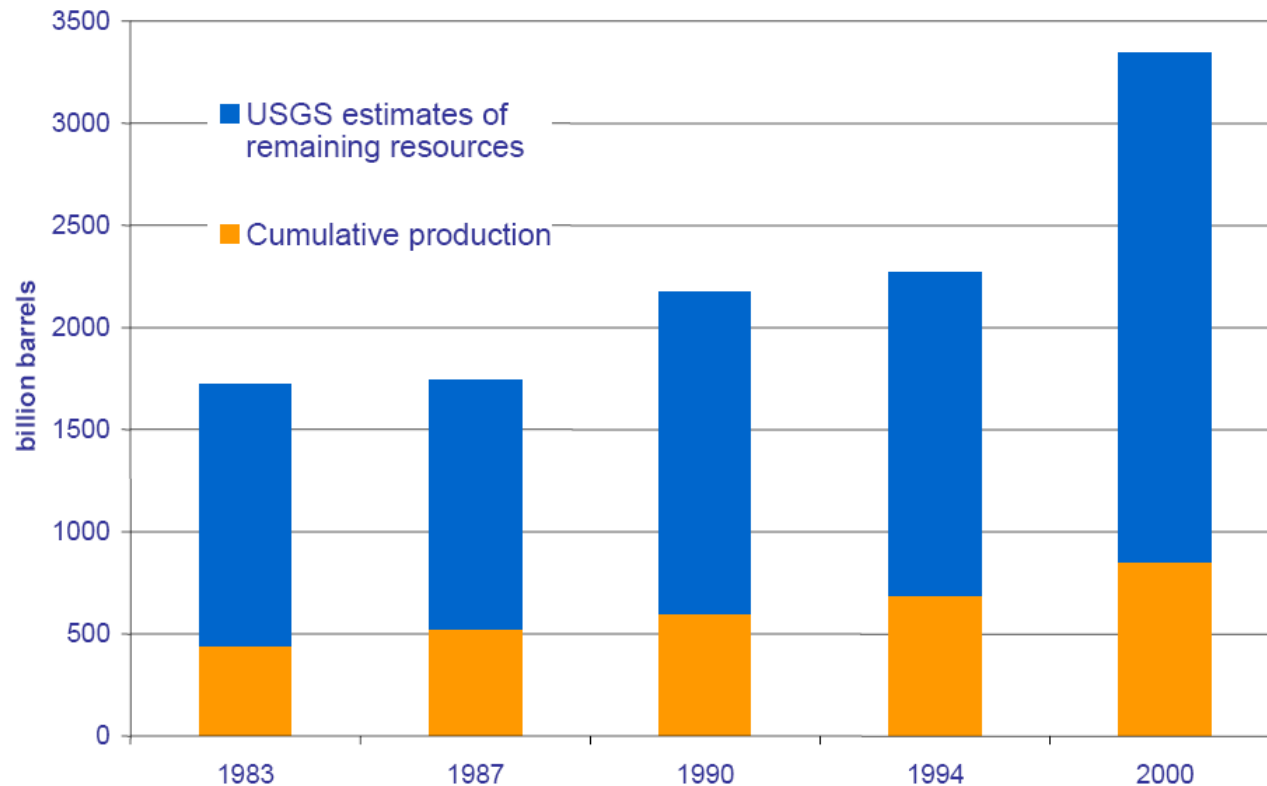
Source: Cambridge Energy Research Associates

Conventional liquids' resource base is sufficient



- Increasing resource base levels (improved technology, enhanced recovery)
- Technology blurs distinction between conventional and non-conventional oil
- Resource base likely to continue to grow ... especially with non-conventional oil

World's conventional oil resources

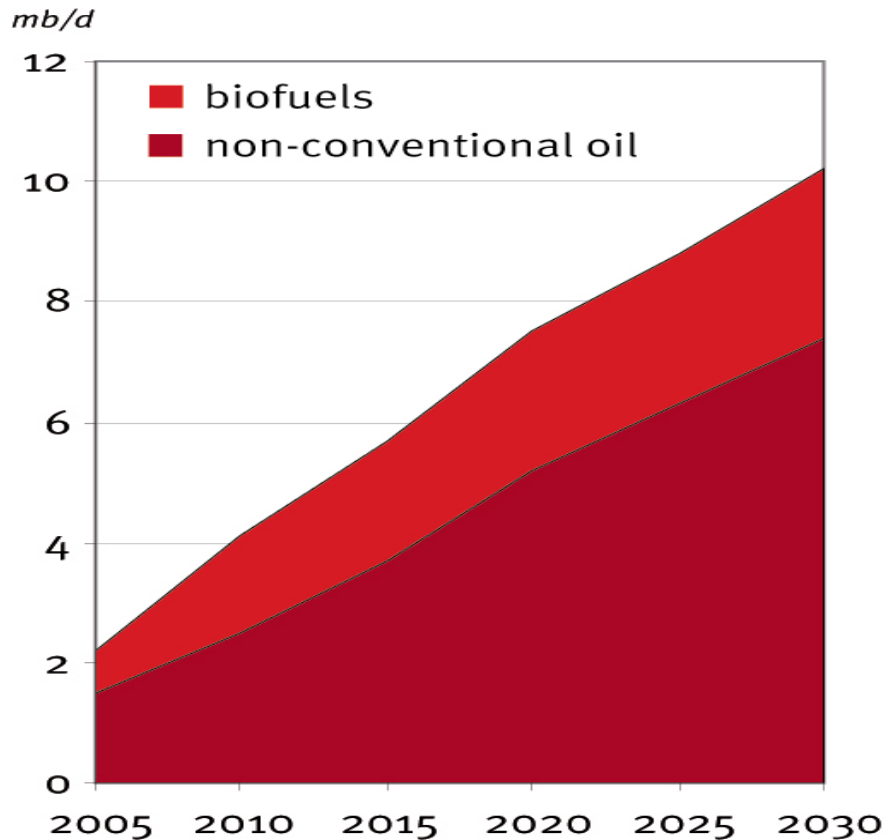


Source: US Geological Survey.



Non-OPEC non-conventional oil and biofuel supply outlook

- Sustainability of large biofuel supply and use is increasingly questioned
- Increased use of crops for biofuels is contributing to surge in basic food prices



- Over 10 mb/d of non-conventional oil plus biofuels by 2030
- Biofuel sustainability issues:
 - Land-use changes
 - Competition with food supply
 - Impacts upon biodiversity
 - Competition for water resources
 - Effects upon air quality
- GHG mitigation costs of biofuels are very high



- **OPEC supports promotion of technologies that address climate change concerns**
- **Aim is to make fossil fuel use more consistent with protection of environment**
- **Carbon capture and storage is promising technology. Industrialized countries should take the lead in its development and deployment**
- **At Third OPEC Summit in Riyadh in November 2007, US \$750 million pledged to research into energy and the environment**



Key issues

- Market **speculation** is major cause of volatility and rising prices
- Market **uncertainty** undermines effectiveness of oil investment strategies
- Urgent attention needed for **rising costs** and **skill shortages**
- **Oil resources sufficient** to meet increasing demand for decades to come
- **Sustainability of biofuels** is being reassessed
- More intensive **technology**-based approach **for environment (CCS)**
- Provision of modern energy services essential for **poverty reduction**

Energy interdependence calls for broader dialogue and well-targeted cooperation, as well as greater transparency and predictability

- OPEC III Summit repeated its resolve to **in-depth dialogue and cooperation**

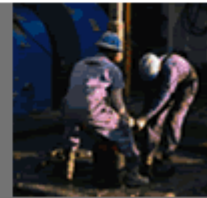
ORGANIZATION OF THE PETROLEUM EXPORTING COUNTRIES

www.opec.org



OPEC

Thank you



Stability in the oil market