

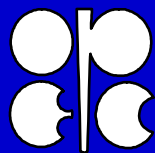
Third OPEC International Seminar

Hofburg Palace, Vienna, 12-13 September 2006

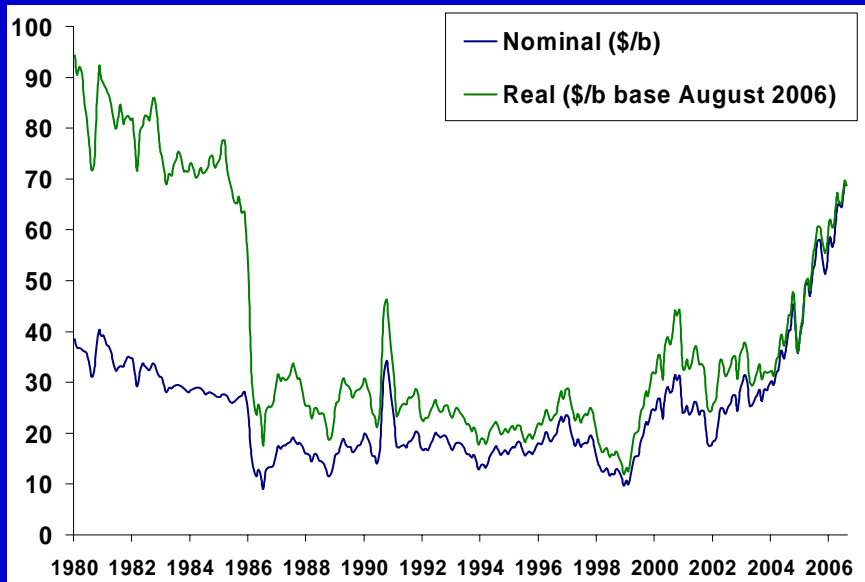
Energy outlook: Challenges and opportunities for OPEC

Mohammed Barkindo

Acting for the Secretary General, OPEC

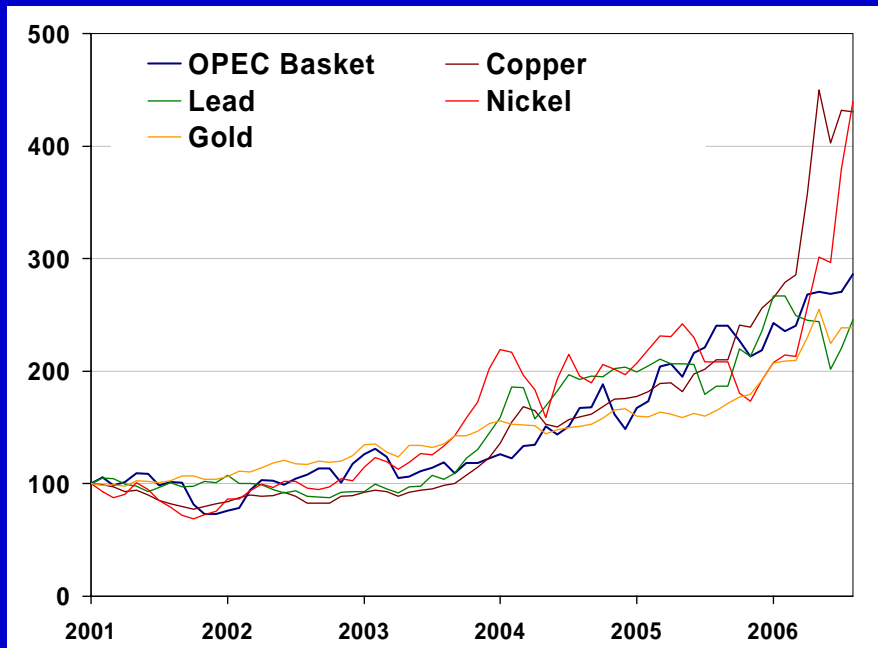


Oil and non-energy price behaviour



← The real price is still well below historical highs

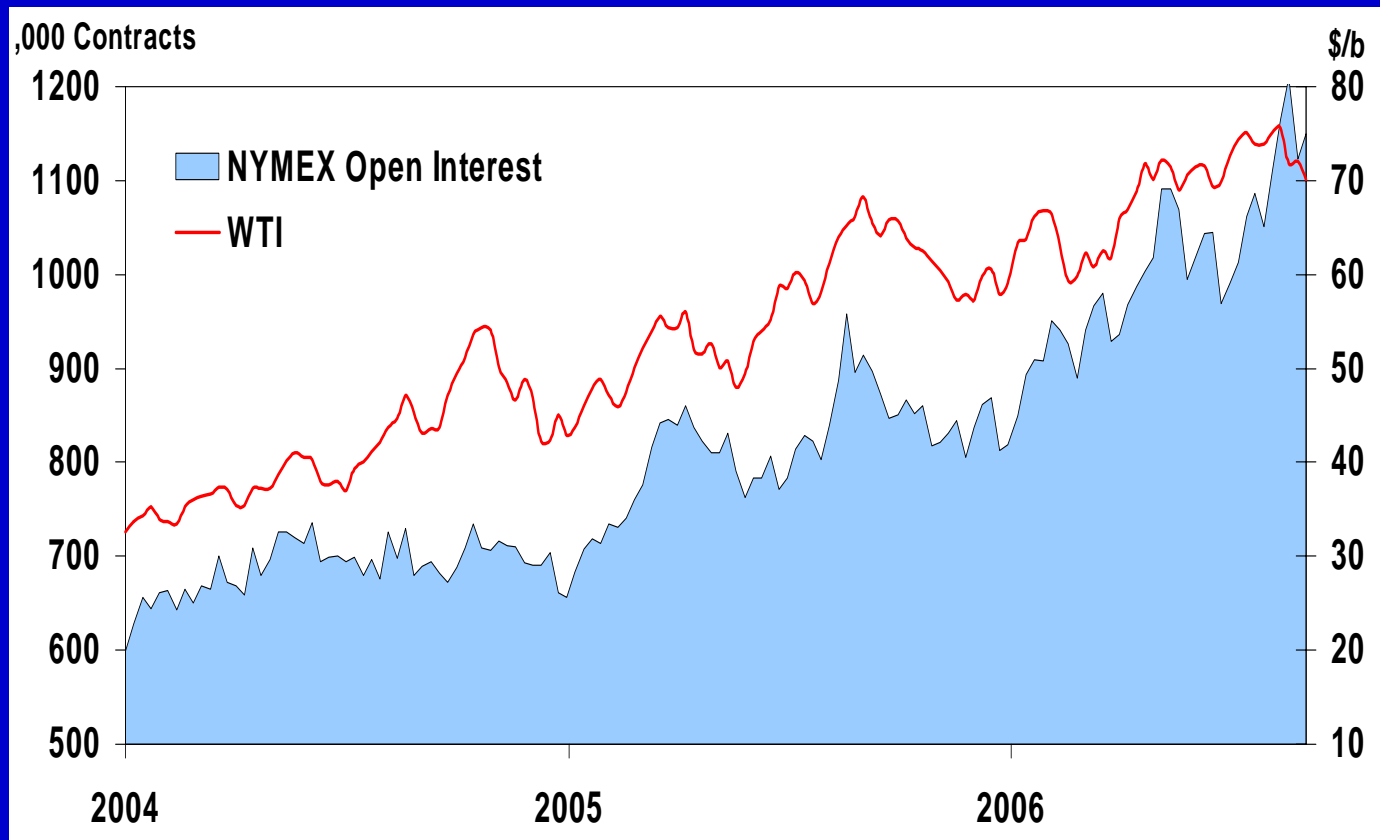
Non-energy commodity prices have also risen →



What has been behind the recent oil price movements?

- Current high stock levels would normally point to falling prices
- Convergence of factors:
 - Strong economic growth
 - Slowdown in expansion of non-OPEC supply
 - Dwindling levels of spare capacity
 - Tightness in refining sector
 - Speculation
- Perceived and real impacts of:
 - Natural disasters
 - Geopolitical concerns

Strong growth in "paper-oil" markets



Speculation is an additional source of price volatility

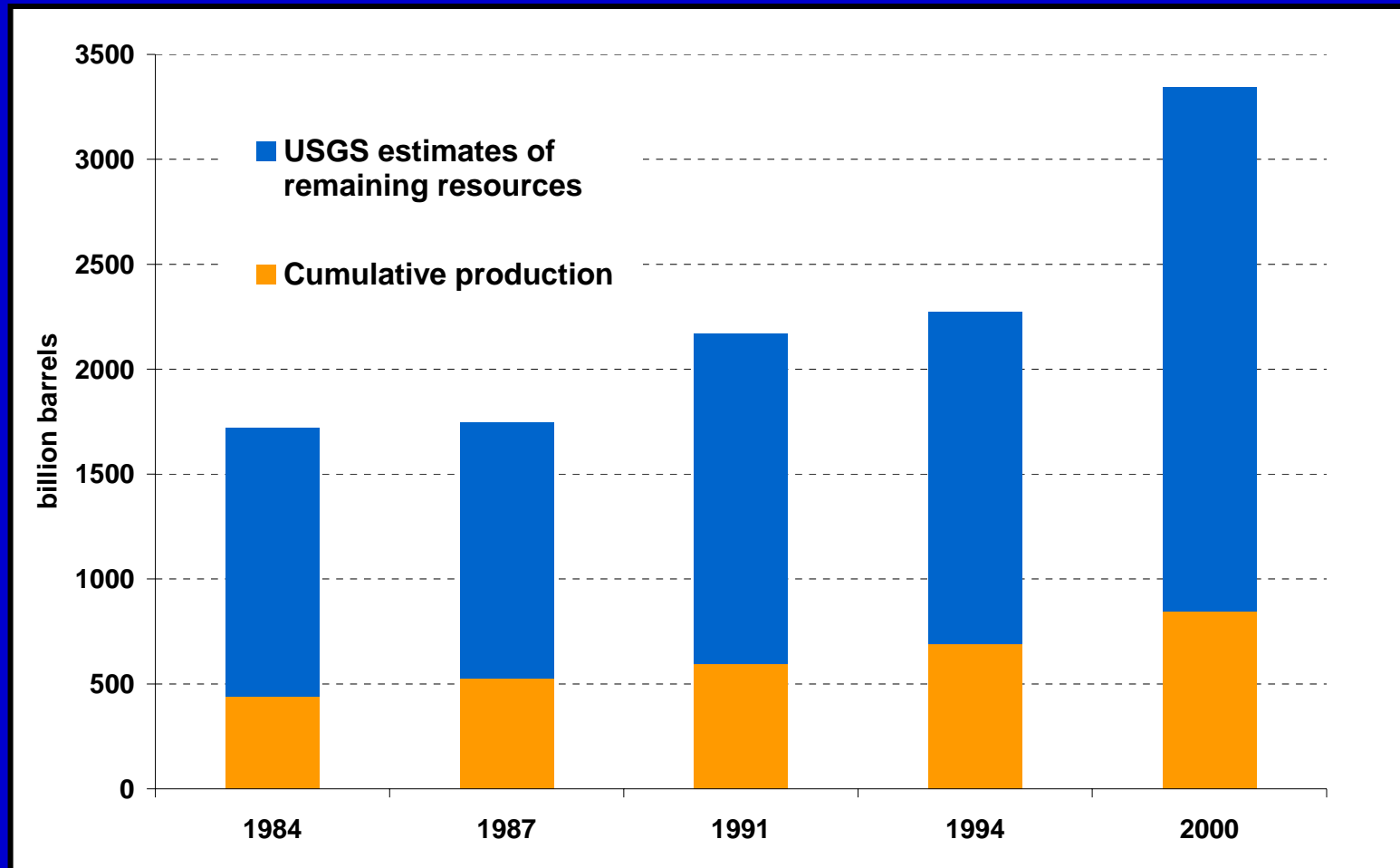
Changing dynamics of demand

- Geographic shift in growth patterns
- Resilient economic and oil demand growth in the face of higher oil prices:
 - More efficient use of oil
 - Rising wealth
 - Switching away from oil has already largely taken place where viable
- Importance of trade to developing countries
 - Need to resume Doha Round negotiations

Changing dynamics of supply

- The resource base debate
- Technological developments
- Future relative role of OPEC and non-OPEC supply
- Expanding role of National Oil Companies
- Protection of the environment
- Possible role of alternatives
- Tightness in the downstream sector
- Cost issues: infrastructure, skilled labour

Conventional liquid resource base is sufficient



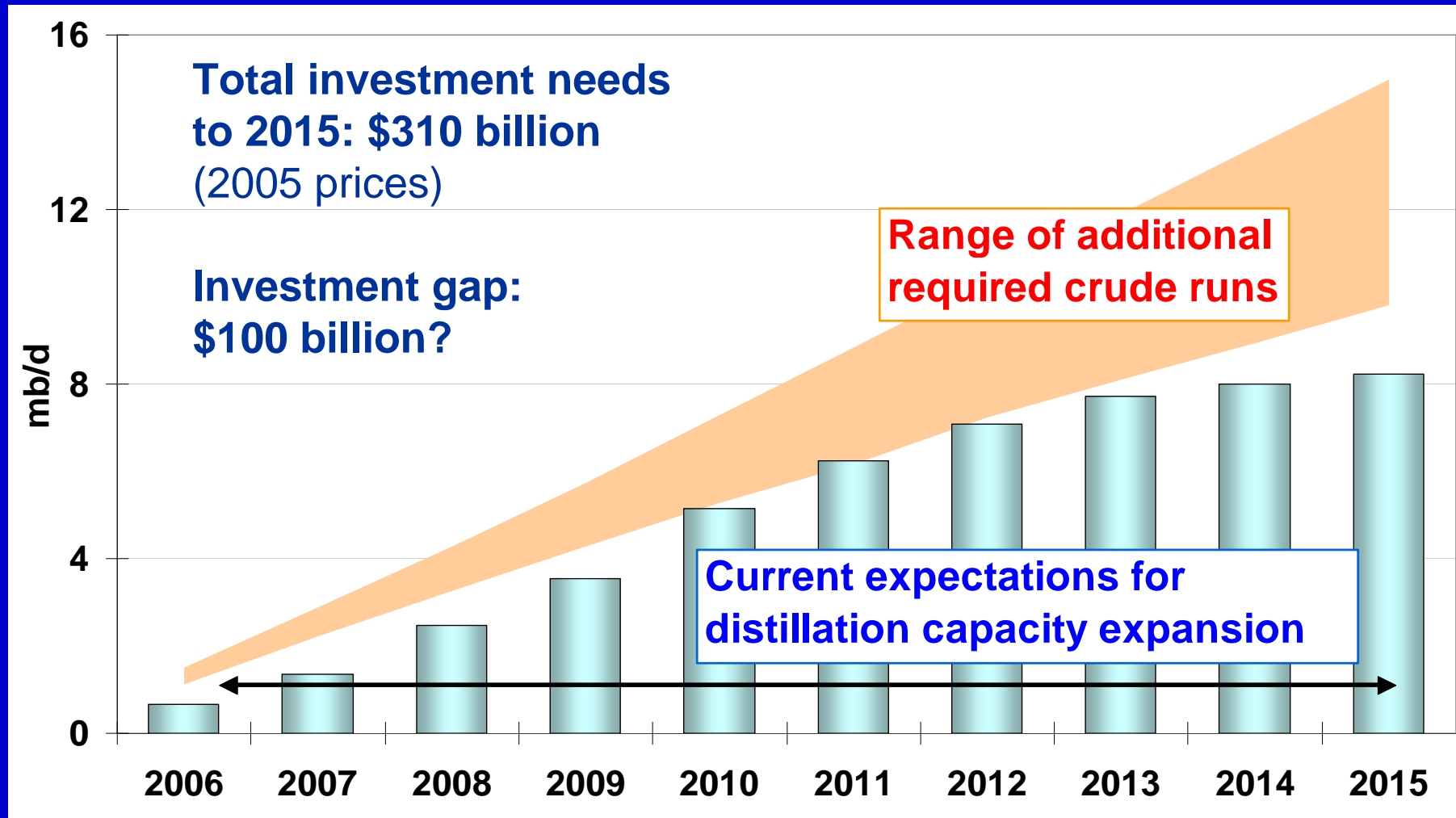
Alternative fuels

- OPEC acknowledges that alternatives have a role to play
- But it will be decades before alternatives have a significant share of global energy mix
- Biofuels receiving attention, but there are many drawbacks:
 - Biofuels provide only one per cent of the world's liquid transport fuels
 - Expensive, unsustainable fiscal incentives and short-sighted policy initiatives
 - Energy balance debatable
 - Replacing food production with biofuels can mean a significant increase in food prices

Cleaner oil and gas technology

- Key question:
 - How to make increased fossil fuel use consistent with the third pillar of sustainable development: protection of the environment
- Huge progress made in improving air quality
- Carbon capture and storage (CCS) is a promising technology to address climate change concerns
- Industrialised countries should take the lead in this area by promoting large-scale demonstration projects
- OPEC commitment demonstrated through:
 - IEA Greenhouse Gas R&D Programme
 - EU-OPEC Roundtable on CCS
 - CDM conference in Riyadh, Saudi Arabia

The downstream is also important



Infrastructure and human resource constraints

- Cost inflation along the entire oil and gas chain
- Upstream costs have increased by 50 per cent since 2003
- Rig rates and the costs of steel and other raw materials are shifting significantly upwards
- Petroleum industry worldwide is suffering from a serious shortage of skilled labour for engineering, procurement, construction and operations
 - During 2005 wages alone increased by about 15%
 - Significant fall in petroleum engineering enrollment
- Efforts required to facilitate education and training
- Easier enrollment in universities across national borders

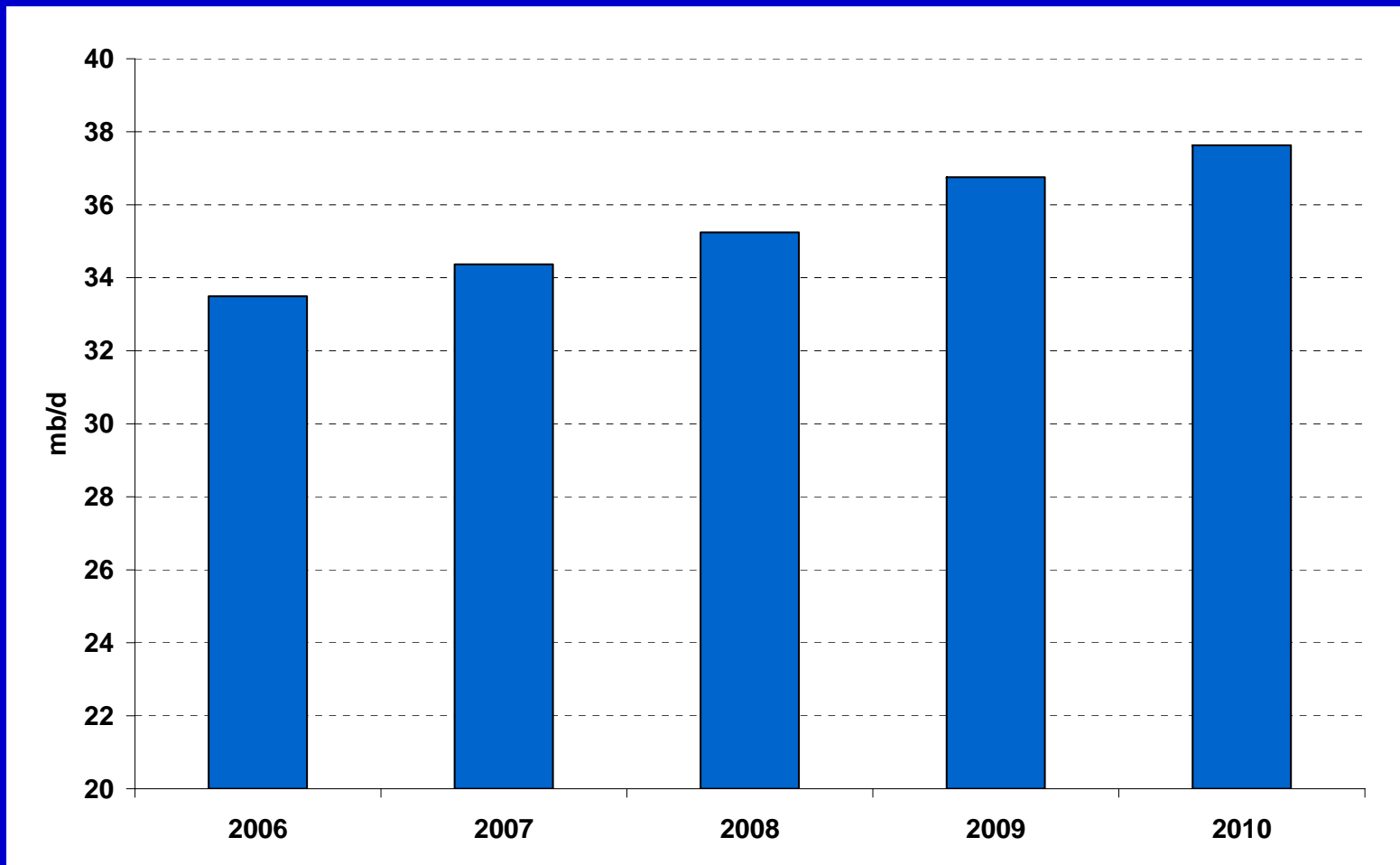
Long-term oil demand and supply outlook

Reference case (mb/d)

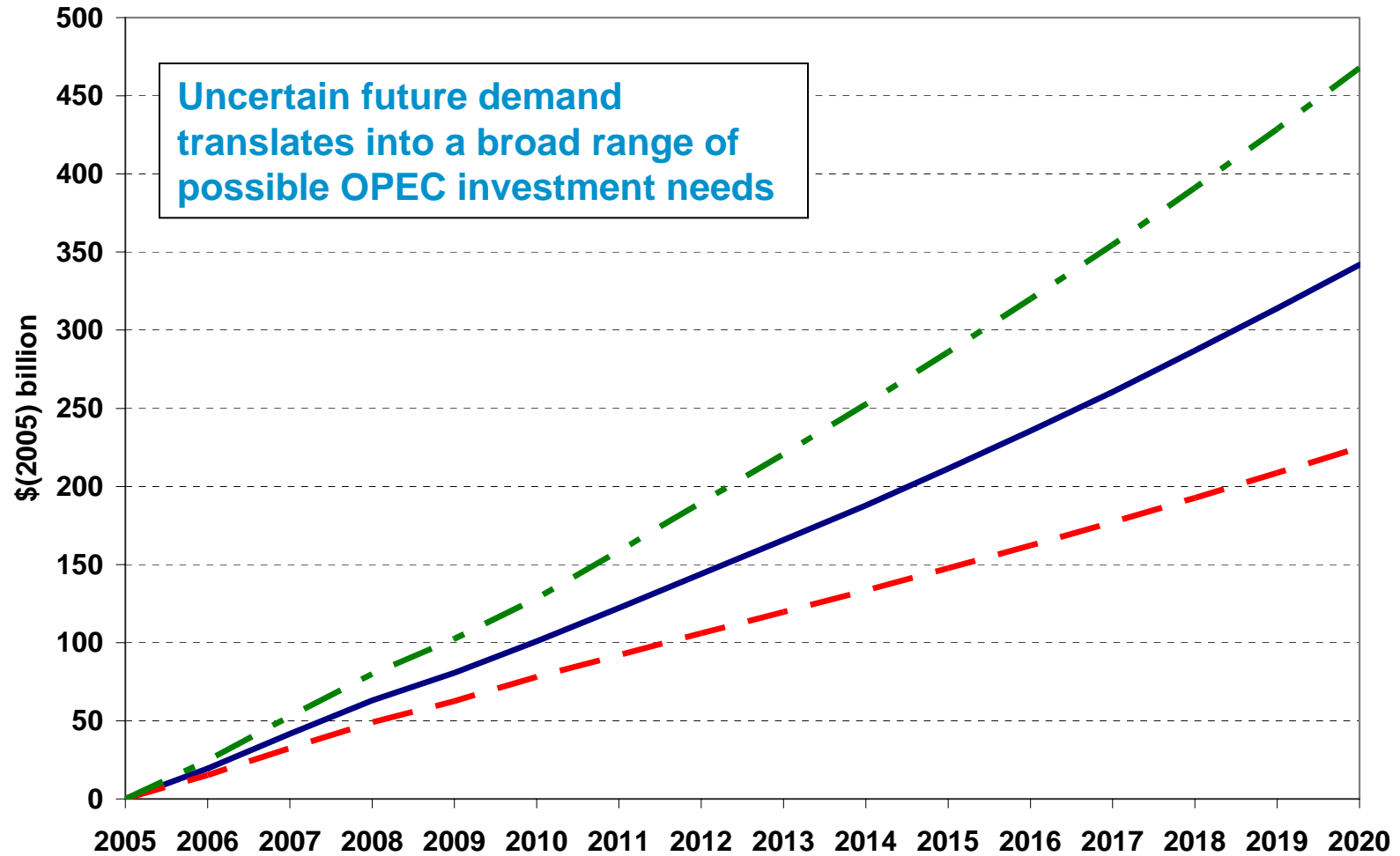
	2005	2010	2015	2020	2025
World demand	83.2	90.7	98.0	105.6	113.1
Non-OPEC supply	50.1	55.8	58.3	59.4	58.9
OPEC supply*	33.1	34.9	39.7	46.2	54.3

* incl. NGLs

OPEC crude capacity continues to expand



Cumulative investment in OPEC: three scenarios



The way forward

- OPEC better understood
- The challenges and opportunities need to be addressed collectively
- OPEC very much believes in enhanced dialogue and communication
- However, extreme poverty, still widely plaguing the world, needs to be urgently addressed
- 15th Session of UNCSD is of key significance



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