

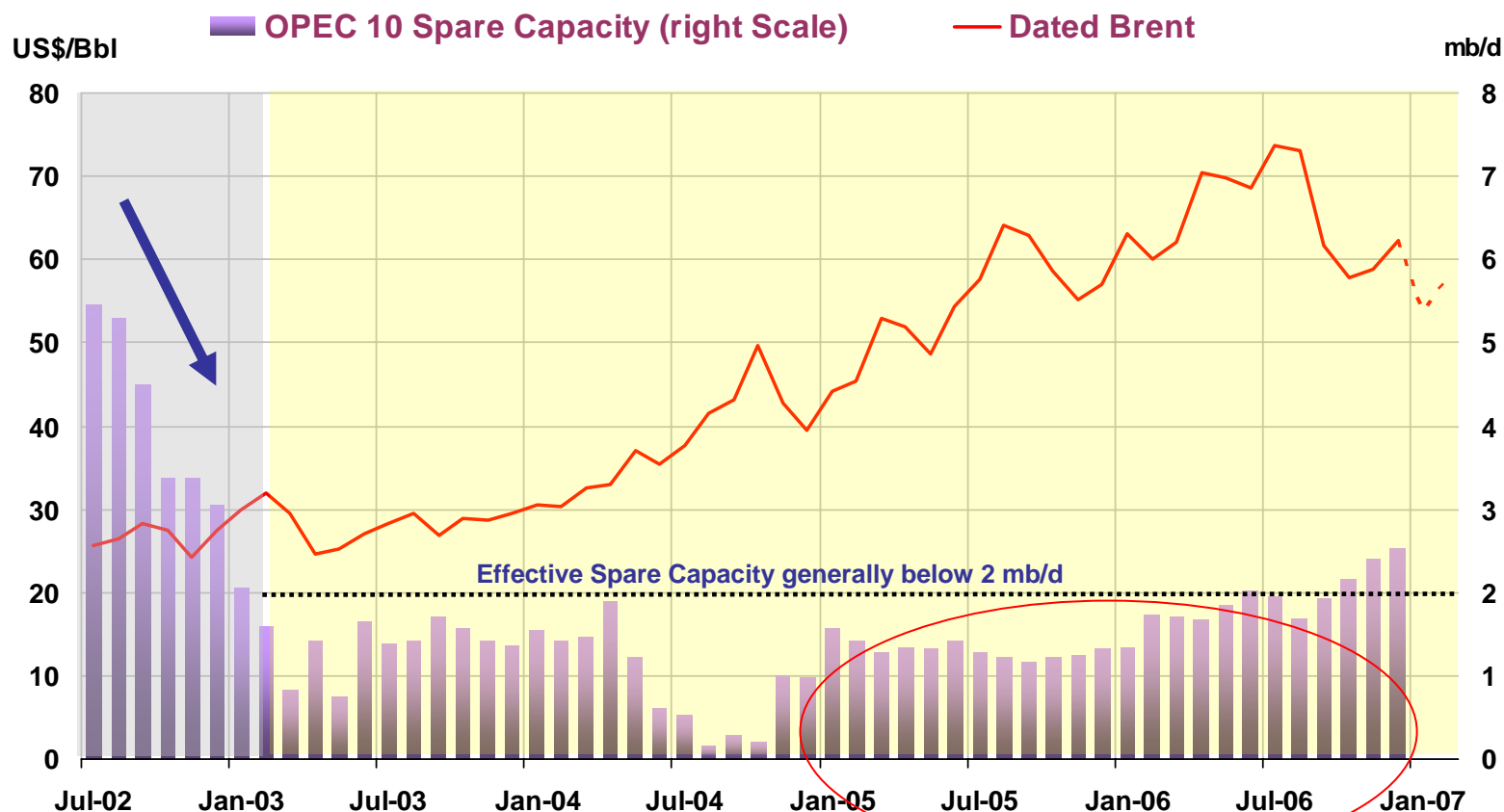
A vertical collage on the left side of the slide. It features a line graph at the top, a hand holding a pen over a document in the middle, a globe with a crowd of people below it, and an offshore oil rig at the bottom.

A Global Oil Outlook: Demand and Supply

Claude Mandil
Executive Director
International Energy Agency

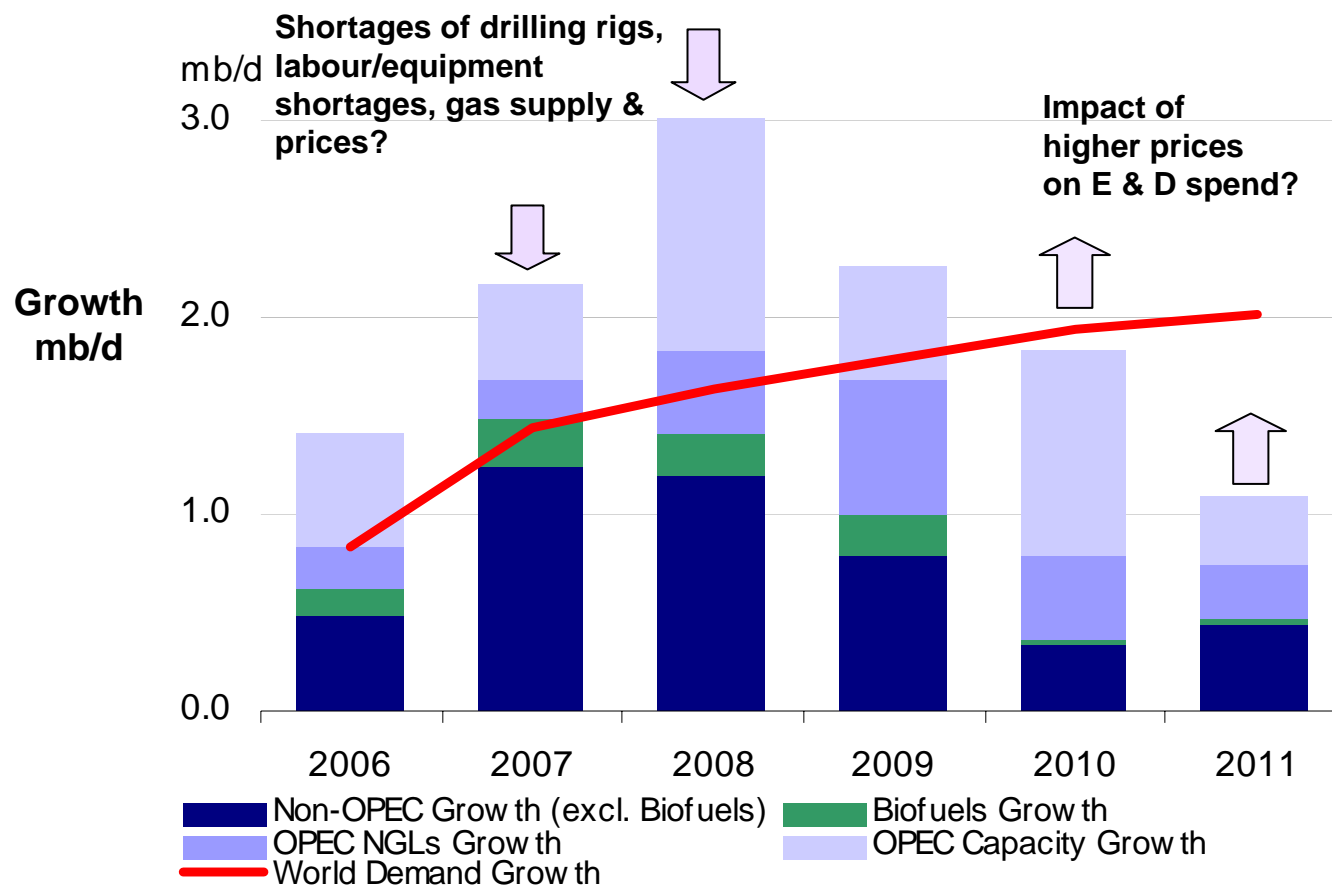
***International Petroleum Week
Monday, 12 February 2007***

OPEC "Effective" Spare Capacity and Prices



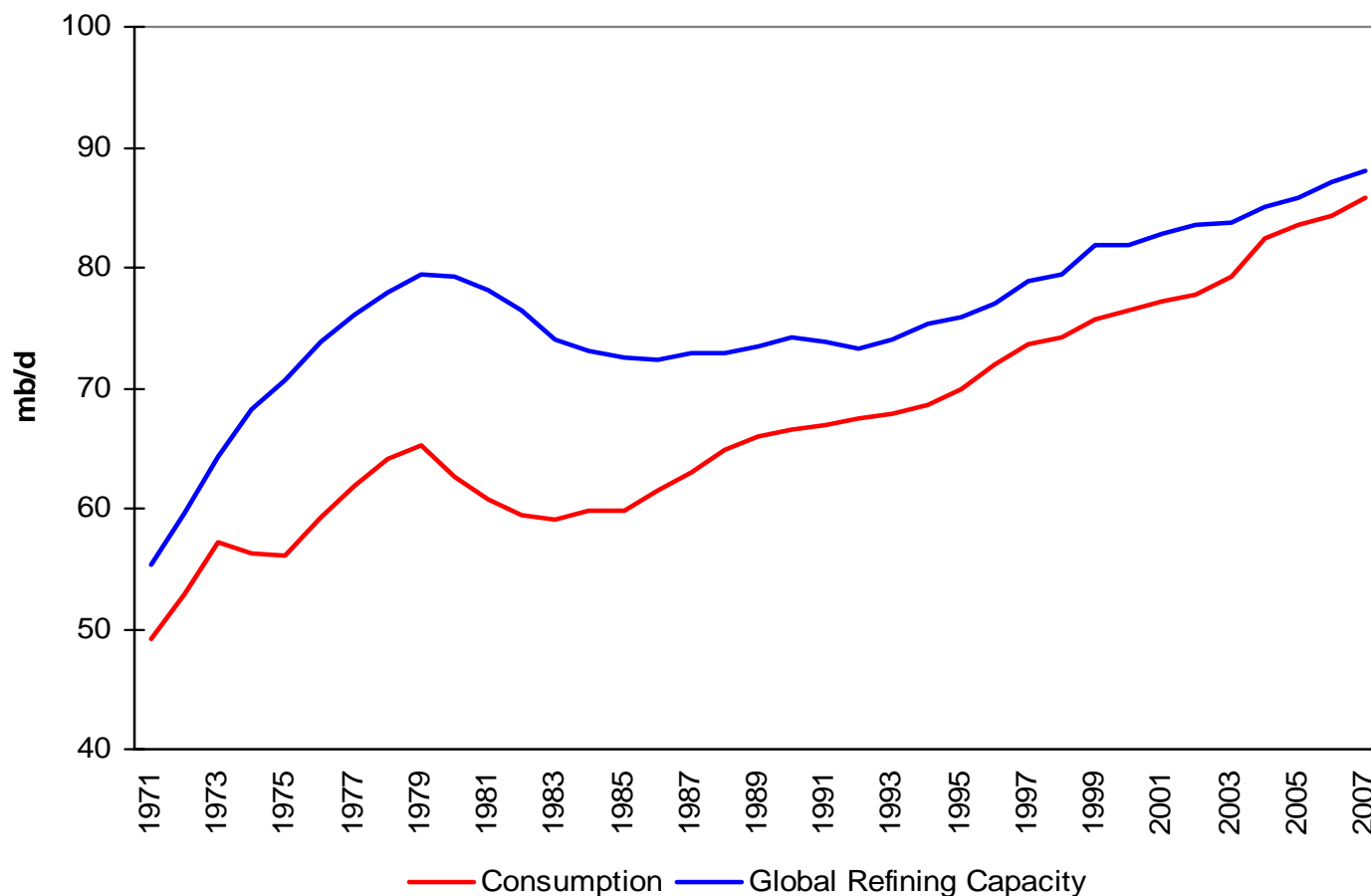
Lack of refinery upgrading capacity reduces usefulness of even this small buffer

The Outlook for OPEC Spare Capacity



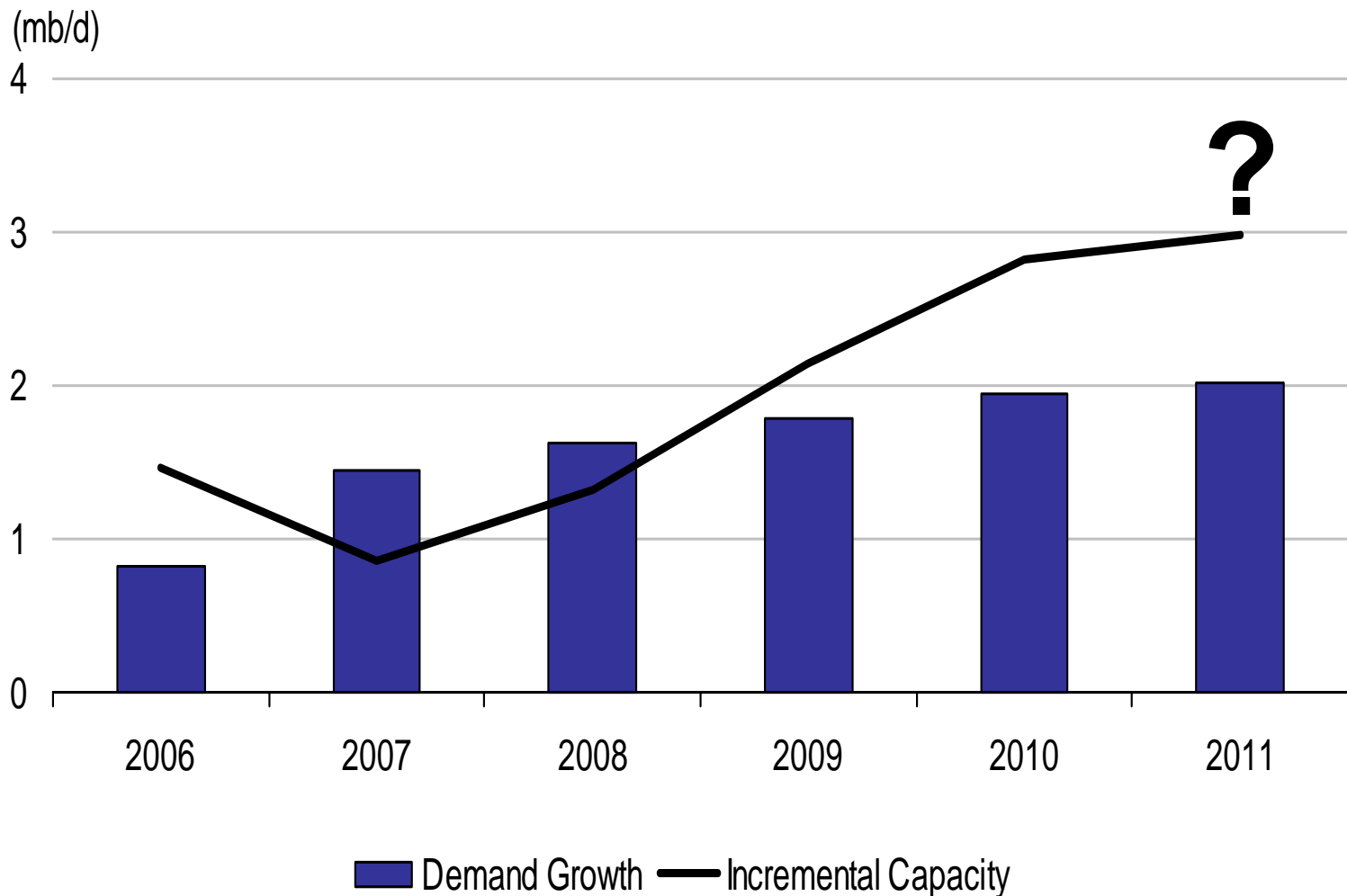
IEA analysis sees OPEC's effective spare capacity rising through 2009 - but investment needs to be sustained

Spare Refinery Capacity Has Tightened



Alongside strong economic growth and concerns in the upstream, the downward trend in oil refining spare capacity has pushed oil prices to current high levels

Will Refining Capacity Remain a Constraint ?

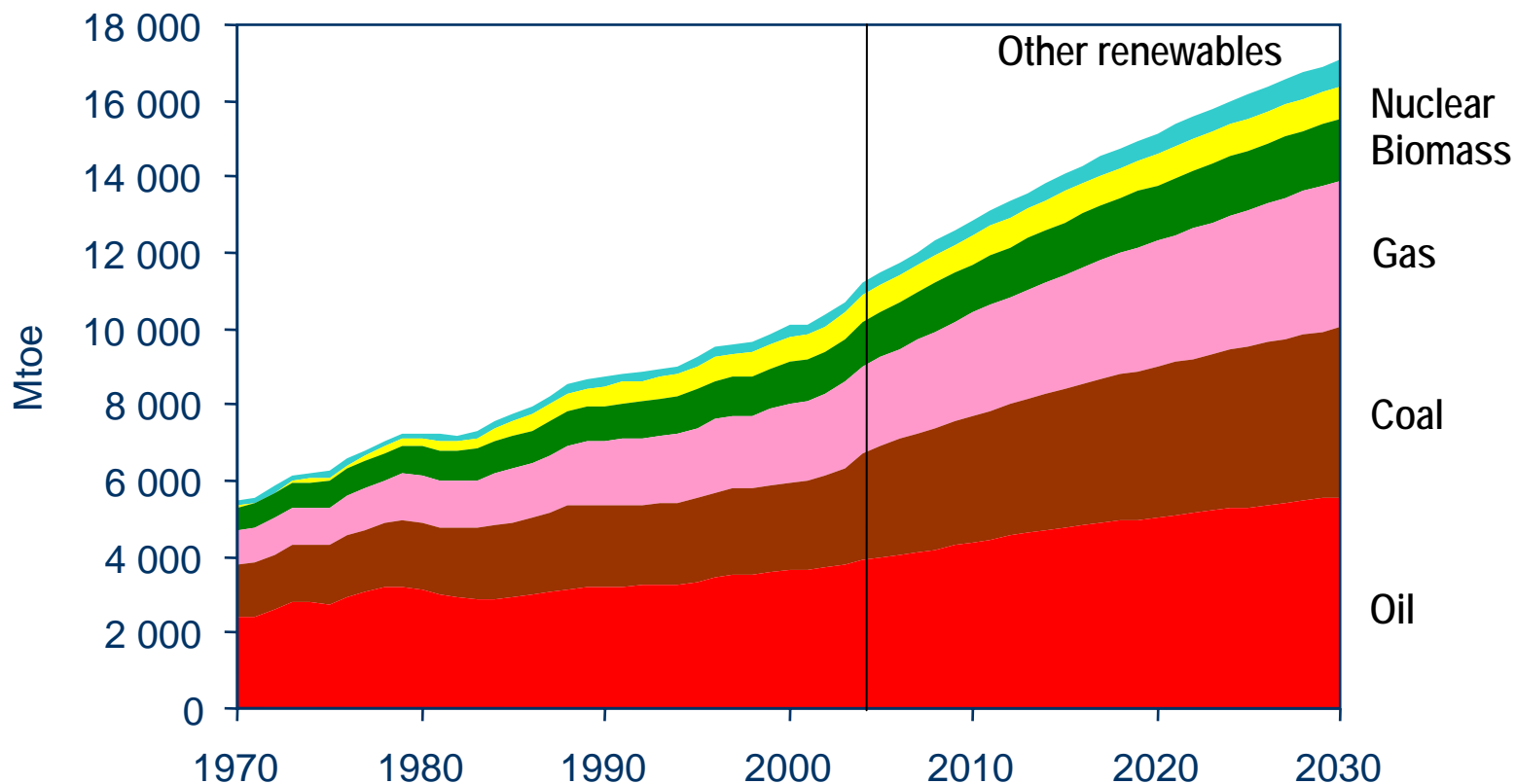


Growth in refining capacity is set to trail that of oil demand till 2008 but will be supplemented by additional upgrading capacity. The bulk of new capacity will be in the Middle East and Asia.



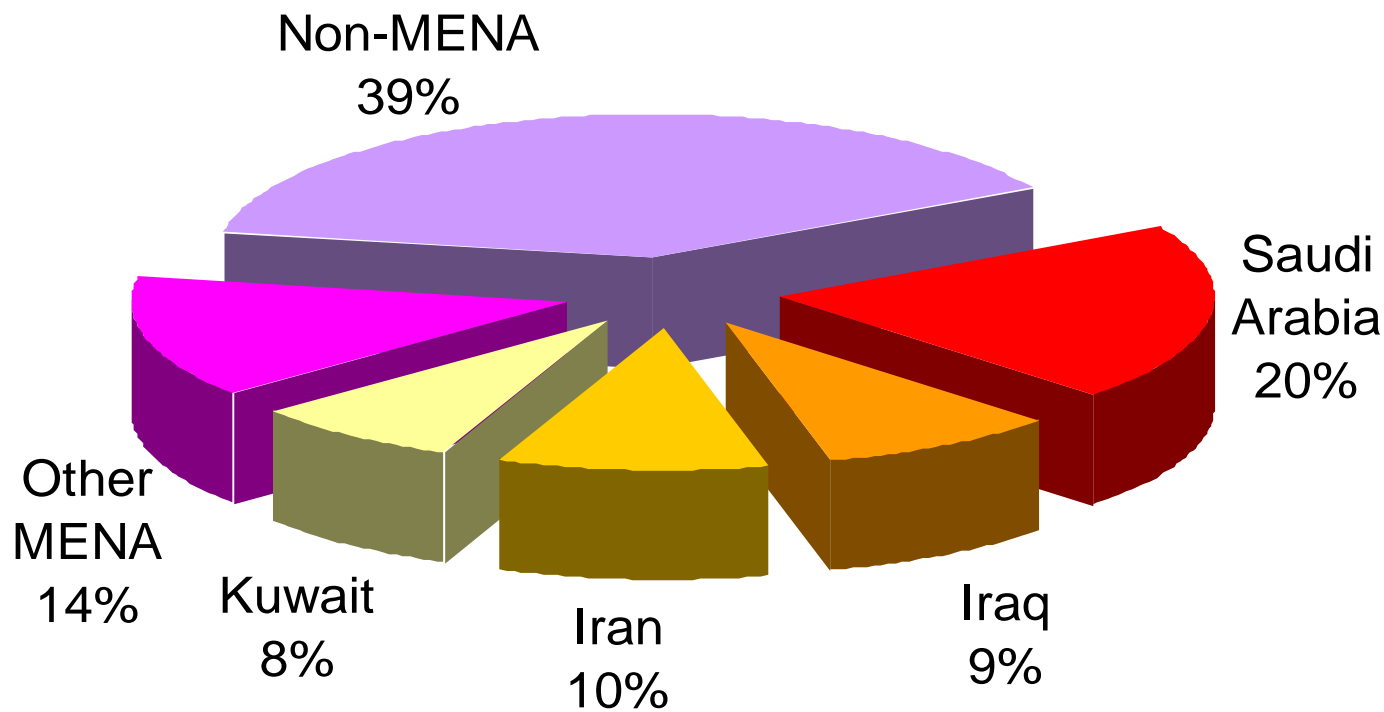
Long-term Outlook

Reference Scenario: World Primary Energy Demand



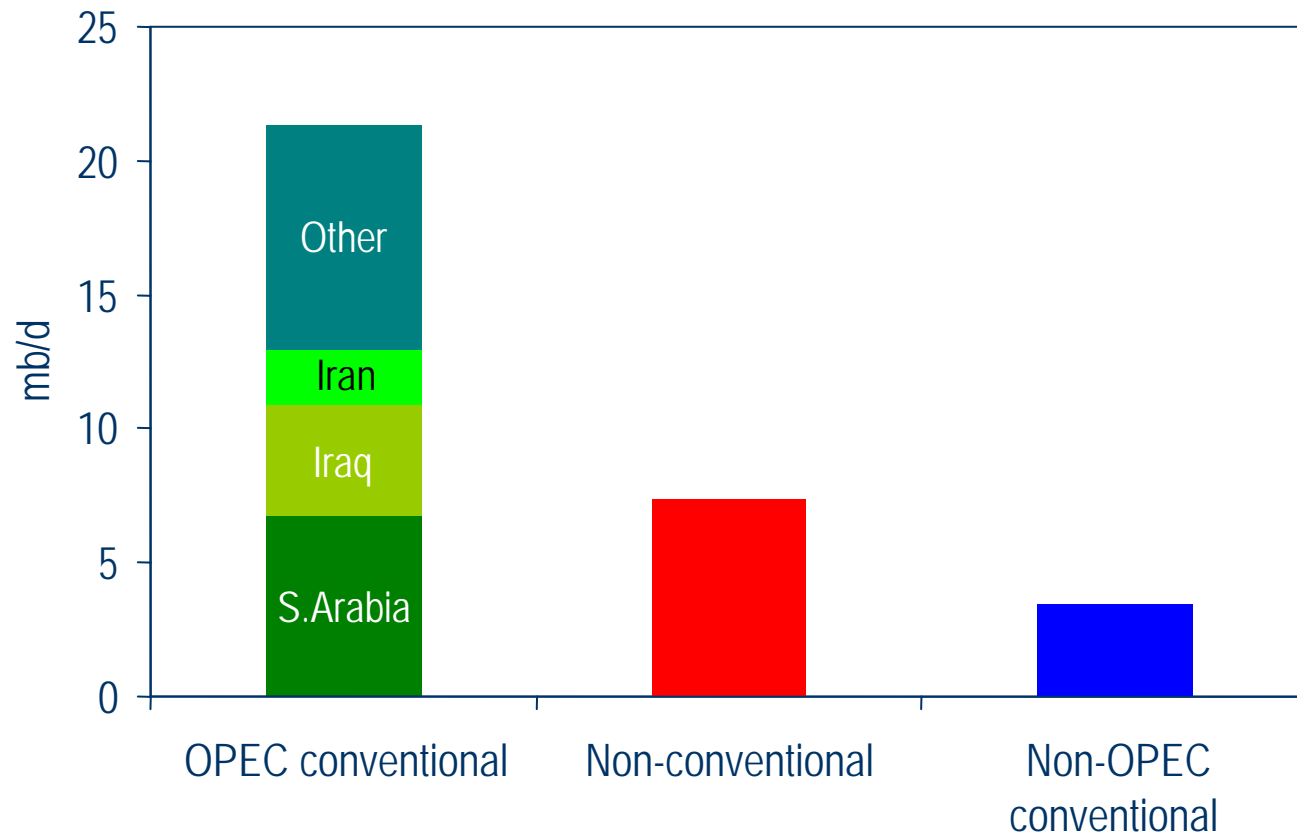
Global demand grows by more than half over the next quarter of a century, with coal use rising most in absolute terms

World Proven Oil Reserves



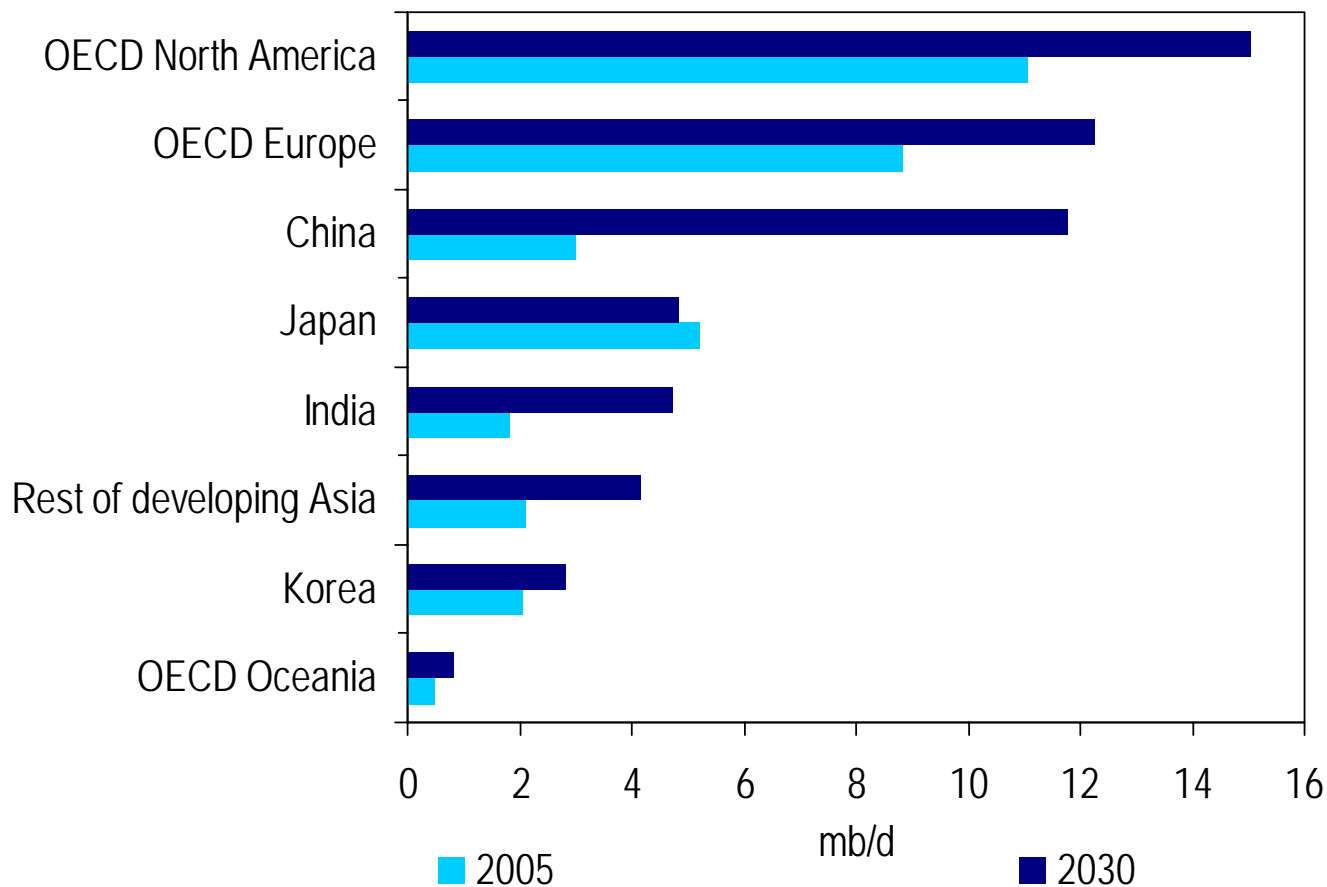
MENA share of global oil reserves is much higher than its share of current production, suggesting strong potential for growth

Reference Scenario: Increase in World Oil Supply, 2004-2030



The share of OPEC in world oil supply increases sharply as conventional non-OPEC production peaks towards the middle of next decade

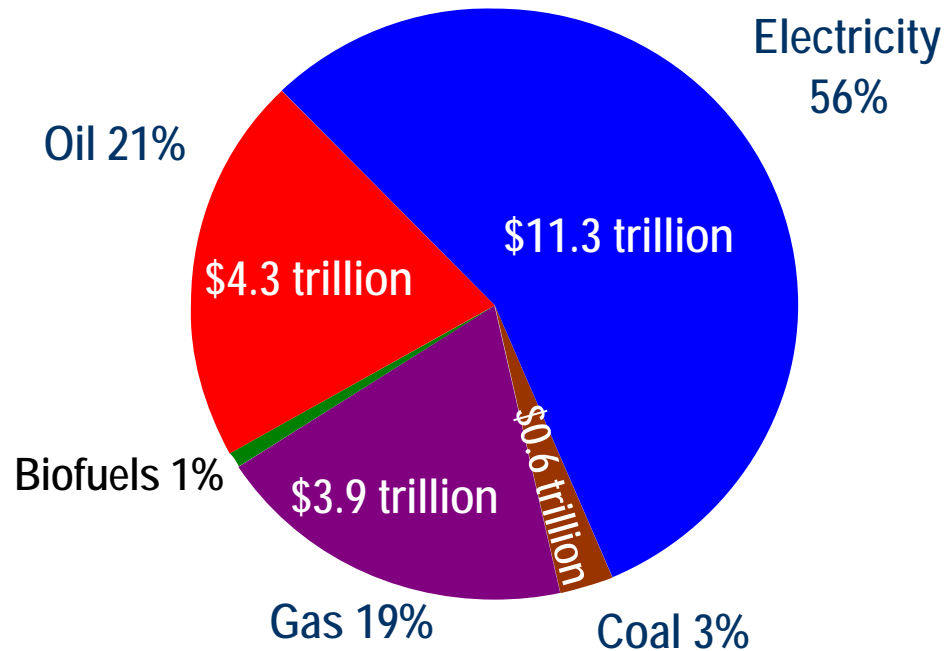
Reference Scenario: Net Oil Imports



China sees the biggest jump in oil imports in absolute terms, but North America remains the largest importer

Reference Scenario: Cumulative Investment, 2005-2030

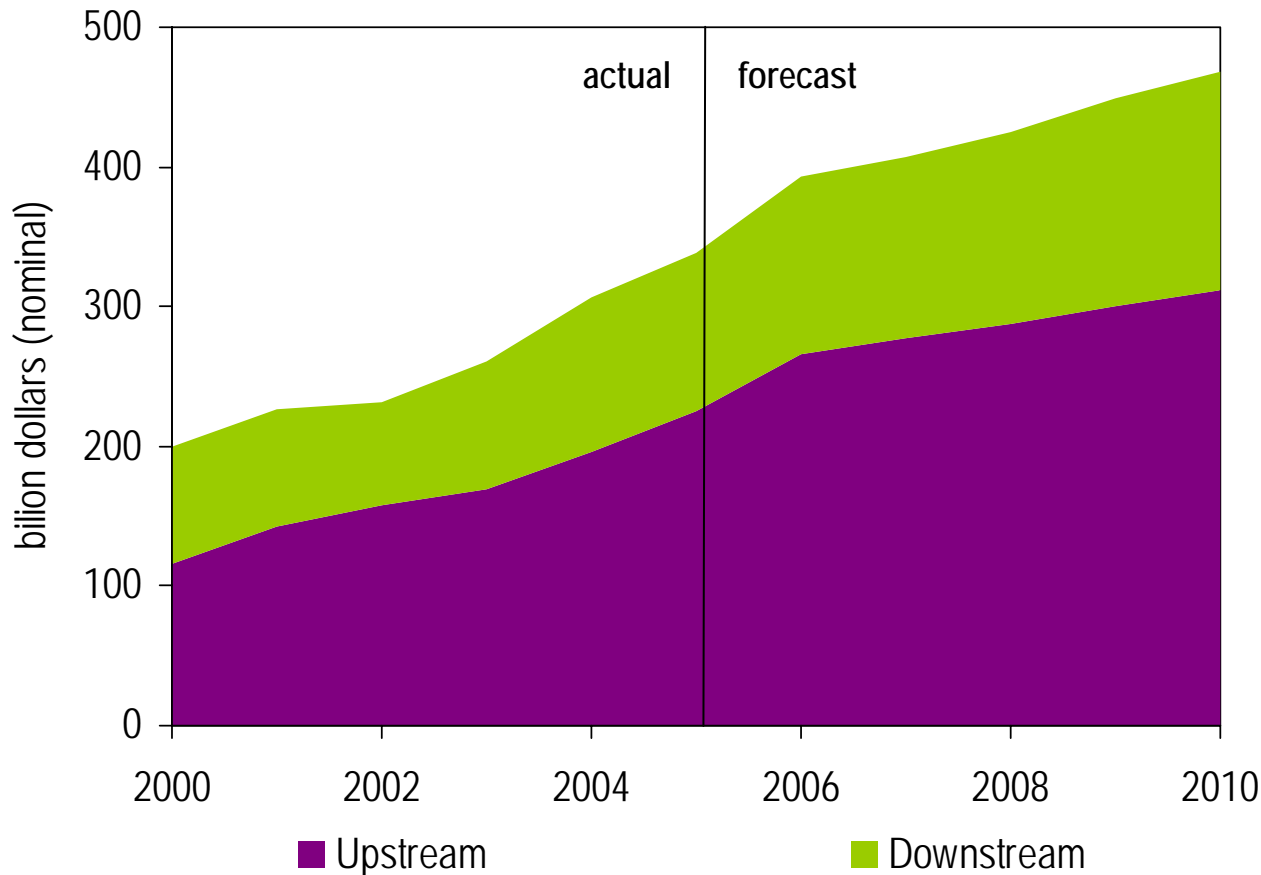
\$20.2 trillion (in \$2005)



Investment needs exceed \$20 trillion – \$3 trillion more than previously projected, mainly because of higher unit costs

Current Trends in Oil & Gas Investment

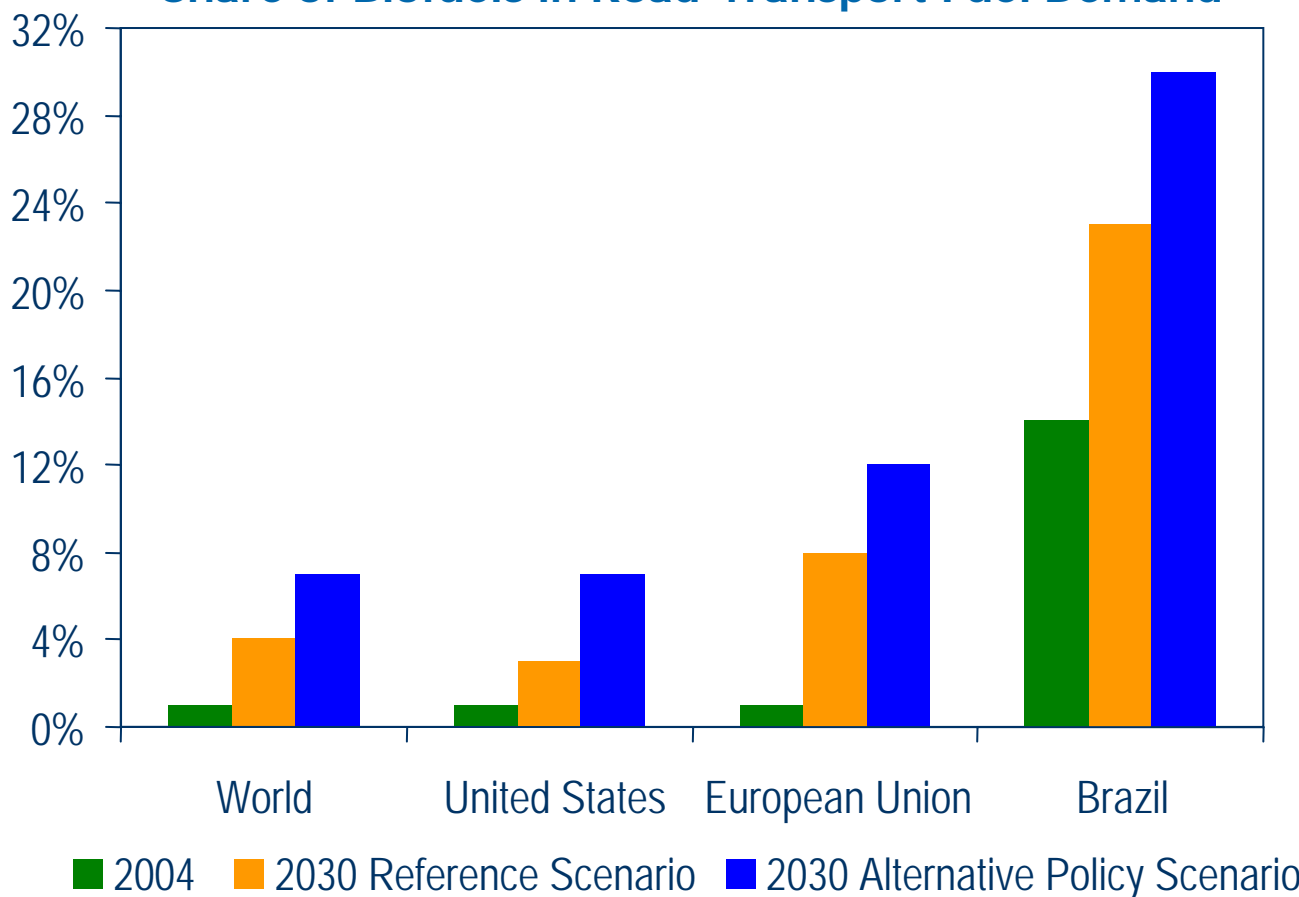
Global Oil & Gas Investment



Investment has surged in recent years with higher prices & is set to rise further through 2010 but most of the increased spending is due to cost inflation, rather than increased real activity

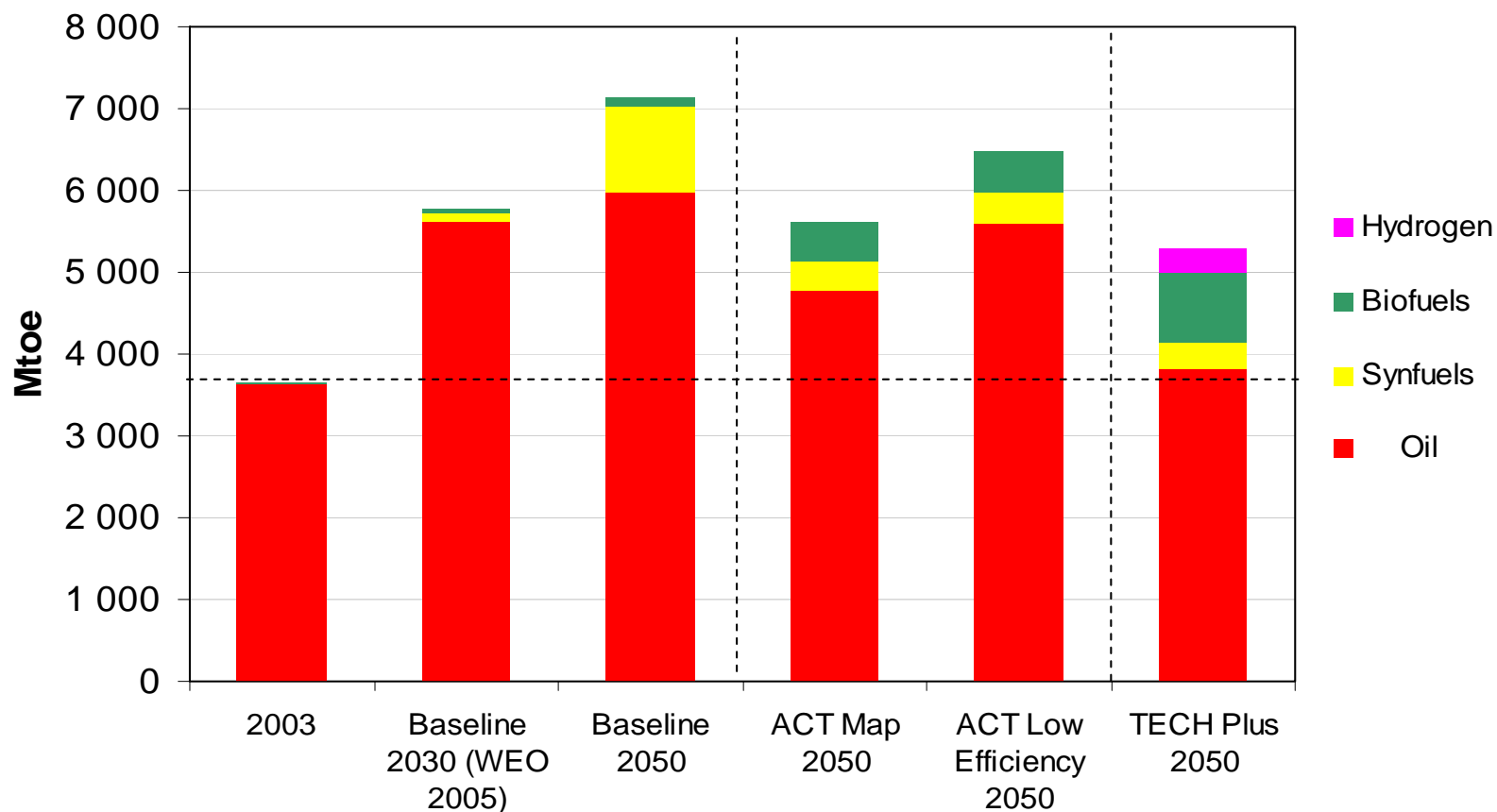
Outlook for Biofuels

Share of Biofuels in Road-Transport Fuel Demand



Biofuels are set to play a growing role in meeting road-transport fuel demand. These projections could prove pessimistic if breakthroughs lead to the widespread commercial production of second-generation biofuels.

Scenarios for World Liquid Fuel Supply 2003-2050



Even with technological breakthroughs, oil will retain a key role in the energy mix

Key Messages

- Current constraints in the oil sector need to be overcome by:
 - Accelerating investment
 - Improving public awareness of the need for energy infrastructure
 - Moderating consumption growth

- Growing dependence on oil from a shrinking number of producers will pose threats to energy security by:
 - Exposing importers to market power
 - Reducing the level of flexibility in the system

- For environmental sustainability, the transport sector will need to be decarbonised, maybe through Hydrogen and Fuel Cells. This is unlikely to happen before 2050

- If the world's oil resources are to last through this transition, we need to ensure adequate levels of :
 - Technological progress in exploration & development activities
 - International cooperation