



Oil Outlook: OPEC's perspective

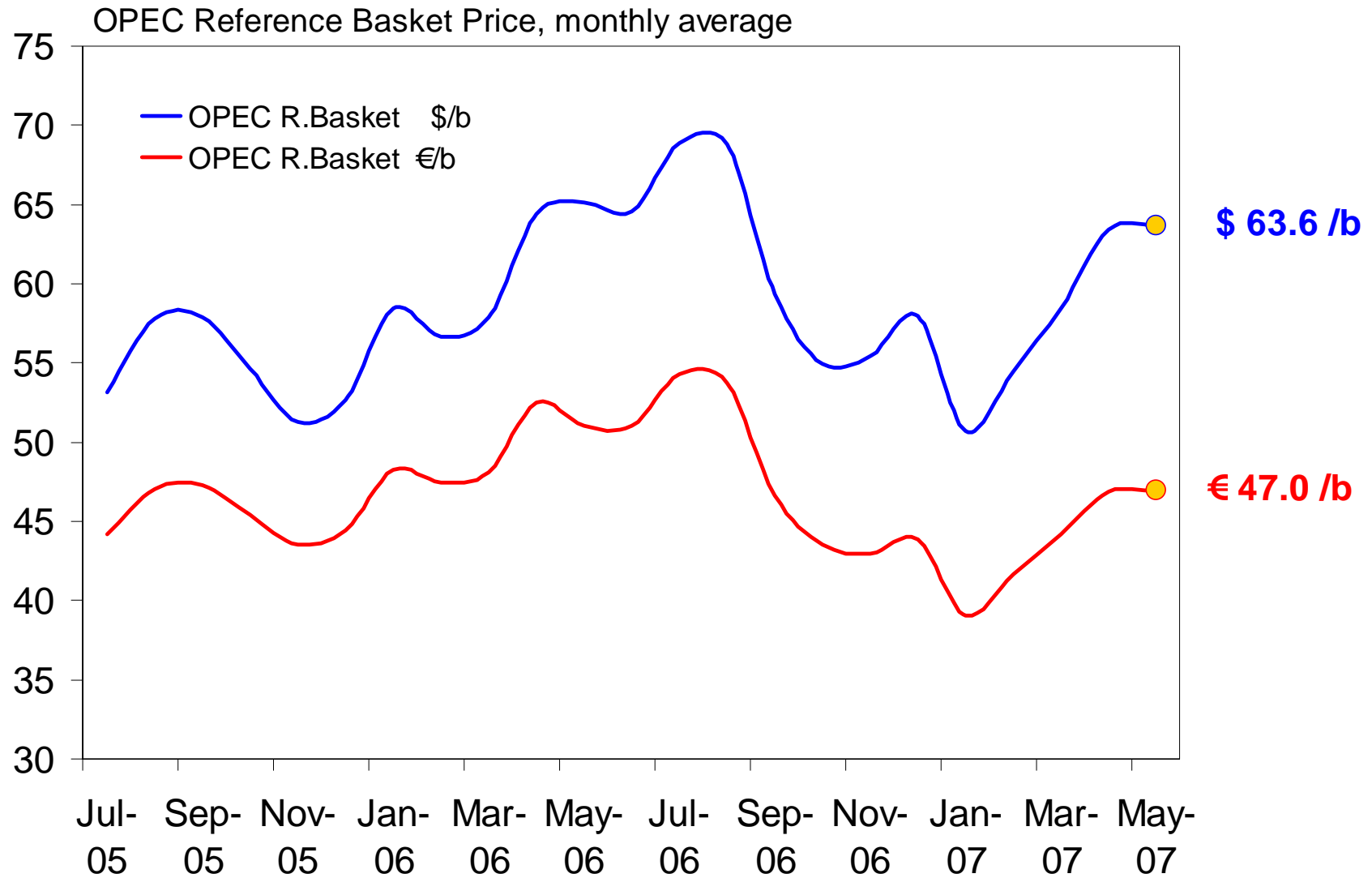
Mohamed Hamel
Head, Energy Studies Department

EU-OPEC Roundtable
Brussels, 30th May 2007

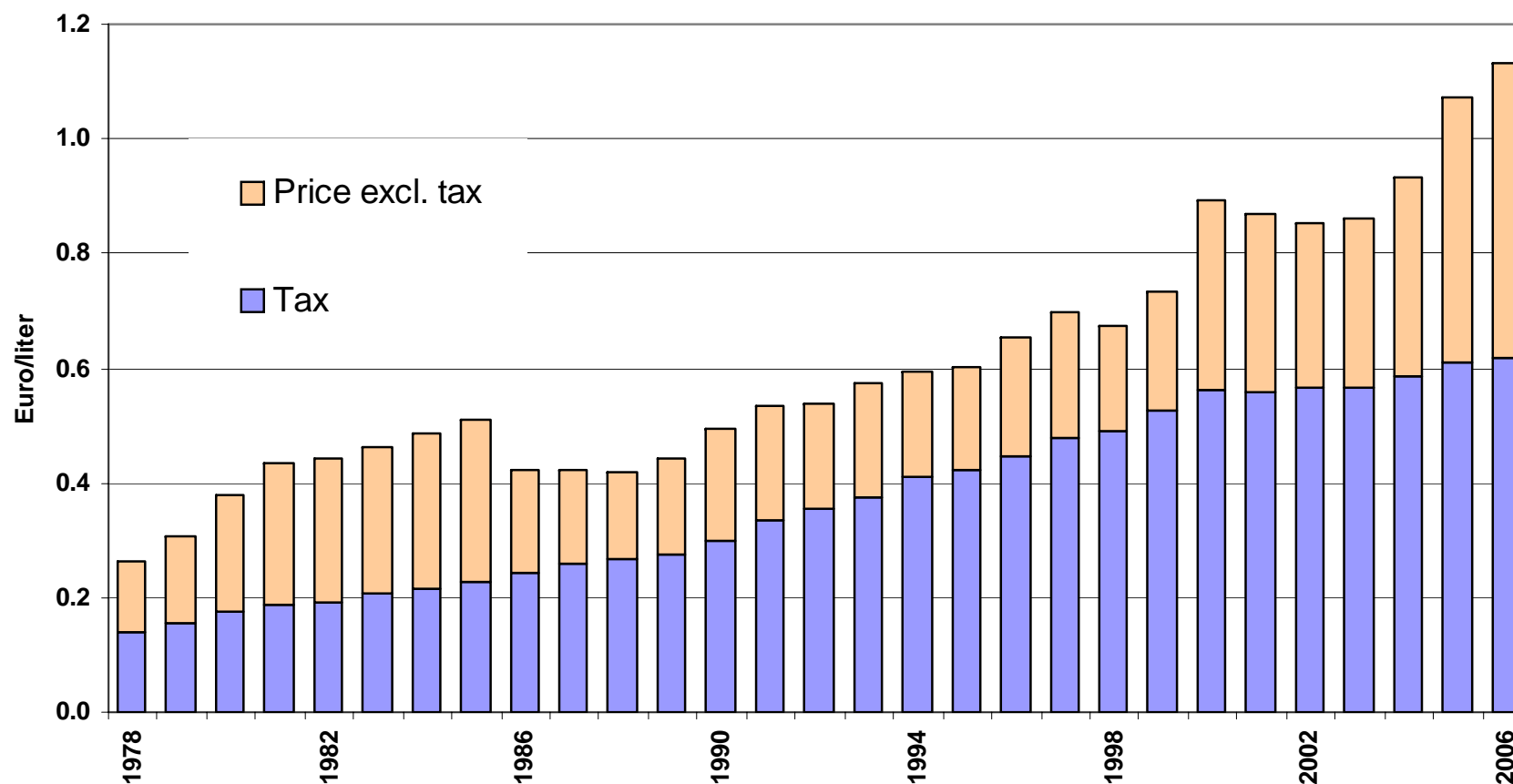


- **Recent Oil Market Developments**
 - No shortage of crude oil / tight refining system in the US
- **Medium- to Long-term Oil Prospects**
 - Plentiful resources / large investments needed
 - Large uncertainties about the demand for OPEC oil
 - Risks for producers have heightened recently
- **Sustainable Development**
 - Access of the poor to modern energy services
 - Increased use of fossil fuels could be made more consistent with the protection of the environment
- **Energy security**
 - World is increasingly interdependent, global and interconnected
 - Energy independence is a myth
 - Energy security is a two-way street: security of supply / security of demand
- **Conclusion**

Oil price in Euro

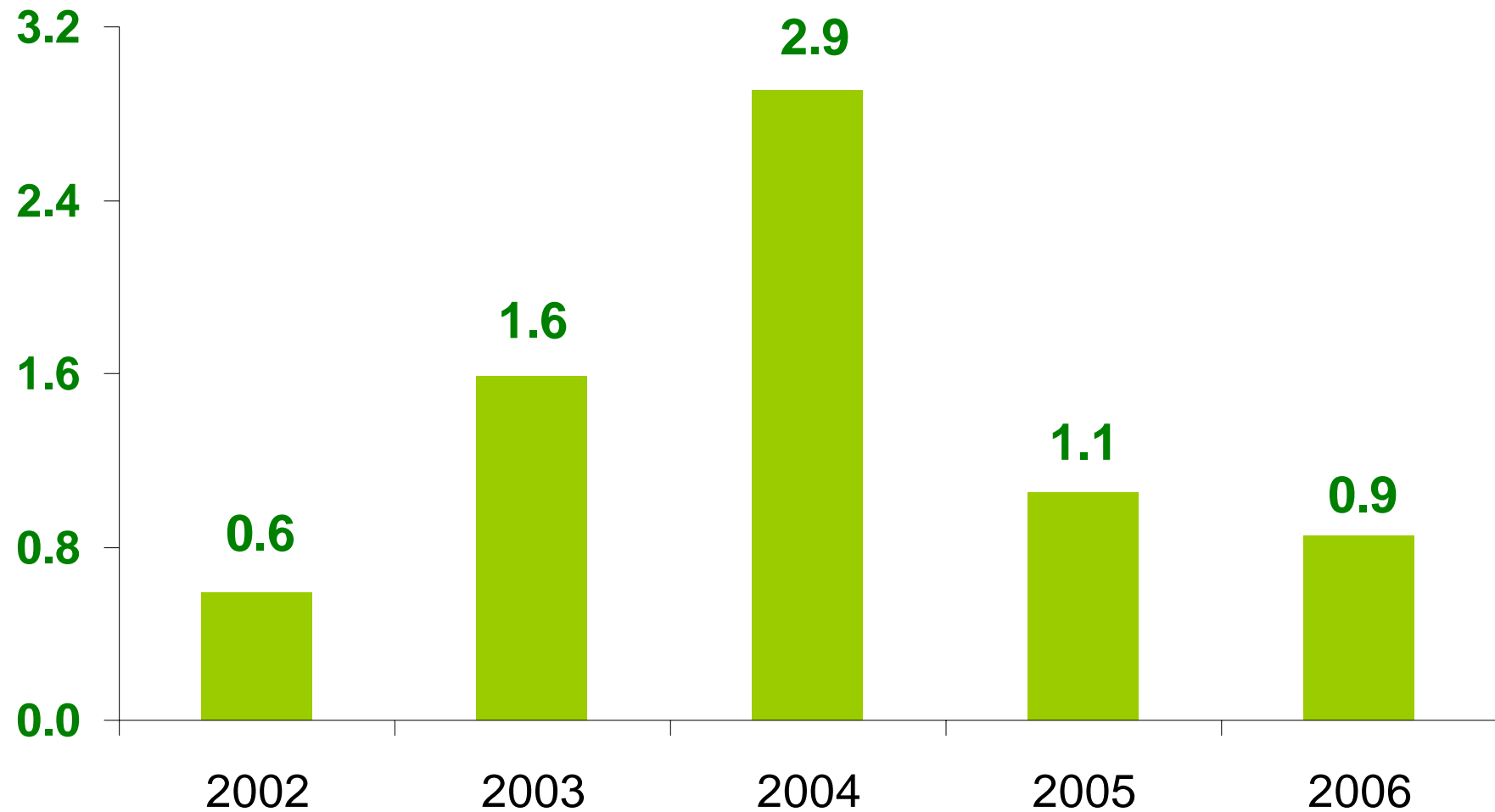


Average automotive diesel price and tax in Europe*

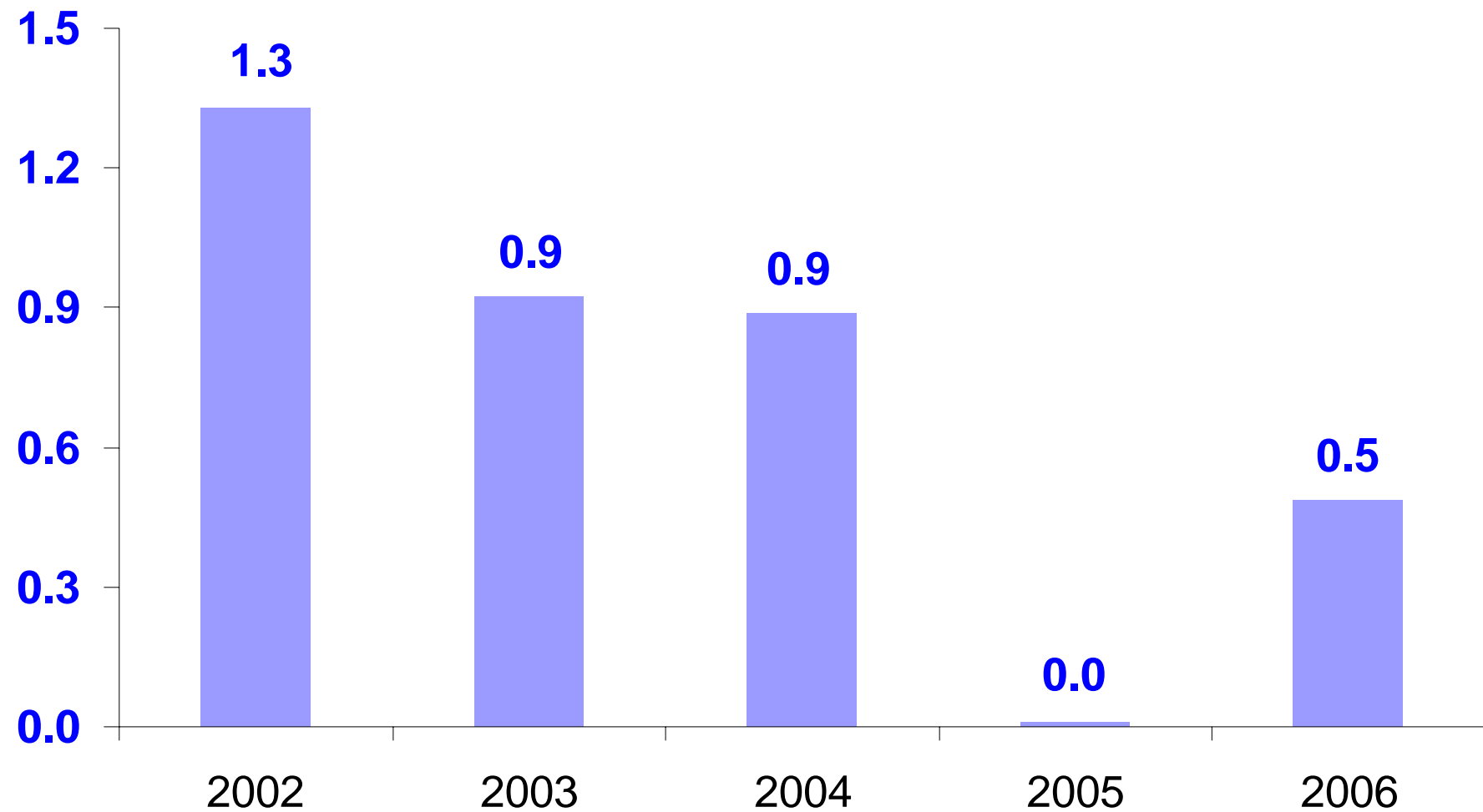


* Weighted by road transport consumption for Germany, France, Italy, Spain and UK. Weights for 2005 and 2006 are estimated.

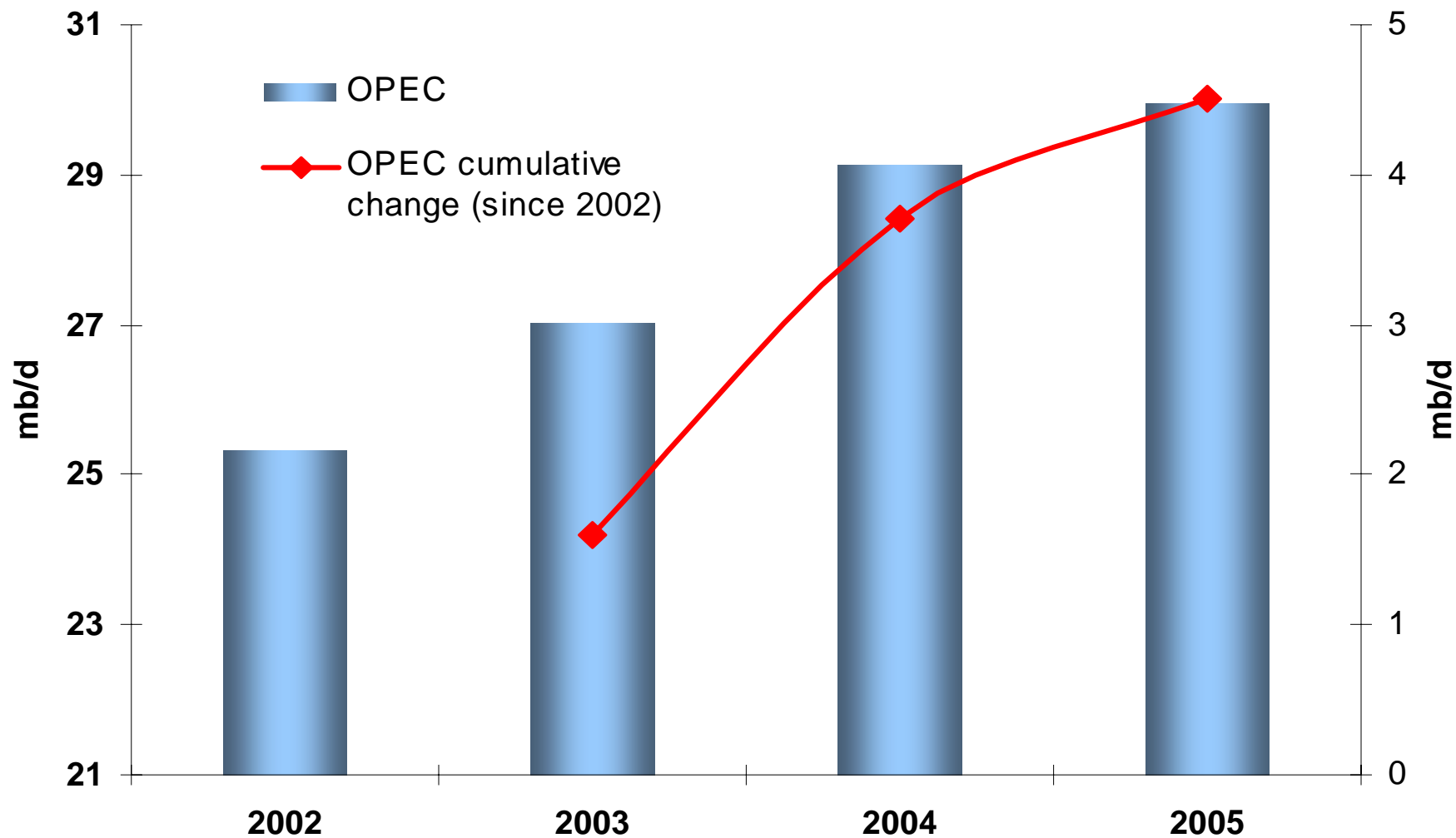
Global oil demand growth year-on-year change, mb/d



Non-OPEC supply growth year-on-year change, mb/d



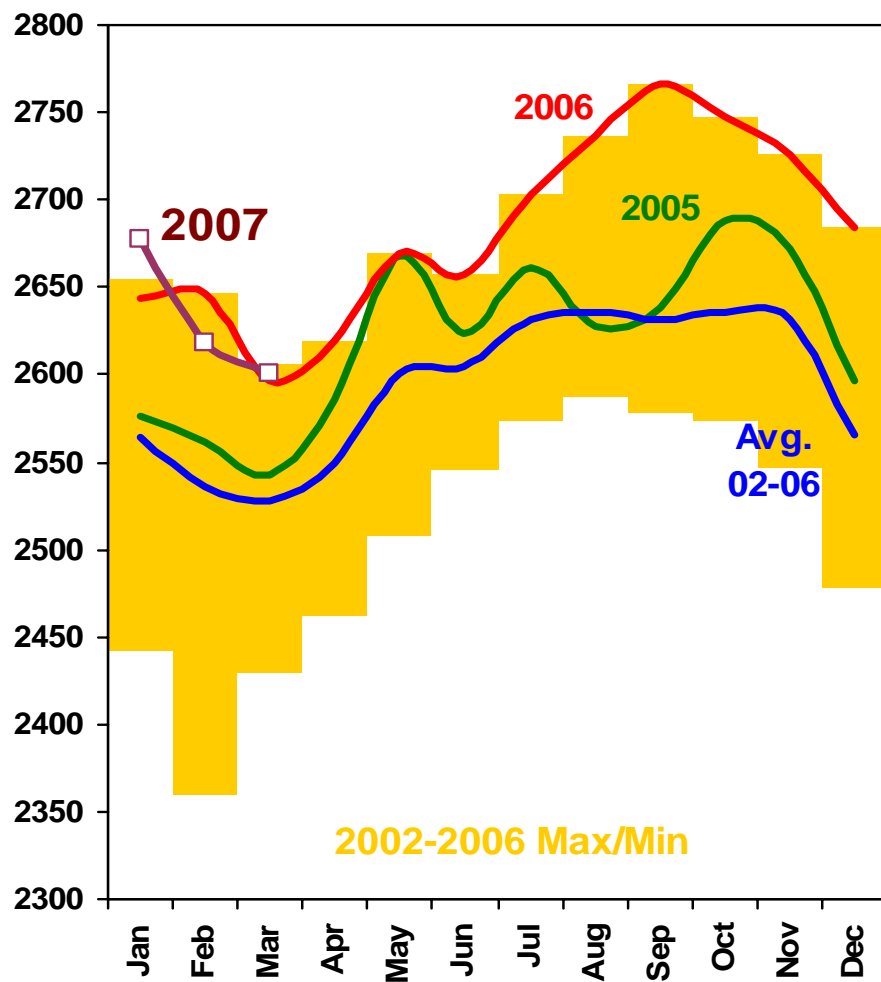
OPEC crude oil supply: swift response to strong demand growth and US supply interruption



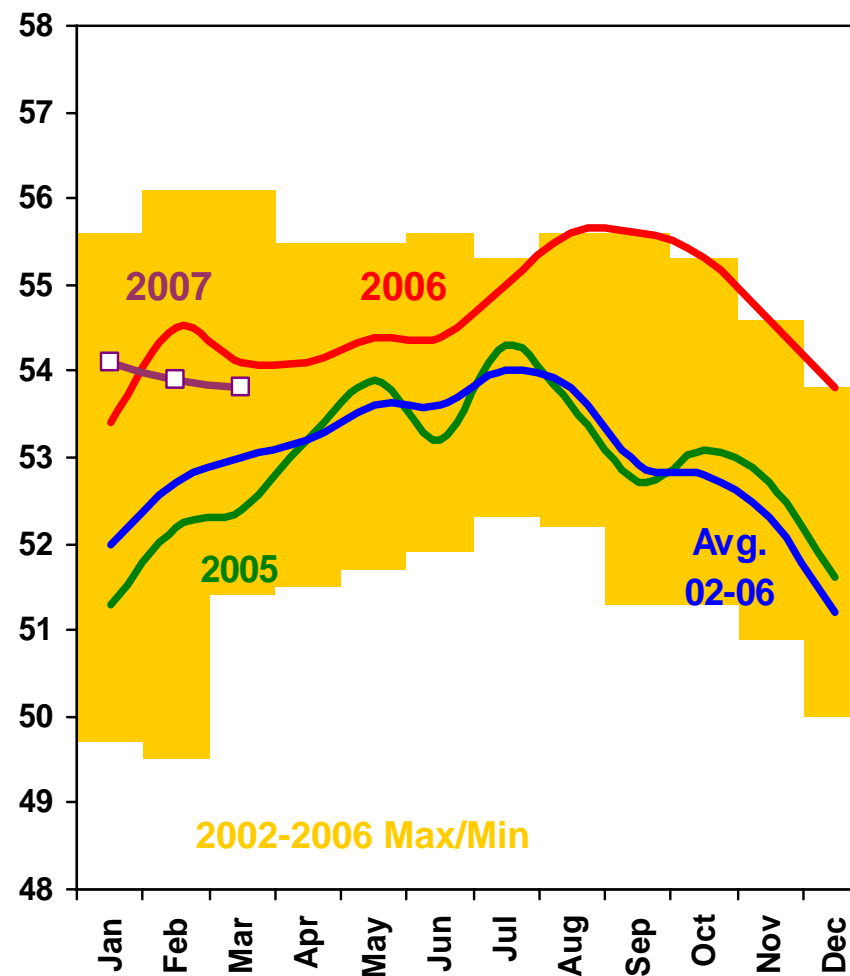
OECD commercial oil stocks



million barrels



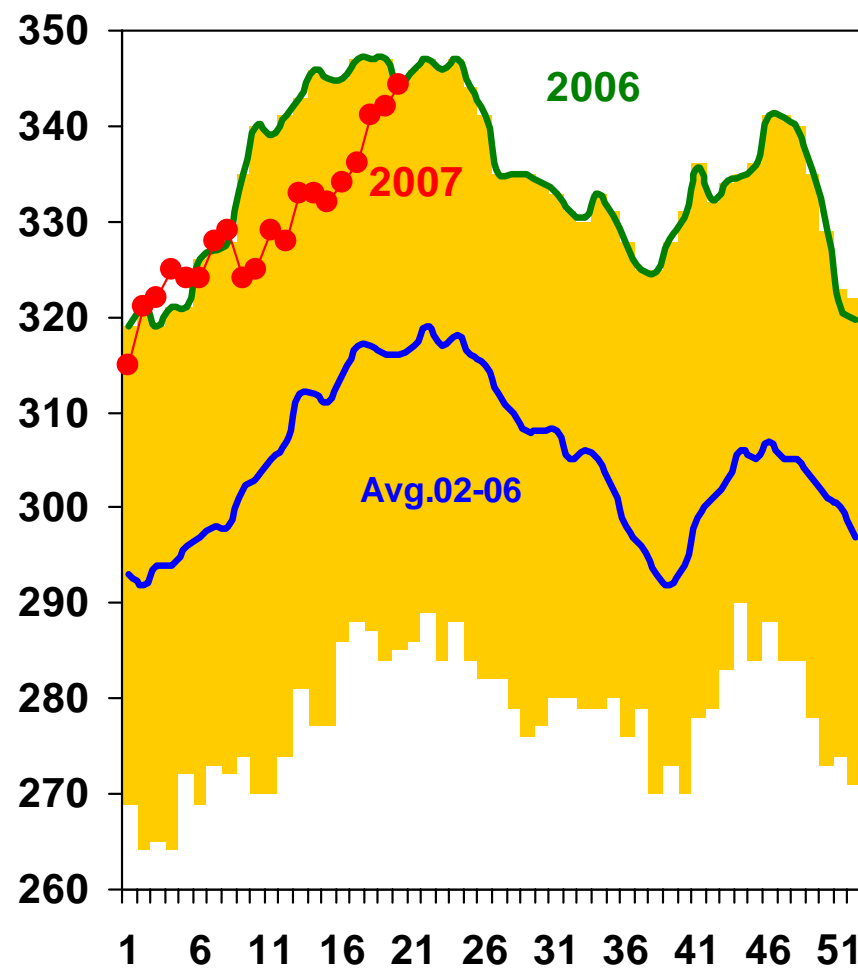
Days of forward cover



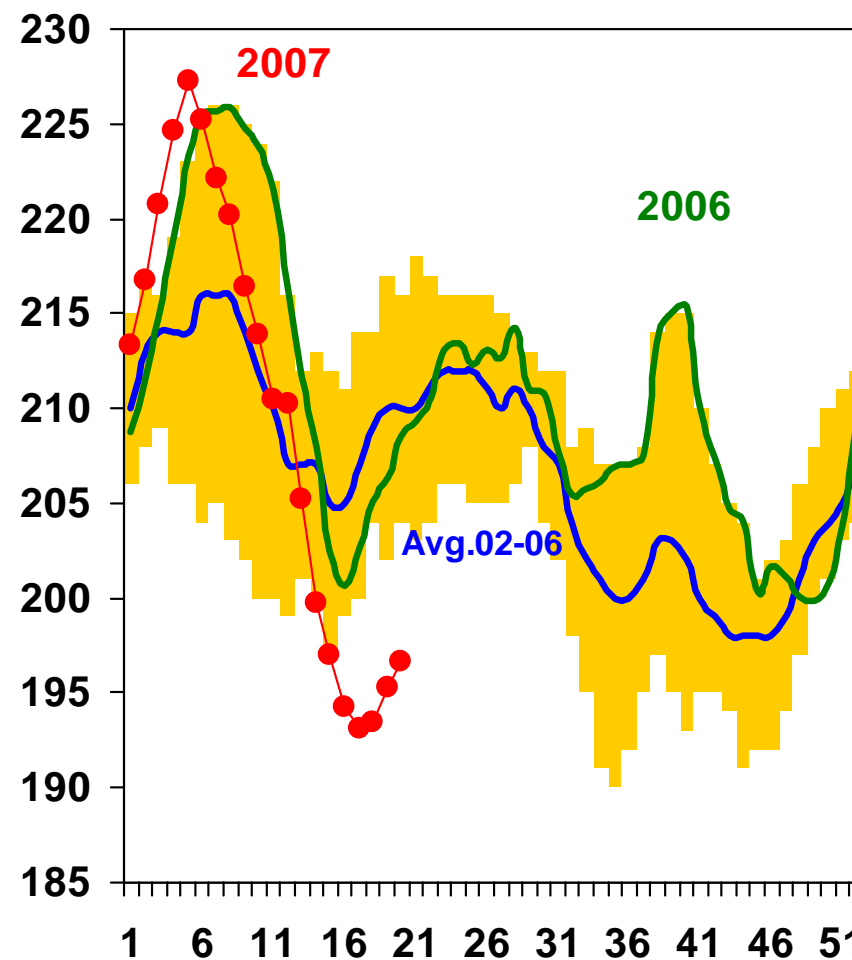
US commercial crude oil and gasoline stocks



Crude oil (million barrels)



Gasoline (million barrels)

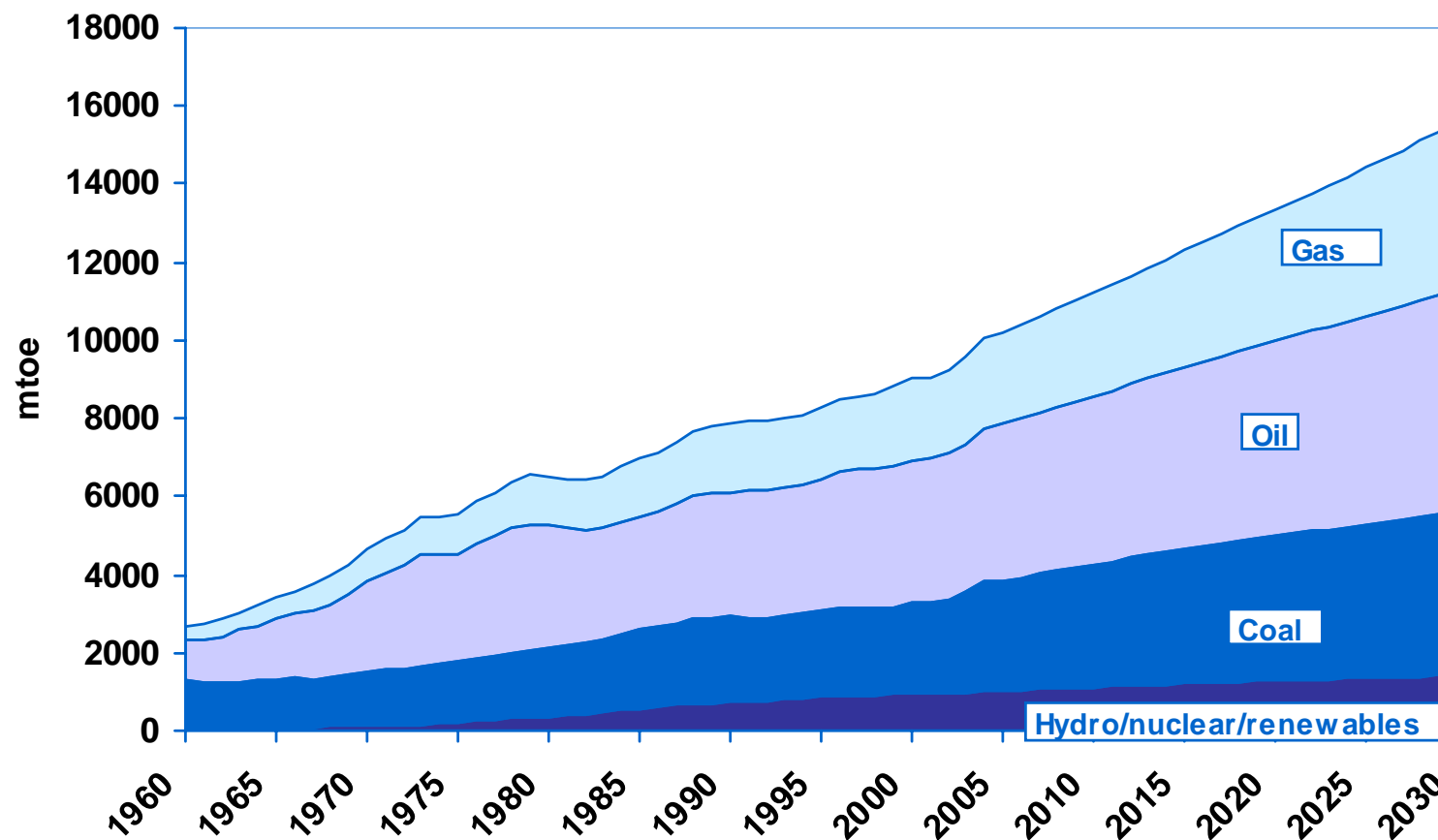


World oil demand supply balance for 2007 (mb/d)



	<u>2006</u>	<u>1Q07</u>	<u>2Q07</u>	<u>3Q07</u>	<u>4Q07</u>	<u>2007</u>	<u>07-06</u>
<u>Demand (a)</u>	84.2	85.6	84.0	85.4	86.7	85.4	1.3
<u>Supply</u>							
Non-OPEC (b)	49.5	50.4	50.3	50.5	51.5	50.7	1.2
OPEC NGL (c)	4.3	4.3	4.4	4.5	4.6	4.4	0.2
Call on OPEC 12	30.4	30.9	29.4	30.4	30.6	30.3	-0.1

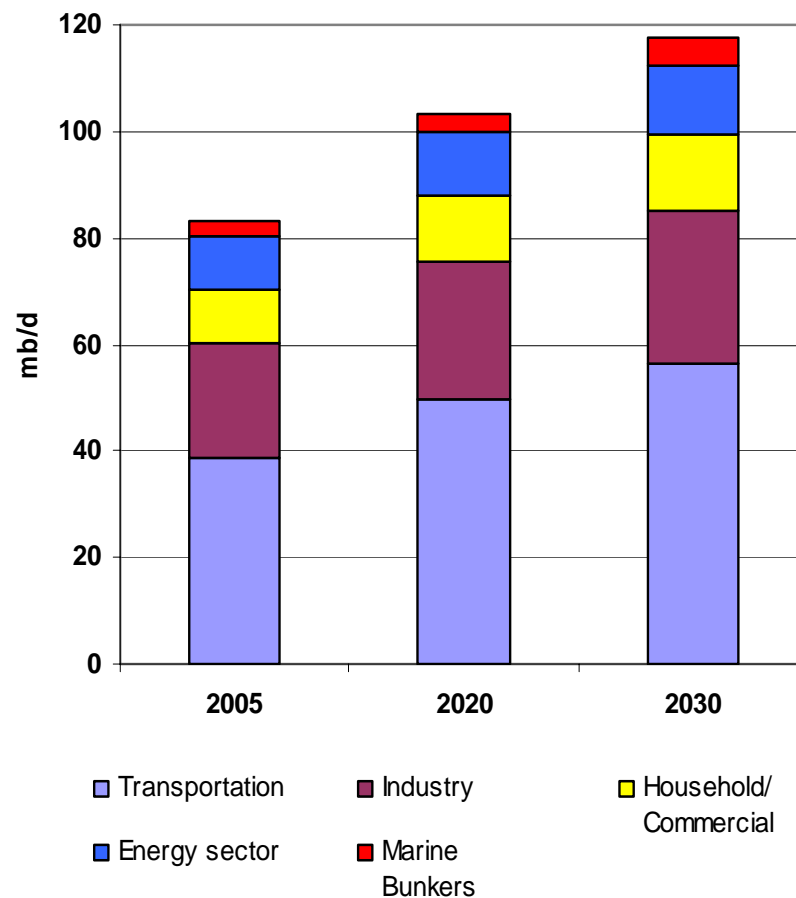
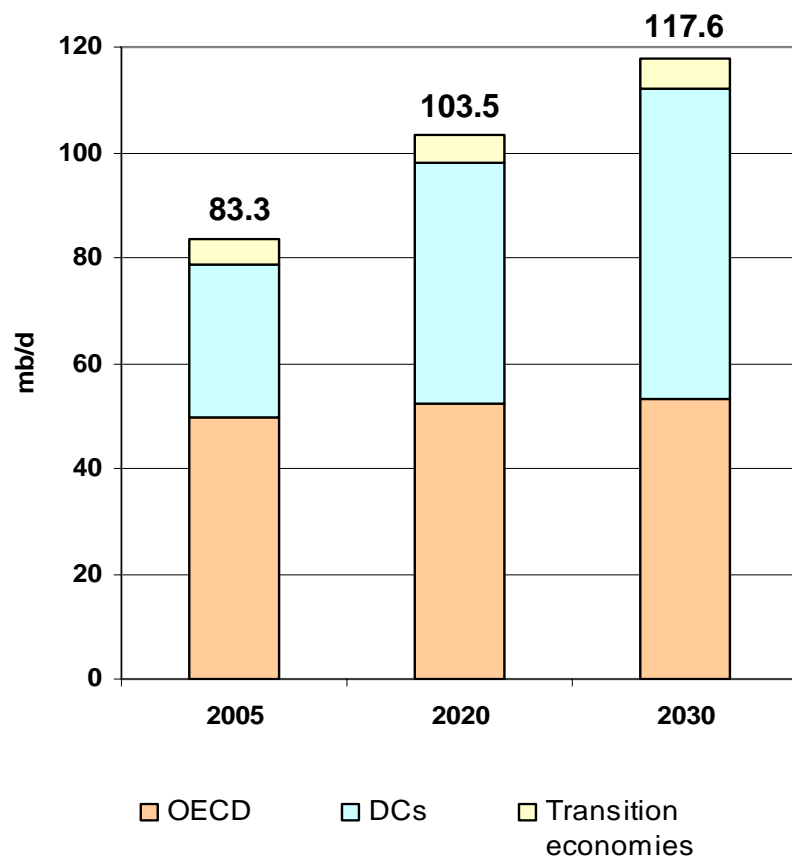
Energy demand by fuel type (Reference case)



- Fossil fuels will continue to provide >90% of commercial energy needs
- Oil continues to have the greatest share



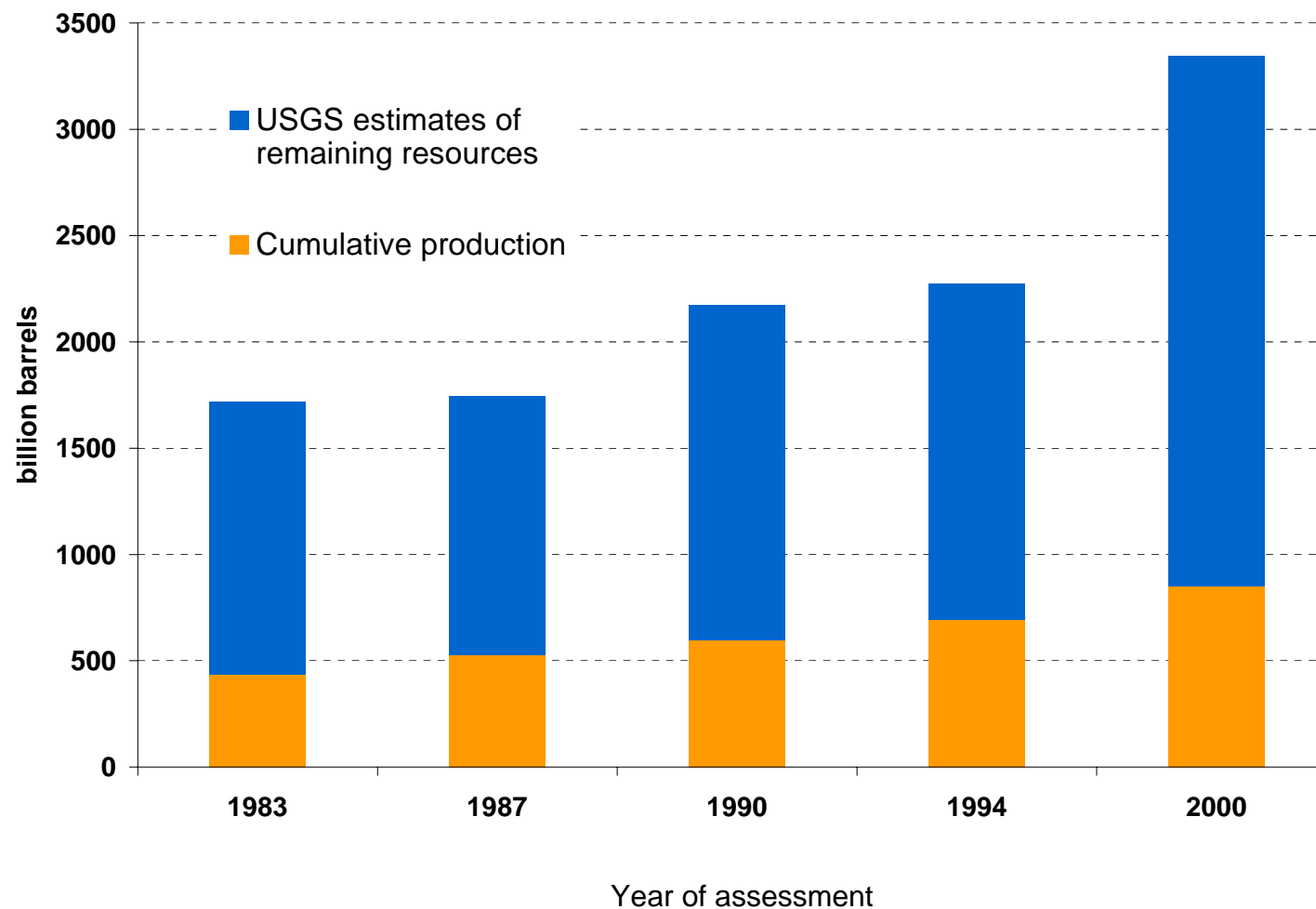
Outlook for the global oil demand (Reference case)



Strongest demand growth in DCs

Key sector: transportation

Resource base is sufficient

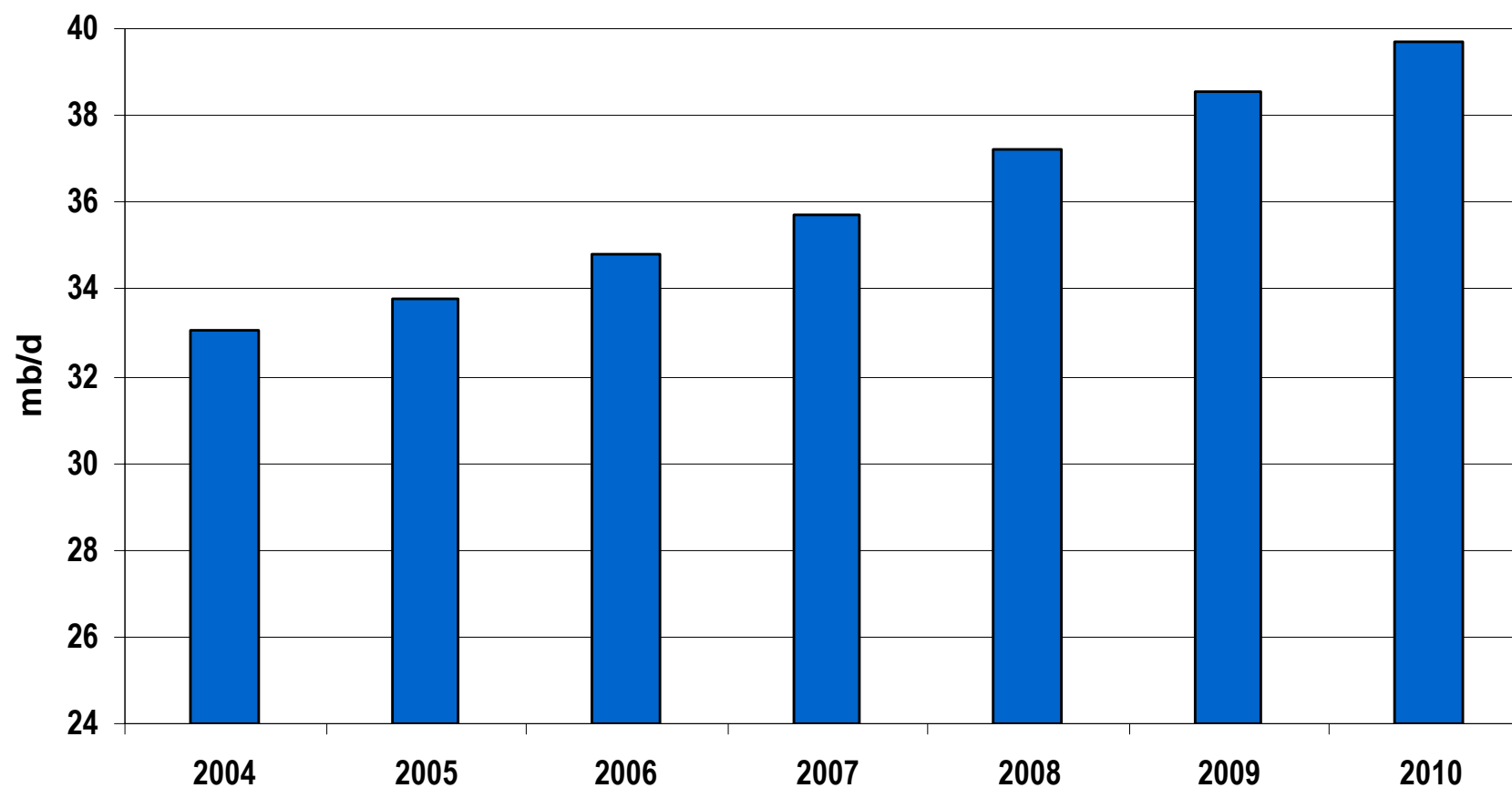


World oil supply outlook in the reference case, mb/d



	2005	2010	2015	2020	2025	2030
Non-OPEC	49.0	54.1	56.3	57.8	58.5	58.8
<i>of which: non-conventional</i>	<i>2.2</i>	<i>4.1</i>	<i>5.8</i>	<i>7.4</i>	<i>8.9</i>	<i>10.2</i>
OPEC						
NGLs/non-conventional	4.1	5.7	6.8	7.8	8.8	9.8
crude	31.1	30.2	33.8	38.2	43.5	49.3
World	83.3	89.7	96.5	103.5	110.4	117.6

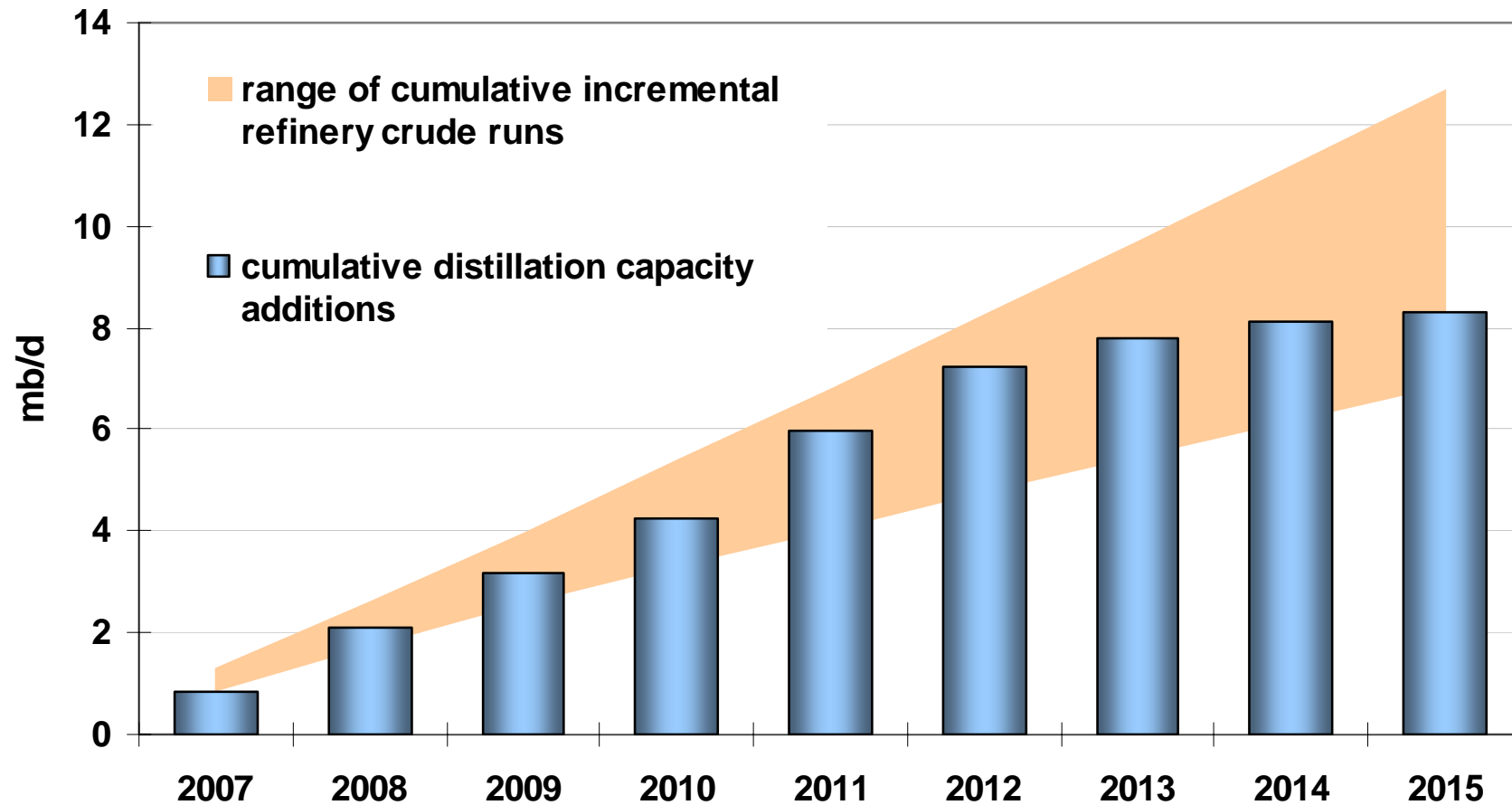
OPEC crude production capacity is increasing



Cumulative distillation capacity additions vs. incremental refinery runs



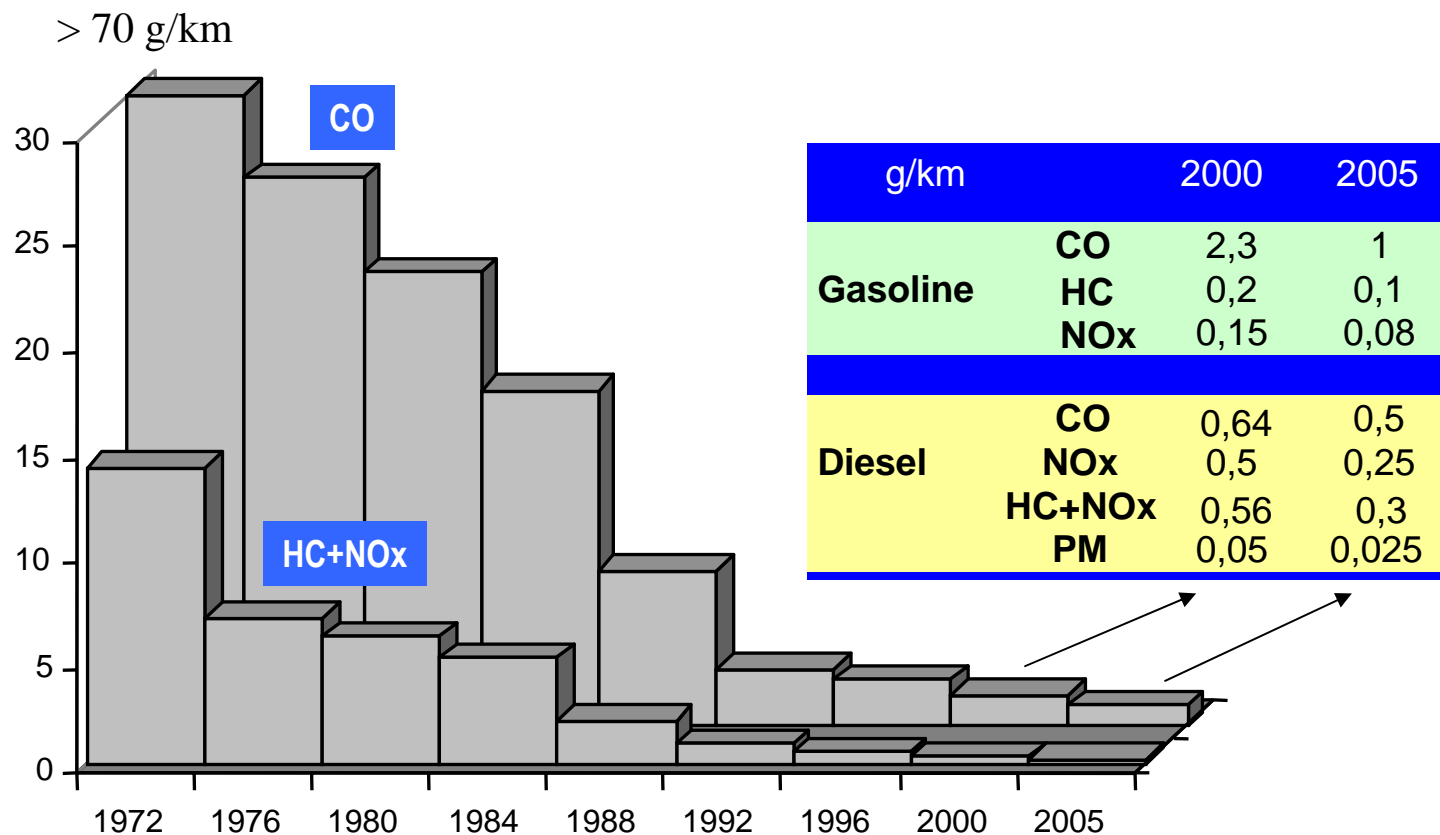
Downside risks on projected incremental crude runs are increasing



Huge progress has been made in addressing local pollution concerns



Evolution of pollutant emissions (individual cars)



Source: IFP

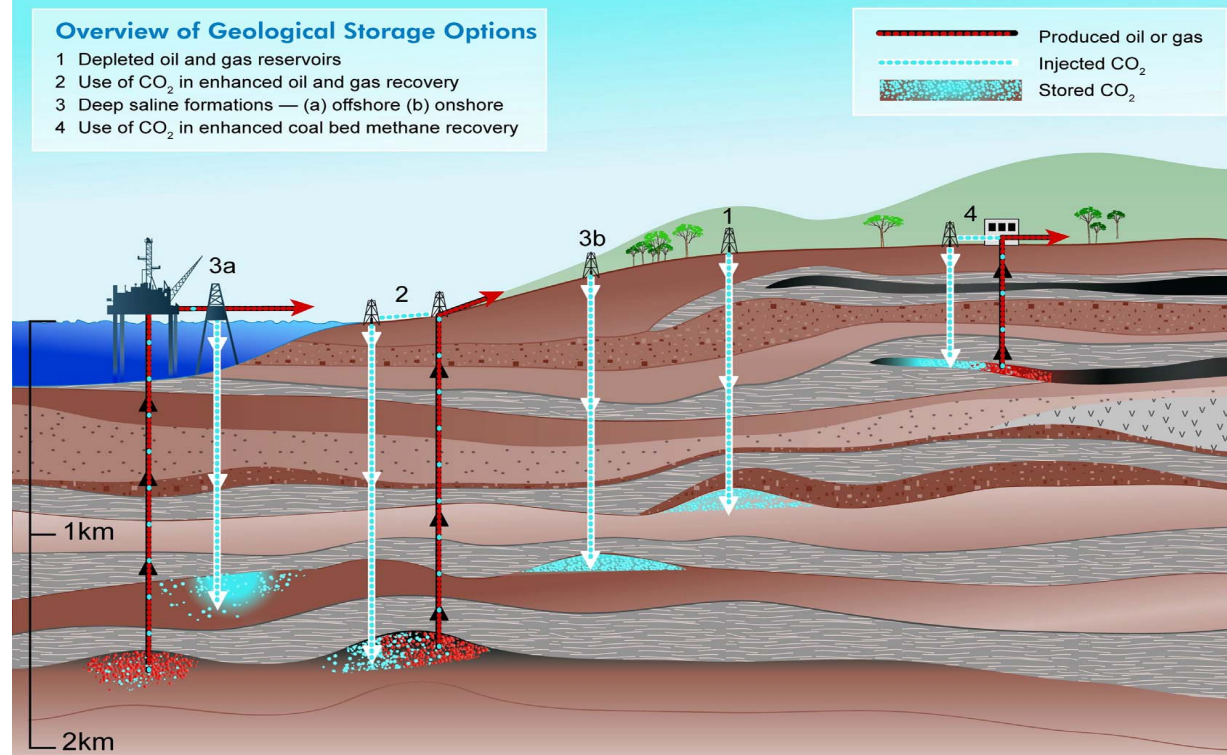
Carbon Capture and Storage: an existing technology, with great relatively low-cost mitigation potential



Methods for storing CO₂ in deep underground geological formations

Overview of Geological Storage Options

- 1 Depleted oil and gas reservoirs
- 2 Use of CO₂ in enhanced oil and gas recovery
- 3 Deep saline formations — (a) offshore (b) onshore
- 4 Use of CO₂ in enhanced coal bed methane recovery



SRCCS Figure TS-7

IPCC

INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE



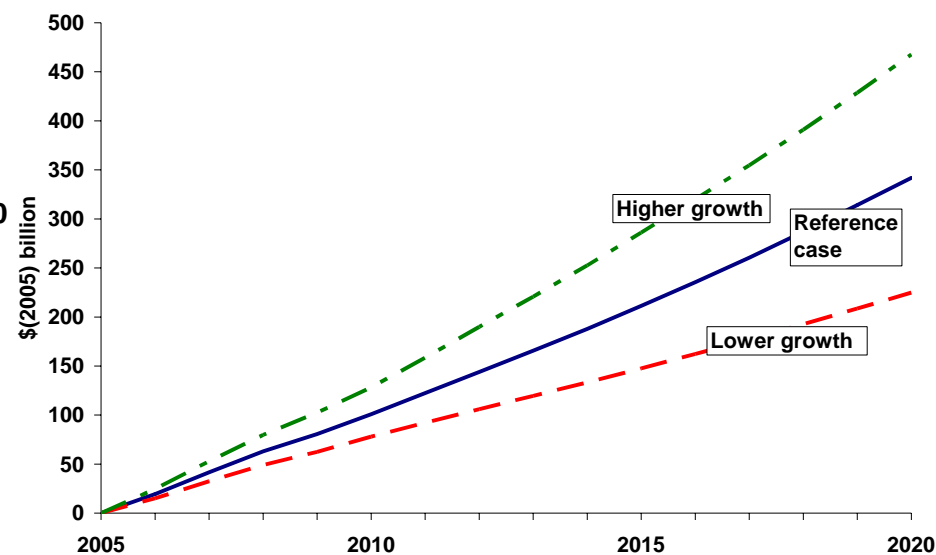
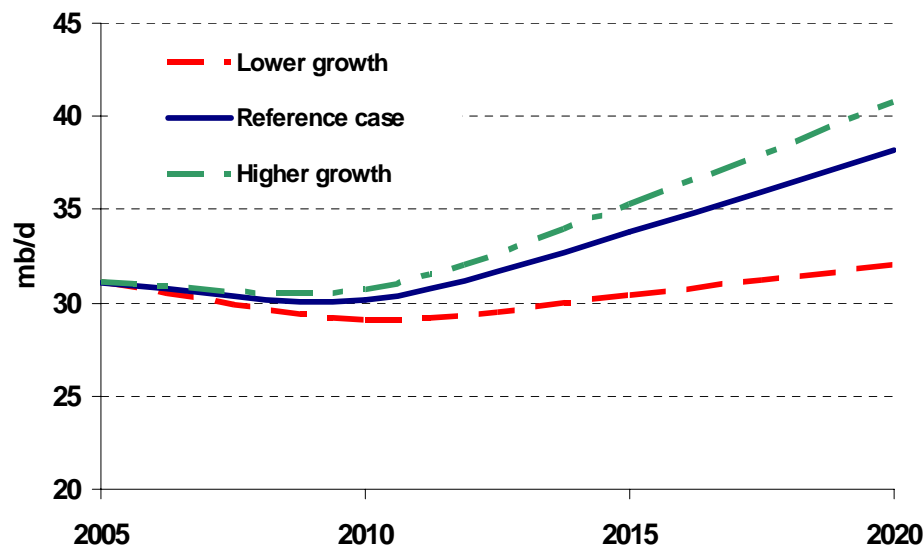
EU-OPEC Roundtable on Carbon Capture and Storage



Security of demand is a key concern



Large uncertainties concerning the demand for OPEC oil ...

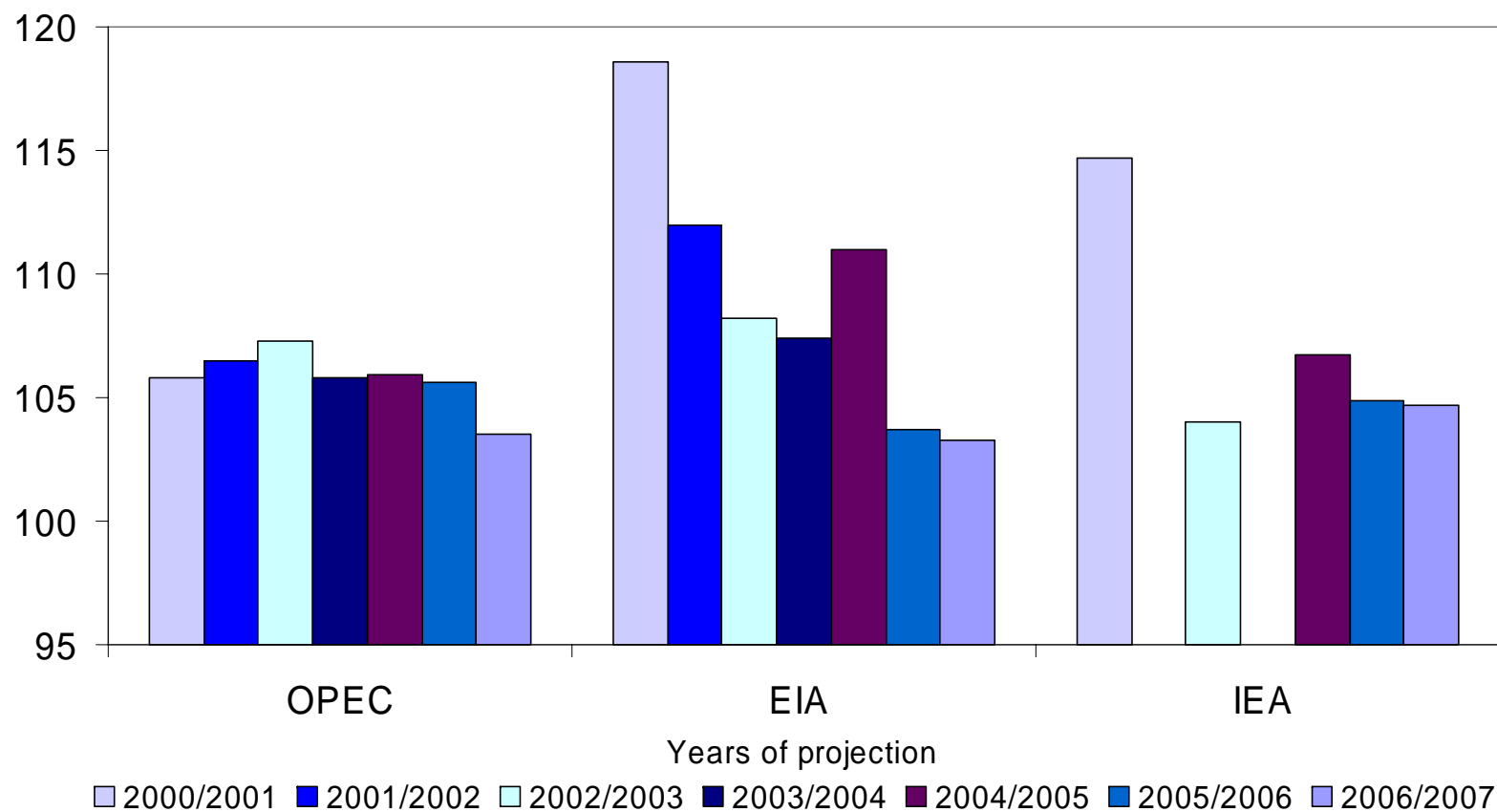


...and OPEC investment needs

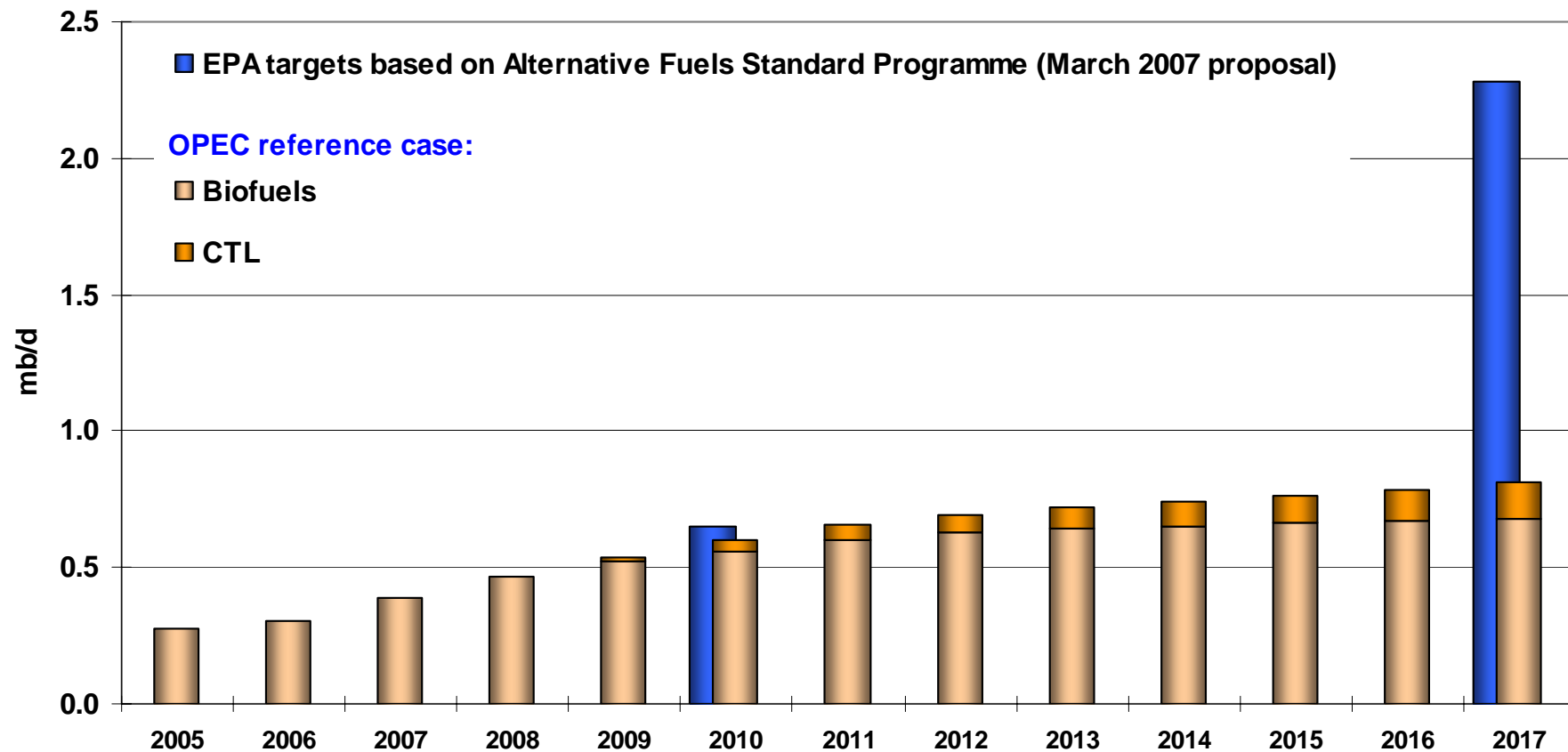
World oil demand projections for 2020: large downward revisions



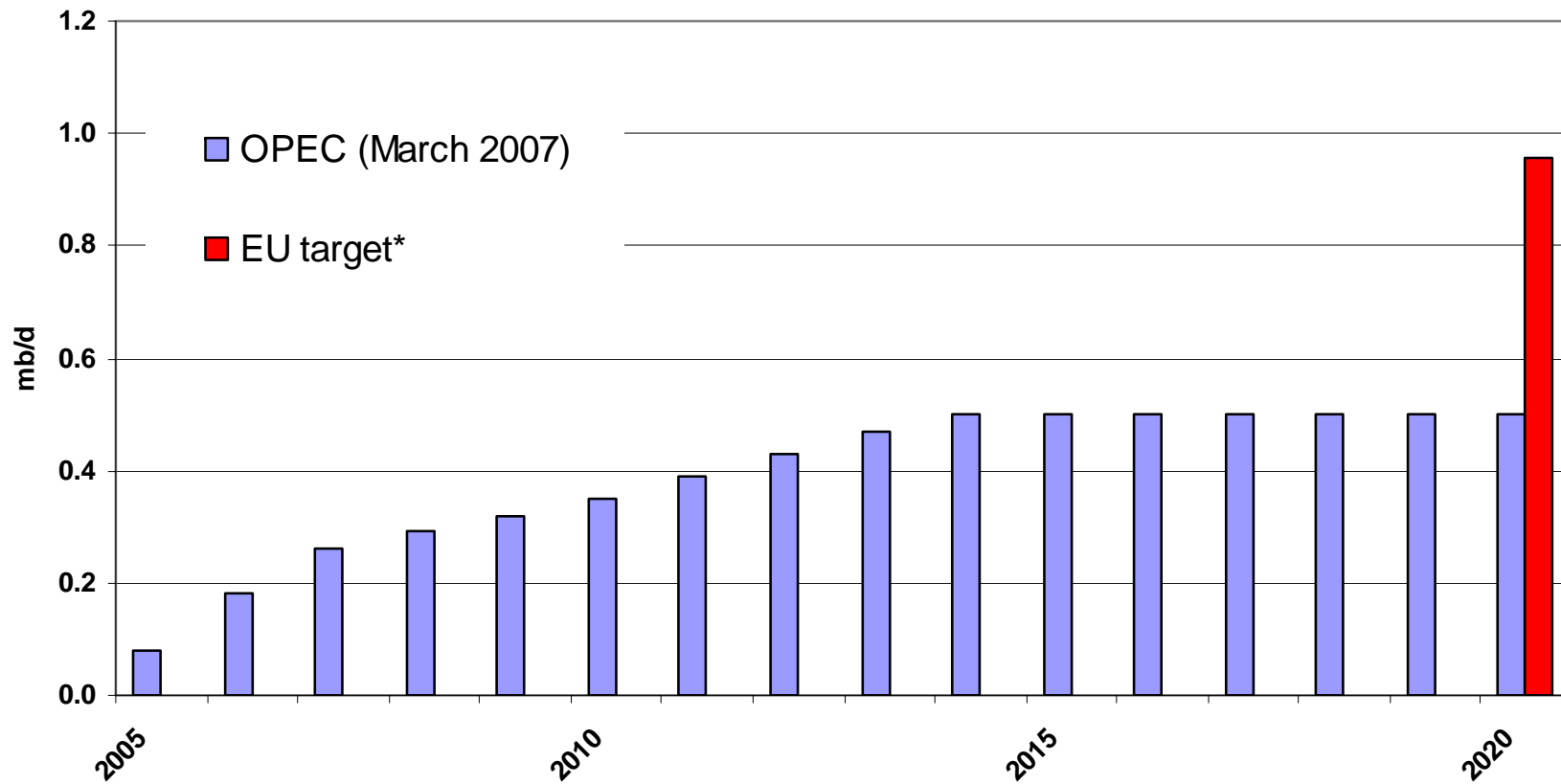
Projections of world oil demand for 2020, mb/d



Alternative transport fuels use in USA: the impact of the new EPA proposed targets

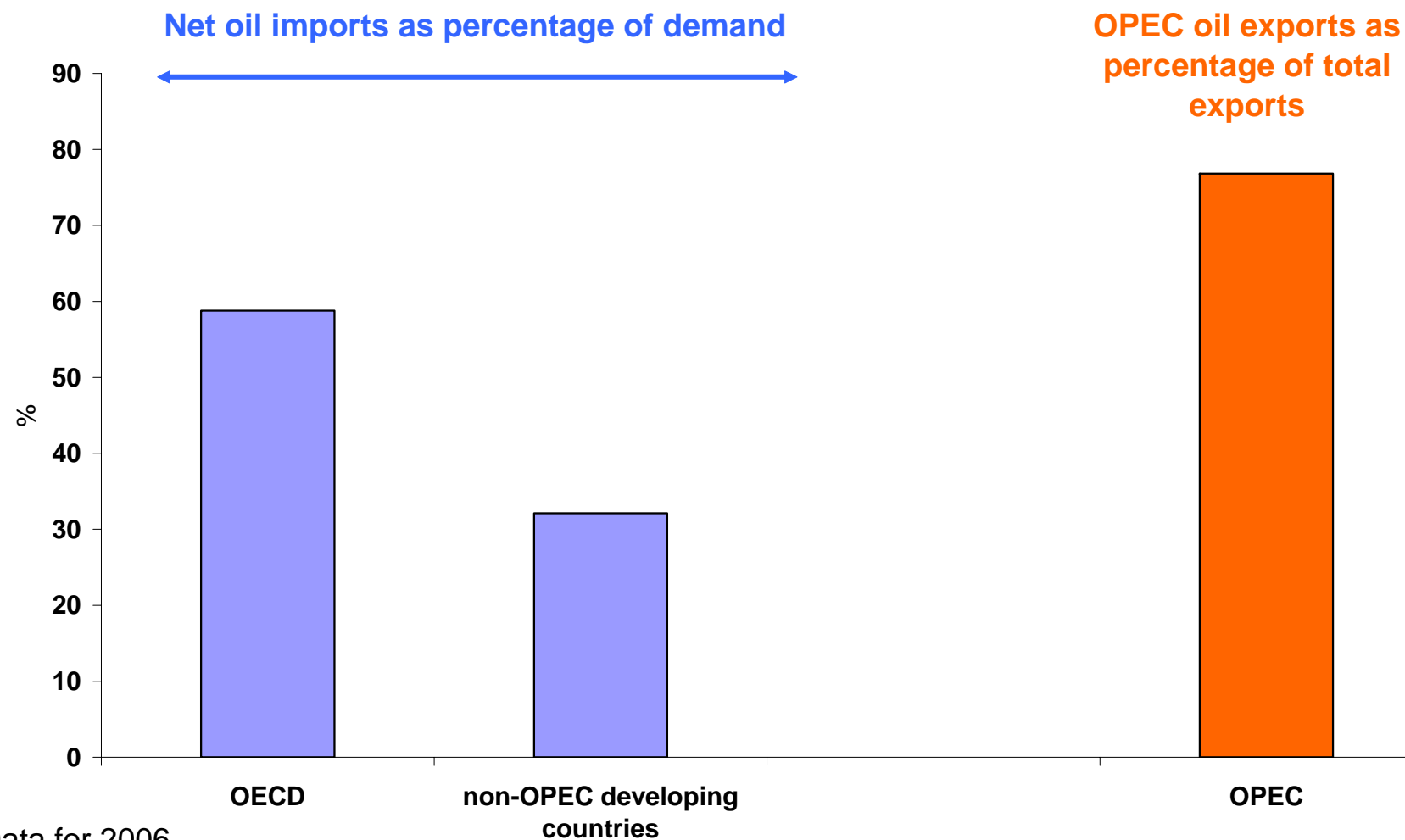


Biofuels target in EU for the transportation sector



* "EU target" calculated based on OPEC projections for road transportation demand in Europe (10% target)

Oil “dependency”: a two-way street





- **Interdependency points to the need for cooperation**
- **OPEC continues to expand dialogues as the way forward with regard to security of supply and demand**
- **Formal energy dialogues exist between OPEC and the EU, China, Russia, the IEA**
- **The International Energy Forum promotes the producer-consumer dialogue**
 - OPEC played a significant part in the development of JODI



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- Conclusion