



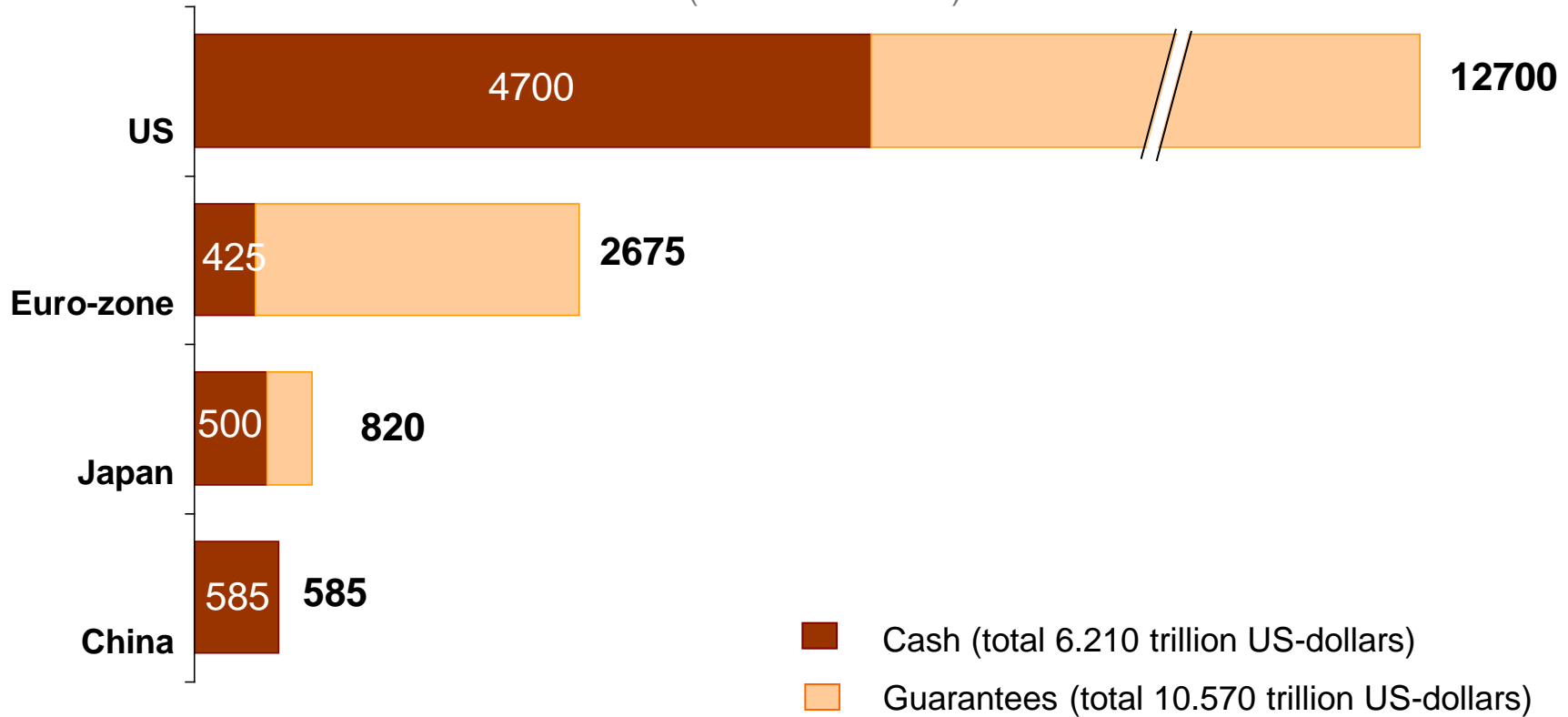
## *Global Oil Outlook & Future Challenges*

**25<sup>th</sup> January, 2012**  
**Vienna, OPEC Secretariat**

**Dr. Hasan M. Qabazard**  
**Director, Research Division**  
**OPEC Secretariat**



Overview of fiscal stimulus by region and comparison with global GDP  
(billion US-dollars)



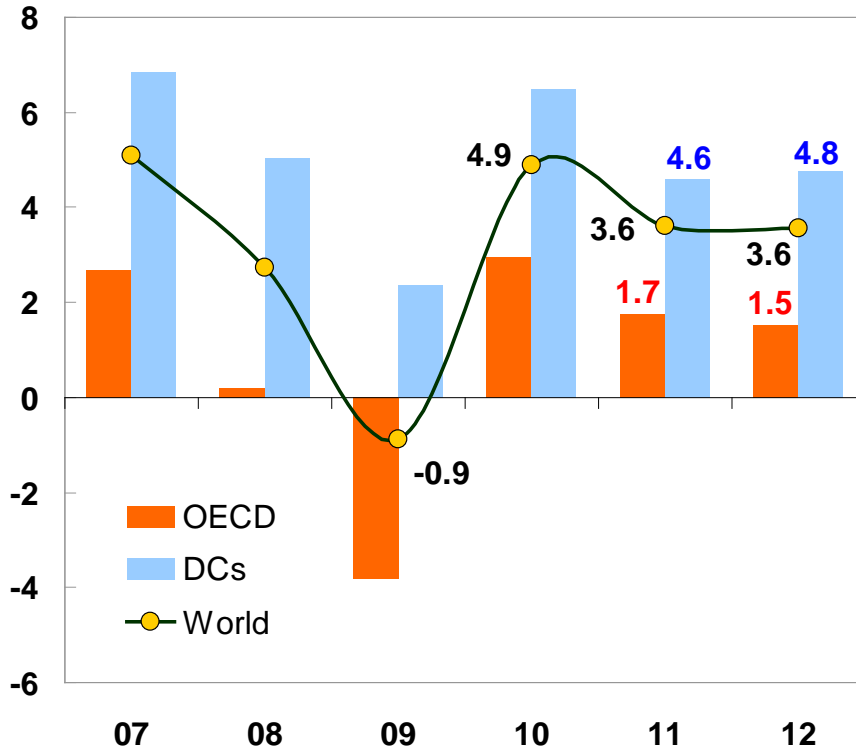
Source: BNP Paribas, Financial Times, der Spiegel, National Development and Reform Commission, CNN, Government of Japan, OPEC Secretariat

Note: Estimates are based on the mentioned sources, reflect calculations made by the OPEC Secretariat. They might differ from the actual spending pattern.

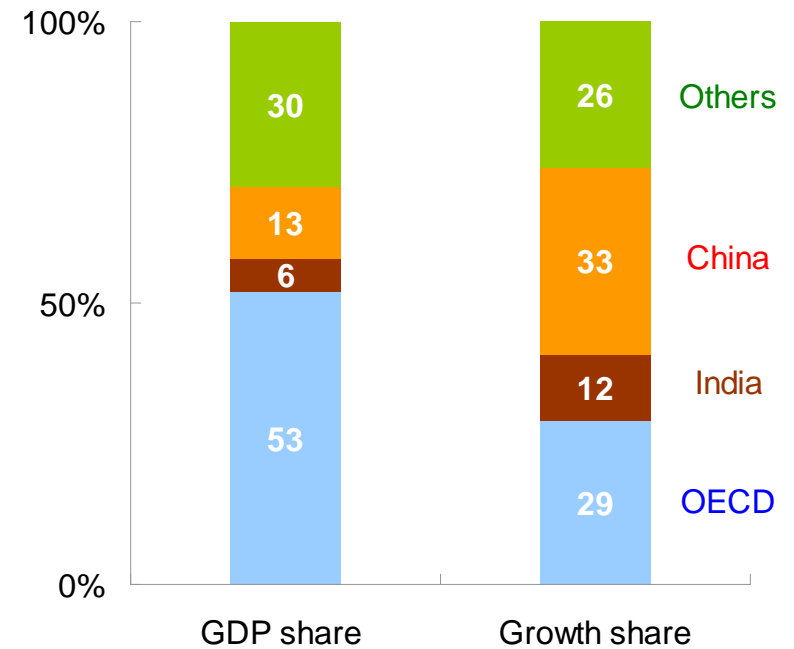
# Slowdown in the world economy is evident



**World real GDP growth**  
(in %)



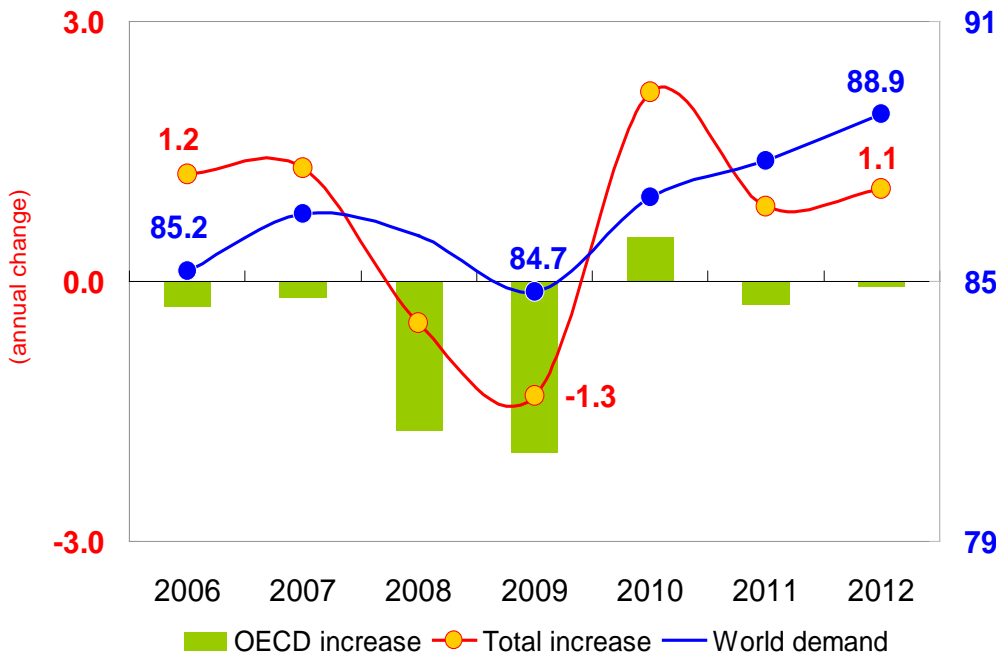
**Contributions to the global economy**  
(% shares in value and growth, 2011)



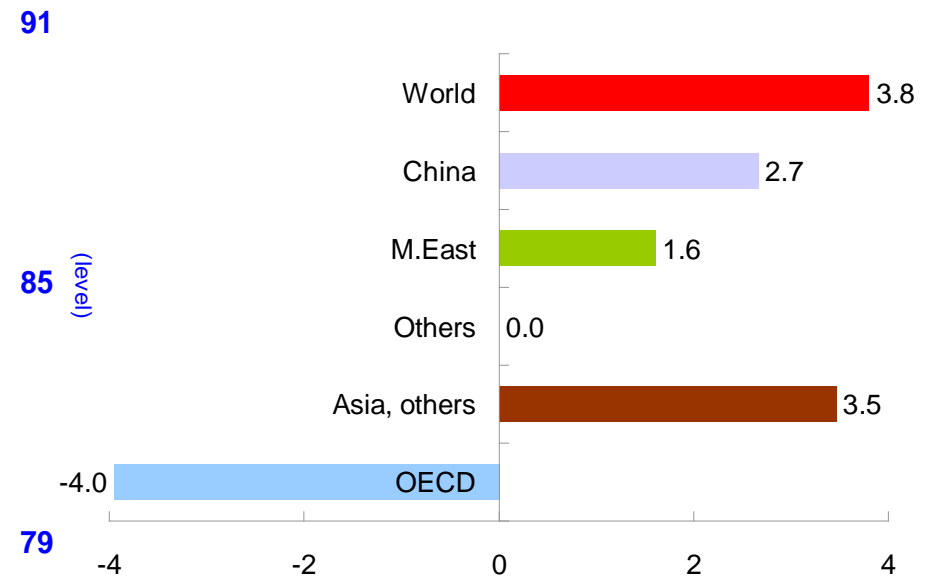
# Developing world leads the oil demand expansion



**Annual oil demand growth**  
(2006-2012, mb/d)



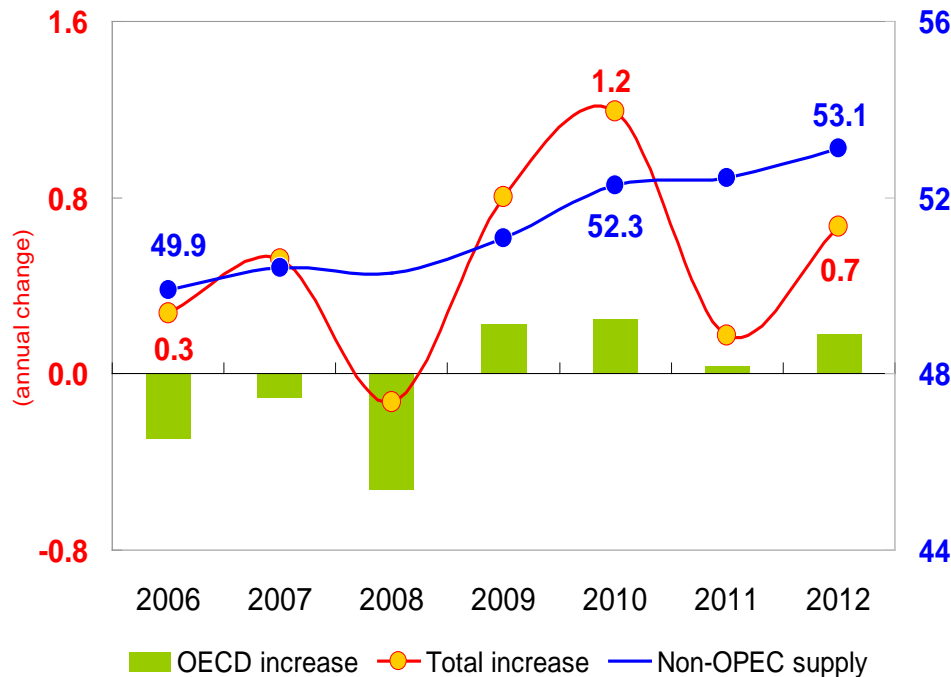
**Cumulative change in oil demand**  
(2006-2011, mb/d)



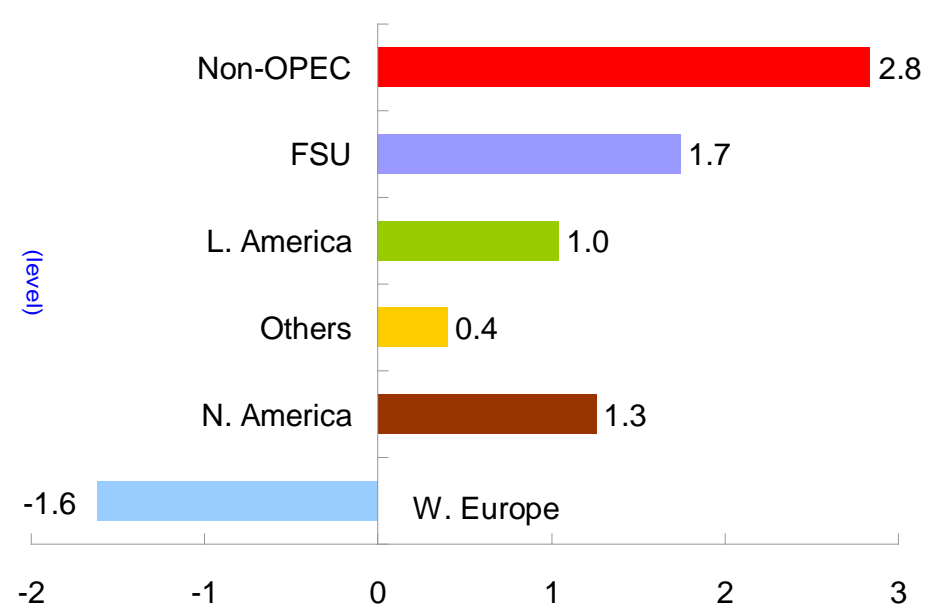
# Steady growth is set to continue in non-OPEC supply



Annual non-OPEC oil supply growth  
(2006-2012, mb/d)



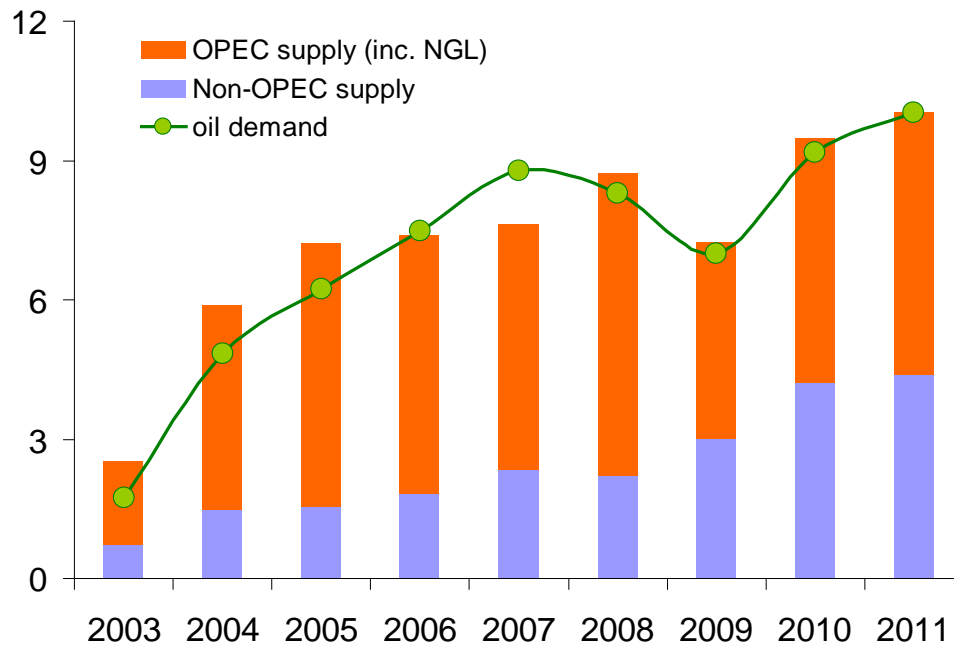
Cumulative change in non-OPEC supply  
(2006-2011, mb/d)



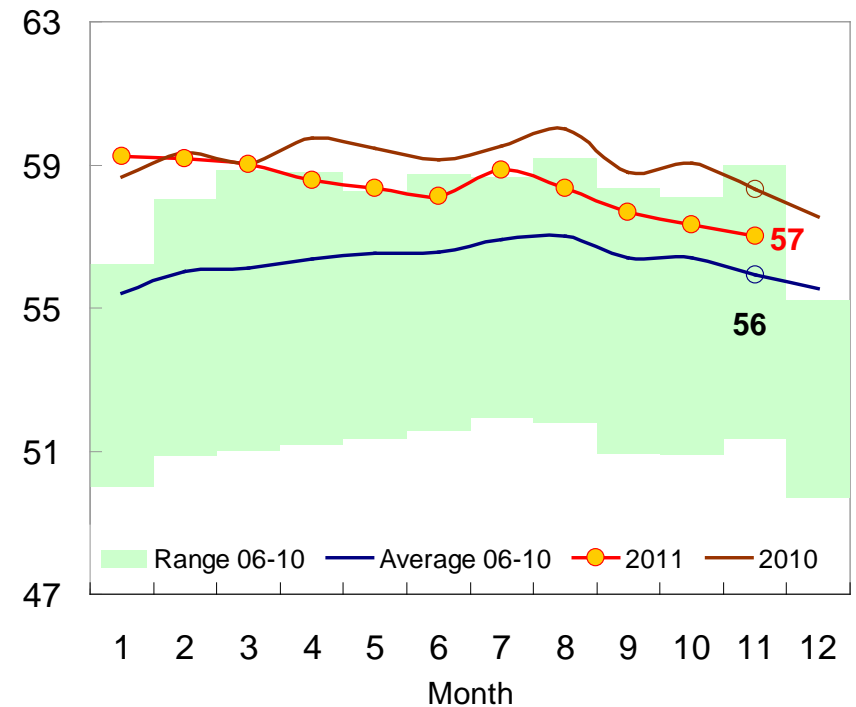
# The global oil market is well supplied and balanced



**OPEC contribution to the world supply**  
(cumulative change 2003-2011, mb/d)



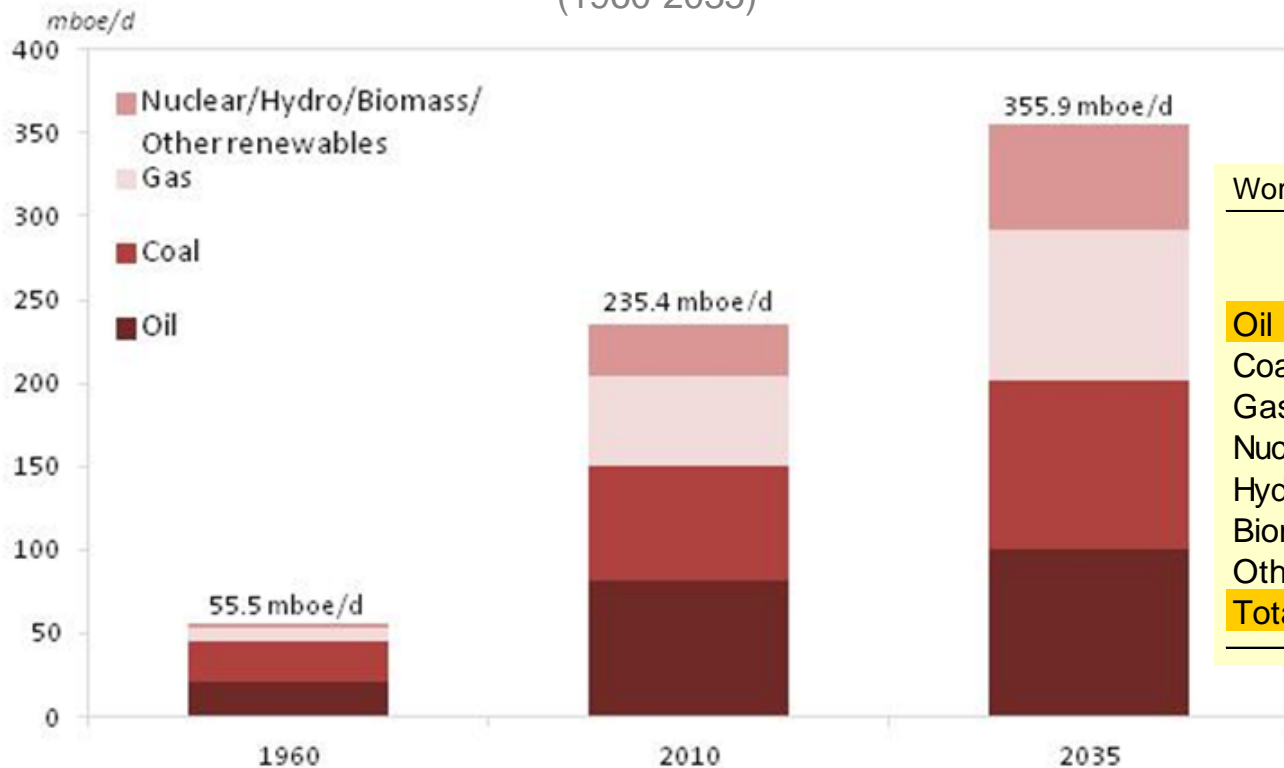
**OECD commercial oil stocks**  
(Days of forward cover, end-November 2011)



# World energy demand to increase by over 50%



**Total energy supply**  
(1960-2035)



World energy supply: growth and shares

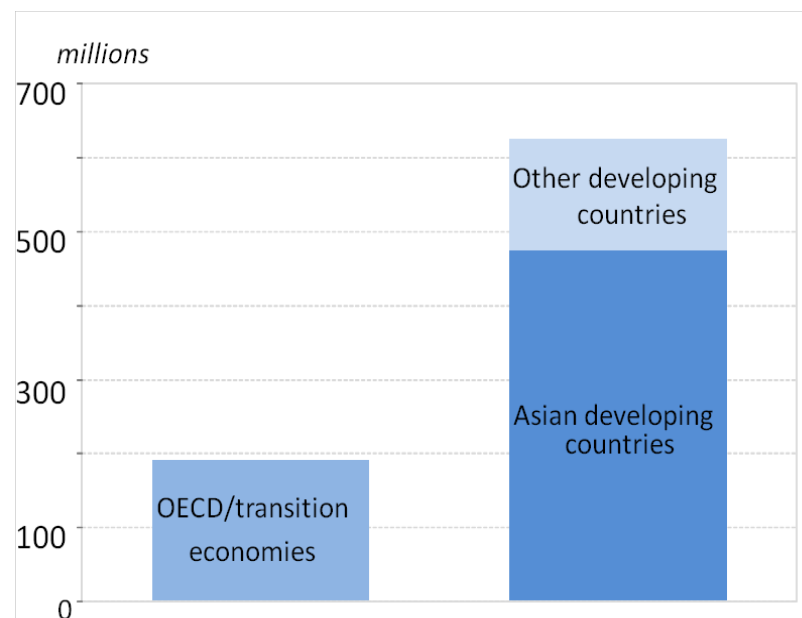
	Growth % (2008-35)	Fuel shares %	
		2008	2035
Oil	0.8	35.2	28.4
Coal	1.6	29.1	28.5
Gas	2.0	22.7	25.3
Nuclear	1.7	6.2	6.3
Hydro	2.3	2.4	2.9
Biomass	3.3	3.7	5.7
Other renewables	7.5	0.6	2.9
<b>Total</b>	<b>1.6</b>		



**World oil demand**  
(Reference case, mb/d)

	2010	2015	2020	2035
OECD	46.1	46.0	45.2	41.9
Developing Countries	35.9	41.8	47.2	61.9
China	8.9	11.6	13.8	18.4
Transition economies	4.8	5.1	5.3	5.9
<b>World</b>	<b>86.8</b>	<b>92.9</b>	<b>97.8</b>	<b>109.7</b>
<b>OECD share %</b>	<b>53.1</b>	<b>49.5</b>	<b>46.2</b>	<b>38.2</b>

**Increase in number of passenger cars**  
(2008-2035)





# World oil supply outlook: there will be diverse source of supply

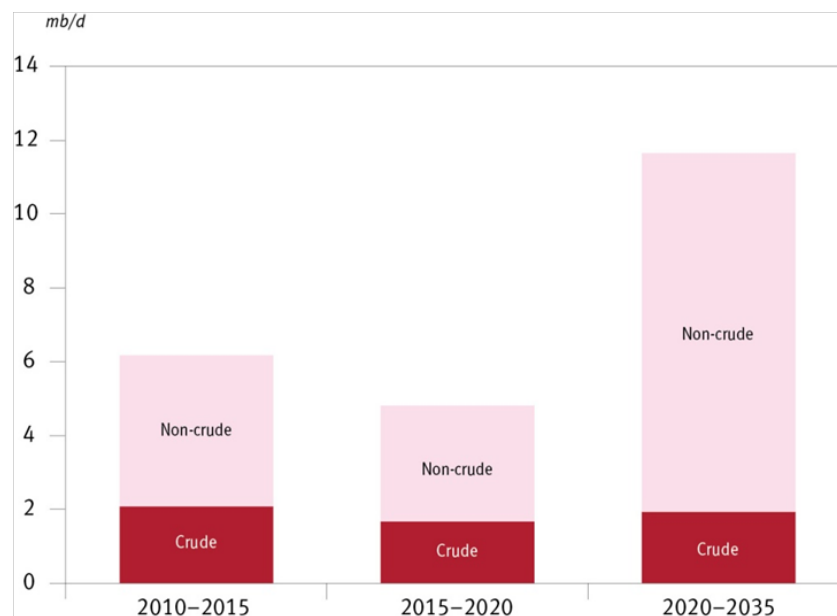


**World oil supply**  
(Reference case, mb/d)

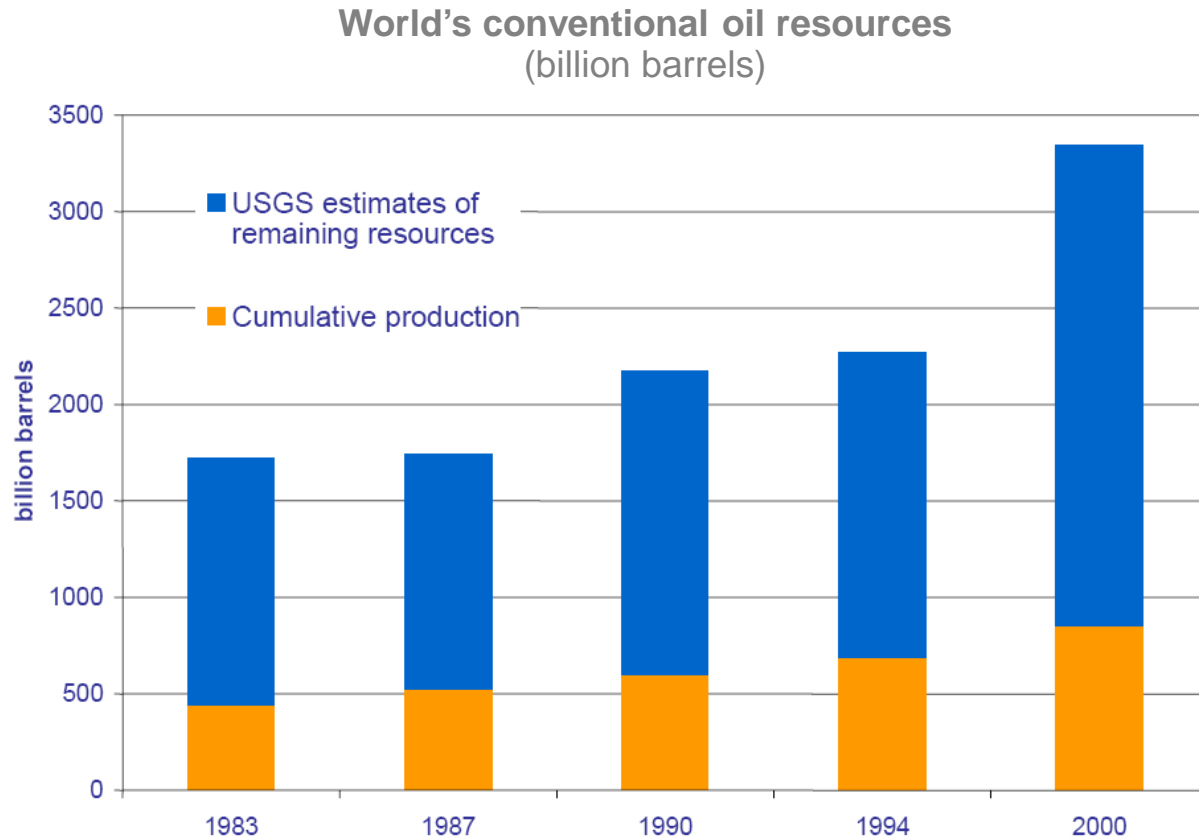
	2010	2015	2020	2035
OECD	19.9	20.3	20.4	22.2
Developing Countries*	16.9	18.4	19.4	19.3
Transition economies	13.4	14.3	14.9	16.1
<b>Total non-OPEC</b>	<b>52.3</b>	<b>55.3</b>	<b>57.3</b>	<b>60.5</b>
OPEC NGL & GTLs	4.9	6.5	7.6	10.0
OPEC crude	29.3	31.3	33.2	39.3
<b>non-OPEC share (%)</b>	<b>60.5</b>	<b>59.4</b>	<b>58.5</b>	<b>55.0</b>

\*/excluding OPEC

**Incremental crude & non-crude oil supply**  
(Reference case, mb/d)



# Technology innovation led to expansion of resource base

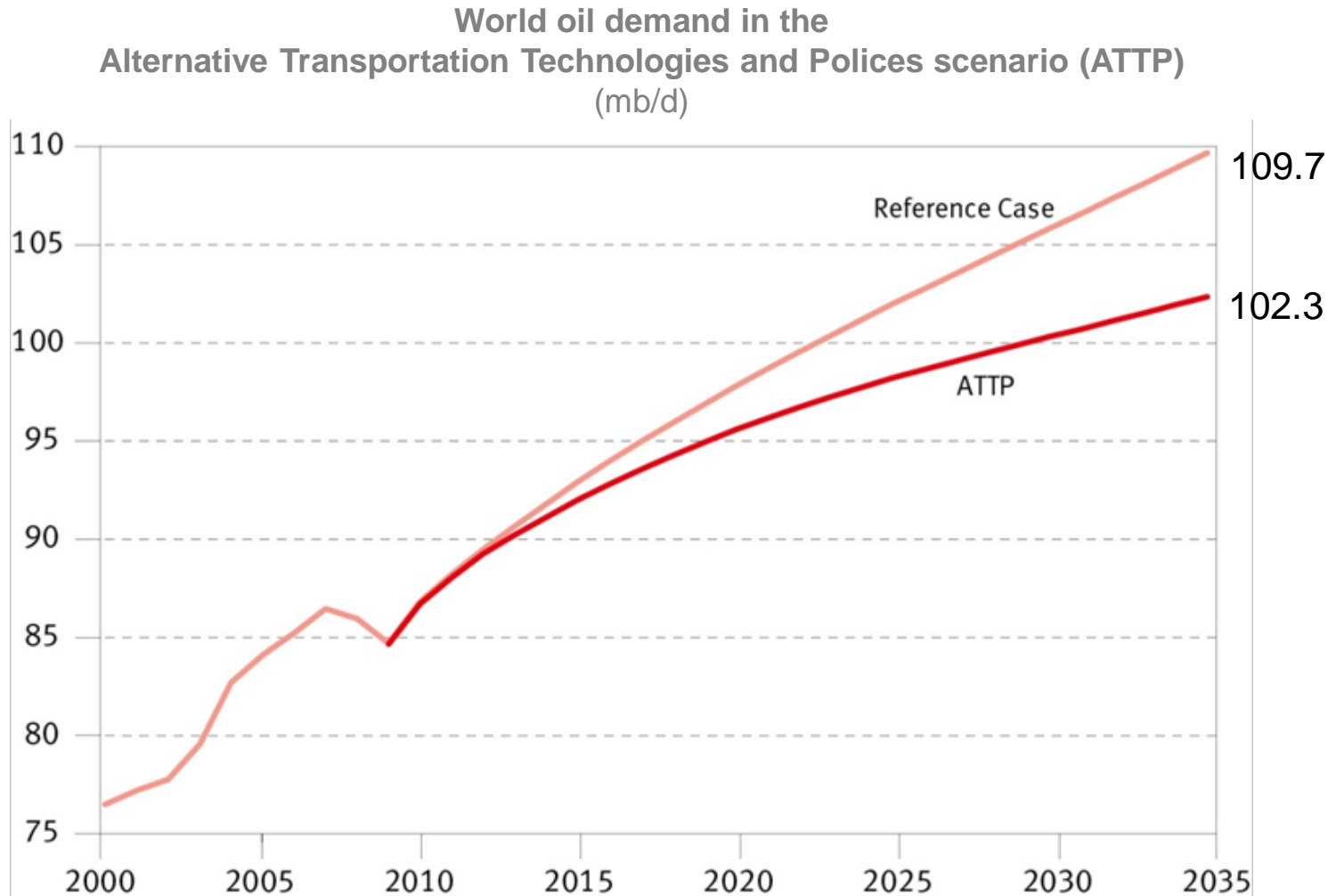


*Source: US Geological Survey.*



- **Investments in technology for exploration**
  - **Enhanced 3D**
  - **Time lapse or 4D seismic**
- **Cutting-edge technologies for frontier fields**
  - **Use of flexible drills (directional, long-reach drilling)**
- **Technological advances in enhanced oil recovery**
  - **CCS technology combined with EOR**

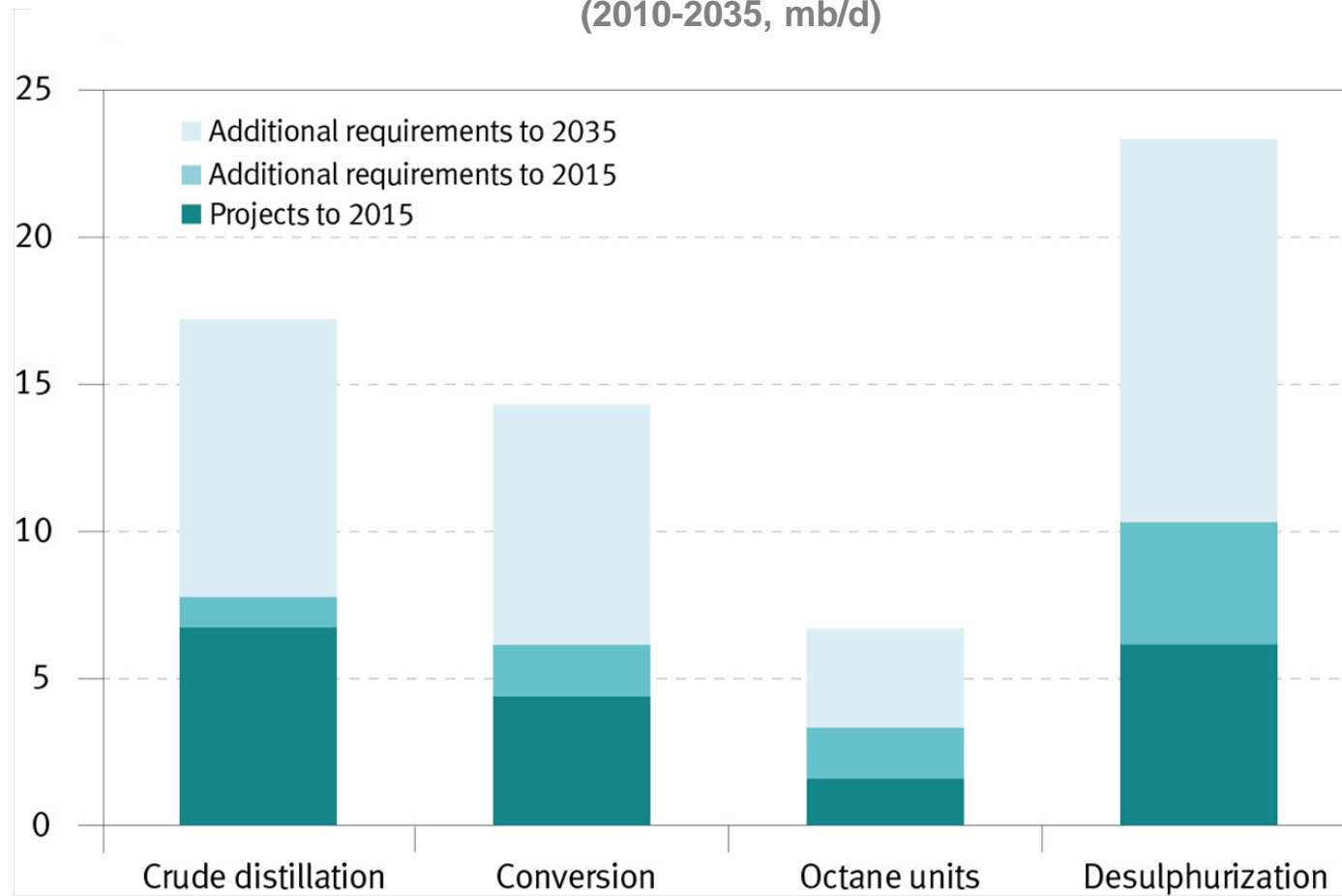
# The policies and technology extend the uncertainty gap



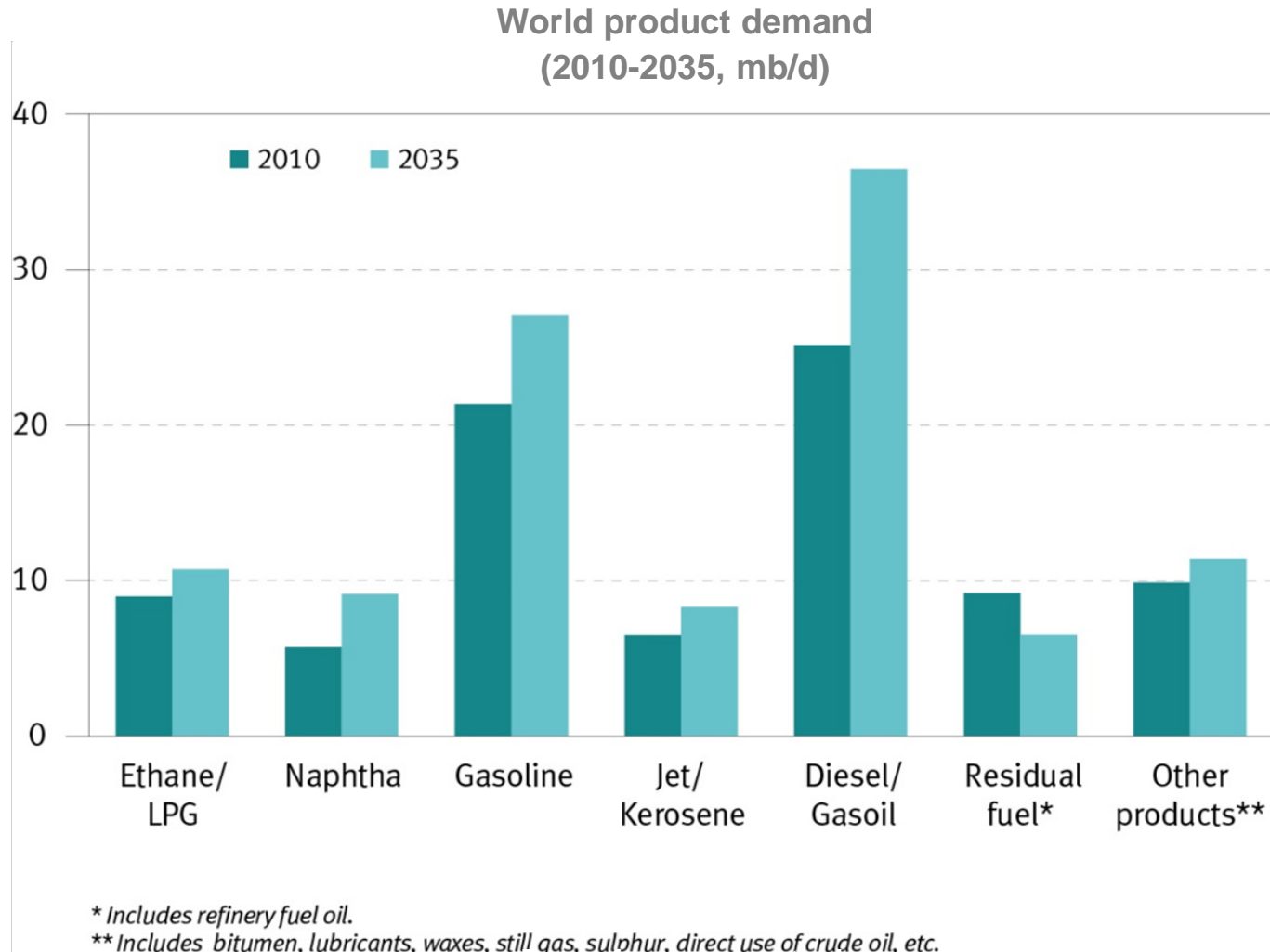
# Despite rationalization, long-term capacity additions are large



World refining capacity requirements by process type  
(2010-2035, mb/d)

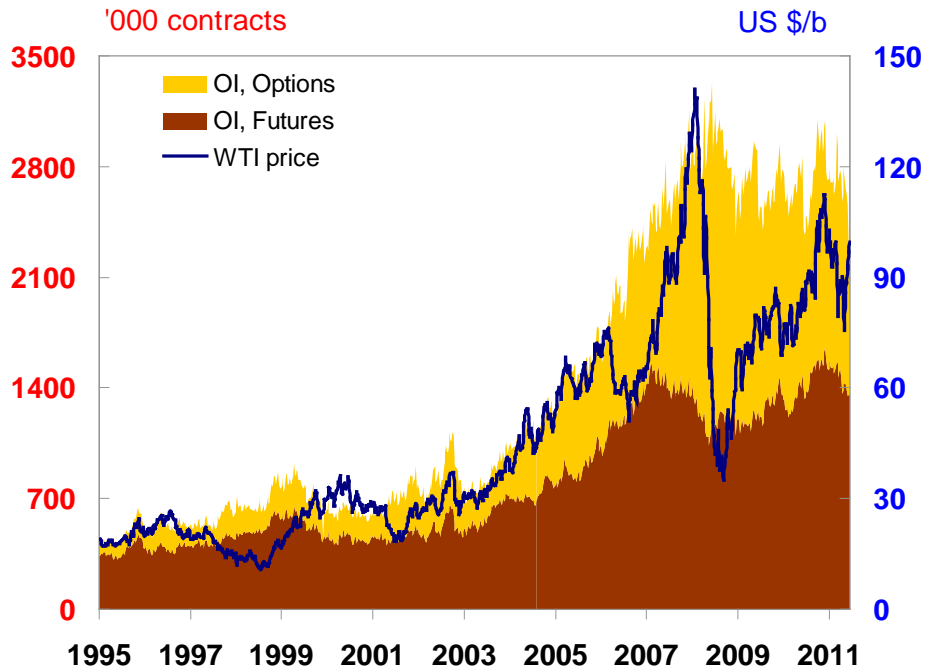


# Diesel oil is projected to expand its leading role

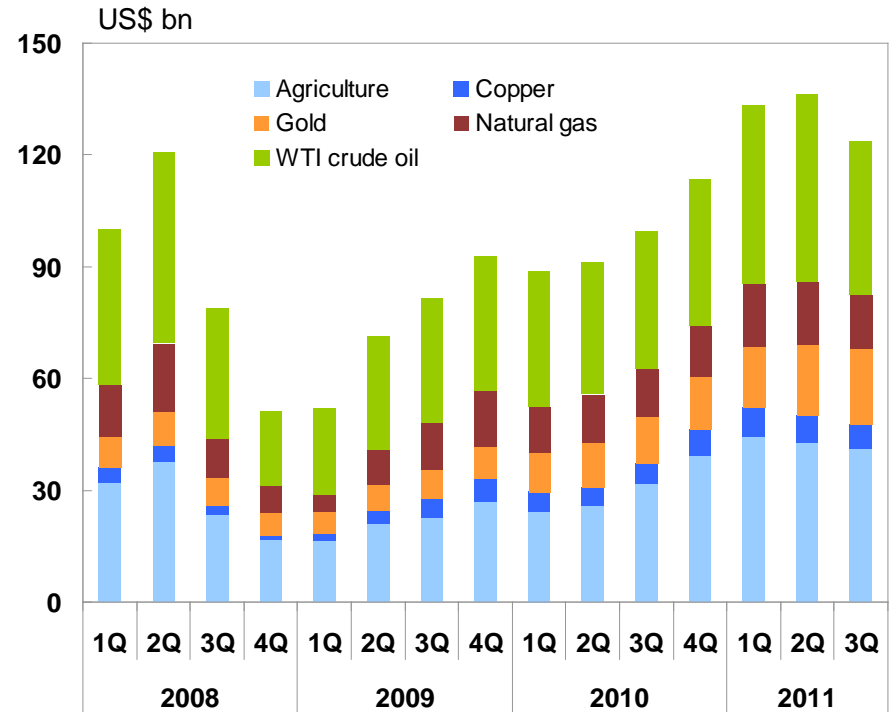




**Open interest in Futures Markets**  
(‘000 contracts, 1995-2011)



**Inflow of investment into commodities**  
(US\$ billion, 2008-2011)





- **Resource base is sufficient and future supply will come from a wide range of sources**
- **Uncertainties over future demand constitute a major risk to upstream investments**
- **Sustainability of demand and supply as a shared challenge reflects the realities of today's globalized, interdependent world**
- **Enhanced consumer-producer collaboration is imperative**
- **All stakeholders should together strive for the market stability**



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# OPEC

**Thank you**

