



# World Oil Outlook



2009



ORGANIZATION OF THE PETROLEUM EXPORTING COUNTRIES

Press Conference

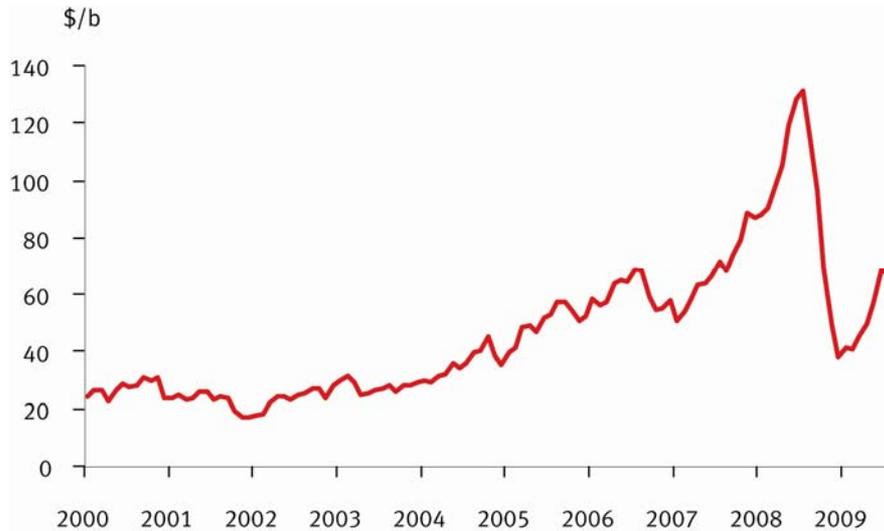
## World Oil Outlook 2009

Mohamed Hamel  
Vienna, 8<sup>th</sup> July 2009

# The year since WOO 2008: a turbulent period



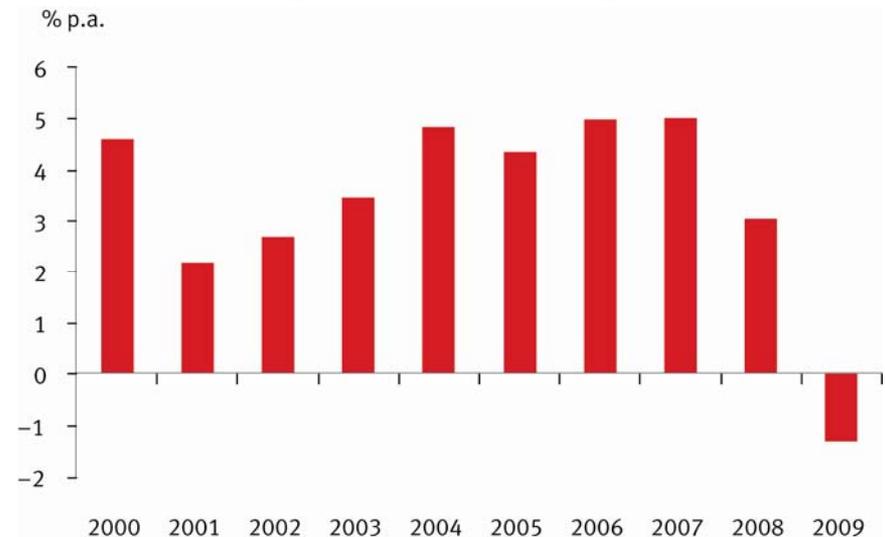
OPEC Reference Basket price



...for oil prices

...and the global economy

Annual global real GDP growth



# Key assumptions in the Reference Case

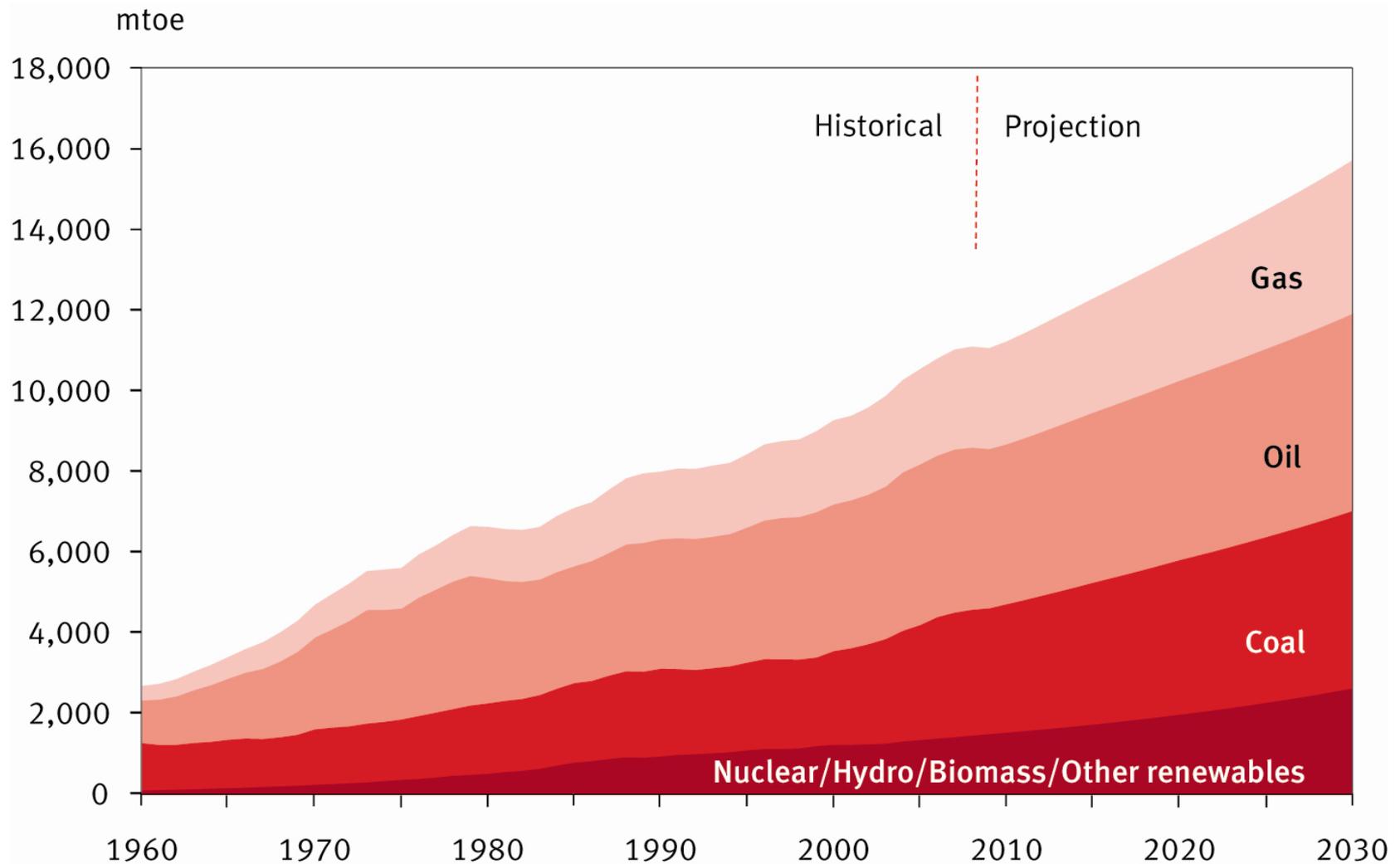


- Economic recovery timing and strength still highly uncertain
- Assumed to be ‘U-shaped’, gaining momentum only gradually
- Cumulative loss in output by 2013 of 8% for the OECD and 4% for developing countries, compared to WOO 2008
- Longer term, economic growth assumptions based upon assessment of demographic trends and productivity gains: average global growth is 3.4% p.a. between 2013–2020
- Impact of policies on demand: US Energy Independence and Security Act and EU climate and energy legislative package incorporated into Reference Case

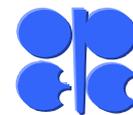
# Petroleum will remain key in satisfying energy demand



World energy supply by fuel type in the Reference Case



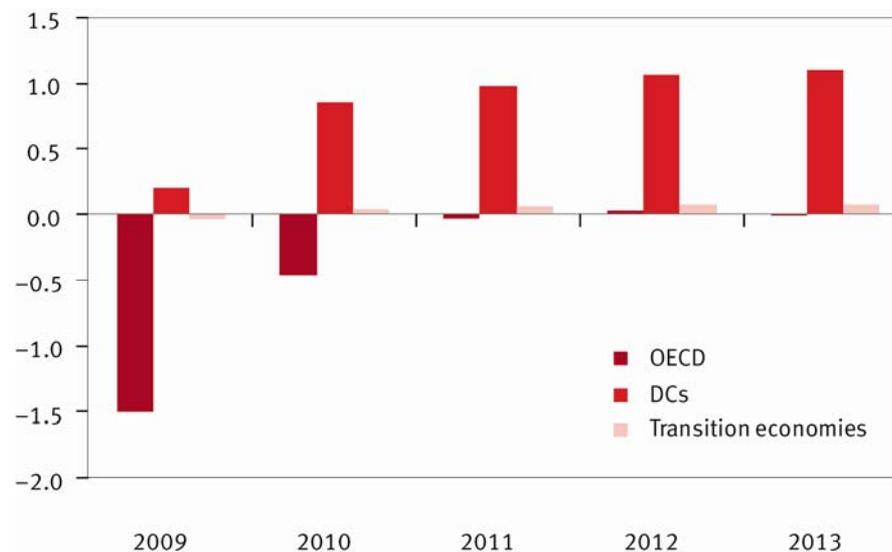
# Medium-term oil demand outlook in the Reference Case



Oil demand, mb/d

	2009	2010	2011	2012	2013
<b>OECD</b>	46.0	45.5	45.5	45.5	45.5
<b>DCs</b>	33.1	34.0	34.9	36.0	37.1
<b>Trans. Econ.</b>	5.0	5.1	5.1	5.2	5.3
<b>World</b>	84.2	84.6	85.6	86.7	87.9

Annual growth in demand, mb/d



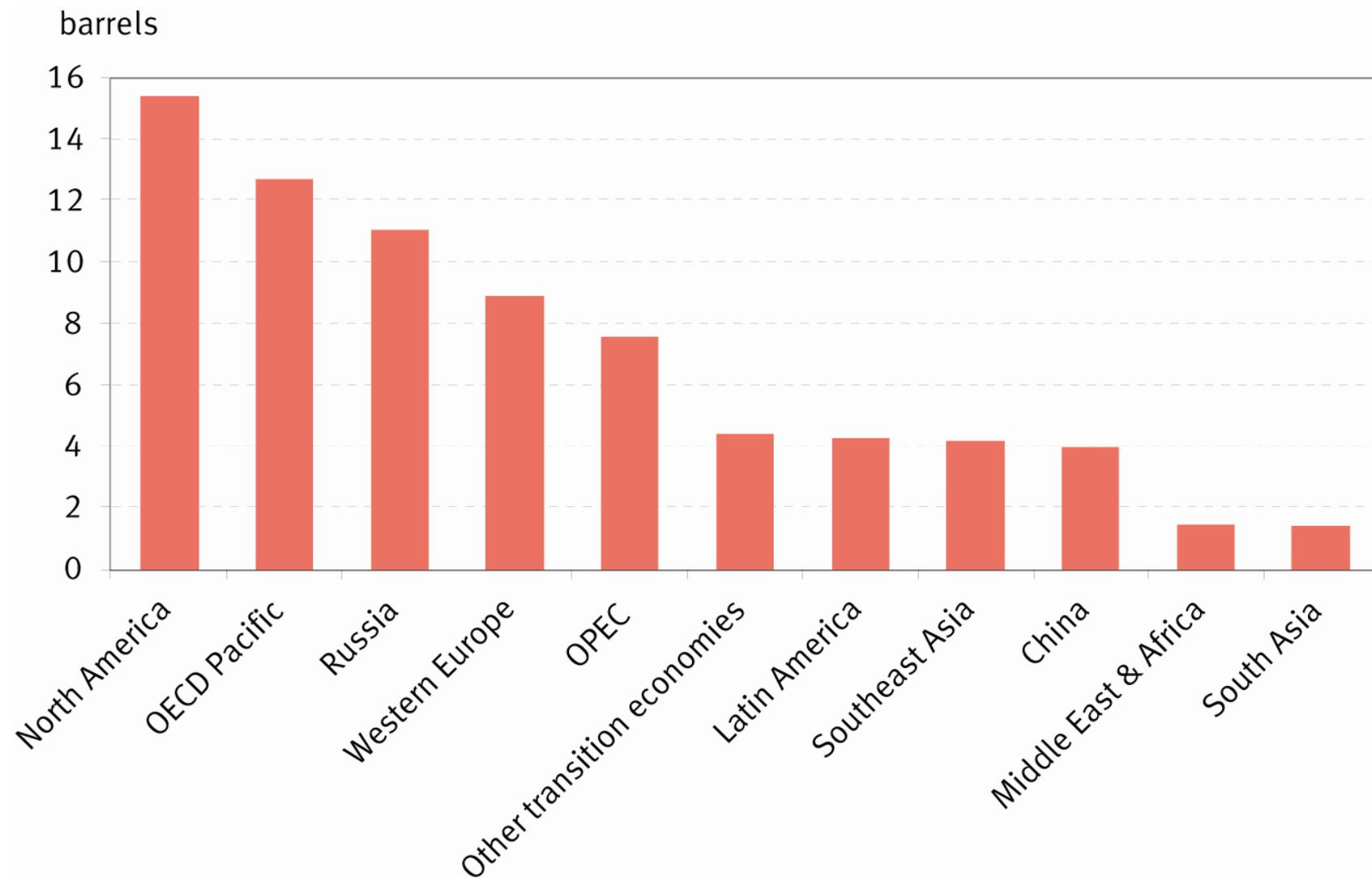
# World oil demand outlook in the Reference Case (mb/d)



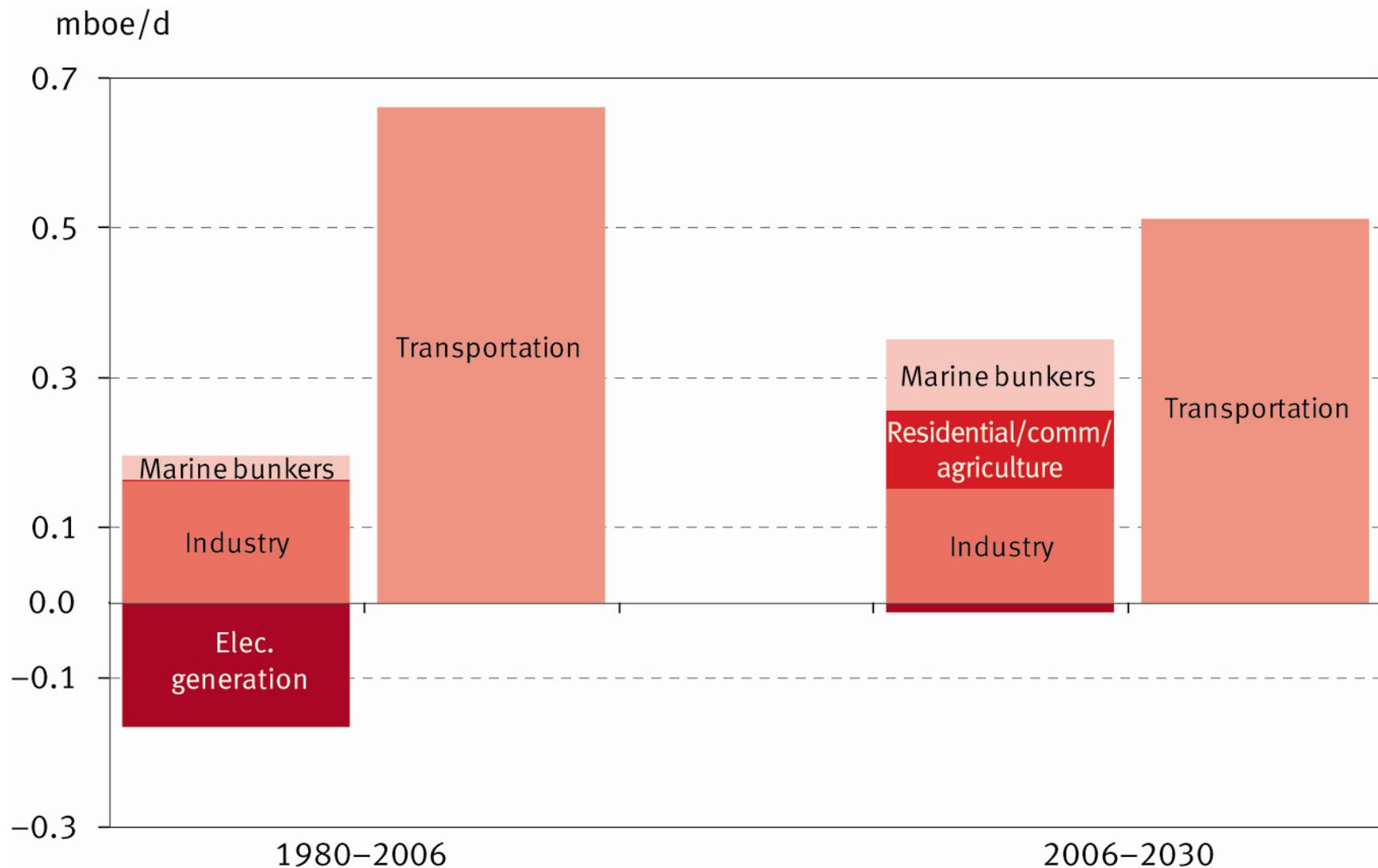
	2008	2010	2020	2030
OECD	47.5	45.5	45.0	43.4
DCs	33.0	34.0	44.8	56.1
Transition economies	5.1	5.1	5.7	6.1
World	85.6	84.6	95.4	105.6

- Oil demand increases by 20 mb/d from 2008–2030
- Average annual growth: 1.1 mb/d from 2010–2020 and 1.0 mb/d for 2020–2030
- By 2030, world oil demand is almost 8 mb/d lower than WOO 2008
- Structural shift: OECD demand declines and Developing Country growth accounts for most of the increase

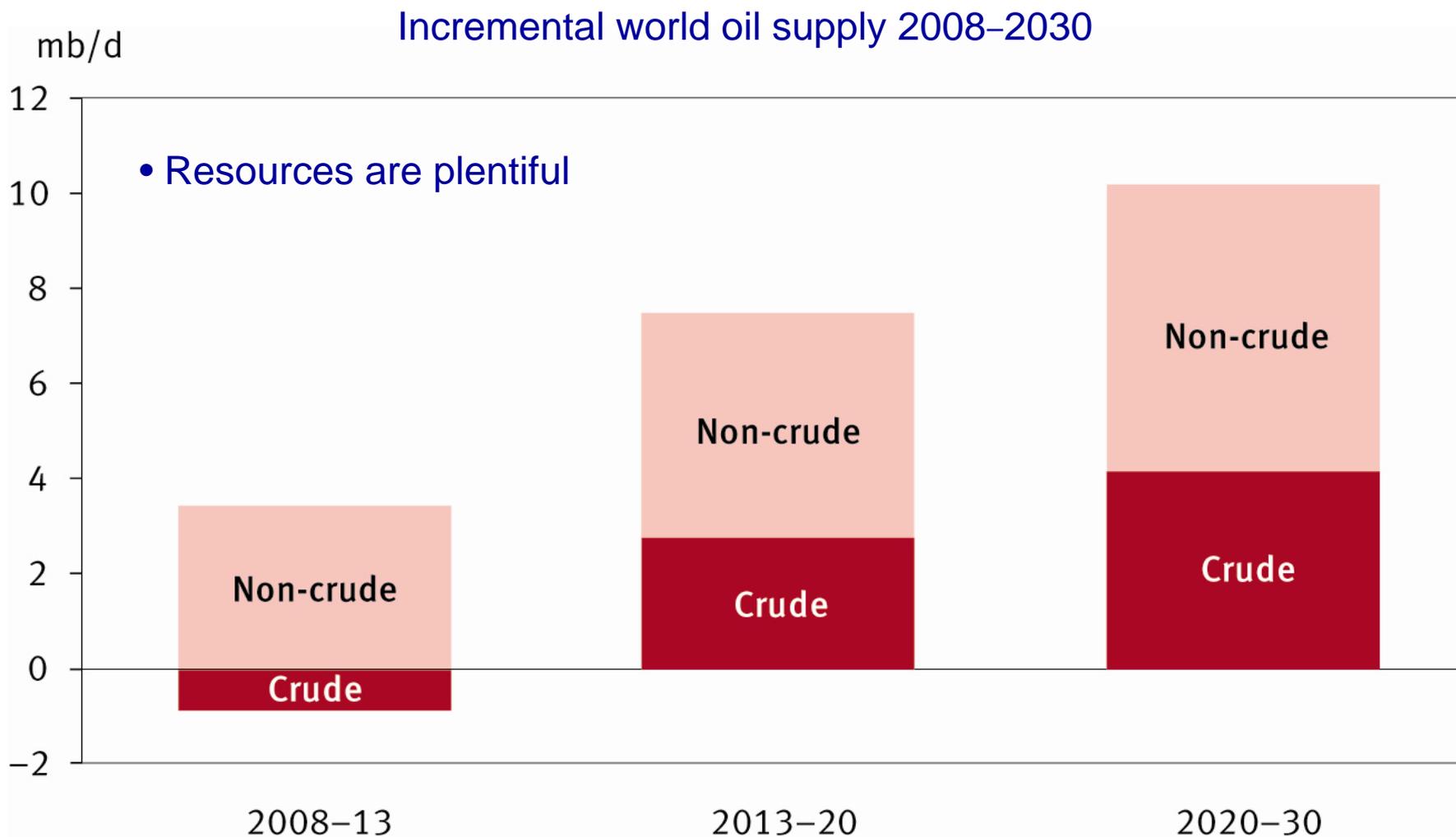
# Oil use per capita in 2030



# Average annual growth in oil demand by sector



# A wide range of sources will satisfy demand



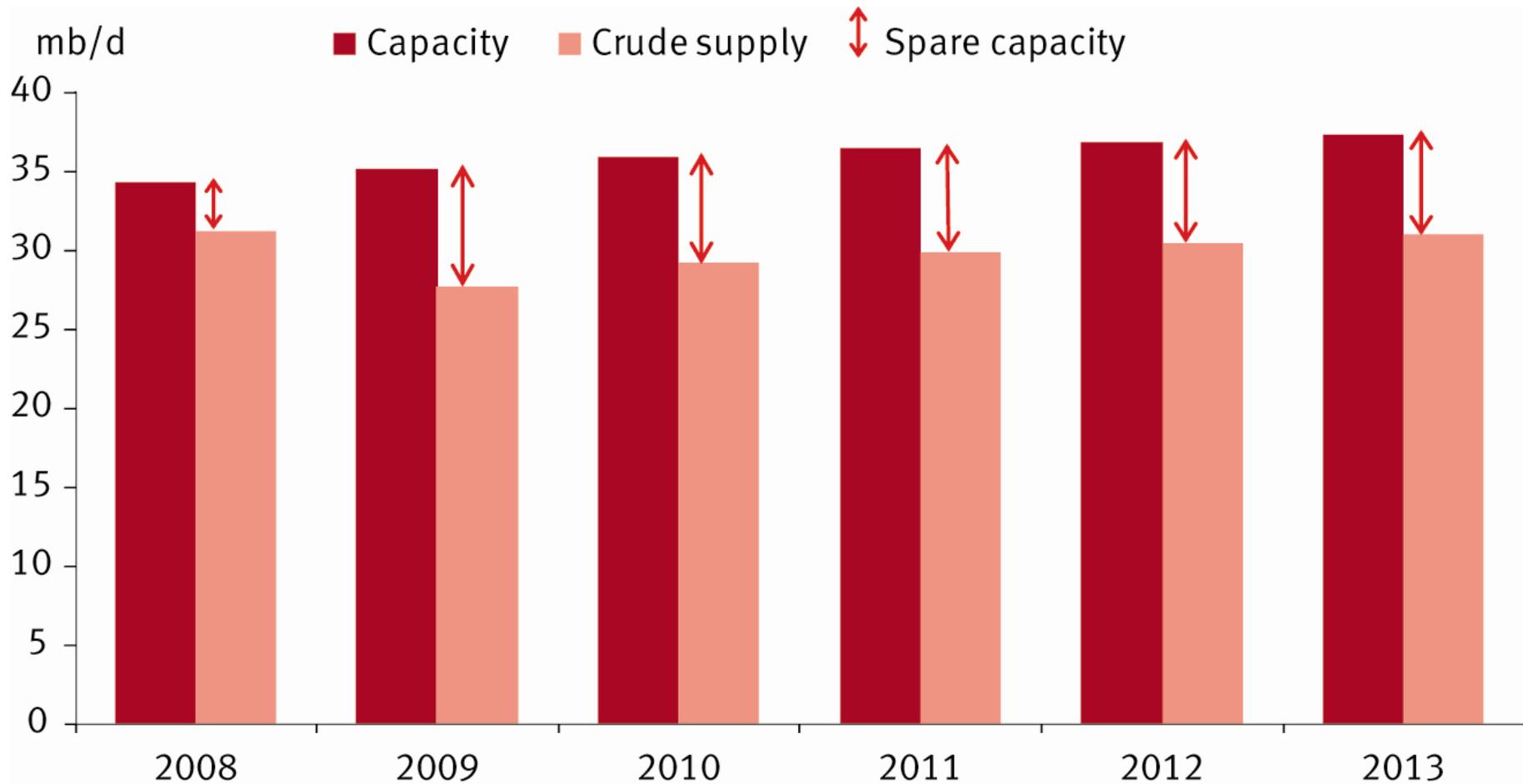
# Medium-term world oil supply outlook in the Reference Case (mb/d)



	2009	2010	2011	2012	2013
OECD	19.2	19.0	18.9	18.8	18.7
DCs excl. OPEC	16.5	16.7	16.8	16.9	17.0
Transition economies	12.9	12.9	13.3	13.5	13.6
<b>Non-OPEC</b>	<b>50.4</b>	<b>50.6</b>	<b>50.9</b>	<b>51.2</b>	<b>51.4</b>
<b>OPEC NGLs</b>	<b>4.6</b>	<b>4.7</b>	<b>4.9</b>	<b>5.2</b>	<b>5.5</b>
<b>OPEC crude</b>	<b>28.0</b>	<b>29.3</b>	<b>29.9</b>	<b>30.5</b>	<b>31.0</b>

- Non-OPEC crude + NGLs stay flat: Russia, Brazil, Caspian compensate for decreases in OECD
- Increase in Canadian oil sands and biofuels
- Demand for OPEC crude: after falling in 2009, gradually rises to 31 mb/d by 2013

# OPEC Member Countries are investing



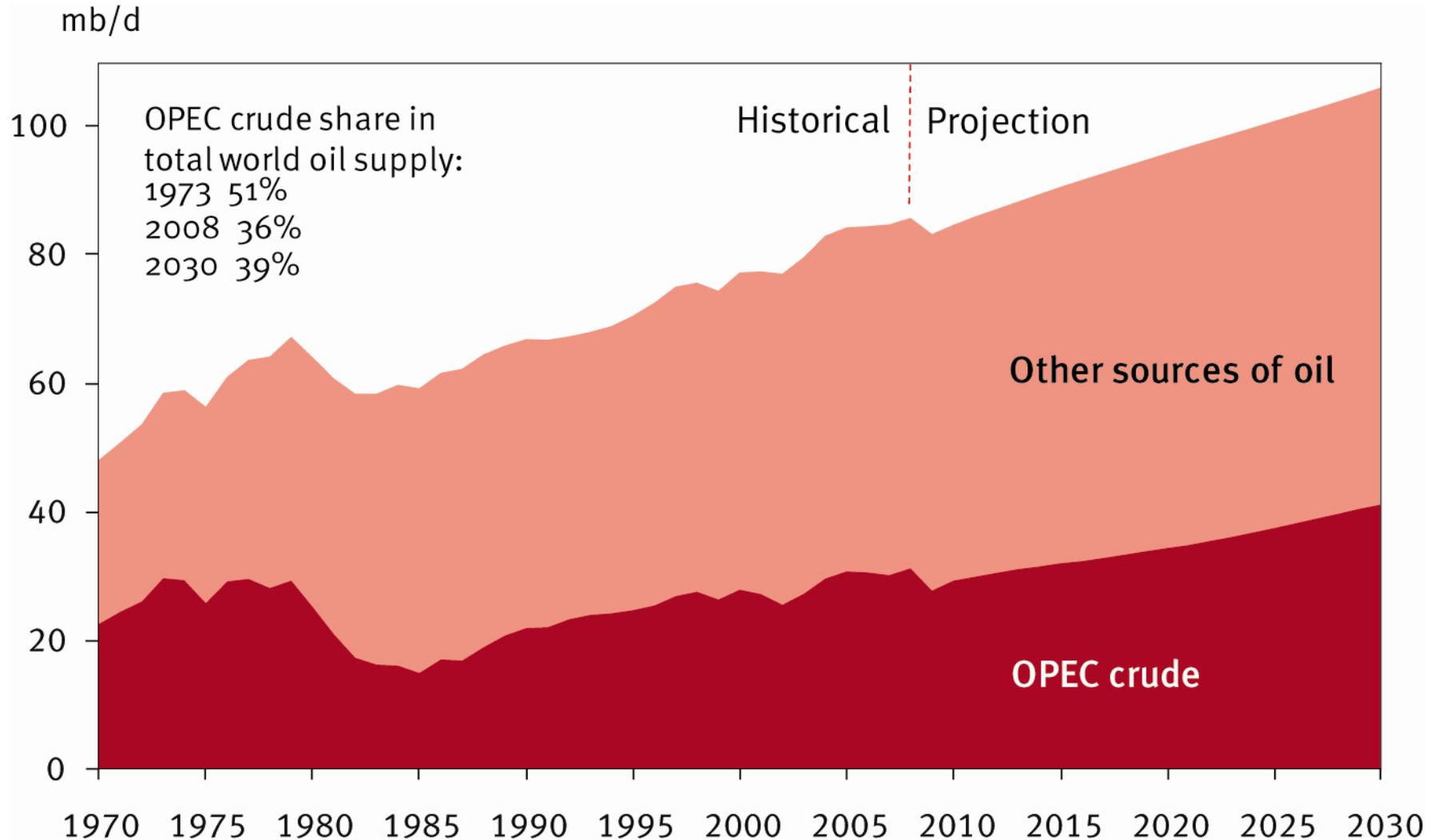
# World oil supply outlook in the Reference Case (mb/d)



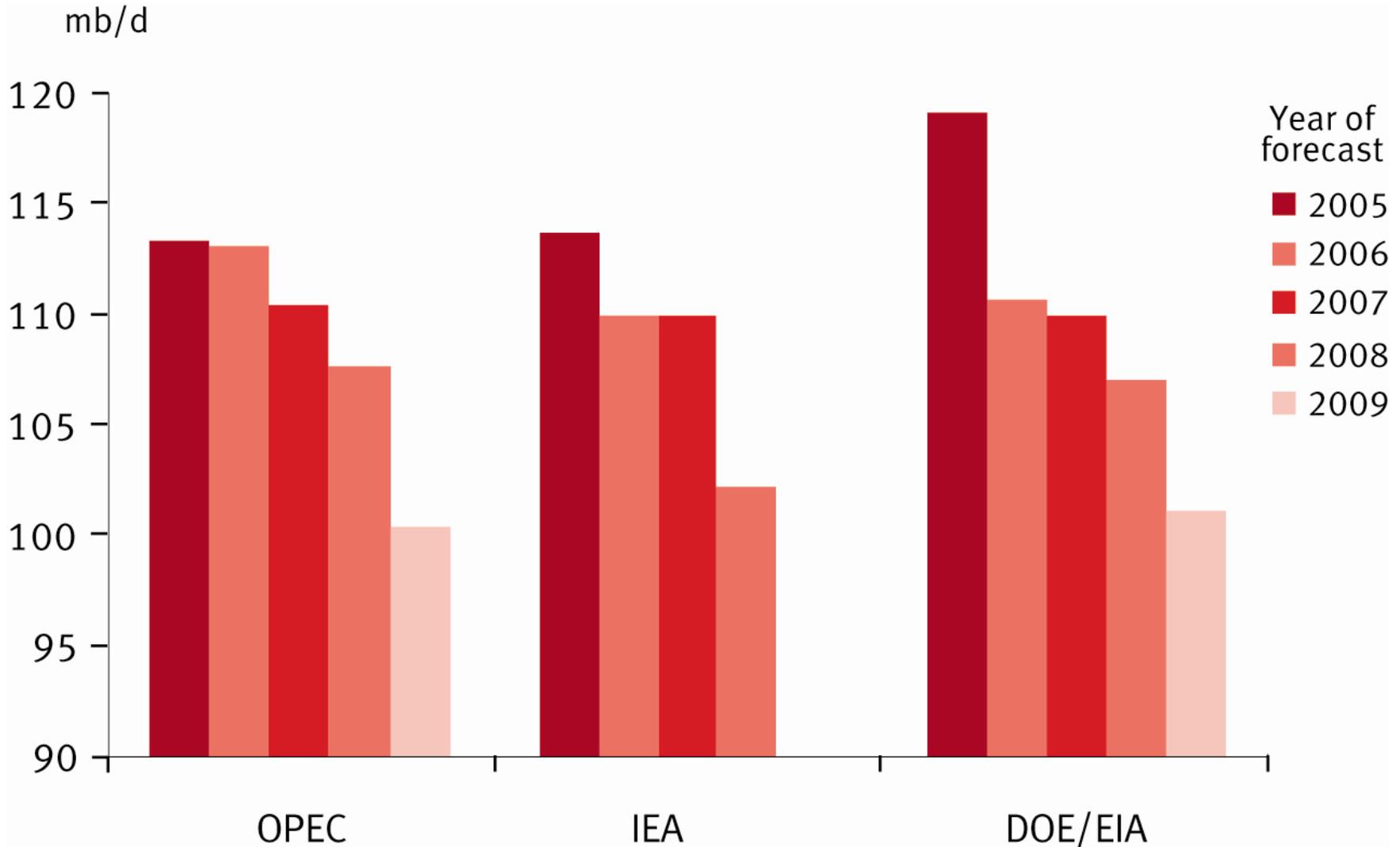
	2008	2010	2020	2030
<b>OECD</b>	19.6	19.0	19.1	19.6
<b>DCS, excl. OPEC</b>	16.1	16.7	18.0	18.3
<b>Transition economies</b>	12.7	12.9	14.9	15.7
<b>Non-OPEC</b>	50.3	50.6	54.3	56.3
<b>OPEC NGLs</b>	4.3	4.7	6.7	8.0
<b>OPEC crude</b>	31.2	29.3	34.3	41.1

- Non-OPEC oil supply rises to 2030, due to non-crude
- OPEC NGLs also increase rapidly
- Demand for OPEC crude rises to 41 mb/d by 2030: this is 2.5 mb/d lower than in the WOO 2008

# OPEC crude oil share not much different than today



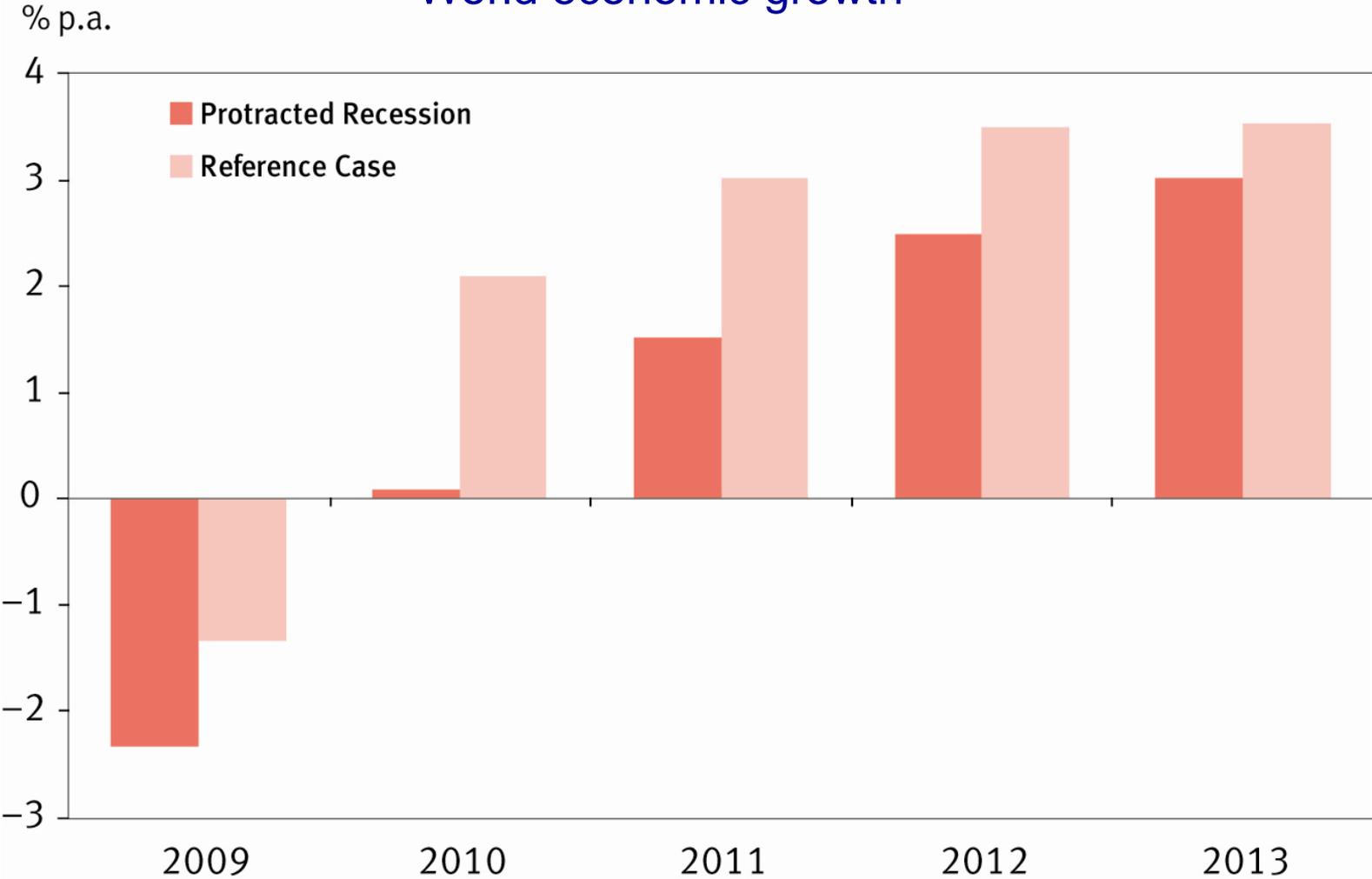
# Security of demand is a real concern: Changing world oil demand projections for 2025



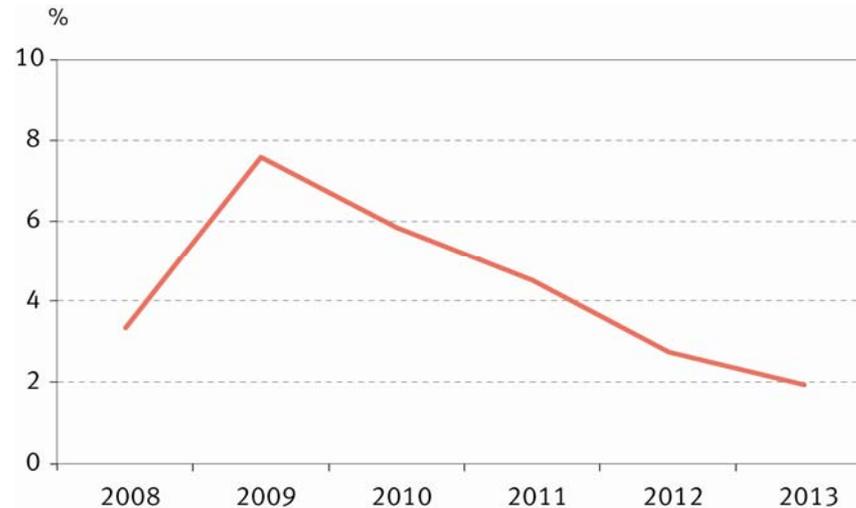
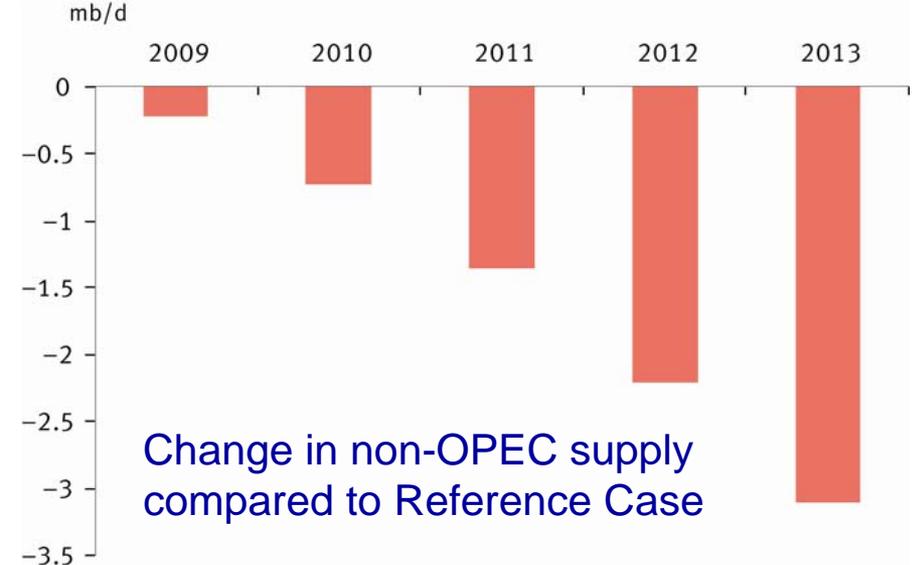
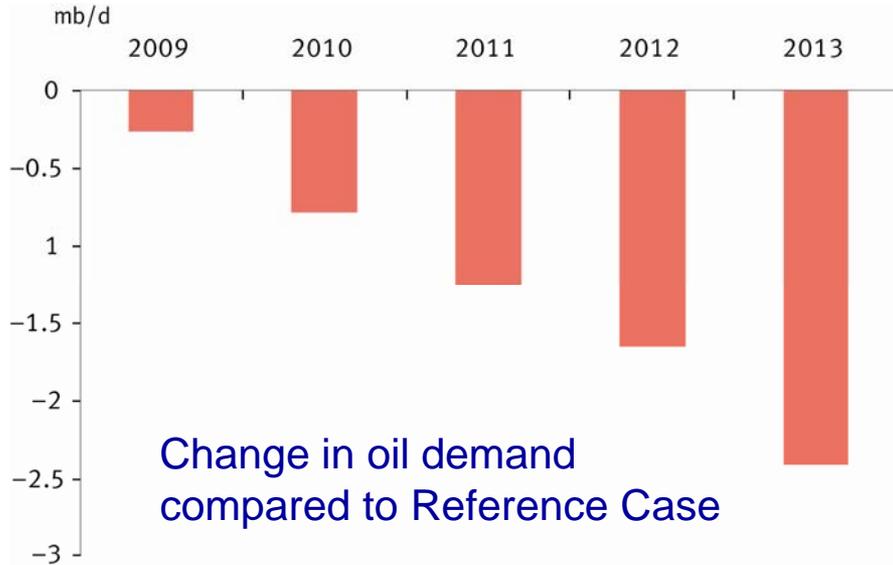
# The Protracted Recession scenario



### World economic growth



# The Protracted Recession scenario

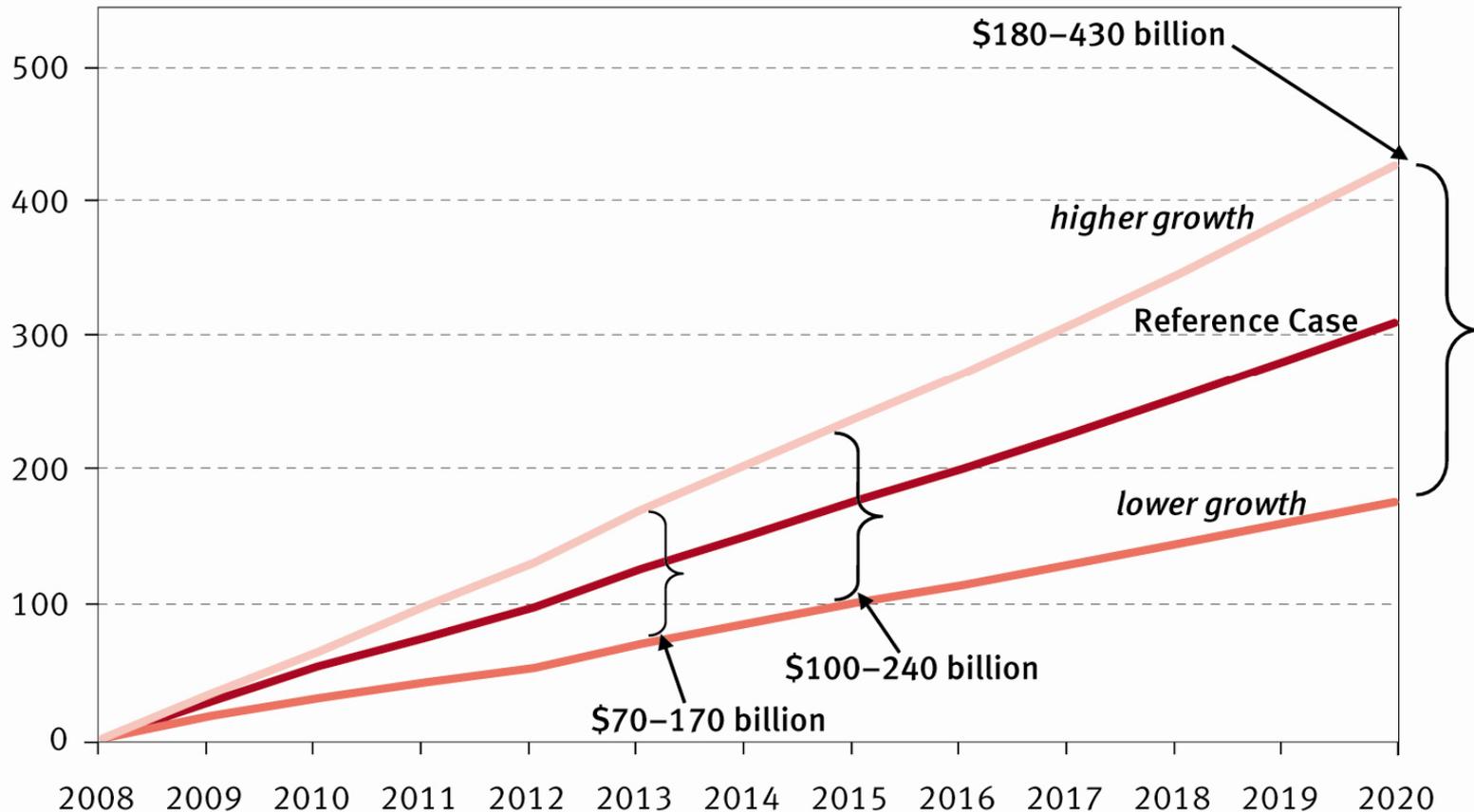


OPEC spare capacity as a % of world demand

# Huge uncertainties over the demand for OPEC oil and how much investment is needed



\$(2008) billion

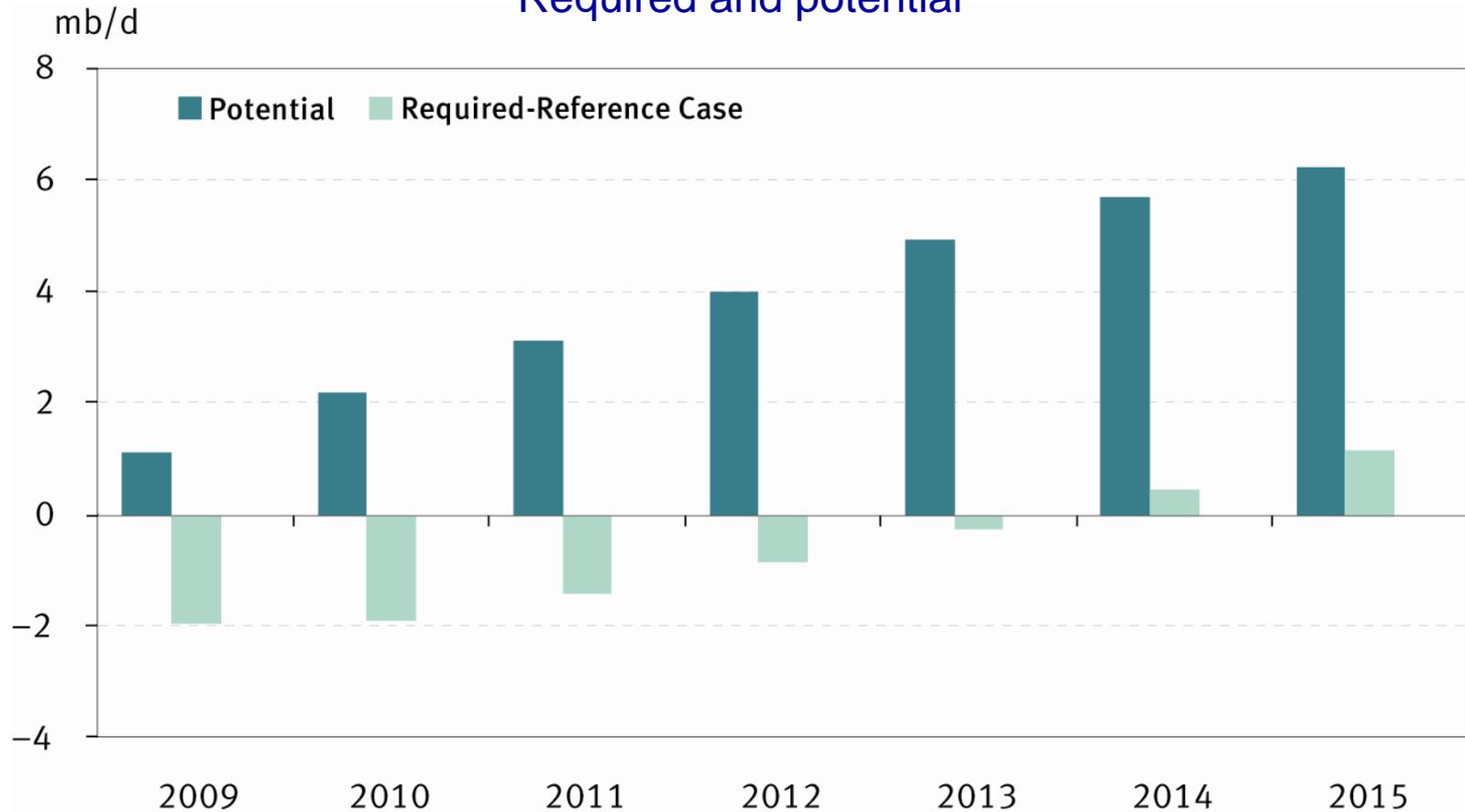


By 2020, upstream development investment requirements, in real terms, could be as low as \$180 billion or as high as \$430 billion

# Distillation capacity expansion exceeds requirements



Additional cumulative refinery crude runs  
Required and potential\*

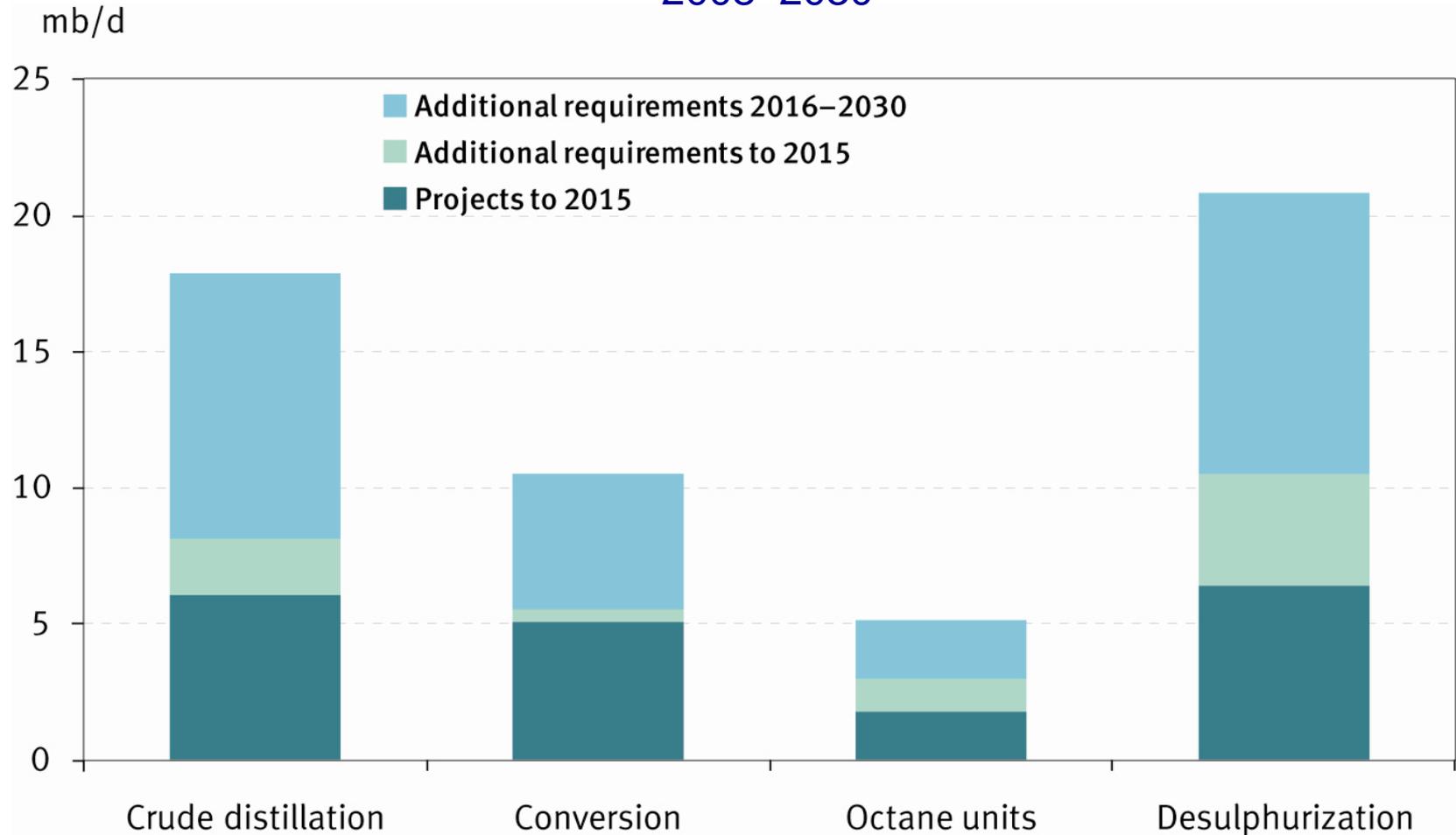


\* Potential: based on expected distillation capacity expansion  
Required: based on projected demand increases

# Longer term additional capacity requirements still substantial



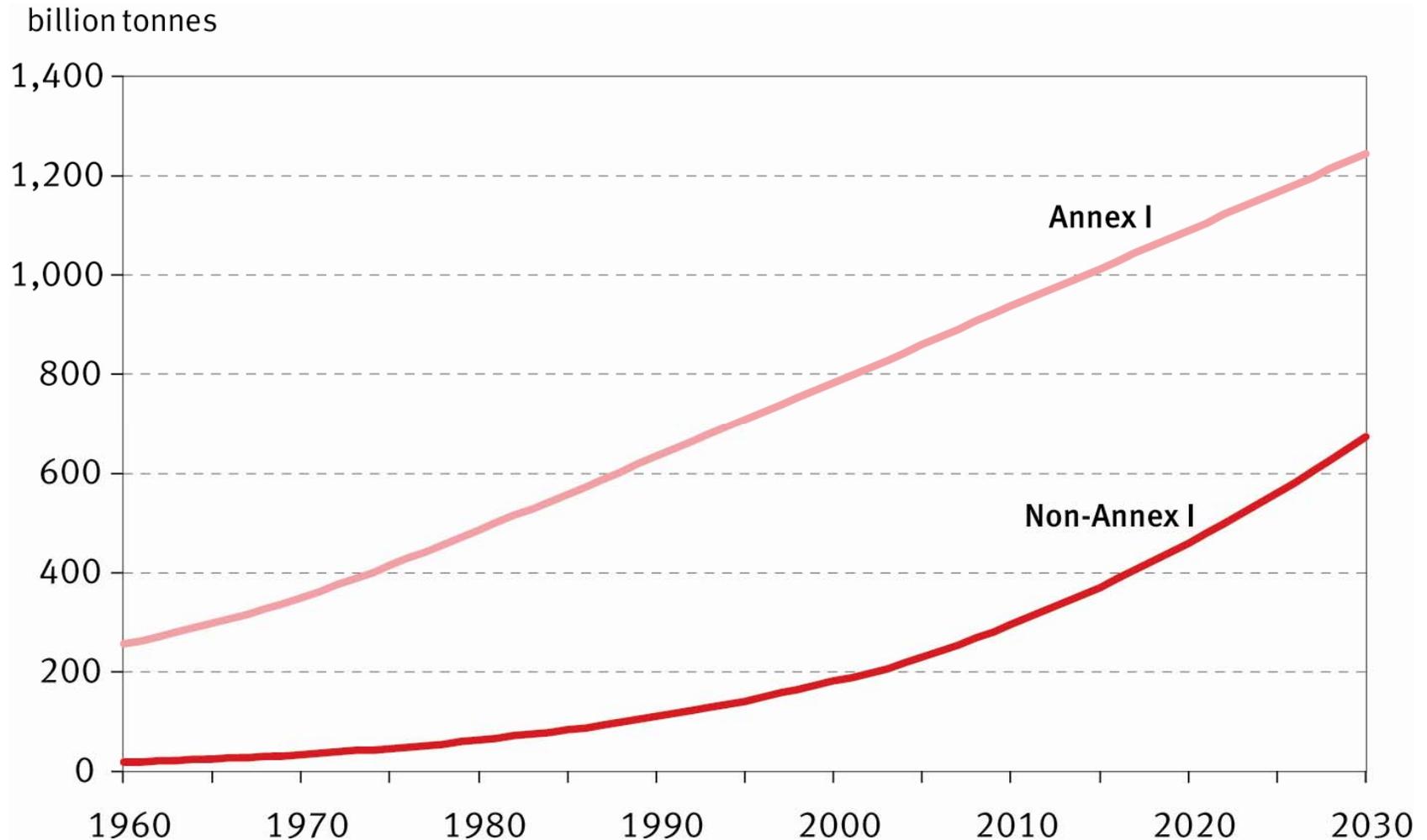
Global capacity requirements by process type  
2008–2030



# CO<sub>2</sub> emissions: the historical responsibility of developed countries



Cumulative CO<sub>2</sub> emissions since 1900





- Huge uncertainties associated with world economy
- Extreme volatility, exacerbated by speculation, unhelpful for oil market stability
- Demand for energy will grow, albeit at a lower pace
- However, energy poverty still a major concern
- Oil remains the leading source of energy
- Sufficient oil resources



- OPEC is investing: spare capacity is set to rise
- But, a too low price environment leads to lower investments – and could sow the seeds of a future price spike
- Risks more associated with demand than with supply
- Large uncertainties in regard to how much investment is needed
- Refining distillation capacity tightness has turned into over-capacity for the medium-term, but longer-term requirements still substantial



- GHG emissions will grow: historical responsibility of developed countries in the state of the Earth's atmosphere
- Increasingly complex global energy system and growing interdependence
- Pragmatic dialogue and cooperation among all stakeholders is the way forward



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