

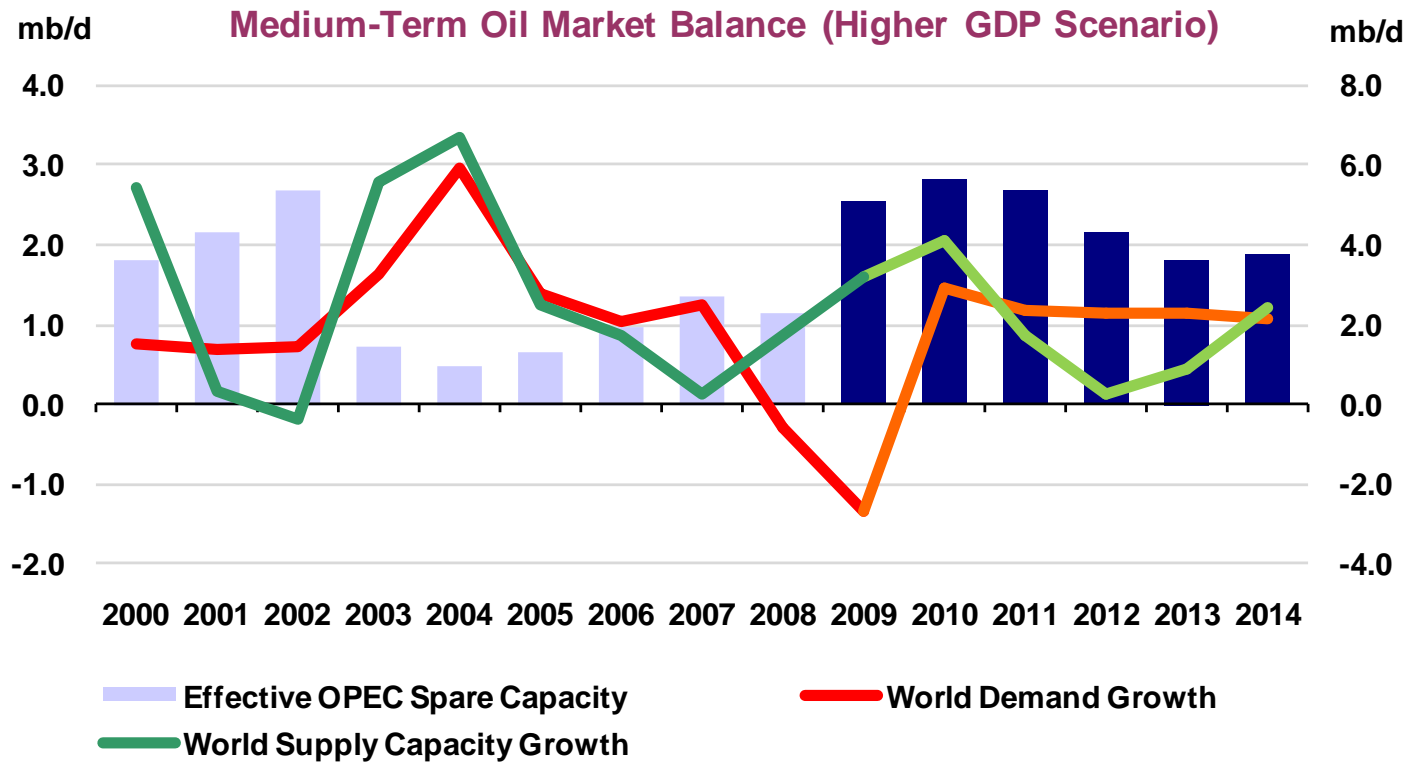


IEA/IEEJ Forum on Global Oil Market Challenges
February 26, 2010

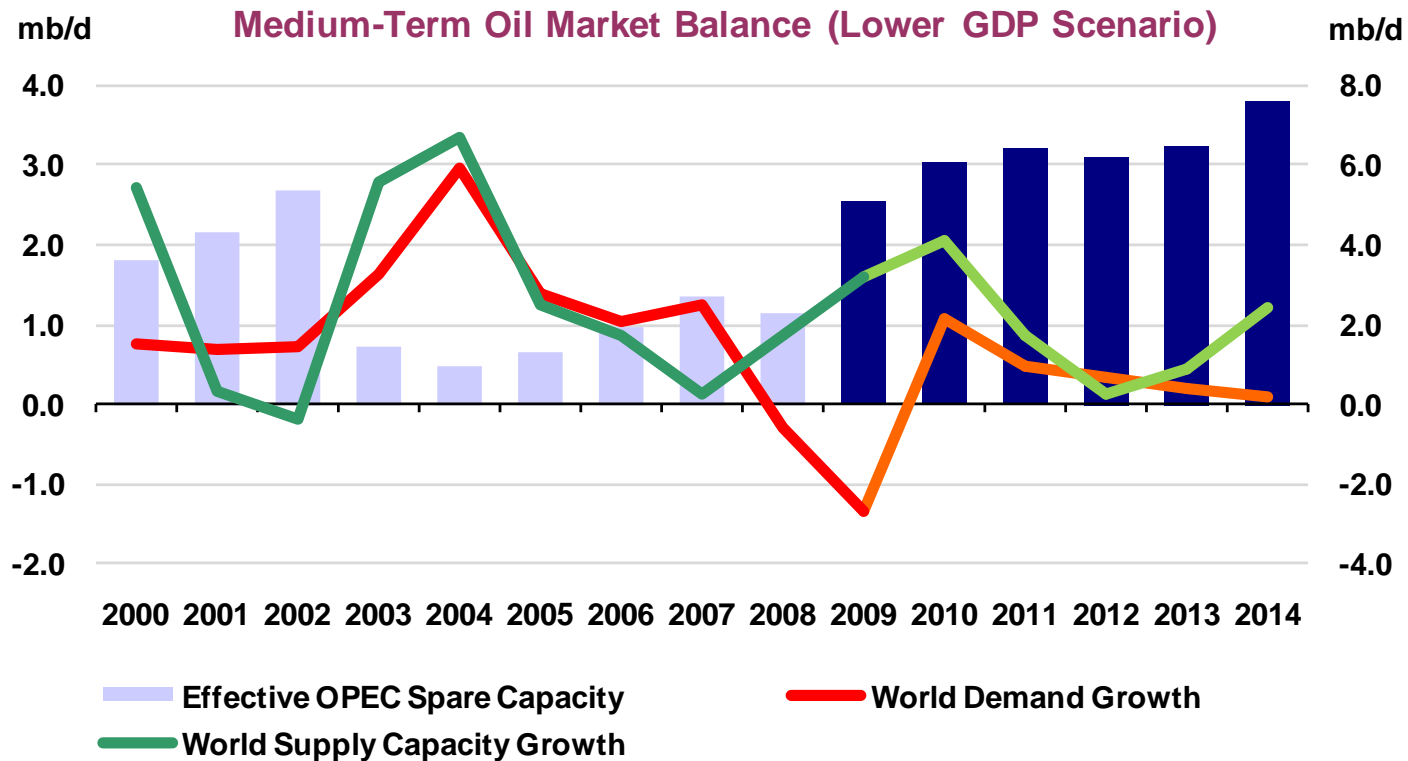
Sustainable energy and the market

Nobuo Tanaka
Executive Director
International Energy Agency

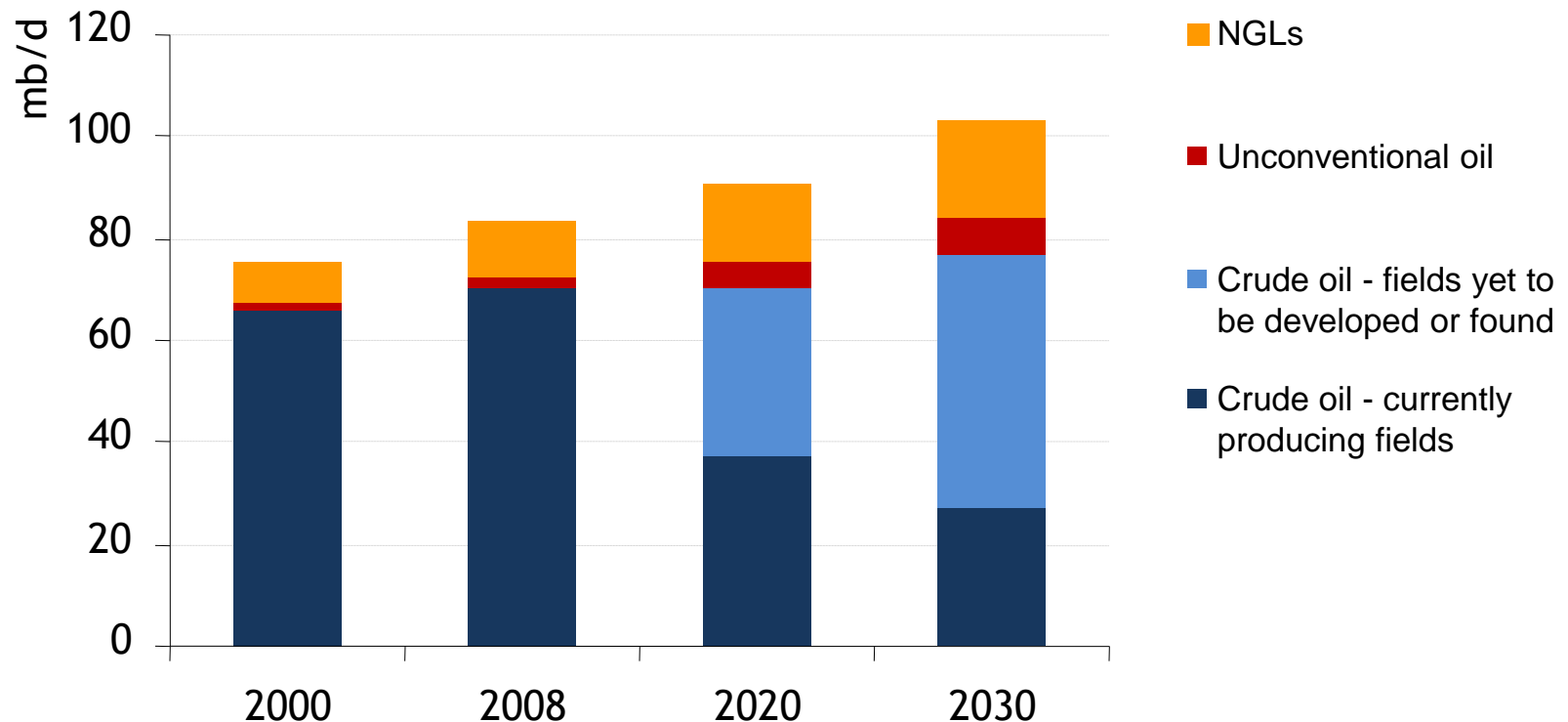
Medium-Term Oil Market Balance



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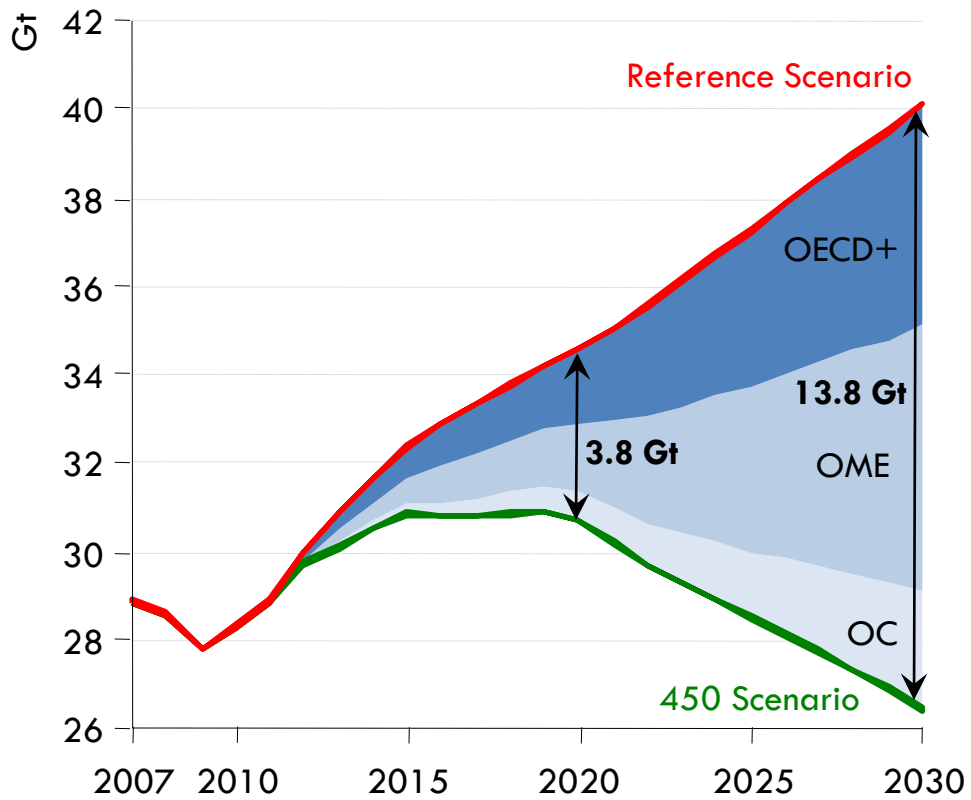


Oil production in the Reference Scenario



■ *Sustained investment is needed mainly to combat the decline in output at existing fields, which will drop by almost two-thirds by 2030*

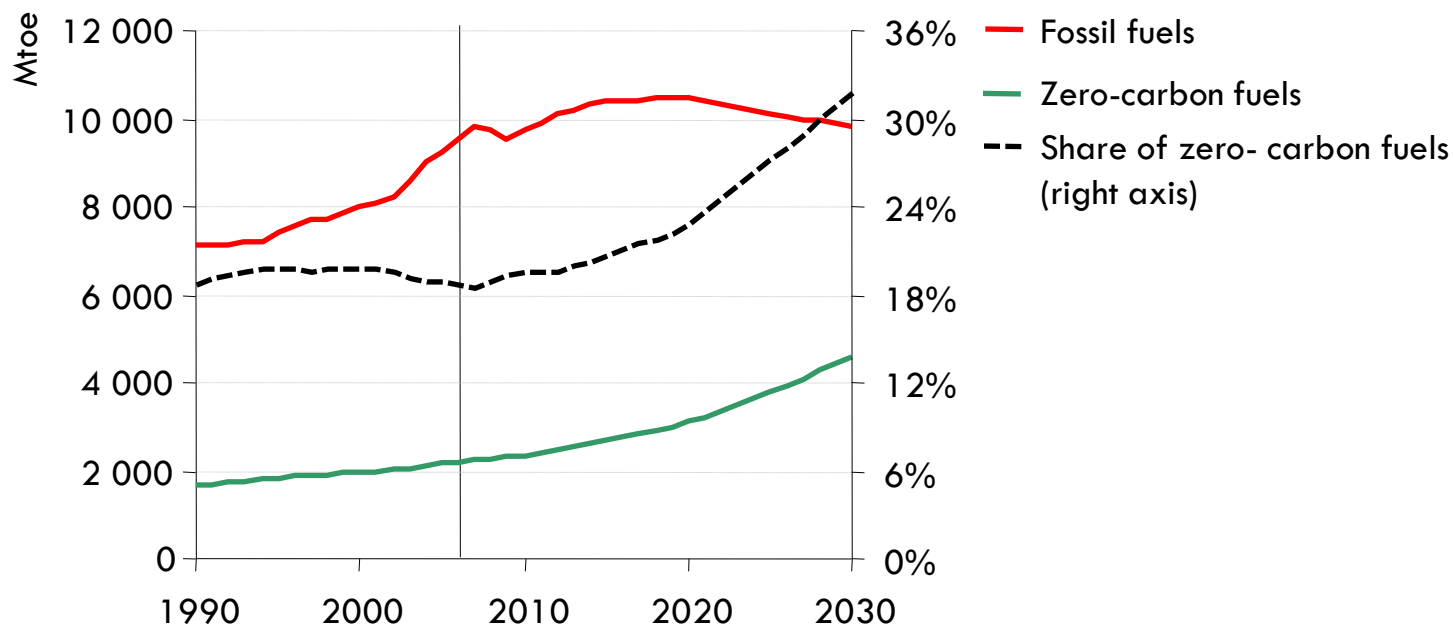
World abatement of energy-related CO₂ emissions in the 450 Scenario



World abatement by technology

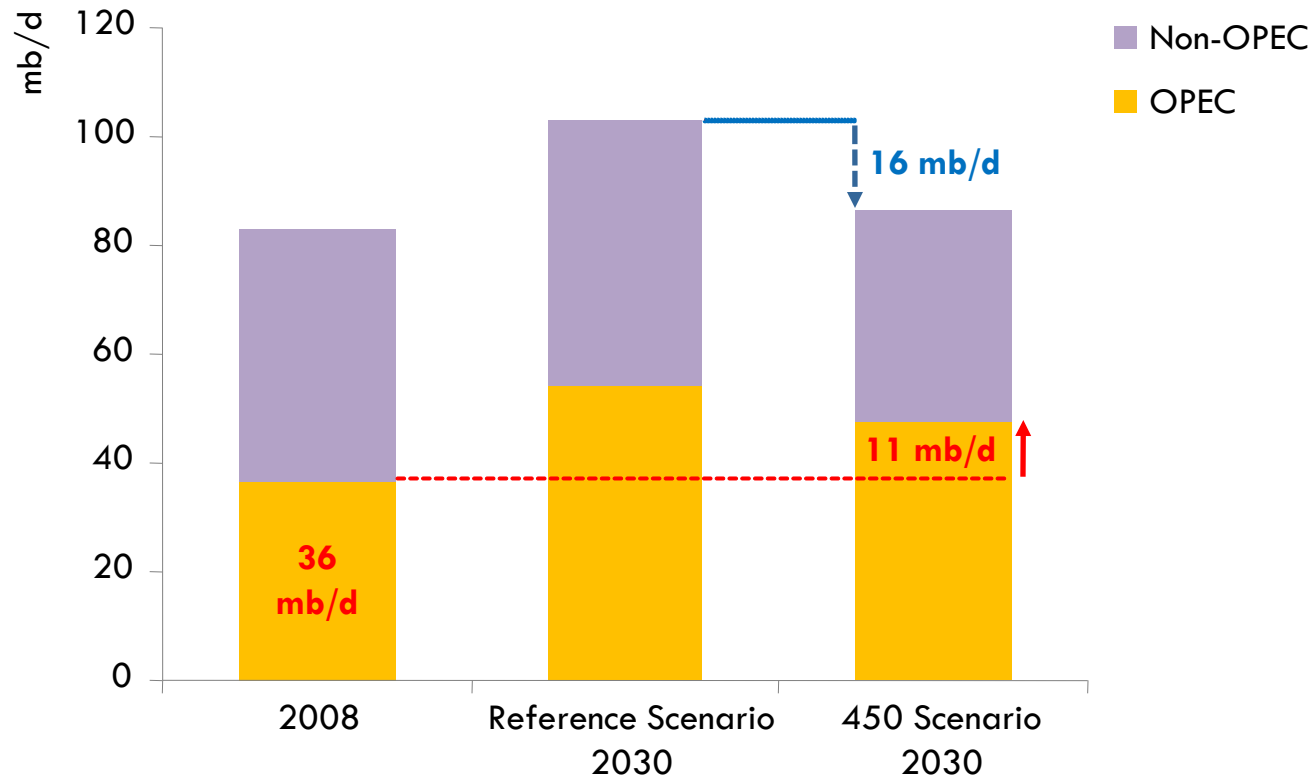
■ An additional \$10.5 trillion of investment is needed in total in the 450 Scenario, with measures to boost energy efficiency accounting for most of the abatement through to 2030

World primary energy demand by fuel in the 450 Scenario



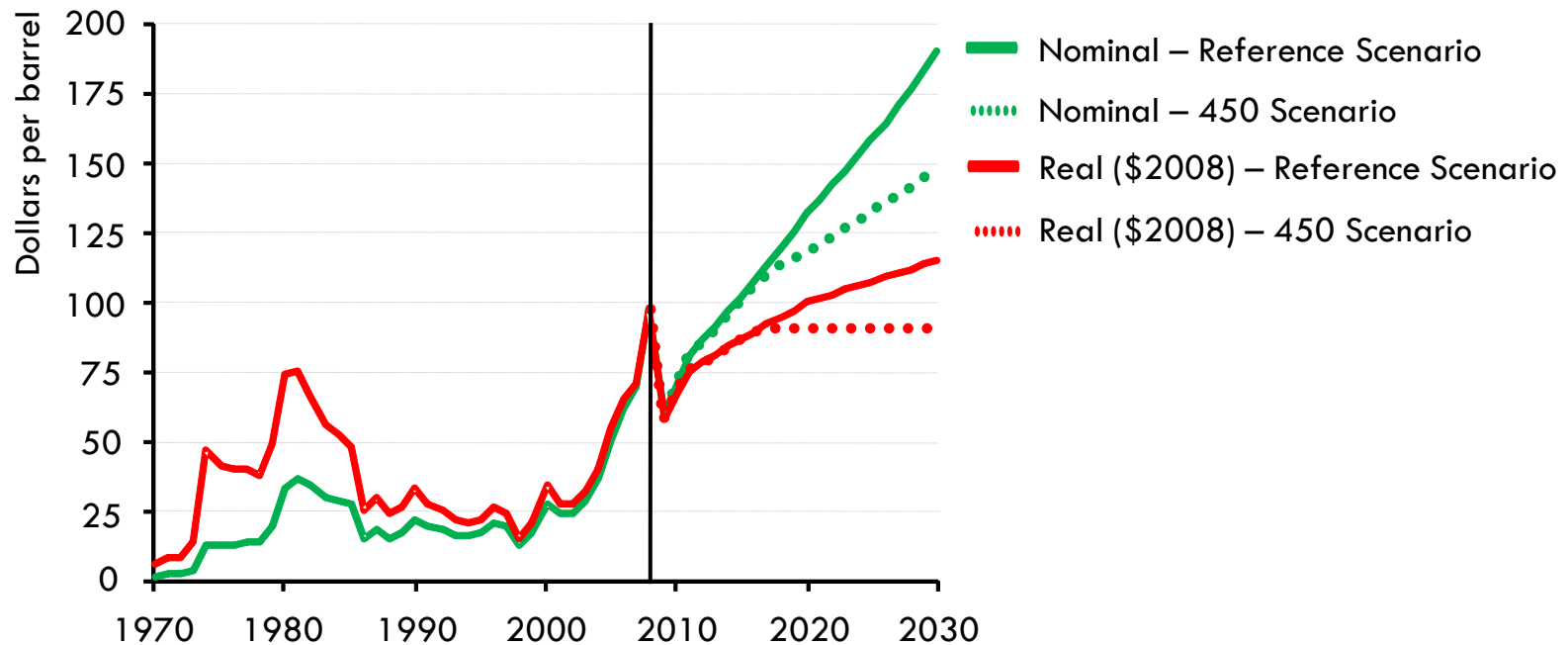
■ *In the 450 Scenario, demand for fossil fuels peaks by 2020, and by 2030 zero-carbon fuels make up a third of the world's primary sources of energy demand*

World oil production by scenario



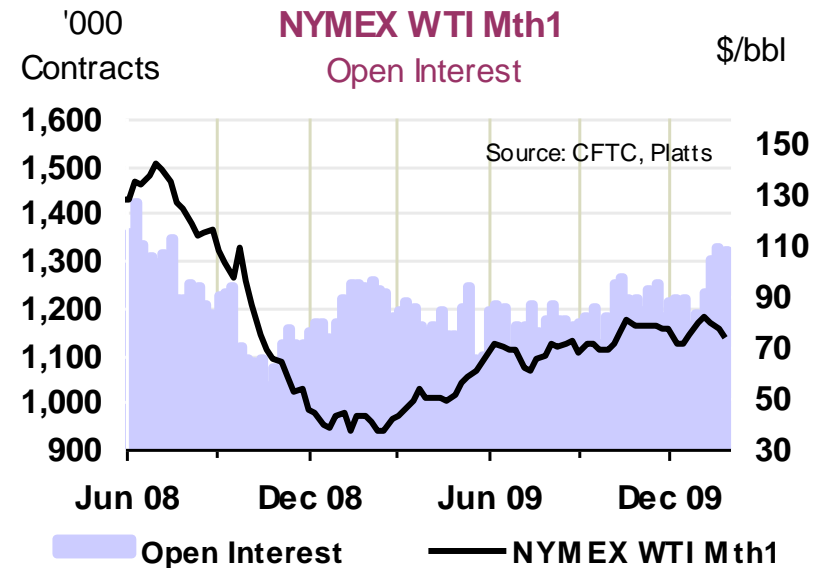
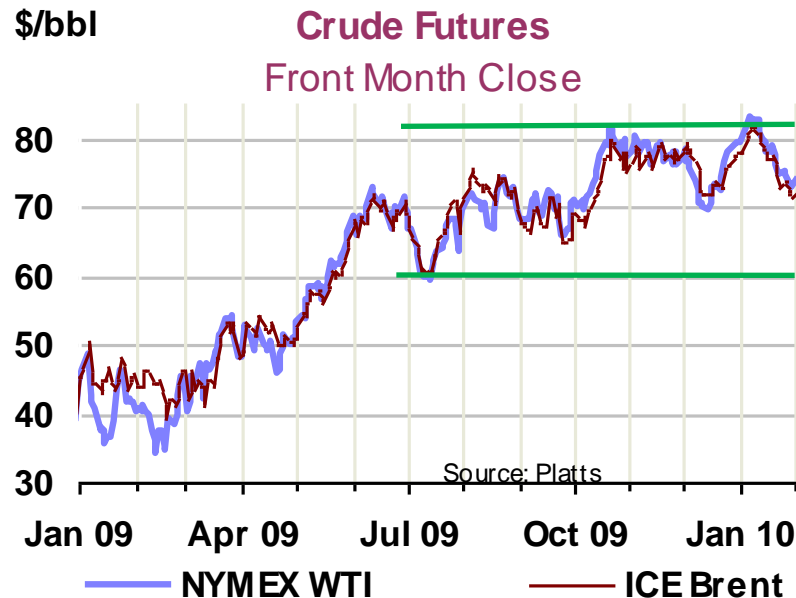
Curbing CO₂ emissions would also improve energy security by cutting oil demand, but even in the 450 Scenario, OPEC production increases by 11 mb/d between now and 2030

Average IEA crude oil import price



■ *The oil price in real terms is assumed to rebound from around \$60 per barrel in 2009 with the economic recovery, reaching \$100 by 2020 & \$115 per barrel by 2030 in Reference Scenario*

Oil price roller-coaster slows for now...



- Last year's price increases reflected OPEC curbs, but also stronger equities, the weak dollar and expected economic/demand recovery
- Intra-day volatility rose until autumn 2008, but receded since
- Intra-year volatility also *generally* receded, prices in \$60-80/bbl range since summer 2009 (but \$10/bbl swing since January)
- Will macro-economic/financial factors or market fundamentals drive a break-out from this range in 2010?

How to reduce volatility

- Reduce uncertainty about fundamentals
 - Clearer, internationally-agreed policies that ensure plentiful supplies of economic, sustainable and secure energy
 - Open access to energy reserves and the encouragement of investment
 - Commitment to set clear environmental and efficiency goals

- Make oil markets function better
 - Require more & better data on financial and physical markets
 - Moves to limit market manipulation
 - More analysis and work towards global harmonization of market function