Global Downstream Petroleum Outlook

Claude Mandil

Executive Director
International Energy Agency

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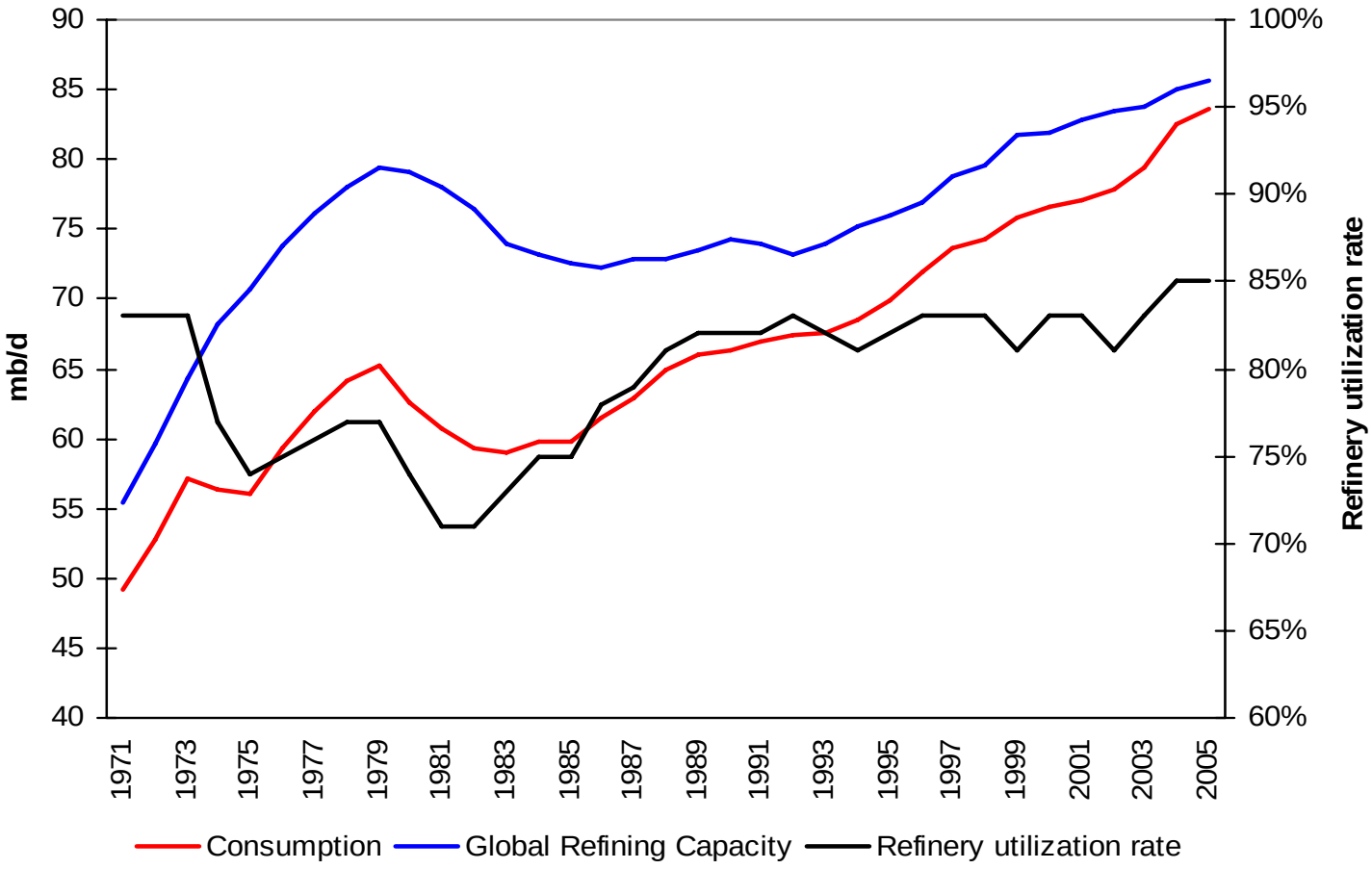
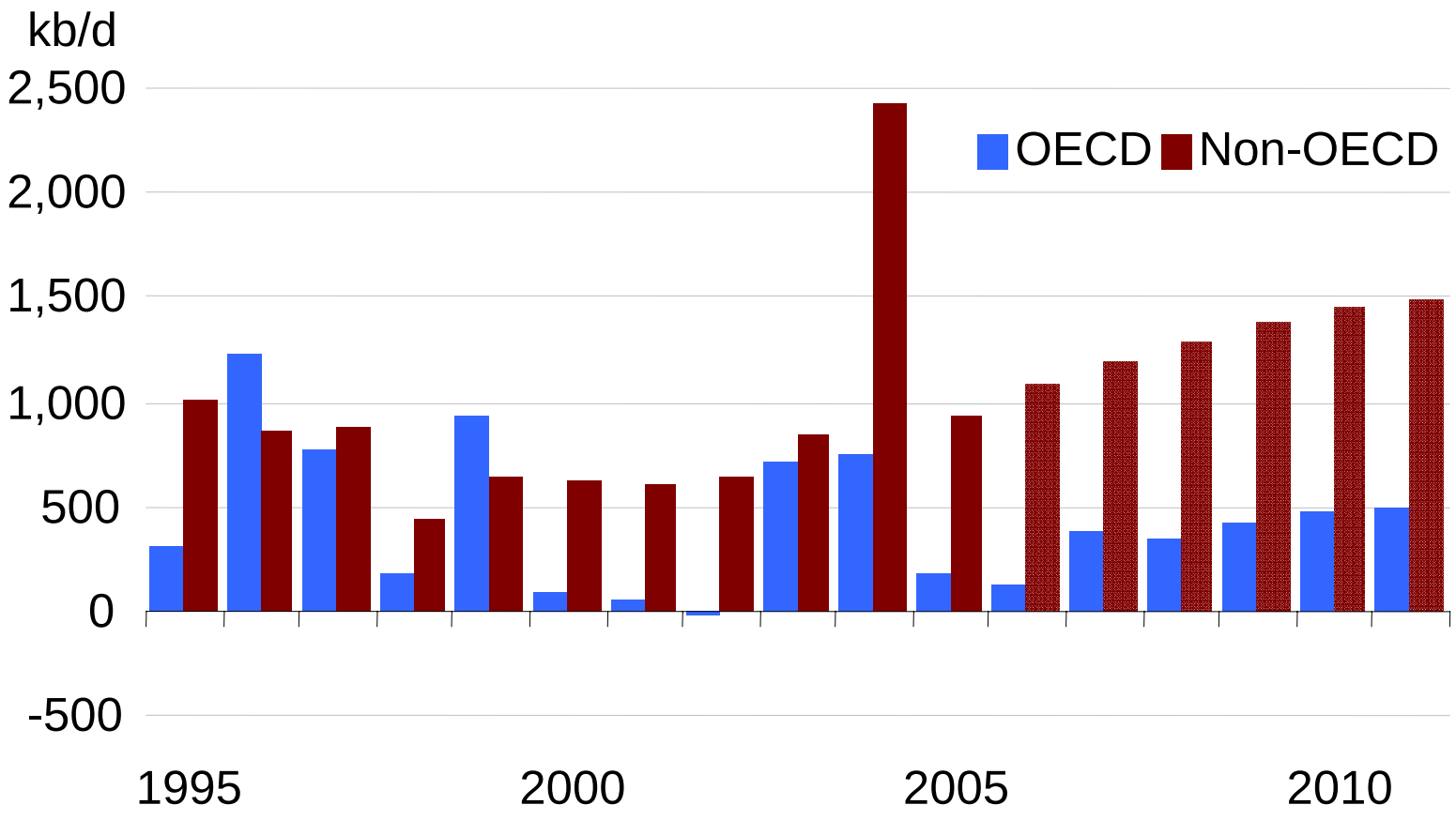
Spare Refinery Capacity Has Tightened



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

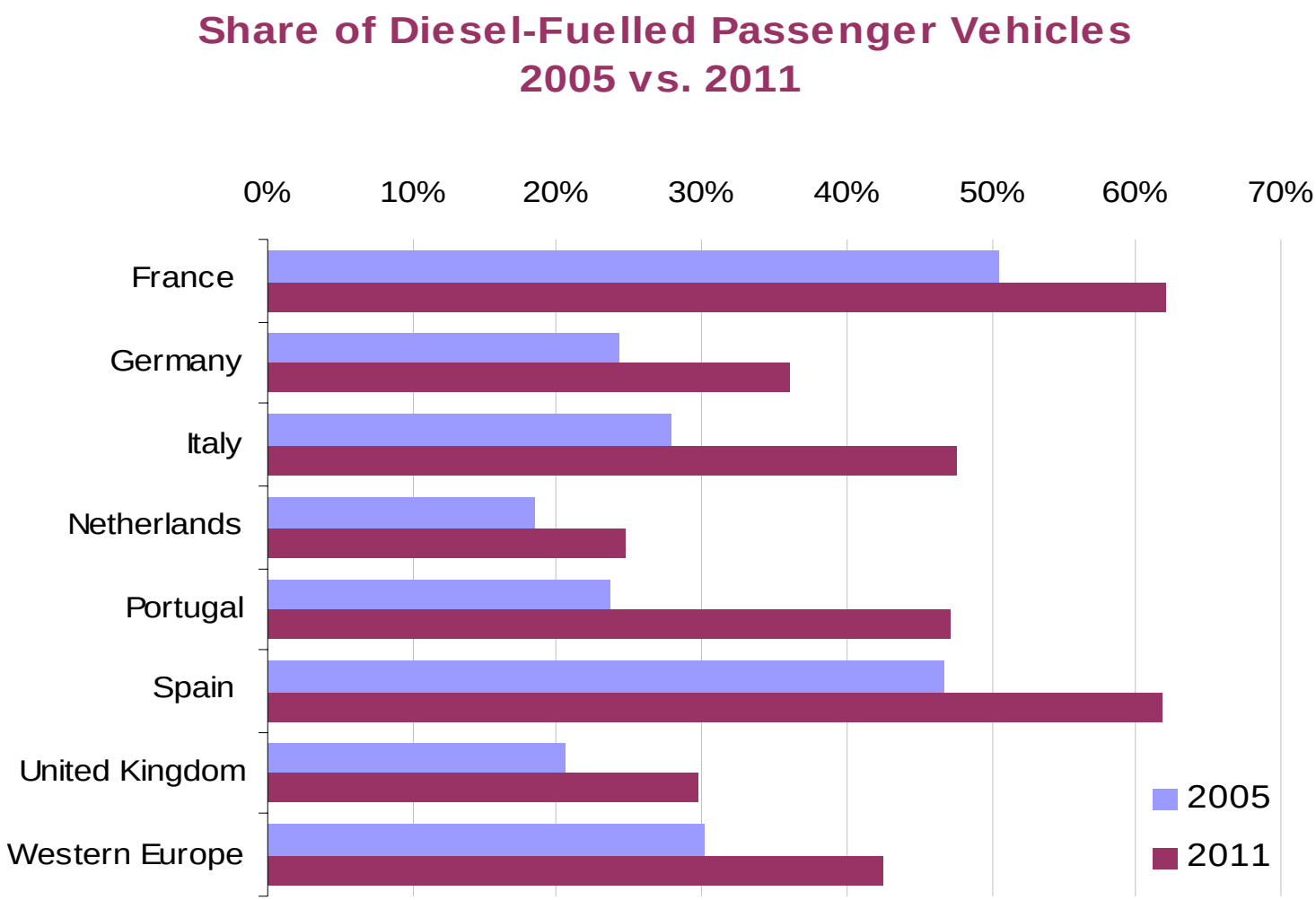
Will downstream constraints alleviate ?

Medium-term Oil Demand Outlook



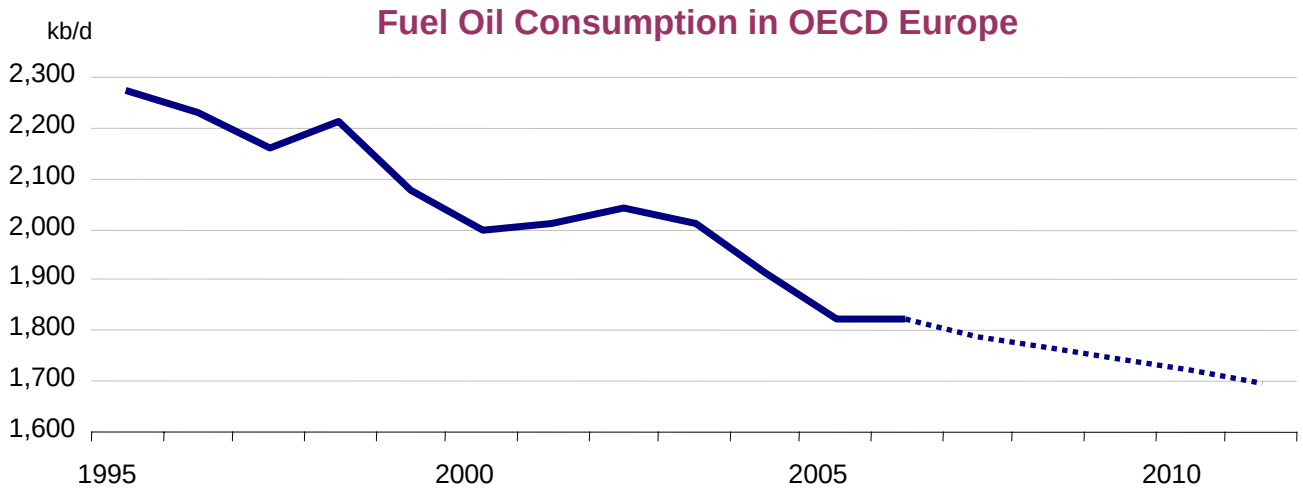
Oil demand is on track to reach around 94 mb/d in 2011. Non-OECD regions will account for over three-quarters of the increase

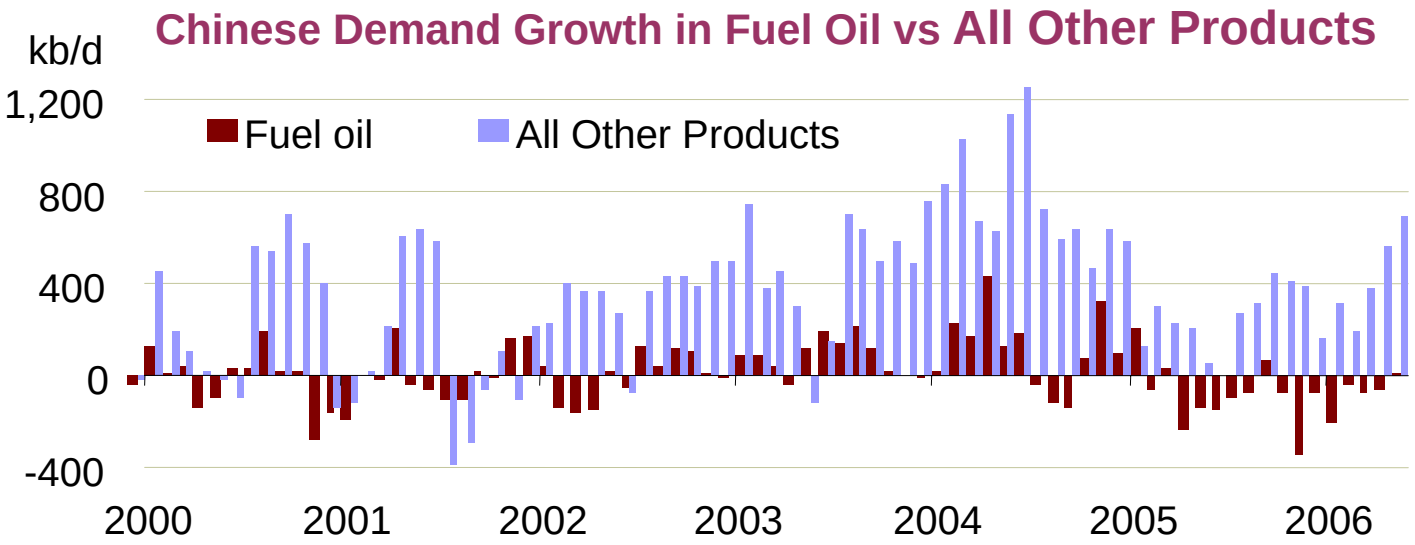
Ongoing Dieselisation of the Vehicle Fleet



Demand for transport fuels will drive oil demand globally. In Europe and Asia dieselisation of the vehicle fleet will gather pace, clearly impacting inter-regional trade.

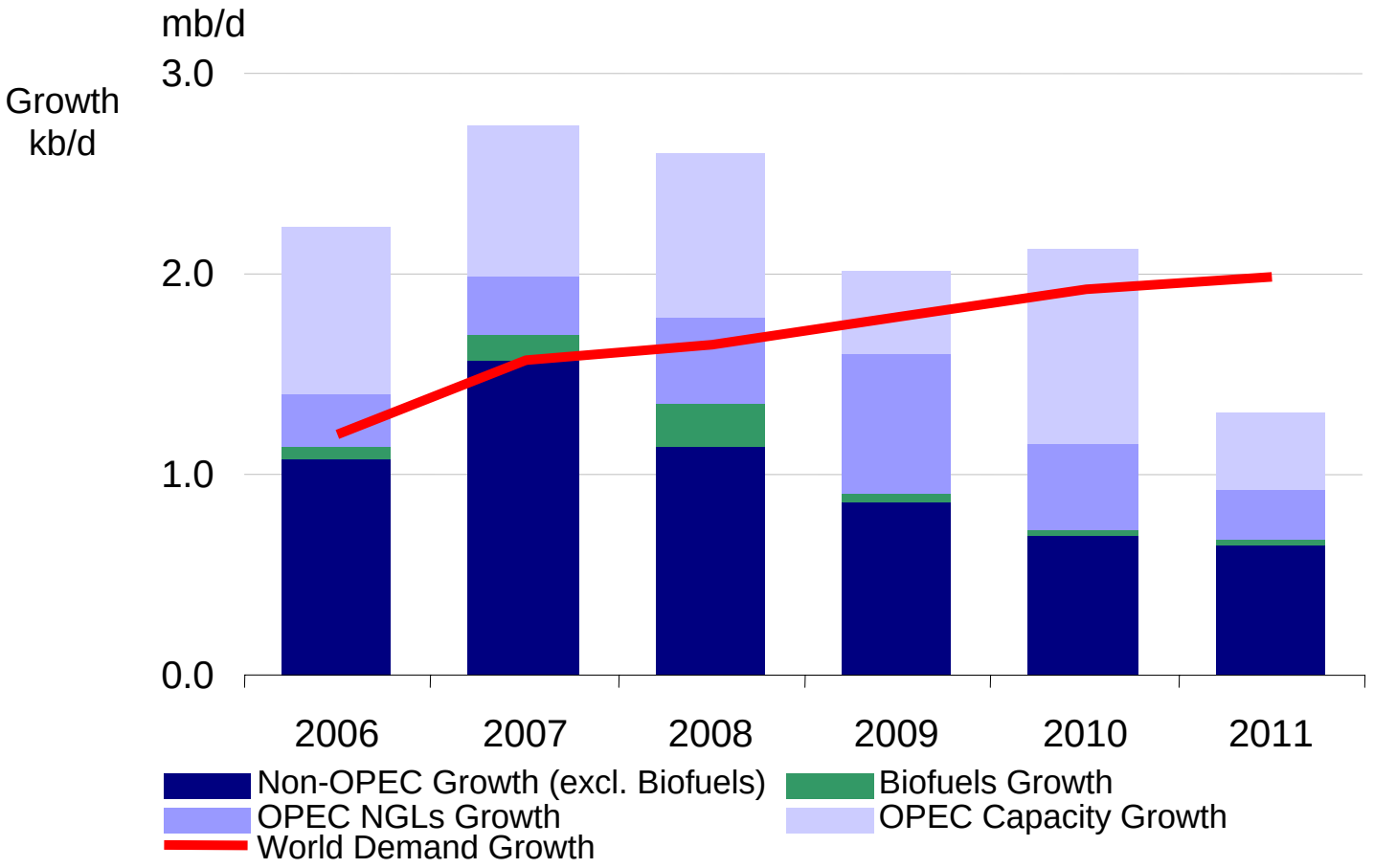
Demand for Heavier Products Stagnant





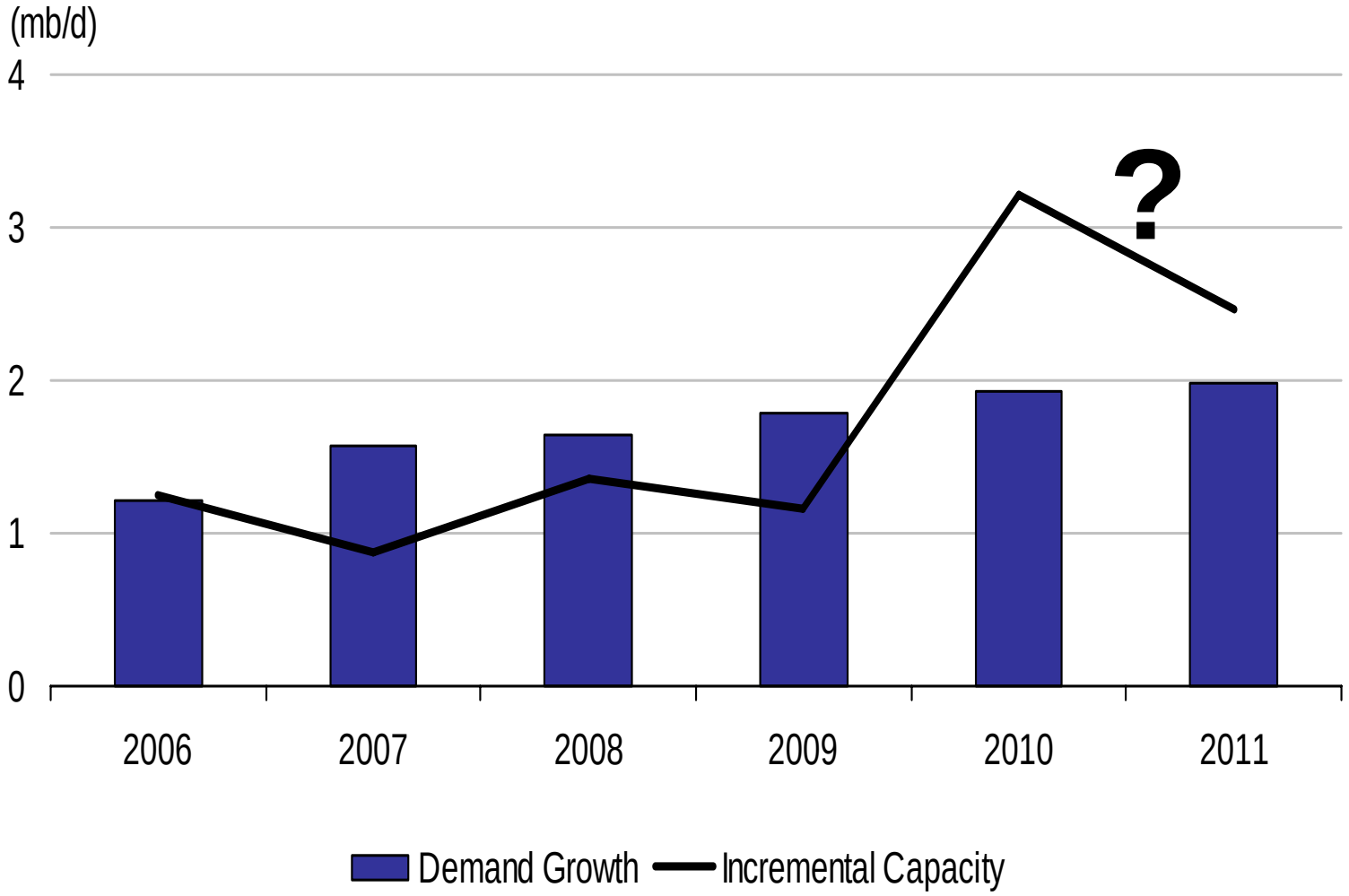
The trend away from fuel oil in power generation will continue.

Supply Side: Growth Should Meet Demand



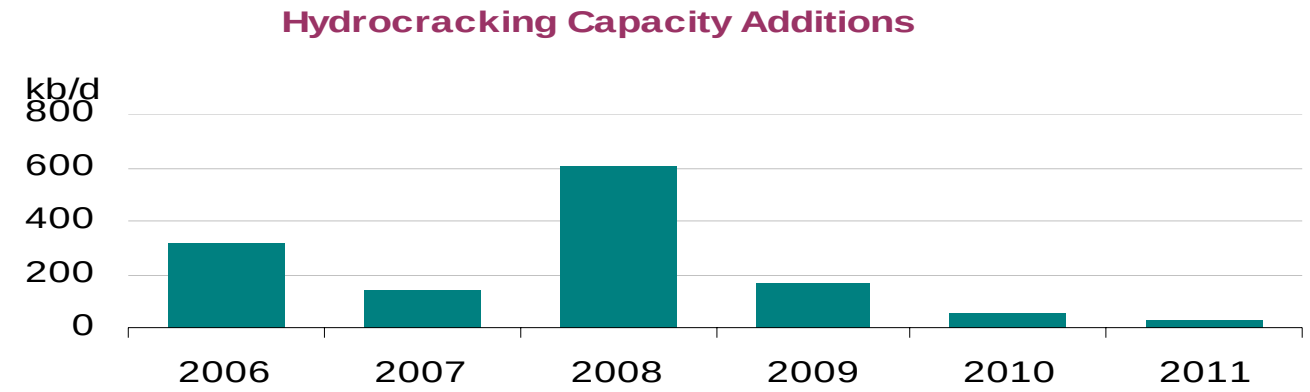
Based on current projects and plans, the level of spare production capacity should rise but the quality of this incremental crude will have important implications for the refining industry and product markets.

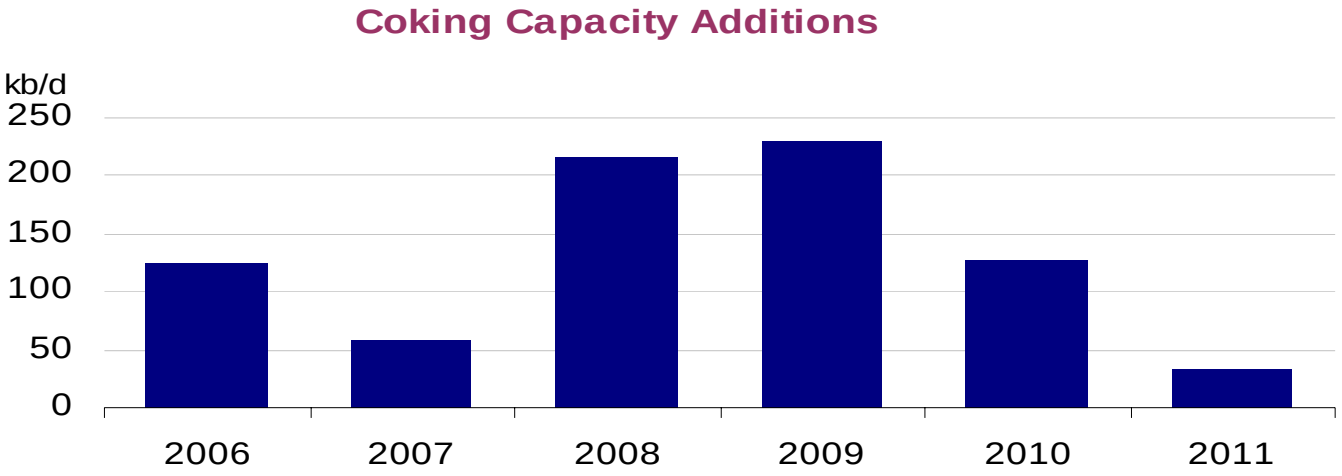
Will Refining Capacity Remain a Constraint ?



Growth in refining capacity is set to trail that of oil demand till 2009 and then improve. The bulk of new capacity will be in the Middle East and Asia.

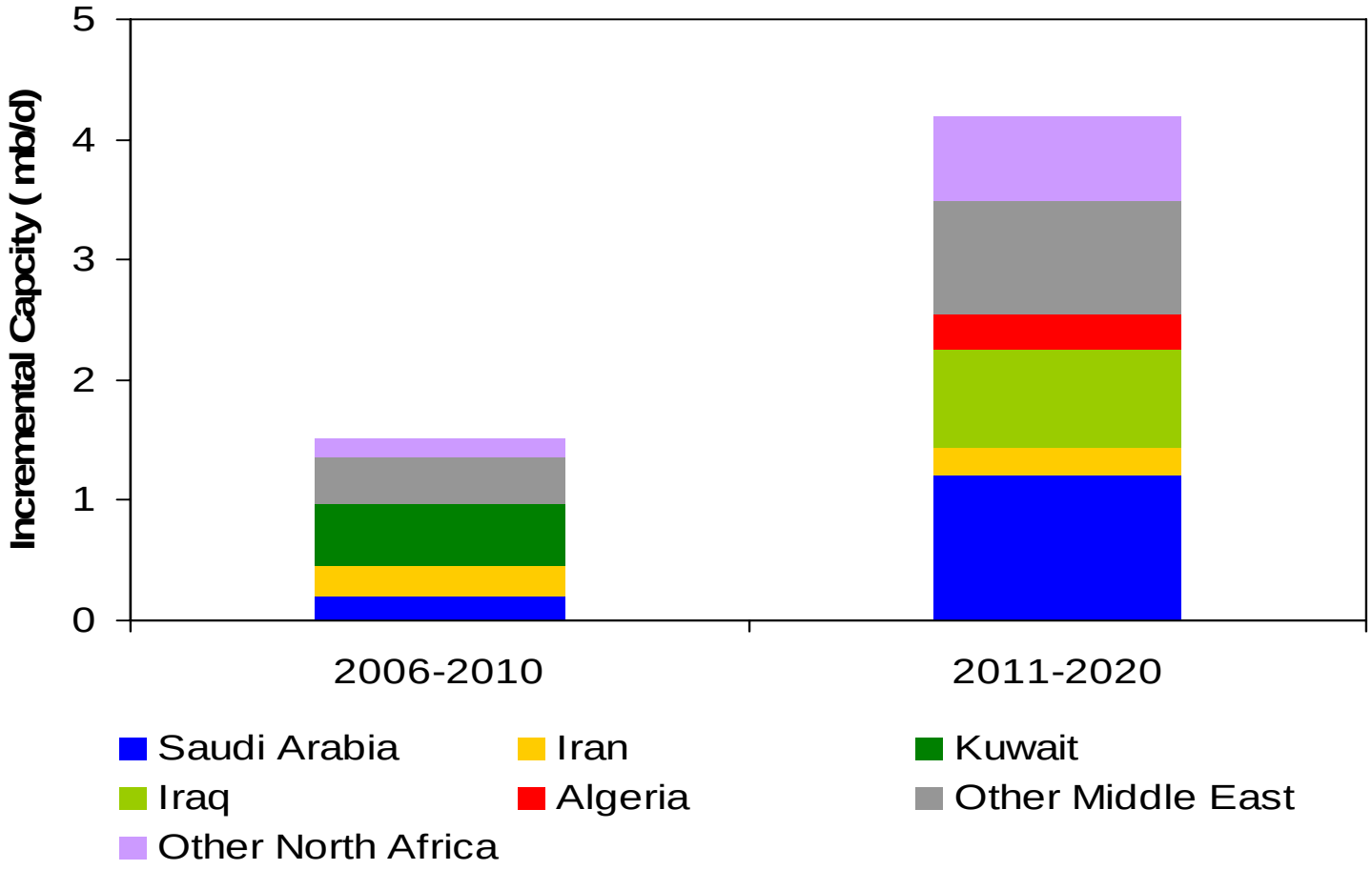
Will it be the Right Type of Capacity?





Current investment plans in upgrading capacity indicate that gasoline and distillate supply capability should improve over the next few years. Most of this investment is focused in the US and Europe

Longer-term: Increased Role For Refining in Major Producing Countries

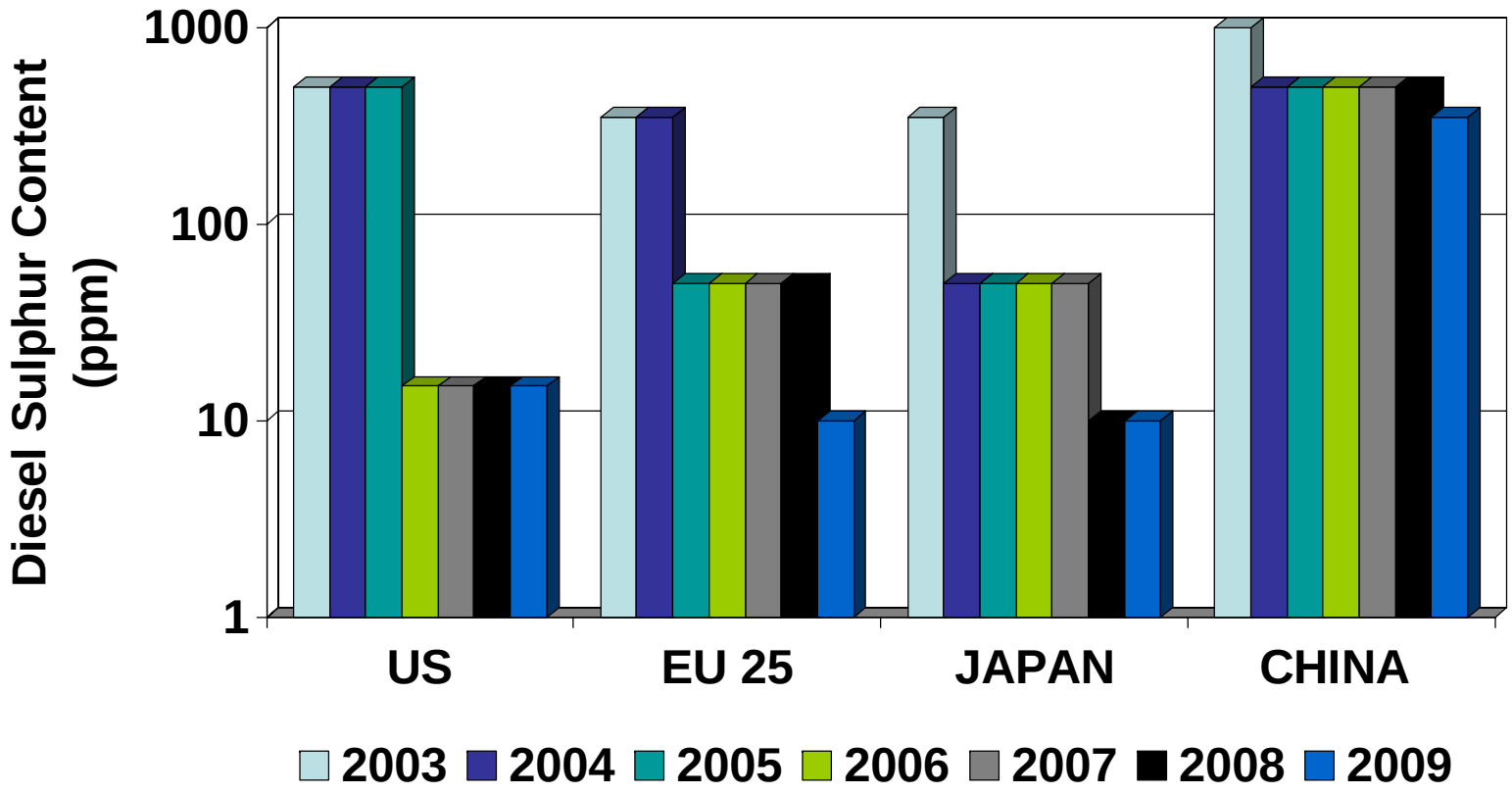


Based on announced projects and plans, MENA refining capacity is set to rise from 9 mb/d now to around 15 mb/d in 2020

Strategic Issues for the Refining Sector

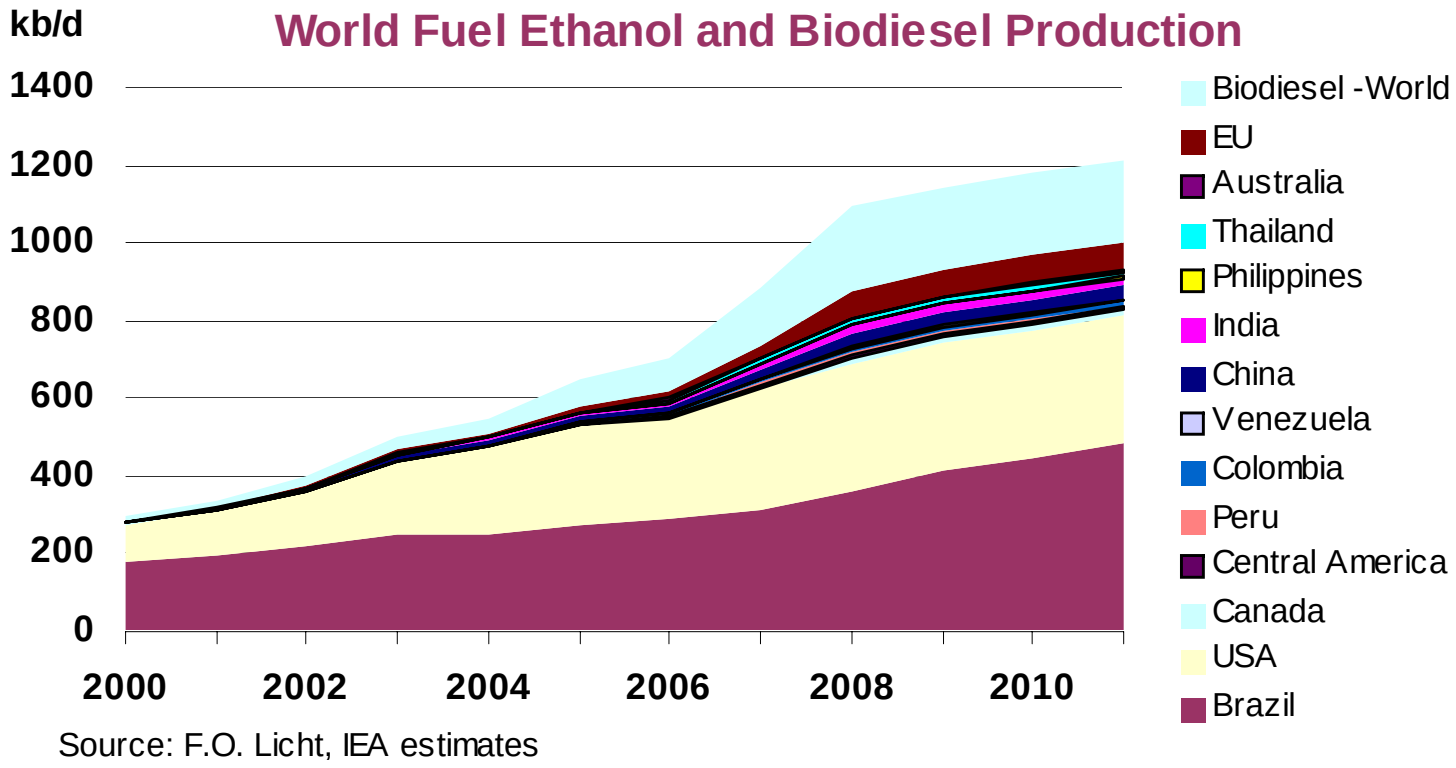
- “Boutique" fuel standards vs. deteriorating crude quality
- The competitive threat of biofuels
- Long-term environmental sustainability

Ongoing Tightening of Fuel Specifications



Meeting increasingly stringent fuel quality specifications as crude quality deteriorates will require ongoing investment. Global harmonization of standards would be an effective trade enabler.

World Biofuel Production



Source: F.O. Licht, IEA estimates

Based on announced projects and plans, biofuels production could grow from 700 kb/d in 2006 to at least 1.2 mb/d in 2011. A marginal but rapidly growing competitor to the refining sector.

G8 GLENEAGLES 2005

G8 SUMMIT 2006 Saint-Petersburg

"We will act with resolve and urgency to meet our shared multiple objectives of reducing greenhouse gas emissions, improving the global environment, enhancing energy security and cutting air pollution in conjunction with our vigorous efforts to reduce poverty"

-- from "G8 Gleneagles Communiqué"

"We will move forward with timely implementation of the Gleneagles Plan of Action. We have instructed our relevant ministers to continue the Dialogue on Climate Change, Clean Energy and Sustainable Development and report its outcomes to the G8 Summit in 2008"

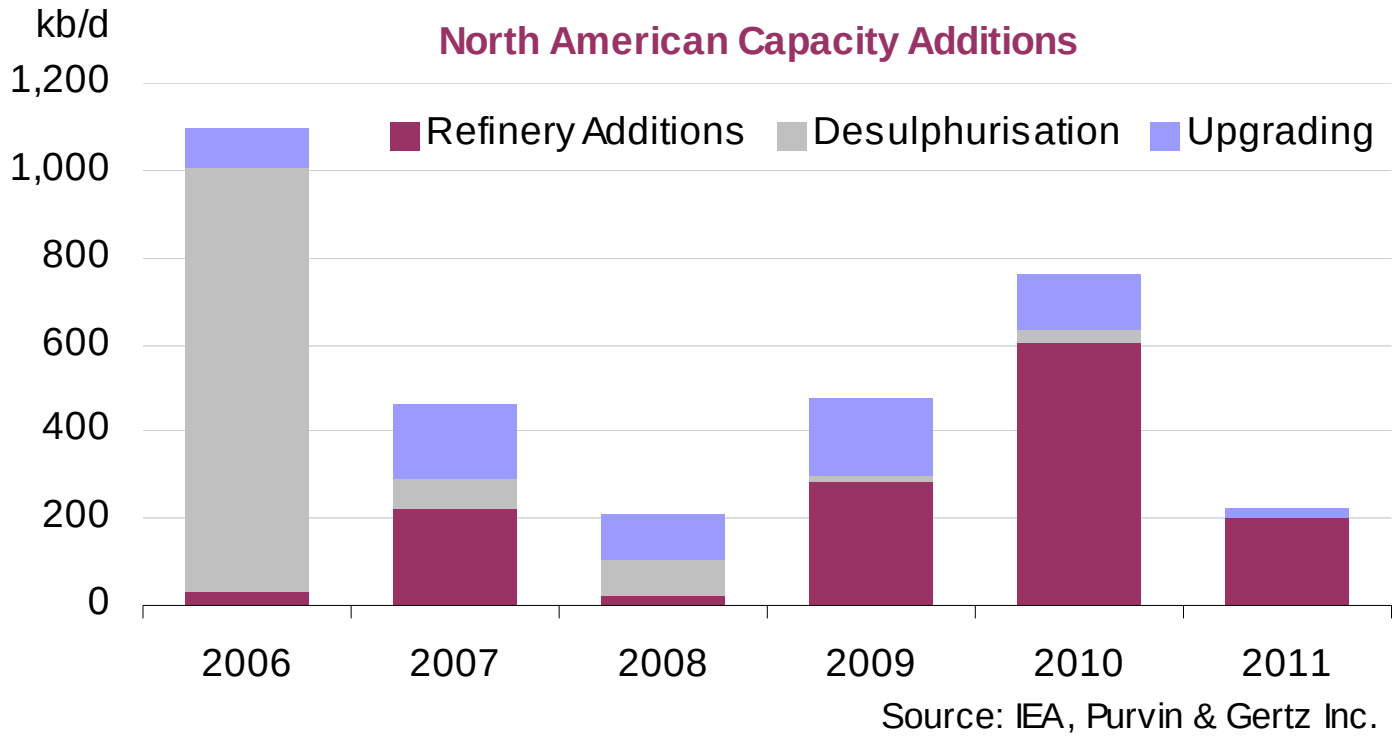
-- from "G8 St. Petersburg Communiqué"

Key Messages

- **Medium-term trends point to an improvement in the level and type of spare refining capacity**
- **Nonetheless, there remains an ongoing need to:**
  - Maintain downstream investment, particularly in upgrading capacity
  - Improve public awareness of the need for new refineries
  - Ensure new fuel quality specifications are warranted on environmental grounds and do not unduly restrict trade
- **In the longer-term, refiners will need to continue to adapt to policies introduced in response to environmental, economic and energy security concerns aimed at:**
  - Increasing energy efficiency
  - Reducing demand growth in the transport sector
  - Promoting development and deployment of new technology
- **Given this uncertainty governments must provide refiners with regulatory certainty**
- **The major producing countries will play an increased role in refined product markets**
  - Thus the need for enhanced producer-consumer dialogue on downstream issues

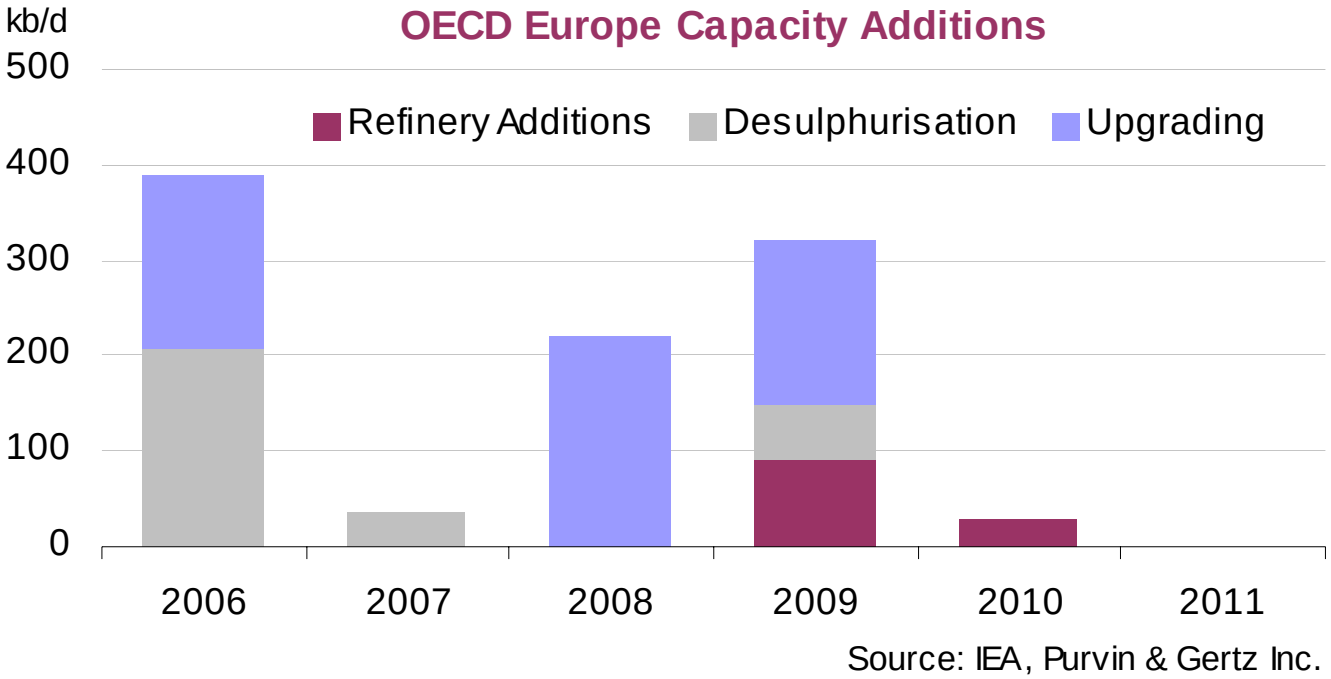
ANNEX SLIDES

North American Capacity Growth



- 2006 growth dominated by new hydrotreating/ desulphurisation capacity to meet tighter product specifications
- Constant level of around 100kb/d of new upgrading capacity expected
- Big refinery expansions due for completion 2009-2011

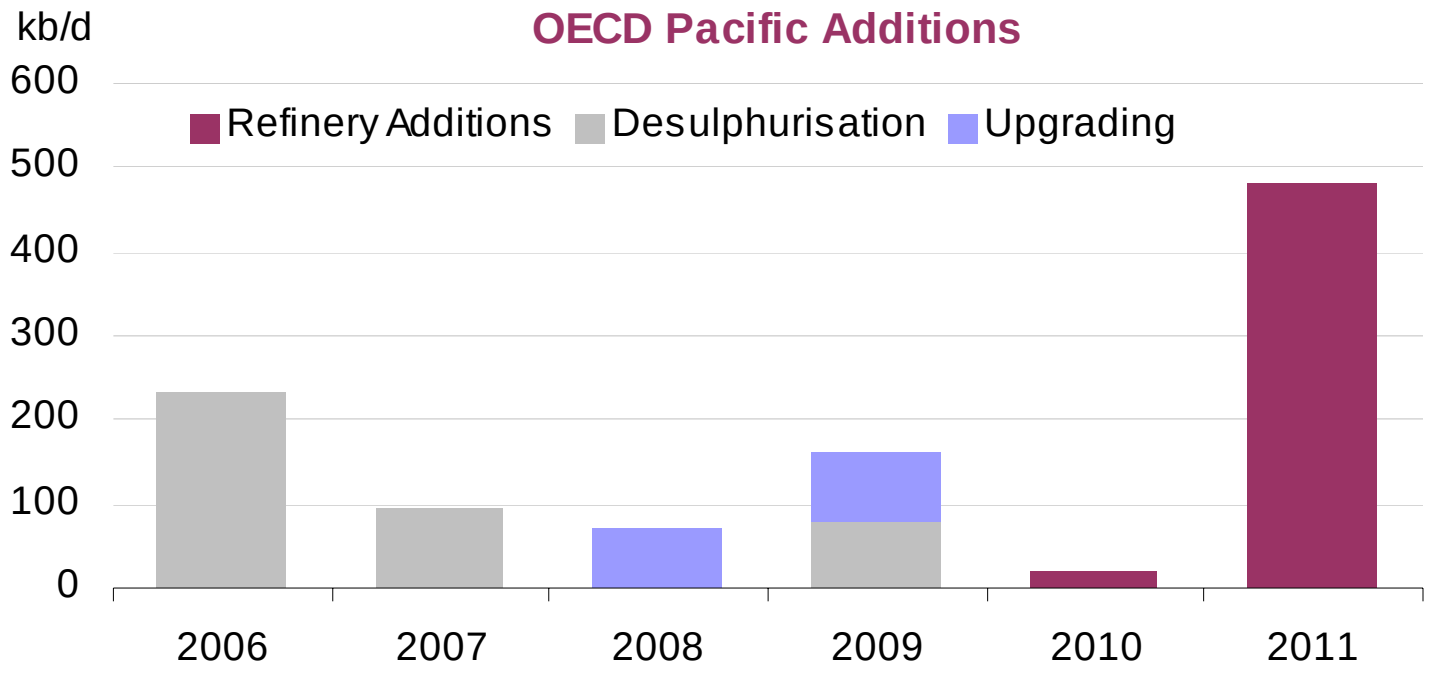
OECD Europe Capacity Growth



Source: IEA, Purvin & Gertz Inc.

- New European capacity is primarily hydrocracking units. Some coking units expected in 2009, mainly in Spain.
- Little planned expansion of crude throughputs, expect for that necessary to maximise flexibility of new upgrading capacity.
- Threat of biofuels seen limiting industry appetite for capital expenditure.

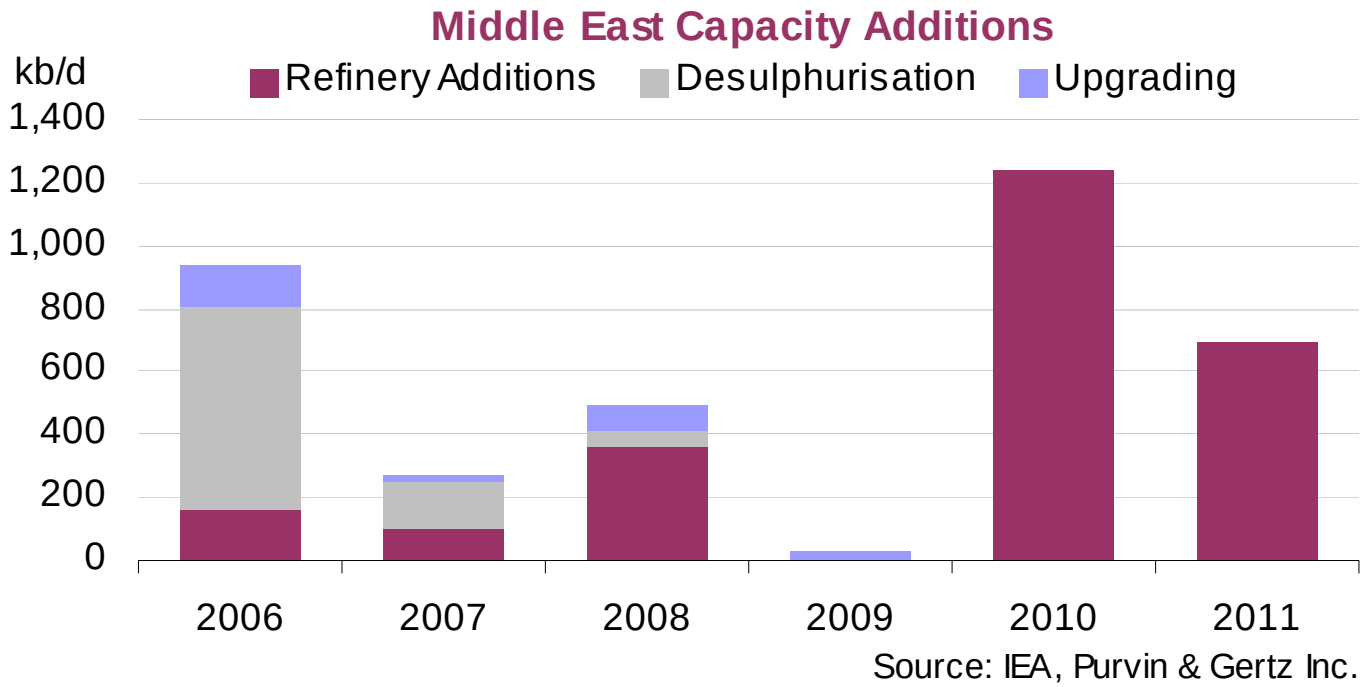
OECD Pacific Capacity Growth



Source: IEA, Purvin & Gertz Inc.

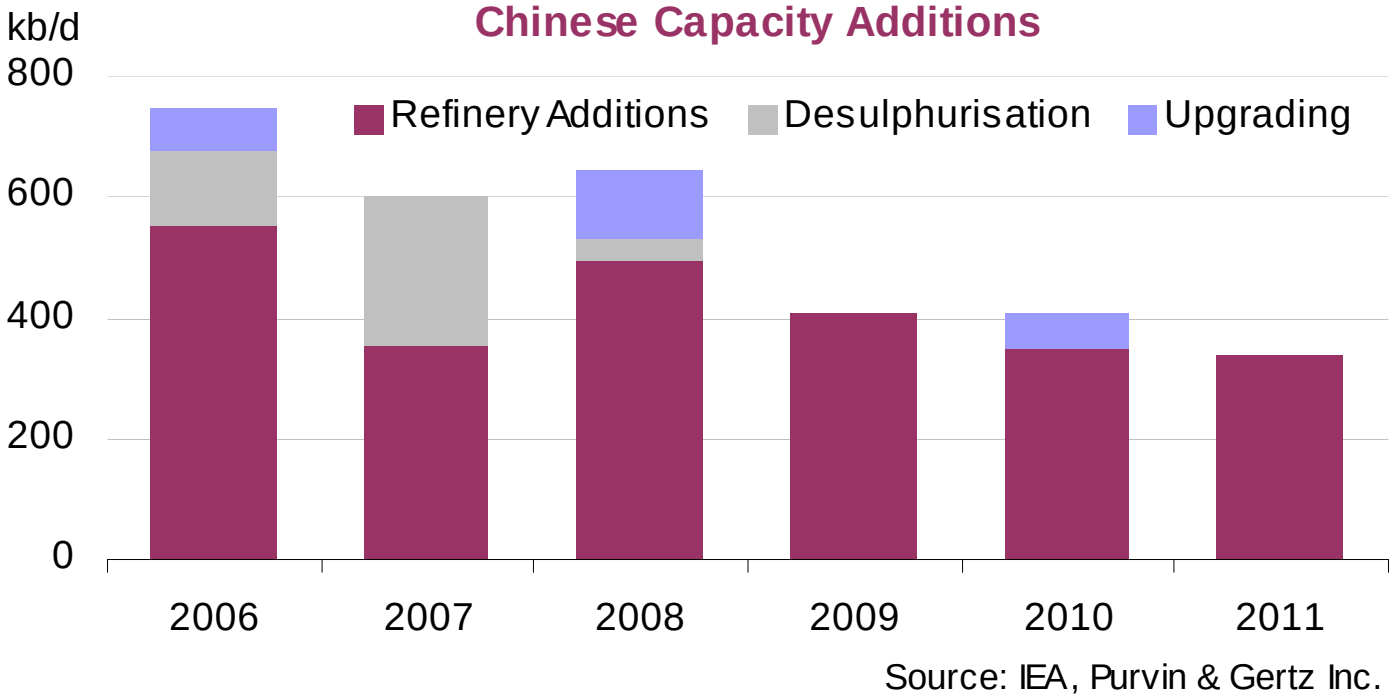
- OECD Pacific investment levels are forecast to be amongst the lowest of any region in the 2006-2011 period.
- Declining demand and region's history of overcapacity are weighing on appetite for new investment.
- The 480kb/d expansion of S-Oil's Daesan plant should be done by 2011

Middle East Capacity Growth



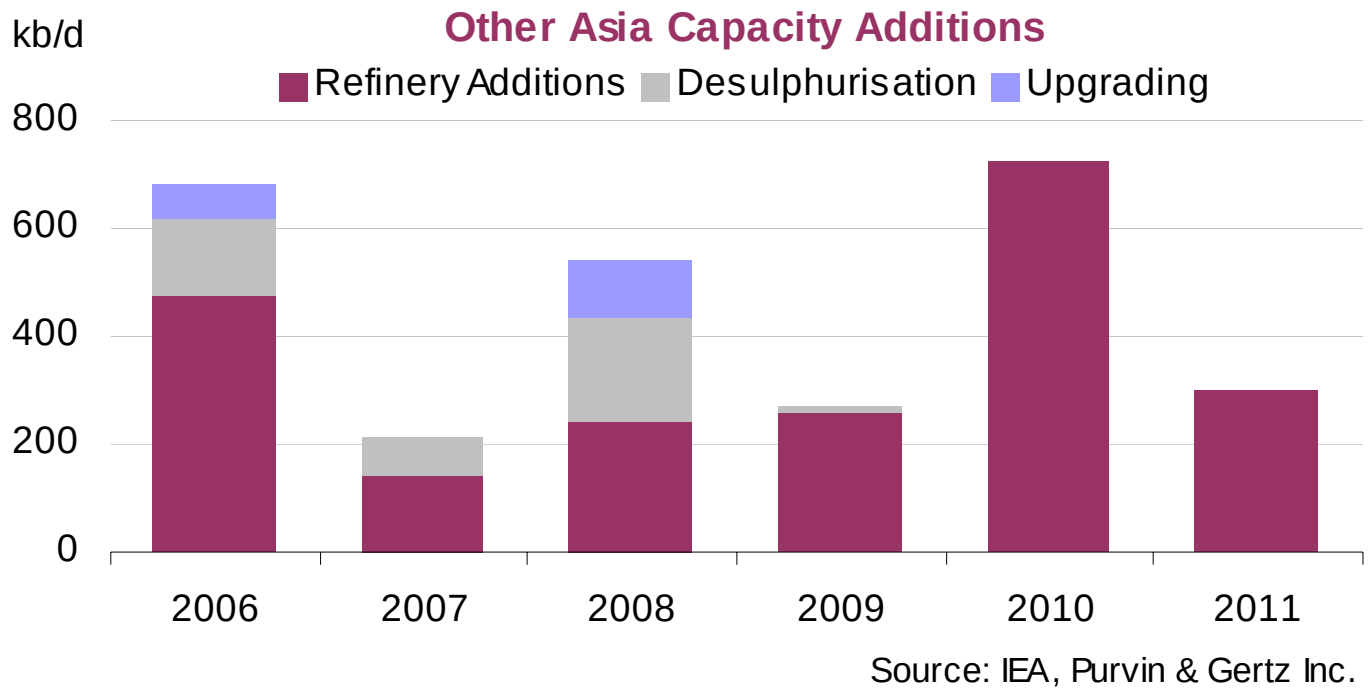
- Significant investment in new capacity will add 2.6mb/d by 2011. Several world-class refineries are expected to start in 2010-2011
- Saudi Arabia, Kuwait, Qatar and the UAE will account for most of the growth.

Chinese Capacity Growth



- Chinese capacity growth of 2.5mb/d is driven by Sinopec/ PetroChina
- New refinery additions dominate the growth but additional investment in upgrading and hydrotreating capacity should improve China's ability to handle more sour, heavy crude

Other Asia Capacity Growth



Source: IEA, Purvin & Gertz Inc.

- Growth of 2.1mb/d in other Asia is driven by India, which accounts for 1.66mb/d or roughly 80% of the total.
- New refinery expansions include the 600kb/d Jamnagar project which we conservatively forecast will be fully on-stream in 2010.