



# The External Energy Policy of the EU

*Ambassador W.C. Ramsay*

*Deputy Executive Director  
International Energy Agency*

*The Ifri Energy Program : European Governance and Geopolitics  
Brussels, 31 January 2008*

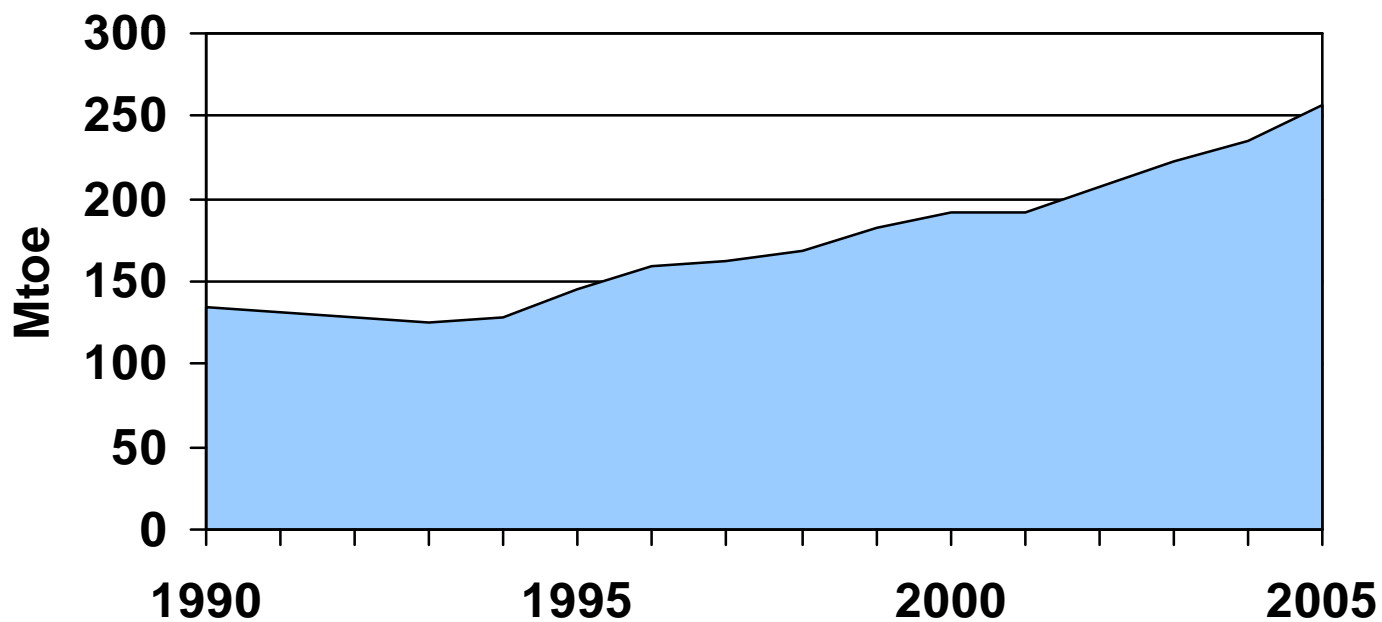


# Energy Challenges - Context

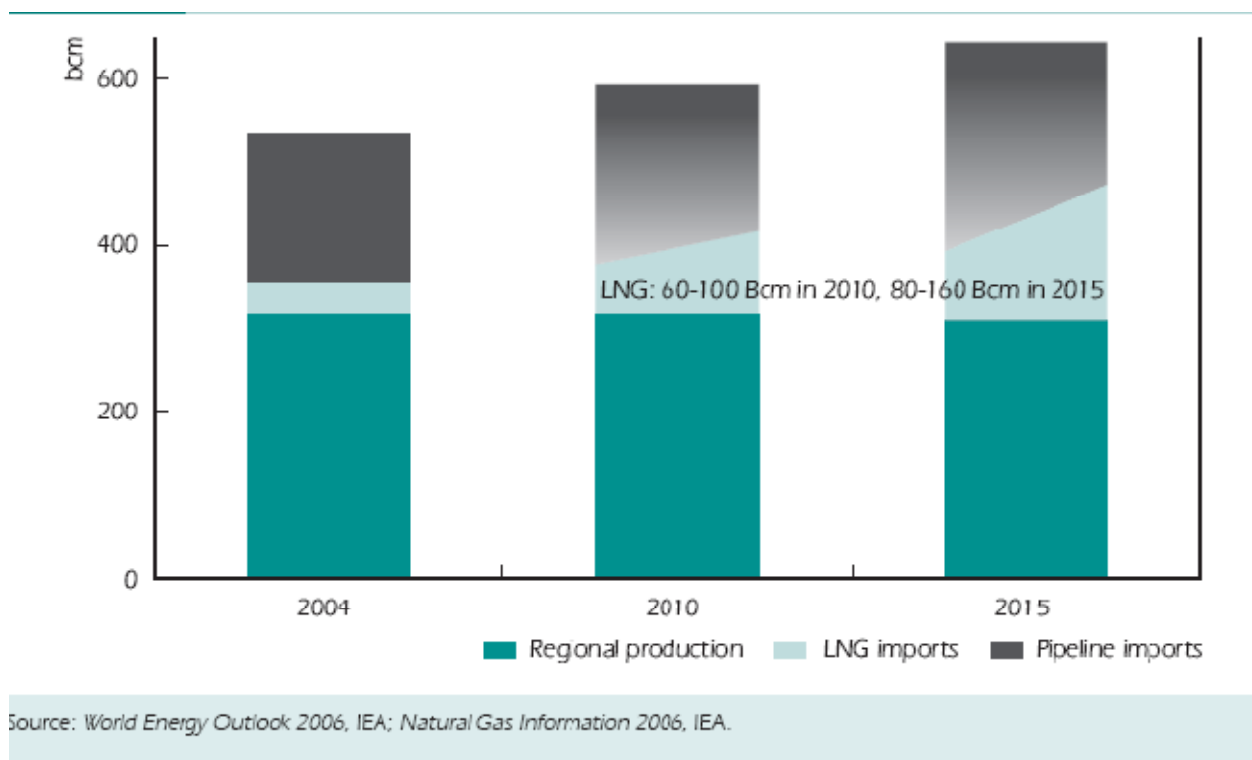
- Challenge not unique to Europe but a global concern
- We all want secure, reliable and affordable energy that's.....
- Easy on the environment
- But... we live in times of rising prices, growing emissions and tight security
- Where are we going??

# Imports of Gas 1990-2005

## Net Imports of Gas into EU27

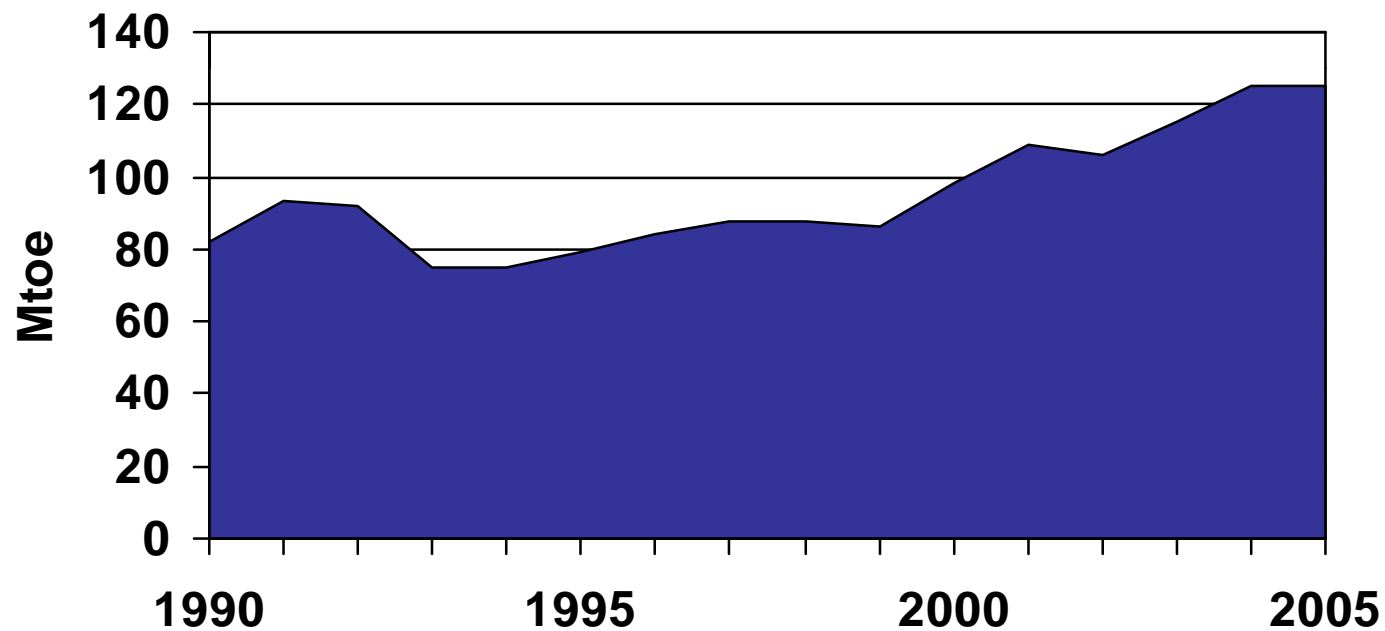


# Dependence on imported LNG Growing



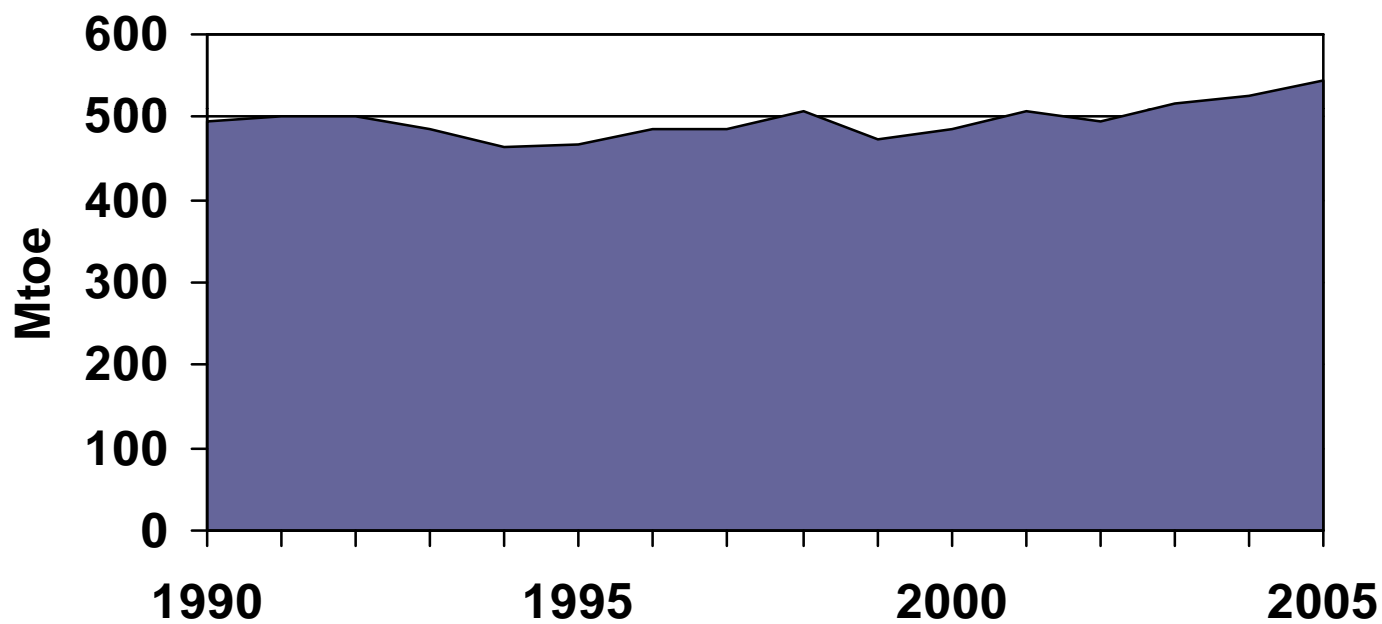
# Imports of Coal 1990-2005

## Net Imports of Coal into EU27

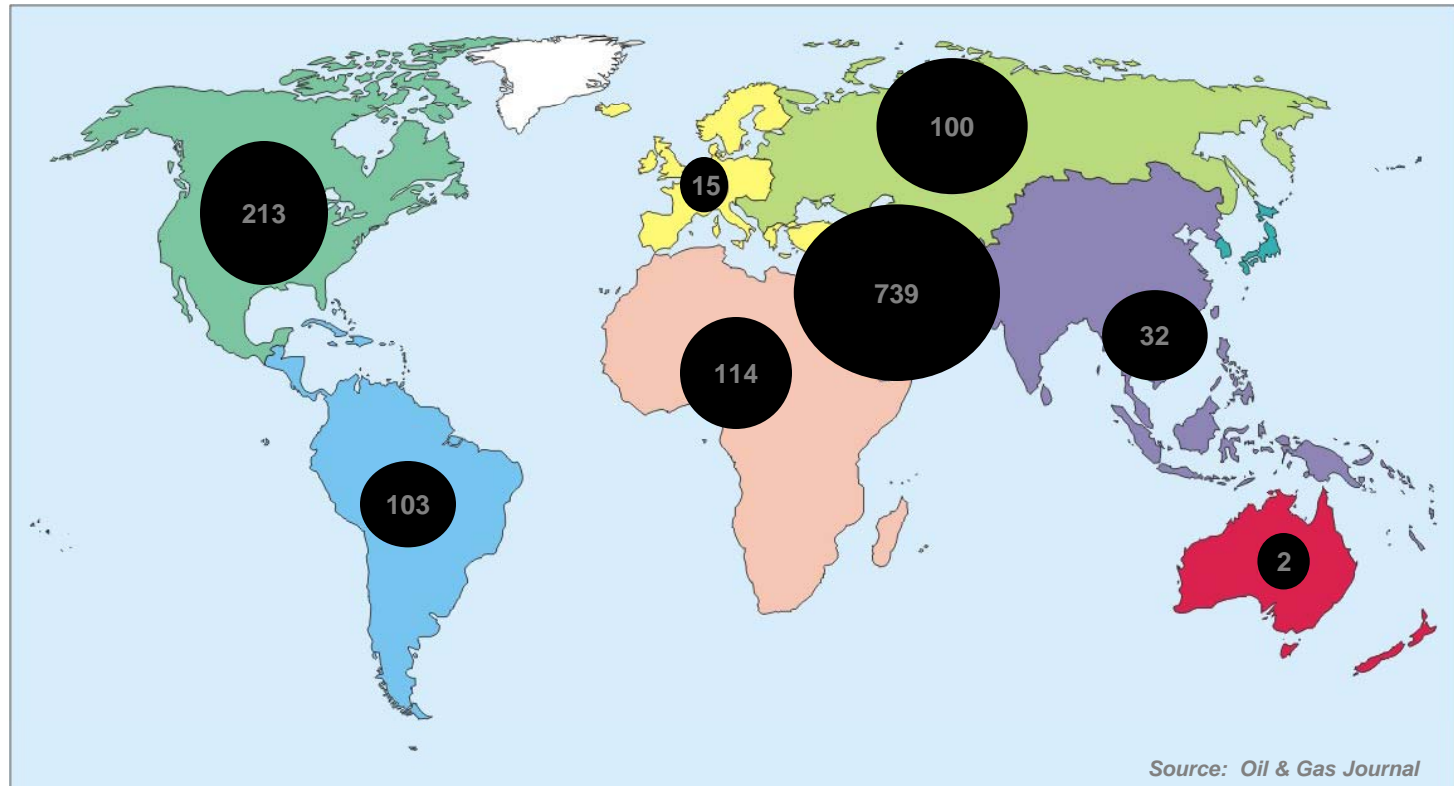


# Imports of Oil from 1990-2005

## Net Imports of Oil into EU27



# Proven Oil Reserves



World total: 1 317 billion barrels as of 1 January 2007

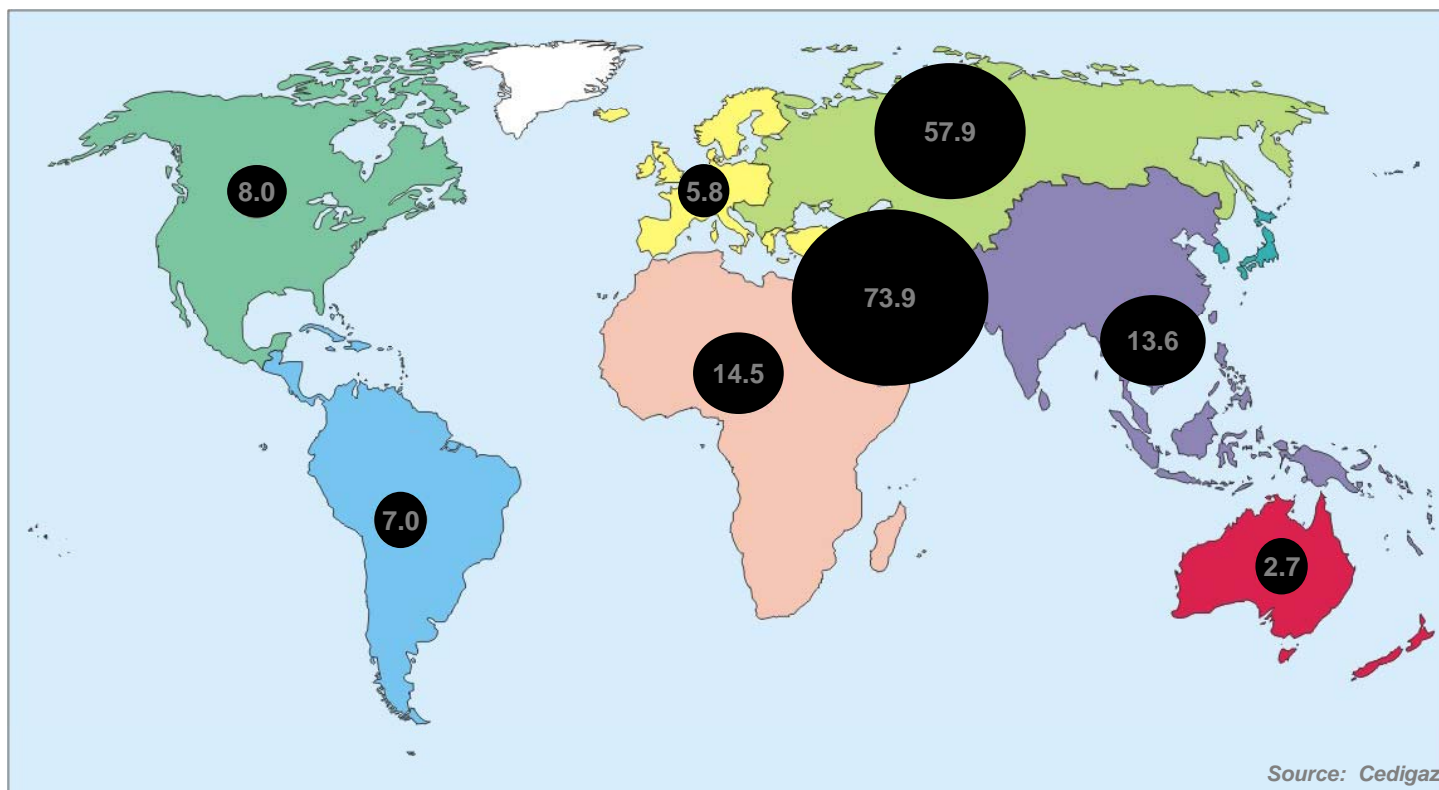
***Oil reserves are concentrated in MENA regions***

Note: North America reserves include Canada tar sands.

© OECD/IEA, 2008



# Proven Natural Gas Reserves



World total: 183 tcm as of 1 January 2007

**Gas reserves are concentrated in FSU and MENA regions – Russia and Iran together account for just over 40% of global gas reserves**



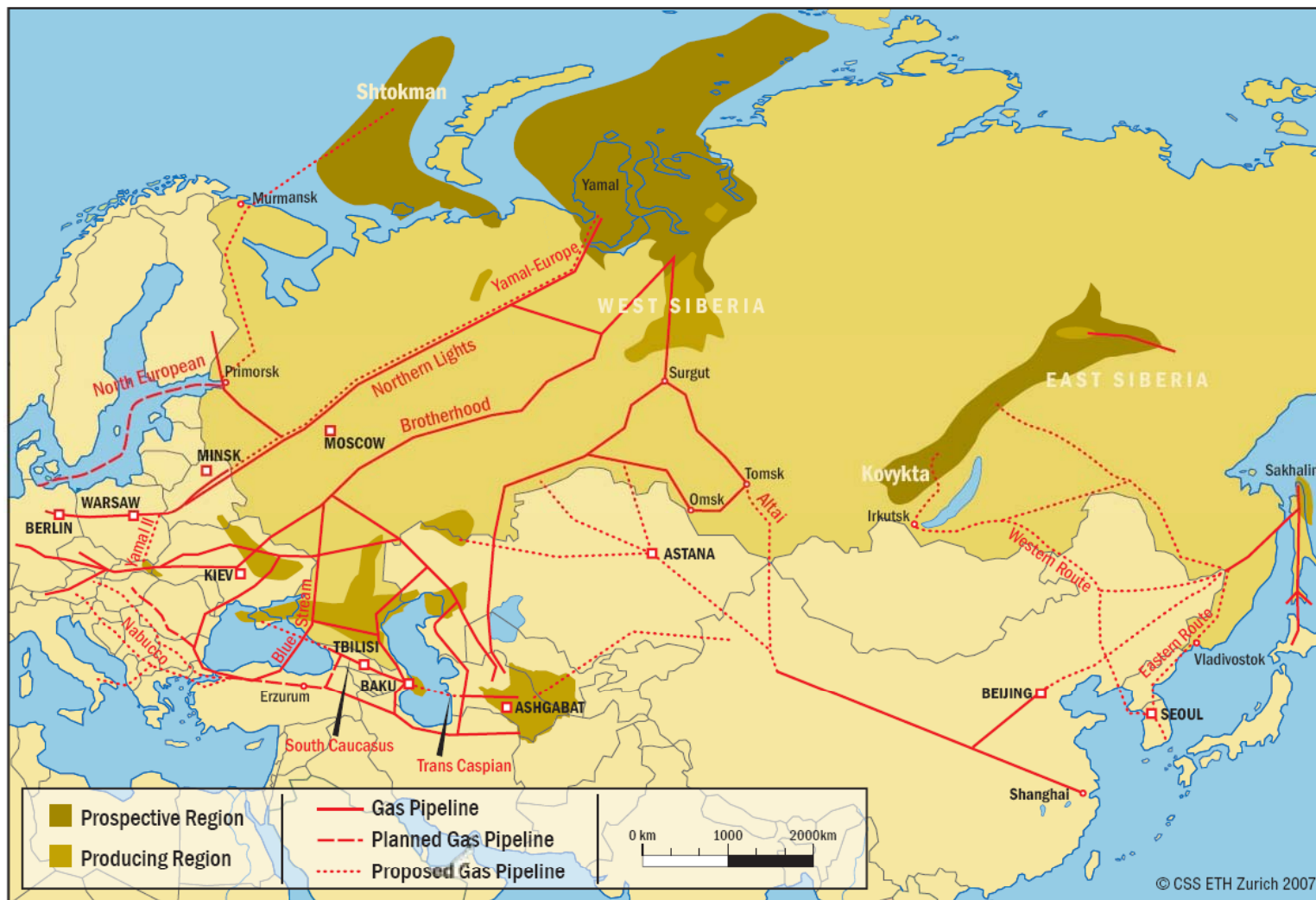
# Gazprom's presence and strategy in Europe

- **Position before the 1990s**
  - Gas sales to incumbent utilities under long term contracts
  - No direct presence in the European market or in other energy markets
- **Acquired assets during the 1990s – opportunistic behaviour and minority stakes**
  - **Shares in gas incumbents:**
    - Germany, Baltic countries, Finland (transport and sales)
  - **International pipelines:**
    - Yamal, Interconnector
- **Post 2000: a revised strategy – diversification along the value chain and full control**
  - **Diversified energy transit (with full or majority control of pipelines)**
    - Bluestream, Norstream, Southstream for gas
    - Bourgas-Alexandroupolis in oil
  - **Direct presence in downstream markets (expanding customer base)**
    - Significant market shares aimed in the major gas markets in Western Europe (UK, France, Italy, Austria)
    - Consolidation to the greatest extent possible in Eastern Europe (Bulgaria)
  - **Control of flexibility (capturing the value and developing new competencies)**
    - Storage development projects in Austria, Hungary, UK, Belgium, Italy
    - Participation in hub development (50% of Baumgarten hub facility)
  - **Development in other energy markets**
    - Oil (transit pipelines in Bulgaria, Greece; oil utility in Serbia)
    - Nuclear (power plant in Bulgaria)

# Gazprom in Europe: major existing assets

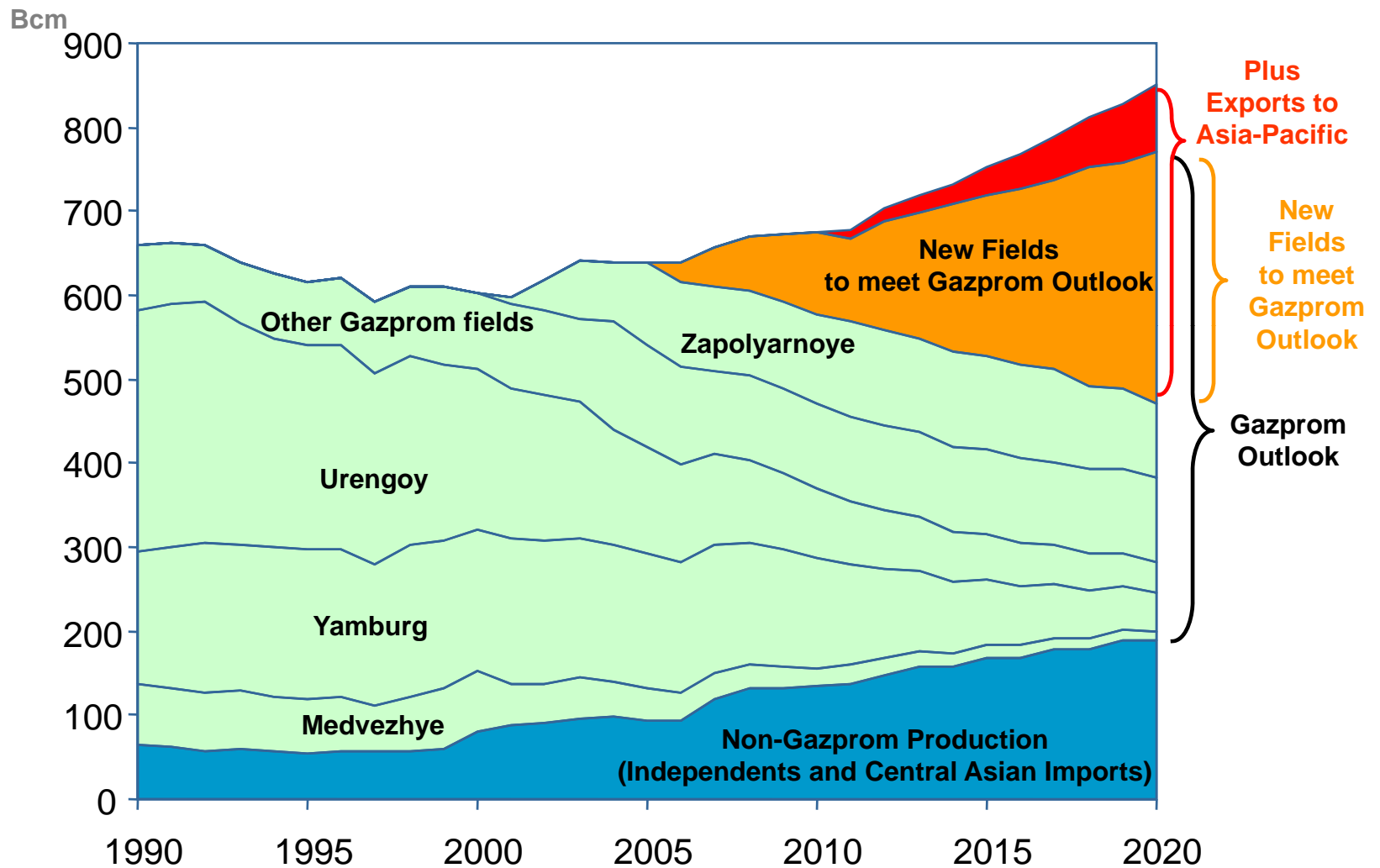
- Transit
  - Europogaz-Yamal (48%)
  - Interconnector (10%)
- Transport & sales
  - Germany: Wingas (35%)
  - Finland: Gasum (25%)
  - Baltic Republics: Lietuvos Dujos (37%), Latvijas Gaze (34%), Eesti Gaas (37.5%)
  - Bulgaria: Overgaz (100%)
- Marketing and trading
  - Existing affiliates in most of European gas markets
  - Some being exclusive importers of Russian gas

# Main Russian gas export pipelines



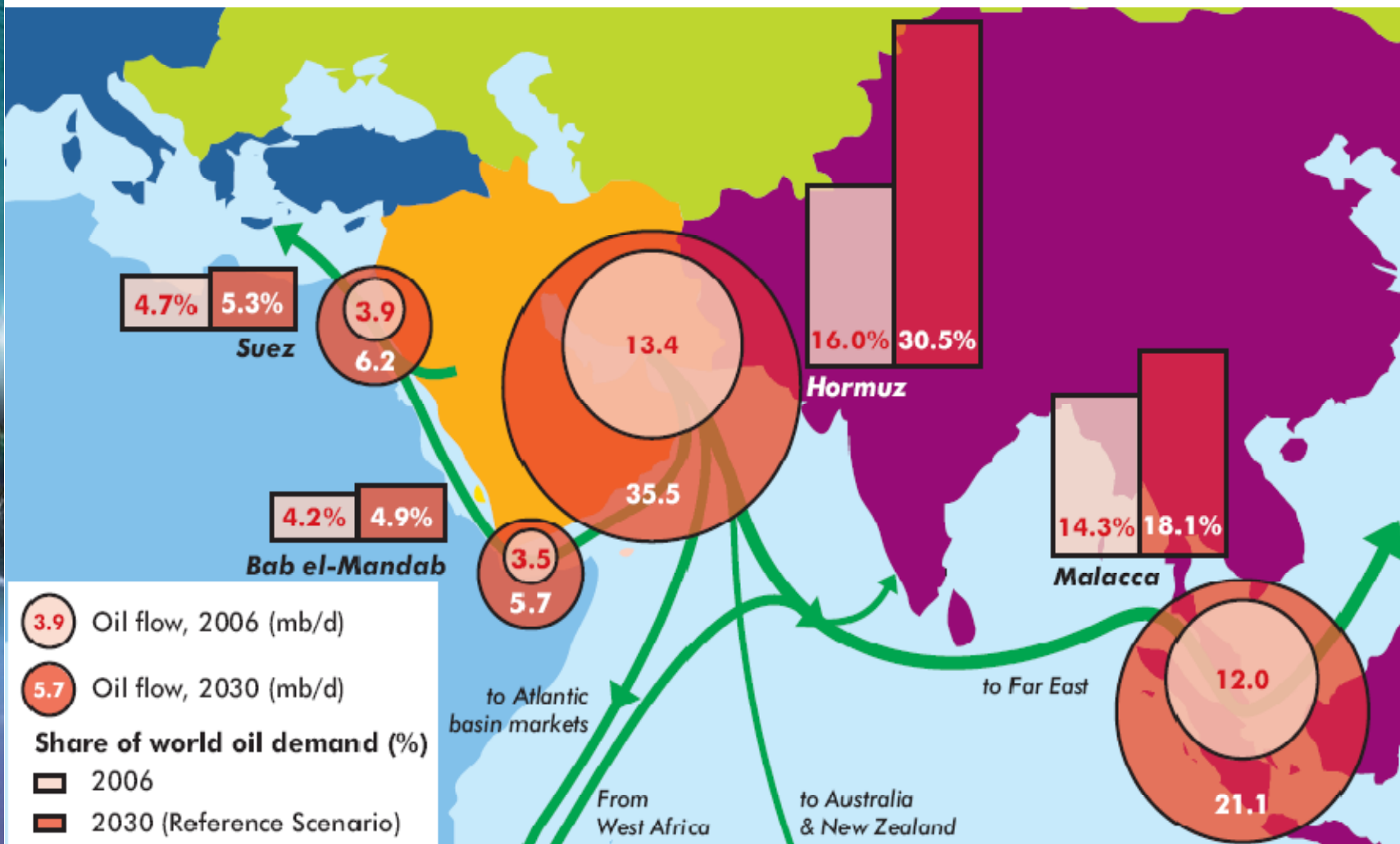
Source: Russian Analytical Digest (2007)

# Russian Gas Supply Outlook

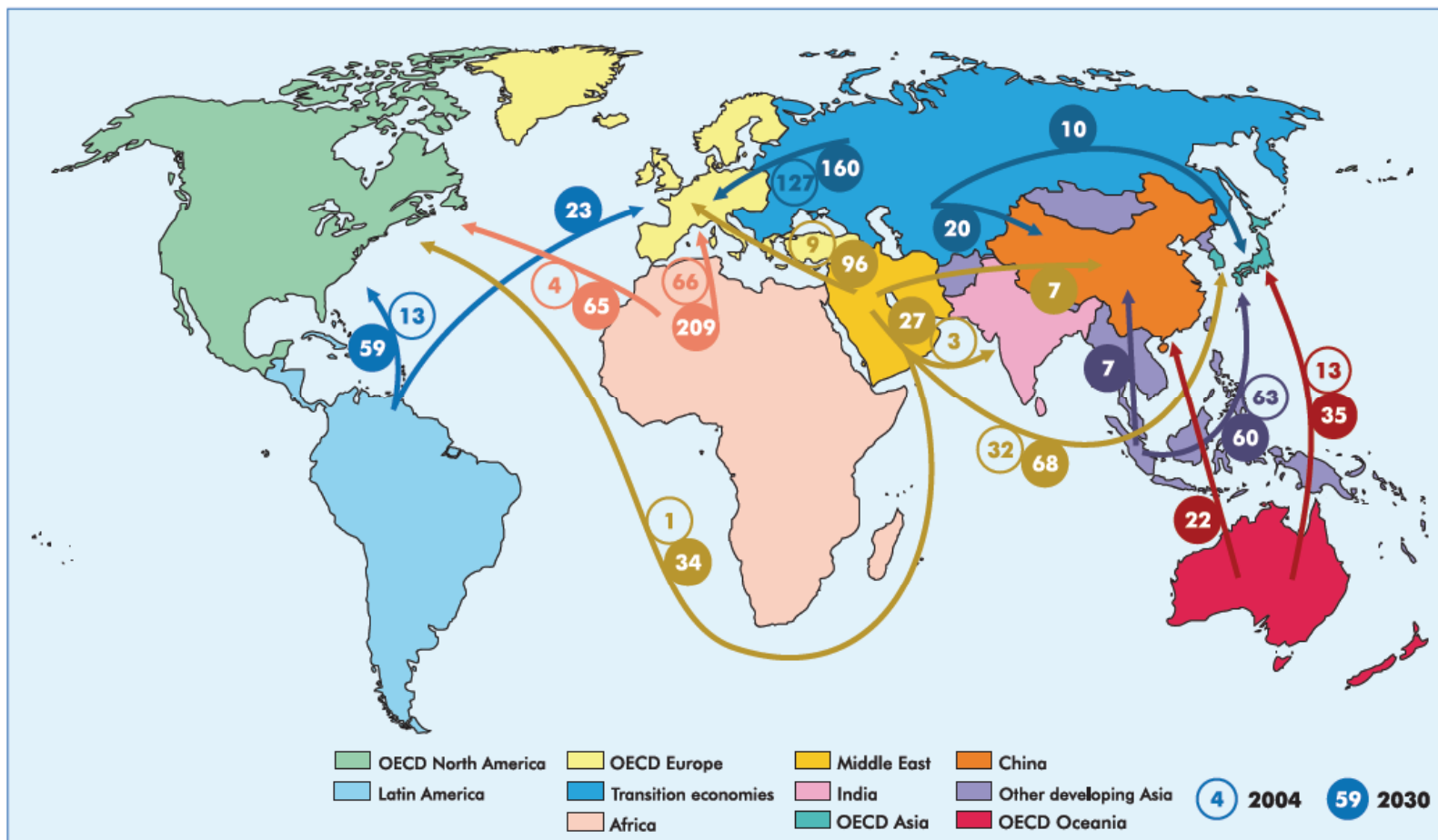


*An apparent growing gap in Russian gas supply underscores the need for investment in new production capacity, an improvement in efficiency and a reduction in flaring.*

# Oil export flows from the Middle East

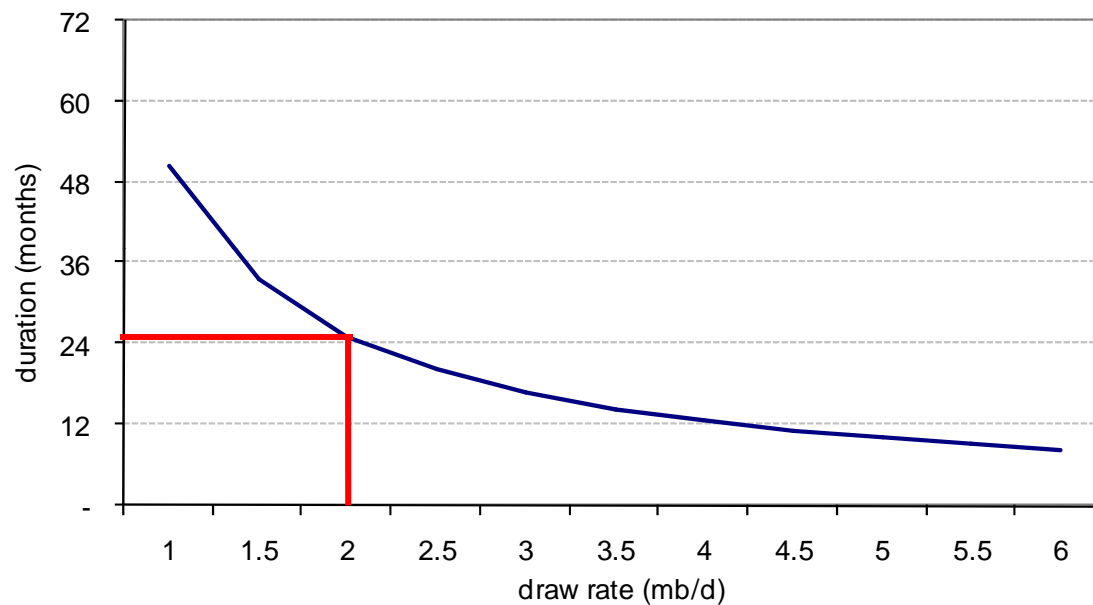


# Net Inter-Regional Natural Gas Trade Flows, 2004 and 2030; Reference Scenario; WEO 2006 (bcm)



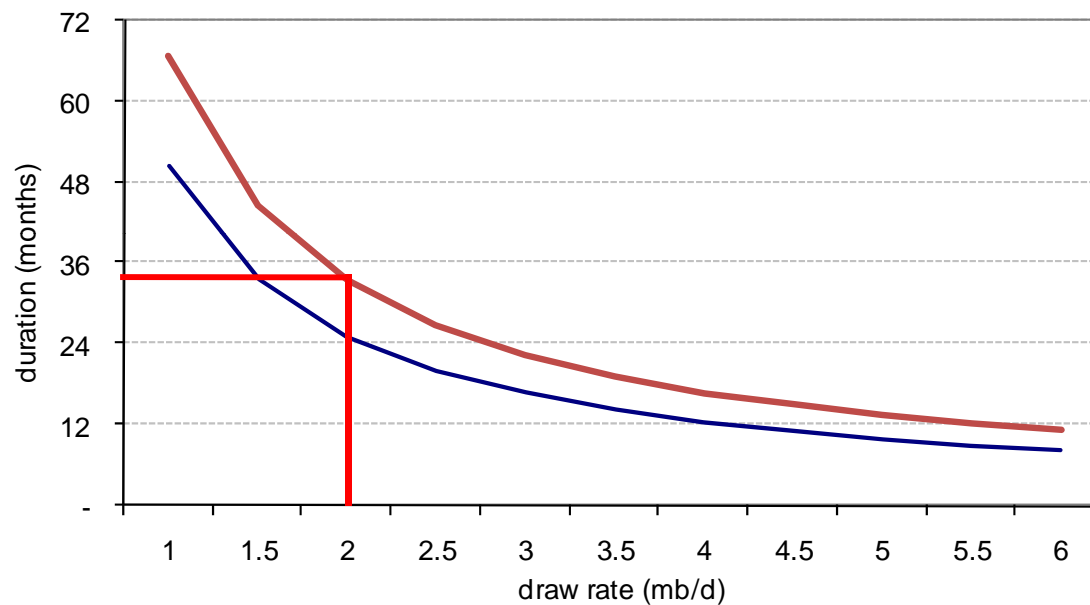
The boundaries and names shown and the designations used on maps included in this publication do not imply official endorsement or acceptance by the IEA.

# IEA Public Stock Potential



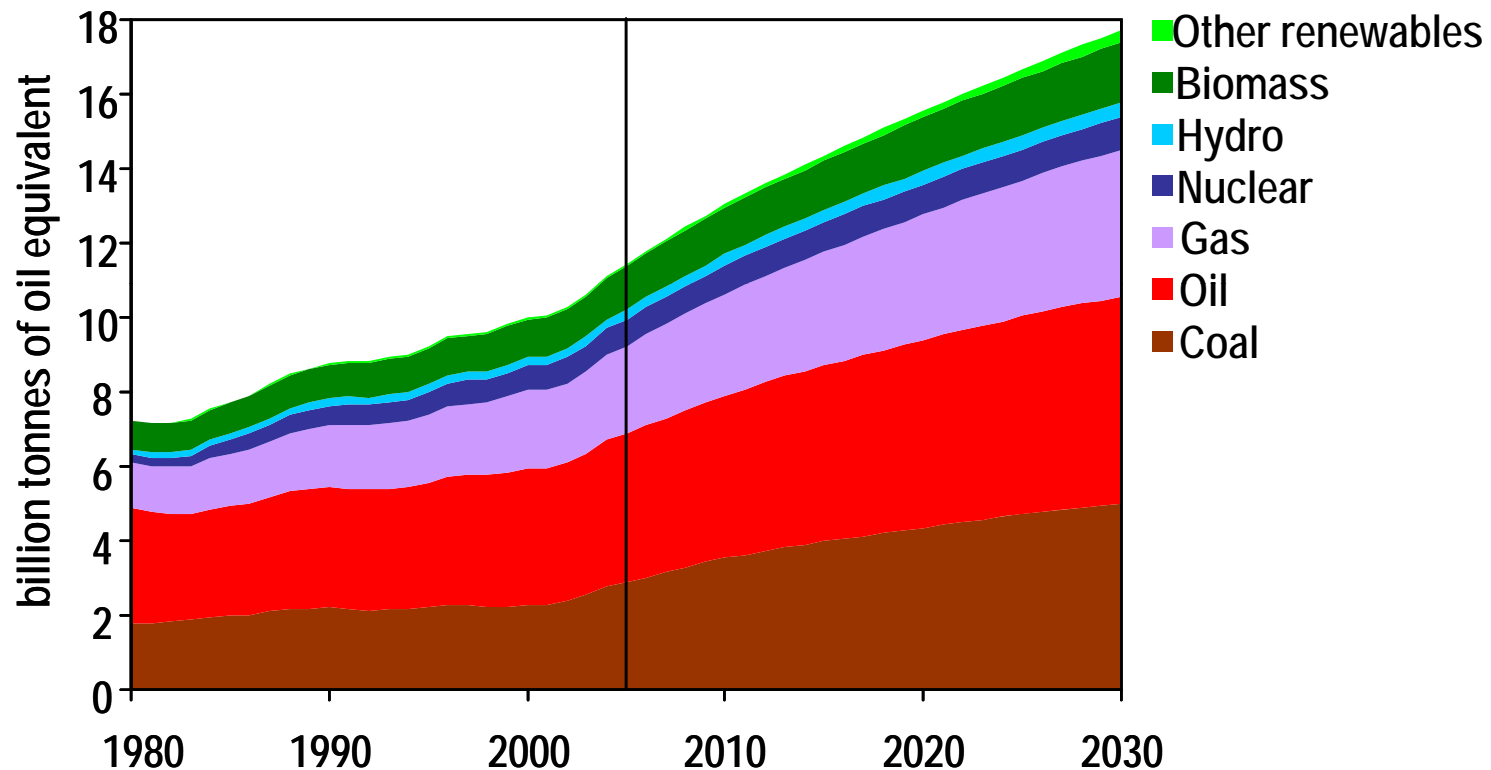
- IEA Public stocks of 1.5 billion barrels
  - If drawn at 2 mb/d would last over 2 years.

# Increased Stock Potential



- Combined IEA public stocks with China and India's stocks
  - At 2 mb/d draw, increases from 25 months to 33 months

# Reference Scenario: World Primary Energy Demand

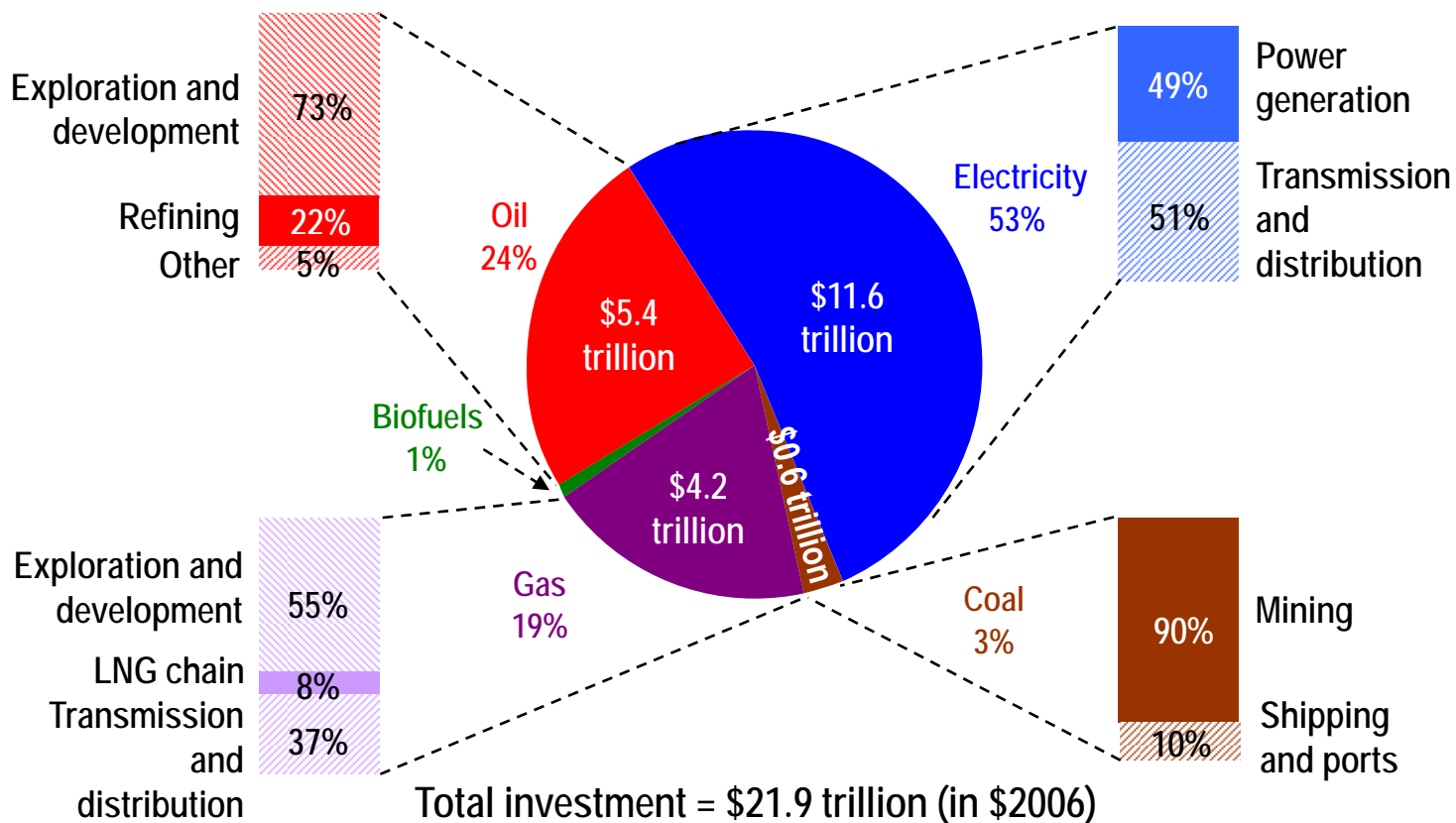


***Global demand grows by more than half over the next quarter of a century, with coal use rising most in absolute terms***



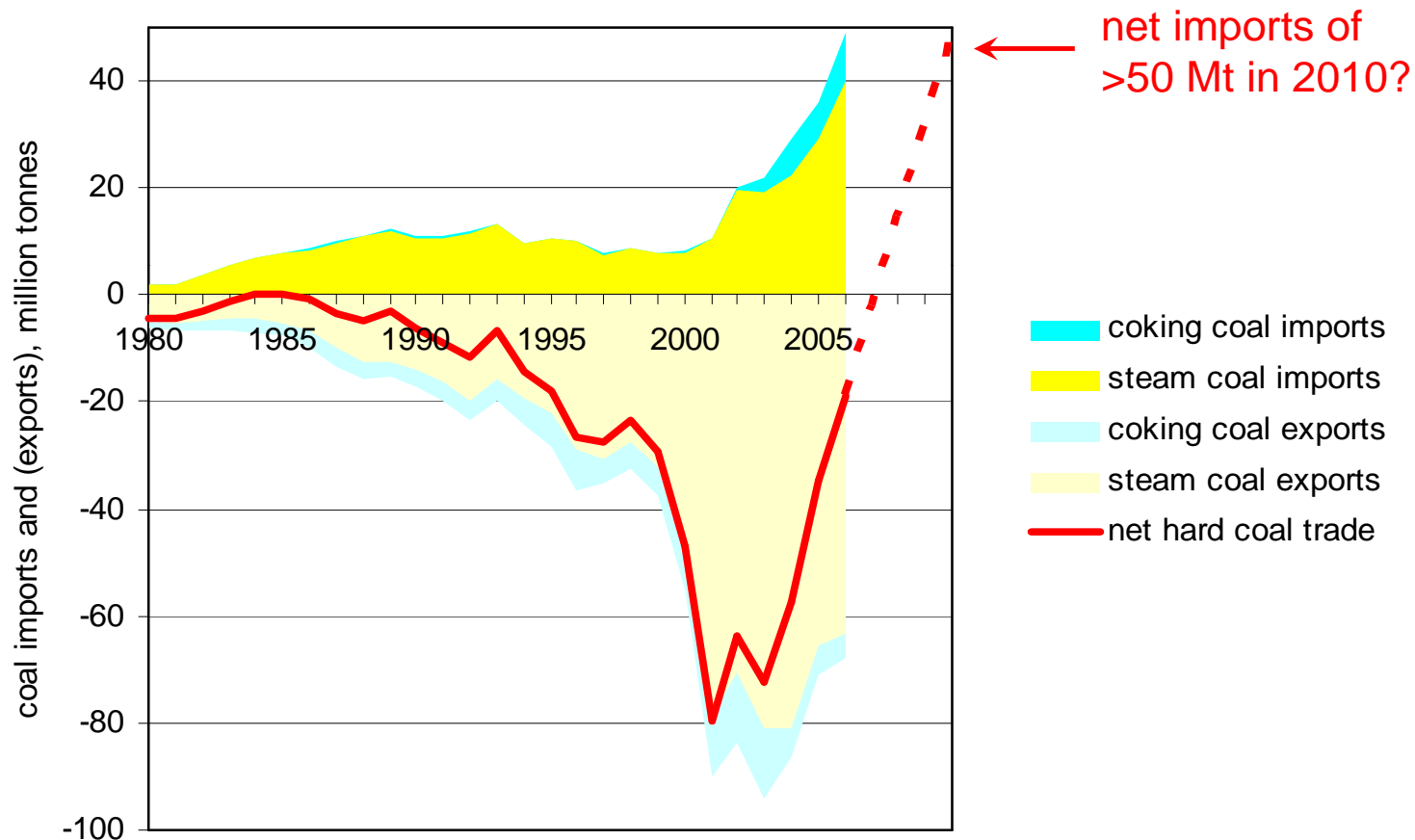
Reference Scenario:

# Cumulative Investment in Energy-Supply Infrastructure, 2006-2030



***The power sector requires more than half of total energy-supply investments***

# China's coal imports and exports with forecast to 2010

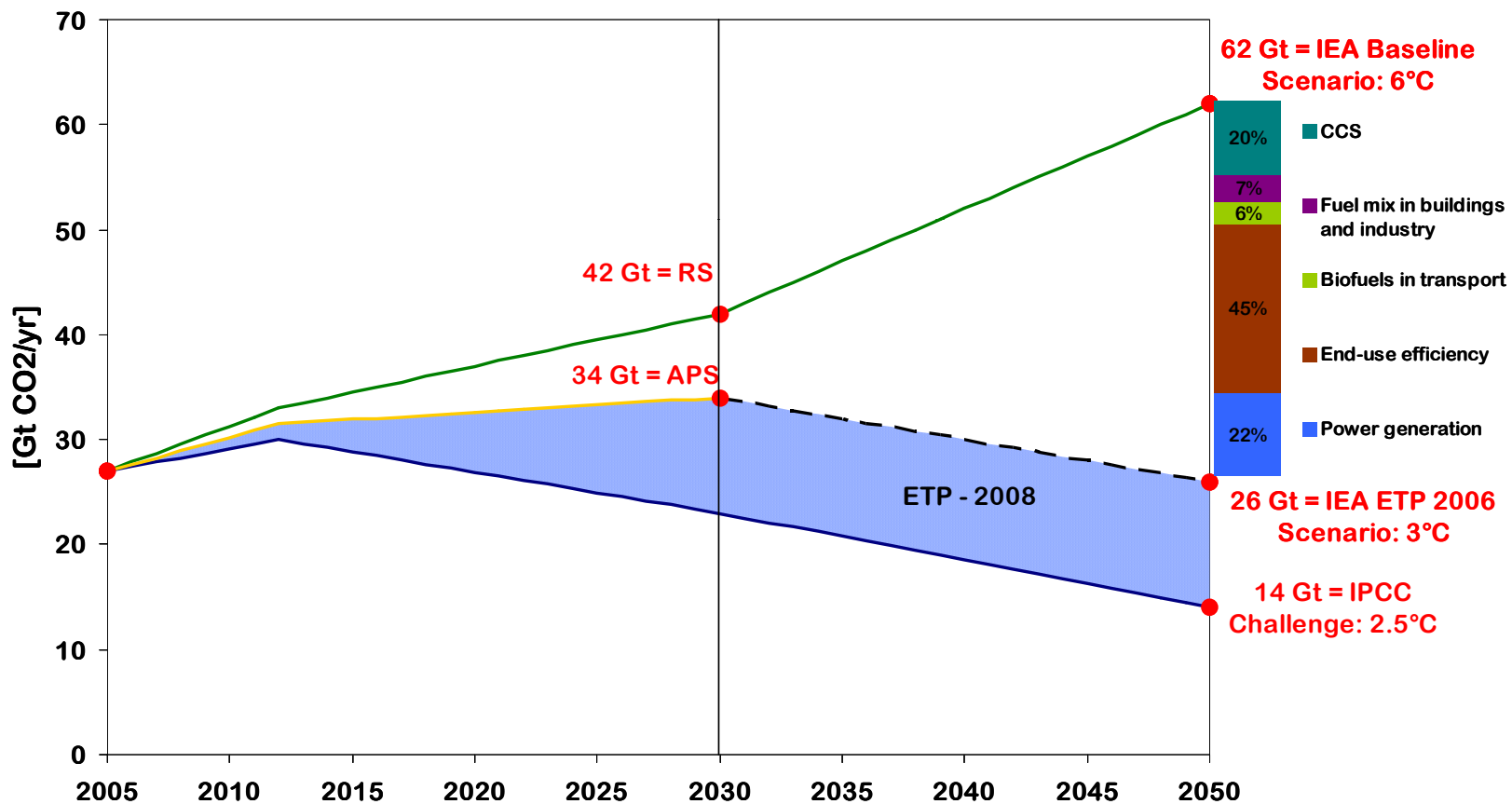


imports include HK

ref: IEA Coal Information 2007 & IEA estimates

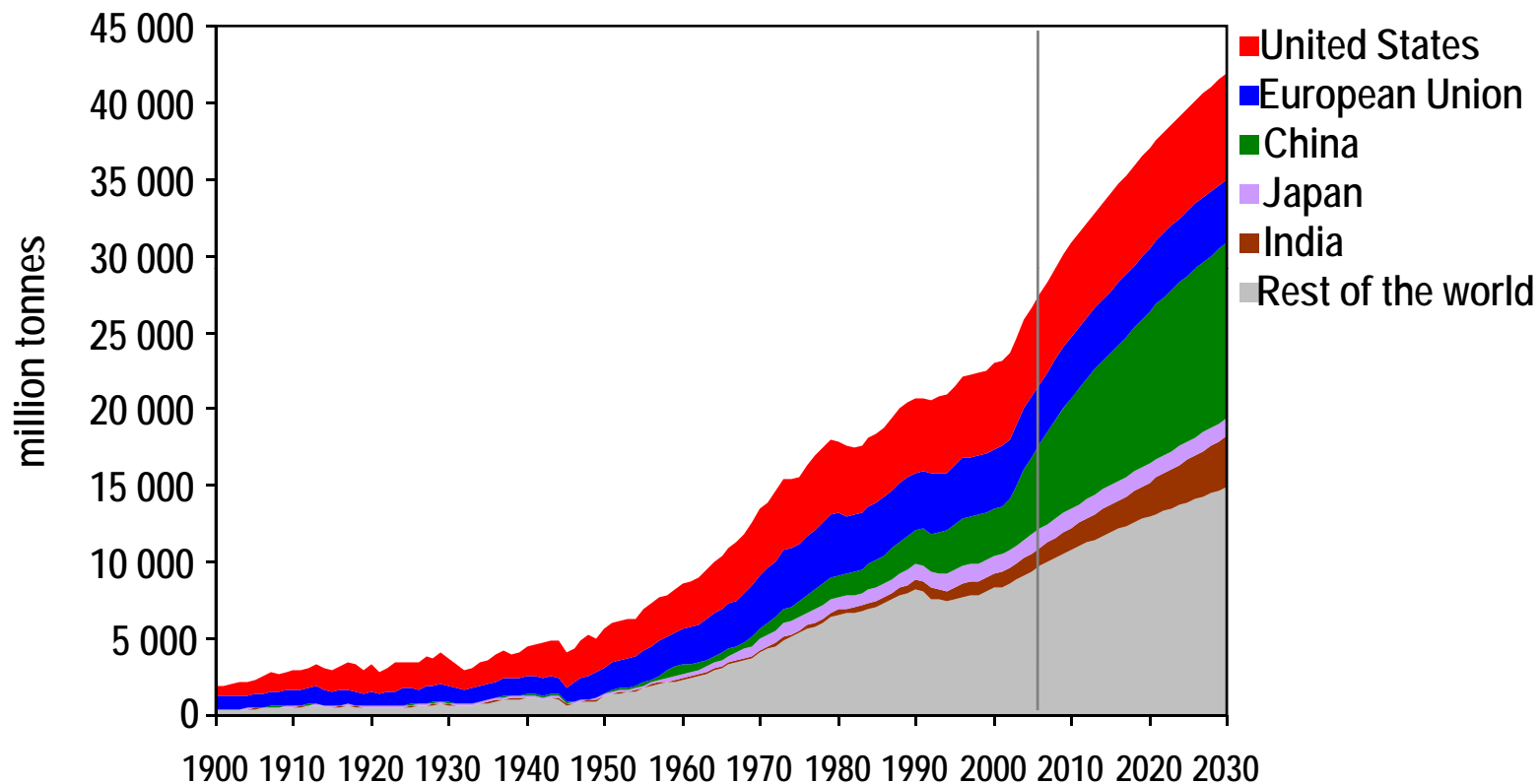
# The Carbon Challenge

The Carbon Challenge to 2050





Reference Scenario:  
**Global Energy-Related CO<sub>2</sub> Emissions**



*China and India accounted for 10% of emissions from 1900 to 2005 – by 2030 their share will grow to 20%, compared to 50% for OECD*

# The IEA's 6 Steps to a Sustainable Energy Future

- Step 1: More investment
- Step 2: More efficiency
- Step 3: More diversity
- Step 4: More transparency
- Step 5: More technology
- Step 6: A safety net**

*Global Cooperation is Crucial at Each Step !*



# Thank You!

[www.iea.org](http://www.iea.org)