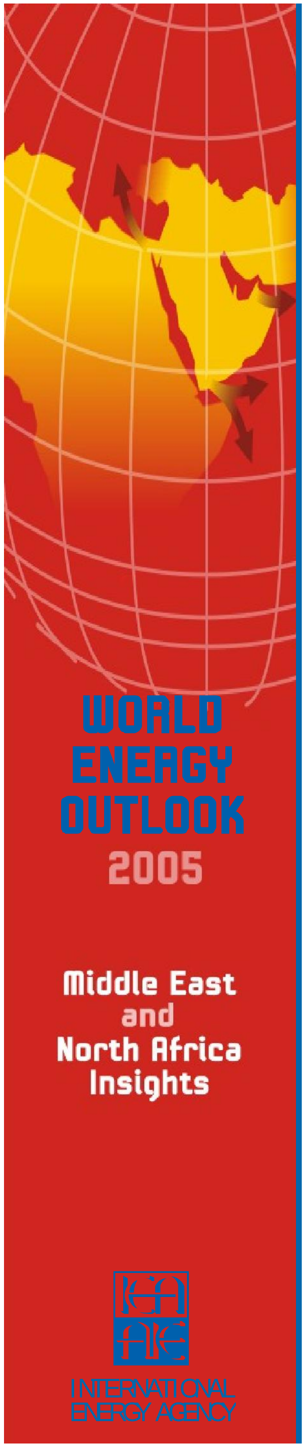
European Energy Outlook: Energy Security and Environmental Challenges

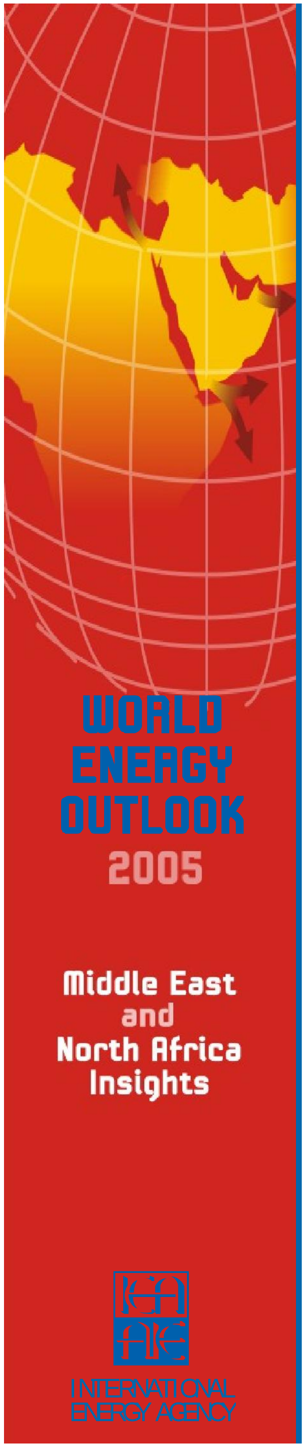
Laura Cozzi
International Energy Agency

18 October 2005, The European Parliament, Brussels

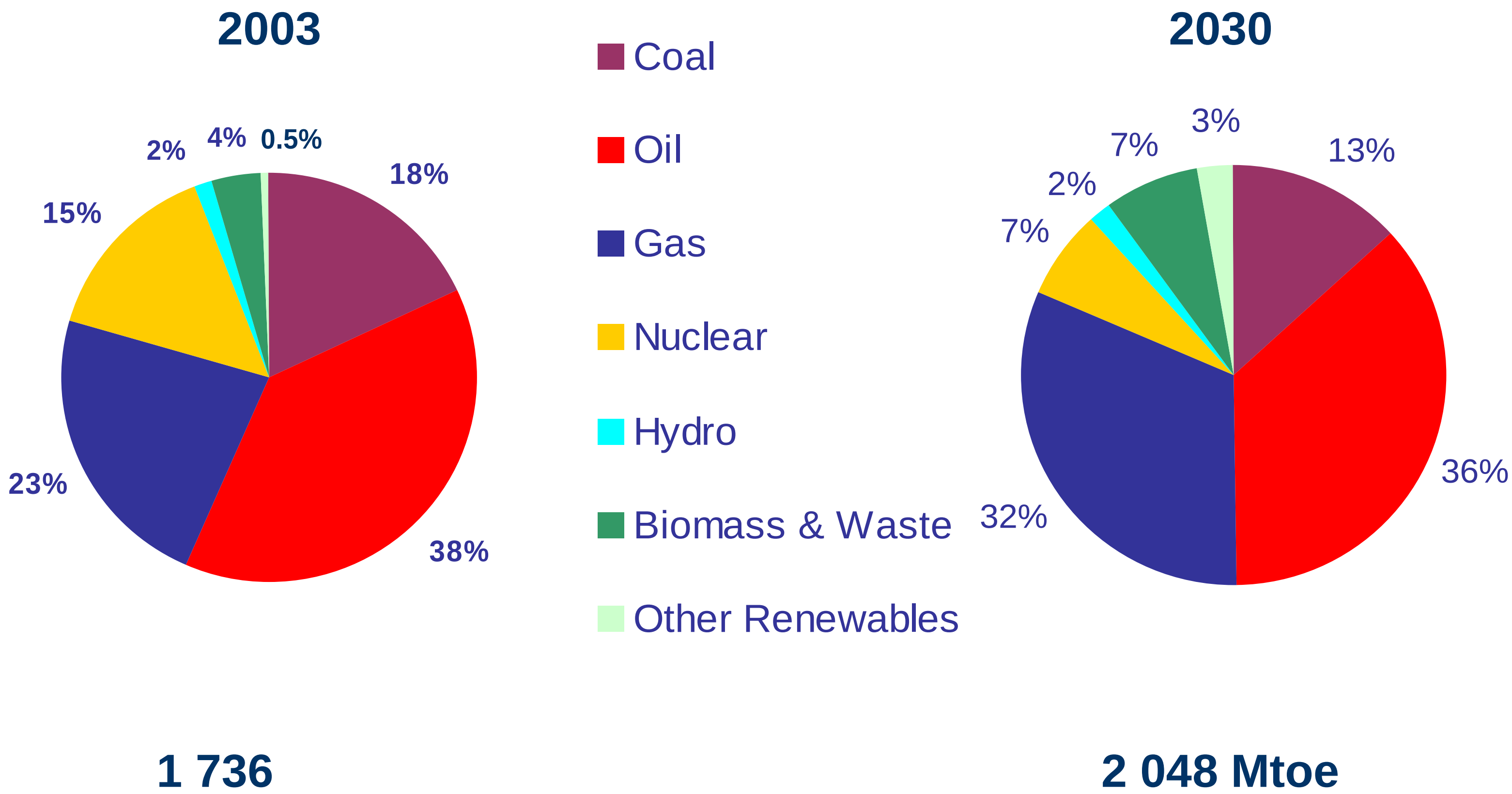
INTERNATIONAL ENERGY AGENCY



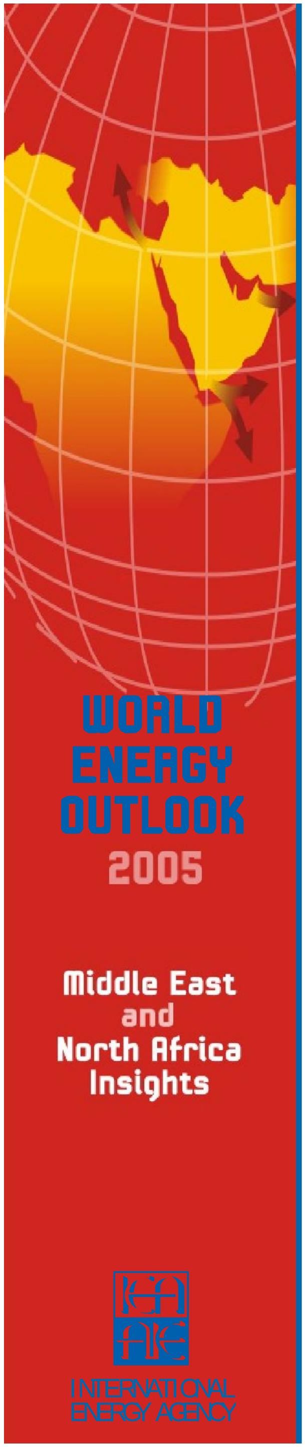
EU Outlook
Reference Scenario



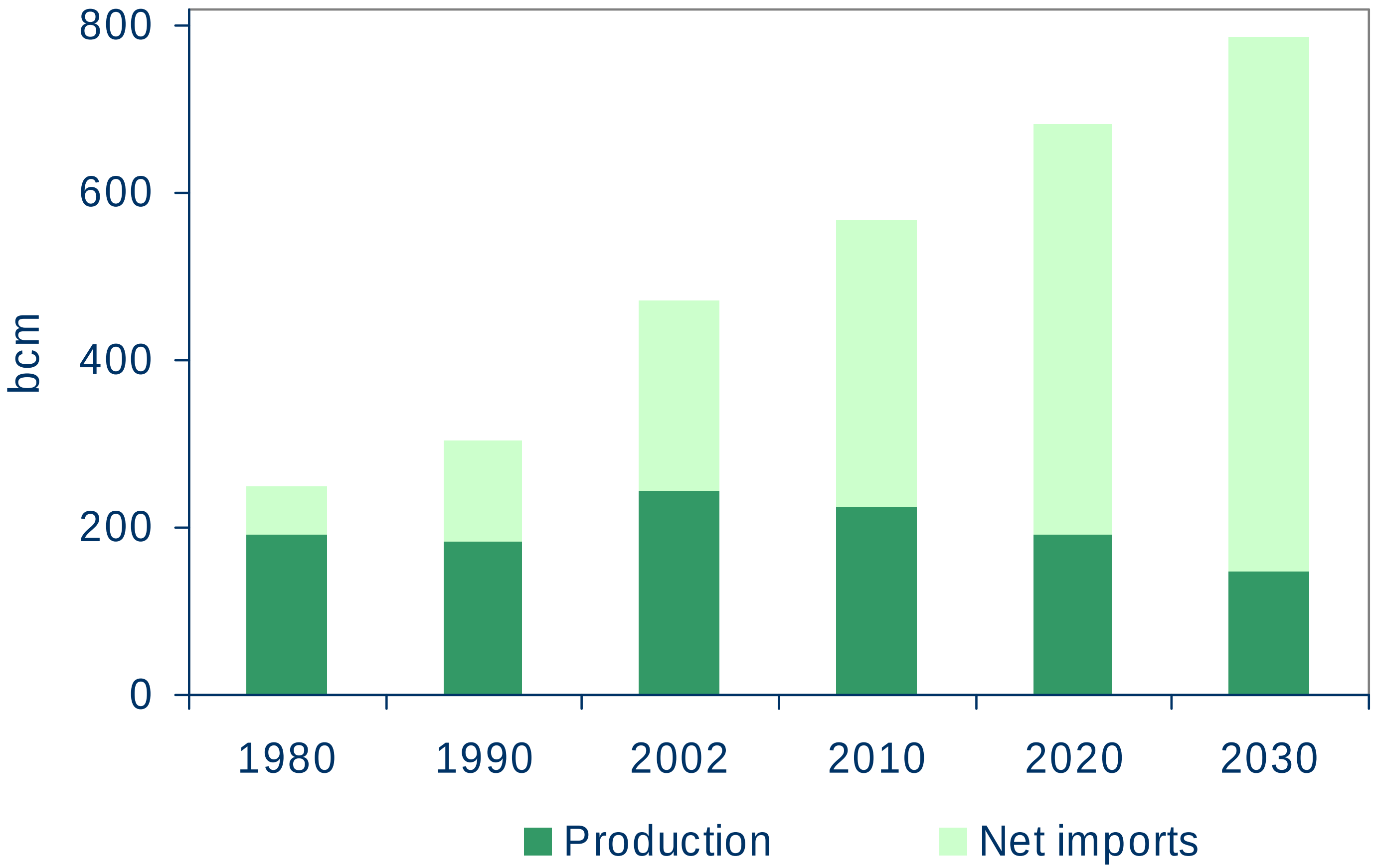
EU Primary Energy Mix



Gas & renewables increase their shares in the EU energy mix,
at the expense of nuclear power, coal & oil



EU Gas Supply Balance



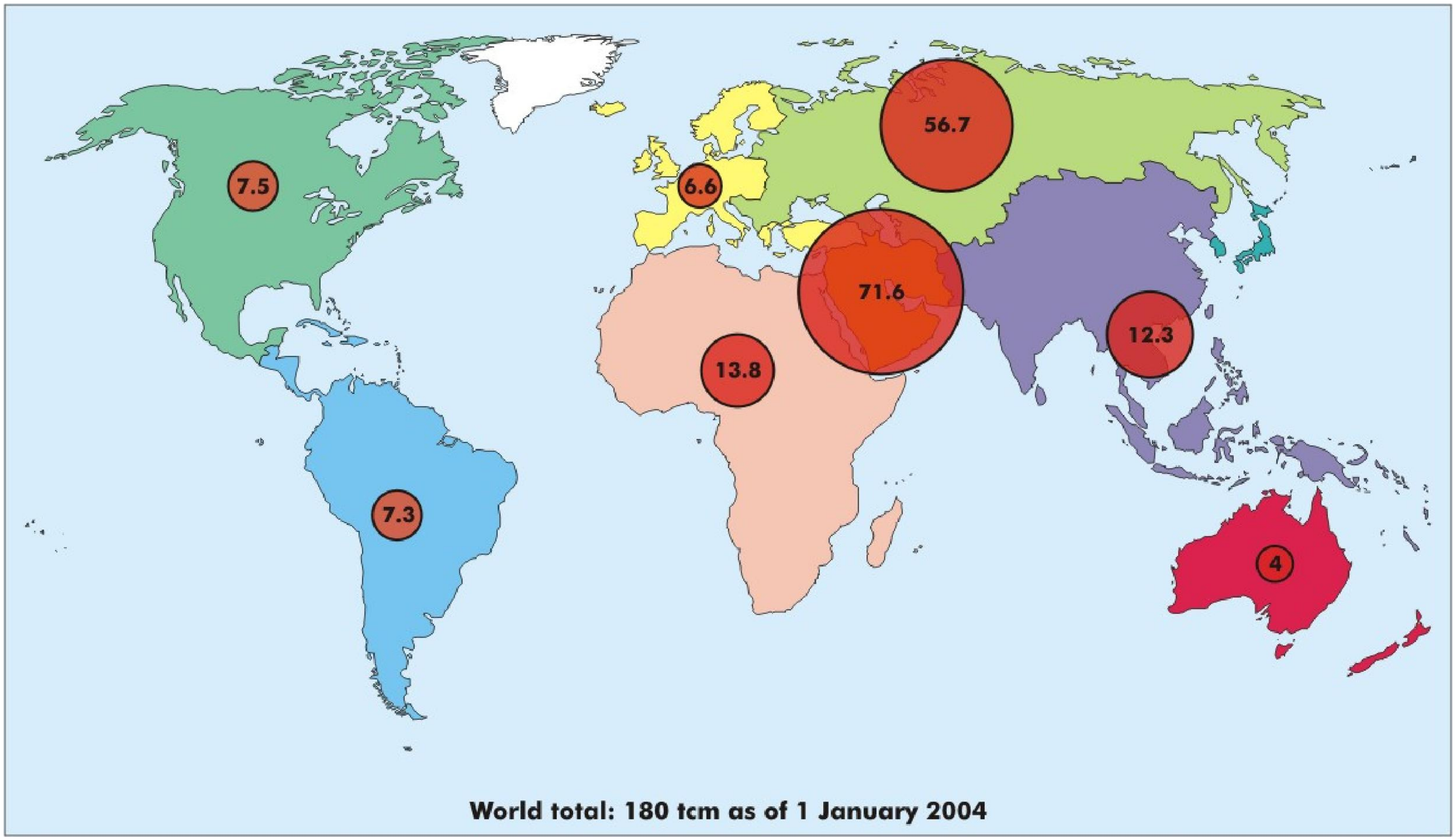
Rising demand – mainly for power generation – and declining output will cause net imports to surge

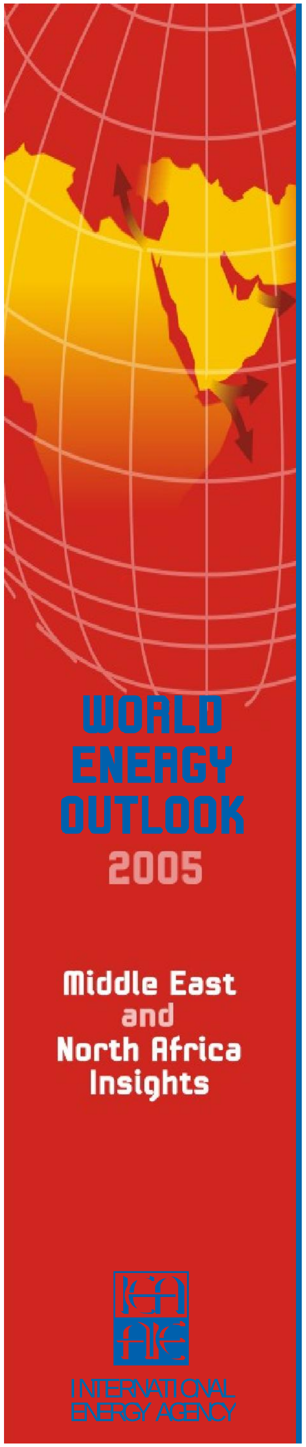
WORLD ENERGY OUTLOOK 2005

Middle East and North Africa Insights

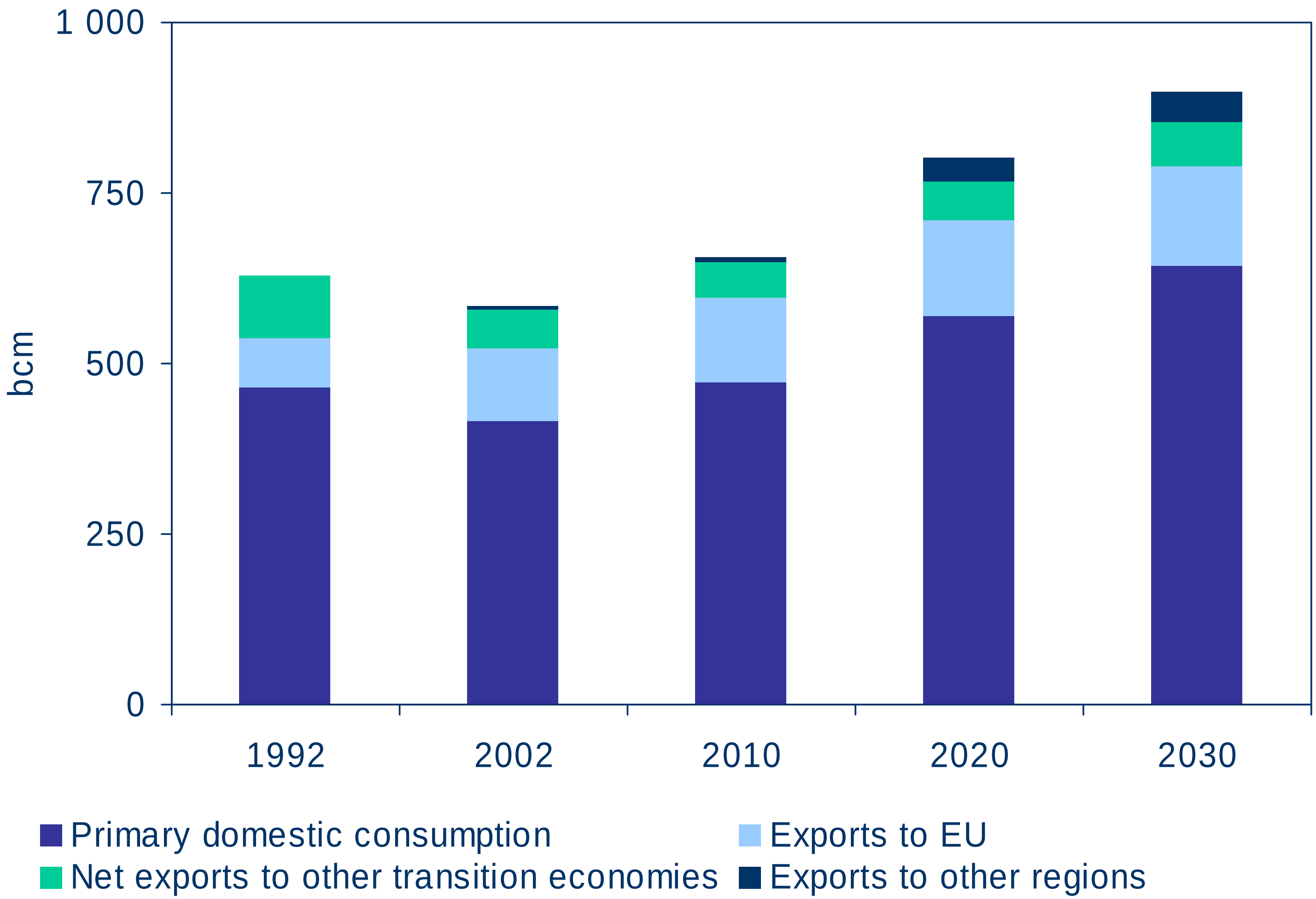
INTERNATIONAL ENERGY AGENCY

World Proven Reserves of Natural Gas

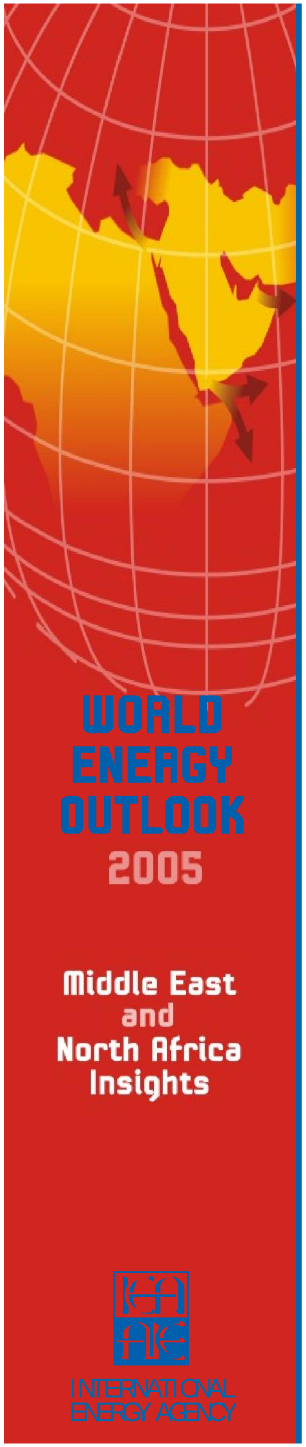




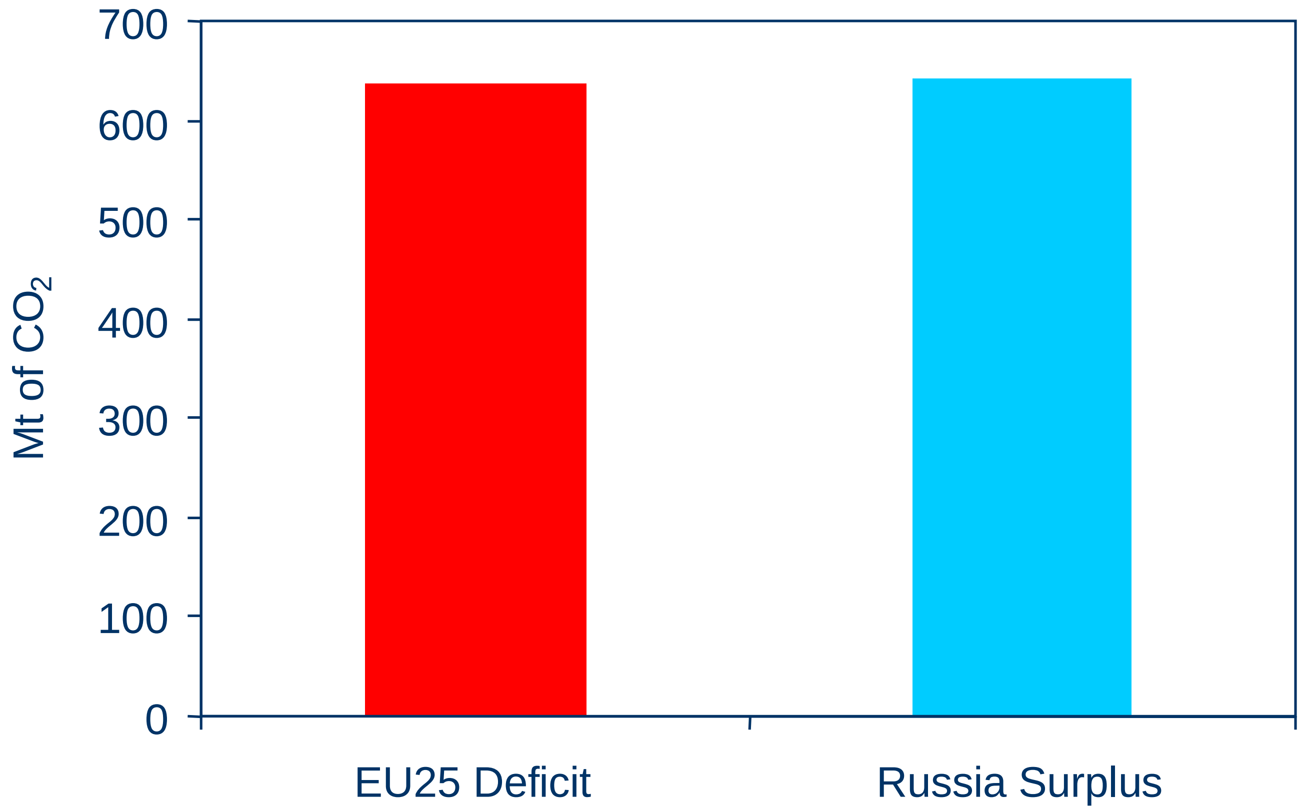
Russian Gas Production



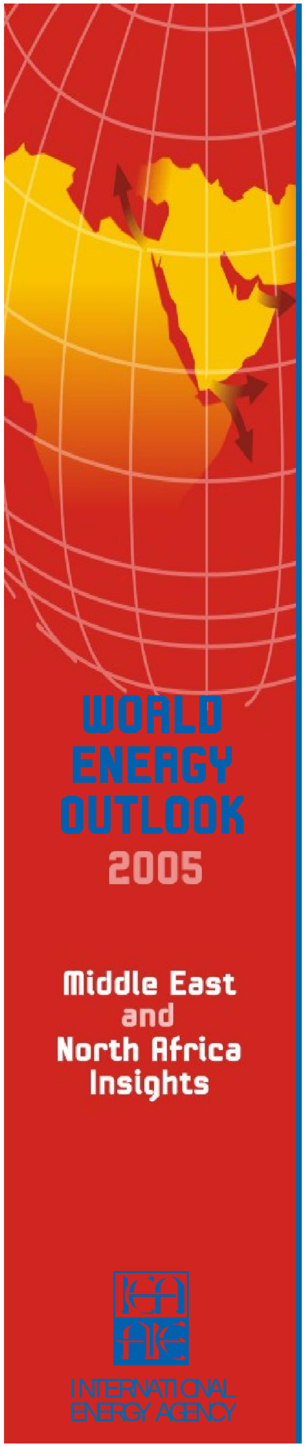
Russia will remain the single largest supplier to the EU, assuming investment in developing new fields is forthcoming



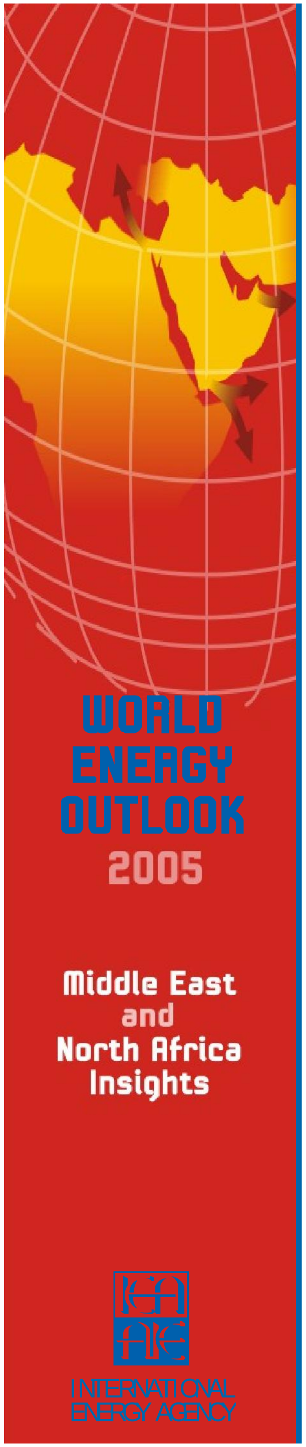
Energy-Related CO_2 Emissions EU Deficit vs. Russia Surplus, 2008-2012



Russia average emissions surplus will equal EU emissions deficit in the 2008-2012 period



EU Outlook
Alternative Policy Scenario



Key Policies in Alternative Scenario for European Union

Strong endorsement at the G8 meeting in Gleneagles

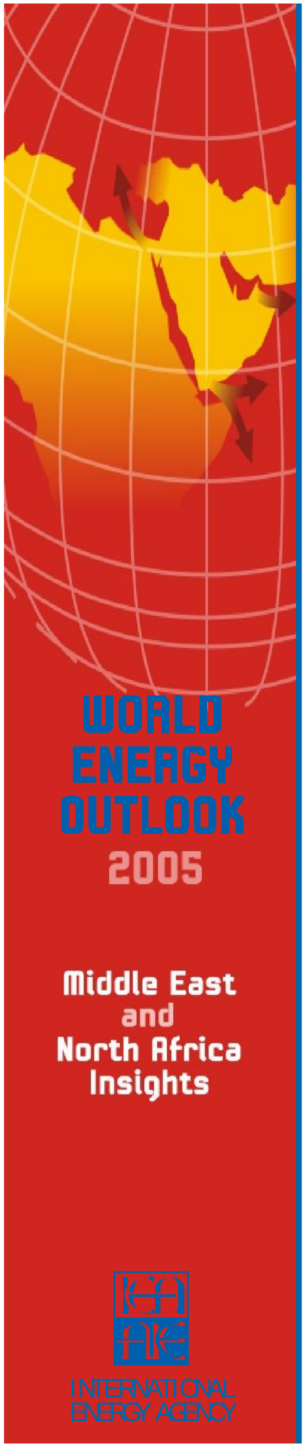
Power generation

- Renewable energy directive
- CHP directive

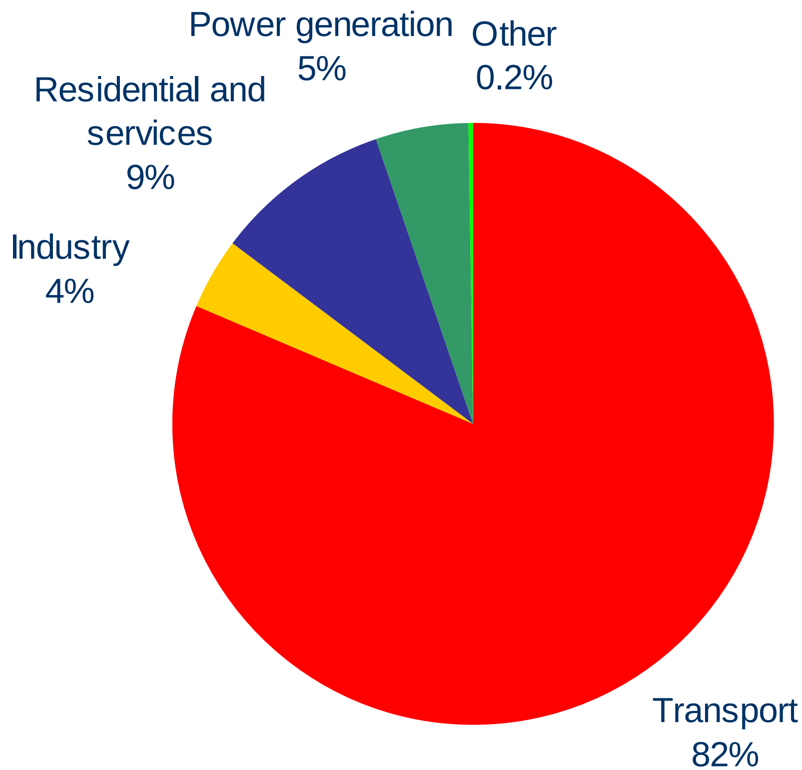
Transport sector

- Prolongation and tightening of Voluntary Agreement with car manufacturers
- Biofuels target

Extension of the Emissions trading scheme for power generation and industry

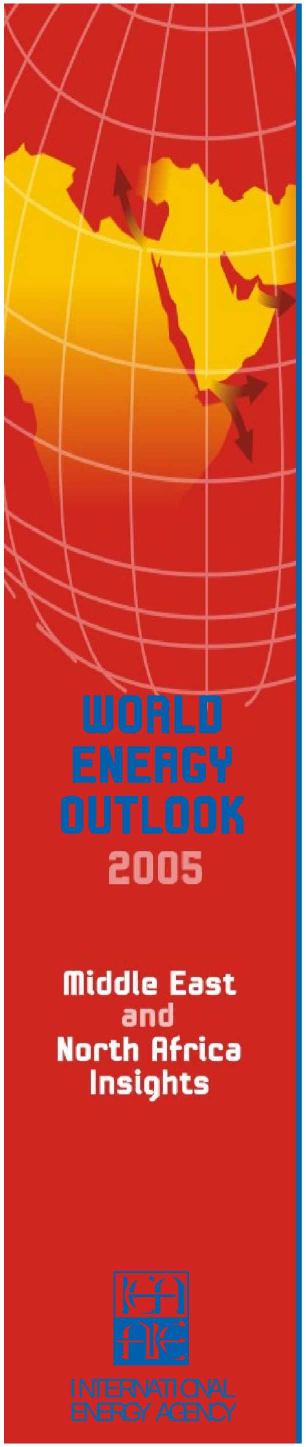


Reduction in European Oil Demand in the Alternative vs. Reference Scenario, 2030

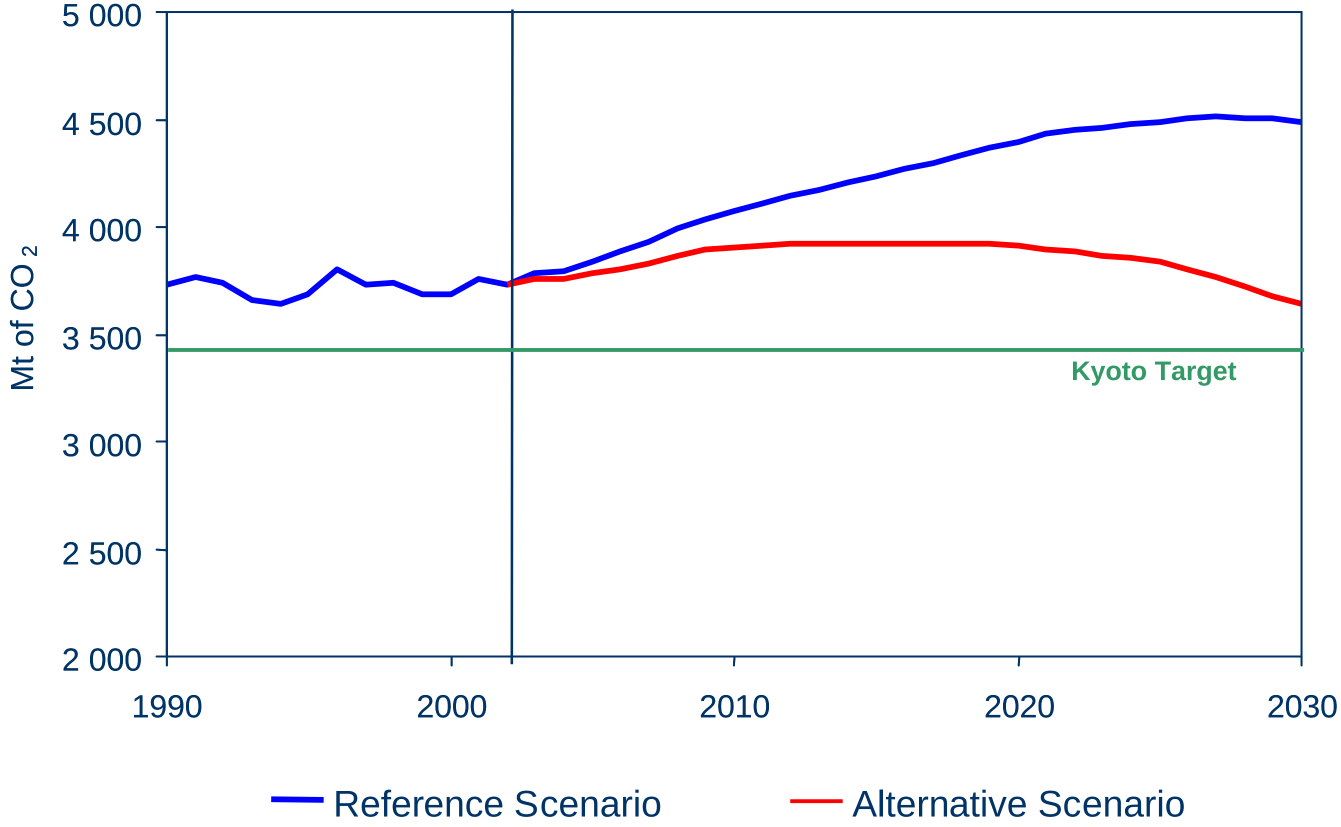


Oil savings = 2.2 mb/d

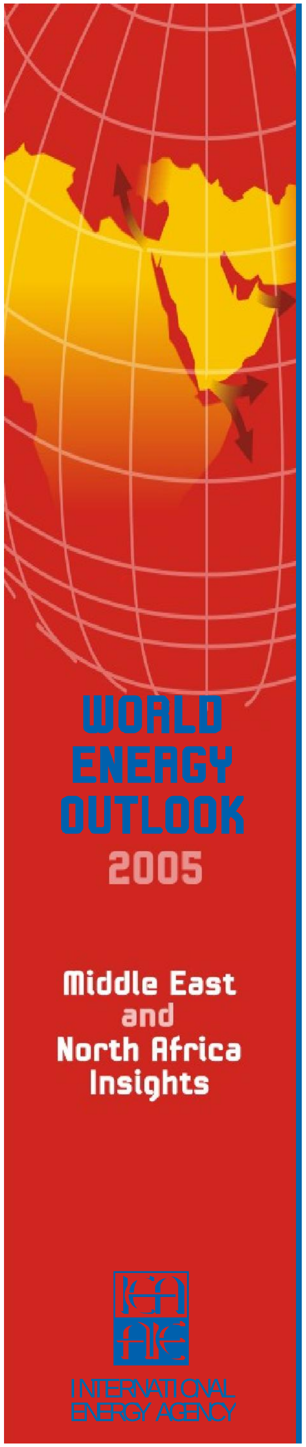
Oil savings in 2030 would be around current production of the UK



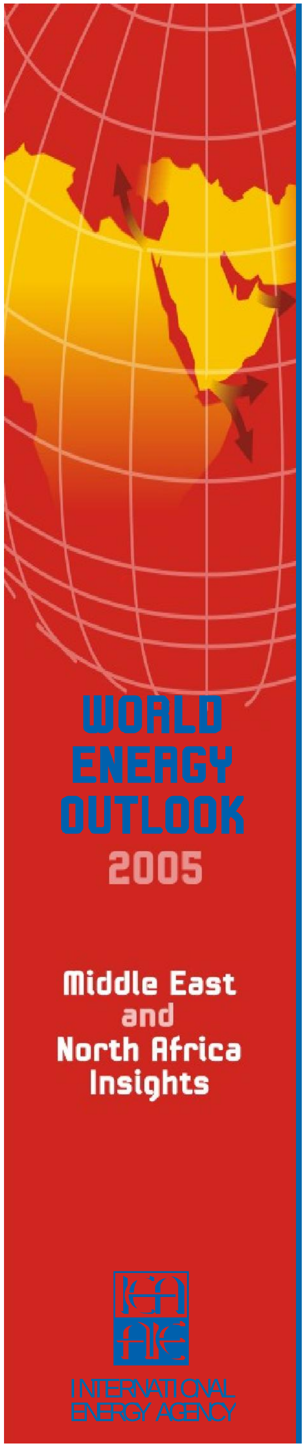
EU CO_2 Emissions in the Reference & Alternative Scenarios



With new policies, EU CO_2 emissions stabilise by 2010 and fall after 2020



Summary & Conclusions



Summary & Conclusions

- EU energy use will continue to grow slowly, led by transport & power generation
- Renewables will penetrate energy mix rapidly, but fossil fuels will still dominate
- Oil & gas imports, notably from the Middle East and North Africa, will surge
- CO_2 emissions are set to grow – unless new policies are adopted
- Release of the WEO 2005 – Middle East and North Africa Insights: 7 November 2005