

European Commission



eeo7
**Annual conference
on renewable energy**

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Introduction

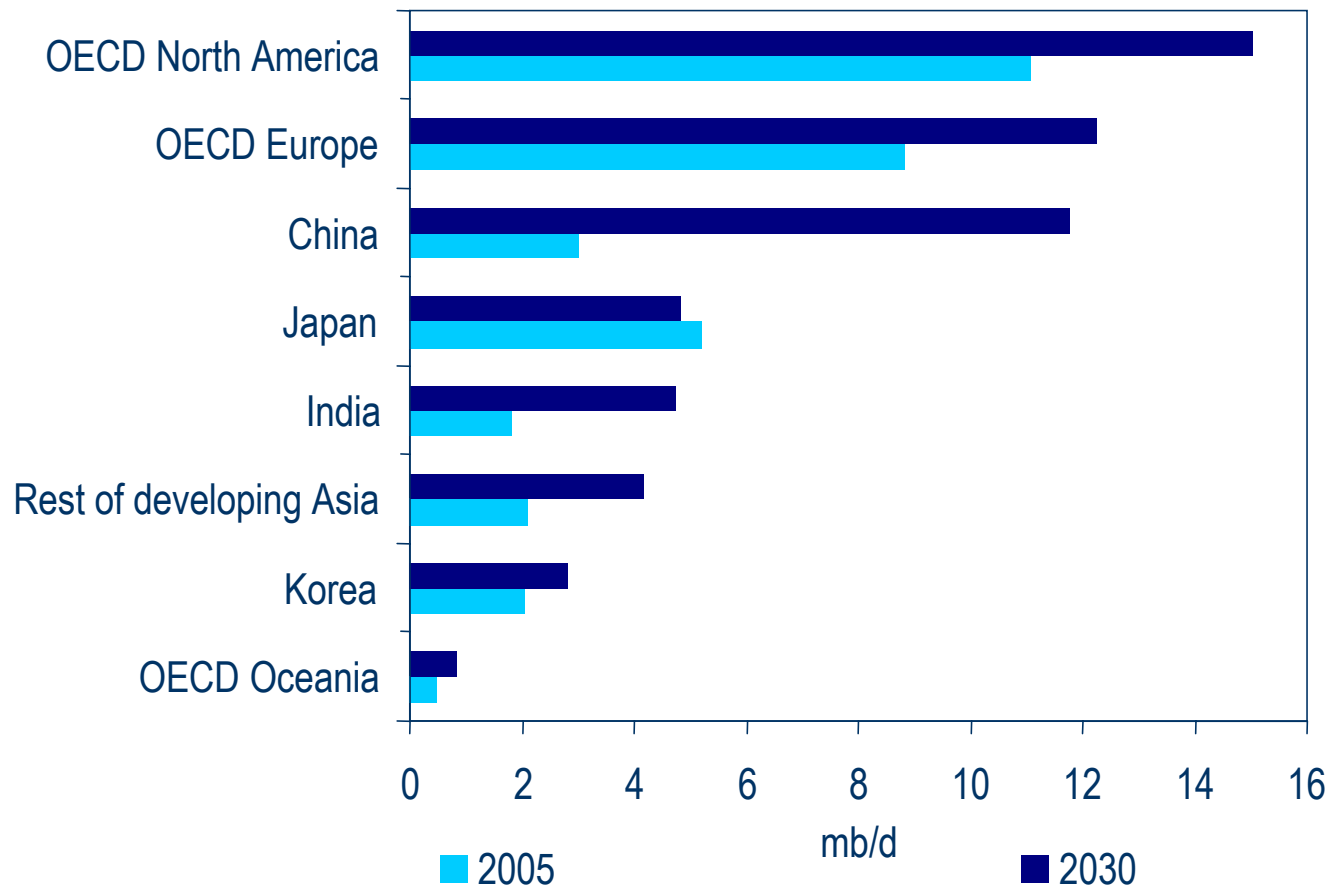


- > The world today is facing a **massive energy and environmental challenge**, that is particularly acute for Europe:
 - > How to secure competitive and clean energy against a backdrop of climate change, escalating global energy demand and future supply uncertainties.
- > A **common European response** is needed in order to ensure a sustainable, secure and competitive energy future.
- > In January 2007, the European Commission adopted **new proposals** for Europe's energy policy, fundamentally changing the direction in which we are heading.
- > On 8 March 2007 the European Council endorsed all the proposals of the European Commission tasking it to work out detailed proposals.

20 years ago



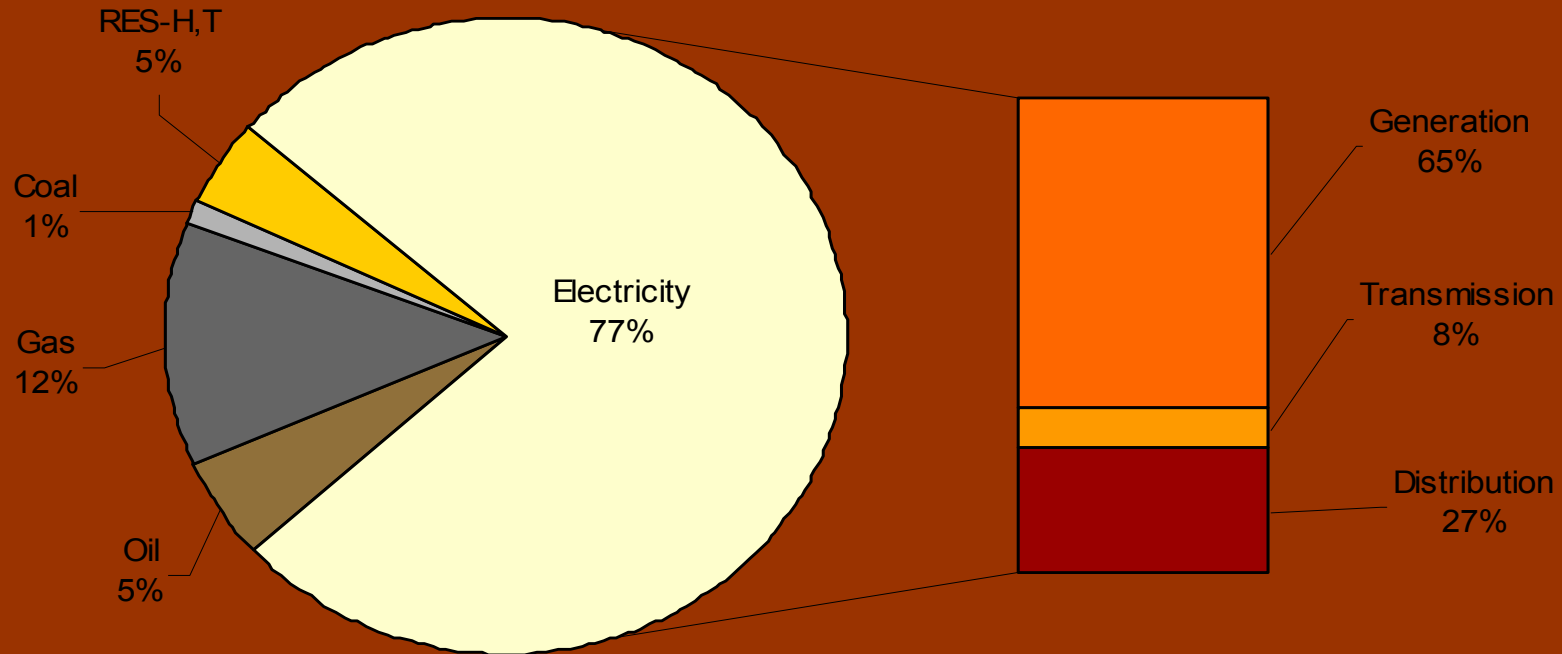
World Reference Scenario: Net Oil Imports

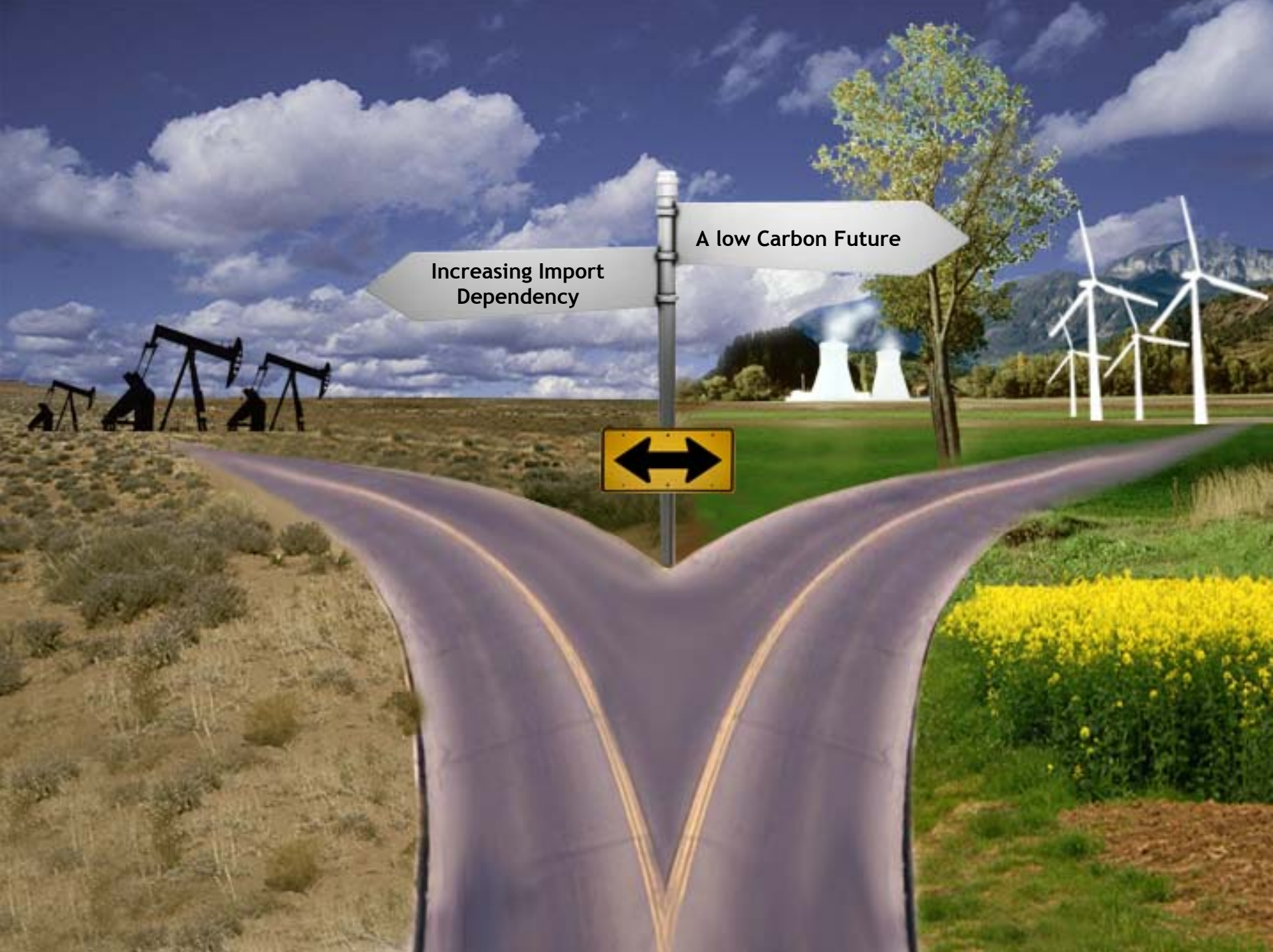


China sees the biggest jump in oil imports in absolute terms, but North America remains the largest importer

A crucial moment for a change

Estimated EU-27 energy investment needs up to 2030: €1.79 trillion





Increasing Import
Dependency

A low Carbon Future



NEW INITIATIVES BUILDING UPON EXISTING POLICY INSTRUMENTS

Legislative measures: EU Directives

- Electricity from renewable energy sources (RES)
- Biofuels
- Labelling of appliances
- Energy Star
- Minimum efficiency requirements for appliances
- Energy performance of buildings
- Cogeneration (CHP)
- Ecodesign (Energy Using Products, including boilers)
- Energy end-use efficiency and energy services

Programmes

- 7th RTD Framework Programme
- Intelligent Energy – Europe (incl. SAVE, ALTENER) in CIP



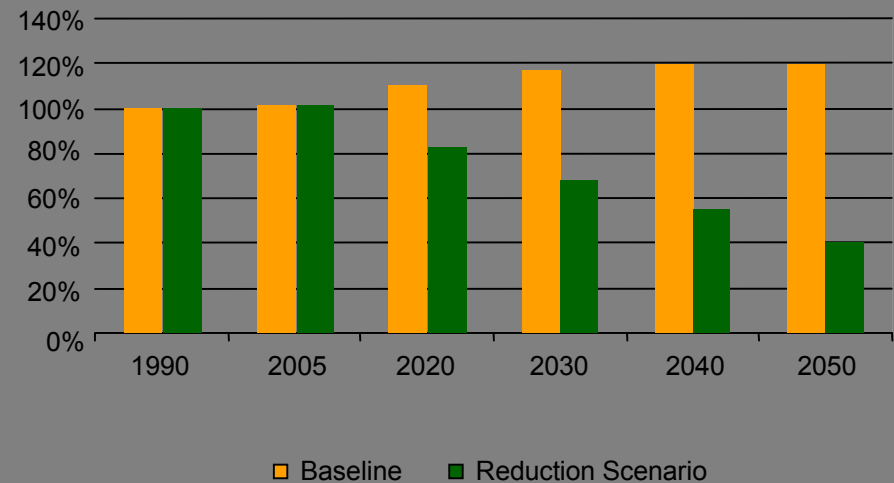
Core energy and climate change objective

A **20%** reduction
in EU greenhouse
gas emissions **by 2020**
compared to 1990 levels

Core energy and climate change objective

- > A unilateral EU commitment to achieve at least a **20%** reduction in greenhouse gas (GHG) emissions by 2020 compared to 1990 levels.
- > An EU objective in international negotiations of a **30%** reduction in GHG emissions by developed countries by 2020 compared to 1990 levels.
- > 2050 global GHG emissions must be reduced by up to **50%** compared to 1990, implying reductions in industrialised countries of 60-80%.

Developed countries GHG emissions



The AGREED Action Plan

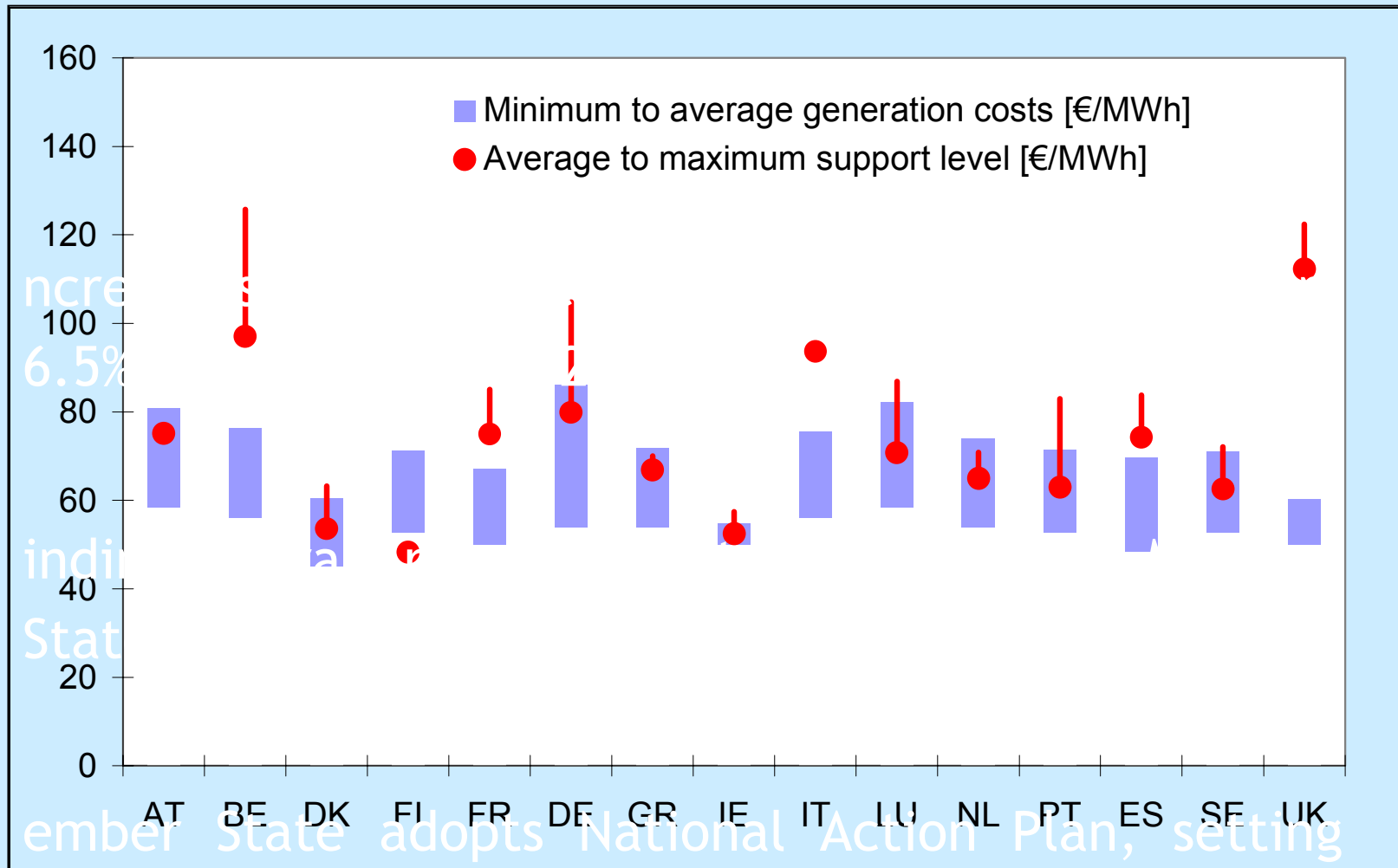
1. Internal Energy Market
2. Solidarity between Member States & security of supply
3. EU Emissions Trading System
4. Energy efficiency
5. Renewable energy sources
6. European Strategic Energy Technology Plan
7. A low CO₂ fossil fuel future
8. Nuclear Energy
9. An International Energy Policy to advance Europe's interests
10. Effective monitoring and reporting

Energy Efficiency

- > Improved **energy efficiency** has the potential to make the most decisive contribution to achieving sustainability, competitiveness and security of supply.
- > On 19 October 2006 the Commission adopted the Energy Efficiency Action Plan: Realising the potential, saving **20% by 2020**.
- > By 2020 the EU would thus use approximately 13% less energy than today, saving € 100 billion and reducing CO₂ emissions by around 780 million tonnes each year.
- > BUT, this will require significant **effort**, both in terms of **behavioural change** and **additional investment**.

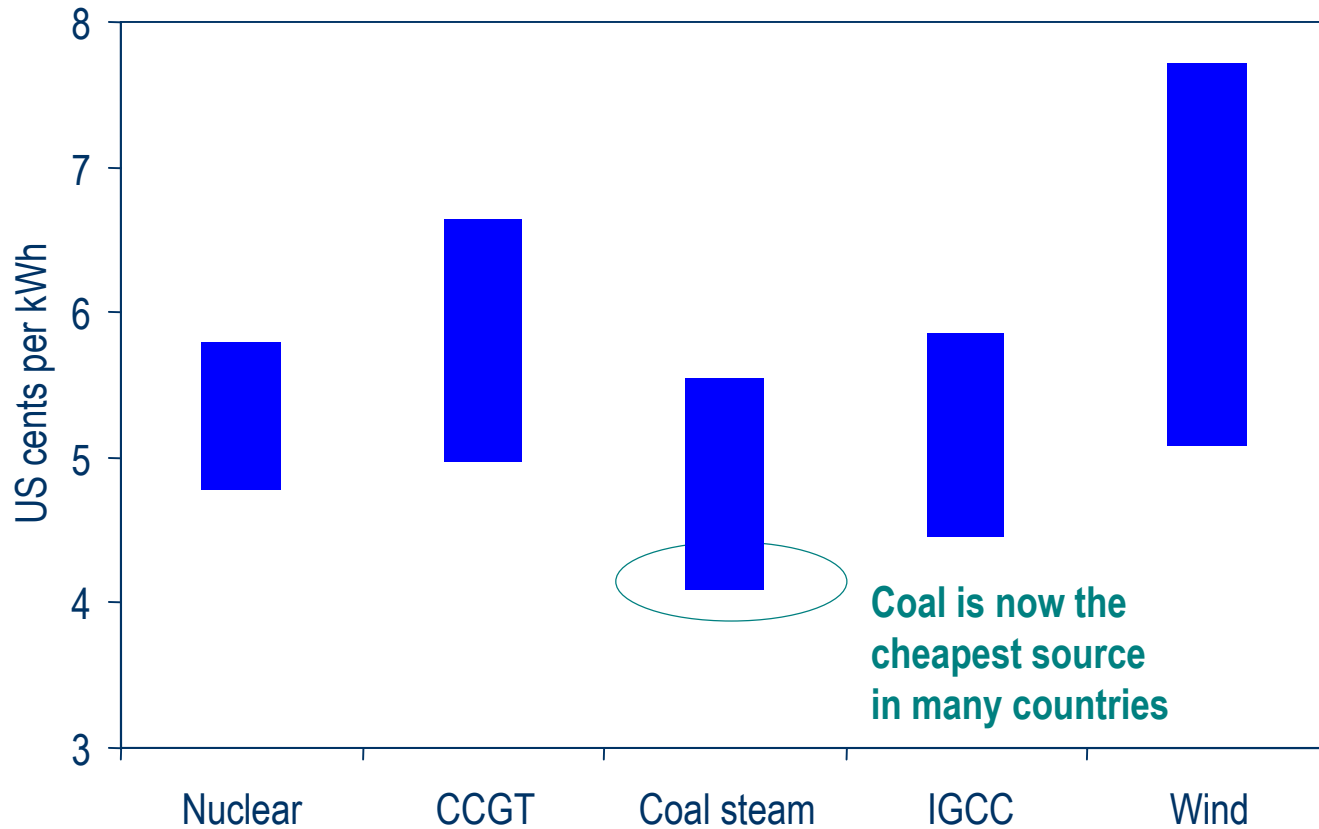
New Renewables Policy

Price ranges for direct support of wind onshore in EU-15 member states compared to the long term marginal generation costs



Member State adopts National Action Plan, setting

Electricity Generating Cost Ranges of Main Technologies

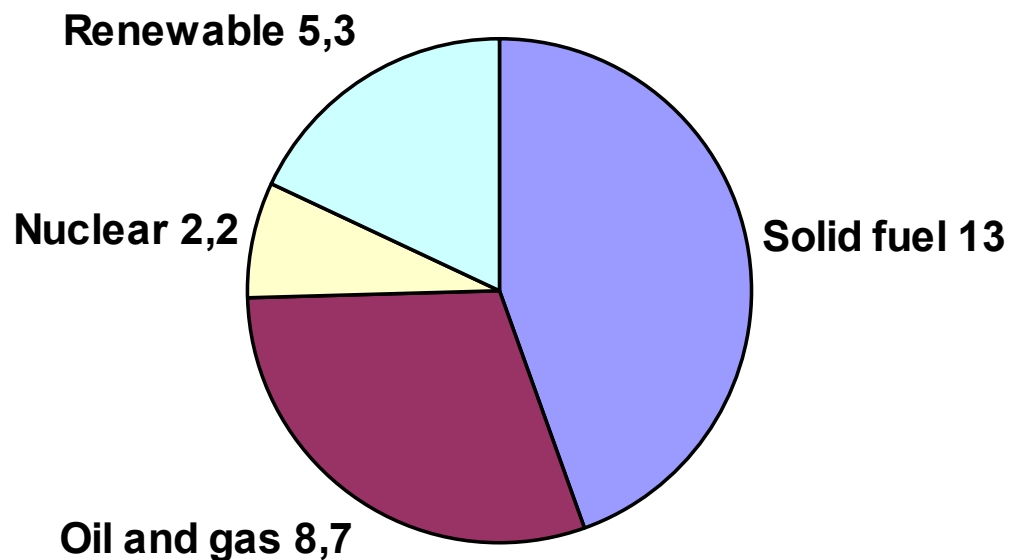


Gas-fired electricity is no longer the cheapest form of generation; prices assumed to remain between \$6 and \$7 per MBtu

Renewables cost money, but they are not alone...

2001 Declared state aid at EU 15:

29.2 bn EUR



Source: EEA Technical report 1/2004: Energy subsidies in the European Union: A brief overview



Economics of renewable energy sources

- > Using renewable energy today is generally more **expensive** than using hydrocarbons, but the gap is narrowing.
- > Economies of scale can reduce the costs for renewables, but this requires major **investment** today.
- > Renewable energy helps to improve our security of energy supply by increasing the share of **domestically-produced** energy.
- > Achieving a 20% share for renewables will result in an additional average annual cost of approximately € 18 billion – around 6% extra on the EU's total expected energy import bill in 2020.
- > But this assumes oil prices of \$ 48/barrel by 2020. If these rose to \$ 78/barrel, the average annual cost would fall to € 10.6 billion.

New momentum

- Energy efficiency and renewable energy have become mainstream policies
- New stakeholders come in (industries banks, SME's,.....)
- Existing stakeholders (agencies) should guide and take the lead

The way forward



- European Council, 8-9 March 2007:
Consensus on an Action Plan on An Energy Policy for Europe including binding targets for CO₂ reduction, renewable energy share and biofuels share
- European Parliament
- After March 2007:
Legislative proposals to be tabled by the Commission
- UNFCCC and Kyoto Protocol processes
- G-8



ENERGY FOR A **CHANGING WORLD**

Thank you for your attention