



Rethinking Energy Security

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Structure presentation

- I** **Developing a risk management,
long-term approach**

- II** **Taking a global view of the
challenges**

- III** **Implementing long-term
policies**



November 2000, the European Commission published a Green Paper on Energy Supply Security:

- analyses of the weaknesses in EU supply security;
- strategies in order to
 - manage risks and ensure adequate supply security for an enlarged EU;
 - time horizon 2030.

A 1 1/2 year debate with Member States and other stake holders was launched. Conclusions were drawn and, at present, the Green Paper approach is being implemented.



I. Green Paper analysis

- External dependence of EU forecast to rise from current 50% to 70% in 2030, indigenous production will decline.
- **Climate change:** CO₂ emissions forecast to rise by over 5% from 2000 to 2010.
- **Demand:**
 - ◆ Demand for energy in transport could rise by 20% (passengers) and 30% (freight) in next 20 years
 - ◆ Demand for electricity could rise by 2% pa (3% in accession countries), while nuclear capacities are falling
- **Technology development:** No dramatic breakthrough of renewables was to be expected under current market conditions.



The three pillars of the EU 's Energy Supply Security approach

1. Tackle energy demand:
buildings and transports; diversification between fuels, changes in mode
2. Manage energy supply:
diversification between (geographical) sources (oil, gas)
producer/consumer dialogue
develop indigenous resources
promote transport and transit infrastructure
3. Establish an integrated, single, energy market in the EU
gas and electricity
condition to the introduction RES and adequate technologies



Part II

Taking a global view of the challenges



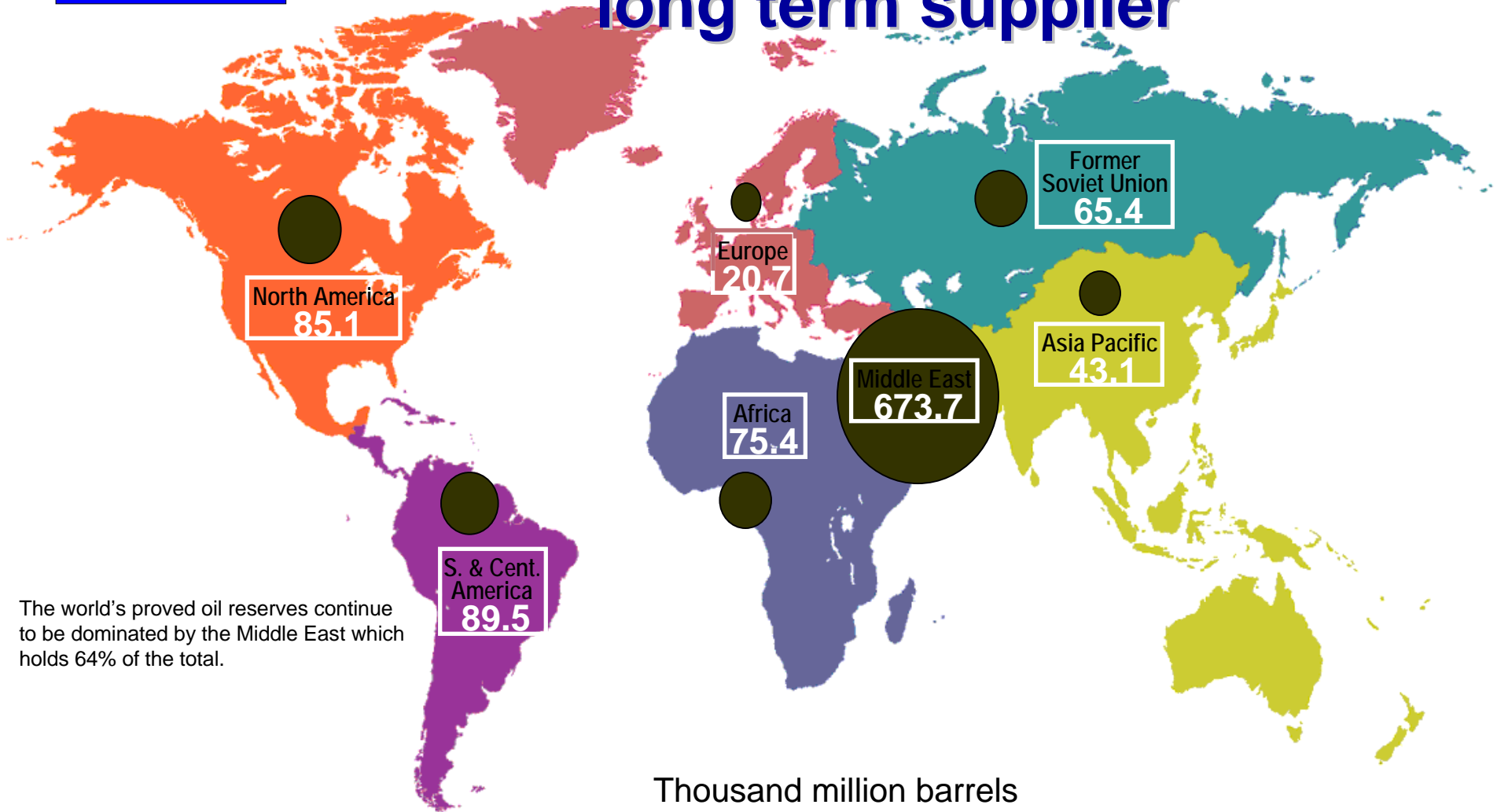
Implementation of Green Paper Strategies

Issues EU energy policies should deal with

- **EU growing dependence of oil and gas; declining indigenous oil and gas reserves**
 - **Risk of Energy price rises or supply disruptions** resulting from
 - ◆ instability in Middle East or other supply regions
 - ◆ Major accident involving pipeline/nuclear plant etc
 - ◆ Oil price speculation undermining market stability
 - **Declining investments in electricity, RES and gas infrastructure** due to, e.g. price undercutting and short-term profit concerns
 - **Declining investments in RTD** as economy slows down
 - **Higher CO2 emissions** as RES fail to compete with fossil fuels and technological efforts dry up whilst nuclear is expected to decrease
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Key challenges - import dependence: Middle East is likely to remain the long term supplier



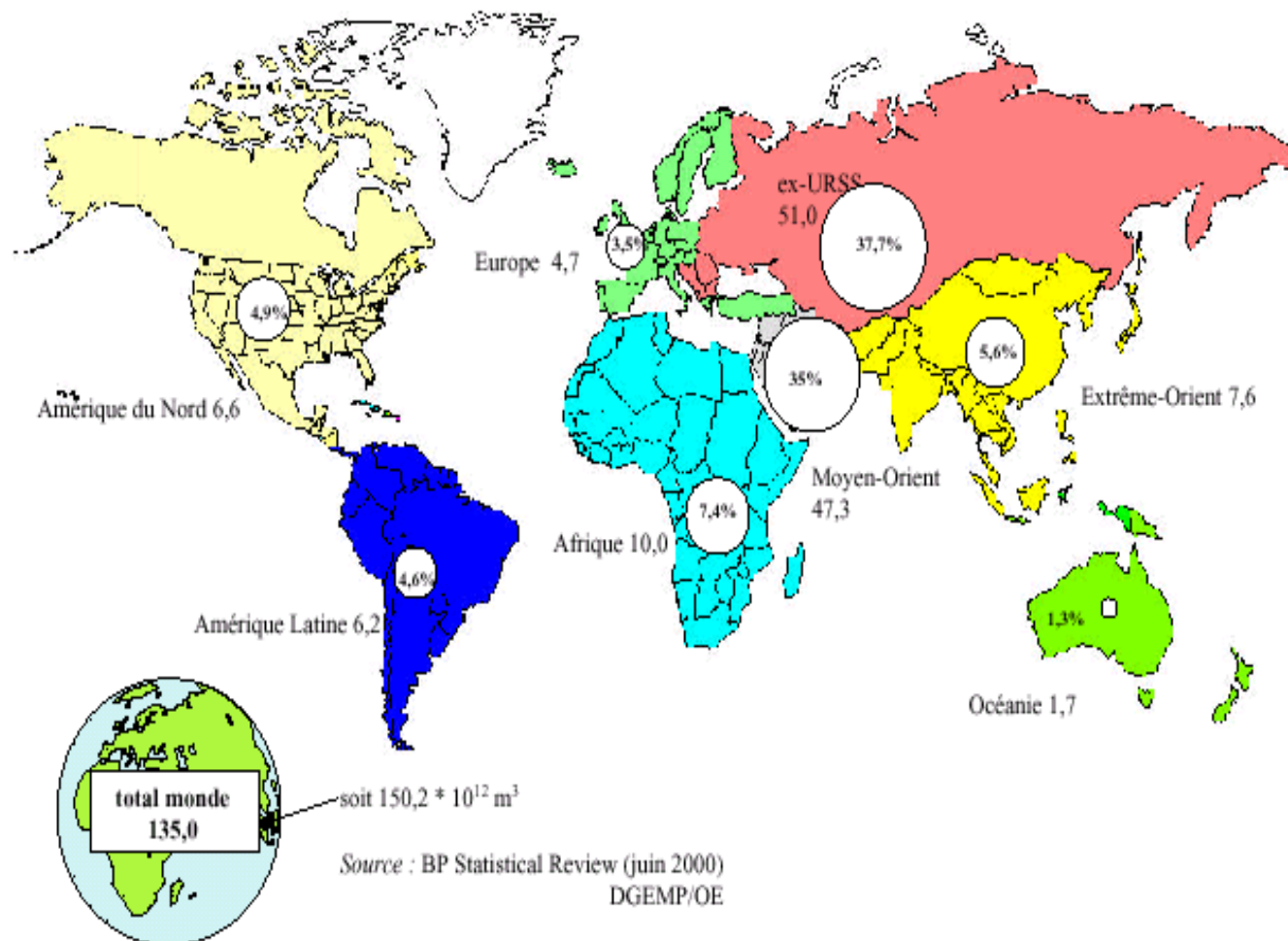
The world's proved oil reserves continue to be dominated by the Middle East which holds 64% of the total.



Diversification

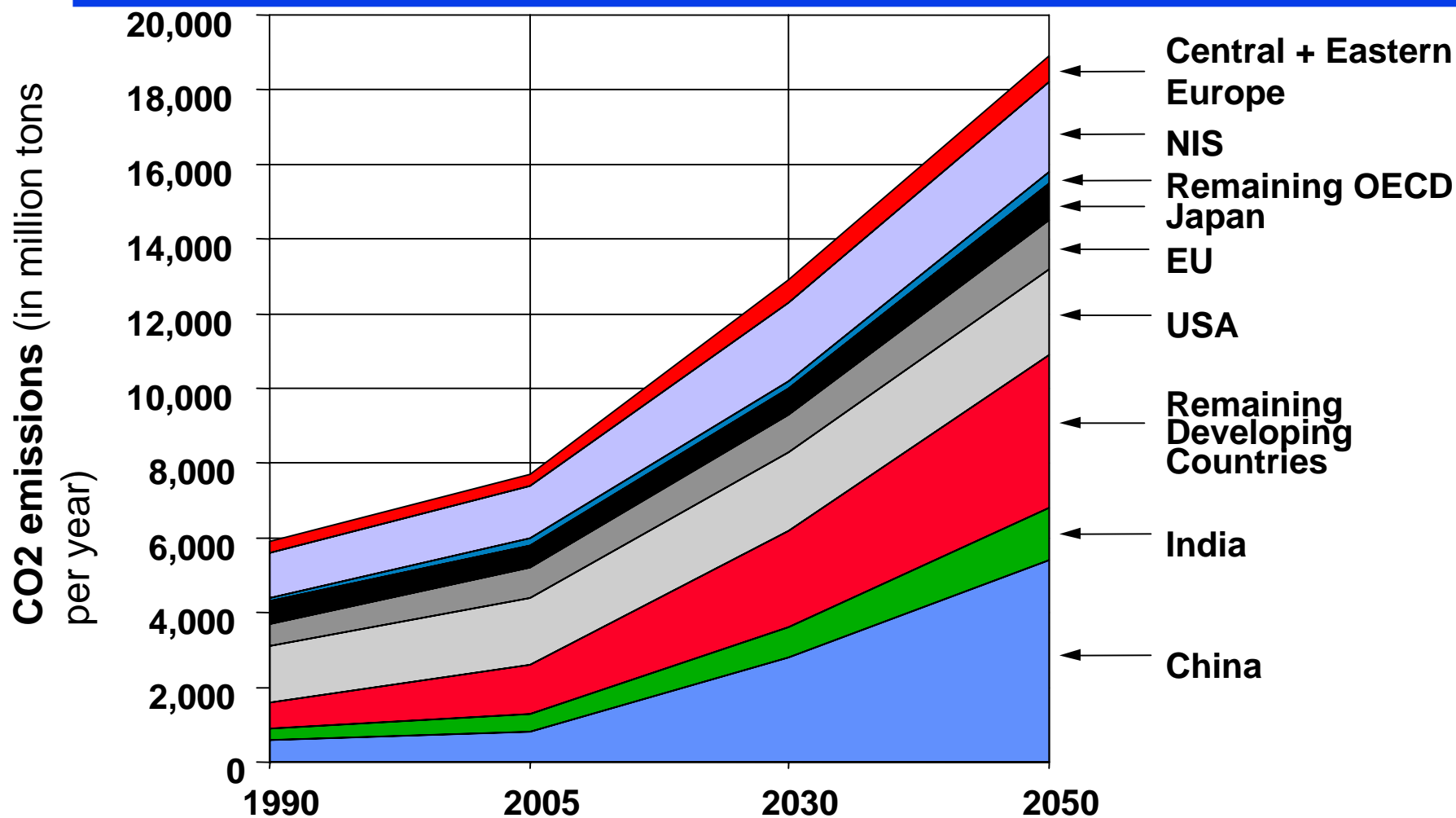
World natural gas proven reserves

Unité : Milliard de tep





Key challenges - CO2 emissions and energy demand in developing countries



IAEE Prague Conference « New Challenges for Energy Decision Makers » June 4 - 7, 2003 - Prague, Czech Republic.

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Source: OECD Scenario for the World Energy Council, Tokyo, October 1995



III. Implementing long-term policies



Priority objectives

- Complete the liberalisation of the gas and electricity sectors in the enlarged (2005) EU
- Complete and enhance Trans-European energy projects
- Realise potential for energy efficiency and de-couple economic growth from energy demand
- Achieve EU targets for RES in electricity, bio-fuels in transport
- Improve co-ordination of MS energy crises policies, in particular regarding stocks
- Improve nuclear safety in enlarged EU
- Develop common identity for EU in international arena, reinforce producer/consumer dialogue
- **Exploit RTD and other energy-related programmes**



Completion of the single, liberalised and open electricity and gas markets

- In 2005 the EU will expand from 15 to 25 Member States
- In 2004 the gas and electricity markets will be opened up to non-household and commerce customers
- In 2007 gas and electricity will open up to all customers



Energy efficiency, de-coupling from economic growth

- Dec. 2002 directive on energy efficiency in buildings. Minimum norms for heating and cooking installations in new buildings. Final target: 20% savings in buildings' sector.
- Policy being developed to increase the competitiveness of freight per rail
- Commission proposal for an EU-methodology for the tarification of the use of transport infrastructure which reflects the cost of society of the various modes of transport.

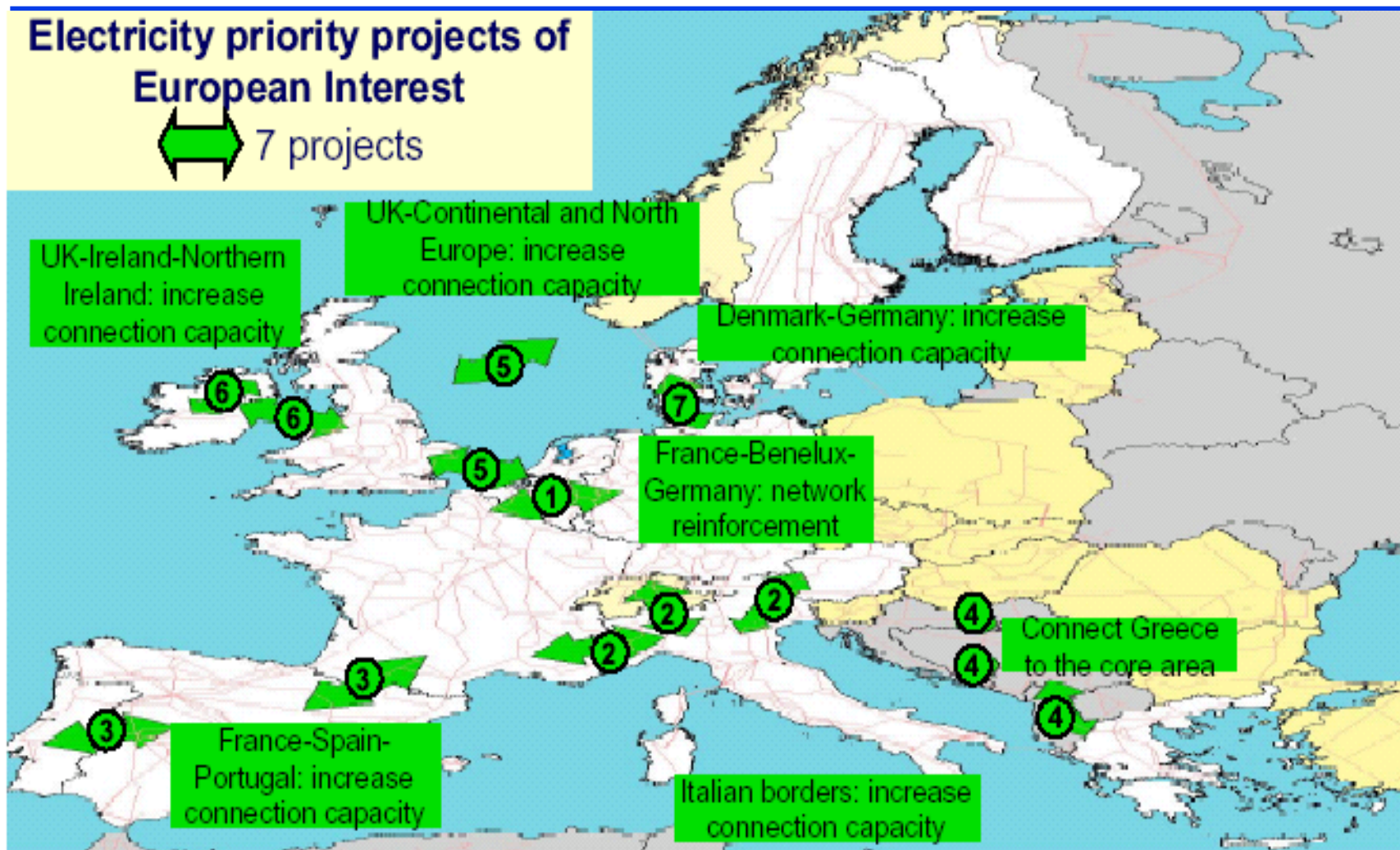


EU targets for RES in electricity and alternative fuels in transport

- By 2020 RES 20% of electricity generation.
- By 2010 RES 12% of entire Energy Balance.



Infrastructure investments - electricity priority projects





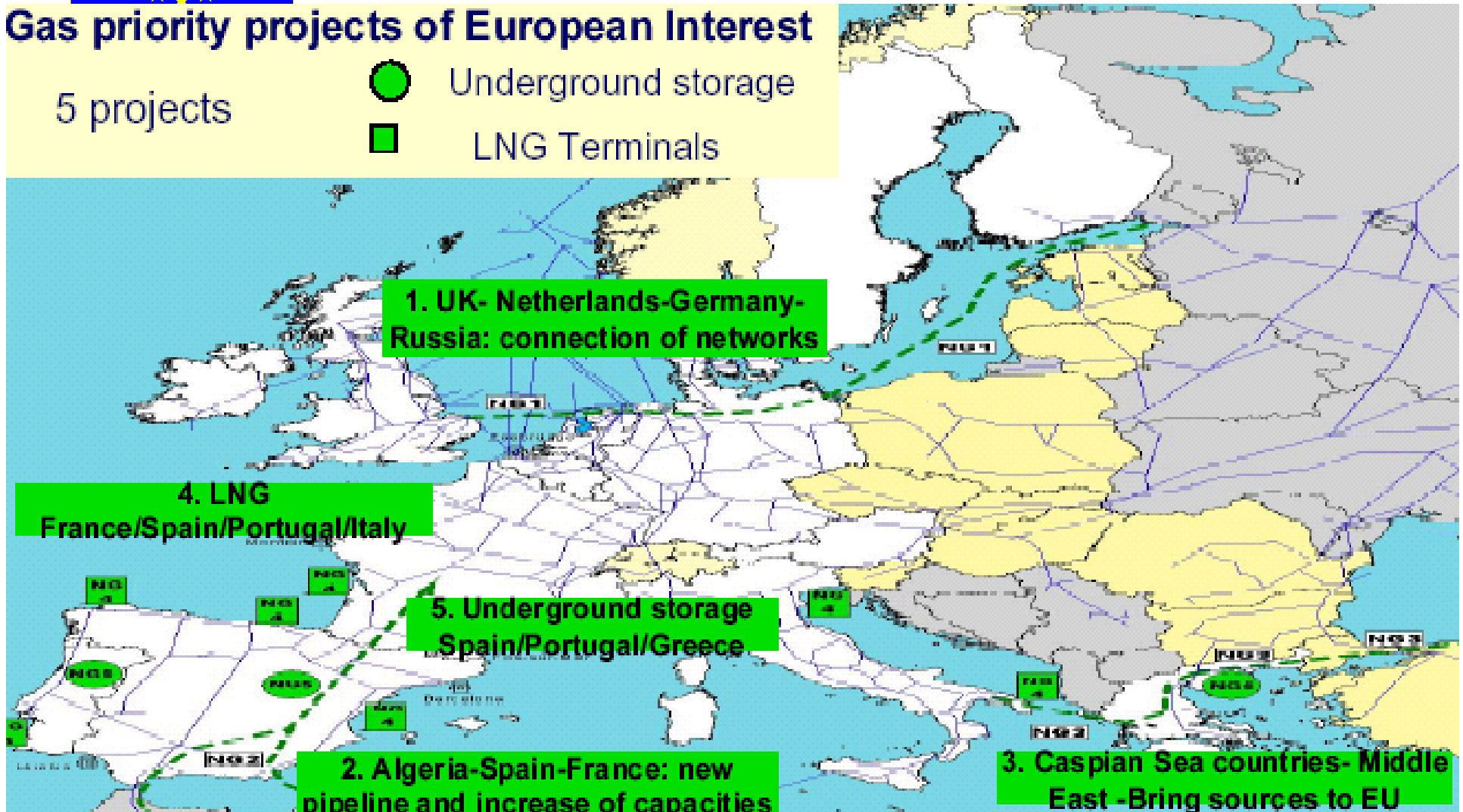


Infrastructure investments - Gas priority projects

Gas priority projects of European Interest

5 projects

-  Underground storage
-  LNG Terminals





Stimulating co-ordination among MS - oil and gas supply security

Commission's new proposals aim to:

- Promote solidarity between Member States in the event of a crisis through mechanisms which will guarantee co-ordinated action
- Manage security of supply with the aid of mechanisms to deal with a physical disruption or economic threat to supplies
- Manage the safety of supplies and infrastructures by taking measures to ensure reliable supply flows from producer countries
- Promote market stability, in consultation with producer countries



Developing a Community approach - nuclear safety

- Union has insisted that candidate countries that operate nuclear reactors of certain vintage types that cannot be upgraded at a reasonable cost commit themselves to their early closure. EU funding available.
- New Commission proposals would introduce a comprehensive Community approach to nuclear safety, including operation of plant, decommissioning, management of radioactive waste and trade in nuclear materials with Russia.



Building up energy dialogues and partnerships

Multilateral

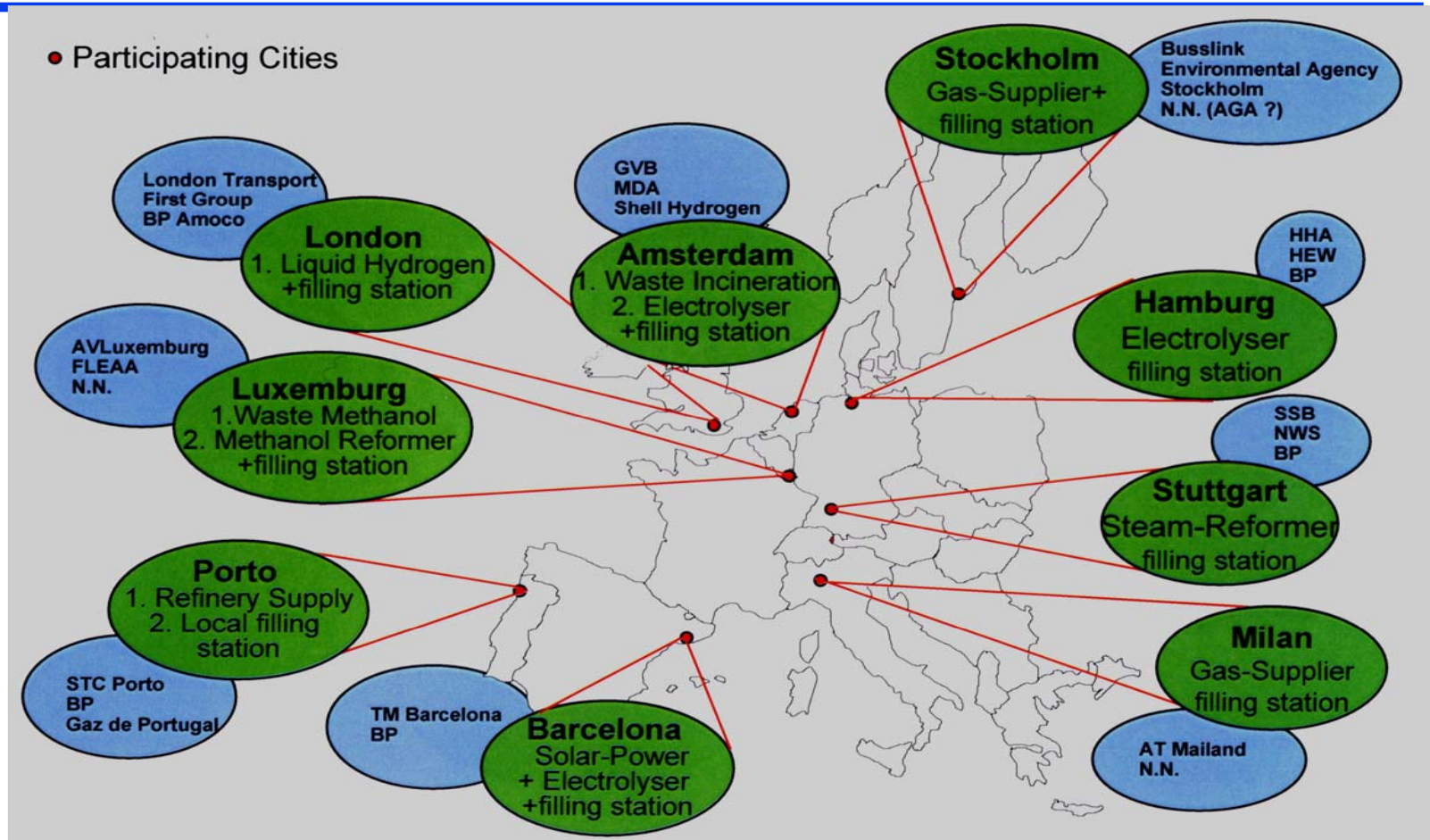
- Producer consumer dialogue, IEF

Bilateral

- Russia
- Iran, Azerbaijan
- North Africa, Algeria
- Norway, USA etc

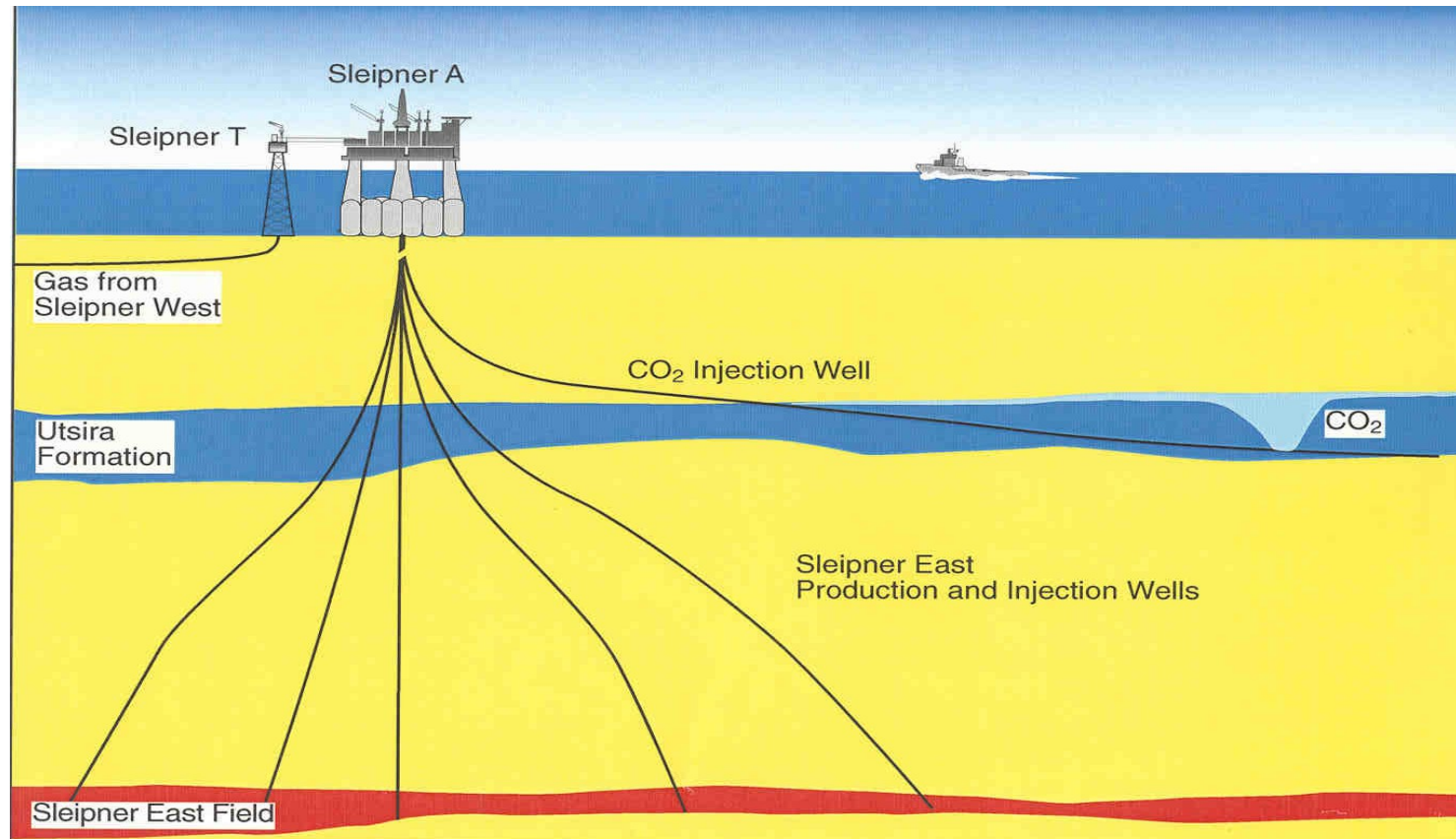


RTD in renewables - CUTE Project (Clean Urban Transport for Europe)





RTD for conventional fuels - CO₂ Re-injection in Sleipner Field



Source: European Commission DG TREN / C: Conventional Energy



In Conclusion

- The European Commission in consultation with its Member States and other interested parties has developed long-term strategies in order to cope with challenges such as increasing dependence on fossil fuels from external sources, climate change and too slow development of alternative energies.
- A wide range of instruments are being used, including EU legislation, EU-wide programmes and projects, investment climate and international energy co-operation and dialogue.
- Instruments can only be effective with full participation of all levels of society - market players, decision makers and consumers.