22 November ‘package’

AN ENERGY POLICY FOR EUROPE

- SEC(2007)1510 – Technology Map
- SEC(2007)1511 – Capacities Map

Impact assessment:

energy for a changing world
By 2020 – the three 20s:

- 20% reduction in greenhouse gas emissions compared to 1990 levels (30% if global agreement)
- 20% reduction in global primary energy use (through energy efficiency)
- 20% of renewable energy in the EU's overall mix (minimum target for biofuels of 10% of vehicle fuel)

By 2050: indicative 60 to 80% reduction in GHG energy for a changing world
Why we need a SET-Plan (1)

- Technology is vital to achieve our policy objectives
- Today we are falling short
  - not on a pathway to meet our policy objectives
  - lack of innovation drivers for the industry
  - insufficient energy research budgets in the EU
- Intrinsic weakness in energy innovation
  - long lead times, incumbent technologies, system inertia
  - no natural market appetite for new energy technologies
  - social acceptance issues and up-front integration costs
Europe should lead the world
- growing international competition
- MSs working alone will struggle
- mastery of technology vital to competitiveness

Time is of the essence
- decisions taken now will have lasting consequences
- cost of inaction will be much higher in the long run

We need to use the ambition and the targets of the Energy Policy for Europe to create a new European policy for energy technology
Indicators are worrying ...

**World Primary Energy Demand in the Reference Scenario**

[Graph showing energy demand from 1980 to 2030 with different energy sources depicted.]
Technologies that can reduce global CO2 emissions from energy combustion

Possible, in theory ...

Source: GCNRS/LEPII-EPE/RIVM/MNP/ICCS-NTUA/CES-KUL study
Investment trends ...

Figure B: R&D expenditure in IEA countries and oil price 1974 - 2004

Source: OECD report, 2006
Achieving the political vision

- First and foremost, energy efficiency
- 2020 targets: reinforced research and pro-active support measures
- 2050 vision: develop new generation of technologies through breakthroughs
- A collective endeavour to deliver results
- Actions for industry, Member States, the European Community and at global level
The Community is the vehicle to:

- Enable the pooling of resources and sharing of risks to develop new technologies
- Facilitate strategic planning at both the technology and energy system levels
- Provide a regular and reliable gathering and sharing of data and information
- Ensure coherence and critical mass in international cooperation efforts
- Address common problems and non-technological barriers
Not starting from zero!

- EU RTD Framework Programmes (EC and EURATOM) – energy research and demonstration
- Intelligent Energy-Europe (part of the Competitiveness and Innovation Programme)
- European Technology Platforms – bringing stakeholders together research agendas
- ERA-Net scheme – encouraging MSs to coordinate R&D programmes
- Networks of Excellence – giving research centres the opportunity to work together
- Art. 171 (JTIs) and Art. 169 initiatives
Overview of measures

- Joint strategic planning – Steering Group and information system

- Effective implementation:
  - European Industrial Initiatives: strategic technology alliances
  - European Energy Research Alliance
  - Trans-European Energy Networks and Systems of the Future – transition planning

- Increase in resources, both financial and human

- Reinforce international cooperation
Joint Strategic Planning

- **Need for European governance**
- **Steering Group on Strategic Energy Technologies**
  - high level representatives from MSs
  - conceive joint actions and make resources available
- **Information system:**
  - Technology Map (potentials? impacts? barriers?)
  - Capacities Map (who does what? and internationally?)
  - Key Performance Indicators (KPI) for initiatives/sectors
- **Energy Technology Summit:**
  - in the first half of 2009; to take stock, to engage industry, researchers and international partners
Effective implementation (1)

European Industrial Initiatives:

- European Wind Initiative
- Solar Europe Initiative
- Bio-energy Europe Initiative
- European Electricity Grid Initiative
- European CO2 capture, transport and storage initiative (Communication in Jan. 2008)
- Sustainable fission initiative (Gen IV)
- Fuel cells and hydrogen (JTI on-going)
- Fusion (ITER on-going)
Effective implementation (2)

- **European Energy Research Alliance**
  - Building on excellent research teams
  - Structured dialogue in 2008
  - From collaborating on projects towards implementing European programmes
  - e.g. basic energy science, enabling and breakthrough technologies and advanced energy efficiency

- **Trans-European Energy Networks and Systems of the Future**
  - Multidisciplinary approach
  - Plan and develop future infrastructures and policies
  - e.g. electricity, CO2 transport and hydrogen distribution
Increase in resources

- Better use of available resources through joint strategic planning and European initiatives
- **Objective to double the overall effort in the EU within three years – Lisbon**
- **Communication on financing low carbon technologies at the end of 2008**
  - Possibility of a new European mechanism/fund for industrial-scale demonstration
- **Human resources – vital to build capacity**
International cooperation

- Developed countries – safety, public acceptance, longer-term frontier research

- Developing and emerging economies – helping sustainable development and creating opportunities for EU industry:
  - networking energy technology centres;
  - large-scale demonstration projects;
  - Global Energy Efficiency and Renewable Energy Fund;
  - Clean Development Mechanism post-2012

- EU ‘speaks with one voice’ in international fora
Thank you for your attention

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