

**ENERGY FOR A CHANGING WORLD**  
EU Energy and Climate Policies adopted by the European Commission

**Climate Policy Initiative, CCAP**  
**Washington, D.C., February 13-14, 2007**  
**Robert Donkers, Environment Counselor**  
**Delegation of the European Commission to the U.S.**



## I. Objectives and Challenges

### **INTEGRATING ENERGY & ENVIRONMENT**

**Meeting the 2°C objective and  
responsibility of the developed  
countries to act in breaking the  
international deadlock for post-2012**



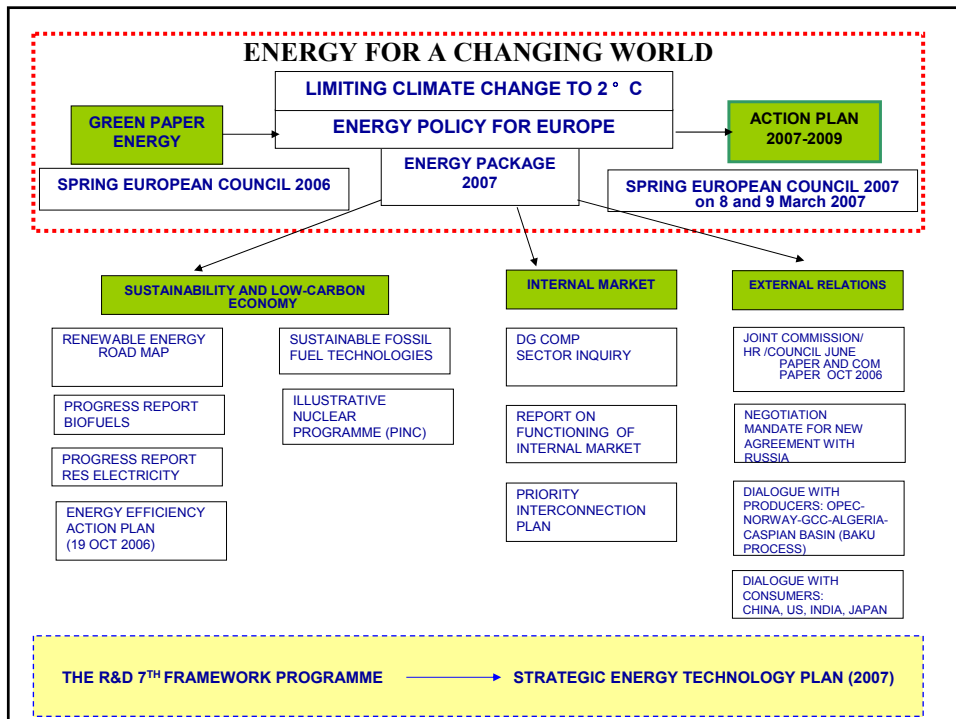
# ENERGY FOR A CHANGING WORLD



*Communications of the Commission:*

**“An Energy Policy for Europe” and the Energy Package 2007**

**“Limiting Global Climate Change to 2°C: The way ahead for the EU and the World for 2020 and beyond”**





## ENERGY FOR A CHANGING WORLD



### THE STRATEGIC OBJECTIVE

➔ **At least 20% unilateral EU reduction of GHG by 2020**

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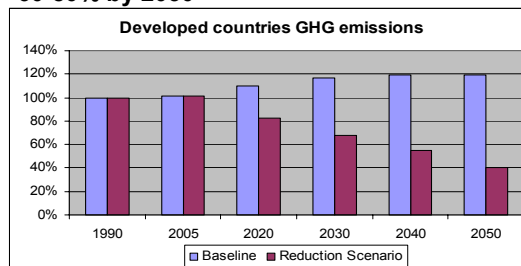


## LIMITING GLOBAL CLIMATE CHANGE TO 2°C



● ***A unilateral EU independent*** commitment of at least 20% GHG emission reduction by 2020, compared to 1990 levels

● ***Developed countries & EU:*** 30% GHG emission reduction target by 2020, compared to 1990 levels, 60-80% by 2050



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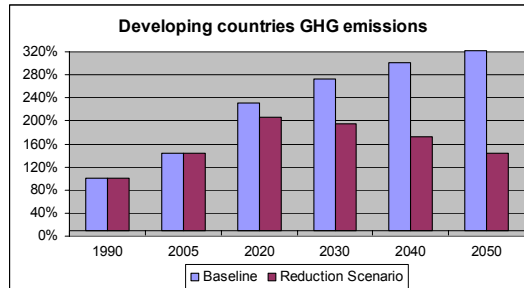


## LIMITING GLOBAL CLIMATE CHANGE TO 2°C



● **Developing countries:** Decoupling emissions and growth asap, absolute reductions after 2020

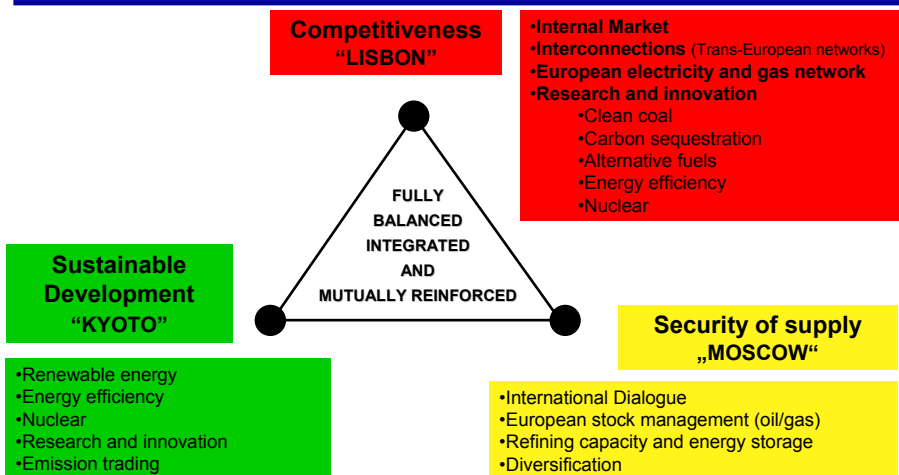
● **Deforestation:** halt within two decades and then reverse



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## THE THREE CHALLENGES



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# 1. COMPETITIVENESS



## Internal Challenges:

- EU internal market on electricity and gas
- Investment needs
- Impact on energy-intensive industry and internationally traded goods

## External Challenges:

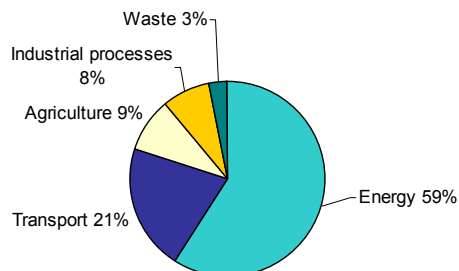
- EU-27 energy bill would increase by €170 billion/year to reach (\$100/barrel in 2030) = €350 per EU citizen



# 2. SUSTAINABLE DEVELOPMENT (1)



**Energy => 80% of EU-GHG**  
**Energy => 93% of EU CO2 emissions**  
**75% of GHG are CO2 emissions**



Source: European Environmental Agency Report 2006

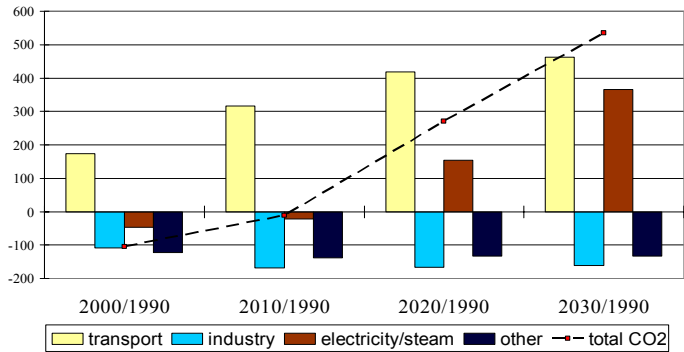


## 2. SUSTAINABLE DEVELOPMENT (2)



### TRENDS IN CO2 EMISSIONS up to 2030

Mt CO<sub>2</sub> – relative to 1990 (Baseline)



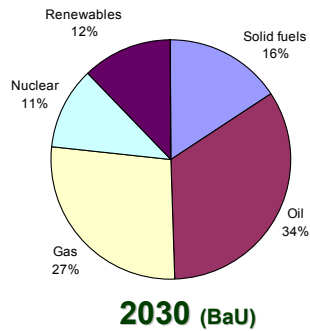
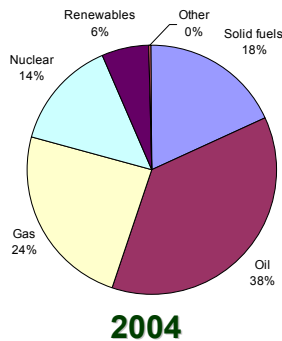
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## 2. SUSTAINABLE DEVELOPMENT (3)



### EU-27 ENERGY MIX: High dependence on fossil fuels => Business as usual is **NOT SUSTAINABLE**



Source: EUROSTAT

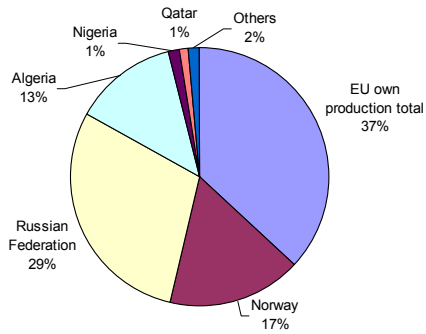
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### 3. SECURITY SUPPLY AT RISK (1)



#### EU-27 ORIGIN OF GAS (2004)



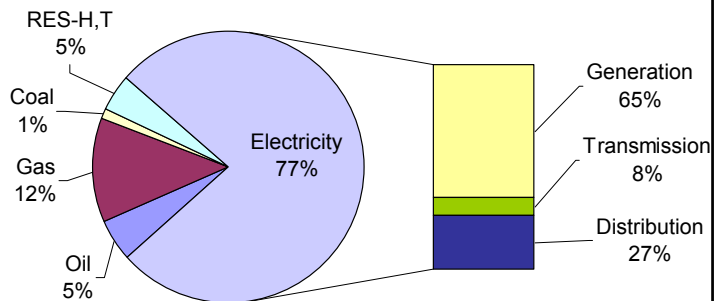
Sources : European Commission



### 3. SECURITY OF SUPPLY AT RISK (2)



#### EU-27 INVESTMENT NEEDS up to 2030: €1.79 trillion



Source: EUROSTAT



## II. THE ACTION PLAN

### *Actions for a new industrial revolution*

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## 1. Internal Energy Market



### **The Challenges:**

- Incomplete and incorrect transposition: 26 infringement cases against 16 MS
- Different powers and competences of regulators
- Markets are not integrated sufficiently – national markets concentrated;
- Lack of cross border capacity and need for interconnections;
- Incompatible market design in some cases – e.g. balancing, transmission tariff regimes
- Limited wholesale trading

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## 2. Solidarity in Security of Supply



- A fully functioning internal energy market is the best guarantee of supply security.
- Gas Coordination Group
- Oil Supply Group
- Energy Correspondents Network
- Communication on strategic stocks
- Effective mechanisms for energy crisis management
- Electricity Interconnections

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## 3. Energy Efficiency (1)



### Energy Efficiency Action Plan

(adopted on 19 October 2006)

Saving 20% by 2020 Realising the Potential:

- Transport : fuel efficient cars; better use of public transport; introduction of biofuels
- Appliances : tougher standards and better labelling
- Buildings : improving the energy performance of the EU's building stock
- Improving the efficiency of heat and electricity generation, transmission and distribution

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### 3. Energy Efficiency (2)



#### Implementation of the Action Plan:

- Intelligent Energy Agency
- Energy performance of Buildings Directive, Cogeneration Directive, Eco-Design Directive, Energy Star Agreement, Energy End-Use Efficiency, Energy Services Directive, Labelling Directive
- Industrial agreements/commitments
- ManagEnergy and Sustainable Energy Europe Campaigns

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### 4. Renewable Energy Sources



- Necessary to increase the level of renewable energy in the EU's overall mix
- Commission proposes a binding overall 20% target by 2020 and a 10% minimum binding target for biofuels
- Member States set national targets and action plans on:
  - RES in electricity
  - Heating and cooling
  - Biofuels

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## 5. Research and Sustainable Fossil Fuels (1)



### STRATEGIC PLAN by end 2007

Promotion of technologies to support the low-carbon energy economy with 20% 2020 RES target

- Sustainable coal and gas: to make plants CCS ready by 2020,
- Second generation biofuels, photovoltaic, large-scale offshore-wind, hydrogen fuel cells,
- Generation IV fission power, fusion energy,
- Energy efficient transports, appliances and industrial systems

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## 5. Research and Sustainable Fossil Fuels (2)



In the 7th Framework Programme (FP) energy funds doubled in comparison with the last FP:

2007-2013

- Energy: €2350 million (>50% for RES and energy efficiency)
- Environment (including climate change): €1890 million
- Nuclear (Euratom): €2751 million

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## 5. Research and Sustainable Fossil Fuels (3)



- Up to 12 industrial-scale demonstration facilities of sustainable power generation from fossil fuel in Europe (“Early mover incentives”, Technology platform, Pooling of EU and MS Funds, Joint Undertakings)
- Clear timeframe for installation of CO<sub>2</sub> capture & storage CCS for coal- and gas-fired power plants
  - CCS for new fossil fuel plant after 2020
  - RETROFITTING of existing plants
- Improvement of the legal framework (CCS in ETS) and public acceptance

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## 6. Future of Nuclear



- Around 1/3 of the electricity and 15% of the EU energy mix
- CO<sub>2</sub>-free source with importance in low emission scenarios
- Concerns on nuclear waste and decommissioning

### Policy Actions:

Commission proposes to establish an EU High Level Group on Nuclear Safety and Security and High Level Group on Innovative Systems

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## 7. International Energy Policy (1)



- **NEGOTIATIONS & AGREEMENTS on climate, trade and technology:**  
Post-2012 climate regime, World Bank Gas Flaring Reduction Partnership, Extractive Industries Transparency Initiative, Energy Charter, extension of ETS to global partners, energy efficiency, energy star
- **ENERGY RELATIONS WITH EU NEIGHBOURS:**  
(Norway, ENP, Egypt, Mashrek/Magreb, Libya, Algeria, Turkey)

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## 7. International Energy Policy (2)



- **EU RUSSIA ENERGY COOPERATION:**
  - Energy partnership
- **COOPERATION WITH KEY ENERGY PRODUCERS, TRANSIT COUNTRIES AND CONSUMERS:**
  - Through OPEC, with Central Asia (e.g. MoU Azerbaijan, Kazakhstan), Baku Initiative, Latin America, Caribbean, Africa-Europe Partnership

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### III. THE WAY AHEAD (1)



- **Council discussions:**  
on 15/02/2007 Energy and on 20/02/2007 Environment Councils
- **European Council: 8-9 March 2007**  
=>Consensus on an Action Plan on An Energy Policy for Europe
- **European Parliament (see its resolution of 14 December 2006)**
- **After March 2007: Legislative proposals to be tabled by the Commission**
- **UNFCCC & Kyoto Protocol processes**
- **G-8**

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### III. THE WAY AHEAD (2)



- **Fuel specification standards proposal of January 30, 2007**
- **Car emissions proposal of February 7, 2007 to reduce to on average 120 g/km by 2012**
- **Proposal of December 2006 to include aviation in ETS**
- **Overall Review of ETS in Fall 2007**
- **CCS paper in Fall 2007**
- **Air - conditioning in vehicles - ongoing**

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## INFORMATION & DOCUMENTATION

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All documents on the climate and energy package are available on:

[http://ec.europa.eu/energy/energy\\_policy/index\\_en.htm](http://ec.europa.eu/energy/energy_policy/index_en.htm)

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## Energy for a Changing World

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**THANK YOU FOR YOUR ATTENTION**

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