# Climate action – a global issue

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## **EU** targets

- 20% GHG reduction compared to 1990
  - Independent commitment
- 30% GHG reduction compared to 1990
  - In context of international agreement
- 20% renewables share of final energy consumption
- 10% biofuels in transport, with
  - production being sustainable
  - second generation biofuels commercially available
- Energy saving: 20% lower energy consumption through efficient use by 2020



## Where do we stand today?

- In 2005:
  - -6.5% GHG emissions compared to 1990
  - including outbound aviation
- 8.5% renewable energy
  - mainly through large scale hydro and conventional biomass
- Targets are ambitious:
  - -14% GHG compared to 2005
  - +11.5% renewable energy share



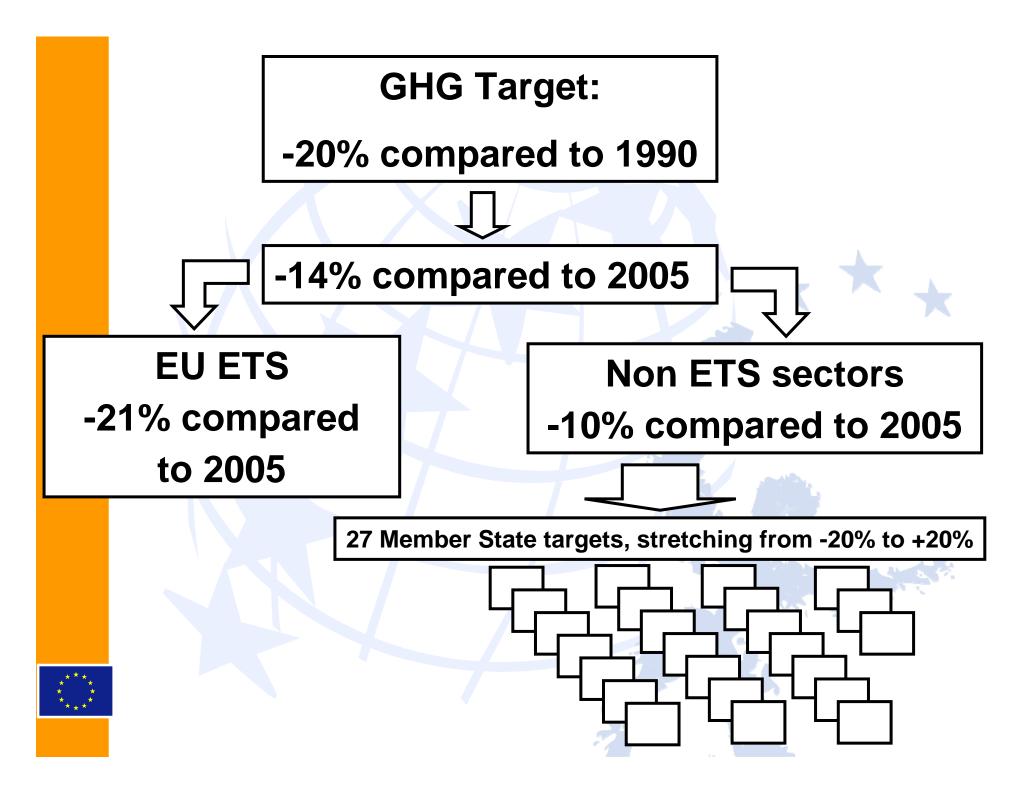


## The Energy Package

- Overall Communication
- Revision of EU Emissions Trading System (the ETS)
- Effort sharing in non ETS sectors
- Directive on promotion of renewable energy, report on renewable energy support schemes
- Directive on carbon capture and storage, and Communication on demonstration plants
- Revised environmental state aid guidelines
- Accompanying integrated impact assessment







## **Approach**

Cost-effectiveness



Fair distribution

#### Solution:

Fairness: differentiate efforts according to GDP/capita

- national targets in sectors outside EU ETS
- national renewables targets (partially half)
- redistribution of auctioning rights (partially 10%)

#### Cost-effectiveness:

introduce flexibility and use market based-instruments (EU ETS, transferability of Guarantee of Origin for renewables)





# Revision of the EU Emissions Trading System

- Cover all big industrial emitters, include more greenhouse gases
- New: single EU-wide cap instead of 27 caps set by Member States
- 21% compared to 2005 emissions
- Harmonised allocation rules ensure level playing field across the EU with much more auctioning
- Full auctioning for sectors able to pass on costs
- Partial free allocation to industry as a transitional measure
- European Commission to report on 'carbon leakage' by 2011



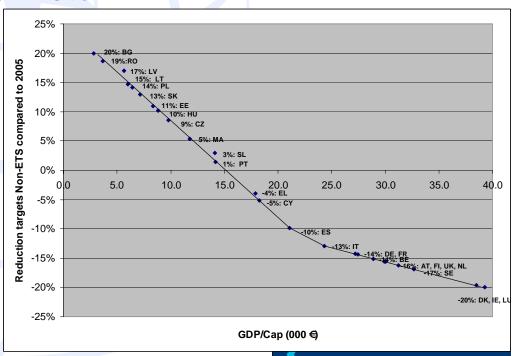


# Sharing of the efforts in non ETS sectors

- Need to take into account the wide divergence of wealth in the EU-27
- GDP/capita as criterion for differentiation (ability to pay)
- Limitation: between -20 and +20%

#### **Consequences:**

- poorer Member States can continue to grow in sectors such as transport
- overall cost increases marginally compared to cost-effectiveness
- but significant equalisation of overall effort between Member States







## Carbon capture and storage

- Enables CCS by providing legal framework to
  - Manage environmental risk
  - Remove barriers in existing legislation
- Provisions for ensuring environmental integrity through the life-cycle of the plant (site selection up to post closure)
- CO2 captured and stored will be considered not emitted under the ETS:
  - CCS can be opted in for Phase II (2008-2012)
  - CCS explicitly included for Phase III (2013-2020)
- Communication on promotion of demonstration plants





# What are the benefits of the package?

- The ultimate goal: avoid the cost of climate change impacts: 5-20% of global GDP (Stern)
- Large scale innovation in the energy sector
- First mover advantage, aiming for technological leadership in low carbon technology
- Significant energy efficiency improvements
- Energy security: reduction of oil and gas import of €50 billion per year (at \$61 per barrel of oil)
- Reduced air pollution giving significant health benefits
- Reduced need for air pollution control measures:
   €11 billion per year in 2020



# What are the costs of the package?

- Direct cost: increased energy and non CO2 mitigation cost to meet the targets domestically: 0.45% of GDP in 2020, or some €70 billion.
- Increased energy cost of 150 € per family by 2020
- Macro-economic GDP effects: GDP growth reduced by some 0.04-0.06% between 2013 and 2020
- These are conservative estimates, with an oil price of \$100 per barrel this would reduce costs further by €30 billion
- Impact on employment is stable (projected between -0.11% and +0.05%) but differences between sub-sectors





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