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Climate action and renewable energy package

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Objectives agreed for 2020

- 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

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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**

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The package

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What is in the 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

GHG Target:

-20% compared to 1990

-14% compared to 2005

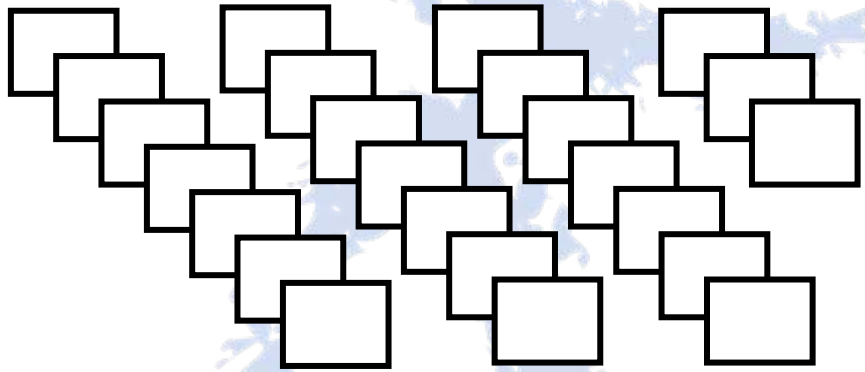
EU ETS

-21% compared to 2005

Non ETS sectors

-10% compared to 2005

27 Member State targets, stretching from -20% to +20%



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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)**

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Revision of the EU Emissions Trading System

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Objectives of EU ETS review

- **Cost-effective contribution to -20% GHG target for 2020, or to stricter target under international climate agreement**
- **Improvement of the EU ETS based on experience**
- **A clear long-term carbon price**

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Scope

- **Cover all big industrial emitters: extension e.g. to chemical sectors and aluminium**
- **Extension to other GHG: nitrous oxide (fertilisers), perfluorocarbons (aluminium)**
- **Leads to new abatement opportunities, lower overall costs, and higher efficiency**
- **Potential “opt-out” of small emitters, if equivalent emission reduction measures in place (e.g. tax)**

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Cap setting

- **New: single EU-wide cap instead of 27 caps set by Member States**
- **CO_2 allowances available in 2020: 1720 Mt**
  - **- 21% compared to 2005 emissions**
- **Linear decrease**
  - **predictable trend-line to 2020 *and beyond***
  - **can be adjusted to stricter target**
- **Aviation to be included in line with political agreement**

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Allocation principles

- **Harmonised allocation rules ensure level playing field across the EU**
- **Basic principle for allocation is auctioning:**
  - Eliminates windfall profits
  - Simplest and most transparent allocation system
- **Full auctioning for sectors able to pass on costs**
  - Power sector
- **Partial free allocation to industry as a transitional measure**
  - Phased out by 2020 for “normal industry”
  - Exception: possibly higher levels (up to 100%) of free allocation to industries particularly vulnerable to international competition (‘carbon leakage’) to be determined in 2010
- **European Commission to report on ‘carbon leakage’ by 2011 and make a proposal, if appropriate:**
  - To review free allocation levels and/or
  - To introduce system to neutralise distortive effects
- **With international agreement: total cap + linear factor adjusted, increased access to CDM credits (half of additional effort)**

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Auctioning and earmarking

- **Auctioning rights distributed to Member States**
  - **Relatively more rights to MS with lower GDP/capita to balance high investment costs**
- **Auctions must be non-discriminatory, open to everybody and will be carried out by Member States on the basis of harmonised rules**
- **20% of auction revenues should be earmarked for combating climate change, promoting renewable energies and addressing social impacts**

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Monitoring & Reporting, Verification & Accreditation, Compliance

- **More harmonised rules on**
  - **monitoring and reporting of emissions by operators**
  - **verification of reports and mutual recognition of verifiers**
- **This will enhance reliability and thus international credibility of the EU ETS**
- **Non-compliance penalties (€100/ton CO_2) to increase by inflation rate to keep deterrent effect**

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International aspects: JI/CDM, linking

- Companies can already use credits from Joint Implementation and Clean Development Mechanism projects (the latter carried out in developing countries) for compliance
- "Left-over" credits from 2008-2012 can be used 2013-2020: total 1.4 billion tons for 2008-2020, one third of reduction effort over the period
- Greater certainty for participants on the type of projects from which credits can be used
- When an international agreement is reached, substantial additional use of credits will be allowed automatically, in order to meet a stricter reduction target
  - Only credits from countries which have ratified the agreement
  - Important incentives for global climate agreement
- Possible to link EU ETS not only to other national emission trading systems, but also to sub-federal and regional systems

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Conclusions EU ETS

- **Emission reduction objectives of the Community require most efficient approach**
- **A more harmonised EU ETS can exploit the benefits of emissions trading to the full**
- **The proposal**
  - **ensures significant contribution by ETS to overall targets**
  - **provides a predictable and reliable long-term perspective for industry to take the necessary investment decisions**
  - **is sufficiently simple to be attractive for other countries to join**
  - **credibly underlines EU leadership**

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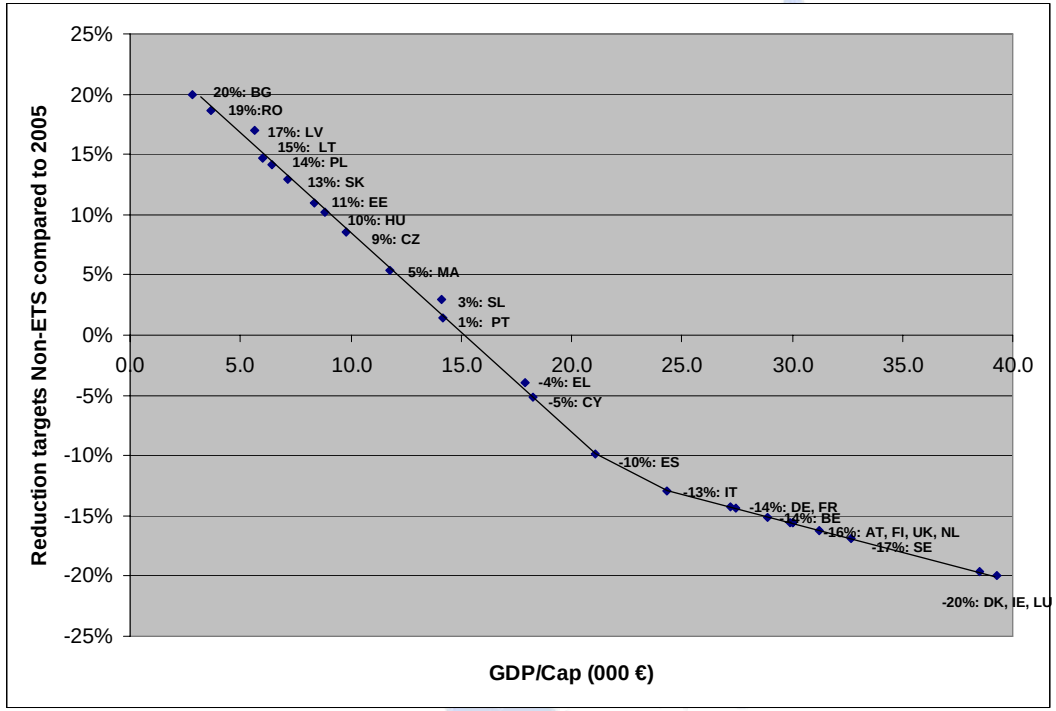
Sharing of the efforts in non ETS sectors

Non ETS targets compared to 2005

- 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



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Carbon capture and geological storage

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Carbon Capture and Storage - background

- CCS – to capture CO_2, transport and store it in geological formations
- While energy efficiency and renewable energy are shorter-term solutions, other options are needed in longer term if we are to reach 50% GHG reduction globally in 2050
- It is crucial from a global perspective
- CCS has been demonstrated as functioning, but not yet as an integrated process or at reasonable costs

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Carbon Capture and Storage -proposals

- **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)**
- **CO_2 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**

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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**

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What are the costs of the package?

- **Direct cost: increased energy and non CO_2 mitigation cost to meet both targets domestically: 0.6% of GDP in 2020, or some €90 billion**
- **Macro-economic GDP effects : GDP growth reduced by some 0.04-0.06% between 2013 and 2020, or in 2020 some GDP reduction of 0.5% of GDP compared to business as usual**
- **These are conservative estimates :**
  - **oil price of $100 per barrel would reduce costs by €30 billion**
  - **foreseen use of cheaper CO_2 credits through investments in Clean Development Mechanism reduces costs by a quarter**
  - **does not include positive macro-economic rebound effects of re-injecting auctioning revenues back into the economy, estimated at maximum +0.15% of GDP**

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A clear path towards a 30% target

20% independent commitment

- **EU ETS cap and non ETS targets as proposed**
- **JI/CDM must be managed**
  - **to keep domestic effort and**
  - **to give clear incentive towards international agreement**

International agreement: up to 30%

- **EU ETS cap and non ETS targets adapted automatically and proportionally**
- **Increased use of JI/CDM both in EU ETS and outside ETS**
  - **half of the extra effort in both cases**

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Concluding remarks

- **EU showing leadership in climate change**
- **EU on a path towards a low-carbon economy**
- **Cost-efficiency and fairness at the heart of the package**
- **A blueprint for international negotiations ('common and differentiated responsibilities')**
- **A significant effort, but future benefits far outweigh the costs**
- **Will deliver important economic, energy security and environmental co-benefits, also in the short term**

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