European Experience with Climate Policies

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International Conference:
The Closing Window: Implementing Effective Climate Policies
7 September 2011
Melbourne, Australia

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European Energy and Climate Policy

Climate and energy policy package including the **'20/20/20' targets** - to be met by 2020:

- A reduction in EU greenhouse gas emissions of at least 20% below 1990 levels (increase to 30% on condition that other countries do their fair reduction share)
- 20% of EU energy consumption to come from renewable resources
- A 20% reduction in primary energy use compared with projected levels, to be achieved by improving energy efficiency

European Energy and Climate Policy

Proposal of binding legislation to implement the 20/20/20 targets. The energy and cimate policy package became law in 2009 comprising four pieces of complementary legislation:

- Revision and stengthening of EU Emission Trading System (EU ETS)
- Effort Sharing Decision (emission reduction targets for non-ETS sectors between EU member states)
- Binding national targets for renewable
- Legal framework of carbon capture and storage (CCS)

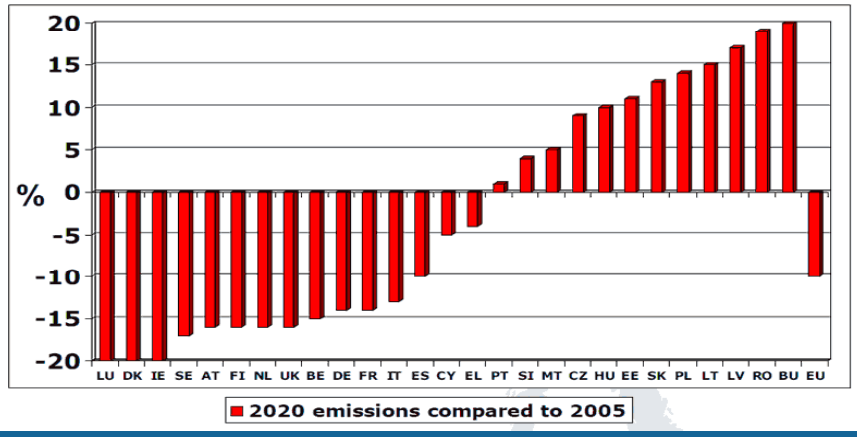
European Energy and Climate Policy

- EU ETS - A single EU-wide cap on emission allowances will apply from 2013 and will be cut annually, reducing the number of allowances available to businesses to 21% below the 2005 level in 2020. The free allocation of allowances will be progressively replaced by auctioning.
- Non EU ETS – Under the decision each Member State has agreed to a binding national emissions limitation target for 2020 which reflects its relative wealth. The targets range from an emissions reduction of 20% by the richest Member States to an increase in emissions of 20% by the poorest. These national targets will cut the EU's overall emissions from the non-ETS sectors by 10% by 2020 compared with 2005 levels
- Importance to distinguish between ETS and non ETS sectors and the relevant policies

Effort sharing targets

Climate Action
Energy for a Changing World

Effort Sharing targets for 2020 compared to 2005 emissions levels



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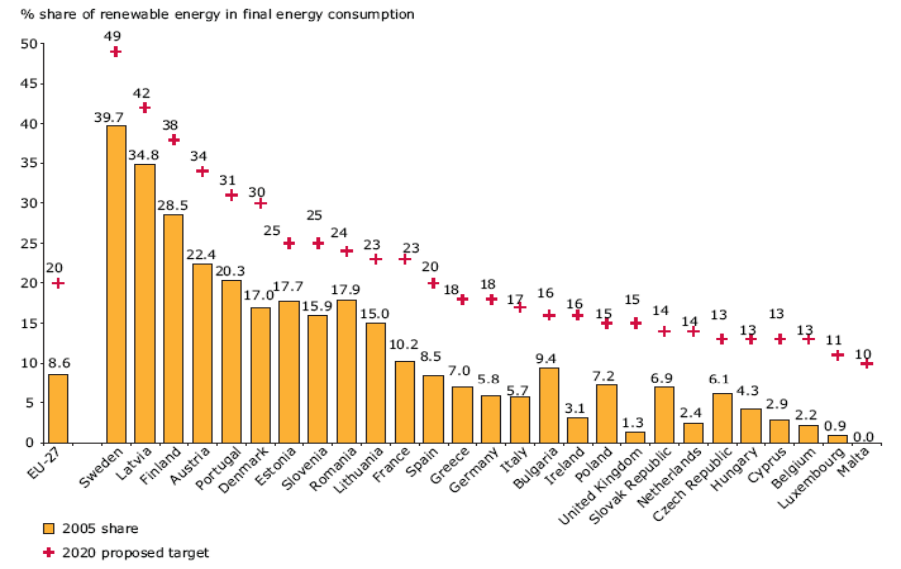
EU renewable energy targets



Source: EEA, 2008

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EU Emission Trading System (EU ETS)

- ETS – a rather new economic instrument implemented in a range of countries/regions (or are under political discussion):
  - European Union (plus Iceland, Liechtenstein and Norway, eg covering 30 countries); Alberta, Canada; Regional Greenhouse Gas Initiative (RGII), United States; New Zealand; Korea; China
- EU ETS commenced in 2005 and is the largest multi-country, multi-sector greenhouse gas emissions trading system in the world. It includes around 11,000 installations accounting for about 45 per cent of EU carbon dioxide (CO2) emissions

EU Emission Trading System (EU ETS)

- The EU ETS follows the cap and trade principle.
- Third phase will start in 2013 (2013-2020):
  - A centralised, known, EU-wide cap on emissions: in 2020 emissions will be 21% lower than in 2005, eg. annual decrease of 1.74% average annual total quantity of allowances issued by the Member States in 2008-2012
  - Aviation will be included as well as additional industries plus other GHG
  - A cap on the permissible level of emissions reductions from outside the EU
  - Fundamental change as auctioning of allowances will be the rule rather than the exception. About 60% of allowances to be auctioned in 2013, rising to 70-85% by 2020 and by 2027 100% auctioning is foreseen → a reversal of the allocation philosophy!

Non EU-ETS sectors

Non EU-ETS sectors: transport, household, services, agriculture, but also parts of the manufacturing industry

Focus will be on

- carbon dioxide taxes currently implemented in EU member states; and
- the 2011 proposal of the European Commission regarding the revision of the Energy Taxation Directive (addresses all energy products and all energy users)

Energy and carbon taxes – current situation

- CO2 taxes – implemented in several European countries since the early 1990s:
  - Finland, Sweden, Denmark, Ireland, UK, Estonia, etc.
  - CO2 tax rates differ widely between countries
- CO2 taxes cannot be considered independent of the overall energy taxation scheme
- Under discussion in different countries – including South Africa, Korea, China and the 2011 proposal of revising the EU Energy Tax Directive

Revision of the EU Energy Tax Directive (2011 proposal)

- New structure of energy taxation scheme
  - A part based on energy content per GJ, regardless of the energy product
  - A part based on CO2 emission of the energy product (carbon content of the energy product) → complement to the EU Emission Trading System (EU ETS); i.e. no double burden for business
- Tax rate based on energy content (motor fuels): gradual increase to €9.6 per GJ by 2018 (€0.15 per GJ for heating purposes, etc. in 2013)
- Tax rate based on CO2 emissions: € 20 per t CO2 (2013)

Energy and carbon taxes

- CO2 tax rates – currently implemented in European countries
  - Sweden: about €110 per ton CO2
  - Finland: €30 per ton CO2 (heating fuels) and 50 Euro per t CO2 (transport fuels)
  - Denmark: €20 per ton CO2
  - Ireland: €15 per ton CO2 → increase to €30 per ton CO2 until 2014 (part of the National Recovery Plan 2011-2014)
  - Revised EU energy taxation directive (proposal): €20 per ton CO2

Interactions between economic instruments and energy/climate policies

- Need for a long-term consistent framework that governments stick to → sending the right price signal and providing certainty for economic actors!
- Coherent policy framework regarding different economic instruments is not always guaranteed → implications are that they impair the effectiveness
  - Subsidies, ETS and other policy instruments, such as feed-in-tariffs and regulatory policies (20% energy efficiency improvements)

Interactions between instruments

UK budget 2011/12 – introduction of a **carbon floor price**

- Purpose: to encourage additional investment in low-carbon power generation by providing certainty to the carbon price; fossil fuels used for electricity generation will be liable
- The carbon floor price starts at £16 per ton CO2 in 2013 and raises to £30 per ton CO2 in 2020; carbon price support rates will reflect the differential between the future market price of carbon and the carbon floor price

→ hybrid emission trading scheme combining carbon taxes with emission trading scheme

Summary - Strengths and Weaknesses of the EU experience

- How effective have the various measures been in achieving objectives?
  - EU ETS works and reduces CO2 emissions but EU ETS prices are volatile (about €11 per ton in August 2011; dropped by 70% between 7/2008 and 2/2009 – but 'a clear long-term carbon price'?)
  - Energy/carbon dioxide taxes – results from Sweden:
    - CO2 emissions would have been 20% higher if taxes had remained at 1990 level
    - 1990 – 2007: 9% reduction of CO2e emissions; economic growth of 48% = emission reductions can be combined with economic growth

Summary - Strengths and Weaknesses of the EU experience

- Social, political and economic challenges of achieving consensus at different levels (sectoral, national etc.) against changing/shifting interests?
  - Vested interest of businesses – EU ETS: carbon leakage and free allowances
  - Energy Taxation Directive – unanimity regarding taxes at EU level
- Problems in ETS phase 1&2 and plans to ameliorate?
  - Oversupply of EU ETS allowances plus the current economic crisis → leading to a depressed carbon price
  - Use of significant quantities of credits generated outside of EU – this option will be limited in phase 3

Opportunities and remaining challenges for the EU

- Question whether policies are sufficient to reach long-term climate targets (at least a 80% reduction of GHG reduction in 2050)
  - *The surveys suggest that the current 20% emission reduction target and the level of resulting carbon prices encourage many companies to consider climate policy a relevant topic. However, most companies do not yet consider the stringency to trigger a shift to low-carbon strategies* (Neuhoff, 2011)
- Investments into renewable and grid infrastructure for a low-carbon strategies – funding gap and a low 'carbon price'!

Opportunities and remaining challenges for the EU

- Current fiscal and economic crisis: potentially a window of opportunity → energy and CO2 taxes as part of the fiscal consolidation process
- Transport – fuel consumption increased by approx. 13% between 2002 and 2009 at EU level
- Consistency of policies – see for example the stocktake exercise by the Productivity Commission – more than 1,000 different policies identified in 9 countries (Germany 131 and Australia 237)
- International climate policies – in particular main trading partners (competitiveness concerns – carbon tariff/BTA)

Thank you for your attention!

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