

The EU emissions trading scheme: Taking stock and looking ahead

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What is CEPS?

- An independent and private policy research institute founded in 1983
 - About 30 researchers from 15 countries
- To provide sound advice to policy-making process based on its own policy research.
- Expertise in EU institutions and policies including 'Energy, environment, and climate change'
- Inter- or multi-disciplinary approaches

Recent CEPS research on climate change policy

- EU Emissions Trading Scheme (ETS)
- Technology
- Post-2012
- Adaptation
- Environmental taxation

Why emissions trading was chosen? (1)

- Emissions trading promised to meet an environmental goal in the most cost-effective way.
- The resulting carbon price was expected to create long-term predictability needed for investment decisions and to help emitters factor carbon reduction strategies into day-to-day decisions
- Environmental certainty will be ensured with the cap of a cap-and-trade system on total emissions, a strong MRV system for full disclosure, and a robust compliance system (e.g. penalties, enforcement).

Why emissions trading was chosen? (2)

- Legal constraints on the EU to agree on taxation
 - An unanimous agreement by EU member states is required for any decision over taxation in the EU Council of Ministers (i.e. veto)
 - A proposal for EU-wide CO₂ taxation was defeated.
- No such constraint on the EU to agree on the environment (e.g. the EU ETS Directive)
- The price to pay for the Directive was excessive decentralisation (e.g. allocation by Member States)

Design

- EU/EEA cap-and-trade scheme (starting in 2005)
- Coverage: CO₂ of power and energy-intensive industries (= 40% of EU GHG emissions: ~ 11.000 installations)
- Global reach: CDM/JI credits accepted
- High degree of de-centralisation (→ allocation)
- Allocation
 - a) multi-year in short periods (2005-7; 2008-12 etc.)
 - b) free allocation 95%, 90%
- Comprehensive 2006 review (coming into effect in 2012)
 - a) reform (after pilot phase): allocation, compliance system
 - b) more gases, more sectors
 - c) linking
 - d) relationship to IET

The EU ETS has been work in progress

The EU ETS has not been in the stage to realise its full potential → big but temporary problems.

- Lack of data & compressed time schedule
- Delay in infrastructure development (registries, MRV)
- Market development issues (accounting, VAT, Investment Services Directive)
- CDM slow to develop (ITL, CDM Executive Board)
- Delay in implementation of the Linking Directive to allow use of CDM/JI credits in the ETS

Overall Issues

- First three years were a trial period. It was very difficult to impose carbon constraint before the Kyoto commitment period.
- Lack of harmonisation creates distortions.
(e.g. new entrants/closures rules; transfer)
cf. the Commission Guidance Document
- Short allocation periods (3-5 years)
cf. Mismatch with investment cycle (30-50 years) → ETS or CO₂

Evaluation

Ellerman, Buchner, Carraro (2007), forthcoming

Allocation: cap-setting (macro)

- Decentralised, negotiated process reflected political EU structure
- Differentiated criteria by member states: between less than BAU and Kyoto “path”
- Modest cuts & high dependence on projections
- NAP 2 changes:
 - Use of explicit “objective” projection based on 2005 verified emissions
 - less leeway on Kyoto consistency

Allocation: methodologies (micro)

- Benchmarking the exception despite wide-spread advocacy
- Strong reliance on recent historical emissions
- Expected shortage was allocated to power sector
- Little use of auctioning
- Novel new entrants/closure provisions

Benchmarking; why so little?

- Complex: emissions factor plus activity rate (projected output, standardised load factors, historic, recent and actual production)
- Products and processes are not homogenous & lack of pre-existing standards (e.g. BAT, BATNEEC etc.)
- Predominance of historical use and existing energy endowments

Default: Recent historic emissions

- Default option because of impossibility of benchmarking
- “Recent” emissions guarantees “what is needed”
- Modified by averaging, selective choices and compliance factors (→ undermining the internal market)

Shortage in power sector

- Exceptions: Ireland, Italy and Germany
- Twin rationale:
 - Abatement potential
 - No exposure to non-EU competition
- Perception or reality ?

Little auctioning

5% /10% maximum

- Only Denmark used in full
- Easy solution given haste
- Lobbying
- Similarity to SO₂, NO_x, fish, cattle → claims by prior users “ecological squatter issue” (Ellerman)

More items

- New entrants and closure rules unique feature by EU ETS
- Uncertainty of actual surplus in 2005: could be 97 Mt CO₂ (Ketter et al 2007)
- Abatement may have happened (Ellerman & Buchner 2007)
- Relying on modest reductions and projections is dangerous

NAP 2 differences:

Benchmarking

- Some increase – all in power (DK, I, E)
- But differentiated across countries (UK, D, NL)

Auctioning

- 8 member states (instead of 4)
- power
- Total: 0.13% (NAP1) to 1.2%-1.8% of total EUAs
- UK: 7% is highest observed auction fraction in the world
- Auctioning is reduced with tighter cap

NAP 2 differences (2)

- More stringent
- -14.2% below 2005 verified emissions (after 15 NAPs)
- Caveat: if all CDM/JI credits are used – no domestic abatement (Schleich et al 2007)

Distributional impacts in liberal markets

- Power prices go up
- Non-fossil-fuel power industry makes windfall profits because of higher electricity prices as a result of the ETS in liberal markets.
- **Fossil-fuel** power industry makes windfall profits from free allocation in the ETS
- Power industry can pass through carbon costs while energy users cannot. Certain energy users trading global commodities (e.g. aluminum, cement) are at a competitive disadvantage. (?? – depends)

Carbon Trust 2004; IEA 2005, Sijm (2005; 2006a; 2006b) European Commission/McKinsey/Ecofys 2007

2006/07 EU ETS Review

- Process
 - i) ECCP working group on the review will report in mid-2007. 1st meeting on 8-9 March.
 - ii) Commission's legislative proposal in the 2nd half of 2007
- 4 main issues
 - Scope, cf. sectors and gases
 - Harmonisation cf. benchmarking, auctioning
 - Compliance and enforcement
 - Linking
- Not radical changes but streamlining
- Changes will take effect in 2013 (or 3rd phase)

Future priorities

- Complete infrastructure, solve market development issues, and boost project mechanisms.
- Allocation:
 - EU cap setting;
 - Harmonisation (e.g. new entrants/closure rules, definition of installation, small installations)
 - Allocation methodologies
- Address competitiveness and distributional impacts?
There will be no structural solutions but member states-based ones on a case-by-case basis. (e.g. in NAPs)
→ cf. 2nd report of the High Level Group on Competitiveness, Energy and the Environment.

CEPS ETS reports

Shaping the Global Arena: Preparing the EU Emissions Trading Scheme for the Post-2012 Period (March 07)

The EU ETS: Taking stock and looking ahead, ECP paper, No.2, European Climate Platform, 2006.

The contribution of linking emissions markets to a global climate change agreement: feasibility and political acceptability, Final report to Economic and Social Research Institute, Cabinet Office, Government of Japan, 2006.

Reviewing the EU emissions trading scheme, Part I&II, CEPS Task Force Report, No.56-57, 2005/06.

Market stimulation of electricity-based renewables in the internal market, CEPS Task Force Report, No. 56, 2005.

Business Consequences of the EU Emissions Trading Scheme, CEPS Task Force Report No. 53, 2005.

Other climate and energy CEPS reports

Improving the Clean Development Mechanism, ECP Paper, No.1, European Climate Platform, 2005.

Bottom-up approaches in the formation of a global climate change regime: The potential of regional bubbles and emission markets, Final report to Economic and Social Research Institute, Cabinet Office, Government of Japan, 2005.

Rethinking the EU Regulatory Strategy for the Internal Energy Market, CEPS Task Force Report No. 52, 2004

Completion of the EU Emissions Trading Scheme in the Emerging Global Climate Regime, CEPS Task Force Report No. 49, 2004



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