



Energy research Centre of the Netherlands

**The impact of the EU ETS on electricity prices:
experiences from the past and expectations for the future**

Jos Sijm

3rd Meeting of the ECCP working group on emissions trading
Brussels, 21-11 May 2007



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Summary of past research (1)

- First report (September 2005)
 - Empirical research (January-July 2005):
 - 2 countries (GE, NL), 2 markets (year ahead: peak & off peak), 3 methods:
 - 12 estimates: 40-70% pass through (3-10 €)
 - Good econometric tests
 - Model research (COMPETES):
 - 4 countries (BE, FR, GE, NL)
 - Pass through: 60-80% (1-19 €/MWh)

Summary of past research (2)

- Second, update report (March 2006; Climate Policy June 2006):
 - Empirical analyses:
 - Same countries/markets; several methods
 - Pass through: 60 - 120%
 - Less good econometric tests

Current work for EC/DG Environment

- Project: Impact of the EU ETS on electricity prices
- Aim: impact analyses & policy recommendations
- Scope:
 - Review of the literature
 - Empirical & statistical analyses
 - 9 countries: FR, GE, IT, PO, SP, SW, CZ, NL & UK
 - 4 power markets: spot/forward & peak/off-peak
 - Both wholesale & retail markets
 - 2 years: 2005 and 2006
 - Model analyses (COMPETES extended)
 - Policy evaluation analyses
- Duration: 2007

A few preliminary results

- Increase in forward power prices/spreads (2005-2006)
- Increasing trends in spot markets, but more volatility
- Main price drivers on 2005 forward markets:
 - Gas-fired: fuel & carbon costs
 - Coal-fired: carbon costs
- Forward markets (2006), spot markets (2005-2006):
 - Links between carbon costs and power price/spread is less clear
- Best statistical results:
 - 2005; forward; off-peak; coal-fired; liberalised markets (GE, NL, UK); during specific periods of 2005-2006
- Worst statistical results:
 - 2006; spot; peak, gas-fired

Some points for discussion (1)

- *Is carbon pass through a problem?*
 - No, it is a rational (intended) effect
 - Yes; although overstated generally by energy-intensive industries, some sectors do suffer
 - The competitive position of the energy-intensive industries in a carbon constrained environment is a general policy issue (i.e. not a specific ETS issue) and, hence should be treated as such
- *Are windfall profits a problem?*
 - Two categories of windfall profits can be distinguished (i.e. fossil versus non-fossil producers)
 - Yes, to some extent windfall profits are a problem

Some points for discussion (2)

- Will carbon pass through & windfall profits continue in the future?
 - Yes , although impact in the long run will be mitigated by induced additional investments in generation capacity
 - However, free allocations undermine incentive structure towards carbon reducing investments
 - A shift of free allocation towards auctioning will have a beneficial impact on carbon reducing investments, reduce (windfall) profits of fossil generators, but most likely not have a (significant) impact on cost pass through or windfall profits of non-fossil generators
- Are there feasible policies to address 'adverse effects' of carbon pass through?
 - No silver bullet, but sensible combination of measures can address most of the issues