

The cost of non ETS scenario Or : the benefits of giving it a “second life”

Christian de Perthuis
Université Paris-Dauphine

CEPS

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- The aim of ETS is to reach a certain amount of emissions at the lowest cost ;
- The cap gives the target ;
- Ex Post abatement cannot be observed : they have to be estimated in comparing actual emissions with a BAU scenario;
- Ex Ante abatement can be estimated in comparing the target with a “Business as usual” (BAU) scenario. The main difficulty is to estimate the amount of abatement resulting from other policies;
- We present a first Ex Post evaluation based on ZEPHYR model simulations and on the cost of reducing emissions through alternative existing policies (Feed-in tariffs and biomass).

- European abatements by sectors given by ZEPHYR-flex :
 - Electricity : 85 %
 - Heat : 8%
 - Industries : 7%
- Cost of feed-in tariffs for the renewable in France (before 2011 and 2012 reductions in the tariffs) : 34-90 €/T (coal-Natural gas)
- Additional cost of biomass/fossils switching in the heat and industrie sectors : 7 €/T (in addition of EU-ETS carbon price). Estimation using responses to public tenders in France (“Fonds Chaleur”).
- Average abatement cost without ETS : 35 €/T

An ex-post evaluation based on ZEPHYR : Cost of abatement with ETS

	Abatement	Average CO2 Price(*)	Average cost	Abatement cost
	MT	€/T	€/T	M€
2005-07 / Year	100	17,5	13	1 300
2008-11 / Year	170	16	14	2 380
2005/2011				
/ Year	140	16,5	13,7	1 917
Total	980	16,5	13,7	13 420
(*) 2007 excluded				

Source : Climate Economics Chair, ZEPHYR-flex Model

An ex-post evaluation based on ZEPHYR : Cost of abatement without ETS

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- With our hypothesis we obtain a cost of non ETS of :
 - 21 Billion Euros (34-13) for the first seven years;
 - Around 3 billion Euros per year (4.9-1.9).

- This is a first order of magnitude, estimated “A minima”. For further investigation, we have to discuss precisely :
 - The hypothesis used in the ZEPHYR scenario to estimate abatement ;
 - The “shadow prices” associated with alternative policies ;
 - The nature of the scenarios we want to asses : Non-ETS ? Distorted-ETS ? “Second-life” ETS ?

Thank you for your attention !

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