

Learning from Experience: First Year of the European CO₂ Emissions Trading Scheme



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New Prospects for Climate Change Regulation
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A Significant Accomplishment



- **Cards stacked against successful, on-time implementation**
 - 25 Member States
 - Decentralized cap-setting for initial period (2005-07)
 - Generally poor-quality data to begin
 - 11,400+ sites
 - Few pre-existing site-level targets
 - Very wide coverage (by sector, size, and familiarity with trading)
 - Large amounts at stake in allocation (€20-40+ billion per year)
- **US Acid Rain Allowance program had centralized cap-setting, fewer and more homogeneous sources, more time**
- **US NO_x markets also decentralized, but caps set centrally**
- **RECLAIM has comparable heterogeneity, but central coordination and pre-existing target “benchmarks” for all participants**

Contrasts with Prior Programs



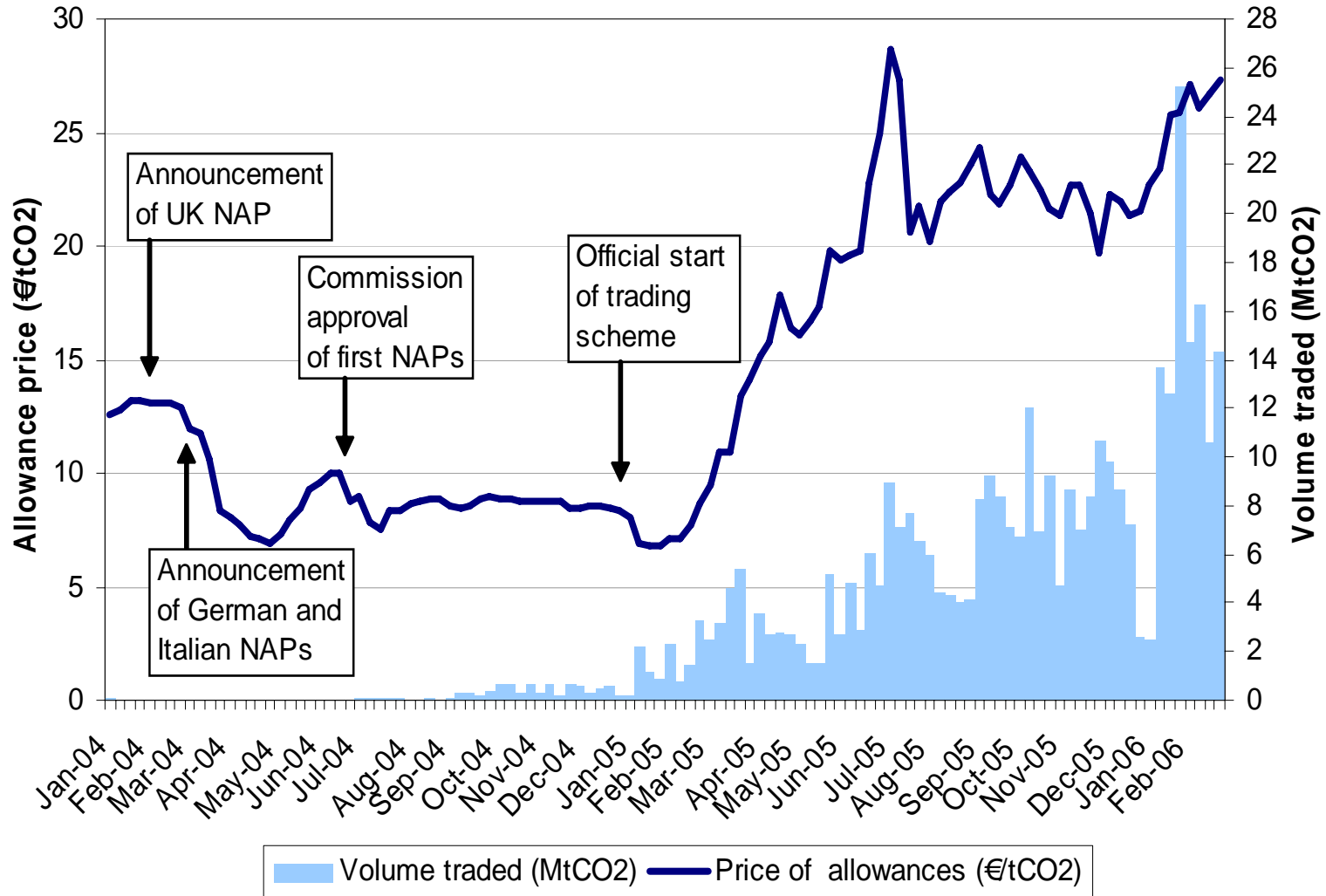
■ Many Common Elements

- Shift from legal-engineering to price response
- Basic architecture of a cap-and-trade program
- Allocation contentious but doable; allowance markets developed

■ Some Differences

- Allocations based upon recent emissions, not benchmarking (heterogeneity, no prior standard)
- New entrant reserves/closure provisions (except some NO_x states)
- Multiple, sequential cap level and allocation
- More long-term uncertainties (cap, allocations, post-2012?)

EU ETS CO₂ Prices



The Developing CO₂ Market



- More than 1 million tons traded each *day*, valued at € tens of millions
 - About 250 MtCO₂ traded in 2005, equal to about €4.8 billion
 - US SO₂ program saw “just” 1.9 MtSO₂ traded in its first year, at a value of around \$200 million

- Market still maturing
 - Relation to price fundamentals (fuel, spread among vintages) unclear
 - Still concerns about “letting market work” (e.g., “ex post” adjustments)
 - Some registries not available; some firms (sellers?) not engaged
 - Importance of CDM credits unclear
 - Uncertainties over future caps/allocations due to sequential decisions cloud capital investment abatement decisions

Some Surprises and Concerns



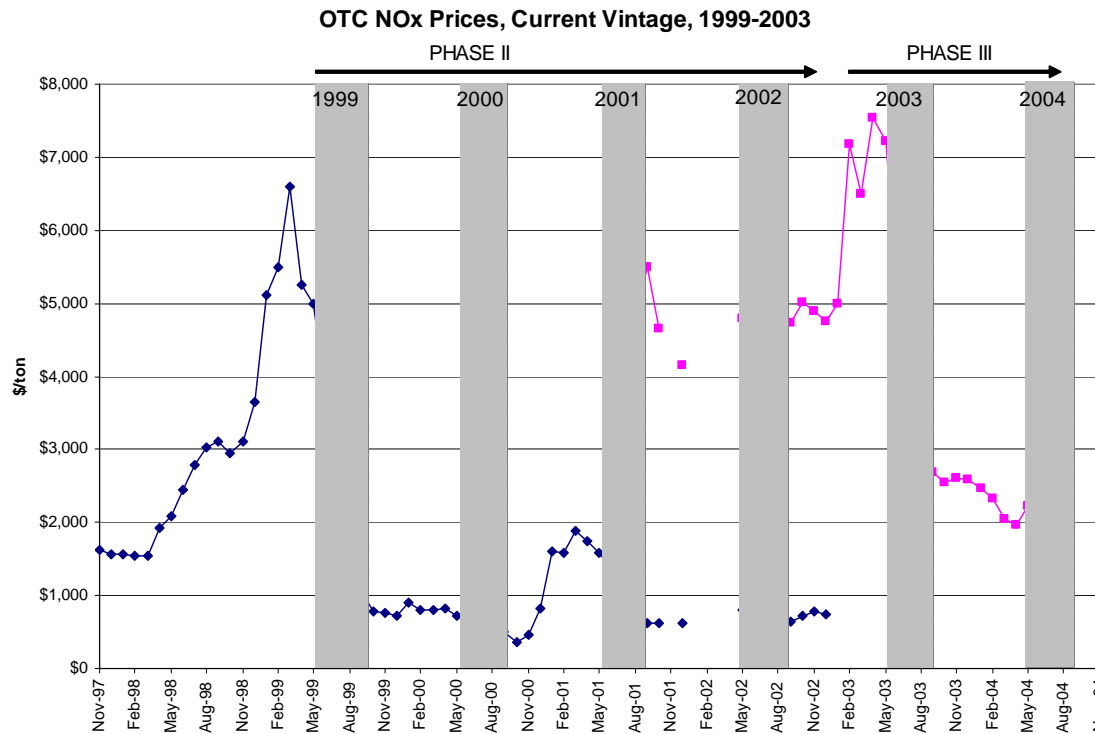
- Prices of CO₂ in 2005 surprising to most
 - Despite un-ambitious cap (e.g., 0-4% below BAU)
 - Few projecting prices over €10/tCO₂ one year ago
 - High oil/gas prices and other potential causes (low hydro, sellers waiting, strategic behavior for Phase 2) but much to be explained
 - Contrast to SO₂, where actual prices lower than expected (used by some to measure “success” of trading)

- Concern about electricity prices
 - Substantial rise in electricity prices in 2005
 - Efforts underway to understand impacts of EU ETS on electricity prices and evaluate “complications” (e.g., interactions of fuel/emission/electricity markets, operations of electricity markets, influence of new entrant reserve/closure provisions, green/white certificates)
 - Proposals to limit electricity prices and “windfall profits” (re-regulate electricity prices?) in light of competitiveness concerns

Price Trends in US NO_x Market



- Will EU CO₂ prices look like these?
- Suggests another reason to postpone “actions”



Some Key Issues for the Future



- Scope for abatement (short-and long-term)
 - Prices reflect more expensive reductions than expected?
- Interactions with other policies (e.g., green certificates)
 - How EU ETS affects renewable markets and vice versa (EC report)
- Nature of future caps/allocations
 - Treatment of new entrants/closures and “updating effect”
 - Role (and format) of benchmarked allowances, of auctioned allowances
- Competitiveness, trade and international climate regime
 - Complicated set of issues (e.g., overall cap, new entrants, electricity price concerns, post-2012 planning)
 - Studies limited but work underway

Significance of EU ETS Year 1



■ In Europe

- EU ETS a major accomplishment for EC and Member States—promoting cost-effective CO₂ reductions
- CO₂ prices and electricity prices – future uncertainties and importance of electricity liberalization suggest actions premature
- “Got peoples’ attention” – process for Member State Phase 2 NAPs (both caps and allocations) likely to be “interesting”

■ U.S. and Rest of the World

- Shows continent-wide carbon trading regime can be set up
- Global support for emissions trading, putting spotlight on CDM
- Implications for potential U.S. cap-and-trade program

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