

The UK Emissions Trading Scheme auction

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UK Emissions Trading Scheme

- UK ETS began March 2002.
 - World's first large-scale greenhouse gas trading scheme
- “Direct” participants
 - 32 successful bidders in March 2002 auction
 - Undertook voluntary targets for additional abatement, in exchange for incentive payment (ie subsidy per tonne of abatement in 2006, against historic baseline)
 - Cap-and-trade system: DPs are allocated allowances equal to baseline emissions minus abatement target
- “Agreement” participants
 - Firms within Climate Change Agreements can achieve compliance by trading
 - Baseline-and-credit system: CCA members generate allowances through over-compliance with CCA target
 - Up to 6000 potential "agreement" participants

The subsidy auction

- 11-12 March 2002
- "Descending clock" auction, to allocate abatement subsidy budget of £215m
 - started at £100 / tCO₂e
 - 38 initial bidders
 - bids totalled 4.9 mtCO₂e (aggregate cost of £490m)
 - Price per tonne successively reduced, until aggregate bid matched budget
 - Auction closed after 9 rounds, at price of £53.37 /tCO₂e.
 - Total percentage emission reduction in 2006, against baseline = 13%
- 32 successful bidders.
 - A small number of firms awarded a high proportion of the total auctioned allowances. (One firm awarded 20% of total)
 - Over half of DP emission reductions are in non-CO₂ GHGs.

The ETS auction outcome: successful bidders and targets

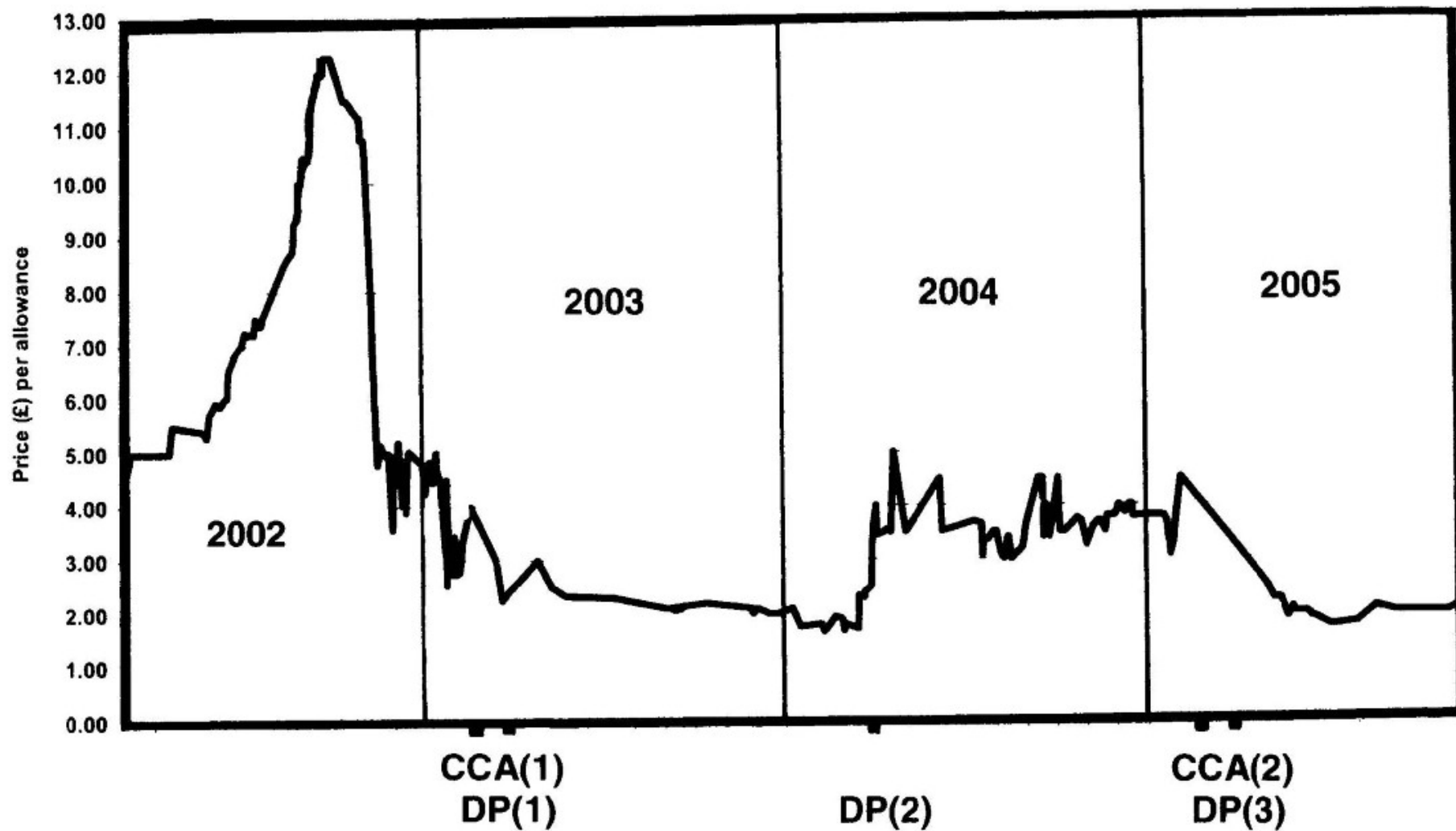
	Target (emission reduction in 2006 against baseline) thousand tonnes CO ₂ e	Share of total target (Share of auctioned allowances) percentages	Percentage emission reduction against baseline percent
Ineos Fluor Ltd	806	20.0	43.3
Du Pont (UK) Limited	500	12.4	19.0
Shell UK Ltd	439	10.9	11.5
Rhodia Organique Fine Limited	430	10.7	20.5
UK Coal Mining Limited	400	9.9	8.8
British Petroleum plc	354	8.8	5.2
First Hydro Company	285	7.1	20.8
Lafarge plc	250	6.2	7.8
24 smaller bidders	564	14.0	13.1
Total	4,026	100.0	13.2
top 3 firms	1,745	43.3	21.0
top 10 firms	3,688	91.6	13.2
bottom 10 firms	26	0.6	16.7

Source: Defra emissions trading website.

Cost of GHG abatement in the auction

- DP auction cleared at price of £53.37 /tCO₂e.
 - But commitments in the auction were for 2006 reductions (as against baseline, normally 1998-2000 emissions).
 - Intermediate reductions were also required, with rising profile over five years: 20% 40% 60% 80% 100%
 - This profile requires 3 tonnes of total abatement for each 2006 tonne.
-implies a price per tonne of abatement of £17.79 /tCO₂e
-equivalent to approx \$114 /tC (17.79 *1.75 * 44/12)

Market price has fluctuated, but always well below auction price. Currently about £2 (\$4) /tonneCO₂



The “problem” of the accumulated permit bank

- **DPs agreed to cumulative abatement of 11.88 mtCO₂e over 5 years (2002-06).**
 - Rising profile of targets (20% of 2006 target in year 1, 40% in year 2,..etc).
- **In first two years, abatement by DPs exceeded targets by 7.41 mtCO₂e**
 - ie abatement was 4x target
- **The accumulated allowance bank was projected to be well over 10 mtCO₂e by end-2004.**
 - The large bank reduces the value of allowances, and hence abatement incentives for CCA participants.
- **April 2004 National Audit Office report criticised over-generous baselines for some firms**
 - allowing them to obtain allowances for non-additional abatement

Reducing the bank

Defra considered various options for reducing the size of the bank.

- eg cancel allowances, restrict tradeability, re-run auction
- consultation document sent to DPs in August 2004
- Goal: a bank of approx 2.5 mtCO₂e by end-2006, when DPs leave the scheme.
- one-off cancellation of allowances to achieve this would need to be approx 15 mtCO₂e.

Requires drastic intervention:

- retrospective measures affect behaviour less than measures affecting future years
- if no retrospective measures, intervention must be very stringent, because bank is already very large.
- various legal and practical issues arise with retrospective measures. eg should there be "buyer" or "seller" liability for cancelled allowances already traded?

Outcome (Defra announcement on 30 November 2004)

- Six companies agreed to make voluntary additional emission reductions totalling 8.9 mtCO₂e
- Ineos Fluor, Rhodia Organique Fine, INVISTA textiles, BP, British Airways, Lafarge Cement
- Is 8.9 mtCO₂e enough?

Price impact?

- Price series shows no impact at August 2004 review, or of November 2004 announcement.
- Did April 2004 price rise from £2 to £4 anticipate this deal?

Why didn't the firms offer more, in order to maximise value of remaining allowances?

Over-compliance in the first three years, and the effect of the 2004 adjustment

