EU & UK Emission Trading Schemes

Lianhai Wu
Crop & Soil Systems Research Group
Scottish Agricultural College
Craibstone Estate, Aberdeen AB21 9YA
Lianhai.Wu@sac.ac.uk

OUTLINE

SAC

- UK Emissions Trading Scheme
- EU Emissions Trading Scheme
- European Climate Exchange (ECX)

UK Emissions Trading Scheme

- The UK is a signatory to the 1997 Kyoto Protocol, In addition, the UK Government aims to go beyond the reductions required under the Kyoto Protocol using the UK Climate Change Programme, to achieve this. The UK Emissions Trading Scheme is part of the Programme.

- The Scheme aims to secure significant reductions in UK GHG emissions - 3.96 million tonnes in 2006, or about 6% of the 65.8m tonnes reduction it was estimated that the policies and measures in the Climate Change Programme might deliver by 2010

UK Emissions Trading Scheme (UK ETS) (2002 – 2006)

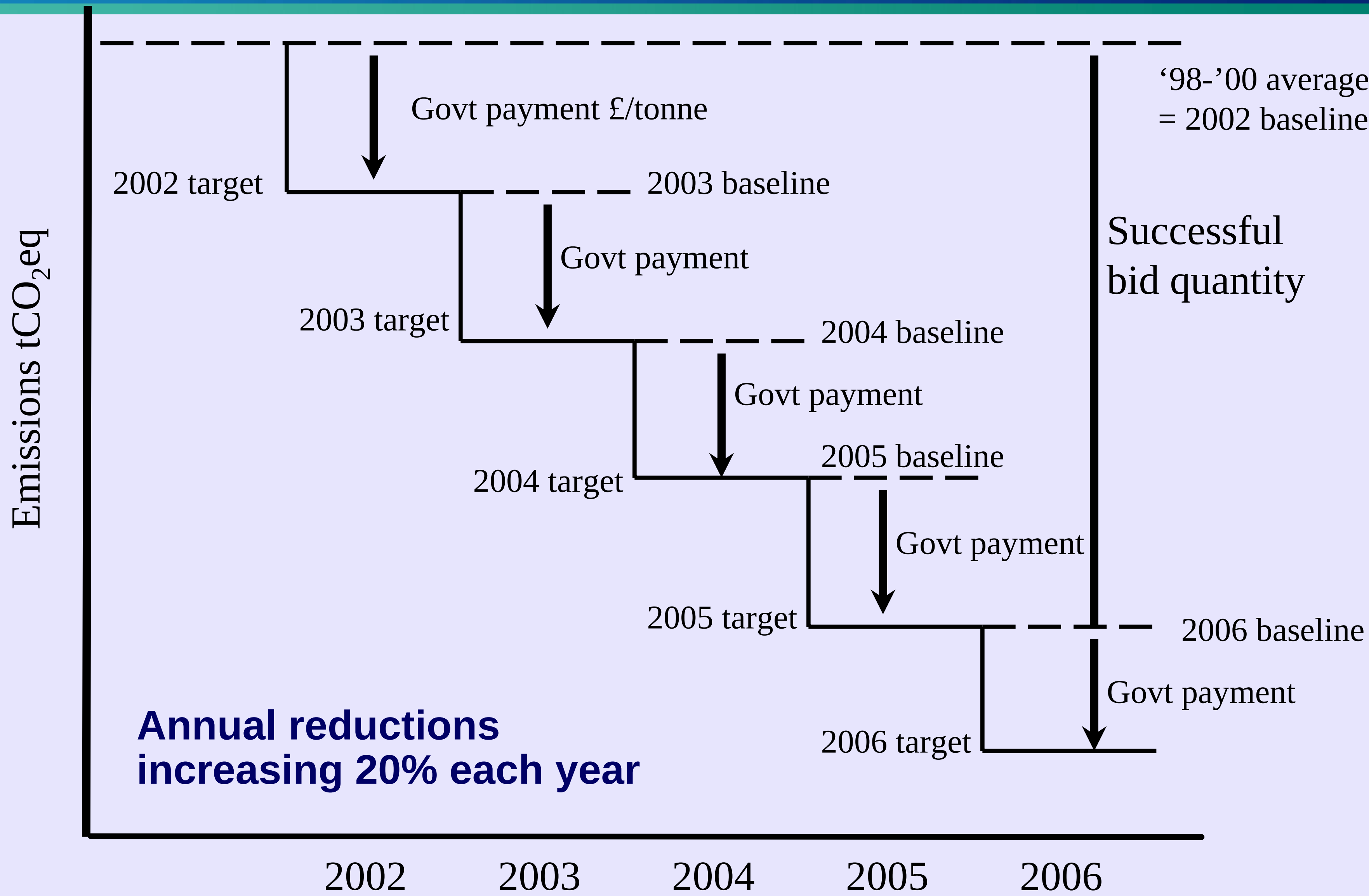
- The Scheme is the first GHG trading scheme in the world which allows many companies to participate and achieves three objectives:
  - to secure cost-effective GHG emissions reductions
  - to give UK companies early experience of emissions trading, with a particular view to being ready for the European Union Emissions Trading Scheme (EU ETS)
  - to encourage the establishment of an emissions trading centre in London

How the Scheme works – auction

- The Scheme began with an auction in March 2002, in which companies and other organisations (‘Direct Participants’, 34 in total, 3 of them withdrawn later) bid emission reductions over the five years 2002 to 2006 in return for a share of £215m incentive funding from DEFRA.

- DP could either enter the whole of their business into the Scheme, or just part, for example a particular factory. The auction led to promises to reduce total emissions by 4m tonnes, to be achieved in stages over the five years from 2002.

Calculation of Direct Participants' baselines



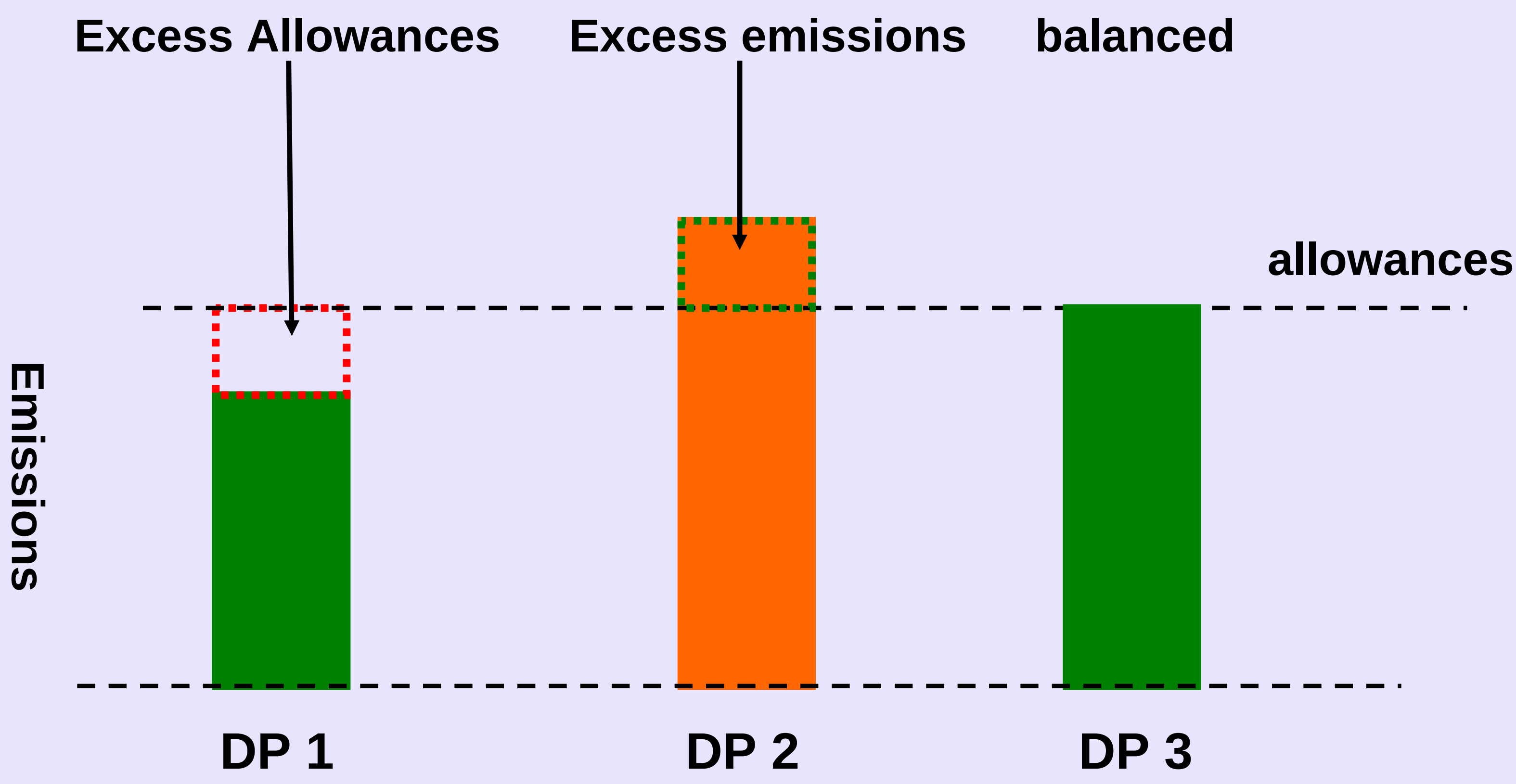
Annual reductions increasing 20% each year

How the Scheme works – trading

- DPs' commitments to reduce emissions were converted into an annual amount of emissions allowances

- From April 2002 the allowances can be traded with DPs, with other eligible companies known as 'Agreement Participants' , or with traders.

Flows of allowances within the system



New road to battle with emissions in the UK

- UK ETS closed at the end of the year 2006.
- Carbon Reduction Commitment is under way
  – a mandatory auction based cap and trade scheme
  – Emissions covered under CCAs and included in EU ETS will not be covered by CRC.
  – Participants are those that annual electricity consumption in excess of 6,000(MWh) and will be required to purchase sufficient allowances
- scheduled to begin in April 2010, with a three-year introductory phase. The first capped phase will begin in April 2013

EU Emissions Trading Scheme

EU Emissions Trading Scheme

- The EU ETS is one of the key policies introduced by the European Union to help meet the EU's GHG emissions reduction target under the Kyoto Protocol. The EU is required to make an 8% reduction in emissions compared to 1990 levels by the first Kyoto Protocol commitment period (2008 to 2012).

EU Emissions Trading Scheme

- In 2005 the EU implemented the EU-ETS. The Scheme is mandatory and applies to every company with certain types of industrial operation, across the EU. The UK Scheme has been a key influence on the European Union's decision to use emissions trading rather than more traditional forms of regulation.
  - Phase I: 2005-2007
  - Phase II: 2008-2012
  - Phase III: 2013 - 2020

Cap and Trade

- EU-ETS sets a cap on ‘installations’ (equipment producing emissions) above a certain size in 6 industrial sectors:
  - energy production
  - ferrous metals production
  - cement manufacture
  - ceramics and brick manufacture
  - glass production
  - pulp & paper
- Caps are set through a process called the National Allocation Plan (NAP). National governments submit proposals for total cap and split between installations to the EC, which assesses :
  - Whether the proposed plan is consistent with meeting the country’s emission reduction targets under the Kyoto Protocol
  - Whether the allocation could distort competition across the EU

Phase I in EU ETS

- In 1st phase EU-ETS covers approx 12,000 installation representing approx 40% of the EU's CO_2 emissions. Verified emissions have seen a net increase over the first phase of the scheme by 1.9%

EU ETS Price Development

Source: point carbon

Phase II in EU ETS

- The NAPs for phase II have been finalized.
  - Aviation sector likely to be included in EU ETS from about 2011.
  - The ‘linking directive’ allows installations to meet part of their cap (0-20% depending on country) through project-based credits (CER’s and ERU’s).
  - This link between the EU ETS and KP project mechanisms has led to a close link between the price of Phase 2 EUA’s and secondary market CER’s/ERU’s.
- No ‘banking’ is allowed between phases 1 and II of the EU-ETS

NAPs in Phase II (annual mt of CO_2)

Member State	Cap	From additional installations	JI/CDM limit(%)	Member State	Cap	From additional installations	JI/CDM limit (%)
Austria	30.7	0.35	10	Latvia	3.43	n/a	10
Belgium	58.5	5.0	8.4	Lithuania	8.8	0.05	20
Bulgaria	42.3	n/a	12.55	Luxembourg	2.5	n/a	10
Cyprus	5.48	n/a	10	Malta	2.1	n/a	Tbd
Czech	86.8	n/a	10	Netherlands	85.8	4.0	10
Denmark	24.5	0	17.01	Poland	208.5	6.3	10
Estonia	12.72	0.31	0	Portugal	34.8	0.77	10
Finland	37.6	0.4	10	Romania	75.9	n/a	10
France	132.8	5.1	13.5	Slovakia	32.6	1.78	7
Germany	453.1	11.0	20	Slovenia	8.3	n/a	15.76
Greece	69.1	n/a	9	Spain	152.3	6.7	ca. 20
Hungary	26.9	1.43	10	Sweden	22.8	2.0	10
Ireland	22.3	n/a.	10	UK	246.2	9.5	8
Italy	195.8	n/a	14.99	**SUM**	**2082.68**	**54.69**	**-**

UK auctions Carbon emissions permits

- **UK sold 4m allowances at a rate of €16.15/t on 19/11/2008 and raised nearly €65m, marking a transition towards a system in which companies will be required to pay for the right to pollute. These allowances have been distributed for free until now, but EU rules allow governments to auction up to 10% of the permits between now and 2012, when phase two ends.**
- **Other EU countries are preparing to follow suit, and the EU is debating rules that would require all carbon allowances to be auctioned from 2013.**

Phase III in consultation

- Much more central control by the Commission
- Progressively tightening caps and no NAPs
- Auctioning of allowances: 100% in power sector from 2013 onward; 20% in 2013 rising to 100% in 2020 in other sectors

European Climate Exchange (ECX)

- The underlying commodities being traded at ECX are EU allowances (**EUAs**) as issued under the EU Emissions Trading Scheme. One EUA equals one tonne of CO_2 (right-to-emit). Approximately 2.3 billion EUAs in total have been granted yearly to the 12,000 energy-intensive installations covered by the EU ETS Directive.
- ECX added Certified Emission Reduction units (**CERs**) as another underlying commodity. CERs are generated from CDM projects, in the form of physically-settled futures and options contracts.

Products of ECX

- **ECX products**
  - **ECX EUA Futures Contract**
  - **ECX EUA Options Contract**

- **CER Products**
  - **ECX CER Futures Contract (on 12/03/08)**
  - **ECX CER Options Contract (on 16/05/08)**

Trade interface of ECX products

- ICE Futures' markets are hosted on the Interchange electronic trading platform, operated by Intercontinental Exchange.
- Platform accessed in two ways:
  - either through ICE Futures' proprietary front-end - known as 'WebICE'
  - or through an Independent Software Vendor (ISV).

The way to access the market

- ICE Futures Member
  - General Participant
    - trade on their own accounts and on behalf of clients
  - Individual Participant
    - trade only on their own accounts
  - Trade Participant
    - trade only their own accounts
- by trading via an intermediary

Participant Membership Criteria

1. satisfy ICE Futures that it is fit and proper;
2. maintain a properly established office (in a location which is acceptable to ICE Futures as it may determine in its absolute discretion) for the conduct of its business on ICE Futures;
3. provide details of the location of Responsible Individuals and ensure that such details (and any related information including order routing) are advised to ICE Futures upon request throughout the period of membership;
4. be able to demonstrate, to the satisfaction of ICE Futures that it has sufficient systems and controls in place to ensure that all employees, agents and representatives who may act on its behalf or in its name in the conduct of business on ICE Futures are fit and proper with suitable qualifications and experience and adequately trained and properly supervised to perform such functions;
5. be a clearing member of the LCH.Clearnet Limited or be accepted for such membership, or be a party to, or satisfy ICE Futures that it will become a party to, a clearing agreement with a clearing member;
6. be party to an Electronic User Agreement (EUA) which is in full force and effect;
7. where relevant, be authorised or otherwise exempt, licensed or permitted by the appropriate regulatory body to conduct business on the Market;
8. hold all necessary licenses, authorisations and consents, or benefit from available exemptions, so as to allow it to carry on business as a Participant on the Platform in accordance with all applicable laws and regulation;
9. satisfy ICE Futures that it enjoys the financial standing suitable for admission to membership supporting its claim by a copy of the last 3 years audited accounts (and thereafter the latest) or such evidence as the Directors may require; and
10. satisfy such other requirements of ICE Futures as they may stipulate, supplying such documents in support as ICE Futures requires.

SAC

Supporting the
land-based industries
for over a century

SAC