A UK Perspective on Carbon Markets

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Unrestricted slide pack

Overview

UK perspective on Global and European carbon markets, covering topics raised in both analytical and policy panel sessions

1. Overview of DECC analytical work on carbon prices
   i. Carbon valuation for policy appraisal

2. Live policy issues: a UK perspective on
   i. Evolution of the global carbon markets
   ii. Evolution of EU ETS

I: ANALYTICAL WORK ON CARBON PRICES

Why does DECC produce carbon price projections?

We don't produce forecasts for commercial purposes as e.g. banks do, we produce carbon values for use in policy appraisal

These values are used to inform key policy decisions

- Included in cost benefit analysis when appraising policies
- Applied whether policies reduce or increase emissions. Whether climate policies or not
- To help make real choices between competing objectives

Any policy decision involves an implicit valuation of carbon. Making valuation explicit helps to

- Ensure account is taken of evidence in decisions
- Ensure consistency in decision making across policies
- Improve transparency and scrutiny

Different approaches to valuing carbon

The value of carbon can be estimated using three approaches:

- Social cost of carbon (damage cost)
- Marginal abatement cost
- Market price of carbon

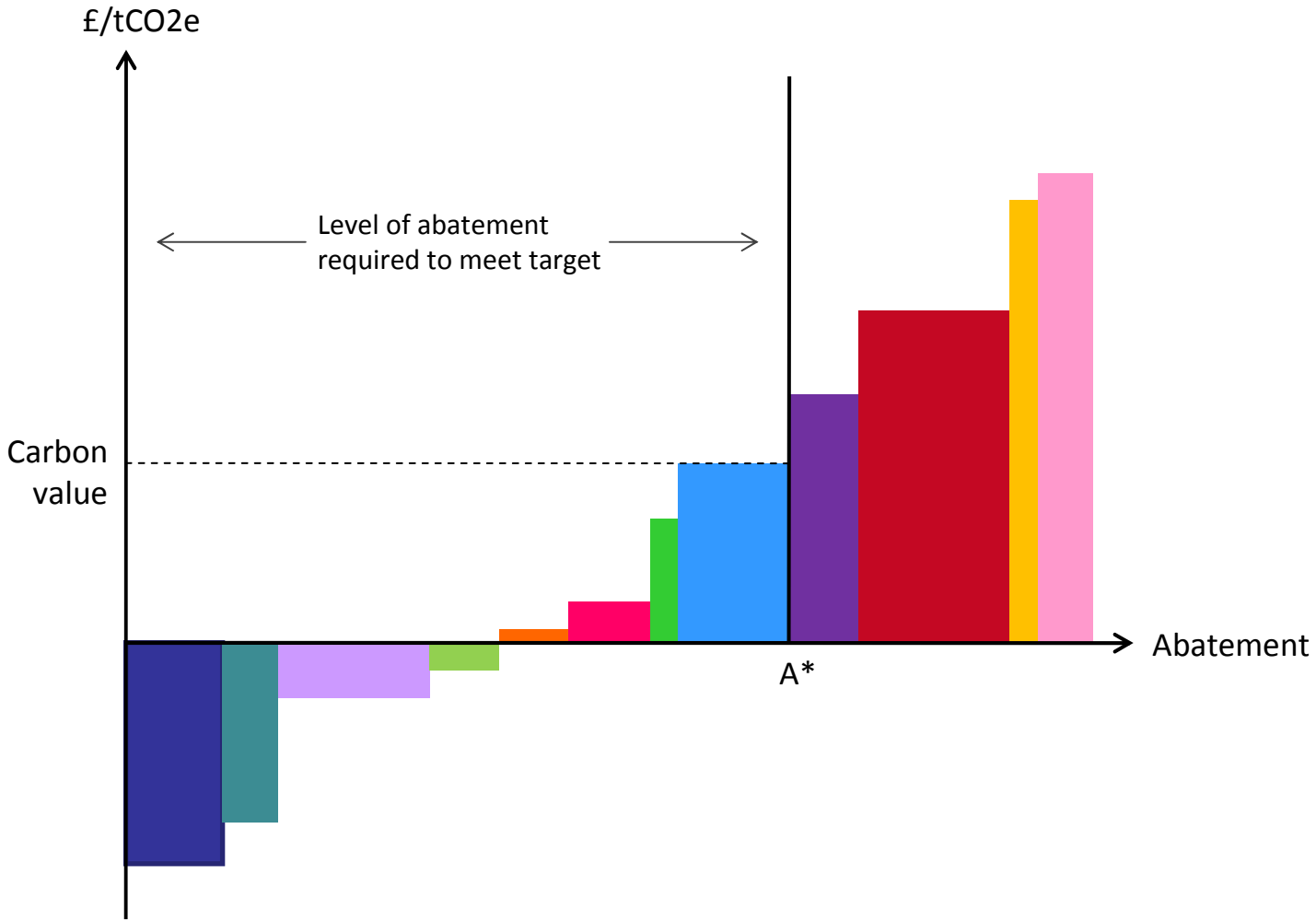
Under certain conditions these three approaches will be equal. However, this condition does not currently hold:

- Uncertainty in evidence (non-linearities)
- No comprehensive international deal

New target consistent approach agreed in 2009 values carbon according to the different targets we have in place

- Two short-term values: traded price and non-traded price of carbon up to 2030
- Post 2030: a single traded price of carbon

Target-consistent approach to carbon valuation



Short term values up to 2020

Traded carbon price derived from ETS cap for 20% world using the DECC EU carbon price model

Supply of abatement: MAC curve
- Fuel switching: Poyry fuel switching MAC
- Project credits (CERs): GLOCAF
- Abatement in industrial sectors: Bloomberg industrial abatement MAC

Demand for abatement
- BAU scenarios determine effort

We use this information to calculate the abatement required over the 10 year period, the profile of which is determined by the cost of carry which we take to be 1.5%

Long term values

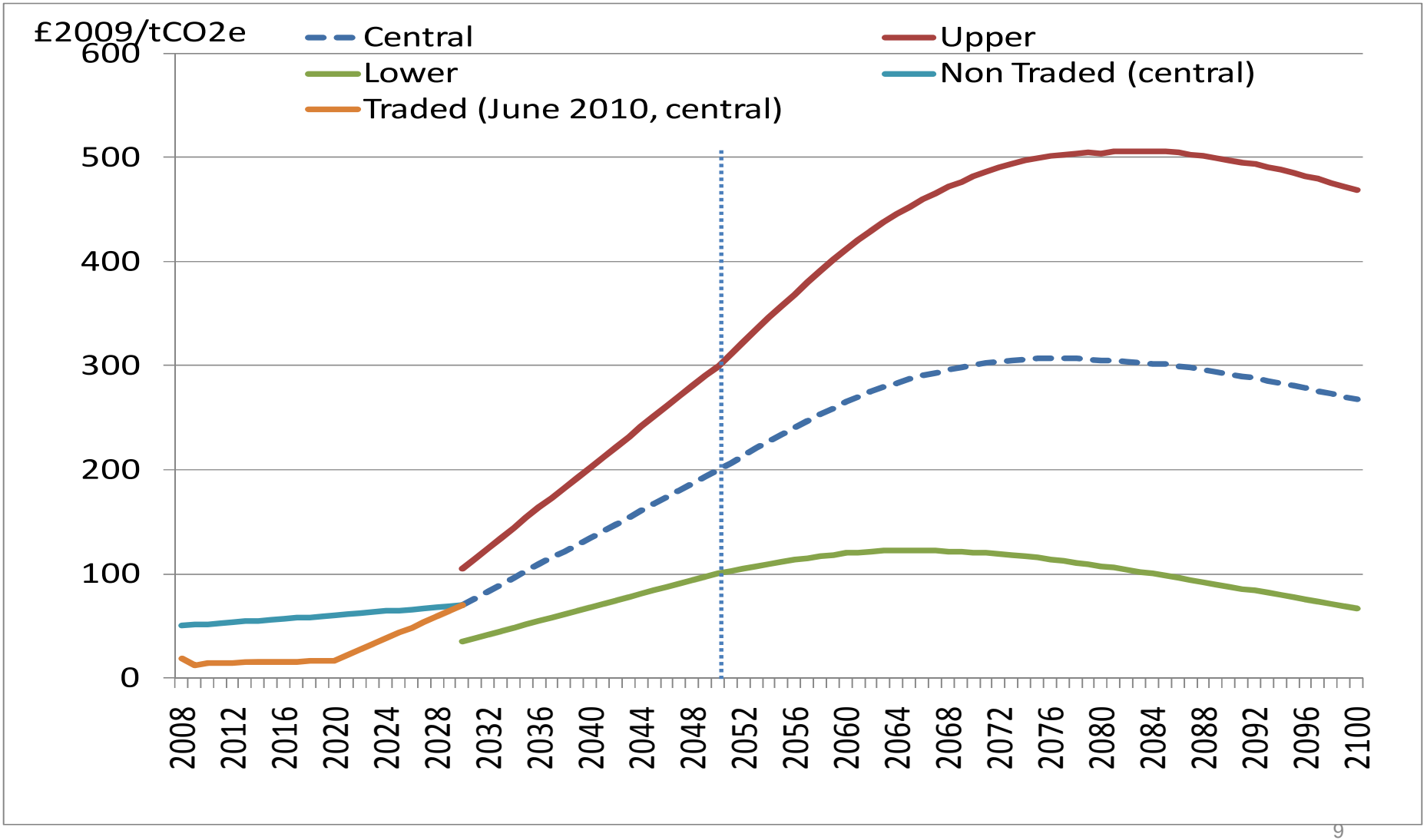
We have derived values looking at
•Global emissions trajectories consistent with meeting a 2℃ global target
•A range of models calculating global abatement costs. Results using in house model – GLOCAF – are compared with external estimates (IEA, IPCC, Poles etc).

Values estimated for 2030 and 2050 and interpolated

This is an estimate of a least cost path to meeting a 2℃ target. Implicitly assumes a comprehensive global trading regime from 2030

Appropriate benchmark for assigning a value to long term emissions impacts from policies

Carbon values



II: CURRENT LIVE POLICY ISSUES

From analysis to policy

Will a global trading regime emerge in practice? How should we intervene in policy terms to help ensure it does?

Will investors today believe it will happen and that carbon prices will rise as a result? How can we improve their confidence?

1. UK views on evolution of global carbon markets

2. UK views on evolution of EU ETS

UK's perspective on evolution of global carbon market

1. Long term vision is for a global carbon market that covers most sectors in most countries

2. The UK supports the EU ambition to establish OECD wide carbon target by 2015 through linking of cap & trade schemes

3. Extend this to advanced developing countries by 2020, including through the adoption of large scale crediting mechanisms

4. Over time, decreasing role for current Kyoto mechanisms, but will continue, especially in less developed countries i.e. improved CDM

Role of CDM

The CDM has had significant successes, engaging developing countries in mitigation and generating about $25bn of climate finance

Continuing role for CDM in a future climate change regime, particularly for low income countries. But promote greater use of standardised approaches (benchmarks) which could:

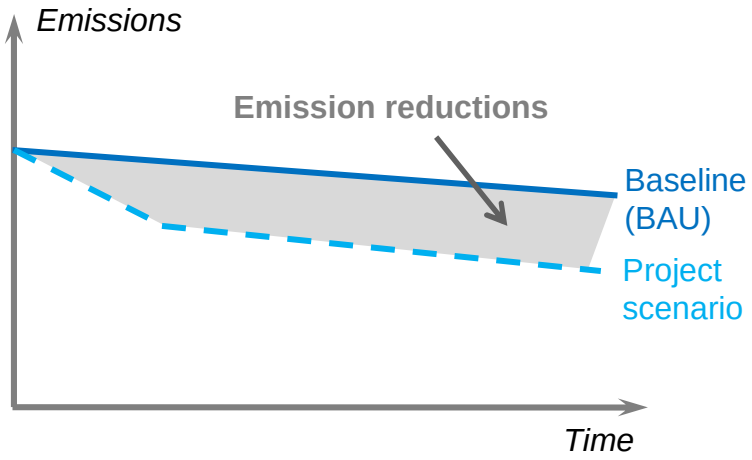
a)Improve efficiency by giving clearer ex ante signals, reducing costs, complexity and uncertainty for project participants

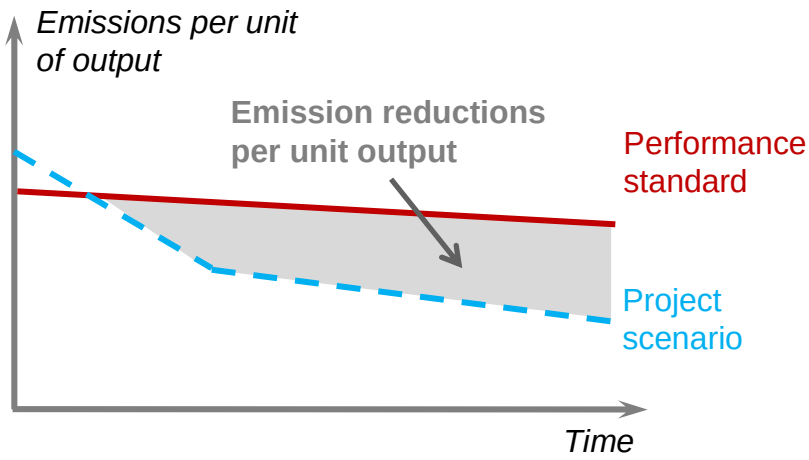
b)Improve environmental integrity through avoiding perverse incentives / offering a more objective approach to determining additionality and quantifying baseline emissions ? Still a trade off in setting stringency of benchmark.

c)Improve equity by prioritising underrepresented countries in developing ‘top down’ methodologies for determining baselines and additionality,

i) Standardised approaches would decrease transaction costs and give a clearer price signal

CDM (most current projects)	CDM (standardised approach)
Baseline determined on a project by project basis	Credits issued against a performance standard





Under both approaches, credits are issued ex-post and are sold to carbon markets by project developers.

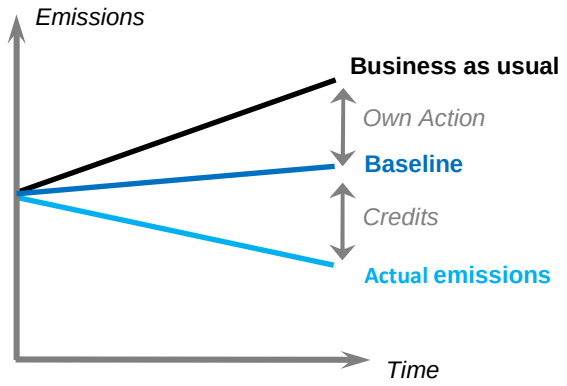
ii. New large scale 'sectoral' market mechanisms will help transition away from the CDM & scale up carbon markets

Sectoral Crediting

Also referred to as 'sector no lose target'

- **Ex post** issuance of credits to Government, i.e. once emissions are verified
- **No obligation** for Governments to purchase extra credits if baseline not achieved

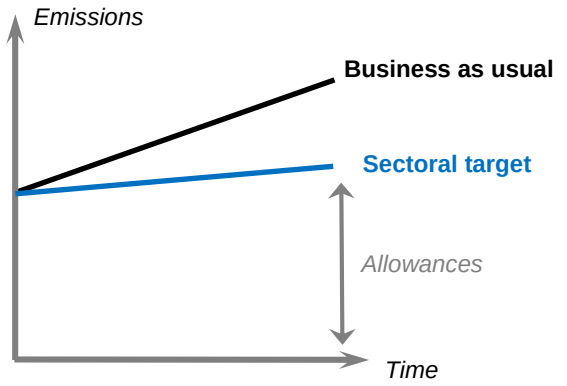
Illustration of sectoral crediting



Sectoral Trading

- **Ex ante** allocation of allowances to Governments, i.e. before emissions have actually occurred
- **Obligation** to buy extra allowances and/or credits if sectoral target is not met

Illustration of sectoral trading

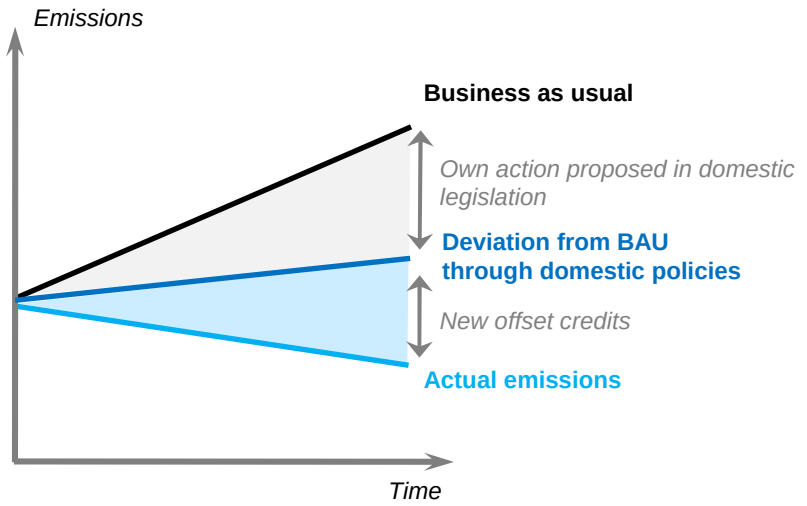


ii. New crediting mechanisms could be implemented as a way to access additional finance and increase emission reductions in developing countries

Sectoral mechanisms are an option to generate carbon market finance

- Up to developing countries to define policies that are appropriate for their national circumstances (subsidies, regulation, taxation, cap and trade).
- Even without crediting mechanisms, developing countries should consider the implementation of cap and trade domestically if it suits their national circumstances.
- Once mitigation policies are in place, developing countries can decide to implement crediting mechanisms to help them go beyond their existing ambition
- Additional abatement achieved thanks to crediting mechanisms will generate carbon market finance through the sale of offset credits in carbon markets
- International verification of emission reductions is essential before these credits can access the international carbon market.
- The European Commission has already signalled its intention to give priority access to new sectoral credits over CDM credits in the EU ETS (except for CDM from Least Developed Countries which will also have a priority access)

Illustration of how domestic policies fit with crediting mechanisms



A UK view on the development of EU ETS

Two aspects : **stringency of target** and **integrity of abatement**

Stringency : the UK Government supports '*an increase in the EU emissions reduction target to 30% by 2020' .* Reduce emissions and give stronger price signal for investment.

Integrity : the UK supports action to restrict access to credits created through CDM projects reducing emissions of industrial gases notably HFCs

- HFC -23 abatement projects have led to genuine emissions reductions at low cost to society. So why restrict access to EU ETS now?

•Potential for perverse incentives given extremely high returns from abatement for both HFCs. Executive Board have responded by putting a cap on HCFC-22 production for which HFC-23 can be credited. But this risks leaving significant levels of HFC-23 emissions uncovered by any mechanism or regulation

•Therefore, need to ensure abatement via alternative mechanisms e.g. Montreal Protocol, which could deliver additional abatement at lower cost to payer.

Summary

- Cost effectiveness
- Stringency
- Integrity

Any questions?

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