UK approach to emissions reduction

- Set legally binding targets to reduce emissions by at least 80% by 2050, through 5-year carbon budgets
- Achieve them as cost-effectively as possible.
- Technological neutrality
## To regulate or to price?

<table>
<thead>
<tr>
<th></th>
<th>Regulation</th>
<th>Emissions Trading</th>
<th>Carbon Tax</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certainty over?</td>
<td>Emissions</td>
<td>Emissions</td>
<td>Price</td>
</tr>
<tr>
<td>Efficient emissions reductions</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Incentives for innovation</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
EU ETS

• Cornerstone of EU and UK climate change policy

• “Cap and trade" system
  ➢ Sets an emissions cap on total emissions allowed by all EU ETS operators.
  ➢ Allows participants in the EU ETS to buy and sell allowances within that limit.

• Provides flexibility to businesses

• Covers CO$_2$ and other GHG emissions from around 11,000 power stations and energy intensive industrial plants across the EU (around 900 in the UK), as well as from aviation within the EU.

• Industrial sectors covered include steel, cement, refineries, basic chemicals, aluminium and other metals.
Climate Change Levy (CCL)

- Introduced in 2001 as a tax on UK business energy use, collected by energy suppliers for Govt.
  - Energy use = electricity, gas, liquid petroleum gas and solid fuel.
  - Exemptions for electricity generated from certain renewable sources and combined heat and power (CHP) and to some very electricity intensive processes – e.g. electrolysis.
- Climate Change Agreements (CCAs) introduced in 2001 (alongside CCL) to support UK energy intensive industries and protect their ability to compete internationally
What are Climate Change Agreements (CCAs)?

- Rebate on CCL to industry (65% for non-electricity, 90% for electricity)
- Scheme is voluntary; once in it, participants have to meet energy efficiency targets
- 53 industrial sectors in CCAs, spanning 8,300 facilities. Sectors include heavy industries (steel, cement, glass) through to food and drink, textiles, laundrettes and data centres.
- Expected to deliver 11.0% energy efficiency improvement across all industry sectors by 2020 against agreed baselines. If targets are met, will:
  - reduce emissions by 19 MtCO$_2$e
  - reduce primary energy consumption by 100TWh
  - save participants £300 million each year
The CRC Energy Efficiency Scheme

- Fill gap in policy incentives for large energy users in businesses and public sector outside the energy intensives regulated by EU ETS and CCAs
- Address barriers identified to uptake of energy efficiency for these organisations:
  - insufficient financial incentives to reduce emissions;
  - uncertain reputational benefits of demonstrating leadership;
  - split incentives within and between organisations (e.g. between landlords and tenants);
  - organisational inertia.

“Despite the cost effective energy efficiency savings available to large public and private sector organisations, their emissions have remained more or less constant for the last twenty years.”
CRC: Who is covered and how it works?

- Starting in 2010 - targets large non-energy intensive organisations not covered by the EU ETS or CCA who typically spend at least £0.5 million a year on electricity

- Around 2000 participants, covering 10% of UK emissions

- Participants monitor their energy use, and report their energy supplies annually. Price for 2014/15 set at £15.60 per t/CO$_2$ (forecast sale) and £16.40 per t/CO$_2$ (buy to comply sale).

- Allowances can be bought at annual fixed-price sales, or traded on the secondary market

- Expected to deliver 50TWh of energy savings to 2022, and emissions reductions of around 16MtCO$_2$ by 2027.
The Carbon Price Floor

- Applies to UK electricity generators only
- EU ETS carbon price not delivering the investment needed in low carbon electricity generation.
- CPF sets a minimum carbon price to drive investment. The Carbon Price Support (CPS) rate is set to “top-up” the EU ETS allowance price to the level of the Carbon Price Floor.
Carbon Price Floor - How it works

- Tax rate set by HM Treasury on an announced trajectory to reach £30/tCO2 in 2020
- Cap on the rate announced in April 2014 in recognition of very low EU ETS price.
Overview of carbon pricing policies for business

- **Business and Public Sector Emissions**: 356MtCO₂e
  - CRC: 59Mt CO₂e
  - CCAs: 57Mt CO₂e
  - EU ETS electricity & direct business emissions – 237MtCO₂e*
  - Rest of business sector: Approx. 980,000 orgs
    - 10-15Mt CO₂e**
  - Emissions overlap with respect to electricity emissions in EU ETS
  - Up to 2,000 orgs

*Excludes all non-business electricity emissions
**Reflects uncertainty over CRC electricity emissions
Source: DECC 2008 data and analysis