

The Carbon Trust

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Making business sense of climate change



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of climate change

TODAY

- I have 20 minutes to enthuse you on the merits of energy efficiency
- Increasing energy efficiency makes supply side decisions easier and lowers security of supply risk



Introducing The Carbon Trust

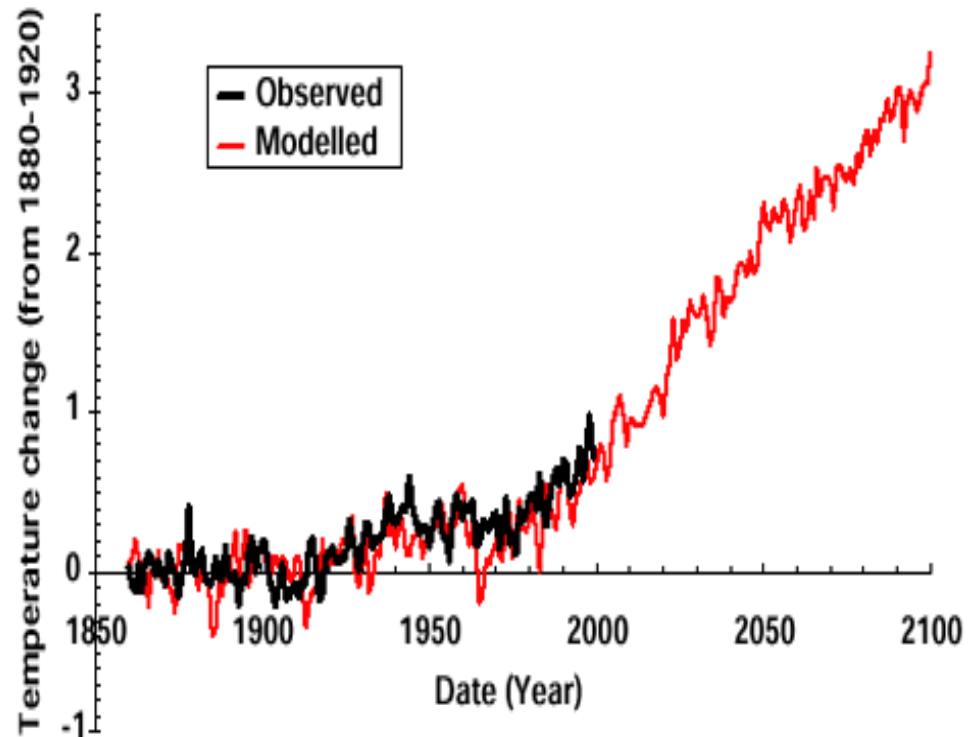
*The Carbon Trust helps **business** and the **public sector** cut carbon emissions, realise associated commercial benefits, and supports the development of low carbon technologies.*



Energy saved
= CO₂ Savings
= £££ Savings

Climate change is happening!

Observed and predicted global temperature change

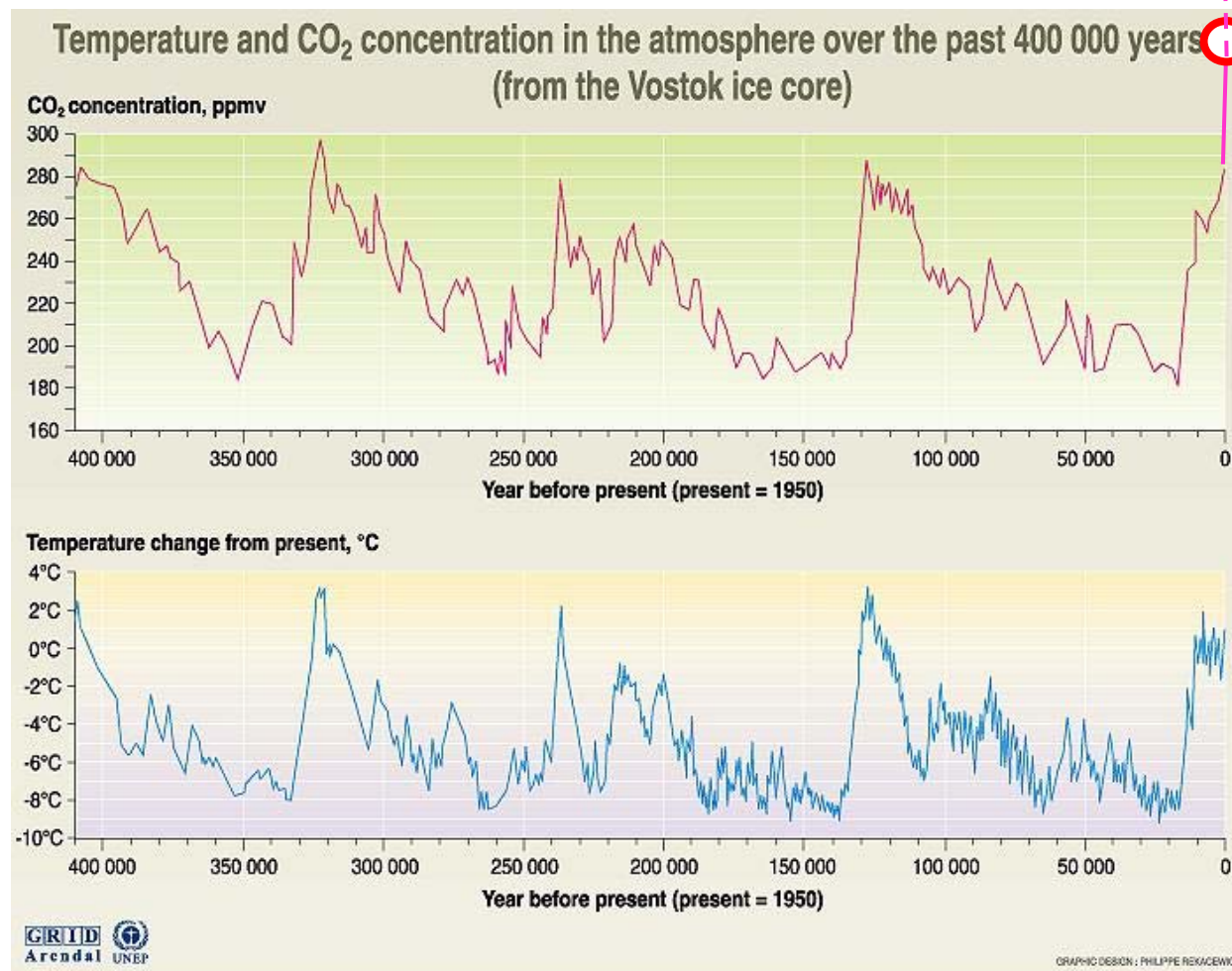


0.6°C average global temperature rise since records began in mid 19th Century

All 10 of hottest years have occurred since 1990

Source: The Met Office's Hadley Centre for Climate Protection and Research

The scientific consensus is that burning fossil fuels accelerates climate change



Impacts on the planet are already evident

Freak Weather

Rapid rise in weather-related natural disasters

- flooding
- droughts
- hurricanes

Changing Habitats

- Rising average temperatures
- Decline in winter ice/snow and glacier retreat
- Rapid decline in Arctic sea-ice thickness and loss of Antarctic Glaciers
- Rising sea levels. DEFRA predicting 86cm by 2080



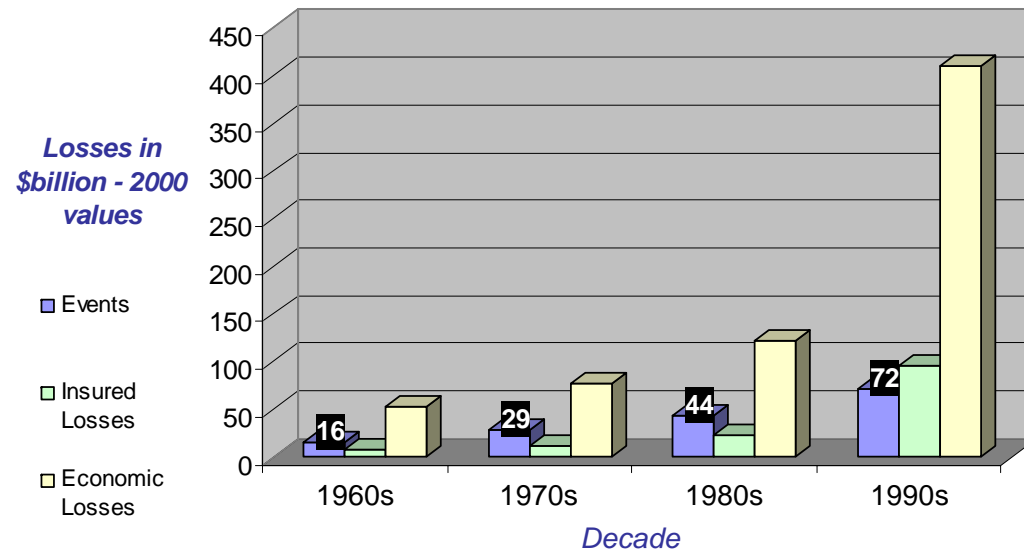
Photographs courtesy of Enviros

Source: IPCC Third Assessment, 2000

The Global & Local Cost of Climate Change

(source: Munich Re-insurance)

Great Weather Disasters 1960 - 2000



Tornado in Birmingham?



Flooding in Bewdley 2000



River Severn flooding



Flooding in Shrewsbury, 2000 (River Severn)

WHAT DO WE NEED TO DO?

- UK Government has set targets for reductions in CO₂ of 20% by 2010 and 60% by 2050
- (based on 1990 baseline)

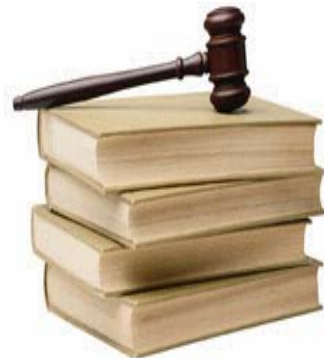
- Only USE THE ENERGY WE NEED and generate energy in a sustainable way. E.g. Biomass, Wind, Wave, Solar Thermal, Solar PV, Ground/air source heat pumps
- Even if you do not care about climate change being 'energy Inefficient' is wasting money and does not make economic sense

Why don't we use stone tools?



Energy Efficiency - Drivers for Action

- Climate Change (££££)
- Costs (Rising Energy Prices - ££££)
- Corporate/Brand Image (££££)
- Increasing Legislation (££££)
- Security of supply



Saving energy and carbon directly benefits the 'bottom line'

Turnover:	£1 million
Profit (10%):	£100,000
Energy cost (4%):	£40,000
Savings potential (20%)	£8,000
Increase in profit	8%
Equivalent turnover increase	£80,000

Typical Energy Bills (per annum)

- *Food & Drink Company : £40m*
- *Insurance Company HQ : £280k*
- *Electrical Company Depot: £220k*

Energy Waste in the UK

- We use 1,860 TWh Energy (KWh x 10⁹)* / £65bn
- ~ 568 million tonnes CO₂
- 12% (£7.6bn) Could be saved at NO COST
- 21% (£14bn) Could be saved at NO COST and by investing in cost effective measures
- (* non-domestic, industrial, agriculture, domestic & transport)

Carbon Trust is business focused

- An independent company – backed by government
- Carbon Trust founded 2001. Board comprised of CEO/FD 15 non-exec members (5 government depts., 10 representing business/industry e.g. CBI, Utilities, Transport, Union)



Ian McAllister -
Chair
Network Rail
Ford 30 years



Tom Delay – CEO
Shell 16 years
McKinsey & Co.
AT Kearney



Carbon Trust is here to help...



Save Energy

££££££££££££££££

- Free Advice & Information
- Financial Incentives

Carbon Management



R,D&D Grants

Technology Support

Incubation

Venture Capital



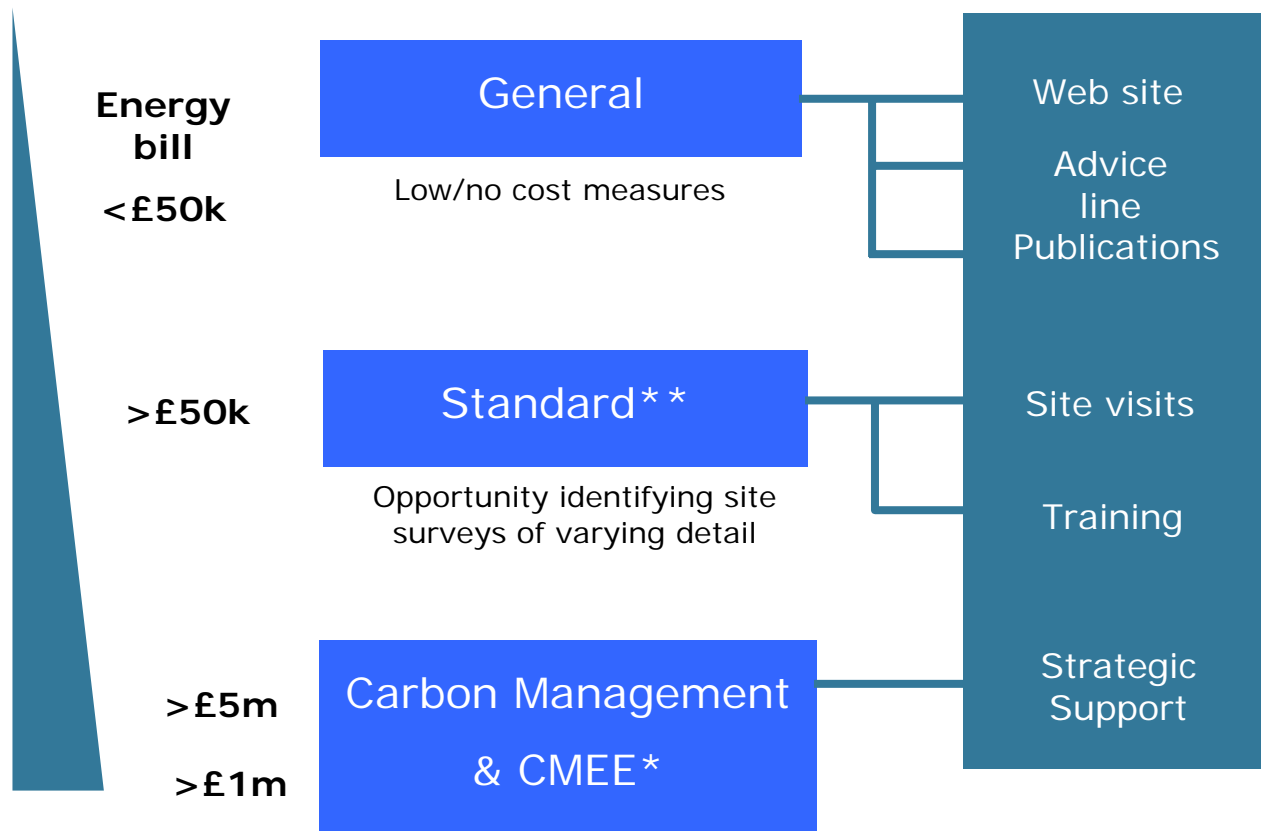
Research

- Climate Change Impact
- Policies & Regulation
- Technical
- Financial

www.thecarbontrust.co.uk



Help from Carbon Trust



SME Loans



ECAs



*co-funded

** mostly fully funded by CT

CASE STUDY: Mueller Europe Ltd (Responsibility, measurement, awareness, projects)

- Copper Tube Producer – West Midlands
- Energy Intensive/24 hr Production - £1m + Energy Bill
- **Contacted the Carbon Trust and received advice**

- Implemented a strategy and action plan for achieving long term savings;
- Established of a formal site responsibility for energy management;
- Improved monitoring and targeting of energy use at the site through the installation of sub meters and further use of the existing meters;
- Completed reviews of opportunities to minimise energy consumption through on-going review of plant operation;
- Staff awareness measures, e.g. encouraging the switch-off of equipment that is not in use;
- Invested in the reduction of compressed air leaks;
- Improved control of space heating and lighting systems.

Mueller Europe

- Jeff Rogers, Quality Engineering Manager at Mueller Europe, says, "The Carbon Trust survey was extremely useful, especially as the advisor was able to identify savings that we wouldn't have normally seen. Thanks in part to the advice we were given, Mueller has been able to exceed our climate change levy targets."
- The Carbon Trust expects Mueller Europe to save over £76,000 a year, as a result of these measures.

The Energy Technology List



- All products and technologies on the [Energy Technology List](#) meet energy saving criteria
- Enhanced Capital Allowances – provide a tax incentive for installing more efficient equipment
- They deliver significant long-term financial benefits over and above the enhanced tax relief - just by being energy efficient
- www.eca.gov.uk

Interest Free Loans from Carbon Trust

Available to **SMEs**

- < 250 employees
 - < 40 million Euros turnover
 - < 27 million Euros assets
 - max 25% non-SME controlling interest
-
- Interest free loans of **£5,000 to £100,000** available for energy efficiency projects showing payback of less than 5 years
-
- Loan repayable over maximum of **4 years**



CASE STUDY: Orian Precision, Derbyshire

- Manufactures plastic components for automotive and electrical applications
- CT suggested all-electric machines that use servo motor drives to replace the inefficient hydraulic pump/motor combination (Circa. 1980)
- Loan of £50,000 used to buy 3 x all electric injection moulding machines
- This achieved a 70%!!! Reduction in energy use (Bill went from £26,220 to £8,450)

Our Carbon Management programme attracted over 50 pilot participants



Case Studies

- BMW Hams Hall engine plant reduced energy consumption by 15% on £1.5m + spend
- Projects focused on air handling, heating and lighting systems
- Good housekeeping
- Paid back in less than 12 months

The Carbon Trust – Contacts

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