Overview

GHG Inventory summary Factsheet

Territorial coverage: UK including Crown Dependencies and Overseas Territories
Total emissions: Quoted with respect to emissions including net LULUCF
Sector Definition: National Communication

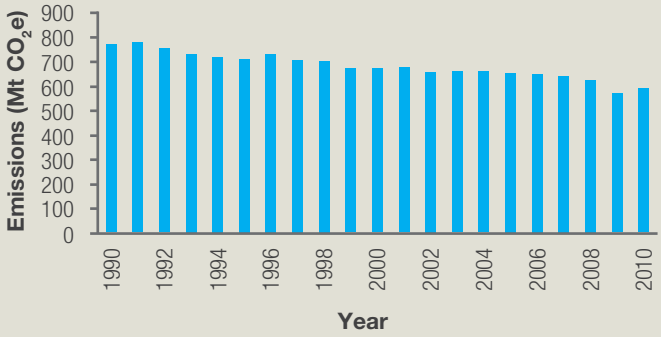
Summary – historic emissions

- Total net greenhouse gas (GHG) emissions in 2010 were 590 Mt CO_2e (excluding the impact of traded allowances).
- Emissions have decreased by 23% since 1990.
- CO_2 is the dominant GHG emitted, accounting for 85% of emissions in 2010.
- More than half of emissions in 2010 are from the Energy Supply and Transport sectors.
- Effects of the recession can be seen in some sectors, particularly in 2009.

Sources of emissions and data sets

- The UK emissions inventory aims to include estimates of emissions from all anthropogenic sources of GHGs.
- Key data sources used in the compilation of the UK inventory include:
  - DECC's Digest of UK Energy Statistics (DUKES)
  - The Pollution Inventory (Environment Agency), the Scottish Pollutant Release Inventory (SEPA) and the Inventory of Statutory Releases (Northern Ireland DoE)
  - EU Emissions Trading System (ETS) operator returns
  - Transport Statistics Great Britain (DfT)
  - Agriculture in the UK (Defra)
  - Data supplied directly by plant operators
  - Data supplied by Trade Associations
  - Waste management data (WasteDataFlow)
  - LULUCF data from the Countryside Survey

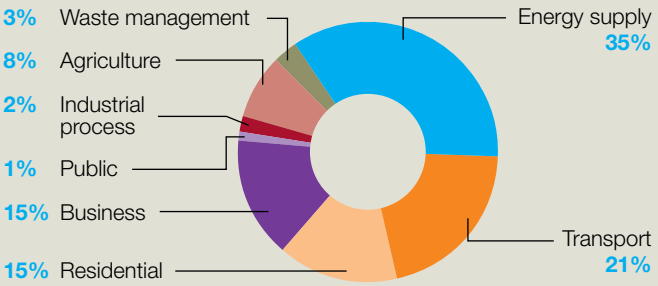
Total Net GHG Emissions, 1990-2010



Source: UK GHG Inventory (UNFCCC coverage) (AEA, 2012)

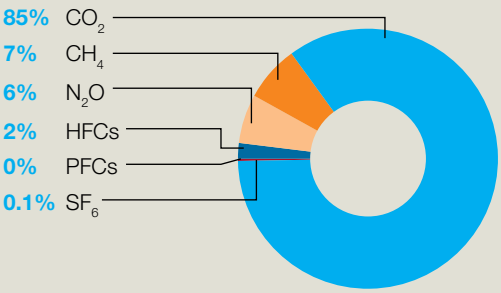
Note: Net emissions include all sources and sinks of GHGs but excludes impact of traded allowances.

Total Emissions by Sector (2010, excluding LULUCF)



Source: UK GHG Inventory (UNFCCC coverage) (AEA, 2012)

Total Emissions by Gas (2010, excluding LULUCF)



Source: UK GHG Inventory (UNFCCC coverage) (AEA, 2012)

Methodology

- The methods used to compile the inventory are based on the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories (IPCC, 1996), the Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories (IPCC, 2000), and the Good Practice Guidance for Land Use, Land-Use Change and Forestry (IPCC, 2003).
- Most emission estimates are compiled by combining activity data (e.g. fuel use) with a suitable emission factor (e.g. amount of CO_2 emitted per unit of fuel used).
- Emissions from some sectors are based on more complicated models (e.g. CH_4 from landfill sites).
- Industrial emission estimates are often compiled based on plant specific emissions data.

Uncertainties

- The estimated uncertainty in total net GHG emissions in 2010 was +/-16% as a 95% confidence interval.
- The uncertainty analysis indicates that the trend in GHG emissions from 1990 to 2010 is between -26 and -21% (excluding the impact of trading allowances).
- Uncertainties are estimated using a Monte Carlo simulation.
- The overall uncertainty is dominated by the uncertainty in emissions from agricultural soils.
- The uncertainty in the trend is much lower than the uncertainty in the emissions for a given year.

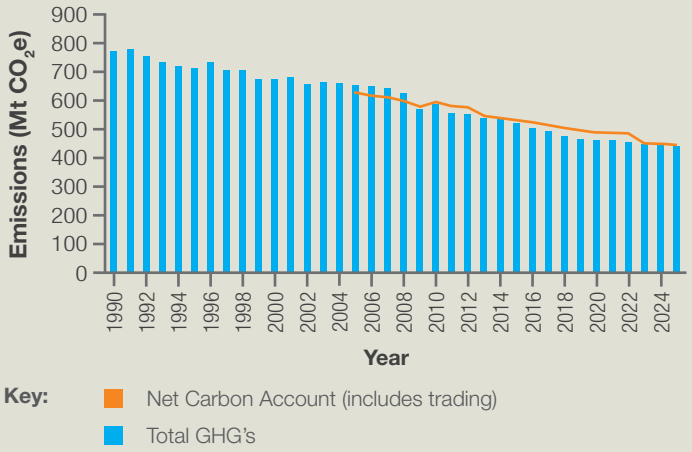
Improvements

- As part of the National Inventory System, there is a National Inventory Steering Committee (NISC) and an Improvements Programme to prioritise and approve improvements for the inventory.
- Improvements can be identified via annual reviews of the inventory by UNFCCC experts, by the inventory team or by sector leads on the NISC.

Projections

- Emissions are expected to continue to be dominated by CO_2.
- The most significant decrease in CO_2 emissions from 2010 to 2025 occurs in the Energy Supply sector.
- Emissions in 2025 are projected to be around 25.3% lower than in 2010, or 25.5% lower including the impact of trading (based on Updated Energy and Emissions Projections: October 2011 (DECC) using historic data from the 2012 inventory).

Historic and Projected Total GHG Emissions



Source: Updated Energy and Emissions Projections: October 2011 (DECC).

Links

- UUK GHG Inventory: http://ghgi.decc.gov.uk/
- UK GHG National Statistics: http://www.statistics.gov.uk/hub/agriculture-environment/environment/climate-change/index.html
- UK Updated Energy Projections: http://www.decc.gov.uk/en/content/cms/about/ec_social_res/analytic_projs/en_emis_projs/en_emis_projs.aspx
- IPCC Guidelines http://www.ipcc-nggip.iges.or.jp/public/index.html