

Appendix 5

End User GHG Emission Estimates for England, Scotland, Wales and Northern Ireland: 1990, 2003 to 2008

Table A5.1: England End User GHG Emission Estimates, 1990 and 2003 to 2008*(continued overleaf)*

| Total GHGs - by end user | | Units: Mt CO ₂ e | | | | | | | | | |
|---------------------------------|---|-----------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------------------|--|
| NC Category | More Detail | Base Year | 1990 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | BY to 2008 % change | |
| Business Total | | 193.4 | 192.2 | 170.2 | 167.9 | 168.0 | 169.7 | 166.5 | 162.3 | -16.1% | |
| Business | Iron and steel - combustion and electricity | 17.3 | 17.3 | 12.8 | 12.5 | 12.1 | 13.1 | 12.8 | 12.7 | | |
| | Other industrial combustion and electricity | 123.9 | 123.9 | 102.6 | 100.5 | 101.9 | 101.8 | 100.4 | 95.7 | | |
| | Commercial and institutional | 50.2 | 50.2 | 49.0 | 48.4 | 47.1 | 47.7 | 45.8 | 46.2 | | |
| | Energy recovery from waste fuels | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | | |
| | Refrigeration and air conditioning | 0.8 | 0.0 | 4.4 | 4.8 | 5.2 | 5.6 | 5.9 | 6.2 | | |
| | Foams | 0.0 | 0.0 | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | | |
| | Firefighting | 0.0 | 0.0 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | | |
| | Solvents | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | | |
| | One Component Foams | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | | |
| | Electronics, electrical insulation and sporting goods | 0.8 | 0.6 | 0.6 | 0.7 | 0.7 | 0.6 | 0.6 | 0.5 | | |
| Transport Total | | 119.2 | 119.2 | 127.1 | 126.3 | 127.4 | 126.1 | 126.7 | 122.1 | 2.5% | |
| Aviation | Civil aviation (Domestic, Landing and take off) | 0.4 | 0.4 | 0.5 | 0.6 | 0.6 | 0.5 | 0.5 | 0.4 | | |
| | Civil aviation (Domestic, Cruise) | 0.6 | 0.6 | 1.0 | 1.0 | 1.1 | 1.1 | 1.0 | 1.0 | | |
| Road | Passenger cars | 70.2 | 70.2 | 74.9 | 74.0 | 73.3 | 71.2 | 70.6 | 68.0 | | |
| | Light duty vehicles | 9.2 | 9.2 | 13.8 | 14.2 | 14.6 | 14.5 | 15.2 | 14.8 | | |
| | Buses | 3.6 | 3.6 | 5.0 | 5.0 | 5.2 | 5.0 | 5.2 | 4.5 | | |
| | HGVs | 22.6 | 22.6 | 20.9 | 20.8 | 21.6 | 21.6 | 22.4 | 21.4 | | |
| | Mopeds & motorcycles | 0.7 | 0.7 | 0.7 | 0.6 | 0.7 | 0.6 | 0.7 | 0.6 | | |
| | LPG emissions (all vehicles) | 0.0 | 0.0 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | | |
| | Other (road vehicle engines) | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | | |
| Railways | Railways | 2.8 | 2.8 | 3.2 | 3.2 | 3.3 | 3.4 | 3.4 | 3.4 | | |
| | Railways - stationary combustion | 0.5 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Shipping | National navigation | 3.0 | 3.0 | 2.9 | 2.8 | 3.2 | 4.3 | 3.8 | 4.2 | | |
| Other Mobile | Military Aircraft and shipping | 5.2 | 5.2 | 3.2 | 3.0 | 2.7 | 2.8 | 2.8 | 2.9 | | |
| Other Transportation | Aircraft - support vehicles | 0.2 | 0.2 | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | | |
| Public | Public | 25.2 | 25.2 | 18.0 | 18.6 | 18.2 | 18.0 | 17.0 | 17.2 | -31.7% | |
| Residential Total | | 135.7 | 135.4 | 130.2 | 131.2 | 127.5 | 127.0 | 121.8 | 123.8 | -8.8% | |
| Residential | Residential combustion and electricity | 134.3 | 134.3 | 126.8 | 127.8 | 123.7 | 123.2 | 118.0 | 120.0 | | |
| | Use of non aerosol consumer products | 1.0 | 1.0 | 1.2 | 1.2 | 1.3 | 1.3 | 1.3 | 1.3 | | |
| | Accidental vehicle fires | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| | Aerosols and metered dose inhalers | 0.3 | 0.0 | 2.2 | 2.2 | 2.5 | 2.5 | 2.5 | 2.5 | | |
| Agriculture Total | | 41.5 | 41.5 | 33.7 | 34.0 | 33.7 | 32.5 | 32.0 | 32.1 | -22.7% | |
| Agriculture | Stationary and mobile combustion and electricity | 6.1 | 6.1 | 5.1 | 5.0 | 5.0 | 4.8 | 4.6 | 4.6 | | |
| | Breakdown of pesticides | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Enteric Fermentation | Cattle | 8.2 | 8.2 | 6.6 | 6.7 | 6.9 | 6.6 | 6.8 | 6.6 | | |
| | Sheep | 2.0 | 2.0 | 1.6 | 1.6 | 1.5 | 1.5 | 1.5 | 1.5 | | |
| | Goats | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| | Horses | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | | |
| | Pigs | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | | |
| | Deer | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Wastes | Cattle | 1.4 | 1.4 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | | |
| | Sheep | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| | Goats | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| | Horses | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| | Pigs | 0.9 | 0.9 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | | |
| | Poultry | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | | |
| | Deer | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Other | Manure liquid systems | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| | Manure solid storage and dry lot | 1.2 | 1.2 | 0.9 | 0.9 | 0.8 | 0.9 | 0.9 | 0.8 | | |
| | Other manure management (N ₂ O) | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 | 0.4 | | |
| | Direct Soil Emission | 20.2 | 20.2 | 16.8 | 17.0 | 16.8 | 15.9 | 15.6 | 16.0 | | |
| | Field burning | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |

Table A5.1: England End User GHG Emission Estimates, 1990 and 2003 to 2008 (continued)

(electricity only emissions are presented underneath the main table)

| NC Category | More Detail | Base Year | 1990 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | BY to 2008 % change |
|---------------------------------------|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------------------|
| Industrial Process Total | | 52.1 | 50.3 | 16.6 | 15.9 | 15.0 | 13.7 | 14.9 | 13.8 | -73.6% |
| Industrial Process | Sinter production | 1.6 | 1.6 | 1.5 | 1.6 | 1.6 | 1.5 | 1.7 | 1.5 | |
| | Cement production | 5.8 | 5.8 | 4.7 | 4.8 | 4.7 | 4.5 | 4.7 | 3.9 | |
| | Lime production | 1.2 | 1.2 | 0.9 | 0.8 | 0.8 | 0.7 | 0.9 | 0.9 | |
| | Limestone and dolomite use | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | |
| | Soda ash production and use | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | |
| | Fletton bricks | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | |
| | Ammonia production | 1.6 | 1.6 | 1.2 | 1.3 | 1.2 | 0.9 | 1.3 | 1.2 | |
| | Iron and steel production and electricity (Blast Furnace) | 2.1 | 2.1 | 1.4 | 1.4 | 1.5 | 1.4 | 1.6 | 2.0 | |
| | Aluminium production | 0.3 | 1.1 | 0.3 | 0.4 | 0.4 | 0.4 | 0.3 | 0.4 | |
| | Nitric acid production | 3.2 | 3.2 | 2.3 | 2.6 | 2.0 | 1.8 | 1.8 | 1.5 | |
| | Adipic acid production | 20.7 | 20.7 | 0.5 | 0.9 | 0.8 | 0.6 | 1.0 | 0.9 | |
| | Other - Chemical industry | 0.2 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | |
| | Halocarbon production | 14.1 | 11.4 | 2.0 | 0.5 | 0.6 | 0.5 | 0.2 | 0.1 | |
| | Magnesium cover gas | 0.4 | 0.4 | 0.6 | 0.4 | 0.2 | 0.2 | 0.1 | 0.1 | |
| Land Use Change | | 5.7 | 5.7 | 3.7 | 3.4 | 3.2 | 3.2 | 3.1 | 3.0 | -47.9% |
| Forest Land | Biomass burning | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | |
| | Land converted to forest land | -2.7 | -2.7 | -3.3 | -3.5 | -3.4 | -3.3 | -3.0 | -2.7 | |
| | Direct N ₂ O emission from N fertilisation of forest land | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Cropland | Liming | 0.6 | 0.6 | 0.4 | 0.4 | 0.3 | 0.4 | 0.4 | 0.3 | |
| | Cropland remaining cropland | 1.1 | 1.1 | 0.7 | 0.7 | 0.6 | 0.6 | 0.6 | 0.6 | |
| | Biomass burning | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Land converted to cropland | 5.7 | 5.7 | 5.6 | 5.6 | 5.5 | 5.5 | 5.5 | 5.5 | |
| Grassland | Biomass burning | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| | Liming | 0.4 | 0.4 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | |
| | Grassland remaining grassland | 0.2 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | |
| | Land converted to grassland | -3.2 | -3.2 | -3.7 | -3.7 | -3.8 | -3.8 | -3.9 | -4.0 | |
| Settlements | Biomass burning | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.0 | |
| | Land converted to settlements | 3.9 | 3.9 | 3.4 | 3.4 | 3.4 | 3.3 | 3.3 | 3.3 | |
| Other | Harvested wood products | -0.5 | -0.5 | -0.1 | 0.1 | 0.0 | -0.1 | -0.4 | -0.6 | |
| Waste Management | | 42.4 | 42.4 | 19.8 | 18.4 | 18.1 | 18.1 | 18.0 | 17.7 | -58.1% |
| Waste Management | Landfill | 39.7 | 39.7 | 17.6 | 16.3 | 16.0 | 15.9 | 15.8 | 15.6 | |
| | Waste-water handling | 1.4 | 1.4 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | |
| | Waste Incineration | 1.3 | 1.3 | 0.5 | 0.5 | 0.5 | 0.4 | 0.5 | 0.4 | |
| Exports | Exports (including electricity) | 7.4 | 7.4 | 13.5 | 13.5 | 13.7 | 11.8 | 12.7 | 11.2 | 51.1% |
| Grand total | | 622.7 | 619.4 | 532.8 | 529.3 | 524.9 | 520.0 | 512.7 | 503.2 | -19.2% |
| Grand Total, excluding exports | | 615.3 | 612.0 | 519.4 | 515.8 | 511.2 | 508.2 | 500.0 | 492.0 | -20.0% |

Electricity ONLY Emissions

Units: MtCO₂

| NC Category | More Detail | Base Year | 1990 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|---------------------------|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Business Total | | 98.1 | 98.1 | 81.7 | 81.6 | 81.7 | 86.6 | 84.2 | 81.9 |
| Business | Iron and steel - electricity | 4.2 | 4.2 | 1.5 | 1.4 | 1.2 | 1.5 | 1.3 | 1.3 |
| | Other industrial - electricity | 54.6 | 54.6 | 42.6 | 42.7 | 43.9 | 47.2 | 47.0 | 44.8 |
| | Commercial and institutional | 39.3 | 39.3 | 37.7 | 37.5 | 36.6 | 37.9 | 35.9 | 35.8 |
| Transport | Railways | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.3 | 1.3 | 1.2 |
| Public | Public | 12.9 | 12.9 | 8.9 | 8.8 | 8.6 | 8.8 | 8.6 | 8.3 |
| Residential | Residential electricity | 64.6 | 64.6 | 53.4 | 53.2 | 52.5 | 55.1 | 53.1 | 53.2 |
| Agriculture | Stationary and mobile - electricity | 2.2 | 2.2 | 1.5 | 1.6 | 1.5 | 1.6 | 1.5 | 1.5 |
| Industrial Process | Iron and steel production - electricity (Blast Furnace) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exports | Exports - electricity | 0.0 | 0.0 | 1.0 | 0.4 | 0.4 | 0.6 | 1.2 | 0.0 |
| Grand Total | | 179.1 | 179.1 | 147.8 | 146.8 | 145.9 | 153.9 | 149.9 | 146.1 |

Table A5.2: Scotland End User GHG Emission Estimates, 1990 and 2003 to 2008*(continued overleaf)*

| Total GHGs - by end user | | Units: Mt CO ₂ e | | | | | | | | |
|---------------------------------|---|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------------------|
| NC Category | More Detail | Base Year | 1990 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | BY to 2008 % change |
| Business Total | | 23.8 | 23.7 | 16.7 | 16.5 | 17.0 | 16.6 | 15.9 | 15.7 | -34.2% |
| Business | Iron and steel - combustion and electricity | 3.5 | 3.5 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| | Other industrial combustion and electricity | 15.4 | 15.4 | 11.5 | 11.3 | 11.5 | 10.5 | 9.6 | 9.3 | |
| | Commercial and institutional | 4.7 | 4.7 | 4.5 | 4.4 | 4.7 | 5.2 | 5.4 | 5.4 | |
| | Energy recovery from waste fuels | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Refrigeration and air conditioning | 0.1 | 0.0 | 0.4 | 0.5 | 0.5 | 0.5 | 0.6 | 0.6 | |
| | Foams | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Firefighting | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Solvents | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | One Component Foams | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Electronics, electrical insulation and sporting goods | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| Transport Total | | 13.2 | 13.2 | 13.9 | 13.8 | 14.0 | 14.1 | 14.2 | 13.8 | 4.4% |
| Aviation | Civil aviation (Domestic, Landing and take off) | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | |
| | Civil aviation (Domestic, Cruise) | 0.3 | 0.3 | 0.5 | 0.6 | 0.6 | 0.6 | 0.6 | 0.5 | |
| Road | Passenger cars | 6.8 | 6.8 | 7.2 | 7.2 | 7.1 | 7.0 | 6.9 | 6.7 | |
| | Light duty vehicles | 0.9 | 0.9 | 1.4 | 1.4 | 1.5 | 1.5 | 1.6 | 1.5 | |
| | Buses | 0.5 | 0.5 | 0.7 | 0.6 | 0.7 | 0.7 | 0.7 | 0.6 | |
| | HGVs | 2.4 | 2.4 | 2.1 | 2.1 | 2.2 | 2.3 | 2.4 | 2.3 | |
| | Mopeds & motorcycles | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | LPG emissions (all vehicles) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Other (road vehicle engines) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Railways | Railways | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | |
| | Railways - stationary combustion | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Shipping | National navigation | 1.1 | 1.1 | 0.9 | 0.8 | 0.9 | 1.1 | 1.0 | 1.0 | |
| Other Mobile | Military Aircraft and shipping | 0.5 | 0.5 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | |
| Other Transportation | Aircraft - support vehicles | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| Public | Public | 3.1 | 3.1 | 2.0 | 2.1 | 2.2 | 2.3 | 2.3 | 2.3 | -27.0% |
| Residential Total | | 16.7 | 16.6 | 14.6 | 14.6 | 14.5 | 14.4 | 14.0 | 14.3 | -14.0% |
| Residential | Residential combustion and electricity | 16.5 | 16.5 | 14.3 | 14.3 | 14.1 | 14.0 | 13.6 | 14.0 | |
| | Use of non aerosol consumer products | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| | Accidental vehicle fires | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Aerosols and metered dose inhalers | 0.0 | 0.0 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | |
| Agriculture Total | | 10.3 | 10.3 | 8.9 | 8.8 | 8.7 | 8.5 | 8.2 | 8.0 | -22.4% |
| Agriculture | Stationary and mobile combustion and electricity | 1.5 | 1.5 | 1.4 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | |
| | Breakdown of pesticides | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Enteric Fermentation | Cattle | 2.1 | 2.1 | 2.0 | 2.0 | 2.1 | 2.0 | 2.0 | 2.0 | |
| | Sheep | 1.0 | 1.0 | 0.8 | 0.8 | 0.8 | 0.8 | 0.7 | 0.7 | |
| | Goats | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Horses | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Pigs | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Deer | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Wastes | Cattle | 0.3 | 0.3 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.2 | |
| | Sheep | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Goats | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Horses | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Pigs | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| | Poultry | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Deer | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Other | Manure liquid systems | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Manure solid storage and dry lot | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | |
| | Other manure management (N ₂ O) | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | |
| | Direct Soil Emission | 4.9 | 4.9 | 4.1 | 3.9 | 3.8 | 3.7 | 3.6 | 3.5 | |
| | Field burning | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |

**Table A5.2: Scotland End User GHG Emission Estimates, 1990 and 2003 to 2008
(continued)***(electricity only emissions are presented underneath the main table)*

| NC Category | More Detail | Base Year | 1990 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | BY to 2008 % change |
|---------------------------------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------------------|
| Industrial Process Total | | 2.1 | 2.2 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 | 0.5 | -75.5% |
| Industrial Process | Sinter production | 0.4 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Cement production | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | |
| | Lime production | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Limestone and dolomite use | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Soda ash production and use | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Fletton bricks | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Ammonia production | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Iron and steel production and electricity (Blast Furnace) | 0.5 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Aluminium production | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| | Nitric acid production | 0.4 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Adipic acid production | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Other - Chemical industry | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Halocarbon production | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Magnesium cover gas | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Land Use Change | | -2.5 | -2.5 | -4.2 | -4.6 | -4.6 | -4.5 | -4.4 | -4.5 | 77.7% |
| Forest Land | Biomass burning | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | |
| | Land converted to forest land | -7.5 | -7.5 | -10.1 | -10.5 | -10.1 | -9.8 | -9.4 | -9.2 | |
| | Direct N ₂ O emission from N fertilisation of forest land | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Cropland | Liming | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| | Cropland remaining cropland | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | |
| | Biomass burning | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Land converted to cropland | 6.0 | 6.0 | 6.5 | 6.5 | 6.6 | 6.6 | 6.6 | 6.6 | |
| Grassland | Biomass burning | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Liming | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | |
| | Grassland remaining grassland | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | |
| | Land converted to grassland | -2.3 | -2.3 | -2.7 | -2.7 | -2.8 | -2.8 | -2.8 | -2.9 | |
| Settlements | Biomass burning | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Land converted to settlements | 1.8 | 1.8 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | |
| Other | Harvested wood products | -0.8 | -0.8 | 0.0 | 0.2 | -0.1 | -0.4 | -0.8 | -0.9 | |
| Waste Management | | 5.8 | 5.8 | 2.6 | 2.5 | 2.5 | 2.6 | 2.6 | 2.8 | -52.3% |
| Waste Management | Landfill | 5.6 | 5.6 | 2.4 | 2.3 | 2.3 | 2.4 | 2.4 | 2.6 | |
| | Waste-water handling | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | |
| | Waste Incineration | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Exports | Exports (including electricity) | 1.4 | 1.4 | 1.3 | 1.8 | 1.8 | 1.5 | 1.6 | 1.6 | 18.7% |
| Grand total | | 73.9 | 73.8 | 56.4 | 56.0 | 56.6 | 56.1 | 54.8 | 54.5 | -26.3% |
| Grand Total, excluding exports | | 72.5 | 72.4 | 55.1 | 54.2 | 54.8 | 54.6 | 53.2 | 52.8 | -27.1% |

Electricity ONLY EmissionsUnits: MtCO₂

| NC Category | More Detail | Base Year | 1990 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|---------------------------|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Business Total | | 12.1 | 12.1 | 8.6 | 8.5 | 8.5 | 8.3 | 7.9 | 8.1 |
| Business | Iron and steel - electricity | 0.4 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Other industrial - electricity | 8.1 | 8.1 | 5.1 | 5.0 | 4.7 | 4.0 | 3.3 | 3.6 |
| | Commercial and institutional | 3.7 | 3.7 | 3.5 | 3.5 | 3.8 | 4.4 | 4.6 | 4.5 |
| Transport | Railways | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Public | Public | 1.7 | 1.7 | 1.0 | 1.0 | 1.1 | 1.2 | 1.3 | 1.3 |
| Residential | Residential electricity | 7.9 | 7.9 | 6.5 | 6.4 | 6.4 | 6.7 | 6.4 | 6.4 |
| Agriculture | Stationary and mobile - electricity | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| Industrial Process | Iron and steel production - electricity (Blast Furnace) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exports | Exports - electricity | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Grand Total | | 22.2 | 22.2 | 16.5 | 16.4 | 16.5 | 16.7 | 16.1 | 16.2 |

Table A5.3: Wales End User GHG Emission Estimates, 1990 and 2003 to 2008*(continued overleaf)*

| Total GHGs - by end user | | Units: Mt CO ₂ e | | | | | | | | |
|---------------------------------|---|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------------------|
| NC Category | More Detail | Base Year | 1990 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | BY to 2008 % change |
| Business Total | | 22.9 | 22.8 | 17.6 | 18.2 | 17.5 | 17.9 | 17.3 | 16.5 | -28.0% |
| Business | Iron and steel - combustion and electricity | 9.6 | 9.6 | 7.0 | 7.4 | 7.0 | 7.8 | 7.3 | 6.9 | |
| | Other industrial combustion and electricity | 11.0 | 11.0 | 8.1 | 8.4 | 7.8 | 7.2 | 7.0 | 6.5 | |
| | Commercial and institutional | 2.1 | 2.1 | 2.2 | 2.2 | 2.3 | 2.6 | 2.7 | 2.7 | |
| | Energy recovery from waste fuels | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Refrigeration and air conditioning | 0.0 | 0.0 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | |
| | Foams | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Firefighting | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Solvents | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | One Component Foams | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Electronics, electrical insulation and sporting goods | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | |
| Transport Total | | 7.6 | 7.6 | 7.9 | 8.0 | 8.0 | 8.1 | 8.1 | 7.9 | 3.4% |
| Aviation | Civil aviation (Domestic, Landing and take off) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Civil aviation (Domestic, Cruise) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Road | Passenger cars | 4.3 | 4.3 | 4.7 | 4.7 | 4.6 | 4.5 | 4.5 | 4.4 | |
| | Light duty vehicles | 0.6 | 0.6 | 0.9 | 0.9 | 1.0 | 1.0 | 1.0 | 1.0 | |
| | Buses | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | |
| | HGVs | 1.3 | 1.3 | 1.0 | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 | |
| | Mopeds & motorcycles | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | LPG emissions (all vehicles) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Other (road vehicle engines) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Railways | Railways | 0.4 | 0.4 | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | |
| | Railways - stationary combustion | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Shipping | National navigation | 0.5 | 0.5 | 0.4 | 0.4 | 0.5 | 0.6 | 0.5 | 0.6 | |
| Other Mobile | Military Aircraft and shipping | 0.3 | 0.3 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| Other Transportation | Aircraft - support vehicles | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Public | Public | 1.6 | 1.6 | 1.0 | 1.0 | 1.1 | 1.2 | 1.2 | 1.2 | -27.8% |
| Residential Total | | 8.6 | 8.6 | 8.0 | 8.1 | 7.8 | 7.9 | 7.4 | 7.8 | -9.8% |
| Residential | Residential combustion and electricity | 8.5 | 8.5 | 7.8 | 7.9 | 7.6 | 7.7 | 7.2 | 7.6 | |
| | Use of non aerosol consumer products | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| | Accidental vehicle fires | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Aerosols and metered dose inhalers | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| Agriculture Total | | 7.2 | 7.2 | 6.4 | 6.4 | 6.5 | 6.1 | 5.8 | 5.5 | -23.3% |
| Agriculture | Stationary and mobile combustion and electricity | 1.1 | 1.1 | 1.0 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | |
| | Breakdown of pesticides | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Enteric Fermentation | Cattle | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.4 | 1.4 | |
| | Sheep | 1.1 | 1.1 | 1.0 | 1.0 | 1.0 | 1.0 | 0.9 | 0.9 | |
| | Goats | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Horses | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Pigs | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Deer | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Wastes | Cattle | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | |
| | Sheep | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Goats | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Horses | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Pigs | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Poultry | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Deer | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Other | Manure liquid systems | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Manure solid storage and dry lot | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | |
| | Other manure management (N ₂ O) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Direct Soil Emission | 2.9 | 2.9 | 2.5 | 2.5 | 2.6 | 2.3 | 2.2 | 2.0 | |
| | Field burning | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |

Table A5.3: Wales End User GHG Emission Estimates, 1990 and 2003 to 2008 (continued)

(electricity only emissions are presented underneath the main table)

| NC Category | More Detail | Base Year | 1990 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | BY to 2008 % change |
|---------------------------------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------------------|
| Industrial Process Total | | 3.4 | 3.6 | 2.8 | 2.8 | 2.7 | 2.8 | 2.9 | 2.8 | -17.3% |
| Industrial Process | Sinter production | 0.9 | 0.9 | 1.0 | 1.0 | 1.0 | 0.8 | 0.8 | 0.7 | |
| | Cement production | 0.6 | 0.6 | 0.5 | 0.5 | 0.4 | 0.6 | 0.6 | 0.5 | |
| | Lime production | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Limestone and dolomite use | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.3 | 0.3 | |
| | Soda ash production and use | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Fletton bricks | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Ammonia production | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Iron and steel production and electricity (Blast Furnace) | 1.1 | 1.1 | 0.7 | 0.7 | 0.7 | 0.7 | 0.9 | 1.0 | |
| | Aluminium production | 0.3 | 0.5 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | |
| | Nitric acid production | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Adipic acid production | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Other - Chemical industry | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Halocarbon production | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Magnesium cover gas | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Land Use Change | | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -18.6% |
| Forest Land | Biomass burning | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Land converted to forest land | -1.2 | -1.2 | -1.6 | -1.6 | -1.5 | -1.5 | -1.4 | -1.3 | |
| | Direct N ₂ O emission from N fertilisation of forest land | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Cropland | Liming | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Cropland remaining cropland | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Biomass burning | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Land converted to cropland | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.1 | 1.1 | |
| Grassland | Biomass burning | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Liming | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | |
| | Grassland remaining grassland | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Land converted to grassland | -0.5 | -0.5 | -0.6 | -0.6 | -0.6 | -0.6 | -0.6 | -0.7 | |
| Settlements | Biomass burning | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Land converted to settlements | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | |
| Other | Harvested wood products | -0.3 | -0.3 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.0 | |
| Waste Management | | 2.9 | 2.9 | 1.4 | 1.4 | 1.4 | 1.3 | 1.3 | 1.3 | -55.6% |
| Waste Management | Landfill | 2.8 | 2.8 | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | |
| | Waste-water handling | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| | Waste Incineration | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Exports | Exports (including electricity) | 1.5 | 1.5 | 1.8 | 2.3 | 2.1 | 1.9 | 2.1 | 2.0 | 31.2% |
| Grand total | | 55.5 | 55.6 | 46.8 | 47.9 | 46.8 | 47.0 | 46.1 | 44.7 | -19.5% |
| Grand Total, excluding exports | | 54.0 | 54.1 | 45.0 | 45.7 | 44.7 | 45.1 | 43.9 | 42.7 | -20.9% |

Electricity ONLY Emissions

Units: MtCO₂

| NC Category | More Detail | Base Year | 1990 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|---------------------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| Business Total | | 8.4 | 8.4 | 6.6 | 6.5 | 6.4 | 6.4 | 6.2 | 5.9 |
| Business | Iron and steel - electricity | 1.9 | 1.9 | 1.0 | 1.1 | 1.0 | 1.2 | 0.9 | 0.9 |
| | Other industrial - electricity | 4.9 | 4.9 | 3.9 | 3.7 | 3.5 | 3.0 | 3.0 | 2.8 |
| | Commercial and institutional | 1.5 | 1.5 | 1.7 | 1.7 | 1.9 | 2.2 | 2.3 | 2.3 |
| Transport | Railways | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 |
| Public | Public | 0.7 | 0.7 | 0.5 | 0.5 | 0.6 | 0.7 | 0.7 | 0.7 |
| Residential | Residential electricity | 3.5 | 3.5 | 2.9 | 2.9 | 2.9 | 3.1 | 2.9 | 3.0 |
| Agriculture | Stationary and mobile - electricity | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.2 |
| Industrial Process | Iron and steel production - electricity (Blast Furnaces) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exports | Exports - electricity | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Grand Total | | 13.1 | 13.1 | 10.4 | 10.3 | 10.3 | 10.6 | 10.2 | 9.9 |

Table A5.4: Northern Ireland End User GHG Emission Estimates, 1990 and 2003 to 2008*(continued overleaf)*

| Total GHGs - by end user | | Units: Mt CO ₂ e | | | | | | | | |
|---------------------------------|---|-----------------------------|------------|------------|------------|------------|------------|------------|------------|------------------------|
| NC Category | More Detail | Base Year | 1990 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | BY to 2008 % change |
| Business Total | | 4.5 | 4.5 | 3.7 | 3.8 | 4.1 | 4.2 | 4.3 | 3.8 | -15.1% |
| Business | Iron and steel - combustion and electricity | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Other industrial combustion and electricity | 3.7 | 3.7 | 2.3 | 2.4 | 2.5 | 2.5 | 2.4 | 1.9 | |
| | Commercial and institutional | 0.8 | 0.8 | 1.2 | 1.3 | 1.4 | 1.6 | 1.7 | 1.7 | |
| | Energy recovery from waste fuels | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Refrigeration and air conditioning | 0.0 | 0.0 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | |
| | Foams | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Firefighting | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Solvents | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | One Component Foams | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Electronics, electrical insulation and sporting goods | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Transport Total | | 4.3 | 4.3 | 5.7 | 5.6 | 5.8 | 5.9 | 6.0 | 5.9 | 35.9% |
| Aviation | Civil aviation (Domestic, Landing and take off) | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| | Civil aviation (Domestic, Cruise) | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | |
| Road | Passenger cars | 2.4 | 2.4 | 2.9 | 2.9 | 2.9 | 2.8 | 3.0 | 2.8 | |
| | Light duty vehicles | 0.3 | 0.3 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 | |
| | Buses | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | |
| | HGVs | 1.0 | 1.0 | 1.7 | 1.5 | 1.6 | 1.7 | 1.8 | 1.9 | |
| | Mopeds & motorcycles | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | LPG emissions (all vehicles) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Other (road vehicle engines) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Railways | Railways | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| | Railways - stationary combustion | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Shipping | National navigation | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.3 | |
| Other Mobile | Military Aircraft and shipping | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| Other Transportation | Aircraft - support vehicles | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Public | Public | 1.2 | 1.2 | 0.5 | 0.5 | 0.6 | 0.6 | 0.6 | 0.6 | -48.0% |
| Residential Total | | 7.3 | 7.3 | 6.0 | 6.1 | 6.0 | 6.2 | 6.2 | 6.2 | -14.6% |
| Residential | Residential combustion and electricity | 7.2 | 7.2 | 5.9 | 6.0 | 5.9 | 6.1 | 6.0 | 6.1 | |
| | Use of non aerosol consumer products | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Accidental vehicle fires | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Aerosols and metered dose inhalers | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| Agriculture Total | | 6.0 | 6.0 | 5.8 | 5.7 | 5.7 | 5.6 | 5.5 | 5.4 | -11.4% |
| Agriculture | Stationary and mobile combustion and electricity | 1.0 | 1.0 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.7 | |
| | Breakdown of pesticides | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Enteric Fermentation | Cattle | 1.7 | 1.7 | 1.8 | 1.8 | 1.9 | 1.9 | 1.9 | 1.9 | |
| | Sheep | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | |
| | Goats | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Horses | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Pigs | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Deer | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Wastes | Cattle | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | |
| | Sheep | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Goats | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Horses | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Pigs | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| | Poultry | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Deer | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Other | Manure liquid systems | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Manure solid storage and dry lot | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | |
| | Other manure management (N ₂ O) | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| | Direct Soil Emission | 2.3 | 2.3 | 2.2 | 2.2 | 2.0 | 2.0 | 1.9 | 1.9 | |
| | Field burning | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |

Table A5.4: Northern Ireland End User GHG Emission Estimates, 1990 and 2003 to 2008 (continued)

(electricity only emissions are presented underneath the main table)

| NC Category | More Detail | Base Year | 1990 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | BY to 2008 % change |
|---------------------------------------|--|-------------|---------------|-------------|-------------|-------------|-------------|---------------|-------------|------------------------|
| Industrial Process Total | | 0.8 | 0.8 | 0.2 | 0.2 | 0.4 | 0.4 | 0.5 | 0.4 | -48.7% |
| Industrial Process | Sinter production | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Cement production | 0.4 | 0.4 | 0.2 | 0.2 | 0.4 | 0.4 | 0.5 | 0.4 | |
| | Lime production | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Limestone and dolomite use | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Soda ash production and use | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Fletton bricks | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Ammonia production | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Iron and steel production and electricity (Blast Furnace) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Aluminium production | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Nitric acid production | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Adipic acid production | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Other - Chemical industry | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Halocarbon production | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Magnesium cover gas | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Land Use Change | | 0.0 | 0.0 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | 844.6% |
| Forest Land | Biomass burning | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Land converted to forest land | -0.7 | -0.7 | -0.7 | -0.7 | -0.6 | -0.6 | -0.6 | -0.5 | |
| | Direct N ₂ O emission from N fertilisation of forest land | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Cropland | Liming | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Cropland remaining cropland | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Biomass burning | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Land converted to cropland | 1.3 | 1.3 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | |
| Grassland | Biomass burning | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Liming | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Grassland remaining grassland | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| | Land converted to grassland | -1.3 | -1.3 | -1.4 | -1.4 | -1.4 | -1.4 | -1.4 | -1.4 | |
| Settlements | Biomass burning | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Land converted to settlements | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | |
| Other | Harvested wood products | 0.0 | 0.0 | -0.1 | -0.1 | -0.1 | -0.1 | -0.2 | -0.2 | |
| Waste Management | | 1.7 | 1.7 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.9 | -48.7% |
| Waste Management | Landfill | 1.6 | 1.6 | 0.7 | 0.7 | 0.7 | 0.7 | 0.8 | 0.8 | |
| | Waste-water handling | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| | Waste Incineration | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Exports | Exports (including electricity) | 0.0 | 0.0 | 0.7 | 0.9 | 1.2 | 1.1 | 0.8 | 0.7 | 1637.3% |
| Grand total | | 25.8 | 25.721 | 23.2 | 23.5 | 24.2 | 24.5 | 24.349 | 23.6 | -8.4% |
| Grand Total, excluding exports | | 25.7 | 25.7 | 22.5 | 22.5 | 23.0 | 23.4 | 23.5 | 22.9 | -11.1% |

Electricity ONLY Emissions

Units: MTCO₂

| NC Category | More Detail | Base Year | 1990 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|---------------------------|---|------------|------------|------------|------------|------------|------------|------------|------------|
| Business Total | | 1.9 | 1.9 | 2.0 | 1.9 | 1.9 | 2.1 | 2.2 | 1.8 |
| Business | Iron and steel - electricity | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Other industrial - electricity | 1.3 | 1.3 | 0.8 | 0.8 | 0.6 | 0.7 | 0.7 | 0.3 |
| | Commercial and institutional | 0.6 | 0.6 | 1.1 | 1.1 | 1.2 | 1.4 | 1.5 | 1.5 |
| Transport | Railways | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 |
| Public | Public | 0.6 | 0.6 | 0.4 | 0.4 | 0.4 | 0.4 | 0.5 | 0.4 |
| Residential | Residential electricity | 1.9 | 1.9 | 1.6 | 1.6 | 1.7 | 1.8 | 1.7 | 1.8 |
| Agriculture | Stationary and mobile - electricity | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Industrial Process | Iron and steel production - electricity (Blast Furnace) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exports | Exports - electricity | 0.0 | 0.0 | 0.6 | 0.9 | 1.1 | 1.0 | 0.7 | 0.7 |
| Grand Total | | 4.7 | 4.7 | 4.9 | 5.1 | 5.3 | 5.6 | 5.4 | 5.0 |