

ESTIMATES OF EMISSIONS FOR SELECTED ITEMS AND ACTIVITIES

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ECCM

***The EDINBURGH CENTRE for
CARBON MANAGEMENT Ltd***

**The Edinburgh Centre for
Carbon Management**

Estimates of Emissions for Selected Items and Activities

Source of emissions	Number of uses or flights	Number of Years	Total Emissions (tonnes carbon)
Electric kettle ¹	1540 uses per year	1	0.02
Washing machine ²	8 washes per week	1	0.05
Household refrigerator ³	n/a	1	0.03
Heating and lighting a typical British home ⁴	n/a	1	1.64
Rubbish from a typical British home ⁵	n/a	1	0.11
Average British car ⁶	n/a	1	1.08
London - Paris by air ⁷	1 return flights	n/a	0.03
London - New York by air (not Concorde) ⁸	1 return flights	n/a	0.33
United Kingdom total ⁹	n/a	1	150 million
United Kingdom citizen (CO ₂ only) ¹⁰	n/a	1	2.58
United Kingdom citizen (all greenhouse gases) ¹¹	n/a	1	3.43

Assumptions

1. Emissions based on an average 1540 uses per year and 170 kWh of electricity consumed per year (Environmental Change Unit 1999a)
2. Energy consumption under typical conditions of an Energy Star qualifying washing machine (worst case) is 447 kWh/yr (Energy Star 1999).
3. Average energy consumption of a refrigerator manufactured in 1998 is 239 kWh/yr (Environmental Change Unit 1999b).
4. Energy consumption for a UK household is 4290 kWh/yr of electricity, 14,528 kWh/yr of gas and 0.33 tonnes of oil equivalent for solid fuel and oil (DETR 1999a).
5. Domestic waste produced by a UK household (average) is 832.3 kg/yr (Open University 1998).
6. Distance travelled per person by car in the UK (average) is 20,000 km/yr. Fuel consumption for a petrol car up to two years old in Great Britain (average) is 34 mpg (DETR 1999b).
7. Plane emissions for short haul flights is 0.0491 kg carbon/passenger km (DETR 1999c).
8. Plane emissions for long haul flights is 0.0300 kg carbon/passenger km (DETR 1999c).
9. Net emissions for the UK 1995 are estimated as 545,6 million tonnes CO₂ (or 148.8 million tonnes of carbon) (WRI 1999).
10. UK CO₂ emissions per capita are 9.4 tonnes CO₂ (or 2.6 tonnes of carbon). This figure is based on 1995 UK CO₂ emissions divided by the UK population (WRI 1999).
11. UK greenhouse gas emissions per capita are 12.6 tonnes 'CO₂ equivalent' (or 3.4 tonnes of 'carbon equivalent'). This figure is based on UK 1996 aggregate emissions of greenhouse gases (CO₂, CH₄, N₂O, HFCs, PFCs and SF₆) divided by UK population (UNFCCC 1998 and WRI 1999).

References

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