

ESTIMATING EMISSIONS FROM COAL CONSUMPTION

Summary

Base Year: 2008

Because of lack of recent, representative and reliable activity datasets, atmospheric emissions from coal consumption for the 2008 base year were not estimated; they were simply assumed to be the same as those in the LAEI 2006.

Projection Years: 2011 and 2015

Because of lack of recent, representative and reliable activity datasets for the 2008 base year, projection of atmospheric emissions from coal consumption to 2011 and 2015 were not undertaken; instead projections of atmospheric emissions from coal consumption to 2011 and 2015 were basically assumed to be the same as those in the LAEI 2006.

2008 emission estimation methodology: Same as the LAEI 2006 methodology

Estimates of atmospheric emissions from coal consumption were based on the methodology used by the London Research Centre (LRC). The LRC obtained 1996 coal sales data by postcode area (for the entire LAEI study area) from RJB Mining and Celtic Energy and emissions factors for smokeless solid fuel (SSF)¹ from the AEA Report, "UK Emissions of Air Pollutants 1970-1994".

Although the LRC had rough figures of the market shares of RJB Mining and Celtic Energy, it did not factor up the figures as there were no regional figures for total coal use/supply, only coal production data was available. National market shares figures were approximated and coal sale datasets (by postcode area) were apportioned by 1-km² grids. Imported coal, mainly for power stations, was covered under the Part A Processes.

Table 1: Emission factors for coal

Pollutants	Domestic	Industrial
	<i>Tonne/tonne</i>	<i>Tonne/tonne</i>
CO ₂	2.83873	2.80977
Methane	0.0064	0.000264
NO _x	0.00132	0.00396
NMVOC	0.0012	0.000528
CO	0.045	0.0041
Black Smoke	0.0056	0.00023
SO ₂	0.016	0.019
Benzene	3.47% of NMVOC	3.47% of NMVOC
TSP	0.003894	0.003894
PM ₁₀	0.00275	0.00275

¹ The urban areas covered by the LAEI are covered by smoke control legislation, so it will be SSF that is burnt rather than coal.