

## Annex 1 - Fuel Conversion Factors

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Table 1

Converting fuel types to CO <sub>2</sub>			Net CV Basis <sup>3</sup>			Gross CV Basis <sup>4</sup>		
Fuel Type	Amount used per year	Units	x	kg CO <sub>2</sub> per unit	Total kg CO <sub>2</sub>	x	kg CO <sub>2</sub> per unit	Total kg CO <sub>2</sub>
Electricity		See Annex 3						
Natural Gas		kWh	x	0.206		x	0.185	
		therms	x	6.023		x	5.421	
Gas Oil		tonnes	x	3190		x	3190	
		kWh	x	0.265		x	0.251	
		litres	x	2.674		x	2.674	
Diesel		tonnes	x	3164		x	3164	
		kWh	x	0.263		x	0.249	
		litres	x	2.630		x	2.630	
Petrol		tonnes	x	3135		x	3135	
		kWh	x	0.253		x	0.240	
		litres	x	2.315		x	2.315	
Fuel Oil		tonnes	x	3223		x	3223	
		kWh	x	0.281		x	0.267	
Burning Oil <sup>1</sup>		tonnes	x	3150		x	3150	
		kWh	x	0.258		x	0.245	
		litres	x	2.518		x	2.518	
Coal <sup>2</sup>		tonnes	x	2457		x	2457	
		kWh	x	0.346		x	0.329	
LPG		kWh	x	0.225		x	0.214	
		therms	x	6.608		x	6.277	
		litres	x	1.498		x	1.498	
Coking Coal		tonnes	x	2810		x	2810	
		kWh	x	0.349		x	0.332	
Aviation Spirit		tonnes	x	3128		x	3128	
		kWh	x	0.250		x	0.238	
		litres	x	2.233		x	2.233	
Aviation Turbine Fuel <sup>1</sup>		tonnes	x	3150		x	3150	
		kWh	x	0.258		x	0.245	
		litres	x	2.518		x	2.518	
Other Petroleum Gas		tonnes	x	2894		x	2894	
		kWh	x	0.217		x	0.206	
Naphtha		tonnes	x	3131		x	3131	
		kWh	x	0.249		x	0.237	
Lubricants		tonnes	x	3171		x	3171	
		kWh	x	0.263		x	0.250	
Petroleum Coke		tonnes	x	3410		x	3410	
		kWh	x	0.361		x	0.343	
Refinery Miscellaneous		kWh	x	0.259		x	0.246	
		therms	x	7.585		x	7.214	
<b>Total</b>					<b>0</b>			<b>0</b>

Sources UK Greenhouse Gas Inventory for 2005 (AEA Energy & Environment)

[Digest of UK Energy Statistics \(DTI\)](#)

Notes

<sup>1</sup> Burning oil is also known as kerosene or paraffin used for heating systems. Aviation Turbine fuel is a similar kerosene fuel specifically refined to a higher quality for aviation.

<sup>2</sup> Average emission factor for coal used in sources other than power stations and domestic, i.e. industry sources including collieries, Iron & Steel, Autogeneration, Cement production, Lime production, Other industry, Miscellaneous, Public Sector, Stationary combustion - railways and Agriculture. Users who wish to use coal factors for types of coal used in specific industry applications should use the factors given in the UKETS.

<sup>3</sup> Emission factors calculated on a Net Calorific Value basis. Energy and emissions are currently calculated on a Gross Calorific Value basis in the UK, however it is anticipated that in the near future calculations will be moved to a Net Calorific Value basis, which is also consistent with the European Union Emission Trading Scheme (EUETS) for CO<sub>2</sub> emissions.

<sup>4</sup> Emission factors calculated on a Gross Calorific Value basis