

The initial emission factors are based upon primary fuel factors for lower heat values. They are listed in Table Two.

Table Two
Initial Emission Factors

	Grams Carbon per Mega-joule	Range (% +/-)
Natural Gas	15.3	0.1
Oil	20.0	3.0
Coal	25.8	3.0
Other Solid Fuels	21.2	>10

To calculate CO₂ emissions it is necessary to first convert million tonnes of oil equivalent to mega-joules by multiplying by 41.868×10^9 . This figure is then multiplied by the relevant initial emission factor and by 10^{-12} to convert grams of carbon to million tonnes of carbon. The resulting values represent the primary emission factors that are applied to the total primary energy supply figures to obtain the carbon emissions. The primary emission factors for natural gas, oil and other solid fuels are represented in Table Three.

Table Three
Primary Emission Factors

Fuel	Primary Emission Factor
Natural Gas	0.64
Oil	0.84
Other solid Fuels	0.89

Because of variations in emissions among different coal types, it is preferable to apply differentiated coal emission factors when examining national data or specific OECD regions. For these purposes the values contained in Table B-1 page 175 of the (IEA/OECD) aforementioned study have been applied to express differences in regional coal properties. They are, for the OECD Total 26.1, OECD Europe 26.6, OECD North America 25.8 and OECD Pacific 26.2. Within the regions, the regional emission factor for coal has been applied to the countries making up the regions.

It is possible to apply average emission factors to a fuel such as oil. For coal, however, there can be significant differences between the heat factors and the coal types within regions and