UK Fuel Mix Methodology

1.1 This note outlines the calculations behind the residual fuel mix. The residual fuel mix is used by electricity suppliers to apportion the electricity they supply between fuel type when they do not hold the relevant evidence of energy source as set out in the guidelines provided by Ofgem[1].

1.2 Data requests are sent to the major energy suppliers for the following information:

Supply for which REGOs or Generator Declarations held[2]
Coal (MWh)
Natural Gas (MWh)
Nuclear (MWh)
Renewable (MWh)
Other (MWh)
Total for which REGOs or generator declarations are held (MWh)
Residual (supply for which REGOs or generator declarations are not held) (MWh)
Total supplied (MWh)
Total purchased for supply (inc loss factor) (MWh) calculated by DECC

1.3 The data are then aggregated to give the total amount of electricity supplied by fuel source for which REGOs or generator declarations are held.

Total purchased for supply (inc. loss factor) (MWh) is calculated for each major energy supplier and aggregated as a total for all major energy suppliers:

*(Total non-renewable supplied for which REGOs or generator declaration held * loss factor) + Total supplied by renewables for which REGOs or generator declaration held*

1.4 The **total UK fuel mix** is calculated on a financial year basis using DECC's published statistics. Data for the UK are published in table 5.1 from our quarterly publication, Energy Trends (the version used in 2010/11 fuel mix was Energy Trends June 2011). These tables can be found via this link http://www.decc.gov.uk/en/content/cms/statistics/source/electricity/electricity.aspx.

1.5 The UK data is then converted to cover Great Britain only by deducting data from Northern Ireland. The Northern Ireland Fuel Mix comes from monthly returns sent in by electricity companies based in Northern Ireland.

---

[1] http://www.ofgem.gov.uk/Sustainability/Environment/Policy/Documents1/12340-282_05.pdf

[2] Renewable Energy Guarantee of Origins (REGOs) http://www.ofgem.gov.uk/Sustainability/Environment/REGOs/Pages/REGOs.aspx

1.6 Imported electricity is also allocated to a fuel type using fuel mix data for France which is available from Eurostat.

1.7 The data are expressed as a percentage of total supply in Great Britain. Each percentage is multiplied by the 'Total purchased for supply (incl. loss factor) (MWh)' to give the total electricity supplied for each fuel source. The difference between this and the actual figures reported by the major energy suppliers gives the GB residual fuel mix, which is then expressed in percentage terms.

Carbon dioxide emissions

2.1 Carbon dioxide emissions by fuel type are obtained from the UK greenhouse gas inventory. The total emissions for generation by each fuel are divided by the electricity supplied by each fuel type to give CO2 emissions per kWh.

2.2 The emissions are rounded to the nearest 10 to reflect the uncertainty around the data. Emissions data are generally available 12 months in arrears (and on a calendar year basis) so are adjusted to take into account changes in electricity supply over the last year. Data are also adjusted to convert emissions from UK to Great Britain.

2.3 For the 2010/11 fuel mix disclosure the emissions are slightly higher than those reported in previous years. In previous years emissions for electricity generated by major power producers were divided by all electricity supplied (major power producers and autogenerators). This year emissions for electricity generated by autogenerators have also been included.