



Department  
of Energy &  
Climate Change

# Sub-national residual fuel consumption statistics

Regional and local authority level statistics  
(2012 data)

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**Statistician**

**Responsible:** Mary Gregory

**Prepared by:** Sabena Khan  
Christopher Fairbanks

**Sub-national consumption statistics**

[EnergyEfficiency.Stats@decc.gsi.gov.uk](mailto:EnergyEfficiency.Stats@decc.gsi.gov.uk)

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## Background

Residual fuels are defined as non-gas, non-electric and non-road transport fuels not used for the generation of electricity or road transport, and cover consumption of:

- coal,
- petroleum,
- manufactured solid fuels<sup>1</sup> and
- bioenergy and wastes.

The residual fuel dataset is derived from the results of the National Atmospheric Emissions Inventory<sup>2</sup> (NAEI) and Greenhouse Gas Inventory (GHGI) survey carried out by Ricardo-AEA. This study excludes fuels used in aviation, shipping and power stations. In addition, for some fuel–sector combinations, no information is available for spatial mapping purposes. Where possible, fuels used for fuel transformation are excluded (for example, coal used in coke ovens and blast furnaces, and coal and oils used in power stations). However, actual end-use of fuels is not always obvious from the raw datasets available and some fuels used in transformation may be included.

The residual fuels fall into several categories which are outlined in Table 1 below.

**Table 1** Sources and fuels that have been mapped in the Ricardo-AEA study

End use (sector)	Fuel type
Industry	Petroleum, coal and Manufactured Solid Fuel (MSF)
Domestic	Petroleum, coal and Manufactured Solid Fuel (MSF)
Rail	Petroleum
Public administration	Petroleum and coal
Commercial	Petroleum and coal
Agriculture	Petroleum and coal
All sources	Bioenergy and waste

This dataset provides residual fuel consumption in the UK at a local authority and regional level over the period spanning 1 January to 31 December 2012. Regional analysis contained in this factsheet covers the nine regions within England; in addition to Scotland, Wales and Northern Ireland which have been referred to as ‘regions’ throughout this document. These data are used by a range of users for different purposes, such as local authorities to understand and monitor local energy use as part of their energy strategies.

Annual data on a consistent basis are available from 2005 and can be found here: <https://www.gov.uk/government/statistical-data-sets/estimates-of-non-gas-non-electricity-and-non-road-transport-fuels-at-regional-and-local-authority-level>.

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<sup>1</sup> Manufactured solid fuels are secondary fuel which include coke, breeze and other solid manufactured fuels, mainly products from patent fuel and carbonisation plants.

<sup>2</sup> Further information about the National Atmospheric Emissions Inventory and Greenhouse Gas Inventory can be found here: <http://naei.defra.gov.uk/>.

This document provides some commentary relating to local authority trends and following the analysis section, background information to the datasets has been provided which includes revisions made to the dataset since the previous publication and differences between sub-national and DUKES residual fuel consumption estimates.

Revisions are made in line with the DECC organisational policy, which is available here: <https://www.gov.uk/government/statistics/energy-statistics-revisions-policy>.

Feedback from users of these data is welcomed. If you would like to comment on the data or the content of the documents or if you have any queries please send these to [EnergyEfficiency.Stats@decc.gsi.gov.uk](mailto:EnergyEfficiency.Stats@decc.gsi.gov.uk).

## Key terms used in this document

**Million tonnes of oil equivalent (mtoe)** has been used throughout this factsheet and data tables. This can be defined as a common unit of measurement which enables different fuels to be compared and aggregated. A **tonne of oil equivalent (toe)** is a unit of energy defined as the amount of energy released by burning one tonne of crude oil. It is approximately 42 gigajoules (41.868 GJ in DUKES 2014 edition).

Also used is **thousand tonnes of oil equivalent (ktoe)** within the domestic section of this factsheet. Please note, ktoe values reported within this factsheet have been rounded to the nearest ten.

A full glossary of terms used within the energy industry has been provided in Annex B of the DECC statistics publication 'Digest of UK Energy Statistics' (DUKES)<sup>3</sup>.

## Accompanying documentation

Further information on the methodology used to produce these data can be found in the detailed methodology note produced by Ricardo-AEA named '[UK sub-national consumption of other fuels for 2005-2012](#)', which is published alongside the residual fuel dataset.

Users are highly advised to familiarise themselves with the material in Chapter 8 of the Sub-national methodology and guidance booklet for further details on the methodology, assumptions and data interpretation relating to the road transport fuel consumption statistics. The booklet can be accessed here: <https://www.gov.uk/government/publications/regional-energy-data-guidance-note>.

Annex B (on page 22 of this document) contains details of the suite of sub-national consumption statistics available on the DECC webpages.

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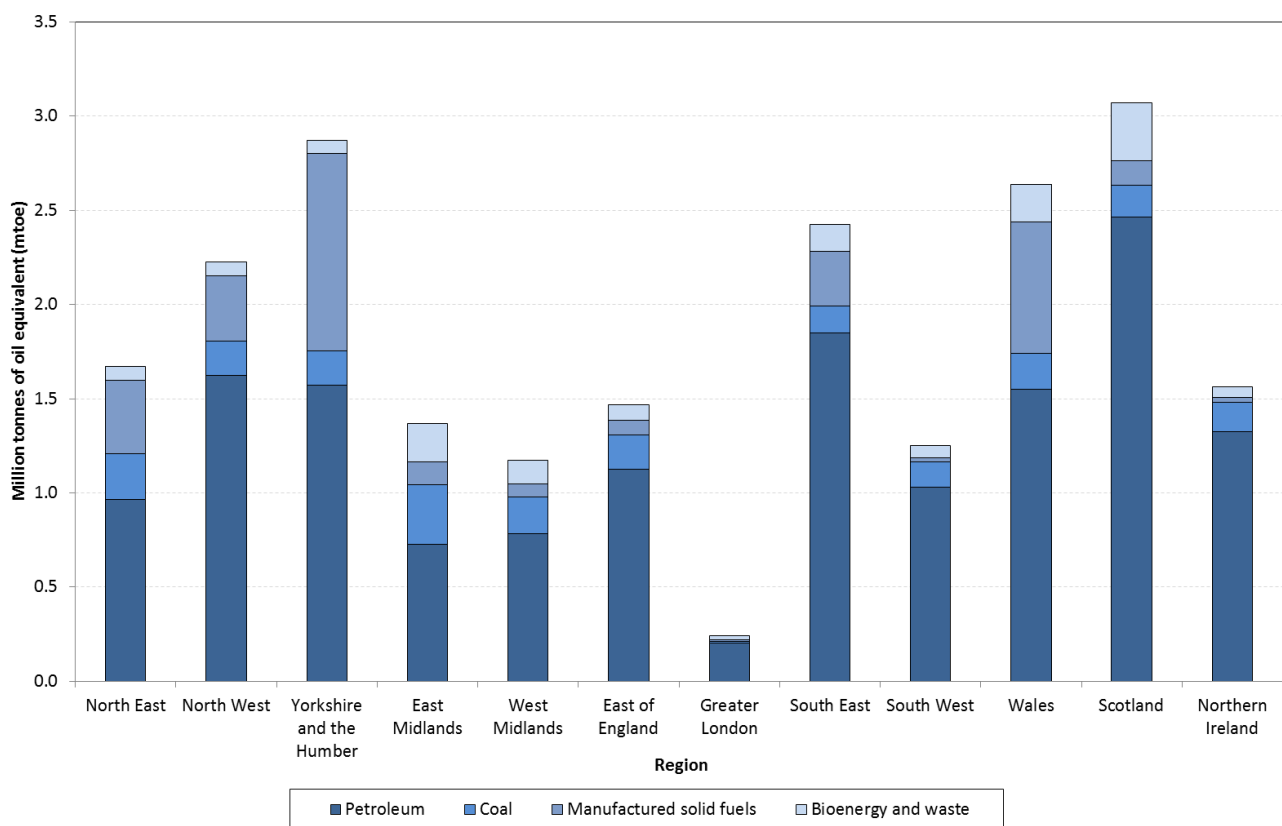
<sup>3</sup> DUKES can be accessed here: <https://www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes>.

## 1. UK total residual fuel consumption by country

### 1.1 Summary of residual fuel consumption by region in 2012

Total UK residual fuel consumption in the UK in 2012 was 22.0 million tonnes of oil equivalent (mtoe) – this was a five per cent decrease from 2011 (23.0 mtoe). Consumption of residual fuels in the UK varies across the nine regions within England and within Scotland, Wales and Northern Ireland. Chart 1 shows total consumption of residual fuels by region, sector and fuel type.

**Chart 1 Residual fuel consumption for regions of the UK in 2012**



**To interpret fuel consumption data by country, it is important to note the different fuel mix used in Northern Ireland compared to England, Scotland and Wales. The low penetration of the gas network in Northern Ireland implies a greater reliance on residuals fuels for heating purposes, and therefore changes in temperatures<sup>3</sup> over years will have more impact on Northern Ireland residual fuel consumption.**

Scotland consumed the most residual fuels in the UK (3.1 mtoe) due to high a high consumption of industrial petroleum (1.9 mtoe), mainly observed in Falkirk (1.2 mtoe). Yorkshire and the Humber consumed 2.9 mtoe of residual fuels, driven by a high consumption of industrial petroleum and industrial manufactured solid fuels in North Lincolnshire. Across all twelve regions; residual fuels used in industry was greater than those used domestically (by households), except in Northern Ireland, where the limited coverage of

the gas distribution network in Northern Ireland means more residual fuels are consumed for domestic heating purposes.

Within England, Yorkshire and the Humber was the greatest consumer of residual fuels in 2012 (2.9 mtoe), followed by the South East (2.4 mtoe) and the North West (2.2 mtoe). These three regions alone make up 51 per cent of England's residual fuel consumption and 34 per cent of total residual fuel consumption for the UK.

Greater London consumed the smallest amount of residual fuels (0.2 mtoe). This is mainly a result of 'smoke control' areas, the greater use of gas and electricity and lower industrial energy usage in the region.

## 1.2 Regional residual fuel consumption between 2005 and 2012

In 2012, the total consumption of residual fuels in the UK was 22.0 million tonnes of oil equivalent (mtoe) - an 18 per cent decrease since 2005 (26.9 mtoe). There has been a steady year-on-year decline in total residual fuel consumption between 2005 and 2012, with the exception of 2010 compared with 2009 when there was a four per cent increase in residual fuel consumption, largely attributed to the colder temperatures in 2010<sup>4</sup>.

Chart 2 (on page 8) illustrates the distribution of total UK consumption of residual fuels by country. England consumed (on average) 67 per cent of total residual fuels between 2005 and 2012, Scotland 13 per cent, Wales 12 per cent and Northern Ireland which consumed seven per cent of total UK residual fuels.

England had the largest change in consumption of residual fuels between 2005 and 2012, a reduction of 3.9 mtoe, from 18.6 mtoe to 14.7 mtoe (21 per cent reduction). Wales had a 16 per cent (3.1 mtoe to 2.6 mtoe) decrease in consumption between 2005 and 2012, Scotland had a 12 per cent (3.5 mtoe to 3.1 mtoe) decrease and Northern Ireland had a seven per cent decrease in consumption (1.7 mtoe to 1.6 mtoe).

Chart 3 (on page 8) illustrates residual fuel consumption by four fuel types (petroleum, coal, MSFs and bioenergy and wastes). Petroleum is the main residual fuel consumed in the UK, accounting for on average 72 per cent per cent of total residual fuel consumption between 2005 and 2012, MSFs accounted for 14 per cent, coal accounted for nine per cent with bioenergy and waste accounted for five per cent of total residual fuel consumption during this period.

Between 2005 and 2012, the consumption of petroleum fell by 23 per cent in the UK (19.8 mtoe to 15.2 mtoe) and there was a 52 per cent increase in the consumption of bioenergy and wastes (0.9 mtoe to 1.4 mtoe). The largest increases in consumption of bioenergy and wastes have occurred between 2006 and 2007 and between 2008 and 2009 (both an increase of 0.3 mtoe). There was also a 21 per cent decrease in consumption of MSFs in the

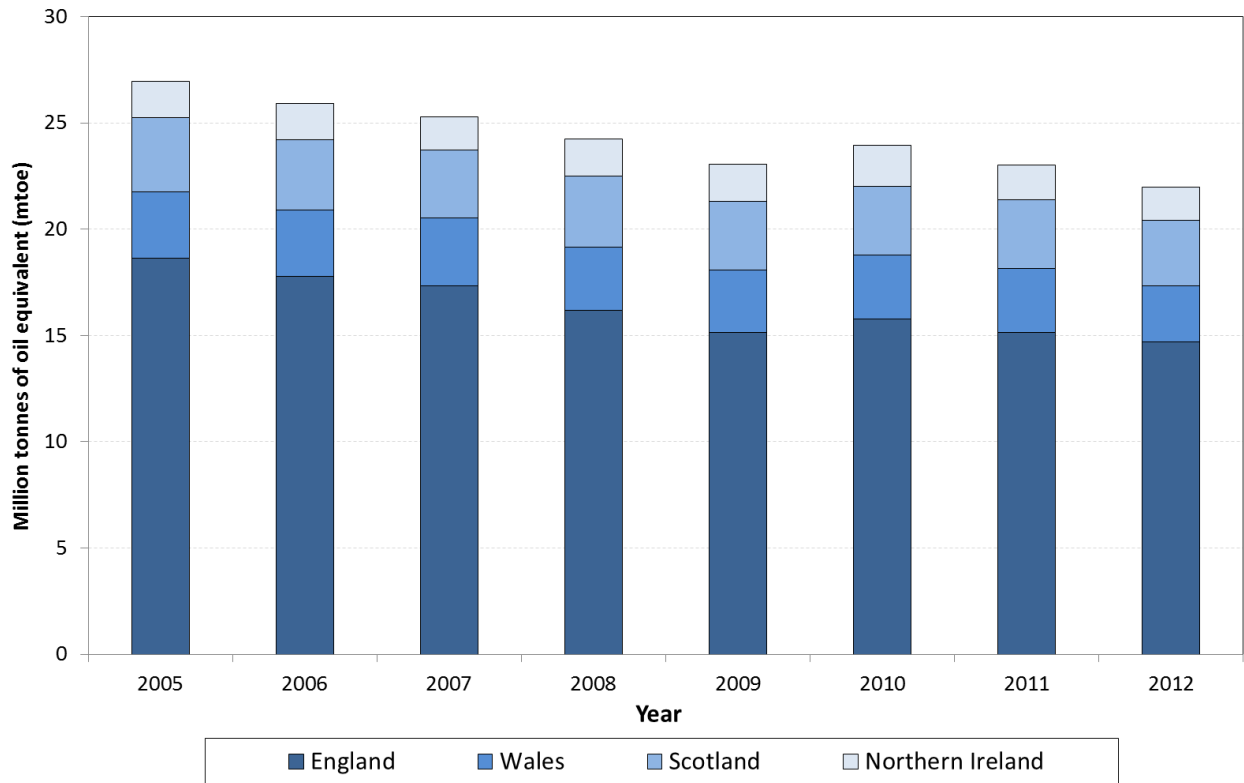
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<sup>4</sup> Average monthly mean temperatures for the UK can be accessed from the MET office website at: <http://www.metoffice.gov.uk/pub/data/weather/uk/climate/datasets/Tmean/ranked/UK.txt>.

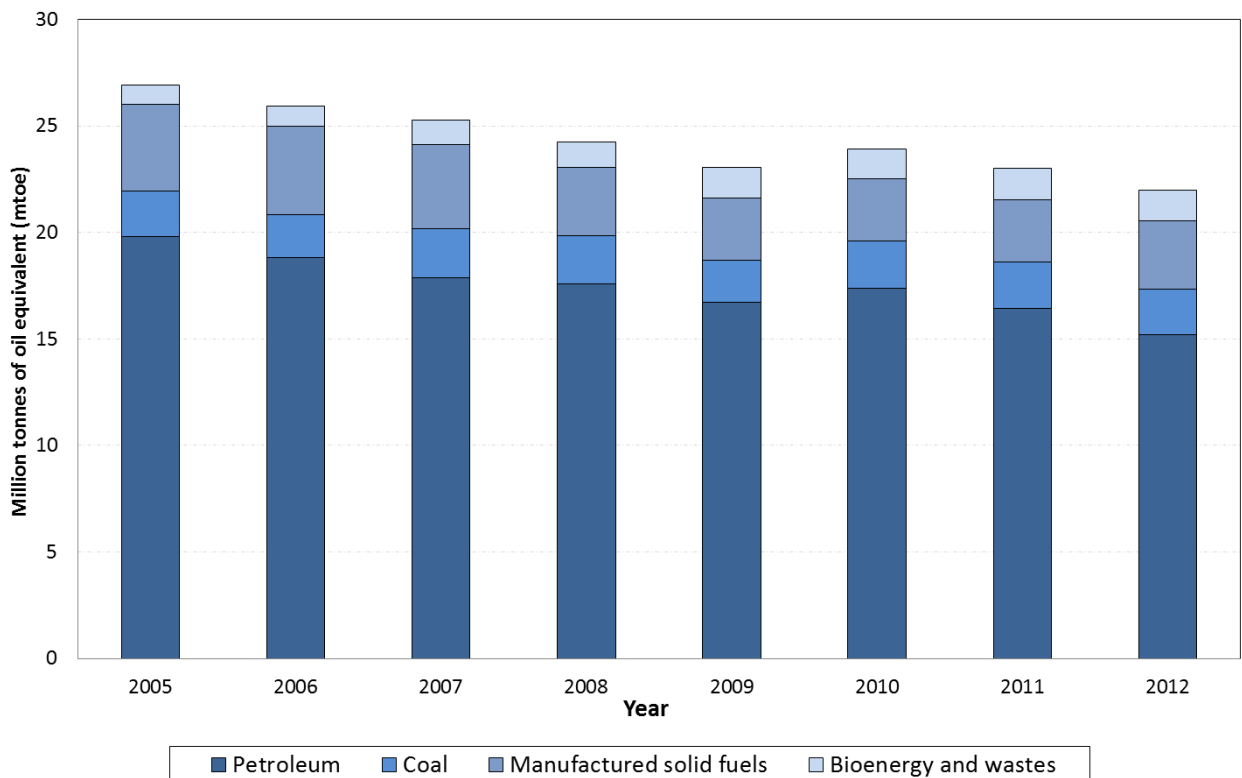
<sup>5</sup> Data from the MET office ([http://www.metoffice.gov.uk/climate/uk/datasets/Tmean/ranked/Northern\\_Ireland.txt](http://www.metoffice.gov.uk/climate/uk/datasets/Tmean/ranked/Northern_Ireland.txt)) shows that the average temperature in Northern Ireland fell between 2007-2008 and 2009-2010, dropping by 0.7°C and 1.1°C respectively. Chart 2 shows that during these two periods there have been increases in residual fuel consumption. The warmest year, since 1910, in Northern Ireland was in 2007, where there has been a notable decrease in residual fuel consumption. Between 2010 and 2011 average annual temperature increased from 8.0°C to 9.3°C. Again with this increase in annual temperature, there seems to be a steep decrease in residual fuel consumption.

UK between 2005 and 2012 (4.1 mtoe to 3.2 mtoe). Coal consumption remained broadly consistent between 2005 and 2012 at 2.1 mtoe.

**Chart 2 Residual fuel consumption for the UK by country, 2005 to 2012**



**Chart 3 Residual fuel consumption in the UK by fuel type, 2005 to 2012**





Regional changes in residual consumption reflected those at a national level – with consumption falling in each region between 2005 and 2012. The greatest percentage decrease occurred in the East of England, where consumption fell by 35 per cent (2.2 mtoe to 1.5 mtoe). This decrease was largely driven by a decrease in consumption in Thurrock, where consumption of residual fuels fell from 0.8 mtoe in 2005 to 0.3 mtoe in 2012. In the South East consumption fell by 27 per cent (3.3 mtoe to 2.4 mtoe). The smallest fall occurred in Northern Ireland, with a seven per cent decrease in residual fuel consumption (1.7 mtoe to 1.6 mtoe).

The largest decrease in consumption of petroleum products between 2005 and 2012 was in the East of England – a decrease of 38 per cent (from 1.8 mtoe to 1.1 mtoe) consumption, followed by a 29 per cent decrease (2.6 mtoe to 1.8 mtoe) in the South East. The smallest decrease in consumption occurred in Northern Ireland, where consumption of petroleum fell by seven per cent since 2005 (1.4 mtoe to 1.3 mtoe).

### **1.3 Regional residual fuel consumption between 2011 and 2012**

Between 2011 and 2012, consumption of residual fuels fell across all countries within the UK. Consumption in :

- Wales fell by 12 per cent (3.0 mtoe to 2.6 mtoe).
- Scotland fell by five per cent (3.2 mtoe to 3.1 mtoe).
- Northern Ireland fell by five per cent (remaining stable at 1.6 mtoe).
- England fell by three per cent (15.1 mtoe to 14.7 mtoe).

The decrease in residual fuel consumption in Wales has been due to a shift away from high sulphur fuels such as petroleum coke and fuel oil, towards natural gas in Pembrokeshire. This change has contributed to almost 88 per cent of the variation observed between 2011 and 2012 in Wales.

Between 2011 and 2012:

- petroleum consumption fell by seven per cent (16.4 mtoe to 15.2 mtoe).
- coal consumption fell by two per cent (2.2 mtoe to 2.1 mtoe).
- bioenergy and wastes decreased by five per cent (1.5 mtoe to 1.4 mtoe).
- MSFs increased by 10 per cent (2.9 mtoe to 3.2 mtoe).

Residual fuel consumption decreased in all regions between 2011 and 2012, except for in the Yorkshire and the Humber and the North East (Chart 4). The Yorkshire and the Humber had a 13 per cent increase in residual fuel consumption (2.5 mtoe to 2.9 mtoe) due to an increased consumption of manufactured solid fuels, primarily observed in North Lincolnshire (0.7 mtoe to 0.9 mtoe, an increase of 40 per cent).

The North East saw an increased residual fuel consumption of nine per cent (1.5 mtoe to 1.7 mtoe) predominantly due to a blast furnace restarting in Redcar and Cleveland; however, this was partly offset by smaller reductions in bioenergy and waste in the area.

**Chart 4 Percentage change in residual fuel consumption by region, between 2011 and 2012**

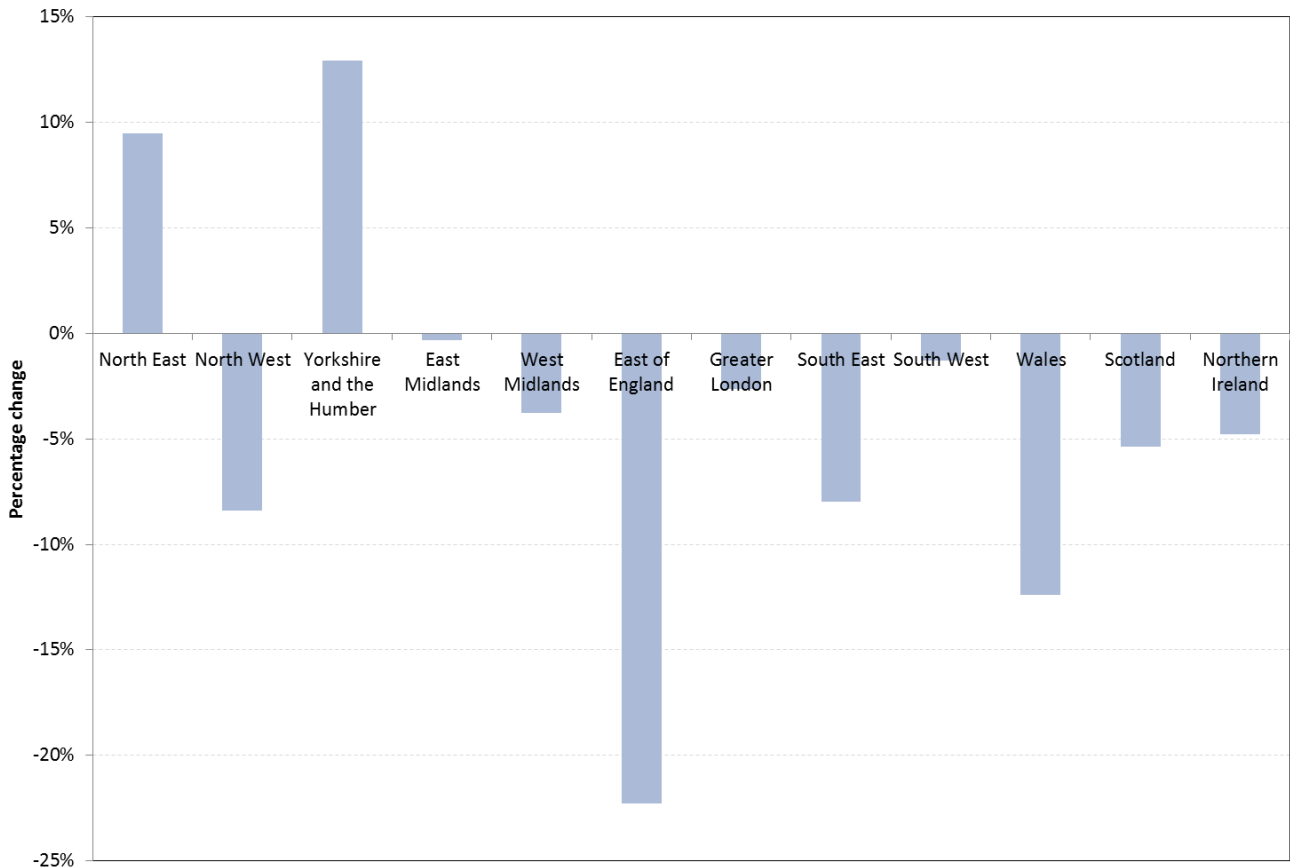


Table 2 below shows the differences in consumption between 2011 and 2012. Where a consumption difference is negative, this indicates that there has been a decrease in consumption between 2011 and 2012 (highlighted in grey). A positive value suggests an increase in consumption between 2011 and 2012. Please note consumption estimates in Table 2 are in ktoe and have been rounded to the nearest ten. It should also be noted that due to small quantities of residual fuels used, especially at regional level, small changes can result in large percentage changes.

**Table 2 Residual fuel consumption (ktoe) by region in 2011 and 2012**

Region	Petroleum		Coal		Manufactured Solid		Bioenergy and wastes		Total	
	Difference (ktoe)	Percentage difference	Difference (ktoe)	Percentage difference	Difference (ktoe)	Percentage difference	Difference (ktoe)	Percentage difference	Difference (ktoe)	Percentage difference
North East	-30	-3%	24	11%	230	142%	-79	-52%	145	9%
North West	-200	-11%	-5	-3%	-5	-1%	6	9%	-204	-8%
Yorkshire and the Humber	64	4%	4	2%	260	33%	2	2%	329	13%
East Midlands	-31	-4%	-37	-10%	16	15%	48	31%	-4	0%
West Midlands	-11	-1%	-37	-16%	7	11%	-6	-4%	-46	-4%
East of England	-350	-24%	3	2%	-93	-54%	19	32%	-420	-22%
Greater London	-4	-2%	0	0%	0	-5%	-2	-8%	-7	-3%
South East	-173	-9%	8	6%	-41	-12%	-3	-2%	-210	-8%
South West	-22	-2%	6	5%	-4	-18%	4	6%	-16	-1%
Wales	-256	-14%	-2	-1%	-130	-16%	15	8%	-373	-12%
Scotland	-174	-7%	-20	-10%	45	55%	-26	-8%	-174	-5%
Northern Ireland	-36	-3%	6	4%	-1	-2%	-47	-47%	-78	-5%
<b>Total difference</b>	<b>-1,225</b>	<b>-7%</b>	<b>-50</b>	<b>-2%</b>	<b>285</b>	<b>10%</b>	<b>-69</b>	<b>-5%</b>	<b>-1,059</b>	<b>-5%</b>

The largest overall percentage difference in residual fuel consumption occurred in the East of England, where consumption fell by 22 per cent (1.9 mtoe to 1.5 mtoe) – with reductions in industrial petroleum specifically, accounting for 83 per cent of this change in the region, as petroleum consumption fell from 0.4 mtoe between 2011 and 2012.

At a local authority level, 150 local authorities had an increased consumption between 2011 and 2012, compared with 256 which had a decreased consumption.

- The highest consuming local authority was North Lincolnshire (Yorkshire and the Humber), with a consumption value of 2.0 mtoe in 2012.
- The lowest consuming local authority was the City of London (Greater London), which consumed approximately 0.2 mtoe of residual fuels in 2012. This is likely to be due to a lower number of residents and a greater use of metered fuels.
- The largest percentage increase in consumption of residual fuels between 2011 and 2012 occurred in Tonbridge (South East), with a 73 per cent increase (20 ktoe to 30 ktoe).
- The largest percentage decrease occurred in Gravesham (South East) with a 64 per cent reduction between 2011 and 2012 (30 ktoe to 10 ktoe).

Analysis at local authority level will also be looked at in more detail in the domestic and non-domestic sectors later in this factsheet. In addition, further information on the consumption values for individual local authorities can be found in Annex A, which summarises the two highest and two lowest consuming local authorities within each region.

## 2. Residual fuel consumption in the domestic sector

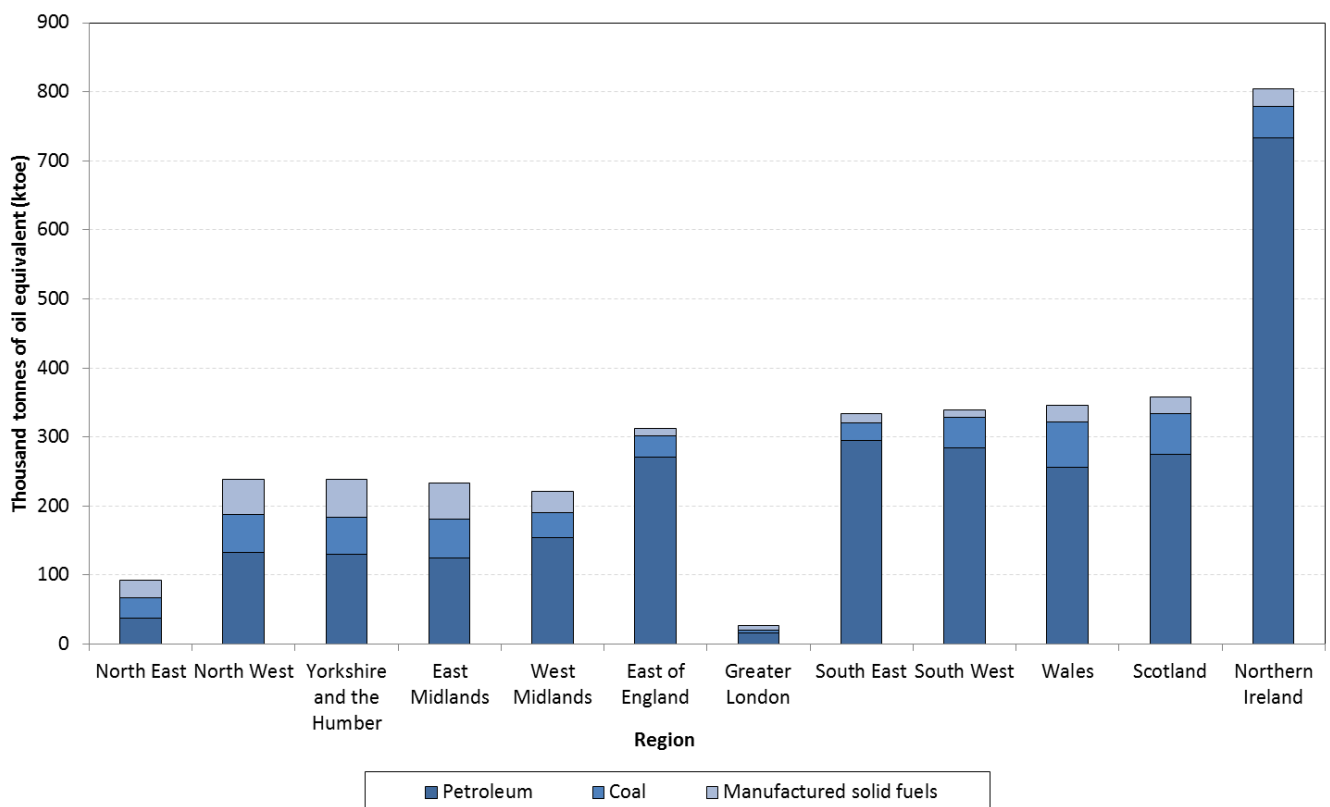
**Bioenergy and wastes have been excluded from the analysis in this section as there are no sectoral breakdowns available.**

**Please also note that due to the lower consumption values in the domestic sector, estimates in this chapter are reported in thousand tonnes of oil equivalent (ktoe).**

### 2.1 Domestic residual fuel consumption in 2012

In total, the UK consumed 3,540 ktoe of residual fuels in 2012 for domestic purposes – 17 per cent of all residual fuels consumed. The greatest regional consumer of domestic residual fuels was Northern Ireland (800 ktoe, 23 per cent of all residual fuels consumed in the domestic sector – more than double of any other region within the UK). It was the only region with a higher proportion of residual fuels used for domestic than non-domestic purposes<sup>6</sup>. Chart 5 below shows domestic fuel consumption for each region in 2012.

**Chart 5 Domestic residual fuel consumption of regions in 2012**



<sup>6</sup> At a per household level, Northern Ireland consumed 1.14 tonnes of oil equivalent (toe), compared to 0.02 toe in Wales, 0.01 toe in Scotland and 0.001 toe in England.

Petroleum<sup>7</sup> accounted for 76 per cent of total domestic residual fuel consumption in 2012 and coal and MSFs accounted for 14 per cent and nine per cent respectively, remaining relatively stable to proportions in 2011.

Northern Ireland consumed the highest amount of petroleum at 730 ktoe (27 per cent of all petroleum consumed for domestic purposes).

## **2.2 Domestic residual fuel consumption between 2005 and 2012**

Between 2005 and 2012, domestic residual fuel consumption decreased by nine per cent (from 3,910 ktoe to 3,540 ktoe). Whilst manufactured solid fuels and coal consumption have remained fairly consistent between 2005 and 2012, there has been a reduction in consumption of petroleum products in every region of the UK (3,090 ktoe to 2,710 ktoe) – most notably within Northern Ireland with a 13 per cent decrease (840 ktoe to 730 ktoe), Wales with a decrease of 13 per cent (300 ktoe to 260 ktoe) and Scotland, with a decrease of 12 per cent (310 ktoe to 270 ktoe).

The decrease in consumption of domestic residual fuels in Northern Ireland between 2005 and 2012, contributed to nearly a third of the total decrease in consumption of residual fuels in the UK. These changes were primarily driven by fluctuations in consumption of domestic burning oil, liable to variance in winter temperatures between 2005 and 2012. Belfast consumed 13 per cent (10 ktoe) less residual fuels, with 87 per cent of this caused by a reduction in burning oil consumption. Craigavon also consumed 13 per cent (10 ktoe) less residual fuels – of which 88 per cent was due to a drop in the consumption of burning oils.

At a local authority level, Belfast (Northern Ireland) consumed the highest amount of residual fuels (80 ktoe) in 2012, whilst the City of London (Greater London) consumed the least amount of domestic residual fuels (less than one ktoe). The largest percentage difference occurred in Mansfield (East Midlands) with a decrease in consumption of three per cent between 2011 and 2012.

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<sup>7</sup> Petroleum consumed for non-transport purposes.

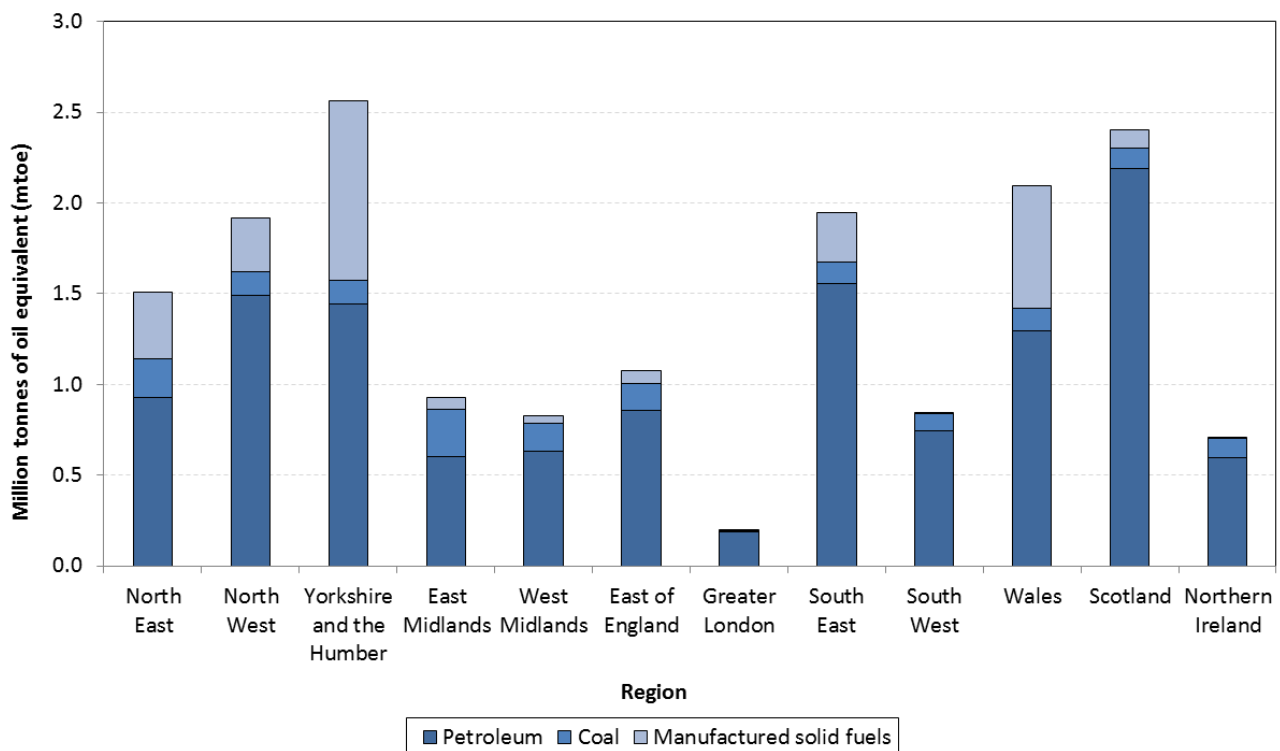
### 3. Residual fuel consumption in the non-domestic sector

**Bioenergy and wastes have been excluded from the analysis in this section as there are no sectoral breakdowns available.**

In 2012, 17.0 mtoe of residual fuels were consumed in the UK for non-domestic purposes. 74 per cent of this was petroleum<sup>8</sup> (12.5 mtoe), followed by 17 per cent of manufactured solid fuels<sup>9</sup> (2.9 mtoe) and nine per cent of coal<sup>10</sup> (1.6 mtoe).

Chart 6 below illustrates residual fuel consumption in the non domestic sector for each region in 2012.

**Chart 6 Non-domestic residual fuel consumption in regions in 2012**



The quantity and type of residual fuel in a certain region will be highly dependant on the industries in the region. In 2012, Yorkshire and the Humber consumed the most fuel at 2.6 mtoe and Greater London consumed the least at 0.2 mtoe, reflecting the composition of the non-domestic sector in those regions, for example Yorkshire and the Humber with refineries and petrochemical industries.

<sup>8</sup> Petroleum is used for industrial, rail, public administration, commercial and agricultural purposes.

<sup>9</sup> Coal is used for industrial and commercial purposes.

<sup>10</sup> MSFs are used for industrial purposes.

Between 2005 and 2012, there was a 23 per cent decrease (22.1 mtoe to 17.0 mtoe) in total non-domestic residual fuel consumption. The most notable changes in consumption in the UK between 2005 and 2012 are:

- 44 per cent decrease in petroleum consumption in the East of England (1.5 mtoe to 0.9 mtoe).
- 37 per cent decrease in manufactured solid fuels in the North East (0.6 mtoe to 0.4 mtoe).
- 32 per cent decrease in consumption of petroleum in the South East (2.3 mtoe to 1.6 mtoe).

At a local authority level, the largest actual decreases in residual consumption between 2005 and 2012 occurred in Thurrock which consumed 62 per cent less (0.8 mtoe to 0.3 mtoe) and North Lincolnshire which consumed 16 per cent less (2.3 mtoe to 1.9 mtoe).

Between 2011 and 2012, the largest decrease in non-domestic consumption occurred in the East of England of 29 per cent (1.5 mtoe to 1.1 mtoe). This was followed by Wales, with a 16 per cent (2.5 mtoe to 2.1 mtoe) decrease in consumption. The North East had an 18 per cent (1.3 mtoe to 1.5 mtoe) increase in consumption.

At a local authority level, the largest changes between 2011 and 2012 occurred in:

- Thurrock (East of England) – with a 54 per cent (0.4 mtoe) decrease in consumption.
- Pembrokeshire (Wales) – with a 24 per cent (0.3 mtoe) decrease in consumption.
- North Lincolnshire (Yorkshire and the Humber) – with a 21 per cent (0.3 mtoe) increase in consumption.
- Redcar and Cleveland (North East) – with a 14 per cent (0.1 mtoe) increase in consumption.

## 4. Revisions to previous publication

Annual revisions are made to previously published datasets to incorporate results from the NAEI, GHGI and EU Emissions Trading Scheme (EU-ETS) publications. Therefore, consumption estimates for the years 2005 to 2011 in the most recent publication will differ to values in earlier publications.

The effect of these revisions are shown in Table 3 below, where 2011 total residual fuel consumption published in 2013 is compared with 2011 total residual fuel consumption values published in 2014.

**Table 3** Impact of annual revisions on the reported UK total residual fuel consumption

	<b>Residual fuel consumption (2011) Published in 2013 (ktoe)</b>	<b>Revised residual fuel consumption (2011) Published in 2014 (ktoe)</b>	<b>Difference (ktoe)</b>	<b>Percentage change</b>
United Kingdom	22,100	23,030	930	4%
England	14,160	15,130	980	7%
Scotland	3,120	3,250	120	4%
Wales	2,890	3,010	130	4%
Northern Ireland	1,930	1,640	-290	-15%

After revisions were made to the dataset published in September 2013, consumption of residual fuels in the UK in 2011 was four per cent (930 ktoe) higher than as first published in 2013. With these revisions in effect, there was a four per cent decrease in consumption between 2010 and 2011 – this percentage decrease in consumption between 2010 and 2011 is consistent with earlier reports.

Further information about the revisions made to the dataset can be found in Section 5 of the the detailed methodology note produced by Ricardo-AEA named '[UK sub-national consumption of other fuels for 2005-2012](#)', which is published alongside the residual fuel dataset.



## 5. Differences between sub-national residual fuel estimates and DUKES estimates

The sub-national residual fuel estimates have been compiled using different methodology to figures reported in the Digest of United Kingdom Energy Statistics (DUKES). The key differences between DUKES estimates and the sub-national residual fuel dataset are outlined in Table 4 below. Overall these definitional differences are small.

**Table 5** Differences between sub-national estimates and DUKES estimates

Fuel	DUKES estimates	Sub-national estimates
<b>Heat (generation)</b>	Heat generation is listed as a separate category.	Heat generation is allocated to final users, so sub-national consumption figures for 'industry' and 'other' sectors are higher than those in DUKES.
<b>Coal</b>	Coal used in autogeneration is classed as transformational use and is not included in industrial consumption.	Coal used in autogeneration is included in industrial consumption, as autogenerators cannot be disaggregated from the NAEI and GHGI databases.
<b>Fuel oil</b>	DUKES aggregates total fuel, gas oil and burning oil consumption to industry level.	GHGI reallocates fuel oil, gas oil and burning oil consumption from industry to power stations to ensure consistency with operator data.
<b>Petroleum coke</b>	Some industrial petroleum coke is classed as non-energy use and not included in final consumption.	Petroleum coke used by industry and households is included in the estimates.
<b>Manufactured solid fuels</b>	Benzole, coal tars, coke oven gas and blast furnace gas are included in final consumption. Additionally, coke consumed by sinter production differs from information provided for the sub-national estimates.	Benzole and coal tars are treated as non-energy consumption and coke oven gas and blast furnace gas are categorised as transformation fuel uses. These are excluded from the estimates.
<b>Waste and renewables</b>	Dukes does not take account of consumption of waste solvents, tyres and other wastes.	Consumption of waste solvents, tyres and other wastes are included in estimates.

DUKES estimates for residual fuels are nine per cent higher than those within the sub-national statistics.

It is recommended that DUKES figures are to be used for headline UK level estimates, and the sub-national estimates to be used only when estimates at lower geographic levels are needed.

## 6. Upcoming sub-national consumption statistics releases

The residual fuel consumption statistics are published annually every September. The next release will include 2013 data and will be published in September 2015.

Sub-national consumption statistics are released each quarter, with each release relating to a different fuel type. Published alongside the residual fuel consumption dataset, are the total final energy consumption statistics (2012 data), which combines estimates from the full suite of sub-national estimates to provide local authorities with an understanding of final energy use to aid and monitor local energy use as part of their local energy strategies.

The total final energy consumption statistics, for 2012 data, are available here: <https://www.gov.uk/government/organisations/department-of-energy-climate-change/series/total-final-energy-consumption-at-sub-national-level>.

2013 data will be published in September 2015.

The next sub-national consumption releases will be published in December 2014 and relate to:

- **Gas consumption statistics (2013 data)** – the data are based on the aggregation of Meter Point Reference Number (MPRN) readings throughout Great Britain as part of DECCs annual meter point gas data exercise. The 2013 data will cover the gas year between 1 October 2012 and 30 September 2013 and are subject to a weather correction factor.

Published data contains estimates for the number of meters, total consumption and average consumption by sector (domestic/non-domestic) at a regional<sup>11</sup> and local authority level, and will be available here:

<https://www.gov.uk/government/collections/sub-national-gas-consumption-data>.

Also available on the same webpage will be estimates of households not connected to the gas network, at a local authority and at an LSOA level, for 2013 data.

- **Electricity consumption statistics (2013 data)** – the data are based on the aggregation of Meter Point Administration Number (MPAN) readings throughout Great Britain obtained as part of DECCs annual meter point electricity data exercise. The 2013 data will cover the industry defined electricity year, which is 26 January 2013 to 25 January 2014 for non-half hourly<sup>12</sup> data, and the calendar year for half-hourly<sup>13</sup> data.

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<sup>11</sup> A region refers to areas previously known as Government Office Regions (GORs), which were the primary statistical subdivision of England in which the Government Offices for the region fulfilled their role. They closed on 31 March 2011 and have remained a static geography used for statistical reporting since then. Further information is available in section 1.2 of the Sub-national methodology and guidance booklet.

<sup>12</sup> A non-half hourly (NHH) meter is generally used for domestic or smaller non-domestic supplies. Reading of NHH meters is normally done manually.

<sup>13</sup> A half hourly (HH) meter is generally used for larger non-domestic supplies. A reading is automatically taken every half hour and relayed to the supplier.

Published data contains estimates for the number of meters, total consumption and average consumption by sector (domestic/non-domestic) at a regional<sup>14</sup> and local authority level, and will be available here:  
<https://www.gov.uk/government/collections/sub-national-electricity-consumption-data>.

Gas and electricity consumption statistics at MSOA/LSOA level (for 2013 data) will be available in January 2015.

For a list of the full set of sub-national consumption datasets, please see Annex B of this document.

Further details and information about the methodology used to compile each dataset is included in the sub-national methodology and guidance booklet:  
<https://www.gov.uk/government/statistics/regional-energy-data-guidance-note>.

Also included in the methodology and guidance booklet are details of related DECC statistical publications available. These are introduced in Annex E of the sub-national methodology and guidance booklet.

A timetable of all DECC statistics releases over the next year is available here:  
<https://www.gov.uk/government/statistics/statistical-releases-timetable-for-twelve-months-ahead>.

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<sup>14</sup> A region refers to areas previously known as Government Office Regions (GORs), which were the primary statistical subdivision of England in which the Government Offices for the region fulfilled their role. They closed on 31 March 2011 and have remained a static geography used for statistical reporting since then. Further information is available in section 1.2 of the Sub-national methodology and guidance booklet.

**Annex A Selected sub-national residual fuel consumption statistics (highest and lowest local authority averages), 2012**

English Region and Devolved Administration and Local Administrative Unit <sup>(1)</sup>	Petroleum							Coal		Manufactured solid fuels		Bioenergy & Wastes <sup>(4)</sup>	All Fuels <sup>(5)</sup>
	Public			Industrial & Agriculture <sup>(2)</sup>				Industrial <sup>(3)</sup>	Domestic	Industrial	Domestic		
	Industrial	Domestic	Rail	Administration	Commercial	Agriculture <sup>(2)</sup>	Commercial <sup>(3)</sup>					Domestic	
Pembrokeshire	810.1	29.9	1.0	0.1	0.2	18.3	1.5	3.3	226.4	0.5	4.4	1,095.7	
Neath Port Talbot	16.9	5.1	2.6	0.0	0.1	1.8	10.2	4.3	396.4	3.6	7.0	448.0	
Torfaen	6.2	0.8	0.5	0.0	0.0	0.5	1.7	0.8	0.0	0.2	1.0	11.8	
Merthyr Tydfil	4.1	0.7	1.0	0.0	0.0	0.2	0.9	0.9	0.0	0.1	1.3	9.3	
<b>TOTAL WALES</b>	<b>1,098.8</b>	<b>256.5</b>	<b>32.2</b>	<b>2.5</b>	<b>3.2</b>	<b>155.5</b>	<b>127.5</b>	<b>65.6</b>	<b>672.8</b>	<b>23.5</b>	<b>200.0</b>	<b>2,638.1</b>	
Falkirk	1,206.4	2.1	4.0	0.2	0.1	1.9	2.2	1.5	96.3	1.5	0.9	1,317.1	
Fife	323.9	8.5	3.4	0.3	0.4	7.1	33.3	3.0	0.3	3.9	7.4	391.5	
West Dunbartonshire	2.9	0.6	0.0	0.1	0.0	0.6	0.0	0.1	0.0	0.2	0.0	4.6	
Inverclyde	1.8	0.5	0.1	0.1	0.1	0.6	0.3	0.1	0.0	0.1	0.0	3.5	
<b>TOTAL SCOTLAND</b>	<b>1,882.1</b>	<b>274.8</b>	<b>58.2</b>	<b>12.0</b>	<b>5.7</b>	<b>229.9</b>	<b>112.9</b>	<b>58.5</b>	<b>102.9</b>	<b>24.3</b>	<b>311.1</b>	<b>3,072.5</b>	
Redcar and Cleveland	691.3	1.4	1.0	0.0	0.1	1.0	149.7	0.8	339.3	0.4	1.0	1,186.1	
County Durham	32.2	10.0	10.6	0.2	0.3	10.1	28.8	11.8	3.7	8.8	58.6	175.0	
South Tyneside	4.5	0.4	0.7	0.0	0.0	0.1	0.3	0.9	0.2	1.5	0.0	8.6	
Middlesbrough	2.8	0.3	0.6	0.1	0.0	0.1	0.5	0.2	0.1	0.3	2.2	7.3	
<b>TOTAL NORTH EAST</b>	<b>848.7</b>	<b>37.2</b>	<b>32.0</b>	<b>1.1</b>	<b>1.4</b>	<b>43.4</b>	<b>212.6</b>	<b>29.4</b>	<b>366.7</b>	<b>26.2</b>	<b>72.9</b>	<b>1,671.6</b>	
Cheshire West and Chester	922.4	15.7	3.6	0.2	0.5	8.4	10.7	2.6	287.5	1.2	2.8	1,255.7	
Cheshire East	27.0	20.6	6.2	0.1	0.6	10.9	16.5	4.4	0.2	2.8	4.0	93.2	
Hyndburn	4.9	0.4	0.1	0.0	0.0	0.4	1.3	0.9	0.0	1.5	0.0	9.6	
Blackpool	3.4	0.3	0.2	0.0	0.0	0.1	1.4	0.2	1.1	0.0	0.3	7.2	
<b>TOTAL NORTH WEST</b>	<b>1,311.7</b>	<b>132.5</b>	<b>73.0</b>	<b>2.8</b>	<b>4.8</b>	<b>99.2</b>	<b>126.5</b>	<b>54.9</b>	<b>296.7</b>	<b>51.4</b>	<b>72.8</b>	<b>2,226.3</b>	
North Lincolnshire	949.3	8.0	6.4	0.1	0.2	3.0	7.6	2.4	941.0	1.4	33.0	1,952.4	
East Riding of Yorkshire	42.4	21.5	5.1	0.2	0.5	11.2	13.9	4.1	0.0	0.6	5.6	105.3	
North East Lincolnshire	9.1	1.4	0.8	0.0	0.1	0.7	4.5	0.4	2.6	0.1	0.5	20.2	
York	4.4	2.8	2.6	0.2	0.1	1.2	0.6	0.5	0.0	0.6	0.2	13.2	
<b>TOTAL YORKSHIRE AND THE HUMBER</b>	<b>1,290.3</b>	<b>129.5</b>	<b>71.5</b>	<b>2.5</b>	<b>4.4</b>	<b>71.9</b>	<b>131.2</b>	<b>54.4</b>	<b>993.7</b>	<b>54.3</b>	<b>69.6</b>	<b>2,873.2</b>	
High Peak	10.1	1.3	2.1	0.0	0.1	1.4	90.9	0.7	18.1	0.5	50.6	175.7	
Rutland	9.9	2.8	2.0	0.1	0.1	1.7	42.2	0.3	0.0	0.0	89.5	148.5	
Lincoln	5.0	0.2	0.4	0.1	0.0	0.1	0.1	0.1	0.2	0.2	0.0	6.4	
Oadby and Wigston	3.7	0.2	0.6	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	4.7	
<b>TOTAL EAST MIDLANDS</b>	<b>435.8</b>	<b>125.1</b>	<b>79.0</b>	<b>4.3</b>	<b>5.8</b>	<b>76.2</b>	<b>261.7</b>	<b>55.7</b>	<b>67.0</b>	<b>52.9</b>	<b>206.7</b>	<b>1,370.3</b>	
Shropshire	36.3	40.8	7.8	0.4	0.7	26.3	4.3	6.4	0.0	2.1	7.5	132.7	
Rugby	7.3	2.0	0.6	0.0	0.1	2.1	56.5	0.4	0.1	0.3	62.1	131.6	
Worcester	4.4	0.3	0.3	0.0	0.1	0.1	1.3	0.2	1.2	0.3	0.0	8.1	
Tamworth	3.0	0.2	1.5	0.0	0.0	0.1	0.8	0.5	0.4	0.9	0.0	7.4	
<b>TOTAL WEST MIDLANDS</b>	<b>452.3</b>	<b>154.4</b>	<b>75.8</b>	<b>3.3</b>	<b>5.4</b>	<b>92.3</b>	<b>157.2</b>	<b>36.5</b>	<b>41.4</b>	<b>30.6</b>	<b>125.4</b>	<b>1,174.7</b>	

**Annex A Selected sub-national residual fuel consumption statistics (highest and lowest local authority averages), 2012 continued**

English Region and Devolved Administration and Local Administrative Unit <sup>(1)</sup>	Petroleum						Coal		Manufactured solid fuels		Bioenergy & Wastes <sup>(4)</sup>	All Fuels <sup>(5)</sup>
	Public			Industrial &			Domestic	Industrial & Domestic				
	Industrial	Domestic	Rail	Administration	Commercial	Agriculture <sup>(2)</sup>		Commercial <sup>(3)</sup>	Domestic	Industrial	Domestic	
Thurrock	238.1	0.5	0.2	0.0	0.2	0.5	5.9	0.2	64.6	0.0	0.8	311.0
Bedford	8.8	4.4	9.6	0.2	0.2	1.8	1.1	0.9	0.3	0.6	33.7	61.6
Castle Point	1.8	0.2	0.0	0.0	0.0	0.2	0.9	0.1	0.0	0.0	0.2	3.5
Watford	2.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	2.8
<b>TOTAL EAST OF ENGLAND</b>	<b>728.0</b>	<b>270.5</b>	<b>52.6</b>	<b>5.1</b>	<b>8.7</b>	<b>62.6</b>	<b>150.2</b>	<b>31.0</b>	<b>67.1</b>	<b>10.3</b>	<b>79.9</b>	<b>1,466.1</b>
Hillingdon	33.4	0.8	2.6	0.0	1.2	0.3	1.0	0.2	0.1	0.3	16.4	56.3
Barking and Dagenham	12.7	0.2	3.3	0.0	0.1	0.1	0.1	0.2	0.8	0.3	0.0	17.6
Kensington and Chelsea	0.7	0.8	0.4	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	2.1
City of London	0.8	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	1.1
<b>TOTAL GREATER LONDON</b>	<b>155.2</b>	<b>16.2</b>	<b>19.2</b>	<b>2.2</b>	<b>8.2</b>	<b>2.8</b>	<b>3.4</b>	<b>3.9</b>	<b>2.1</b>	<b>6.5</b>	<b>22.1</b>	<b>241.8</b>
New Forest	852.1	7.7	1.1	0.1	0.2	3.3	2.5	0.9	254.2	0.1	1.3	1,123.5
Slough	6.6	0.2	4.0	0.0	0.1	0.1	11.9	0.0	0.0	0.0	90.3	113.2
Bracknell Forest	1.6	0.7	0.1	0.0	0.1	0.4	0.0	0.1	0.0	0.2	0.0	3.3
Eastbourne	1.7	0.3	0.3	0.0	0.0	0.2	0.4	0.1	0.0	0.0	0.1	3.2
<b>TOTAL SOUTH EAST</b>	<b>1,326.7</b>	<b>295.4</b>	<b>104.3</b>	<b>9.5</b>	<b>11.2</b>	<b>101.7</b>	<b>118.2</b>	<b>25.3</b>	<b>275.1</b>	<b>13.2</b>	<b>144.9</b>	<b>2,425.6</b>
Cornwall	50.8	58.2	11.4	0.8	1.4	30.8	7.2	10.3	0.5	1.6	21.8	194.8
Wiltshire	57.0	42.6	17.4	0.8	1.0	24.7	11.9	4.0	0.1	0.6	5.7	165.9
Weymouth and Portland	1.0	0.3	0.8	0.0	0.0	0.2	0.7	0.1	0.0	0.0	0.1	3.3
Isles of Scilly	0.8	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	1.4
<b>TOTAL SOUTH WEST</b>	<b>443.4</b>	<b>284.7</b>	<b>85.8</b>	<b>8.1</b>	<b>8.3</b>	<b>199.2</b>	<b>92.8</b>	<b>43.3</b>	<b>7.6</b>	<b>11.5</b>	<b>65.1</b>	<b>1,249.9</b>
Fermanagh	48.3	27.0	0.0	0.6	0.4	17.6	10.7	2.2	0.0	0.3	8.8	116.1
Derry	21.4	45.4	0.2	0.4	0.2	3.7	33.4	2.6	0.0	0.4	3.4	111.1
Carrickfergus	1.9	15.9	0.8	0.0	0.0	0.8	0.2	0.5	0.0	0.1	0.7	20.9
Moyle	1.1	7.7	0.0	0.1	0.1	3.6	0.1	0.7	0.0	0.1	1.0	14.5
<b>TOTAL NORTHERN IRELAND</b>	<b>424.4</b>	<b>732.6</b>	<b>12.3</b>	<b>8.1</b>	<b>5.2</b>	<b>144.5</b>	<b>108.0</b>	<b>45.7</b>	<b>2.4</b>	<b>25.2</b>	<b>53.3</b>	<b>1,561.7</b>
<b>GREAT BRITAIN</b>	<b>9,973.0</b>	<b>1,976.8</b>	<b>683.6</b>	<b>53.5</b>	<b>67.1</b>	<b>1,134.7</b>	<b>1,494.1</b>	<b>458.7</b>	<b>2,893.2</b>	<b>304.7</b>	<b>1,370.7</b>	<b>20,410.1</b>
England	6,992.1	1,445.5	593.2	39.0	58.2	749.4	1,253.8	334.5	2,117.4	256.9	859.5	14,699.5
Scotland	1,882.1	274.8	58.2	12.0	5.7	229.9	112.9	58.5	102.9	24.3	311.1	3,072.5
Wales	1,098.8	256.5	32.2	2.5	3.2	155.5	127.5	65.6	672.8	23.5	200.0	2,638.1
Northern Ireland	424.4	732.6	12.3	8.1	5.2	144.5	108.0	45.7	2.4	25.2	53.3	1,561.7
<b>UNITED KINGDOM</b>	<b>10,397.4</b>	<b>2,709.5</b>	<b>695.9</b>	<b>61.6</b>	<b>72.3</b>	<b>1,279.2</b>	<b>1,602.1</b>	<b>504.4</b>	<b>2,895.6</b>	<b>330.0</b>	<b>1,423.9</b>	<b>21,971.8</b>

<sup>(1)</sup> Please note that there was a change in ONS geographies in 2010, causing some local authorities to merge. For this reason, there are fewer local authorities for 2010.

<sup>(2)</sup> Excludes the consumption of propane.

<sup>(3)</sup> Includes some coal consumption by auto-generators.

<sup>(4)</sup> Excludes bioenergy and wastes used for electricity generation.

<sup>(5)</sup> There has been an update in the underlying employment data used in mapping distributions for calculating estimates between 2007 and 2008. As a result, estimates from 2008 onwards are not comparable with earlier estimates.

## **Annex B**      **Sub-national consumption publications**

### **Electricity consumption statistics**

- Electricity consumption statistics at local authority level (UK):  
<https://www.gov.uk/government/collections/sub-national-electricity-consumption-data>.

### **Gas consumption statistics**

- Gas consumption statistics at local authority level (Great Britain):  
<https://www.gov.uk/government/collections/sub-national-gas-consumption-data>.

### **Road transport consumption statistics**

- Road transport consumption statistics at local authority level (United Kingdom):  
<https://www.gov.uk/government/statistical-data-sets/road-transport-energy-consumption-at-regional-and-local-authority-level>.

### **Residual fuel (non-electricity, non-gas, non-road transport fuels) consumption statistics**

- Residual fuel consumption statistics at local authority level (United Kingdom):  
<https://www.gov.uk/government/organisations/department-of-energy-climate-change/series/sub-national-consumption-of-other-fuels>.

### **Total final energy consumption statistics**

- Total final energy consumption statistics at local authority level (Great Britain):  
<https://www.gov.uk/government/organisations/department-of-energy-climate-change/series/total-final-energy-consumption-at-sub-national-level>.

Before using any of the above datasets, it is highly advised to refer to the related chapter in the sub-national methodology and guidance booklet:

<https://www.gov.uk/government/publications/regional-energy-data-guidance-note>.

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Department of Energy & Climate Change  
3 Whitehall Place  
London SW1A 2AW  
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