



Department
of Energy &
Climate Change

Sub-national electricity consumption statistics

Regional and local authority level statistics
(2012 data)

December 2013

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Statistician

Responsible: Mary Gregory

Prepared by: Sabena Khan
Sam Stadnyk

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EnergyEfficiency.Stats@decc.gsi.gov.uk

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Background

The 2012 data analysed in this document are based on the aggregation of Meter Point Administration Number (MPAN) readings throughout Great Britain obtained as part of DECC's annual meter point electricity data exercise. The estimates presented are initial estimates and should be treated as provisional.

These data follow on from the results produced from similar exercises carried out for 2005 to 2011 and cover the industry defined electricity year, which is as follows for 2012:

- 27 January 2012 to 26 January 2013 for Non-Half Hourly¹ (NHH) data; and
- 1 January 2012 to 31 December 2012 for Half-Hourly (HH)² data.

This document looks at electricity consumption by consuming sector (ie, domestic and non-domestic) for Great Britain, and regional³/devolved administration areas (these will be referred to as regions for the remainder of this document), together with some commentary relating to local authority trends.

Annual data on a consistent basis are available from 2005 and can be found here:

<https://www.gov.uk/government/statistical-data-sets/regional-and-local-authority-electricity-consumption-statistics-2005-to-2011>.

This analysis is dependent on the excellent co-operation of the electricity industry, who we would like to thank once again for their continuous help and assistance.

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.

Consumption information below local authority area level

Gas and electricity consumption data are available for the years 2005 to 2011 at middle layer super output area (MSOA) level and at intermediate geography zone (IGZ) in Scotland. Also available are 2010 and 2011 estimates at lower layer super output area (LSOA) level (census geographies, each typically covering around 2,000 and 500 households respectively) in England and Wales. The 2011 data can be accessed at:

<https://www.gov.uk/government/collections/mlsoa-and-lsoa-electricity-and-gas-estimates>.

MSOA/IGZ and LSOA data for 2012 will be released on 27 March 2014.

¹ A non-half hourly (NHH) meter is generally used for domestic or smaller non-domestic supplies. Reading of NHH meters is normally done manually.

² 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.

³ 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.

Accompanying documentation

For further details on the methodology, assumptions and data interpretation relating to the electricity consumption statistics, please refer to the Methodology and guidance booklet for sub-national energy data which can be accessed here:

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

Readers are highly advised to familiarise themselves with the material in the booklet before using the data.

1. Electricity consumption in Great Britain

1.1 Total annual electricity consumption

During 2012, the total annual electricity consumption in Great Britain was 274,801 GWh (via 29,796,073 meters), 4 per cent lower than consumption in 2011 (286,361 GWh)⁴.

The total number of electricity meters increased for all but 38 of the 380 local authorities between 2011 and 2012, whilst only 96 saw an increased total annual consumption. The number of meters in an area can change as new properties are built and old properties demolished. Assigning a meter to an area within the sub-national electricity consumption statistics is dependent upon accurate address information for each meter. During recent years, increased quality of address information (for example, a full postcode rather than a partial postcode) and improved address matching have enabled more meters to be matched to the correct geographic area rather than remaining 'Unallocated'⁵. This means that an increase in the number of meters in an area may reflect better address matching, rather than an actual increase in the number of meters between years.

The changes in electricity consumption in Great Britain between 2011 and 2012 are summarised in Table 1 below. The table shows that there has been an increase in the number of meters for all regions. This is consistent with the gradual increase seen each year since 2005.

Changes in total electricity consumption between 2011 and 2012 are more varied, with an increase (1.6 per cent) in total consumption seen in the North West and all other regions having varying levels of decrease between the two years (up to an 11.2 per cent decrease in Wales). Changes in consumption levels are usually driven by changes in the non-domestic sector (see section 3 for further information) given that it represents 60 per cent of total consumption and tends to be more changeable than domestic consumption. The changes in consumption between 2011 and 2012 have been more varied than those seen in earlier years. At this stage it is not clear what is driving this variation and further investigations will be made as the data are analysed at lower levels of geography. The data are to be treated as provisional until these investigations are complete. If any revisions are required, a final dataset will be published alongside the MSOA/IGZ and LSOA data for 2012 on 27 March 2014.

⁴ Sub-national estimates for total electricity consumption differ slightly from electricity consumption estimates included in Chapter 5 of the Digest of UK Energy Statistics (DUKES) and table 1.02 of Energy Consumption in the UK (ECUK). For further information about the differences in electricity consumption estimates between the sub-national statistics and DUKES/ECUK, please refer to the DUKES comparison on page 20 of this document.

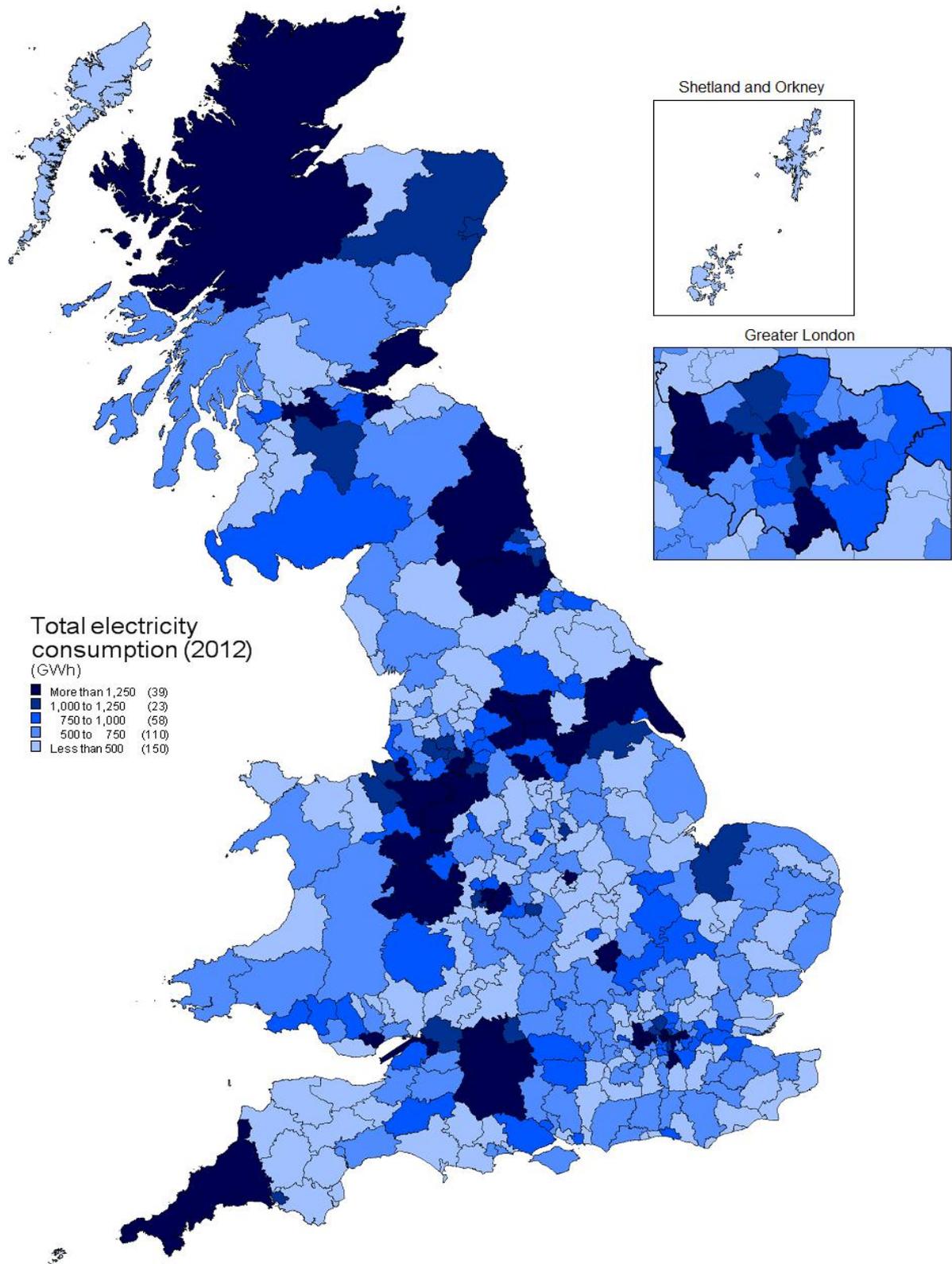
⁵ 'Unallocated' meters are meters with insufficient address information and the consumption for these meters are unable to be assigned, or allocated, to a region. These values appear towards the end of the sub-national electricity consumption statistics table which is available alongside this document.

Table 1 Electricity consumption in Great Britain by region, between 2011 and 2012

	2011		2012		Percentage change	
	Total annual electricity consumption (GWh)	Number of meters (thousands)	Total annual electricity consumption (GWh)	Number of meters (thousands)	Total annual electricity consumption (GWh)	Number of meters (thousands)
East Midlands	20,582	2,140	19,459	2,147	-5.5%	0.3%
East of England	26,147	2,761	26,130	2,777	-0.1%	0.6%
Greater London	39,946	3,795	39,337	3,817	-1.5%	0.6%
North East	11,681	1,276	10,573	1,276	-9.5%	0.1%
North West	31,015	3,373	31,519	3,380	1.6%	0.2%
South East	39,021	4,042	37,655	4,066	-3.5%	0.6%
South West	24,315	2,675	23,551	2,690	-3.1%	0.6%
Yorkshire and The Humber	24,123	2,516	21,865	2,521	-9.4%	0.2%
West Midlands	24,609	2,564	22,839	2,573	-7.2%	0.4%
Scotland	26,658	2,959	24,976	2,959	-6.3%	0.0%
Wales	15,226	1,499	13,524	1,504	-11.2%	0.4%
England	241,440	25,140	232,927	25,248	-3.5%	0.4%
Great Britain¹	286,361	29,687	274,801	29,796	-4.0%	0.4%

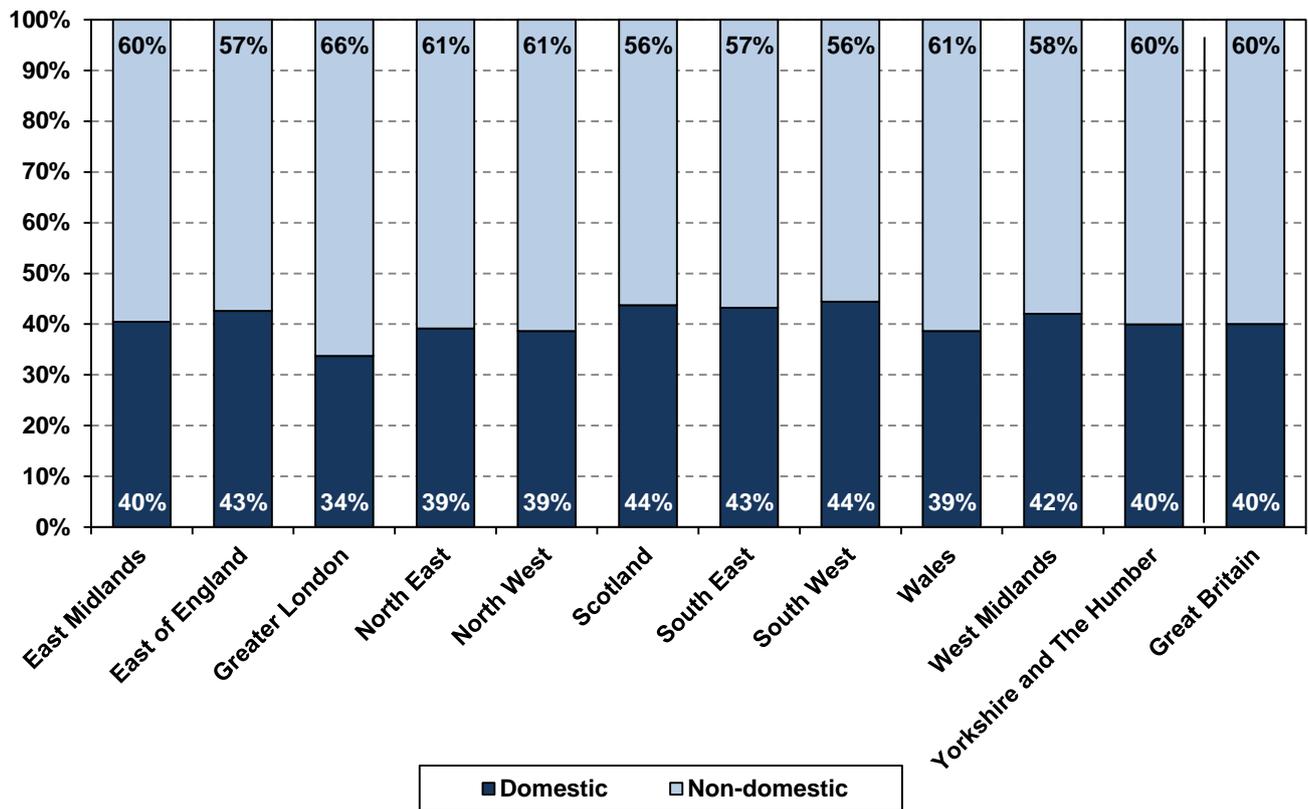
Map 1 below shows the variation in total annual electricity consumption in 2012, by local authority.

Map 1 Total annual electricity consumption by local authority, 2012



Total electricity consumption differs between the domestic and non-domestic sectors - the non-domestic sector consumes a much higher proportion of the total electricity for all regions across Great Britain (Chart 1) despite the non-domestic sector having a significantly lower number of meters compared with the domestic market. Of the 29.8 million meters, 27.4 million meters were in the domestic sector and 2.4 million were in the non-domestic sector.

Chart 1 **Distribution of domestic and non-domestic electricity consumption by region, 2012**



Across Great Britain, 40 per cent of electricity is estimated to be consumed in the domestic sector, and 60 per cent by the non-domestic sector (compared with 92 per cent of meters in the domestic sector and 8 per cent in the non-domestic sector). However, the split varies across the regions of Great Britain, with domestic consumption accounting for 34 per cent of total electricity consumption in Greater London and 44 per cent in the South West and Scotland. The distribution depends on regional factors, such as the type of industry/service in a region and the degree of electricity used for heating.

1.2 Average annual electricity consumption

In 2012, the average⁶ annual consumption per meter in Great Britain was 9,223 kWh, 4 per cent lower than in 2011 when average consumption was 9,646 kWh. Greater London had the

⁶ Averages used in this document relate to the mean, unless otherwise stated.

highest average consumption with 10,305 kWh per meter, with the North East having the lowest at 8,283 kWh per meter.

Table 2 below shows the average consumption and the number of meters in the electricity market by sector, for each region within Great Britain. Average annual domestic electricity consumption per meter (ordinary or Economy 7) in Great Britain was 4,014 kWh, with total domestic electricity consumption of 110,049 GWh. Average annual non-domestic electricity consumption per meter was 69,146 kWh, with total non-domestic electricity consumption of 164,751 GWh.

Table 2 Average electricity consumption per meter by sector and region, 2012

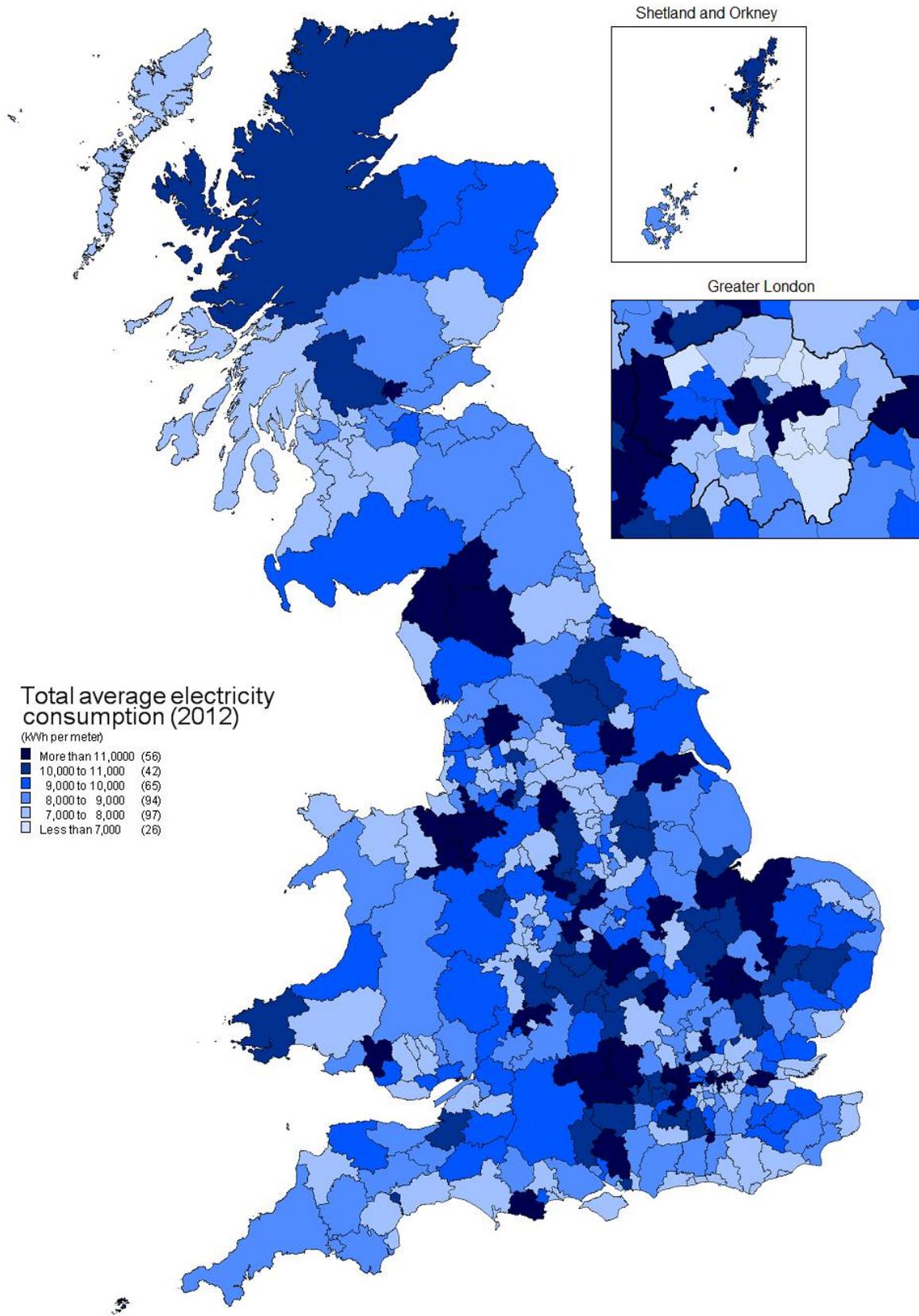
	All electricity meters		Domestic meters		Non-domestic meters	
	Average consumption (kWh)	Number of meters (thousands)	Average domestic consumption (kWh)	Percentage of all meters	Average non-domestic consumption (kWh)	Percentage of all meters
East Midlands	9,062	2,147	3,954	93%	74,335	7%
East of England	9,410	2,777	4,343	92%	69,808	8%
Greater London	10,305	3,817	3,879	90%	65,725	10%
North East	8,283	1,276	3,458	94%	80,541	6%
North West	9,325	3,380	3,871	93%	82,346	7%
South East	9,262	4,066	4,358	92%	64,919	8%
South West	8,754	2,690	4,280	91%	53,292	9%
Yorkshire and The Humber	8,673	2,521	3,730	93%	73,981	7%
West Midlands	8,876	2,573	4,035	93%	68,747	7%
Scotland	8,440	2,959	3,972	93%	67,053	7%
Wales	8,991	1,504	3,787	92%	67,316	8%
England	9,226	25,248	4,034	92%	68,703	8%
Great Britain ¹	9,223	29,796	4,014	92%	69,146	8%

1. Includes 84 thousand meters, with a total consumption of 3,373 GWh, that couldn't be allocated at local authority level, representing 0.3 per cent of meters and 1.2 per cent of consumption.

Map 2 below shows average electricity consumption per meter by local authority in 2012.

The remainder of this document analyses the consumption of electricity across the domestic and non-domestic sectors separately.

Map 2 Average electricity consumption per meter by local authority, 2012



2. Domestic electricity consumption in Great Britain by region

2.1 Average annual domestic electricity consumption by region

Average (mean) annual domestic electricity consumption per meter in Great Britain was 4,014 kWh, with total domestic electricity consumption of 110,049 GWh. The average consumption per meter was 2 per cent lower than in 2011 (4,078 kWh), with total domestic consumption 1 per cent lower than in 2011 (111,321 GWh). Average consumption for customers with ordinary domestic meters was 3,670 kWh, compared to 5,628 kWh for households with an Economy 7 meter⁷.

The North East had the lowest average domestic consumption with 3,458 kWh per meter, whilst the South East had the highest average domestic consumption at 4,358 kWh per meter. Table 3 shows the average (mean) domestic consumption per meter in each region in 2012.

Table 3 Average domestic electricity consumption per meter by region, 2012

	All domestic meters		Ordinary domestic meters		Economy 7 meters	
	Average domestic consumption (kWh)	Number of domestic meters (thousands)	Average ordinary domestic consumption	Percentage of domestic meters	Average economy 7 domestic consumption	Percentage of domestic meters
East Midlands	3,954	1,991	3,509	62%	4,665	38%
East of England	4,343	2,562	3,824	65%	5,381	35%
Greater London	3,879	3,421	3,632	85%	5,348	15%
North East	3,458	1,197	3,308	93%	5,588	7%
North West	3,871	3,145	3,643	92%	6,457	8%
South East	4,358	3,737	3,999	79%	5,779	21%
South West	4,280	2,445	3,765	83%	6,917	17%
Yorkshire and The Humber	3,730	2,344	3,529	92%	5,983	8%
West Midlands	4,035	2,381	3,706	81%	5,508	19%
Scotland	3,972	2,750	3,587	82%	5,784	18%
Wales	3,787	1,381	3,505	92%	7,087	8%
England	4,034	23,221	3,692	81%	5,573	19%
Great Britain ¹	4,014	27,413	3,670	82%	5,628	18%

1. Includes 62 thousand meters, with a total consumption of 220 GWh that couldn't be allocated at Local Authority level, representing 0.2 per cent of meters and consumption.

Between 2011 and 2012, all regions saw a decrease in the average domestic consumption per meter of between 0.9 and 2.1 per cent.

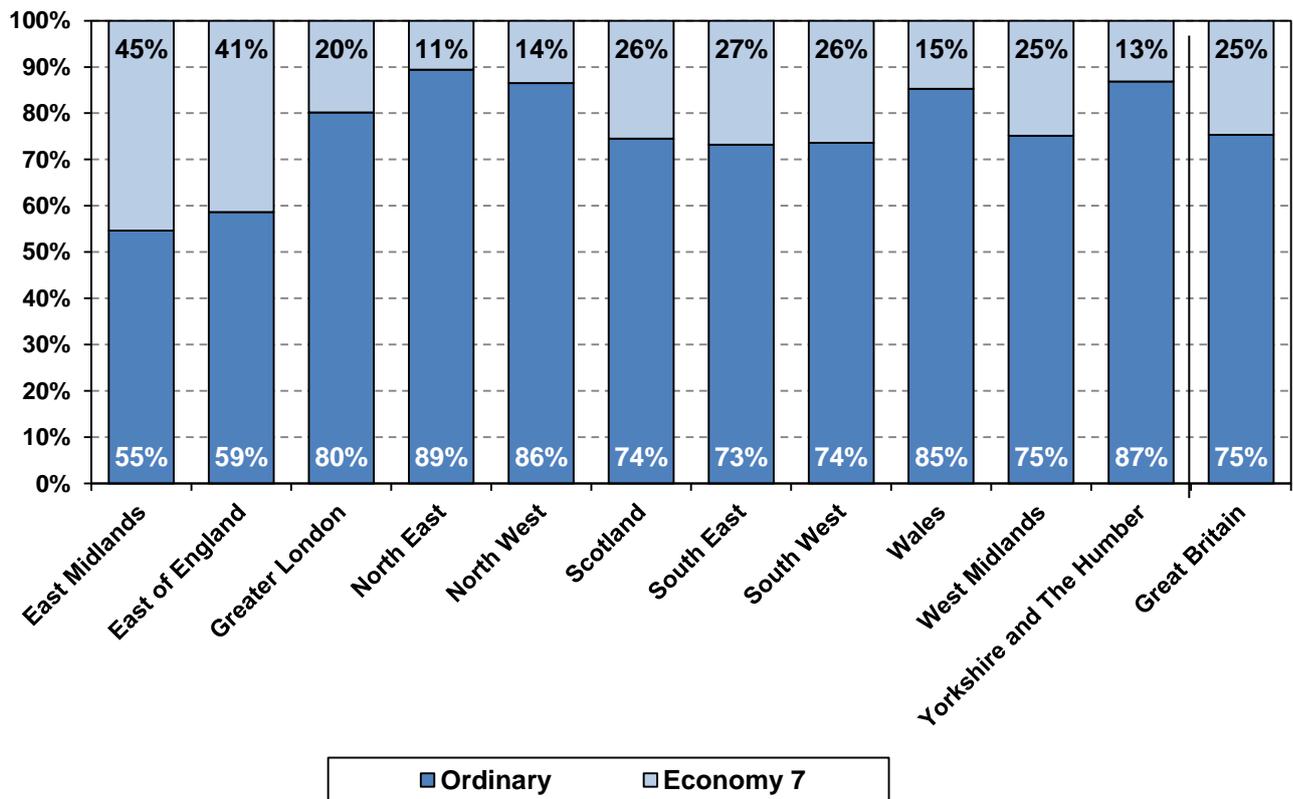
The Great Britain average (mean) ordinary domestic consumption was 3,670 kWh in 2012, compared to 5,628 kWh for the average Economy 7 meter. The region with the highest average consumption per Economy 7 meter in 2012 was Wales (7,087 kWh) whilst the East Midlands had the lowest average per Economy 7 meter (4,665 kWh). It should be noted that not all customers who have an Economy 7 meter will be on an Economy 7 tariff. However,

⁷ An Economy 7 meter differs from an ordinary meter in that it has a separate (cheaper) off-peak rate. Economy 7 meters still measure all household consumption (that is, the total of its ordinary and Economy 7 consumption) however, a household on an economy 7 tariff will still have only one meter.

customers with an ordinary domestic meter cannot be on an Economy 7 tariff. In some instances electricity used for heating purposes will not be consumed off-peak.

The distribution between households with ordinary standard domestic meters and Economy 7 meters at regional level in Great Britain is shown in Chart 2 below. For Great Britain, 75 per cent of total domestic consumption was attributed to ordinary domestic meters and 25 per cent to Economy 7 meters, but across Great Britain the ratio between ordinary domestic and Economy 7 varied from 89 per cent ordinary domestic and 11 per cent Economy 7 in the North East, to a 55:45 per cent split in the East Midlands.

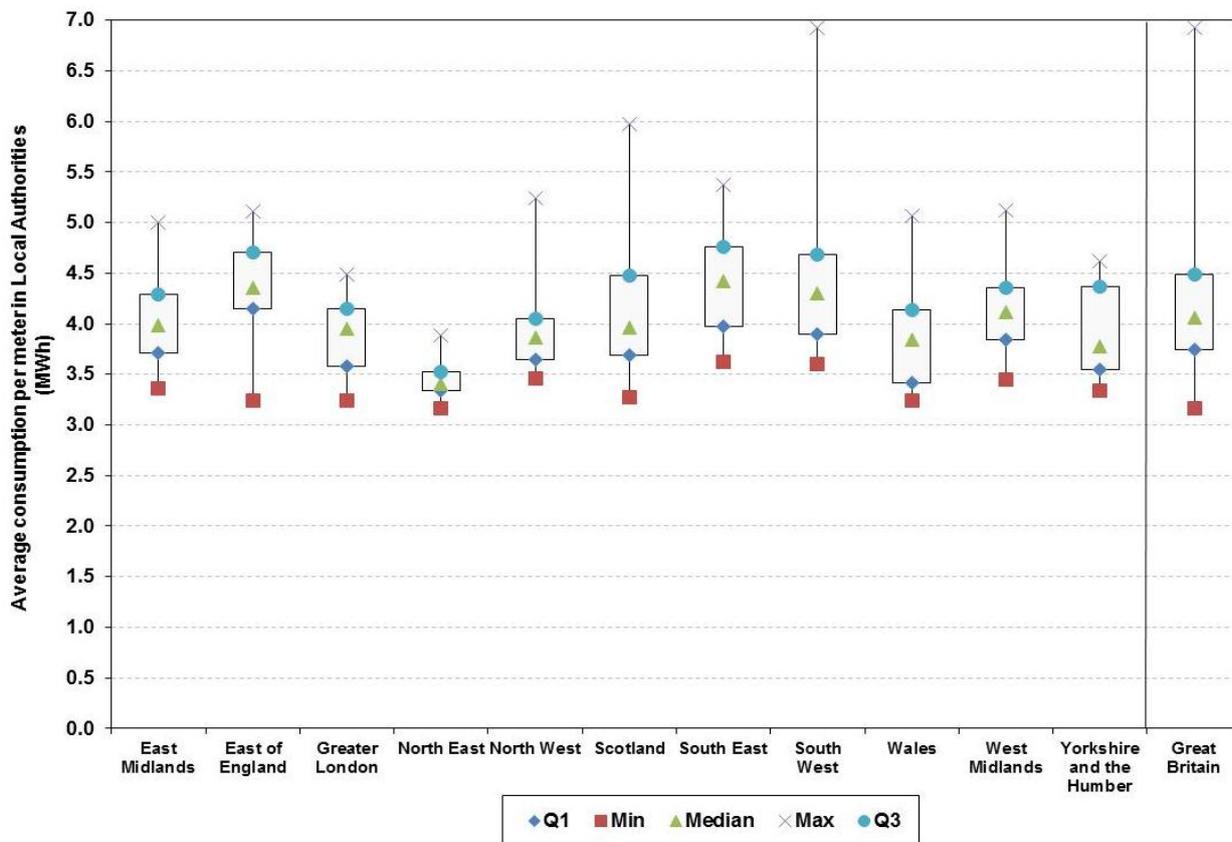
Chart 2 **Distribution of total domestic electricity consumption by profile, 2012**



Total domestic electricity consumption in Great Britain was estimated to be 111,049 GWh, 1 per cent lower than in 2011 (111,321 GWh). The South East consumed 15 per cent of this total, whilst the North East used 4 per cent. Factors influencing total domestic electricity consumption include the population/household density of a region and the fuel mix used to meet domestic energy demands (for example, households without access to gas are likely to use more electricity for heating purposes).

Chart 3 shows a series of box plots illustrating the distribution of average domestic (ordinary and Economy 7) electricity consumption for each region and Great Britain. These have been calculated based on average (mean) consumption at local authority level within each region.

Chart 3 Box plot of average domestic electricity consumption for local authorities within each region, 2012



The spread⁸ of the data varies across regions between the North East having a spread of 721 kWh and the South West of 3,326 kWh. The inter-quartile range⁹ of average domestic electricity consumption in local authorities is greatest in Yorkshire and the Humber (a difference of 820 kWh per meter), whereas the inter-quartile range for the North East was 191 kWh as indicated by the shorter box. The lowest average consumption for a local authority varies within each region from 3,159 kWh (South Tyneside) in the North East to 3,618 kWh (Portsmouth) in the South East. Whilst the largest average domestic consumption varies from 3,880 kWh (Northumberland) in the North East to 6,926 kWh (Isles of Scilly) in the South West. For the North East, East Midlands, Yorkshire and the Humber, East of England and Scotland the median is located nearer to the lower quartile (the value such that 25 per cent of all data are lower) which indicates a positive or a right skewed distribution¹⁰. It is also worth noting that the gap between the upper quartile and maximum value is largest for Scotland and the South West, this may be a result of greater electricity use for heating purposes in these regions.

Map 3 below shows average domestic electricity consumption per meter by local authority in 2012.

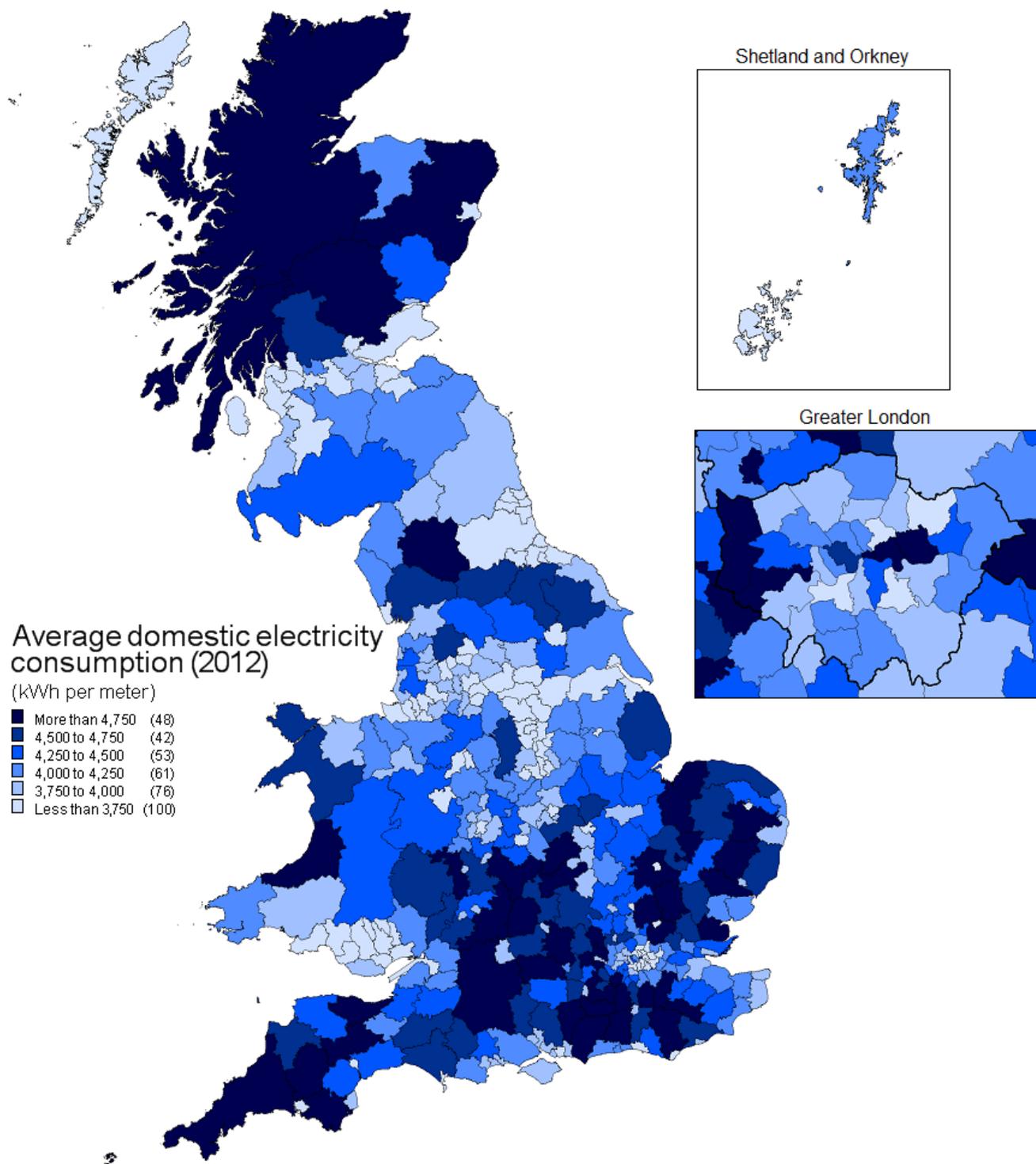
⁸ The spread of the data is the difference between the minimum and maximum average consumption values within each region.

⁹ The difference between the upper (Q3) and lower (Q1) quartiles - that is, the middle 50 per cent of the data.

¹⁰ A positively skewed distribution means that the average consumption for most local authorities tends around the regional average, however there are a few local authorities with much higher average consumption levels.

Map 3

Average domestic electricity consumption per meter by local authority, 2012



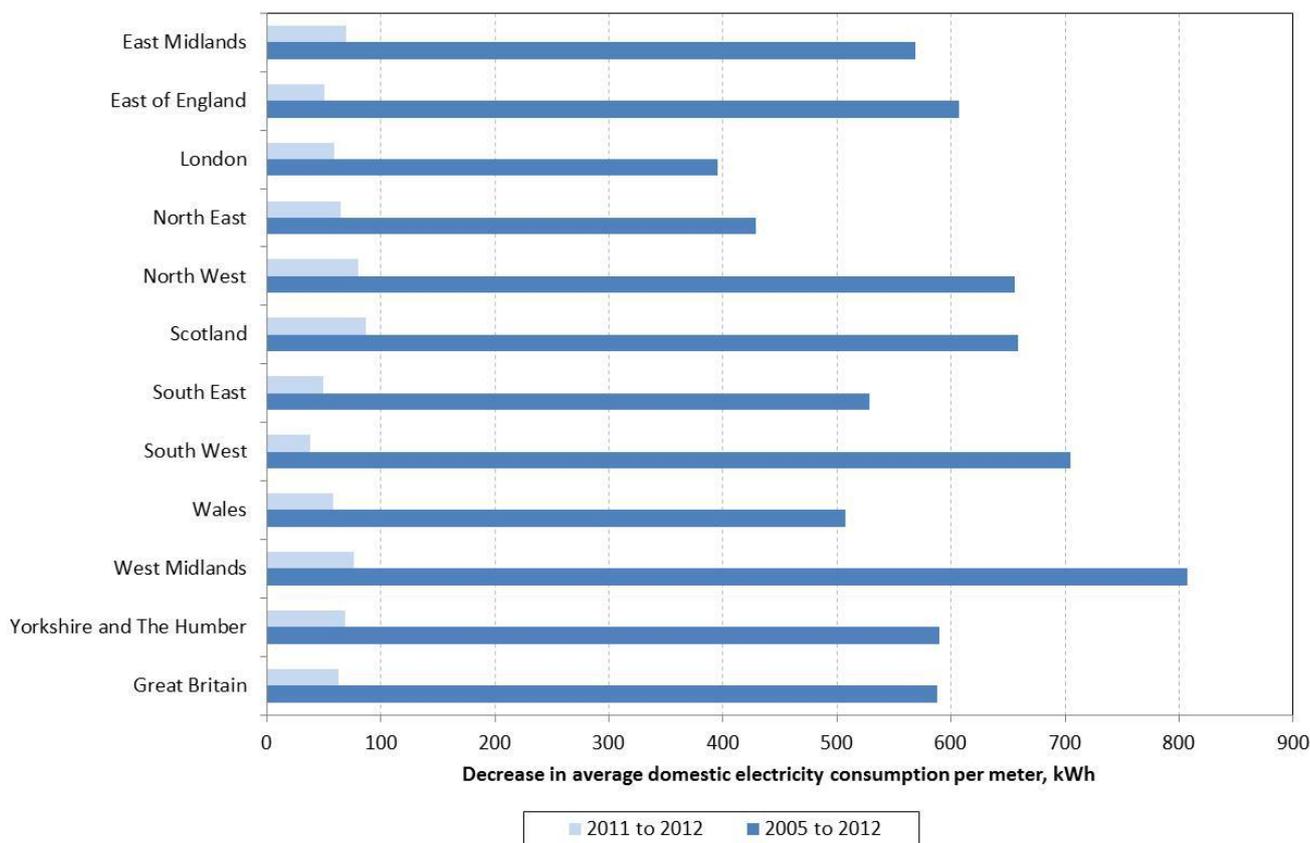
2.2 Longer term trends between 2005 and 2012

Average domestic electricity consumption per meter in Great Britain has decreased by 13 per cent between 2005 and 2012. Over the same period, regional reductions in domestic

electricity consumption varied between 9 per cent in Greater London to 17 per cent in the West Midlands. There are a number of factors which may have contributed to these reductions in consumption, including; weather conditions, energy efficiency improvements¹¹, such as increased levels of insulation, new boilers and more energy efficient appliances; increased prices¹² and the recession; and changes in the building stock and household composition. It should also be noted that 2005, the earliest point for this analysis, is where DUKES also represents a peak in domestic electricity consumption to date¹³.

Chart 4 shows the decrease in average domestic consumption by region, between 2005 and 2012, and between 2011 and 2012.

Chart 4 **Decrease in average domestic electricity consumption per meter point between 2005 and 2012**



¹¹ The energy efficiency of the housing stock improved between 2005 and 2011, the average SAP rating of a dwelling increased by 7.7 points from 49.0 to 56.7. The SAP rating is a measure of the overall energy efficiency of the dwelling. Table 13: English Housing Survey Headline Report 2011-12:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/211288/EHS_Headline_Report_2011-2012.pdf.

¹² Between 2005 and 2012, domestic electricity prices contained in Quarterly Energy Prices show an increase of 77 per cent (52 per cent in real terms) which is likely to have influenced demand. 'Quarterly Energy Prices' can be accessed here:
<https://www.gov.uk/government/collections/quarterly-energy-prices>.

¹³ Please see Table 5.2 of DUKES: [Electricity: chapter 5, Digest of United Kingdom energy statistics \(DUKES\) - Publications - GOV.UK](#).

3. Non-domestic electricity consumption in Great Britain by region

3.1 Average annual non-domestic electricity consumption by region and profile

Average (mean) annual non-domestic electricity consumption per meter was 69,146 kWh, with total non-domestic electricity consumption of 164,751 GWh. Average consumption for non-domestic customers was 6 per cent lower than in 2011 (73,365 kWh), with total non-domestic consumption also 6 per cent lower than in 2011 (175,040 GWh).

Investigations into the differences in electricity consumption in the non-domestic sector between 2011 and 2012 have shown larger variation than seen in earlier years. It is currently unclear why some regions and local authorities have experienced much larger reductions than others. Further investigations will be made into the factors driving these changes when the data is analysed at lower levels of geography. Initial investigations suggest that it is generally a result of reduced consumption by larger industrial users rather than a result of industrial consumers which have ceased to operate. However, DECC would welcome any input from users on possible causes which can aid further investigations. The non-domestic data should be treated as provisional until these investigations are complete. If revisions are required, a final dataset will be published on 27 March 2014.

Table 4 shows the average (mean) non-domestic electricity consumption per meter in each region, which varies according to the number of non-domestic sites in an area, the type of business and the volume of electricity they use. The table also includes average consumption for two different meter types: non-half hourly meters and half hourly meters¹⁴. The difference in average consumption between the two types of meters reflects that the half hourly meters are installed for larger industrial/commercial customers.

Table 4 Average non-domestic electricity consumption per meter by region, 2012

	All non-domestic meters		Average NHH consumption		Average HH consumption	
	Average consumption (kWh)	Number of non-domestic meters (thousands)	Average consumption (kWh)	Percentage of non-domestic meters	Average consumption (kWh)	Percentage of non-domestic meters
East Midlands	74,335	156	23,474	94.7%	983,637	5.3%
East of England	69,808	215	23,200	95.5%	1,056,332	4.5%
Greater London	65,725	397	19,643	95.5%	1,050,810	4.5%
North East	80,541	80	24,293	95.4%	1,249,280	4.6%
North West	82,346	235	24,307	95.1%	1,214,315	4.9%
Scotland	67,053	210	25,132	95.8%	1,028,161	4.2%
South East	64,919	329	22,407	95.9%	1,056,149	4.1%
South West	53,292	246	19,567	96.6%	1,006,906	3.4%
Wales	67,316	123	20,176	96.2%	1,245,777	3.8%
West Midlands	68,747	193	22,218	95.0%	960,137	5.0%
Yorkshire and The Humber	73,981	177	23,450	95.5%	1,134,239	4.5%
England	68,703	2,027	22,050	95.5%	1,068,647	4.5%
Great Britain ¹	69,146	2,383	22,335	95.5%	1,074,041	4.5%

1. Includes 23 thousand meters, with a total consumption of 3,154 GWh that couldn't be allocated at Local Authority level, representing 1.0 per cent of meters and 1.9 per cent of consumption.

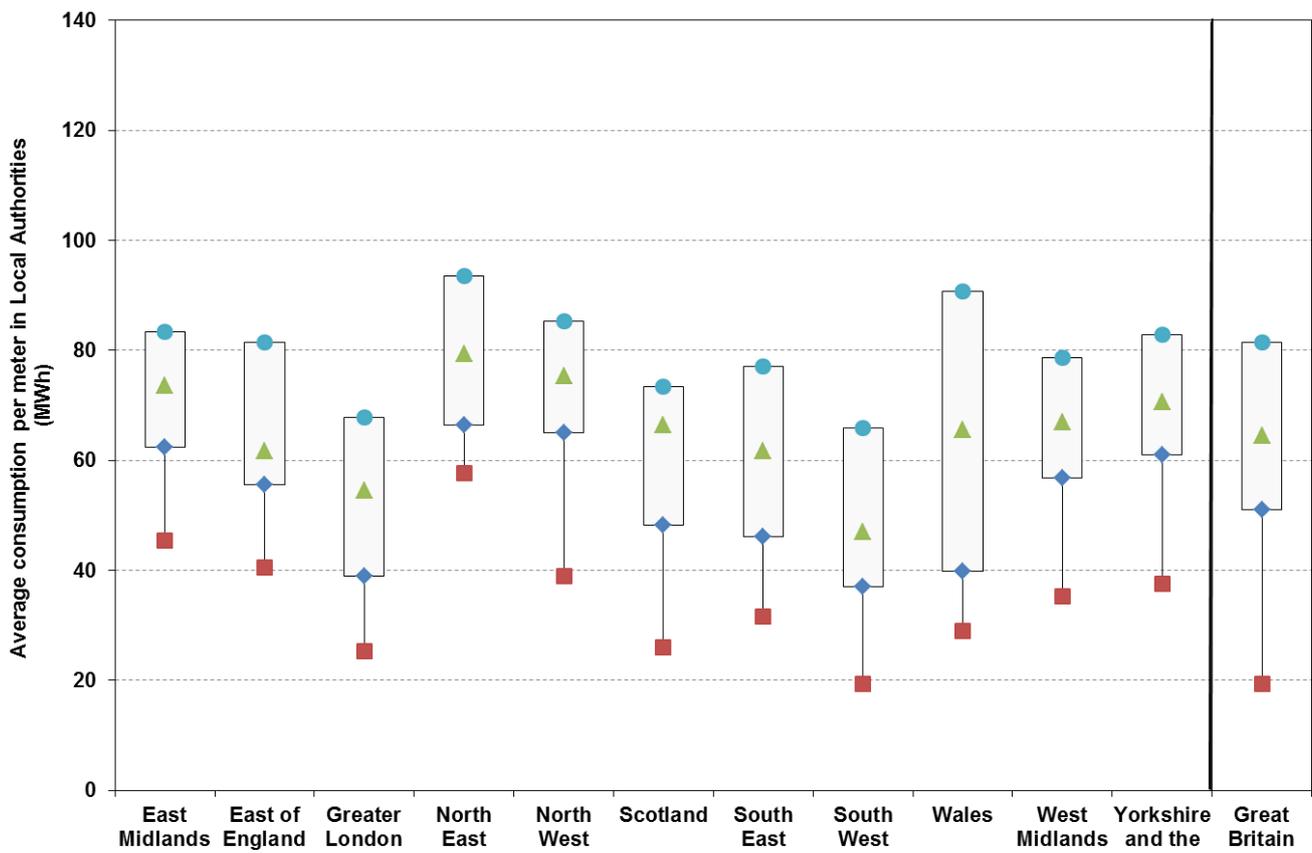
¹⁴ Non-half hourly and half-hourly meters are covered in more detail in Chapter 3 of the Sub-national methodology and guidance booklet.

At a local authority level, high average non-domestic consumption can occur where there are a small number of relatively high consumers which dominate the area. As a result, City of London (Greater London) and Knowsley (North West) had the highest average annual non-domestic consumption of 329 MWh and 205 MWh respectively. The Isles of Scilly (19 MWh) had the lowest average non-domestic consumption per meter in 2012. This low level of non-domestic consumption reflects the rural characteristic of the area and the few commercial/heavy industrial properties.

Chart 5 shows a box plot displaying aspects of the distribution of average non-domestic electricity consumption in local authorities for each region, as well as one for local authorities in Great Britain as a whole. For each region, the box plot shows the minimum average (mean) non-domestic electricity consumption, the upper and lower quartile and the median average electricity consumption. The maximum average non-domestic electricity consumption values have been excluded due to the magnitude which meant the rest of the detail of the box plot could not be seen clearly – the maximum values ranged from 329 MWh in Greater London to 121 MWh in the South West.

From the chart it can be seen that the inter-quartile range of average electricity consumption in local authorities was greatest in Wales, whilst the North West had the smallest spread of average non-domestic electricity consumption per local authority, reflecting the more uniform nature of business across this region.

Chart 5 Box plot of average non-domestic electricity consumption for local authorities within each region, 2012

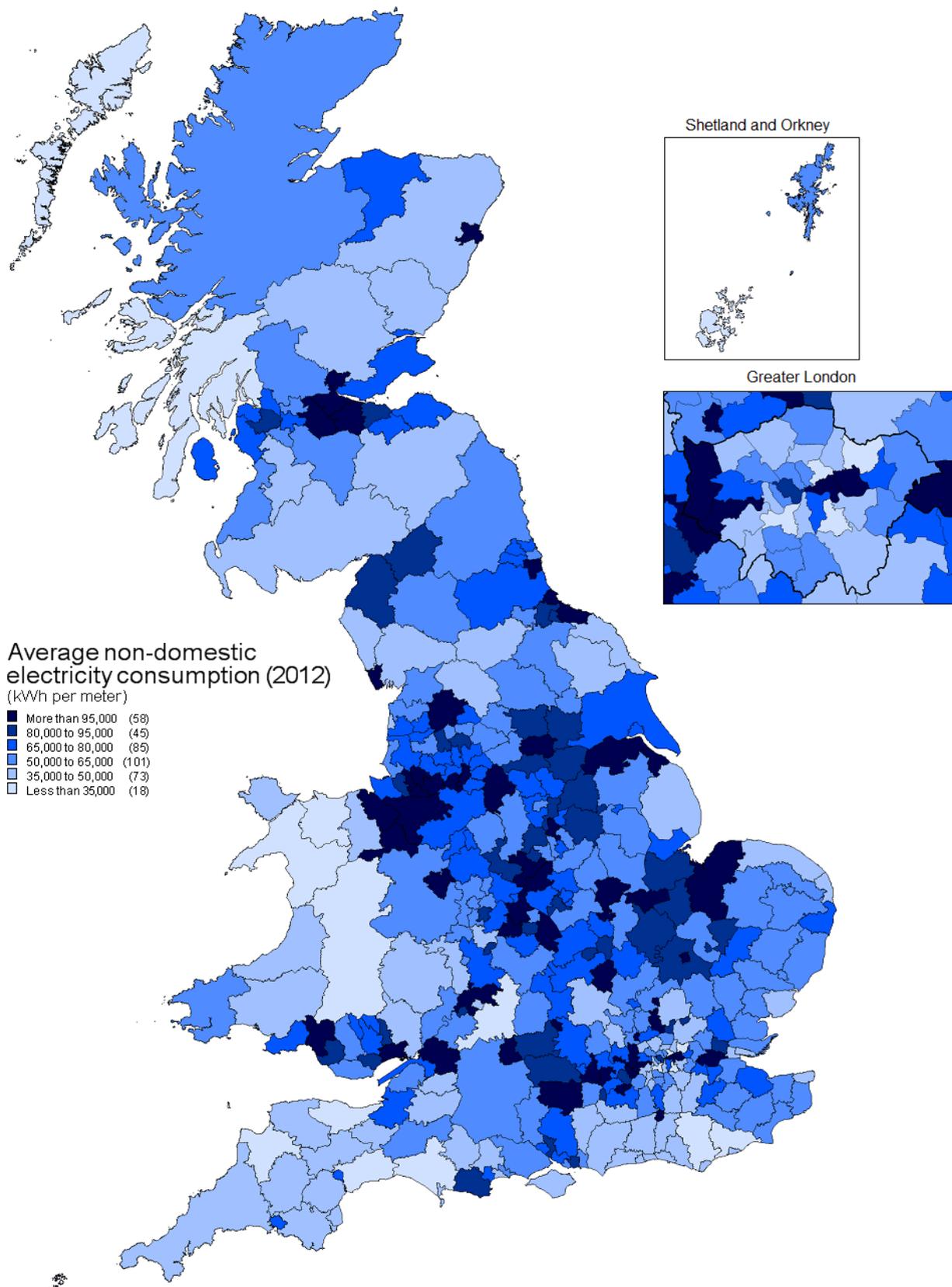


On average annual consumption for non-domestic meters in Great Britain decreased by 5.8 per cent between 2011 and 2012, to 69,146 kWh. All regions saw a decrease in average

consumption, apart from the North West which had an increase in average consumption of 3.2 per cent (from 79,797 kWh to 82,346 kWh). The largest decrease was in Wales of 16 per cent (from 80,439 kWh to 67,316 kWh) which can be attributed to a reduction of energy consumption at Port Talbot as a result of lower production in 2012 due to the temporary stop of one blast furnace whilst it was rebuilt. The smallest decrease was in the East of England of 0.3 per cent (70,017 kWh to 69,808 kWh).

Map 4 shows average non-domestic electricity consumption per meter by local authority in 2012.

Map 4 Average non-domestic electricity consumption per meter by local authority, 2012

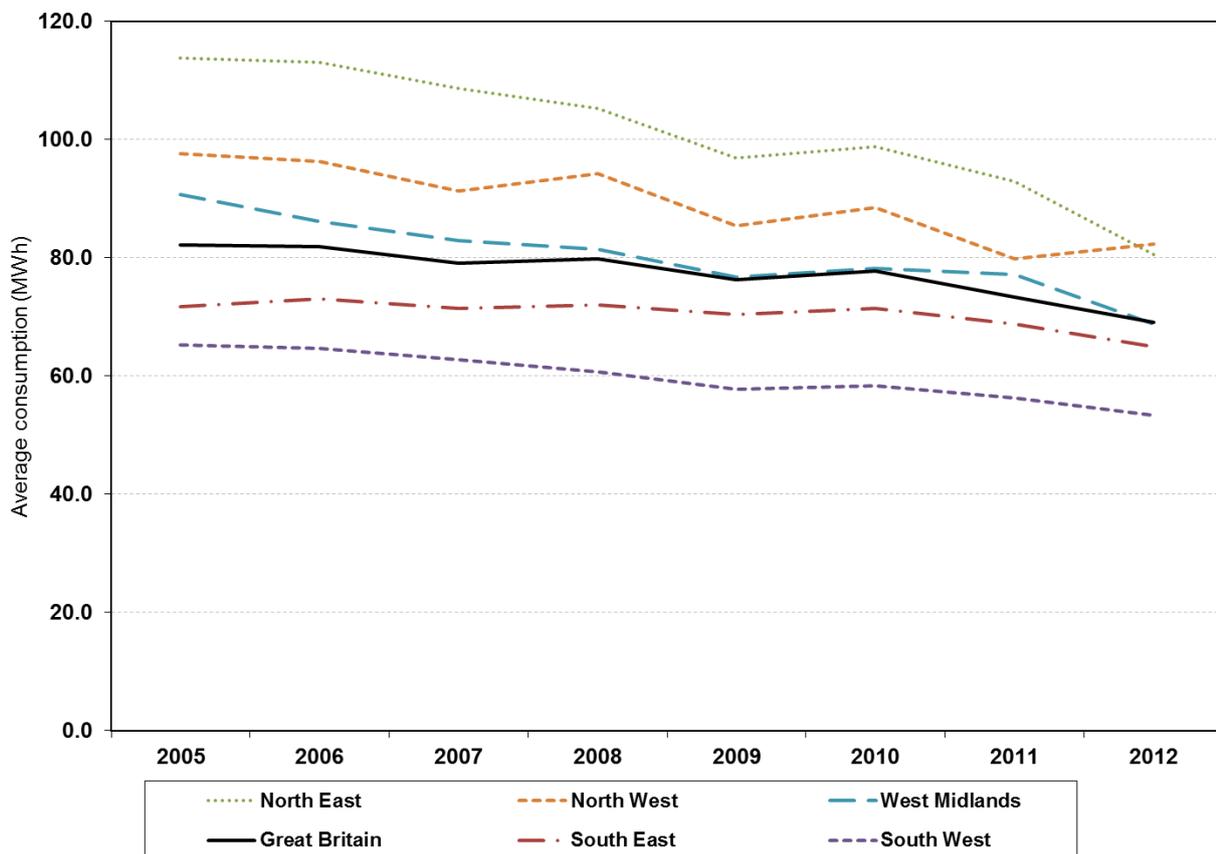


3.2 Longer term trends between 2005 and 2012

In comparison to domestic electricity consumption, trends for average annual non-domestic electricity consumption varied between 2005 and 2012. Alongside the Great Britain average, Chart 6 shows the trends in average non-domestic electricity consumption for selected regions which have had the greatest variation in the past eight years – North East, North West, West Midlands, Greater London, and the South West.

In 2012, the average consumption for all other regions were between the North West (maximum) and South West (minimum). The North East had the largest percentage decrease (29 per cent) in average non-domestic consumption between 2005 and 2012, whilst Greater London had the largest increase (0.5 per cent). Over this time the average non-domestic consumption per meter for Great Britain decreased by 16 per cent. The energy efficiency of buildings and economic recession will have had an impact on consumption and this will have varied between regions.

Chart 6 Average non-domestic electricity consumption for selected regions, 2005 to 2012



It is important to recognise that when making comparisons between years at local authority level, total and average consumption levels are influenced by changes to establishments in a local authority, this could be because of relocations, new industrial or commercial establishments opening or the closure or downsizing of existing businesses. The impact of these changes on totals and averages is highly dependent on the size of the business. The

rate of change of average consumption will be impacted by these factors, particularly between 2008 and 2012 given the recent recession. Weather conditions have a smaller impact on non-domestic consumption than on household use as less of the energy is used for heating.

4. Comparison of meter point data with Digest of UK Energy Statistics

Estimated total electricity consumption from the meter point data differs from Chapter 5 of the Digest of UK Energy Statistics (DUKES) as DUKES data are based on sales information collected from two separate annual surveys, one of major power producers and one of electricity suppliers¹⁵. It is recommended for DUKES data to be used for headline analysis, and sub-national data to be used for regional analysis.

Table 5 below compares the total consumption based on meter points to the corresponding DUKES total.

Table 5 Comparison with published UK statistics for 2012

	GWh	
Total final consumption (UK)		
Great Britain total consumption		
Domestic	110,049	
Industrial and commercial	164,751	
	<u>274,801</u>	
Implied UK total consumption		
Great Britain total consumption (above)	274,801	
Plus Northern Ireland	7,935	
Plus Sales direct from high voltage lines (based on Ofgem data)	4,382	
Implied UK sales of electricity	<u>287,118</u>	
DUKES total UK sales (DUKES 2013 Table 5.5)	<u>308,409</u>	
Statistical difference	<u>- 21,291</u>	-7 per cent of UK Sales

After taking into account consumption not included in the sub-national estimates (total consumption for Northern Ireland and sales from high voltage lines) there was a statistical difference of 21,291, -7 per cent of total UK sales reported in DUKES.

One of the main factors behind this difference is that the non-half hourly data covers the period from the end of January 2012 to the end of January 2013 and not the calendar year 2012 as covered by DUKES. Some of this difference may also be explained by the fact that approximately 20 per cent of the data in the sub-national exercise are based on estimated rather than actual meter readings, and some further meters will have been estimated by suppliers. Therefore the sub-national totals may not reflect the full scale of changes in consumption between years.

¹⁵ Detailed electricity figures available in DUKES can be accessed here:
<https://www.gov.uk/government/organisations/department-of-energy-climate-change/series/electricity-statistics>.

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

LAU1 Area	Domestic consumers		Commercial and industrial consumers		All consumers		Sales per consumer (kWh)	
	Sales 2012 (GWh)	Number of MPANs (thousands)	Sales 2012 (GWh)	Number of MPANs (thousands)	Sales 2012 (GWh)	Number of MPANs (thousands)	Average domestic consumption	Average commercial and industrial consumption
Ceredigion	168.6	33.3	190.5	5.4	359.1	38.7	5,064.8	35,072.0
Blaenau Gwent	103.7	32.0	146.9	2.1	250.7	34.1	3,243.0	70,141.3
Neath Port Talbot	216.6	64.5	636.7	3.9	853.3	68.4	3,358.1	161,840.6
Powys	273.9	61.0	312.3	10.8	586.2	71.8	4,489.9	28,926.3
TOTAL WALES	5,230.2	1,381.0	8,294.1	123.2	13,524.3	1,504.2	3,787.4	67,315.8
Shetland Islands	102.7	17.2	92.6	1.8	195.2	19.0	5,977.2	50,557.5
Glasgow City	1,076.7	328.8	1,700.0	23.1	2,776.8	352.0	3,274.3	73,562.5
Clackmannanshire	92.8	24.9	228.7	1.4	321.5	26.3	3,721.3	165,938.2
Orkney Islands	82.4	14.1	58.2	2.2	140.7	16.3	5,858.8	25,933.0
TOTAL SCOTLAND	10,921.9	2,749.5	14,054.2	209.6	24,976.1	2,959.1	3,972.3	67,052.9
Northumberland	585.3	150.8	751.8	13.0	1,337.1	163.9	3,880.4	57,658.1
South Tyneside	222.0	70.3	236.7	3.9	458.7	74.2	3,158.9	60,829.7
Redcar and Cleveland	216.5	62.8	700.3	3.6	916.7	66.3	3,448.6	196,212.9
Darlington	175.0	49.2	209.1	3.5	384.1	52.6	3,557.3	60,427.1
TOTAL NORTH EAST	4,137.5	1,196.6	6,435.6	79.9	10,573.1	1,276.5	3,457.8	80,540.8
Eden	129.0	24.6	223.5	4.3	352.5	28.9	5,238.6	51,959.4
Barrow-in-Furness	113.5	32.8	384.5	2.1	498.0	34.9	3,458.1	186,488.0
Knowsley	233.8	64.2	564.8	2.8	798.6	67.0	3,641.3	205,016.5
Copeland	132.0	32.6	104.0	2.7	236.0	35.3	4,050.1	38,943.9
TOTAL NORTH WEST	12,176.5	3,145.2	19,342.1	234.9	31,518.6	3,380.1	3,871.4	82,345.7
Ryedale	113.9	24.6	160.1	3.8	274.0	28.4	4,620.6	42,452.3
Kingston upon Hull, City of	396.2	118.5	597.5	7.9	993.7	126.4	3,343.5	75,502.2
North Lincolnshire	274.7	73.3	862.0	5.7	1,136.7	79.1	3,744.9	150,072.9
Craven	117.2	26.4	131.4	3.5	248.6	29.9	4,432.0	37,442.5
TOTAL YORKSHIRE AND THE HUMBER	8,742.4	2,343.5	13,122.4	177.4	21,864.9	2,520.9	3,730.5	73,981.4
Daventry	168.9	33.7	236.7	3.1	405.6	36.8	5,005.7	76,891.0
Chesterfield	162.8	48.4	232.7	4.0	395.5	52.4	3,359.8	58,681.8
Rutland	75.6	16.1	246.9	1.7	322.5	17.8	4,696.5	146,904.8
East Lindsey	297.1	65.2	338.0	7.4	635.1	72.6	4,558.8	45,403.2
TOTAL EAST MIDLANDS	7,872.9	1,991.4	11,585.7	155.9	19,458.6	2,147.2	3,953.5	74,335.2

Annex A continued

Selected sub-national electricity consumption statistics (highest and lowest local authority averages),
2012

LAU1 Area	Domestic consumers		Commercial and industrial consumers		All consumers		Sales per consumer (kWh)	
	Sales 2012 (GWh)	Number of MPANs (thousands)	Sales 2012 (GWh)	Number of MPANs (thousands)	Sales 2012 (GWh)	Number of MPANs (thousands)	Average domestic consumption	Average commercial and industrial consumption
Stratford-on-Avon	277.3	54.1	330.4	6.0	607.7	60.1	5,125.9	55,027.1
Stoke-on-Trent	383.8	111.3	552.8	7.7	936.6	118.9	3,449.8	71,955.1
North Warwickshire	120.6	27.1	383.9	2.5	504.6	29.6	4,444.2	153,328.0
Malvern Hills	160.0	33.7	118.3	3.4	278.2	37.0	4,752.9	35,188.0
TOTAL WEST MIDLANDS	9,604.5	2,380.6	13,234.1	192.5	22,838.7	2,573.1	4,034.5	68,747.0
Maldon	140.1	27.0	130.8	2.5	270.9	29.5	5,188.3	51,512.3
Norwich	207.9	64.2	396.9	6.8	604.8	71.0	3,236.4	58,363.8
Thurrock	284.1	65.9	670.4	4.3	954.4	70.2	4,313.4	155,430.7
Epping Forest	265.4	54.8	201.5	5.0	466.9	59.7	4,845.1	40,544.9
TOTAL EAST OF ENGLAND	11,128.3	2,562.1	15,001.9	214.9	26,130.2	2,777.0	4,343.5	69,808.0
Barnet	639.2	142.6	474.2	11.8	1,113.4	154.4	4,482.3	40,285.5
Islington	324.5	100.1	907.5	17.7	1,231.9	117.8	3,240.0	51,377.0
City of London	26.5	5.9	2,252.9	6.8	2,279.5	12.8	4,490.0	329,230.4
Lewisham	426.4	120.6	281.5	11.2	707.8	131.8	3,534.2	25,212.6
TOTAL GREATER LONDON	13,267.2	3,420.5	26,069.7	396.6	39,336.9	3,817.2	3,878.7	65,725.0
South Bucks	150.5	28.0	209.1	2.8	359.6	30.8	5,372.4	74,008.9
Portsmouth	323.2	89.3	663.1	7.1	986.4	96.4	3,617.7	93,625.1
Slough	200.8	51.2	769.3	4.4	970.1	55.6	3,922.7	175,081.1
Wealden	326.8	65.7	205.0	6.5	531.8	72.2	4,977.1	31,578.0
TOTAL SOUTH EAST	16,284.2	3,736.5	21,371.2	329.2	37,655.4	4,065.7	4,358.1	64,919.2
Isles of Scilly	8.1	1.2	9.0	0.5	17.1	1.6	6,925.8	19,274.4
Plymouth	417.9	116.1	632.1	8.1	1,049.9	124.2	3,600.3	77,638.1
Swindon	351.4	92.5	742.9	6.1	1,094.3	98.6	3,800.5	120,914.4
Isles of Scilly	8.1	1.2	9.0	0.5	17.1	1.6	6,925.8	19,274.4
TOTAL SOUTH WEST	10,463.9	2,444.7	13,086.9	245.6	23,550.7	2,690.3	4,280.2	53,292.0
England	93,677.5	23,221.1	139,249.6	2,026.8	232,927.1	25,248.0	4,034.2	68,702.6
Scotland	10,921.9	2,749.5	14,054.2	209.6	24,976.1	2,959.1	3,972.3	67,052.9
Wales	5,230.2	1,381.0	8,294.1	123.2	13,524.3	1,504.2	3,787.4	67,315.8
Unallocated	219.8	61.8	3,153.6	23.0	3,373.4	84.8	3,556.4	137,119.5
GREAT BRITAIN	110,049.5	27,413.4	164,751.5	2,382.7	274,800.9	29,796.1	4,014.4	69,146.1

Annex B **Sub-national consumption publications**

Electricity consumption statistics

- Electricity consumption statistics at local authority level (Great Britain):
<https://www.gov.uk/government/statistical-data-sets/regional-and-local-authority-electricity-consumption-statistics-2005-to-2011>.
- Electricity consumption statistics at MSOA/LSOA level (England and Wales):
<https://www.gov.uk/government/organisations/department-of-energy-climate-change/series/mlsoa-and-lsoa-electricity-and-gas-estimates>.
- Experimental statistics are also available for Northern Ireland:
<https://www.gov.uk/government/organisations/department-of-energy-climate-change/series/sub-national-electricity-consumption-in-northern-ireland>.

Gas consumption statistics

- Gas consumption statistics at local authority level (Great Britain):
<https://www.gov.uk/government/organisations/department-of-energy-climate-change/series/sub-national-gas-consumption-data>.
- Gas consumption statistics at MSOA/LSOA level (England and Wales):
<https://www.gov.uk/government/organisations/department-of-energy-climate-change/series/mlsoa-and-lsoa-electricity-and-gas-estimates>.

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>.

Annex C **Tools available to analyse sub-national consumption statistics**

DECC has published three tools to aid the user to further explore the data:

1. **Sub-national electricity and gas consumption statistics analytical tool**

This tool has been created for analysing electricity and gas consumption at the local authority level, and has been produced to help local authorities and other regional bodies use DECC's sub-national gas and electricity data to better understand changes in consumption over time. The tool allows for three distinct types of analysis:

- Analysis of individual local authority data in comparison to its respective regional average and the Great Britain average;
- Comparison between a selected local authority and five additional local authorities;
- Change between all local authorities in Great Britain.

The tool can be accessed here: <https://www.gov.uk/government/collections/analytical-tools>.

2. **Look-up spreadsheets**

The look-up spreadsheets are published alongside the SOA datasets, and are aimed at users interested in which SOA codes are included in a local authority, or for users who would like to determine which NUTS4 corresponds to which local authority. The spreadsheet also collates annual consumption (kWh), the number of meters and average consumption (kWh) for each SOA, or LA of interest.

The MSOA look-up spreadsheet is available here:

<https://www.gov.uk/government/statistical-data-sets/mlsoa-electricity-and-gas-2011>.

The LSOA look-up spreadsheet is available here:

<https://www.gov.uk/government/statistical-data-sets/lsoa-electricity-and-gas-2011-experimental>.

3. **Change over Time Analysis (CoTA) Viewer**

CoTA is a visual tool which assists the analysis of change over time for English regions, local authorities and MSOA areas. The purpose of the viewer is to help local authorities and other regional bodies create an evidence base when developing and monitoring policies for small geographic areas. Information on changes in total consumption, number of meters, and average consumption between two years can be analysed at either local authority or MSOA level for domestic (ordinary and Economy 7) and non-domestic electricity consumption, and domestic and non-domestic gas consumption.

The tool helps users to explore questions like:

- Has the areas energy consumption changed compared to others in the region?
- Has much change occurred within a local authority?
- Which MSOAs have experienced significant change?

A user guide and tool can be accessed from the following page:

<https://www.gov.uk/government/publications/change-over-time-analysis-cota-tool>.

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Department of Energy & Climate Change
3 Whitehall Place
London SW1A 2AW
www.gov.uk/decc
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