



Department  
of Energy &  
Climate Change



# Energy Trends June 2015

25 June 2015

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This document is also available from our website at [www.gov.uk/government/collections/energy-trends](http://www.gov.uk/government/collections/energy-trends)

**Explanatory notes are to be found inside the back cover**

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# Introduction

Energy Trends and Energy Prices are produced by the Department of Energy and Climate Change (DECC) on a quarterly basis. Both periodicals are published concurrently in June, September, December and March. The June editions cover the first quarter of the current year.

Energy Trends includes information on energy as a whole and by individual fuels. The text and charts provide an analysis of the data in the tables. The tables are mainly in commodity balance format, as used in the annual Digest of UK Energy Statistics. The 2014 edition of the Digest was published on 31 July 2014. Printed and bound copies of the 2014 Digest can be obtained from The Stationery Office and an electronic version is available on the DECC section of the GOV.UK website at: [www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes](http://www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes)

The balance format shows the flow of a commodity from its sources of supply, through to its final use. The articles provide in-depth information on current issues within the energy sector.

The text and tables included in this publication represent a snapshot of the information available at the time of publication. However, the data collection systems operated by DECC, which produce this information, are in constant operation. New data are continually received and revisions to historic data made. To ensure that those who use the statistics have access to the most up-to-date information, revised data will be made available as soon as possible, via the electronic versions of these tables. The electronic versions are available free of charge from the DECC section of the GOV.UK website. In addition to quarterly tables, the main monthly tables that were published in the period up to May 2001 when Energy Trends was produced monthly, continue to be updated and are also available on the DECC section of the GOV.UK website. Both sets of tables can be accessed at:

[www.gov.uk/government/organisations/department-of-energy-climate-change/about/statistics](http://www.gov.uk/government/organisations/department-of-energy-climate-change/about/statistics)

Annual data for 2014 included within this edition is on a provisional basis. New data are continually received and revisions to previous data made. Finalised figures for 2014 will be published on the 30 July 2015 in the annual Digest of UK Energy Statistics.

Energy Trends does not contain information on Foreign Trade, Weather (temperature, wind speed, sun hours and rainfall) and Prices. Foreign Trade and Weather tables are, however, available on the DECC section of the GOV.UK website at:

[www.gov.uk/government/organisations/department-of-energy-climate-change/about/statistics](http://www.gov.uk/government/organisations/department-of-energy-climate-change/about/statistics).

Information on Prices can be found in the Energy Prices publication and on the DECC section of the GOV.UK website at: [www.gov.uk/government/collections/quarterly-energy-prices](http://www.gov.uk/government/collections/quarterly-energy-prices)

If you have any comments on Energy Trends or Energy Prices publications please send them to:

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### **The main points for the first quarter of 2015:**

- Total energy production was 1½ per cent higher than in the first quarter of 2014. This small increase was due to rises in the production of bioenergy and waste, and from nuclear as a result of stations returning to operation after outages and maintenance.
- Oil production fell by 5 per cent when compared with the first quarter of 2014.
- Natural gas production was broadly unchanged when compared to the first quarter of 2014. Gas imports increased by 9 per cent to meet increased demand due to lower temperatures. LNG imports up significantly more than offsetting a fall in pipeline imports.
- Coal production in the first quarter of 2015 was 8 per cent higher than the first quarter of 2014. Coal imports were 9 per cent lower as generators' demand for coal fell by 15 per cent.
- Total primary energy consumption for energy rose by 4 per cent. However, when adjusted to take account of weather differences between the first quarter of 2014 and the first quarter of 2015, total primary energy consumption rose by ½ per cent.
- Temperatures in the quarter were on average 1.3 degrees cooler than a year earlier, with February the coldest month of the quarter, 2.0 degrees cooler than a year earlier.
- Final consumption was provisionally 6 per cent high than in the first quarter of 2014, within which domestic consumption rose by 11 per cent reflecting the cooler weather. On a temperature adjusted basis, final energy consumption was up 2½ per cent.
- Total deliveries of the key transport fuels were up 2 per cent when compared to the same period last year. Motor spirit deliveries were down 2½ per cent, DERV deliveries were up 4½ per cent while aviation turbine fuel deliveries were up 2½ per cent.
- Electricity generated in the first quarter of 2015 rose by 1 per cent, from 93.7 TWh a year earlier to 94.9 TWh.
- Coal's share of generation decreased from 37.0 per cent to 31.3 per cent, whilst gas's share rose from 23.2 per cent to 25.0 per cent. Nuclear's share of generation rose from 17.6 per cent in the first quarter of 2014 to 19.1 per cent in the first quarter of 2015 due to stations on outage or closed for maintenance in the first quarter of 2014.
- Low carbon electricity's share of generation increased from 37.3 per cent in the first quarter of 2014 to 41.4 per cent in the first quarter of 2015.
- Renewables' share of electricity generation increased to a record level of 22.3 per cent, compared to the 19.6 per cent share in the first quarter of 2014. Hydro generation decreased by 10.5 per cent on the first quarter of 2014. Over the same period, wind generation increased by 5.3 per cent, of which offshore wind generation rose by 6.3 per cent due to much increased capacity. Overall hydro, wind and solar PV generation was up 4.6 per cent.
- Renewable electricity generation was a record 21.1 TWh in the first quarter of 2015, an increase of 15 per cent on the same period a year earlier.
- In the first quarter of 2015, 148 MW of capacity joined the Feed in Tariff scheme, increasing the total to 3,567 MW, approximately 14 per cent of all renewable installed capacity.

## Section 1 - Total Energy

### Key results show:

Total energy production was 1.5 per cent higher than in the first quarter of 2014. **(Charts 1.1 & 1.2)**

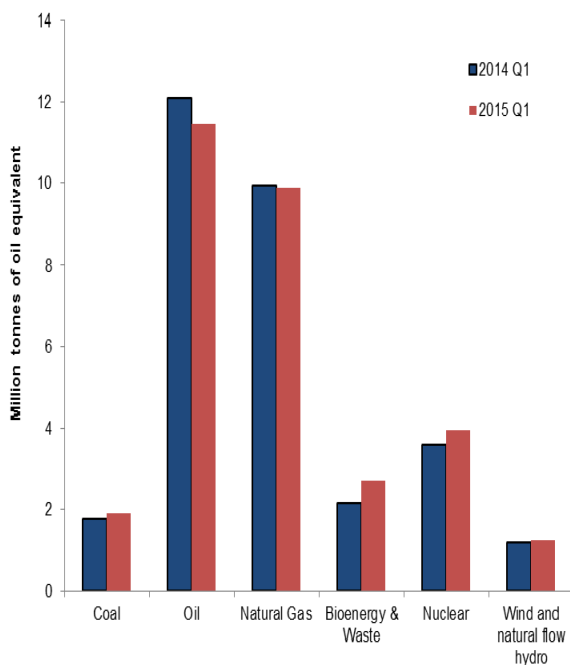
Total primary energy consumption for energy uses rose by 4.2 per cent. However, when adjusted to take account of weather differences between the first quarter of 2014 and the first quarter of 2015, primary energy consumption is estimated to have increased by 0.5 per cent. **(Chart 1.3)**

Final consumption rose by 6.0 per cent compared to the first quarter of 2014 reflecting the cooler weather in the quarter. Domestic consumption rose by 10.8 per cent, other final users' consumption rose by 8.1 per cent, transport consumption rose by 1.8 per cent and industrial consumption rose by 0.8 per cent. **(Chart 1.4)**

Net import dependency was 45.1 per cent, up 0.8 percentage points from the first quarter of 2014. **(Chart 1.6)**

Fossil fuel dependency was 84.3 per cent in the first quarter of 2015. **(Chart 1.7)**

**Chart 1.1 Production of indigenous primary fuels**



Total production in the first quarter of 2015 stood at 31.1 million tonnes of oil equivalent, 1.5 per cent higher than in the first quarter of 2014.

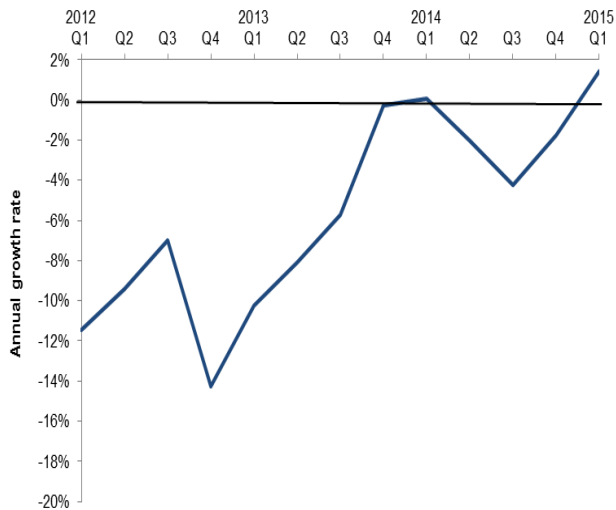
Production of bioenergy and waste was 27 per cent higher compared to the first quarter in 2014.

Primary electricity output in the first quarter of 2015 was 8.6 per cent higher than in the first quarter of 2014, within which nuclear electricity output was 10.0 per cent higher as stations resumed operation following outages and output from wind and natural flow hydro was 4.6 per cent higher.

Production of oil fell by 5.3 per cent compared to the first quarter of 2014, as a result of low production at the Huntington field while production of natural gas fell slightly by 0.5 per cent. Coal production rose by 8.4 per cent.

## Total Energy

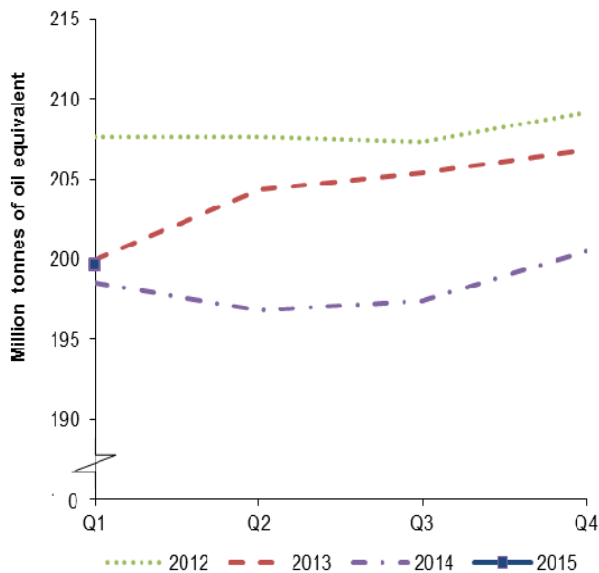
### Chart 1.2 UK production (annual growth rate)



In the first quarter of 2015, the annual growth rate of UK production was 1.5 per cent. The growth was the result of increases in bioenergy, nuclear output, coal production and output from wind and hydro.

The rate of growth of 1.5 per cent is the highest since 2002, though production is still generally falling as growth in renewables is more than offset by declines in fossil fuel production.

### Chart 1.3 Total inland consumption (primary fuel input basis)<sup>(1)</sup>



Total inland consumption on a primary fuel input basis (temperature corrected, seasonally adjusted annualised rate), was 199.6 million tonnes of oil equivalent in the first quarter of 2015, 0.5 per cent higher than in the first quarter of 2014. On an unadjusted basis inland consumption was 4.2 per cent higher due to the cooler weather. Average temperature in the first quarter of 2015 was 5.2 degrees Celcius, 1.3 degree Celsius lower than the same period a year earlier.

Between the first quarter of 2014 and the first quarter of 2015 (on a seasonally adjusted and temperature corrected basis) coal and other solid fuel consumption fell by 17.4 per cent as demand from electricity generators fell.

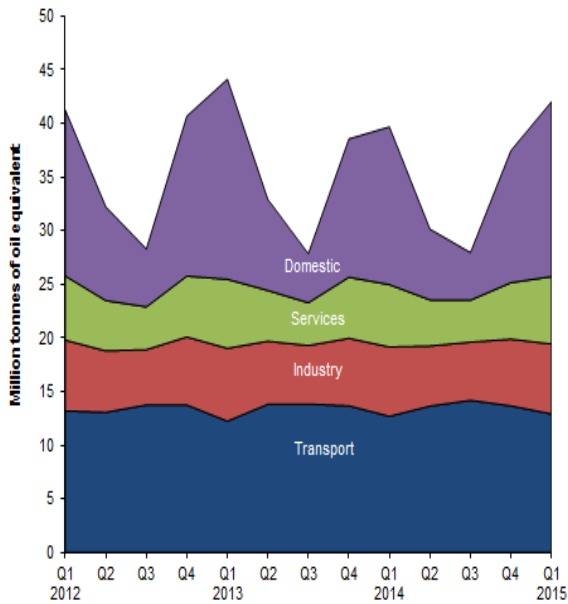
Also on a seasonally adjusted and temperature corrected basis, between the first quarter of 2014 and the first quarter of 2015, oil consumption rose by 1.0 per cent, nuclear consumption by 10.3 per cent and bioenergy by 28 per cent.

On the same basis, natural gas consumption rose by 3.5 per cent between the first quarter of 2014 and the first quarter of 2015. Unadjusted demand was up 10.3 per cent, with increases across all sectors.

(1) Seasonally adjusted and temperature corrected annual rates



**Chart 1.4 Final energy consumption by user**



Total final consumption rose by 6.0 per cent between the first quarter of 2014 and the first quarter of 2015.

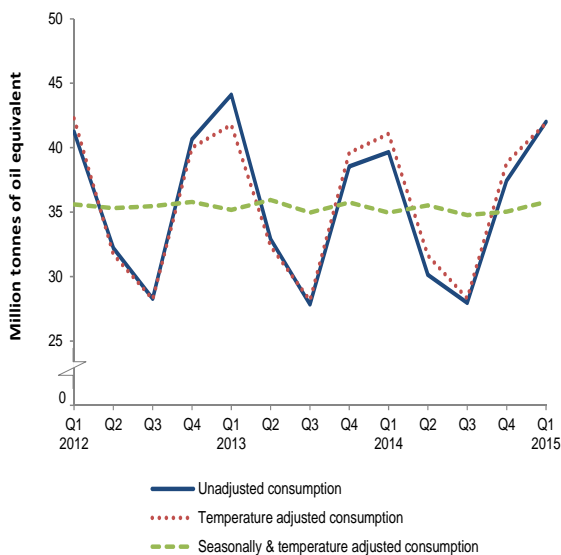
Domestic sector energy consumption rose by 10.8 per cent, reflecting the cooler weather compared to a year earlier.

Service sector energy consumption rose by 8.1 per cent.

Transport sector energy consumption rose by 1.8 per cent.

Industrial sector energy consumption rose by 0.8 per cent.

**Chart 1.5 Seasonally adjusted and temperature corrected final energy consumption**



Total unadjusted final energy consumption (excluding non-energy use) rose by 5.9 per cent between the first quarter of 2014 and the first quarter of 2015.

On a seasonally and temperature adjusted basis final energy consumption (excluding non-energy use) rose by 2.4 per cent between the first quarter of 2014 and the first quarter of 2015.

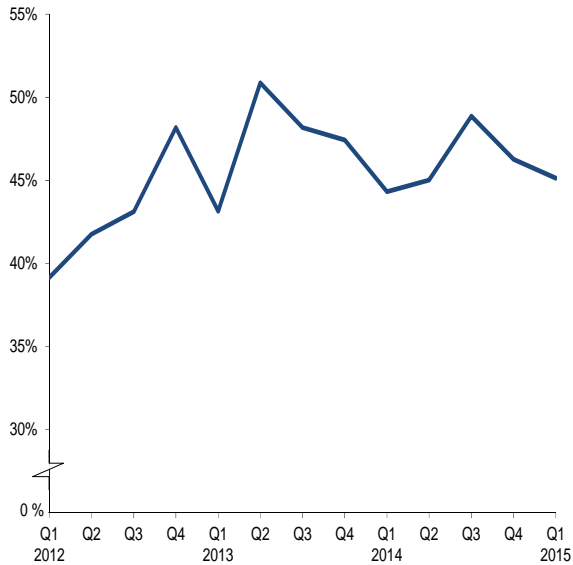
Unadjusted domestic consumption rose by 10.8 per cent over the same period, and was up 2.0 per cent on a temperature and seasonally adjusted basis.

Consumption data by fuel and sector is available in the table ET 1.3c on the DECC section of the GOV.UK website at:

[www.gov.uk/government/statistics/total-energy-section-1-energy-trends](http://www.gov.uk/government/statistics/total-energy-section-1-energy-trends)

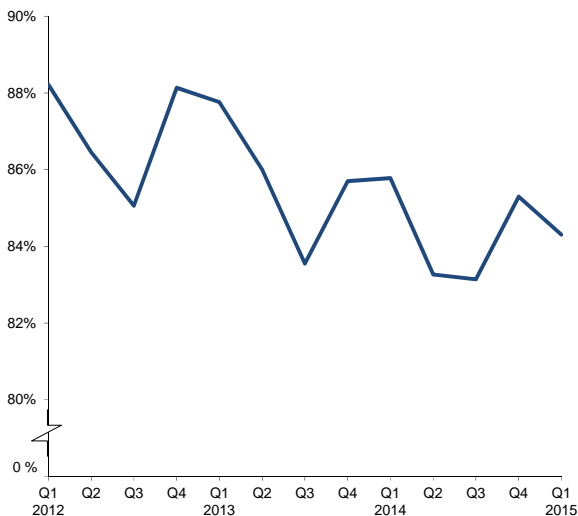
## Total Energy

### Chart 1.6 Net import dependency



In the first quarter of 2015 net import dependency was 45.1 per cent, up 0.8 percentage points compared to the first quarter of 2014, but down on the levels seen in quarters 3 and 4 of 2014.

### Chart 1.7 Fossil fuel dependency



In the first quarter of 2015 fossil fuel dependency was 84.3 per cent, down 1.5 percentage points from the first quarter of 2014.

### Relevant tables

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- 1.2: Inland energy consumption: primary fuel input basis.....Page 10
- 1.3: Supply and use of fuels.....Page 11-12

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# 1 TOTAL ENERGY

TABLE 1.1. Indigenous production of primary fuels

Million tonnes of oil equivalent

		Primary electricity						Wind and natural flow hydro <sup>6</sup>	
		Total	Coal <sup>1</sup>	Petroleum <sup>2</sup>	Natural gas <sup>3</sup>	Bioenergy & waste <sup>4,5</sup>	Nuclear		
2010		158.6r	11.5	69.0	57.2	5.9r	13.9	1.19	
2011		137.3r	11.6	56.9	45.3	6.1r	15.6	1.86r	
2012		122.6r	10.6	48.8	38.9	6.8r	15.2	2.28r	
2013		115.0r	8.0	44.5	36.5	7.5r	15.4	3.02	
2014 p		112.8r	7.2	43.7r	36.6	7.9	13.9	3.61r	
<i>Per cent change</i>		-1.9	-10.6	-1.7	+0.2	+5.3	-10.3	+19.5	
2014	Quarter 1	30.7r	1.8	12.1	9.9	2.1r	3.6	1.19r	
	Quarter 2	28.6r	1.8	11.3	9.3	1.7r	3.8	0.66r	
	Quarter 3	24.5r	1.9	9.0r	8.0	1.6	3.4	0.64r	
	Quarter 4	29.0r	1.7	11.4r	9.3r	2.4r	3.1	1.12r	
2015	Quarter 1 p	31.1r	1.9	11.5r	9.9r	2.7r	3.9r	1.24r	
<i>Per cent change</i> <sup>7</sup>		+1.5	+8.4	-5.3	-0.5	+27.1	+10.0	+4.6	

1. Includes an estimate of slurry.

2. Crude oil, offshore and land, plus condensates and petroleum gases derived at onshore treatment plants.

3. Includes colliery methane, excludes gas flared or re-injected.

4. Includes solid renewable sources (wood, straw and waste), a small amount of renewable primary heat sources (solar, geothermal etc), liquid biofuels and sewage gas and landfill gas.

5. Bioenergy & waste introduced as a separate category from March 2014 - see special feature article in the March 2014 edition of Energy Trends at:

[www.gov.uk/government/collections/energy-trends-articles](http://www.gov.uk/government/collections/energy-trends-articles)

6. Includes generation by solar PV.

7. Percentage change between the most recent quarter and the same quarter a year earlier.

# 1 TOTAL ENERGY

**TABLE 1.2 Inland energy consumption: primary fuel input basis**
*Million tonnes of oil equivalent*

										<i>Million tonnes of oil equivalent</i>							
		Total	Coal <sup>1</sup>	Petroleum <sup>2</sup>	Natural gas <sup>3</sup>	Bioenergy & waste <sup>4,5</sup>	Primary electricity		Net imports	Total	Coal	Petroleum	gas	Bioenergy & waste	Primary electricity		Net imports
							Nuclear	Wind and natural flow hydro <sup>6</sup>							Nuclear	Wind and natural flow hydro	
<i>Unadjusted<sup>7</sup></i>										<i>Seasonally adjusted and temperature corrected<sup>8,9</sup> (annualised rates)</i>							
2010		219.4r	32.7	70.2	93.6	7.6r	13.9	1.19	0.23	213.5r	31.1	70.2	89.2	7.6r	13.9	1.19	0.23
2011		203.5r	32.3	67.8	77.6	7.7r	15.6	1.86r	0.53	209.1r	34.0	67.8	81.5	7.7r	15.6	1.86r	0.53
2012		208.0r	41.0	67.0r	73.3	8.3r	15.2	2.28r	1.02	208.0r	40.9	67.0r	73.3	8.3r	15.2	2.28r	1.02
2013		207.0r	39.2	66.1r	72.7	9.4r	15.4	3.02	1.24	204.1r	38.4	66.1r	70.5	9.4r	15.4	3.02	1.24
2014 p		193.0r	31.3	65.8r	65.9r	10.7r	13.9	3.61r	1.76	198.3r	33.0	65.8r	69.6	10.7r	13.9	3.61r	1.76
<i>Per cent change</i>		-6.8	-20.0	-0.3	-9.3	+13.5	-10.3	+19.5	+42.1	-2.8	-14.2	-0.3	-1.3	+13.5	-10.3	+19.5	+42.1
2014	Quarter 1	55.8r	10.3	15.9r	21.6	2.7r	3.6	1.19r	0.42	198.5r	37.4	63.5r	67.3r	10.9r	13.6r	4.04r	1.68
	Quarter 2	43.9	7.0	16.4r	13.1	2.4r	3.8	0.66r	0.44	196.8r	34.7	65.4r	67.0r	9.8r	15.0r	3.20r	1.75
	Quarter 3	41.0	5.7	16.8r	11.5	2.4r	3.4	0.64r	0.47	197.4r	28.9	67.4r	72.2r	9.6r	13.9	3.52r	1.87
	Quarter 4	52.4r	8.3	16.8r	19.7	3.1r	3.1	1.12r	0.44	200.5r	30.9	67.0r	71.8r	12.4r	12.9	3.67r	1.76
2015	Quarter 1 p	58.1r	9.1r	16.0r	23.8	3.5r	3.9r	1.24r	0.42	199.6r	30.9r	64.2r	69.7r	14.0r	15.0r	4.11r	1.68
<i>Per cent change<sup>10</sup></i>		+4.2	-12.1	+1.0	+10.3	+28.3	+10.0	+4.6	-0.1	+0.5	-17.4	+1.0	+3.5	+28.3	+10.3	+1.8	-0.1

1. Includes net foreign trade and stock changes in other solid fuels.

2. Inland deliveries for energy use, plus refinery fuel and losses, minus the differences between deliveries and actual consumption at power stations.

3. Includes gas used during production and colliery methane. Excludes gas flared or re-injected and non-energy use of gas.

4. Includes solid renewable sources (wood, straw and waste), a small amount of renewable primary heat sources (solar, geothermal, etc.), liquid biofuels, landfill gas and sewage gas.

5. Bioenergy & waste introduced as a separate category from March 2014 - see special feature article in the March 2014 edition of Energy Trends at:

[www.gov.uk/government/collections/energy-trends-articles](http://www.gov.uk/government/collections/energy-trends-articles)

6. Includes generation by solar PV. Excludes generation from pumped storage stations.

7. Not seasonally adjusted or temperature corrected.

8. Coal and natural gas are temperature corrected; petroleum, bioenergy and waste, and primary electricity are not temperature corrected.

9. For details of temperature correction see the June and September 2011 editions of Energy Trends; Seasonal and temperature adjustment factors were reassessed in June 2013

[www.gov.uk/government/collections/energy-trends](http://www.gov.uk/government/collections/energy-trends)

10. Percentage change between the most recent quarter and the same quarter a year earlier.

# 1 TOTAL ENERGY

Table 1.3a Supply and use of fuels

Thousand tonnes of oil equivalent

	2013	2013	per cent change	2013	2013	2013	2013	2014	2014	2014	2014	2015	per cent change <sup>1</sup>
	2013	2014 p		1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter p	
<b>SUPPLY</b>													
Indigenous production	114,962r	112,794r	-1.9	30,668r	29,155r	25,593r	29,545r	30,696r	28,562r	24,512r	29,024r	31,134	+1.4
Imports	178,596r	164,060r	-8.1	47,074r	46,420r	40,120r	44,983r	43,792r	39,202r	38,187r	42,879r	44,126	+0.8
Exports	-76,129r	-70,705r	-7.1	-19,301r	-20,614r	-18,312r	-17,903r	-17,971r	-18,289r	-16,968r	-17,476r	-16,713	-7.0
Marine bunkers	-2,691	-2,484r	-7.7	-665	-714	-684	-629	-636	-599	-618r	-630r	-621	-2.4
Stock change <sup>2</sup>	+53	-3,092r		+5,934	-4,226	-2,129	+473	+1,758r	-3,024r	-2,302r	+477r	+2,208	
<b>Primary supply</b>	<b>214,790r</b>	<b>200,574r</b>	<b>-6.6</b>	<b>63,711r</b>	<b>50,021r</b>	<b>44,589r</b>	<b>56,470r</b>	<b>57,639r</b>	<b>45,852r</b>	<b>42,809r</b>	<b>54,274r</b>	<b>60,134</b>	<b>+4.3</b>
Statistical difference <sup>3</sup>	-230r	-573r		-166r	-106r	47r	-4r	-5r	-203r	-312r	-54r	-11	
<b>Primary demand</b>	<b>215,020r</b>	<b>201,147r</b>	<b>-6.5</b>	<b>63,877r</b>	<b>50,127r</b>	<b>44,542r</b>	<b>56,474r</b>	<b>57,644r</b>	<b>46,055r</b>	<b>43,121r</b>	<b>54,327r</b>	<b>60,145</b>	<b>+4.3</b>
Transfers <sup>4</sup>	-6r	-3r		-2r	-4r	-7r	7r	-1r	-5r	6r	-2r	35	
<b>TRANSFORMATION</b>													
Electricity generation	-44,071r	-39,420r	-10.6	-12,725r	-10,112r	-9,967r	-11,266r	-10,988r	-9,354r	-8,850r	-10,227r	-10,932	-0.5
Heat generation	-1,234r	-1,363r	+10.5	-389r	-281r	-240r	-324r	-388r	-299r	-285r	-391r	-367	-5.3
Petroleum refineries	-67r	-349r	(+)	48r	6r	-33r	-89r	-86r	-128r	-137r	3r	14	(-)
Coke manufacture	-446	-229	-48.7	-97	-90	-146	-113	-59	-51	-59	-60	-47	-21.5
Blast furnaces	-2,381	-2,379	-0.1	-563	-609	-602	-607	-644	-573	-626	-537	-612	-4.8
Patent fuel manufacture	-6	-67	(+)	-3	-1	3	-5	-16	-17	-18	-15	-18	+13.0
Energy industry use	12,499r	11,415r	-8.7	3,257r	3,241r	3,037r	2,963r	2,996r	2,828r	2,700r	2,891r	3,129	+4.4
Losses	3,179	3,165r	-0.4	918	784	654	823	903r	685r	688r	889r	1,023	+13.3
<b>FINAL CONSUMPTION</b>													
Iron & steel	1,346	1,383r	+2.8	336	333	330	347	360r	346r	353r	324r	369	+2.5
Other industries	23,063r	22,343r	-3.1	6,447r	5,545r	5,130r	5,941r	6,105r	5,262r	5,076r	5,901r	6,149	+0.7
Transport	53,562r	54,178r	+1.1	12,247r	13,815r	13,832r	13,668r	12,692r	13,647r	14,176r	13,663r	12,918	+1.8
Domestic	44,563r	38,031r	-14.7	18,637r	8,478r	4,568r	12,879r	14,701r	6,589r	4,431r	12,310r	16,285	+10.8
Other Final Users	20,849r	19,261r	-7.6	6,438r	4,724r	3,986r	5,701r	5,805r	4,287r	3,911r	5,257r	6,276	+8.1
Non energy use	7,749r	7,561r	-2.4	1,827r	2,120r	2,027r	1,775r	1,860r	1,989r	1,830r	1,882r	2,029	+9.1
<b>DEPENDENCY<sup>5</sup></b>													
Net import dependency	47.1%	46.0%		43.1%r	50.9%r	48.2%r	47.4%	44.3%r	45.0%r	48.9%r	46.3%r	45.1%	
Fossil fuel dependency	85.9%r	84.5%r		87.8%r	86.0%r	83.5%	85.7%r	85.8%r	83.3%r	83.1%r	85.3%r	84.3%	
Low carbon share	13.1%r	14.2%r		11.6%r	13.0%	15.1%r	13.5%r	13.1%r	15.3%	15.3%r	13.5%r	14.7%	

1. Percentage change between the most recent quarter and the same quarter a year earlier.

2. Stock fall (+), stock rise (-).

3. Primary supply minus primary demand.

4. Annual transfers should ideally be zero. For manufactured fuels differences occur in the rescreening of coke to breeze.

For oil and petroleum products differences arise due to small variations in the calorific values used.

5. See article in the December 2010 edition of Energy Trends at:

<http://webarchive.nationalarchives.gov.uk/20130109092117/http://www.decc.gov.uk/en/content/cms/statistics/publications/trends/trends.aspx>

# 1 TOTAL ENERGY

## Table 1.3b Supply and use of fuels

*Thousand tonnes of oil equivalent*

	2014 Quarter 1									2015 Quarter 1 p								
	Coal	Manufactured fuels <sup>4</sup>	Primary oil	Petroleum Products	Natural gas <sup>5</sup>	Bioenergy & waste <sup>6</sup>	Primary electricity	Electricity	Heat sold	Coal	Manufactured fuels <sup>4</sup>	Primary oil	Petroleum Products	Natural gas <sup>5</sup>	Bioenergy & waste <sup>6</sup>	Primary electricity	Electricity	Heat sold
<b>SUPPLY</b>																		
Indigenous production	1,752	-	12,099	-	9,934	2,134	4,776	-	-	1,890	-	11,457	-	9,883	2,713	5,189	-	-
Imports	8,208	145	14,353	7,601	12,314	681	-	490	-	7,498	215	13,559	8,069	13,441	877	-	467	-
Exports	-97	-29	-8,770	-6,963	-1,966	-78	-	-69	-	-77	-16	-8,660	-5,508	-2,327	-78	-	-47	-
Marine bunkers	-	-	-	-636	-	-	-	-	-	-	-	-	-621	-	-	-	-	-
Stock change <sup>1</sup>	+364	+30	-314	+217	+1,461	-	-	-	-	-383	-7	-305	-63	+2,966	-	-	-	-
<b>Primary supply</b>	10,227	146	17,368	219	21,744	2,737	4,776	421	-	8,928	192	16,052	1,876	23,964	3,512	5,189	420	-
Statistical difference <sup>2</sup>	+25	-2	+9	-25	-23	-21	-	+34	-	-15	-0	-60	-25	+97	-	-	-9	-
<b>Primary demand</b>	10,202	148	17,360	244	21,767	2,759	4,776	387	-	8,943	192	16,111	1,901	23,867	3,512	5,189	430	-
Transfers <sup>3</sup>	-	0	-423	+423	-1	-	-1,186	+1,186	-	-	+6	-116	+153	-8	-	-1,241	+1,241	-
<b>TRANSFORMATION</b>	-9,732	348	-16,937	16,667	-4,811	-1,395	-3,590	6,804	464	-8,446	299	-15,995	15,846	-5,048	-2,002	-3,948	6,867	464
Electricity generation	-8,328	-235	-	-142	-4,126	-1,371	-3,590	6,804	-	-7,115	-262	-	-134	-4,363	-1,978	-3,948	6,867	-
Heat generation	-111	-13	-	-18	-685	-25	-	-	464	-94	-13	-	-15	-685	-25	-	-	464
Petroleum refineries	-	-	-16,937	16,851	-	-	-	-	-	-	-	-15,995	16,009	-	-	-	-	-
Coke manufacture	-939	880	-	-	-	-	-	-	-	-885	839	-	-	-	-	-	-	-
Blast furnaces	-312	-331	-	-	-	-	-	-	-	-321	-291	-	-	-	-	-	-	-
Patent fuel manufacture	-41	48	-	-23	-	-	-	-	-	-30	26	-	-14	-	-	-	-	-
Energy industry use	0	212	-	1,049	1,134	-	-	561	40	-	218	-	1,026	1,276	-	-	569	40
Losses	-	50	-	-	168	-	-	685	-	-	56	-	-	175	-	-	791	-
<b>FINAL CONSUMPTION</b>	470	235	-	16,285	15,653	1,363	-	7,131	385	497	223	-	16,874	17,359	1,510	-	7,178	385
Iron & steel	10	141	-	2	125	-	-	82	-	10	137	-	3	136	-	-	83	-
Other industries	335	11	-	1,080	2,273	213	-	1,981	212	349	11	-	1,122	2,328	218	-	1,909	212
Transport	3	-	-	12,329	-	268	-	92	-	3	-	-	12,555	-	268	-	92	-
Domestic	118	47	-	850	10,242	720	-	2,701	24	126	44	-	991	11,522	822	-	2,756	24
Other final users	5	-	-	317	2,896	162	-	2,276	149	10	-	-	322	3,256	201	-	2,338	149
Non energy use	-	36	-	1,707	117	-	-	-	-	-	31	-	1,881	117	-	-	-	-

1. Stock fall (+), stock rise (-).

2. Primary supply minus primary demand.

3. Annual transfers should ideally be zero. For manufactured fuels differences occur in the rescreening of coke to breeze.

For oil and petroleum products differences arise due to small variations in the calorific values used.

4. Includes all manufactured solid fuels, benzole, tars, coke oven gas and blast furnace gas.

5. Includes colliery methane.

6. Includes geothermal, solar heat and biofuels for transport; wind and wave electricity included in primary electricity figures.

## Section 2 - Solid Fuels and Derived Gases

### Key results show:

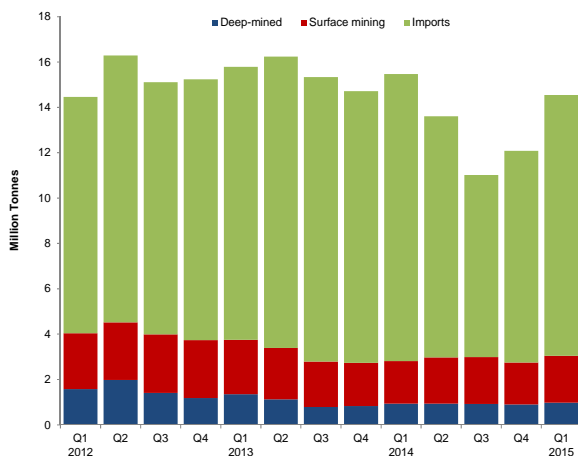
Overall coal production in the first quarter of 2015 was up 7.9 per cent (+0.2 million tonnes) compared with quarter 1 2014, with deep-mined output up 5.2 per cent (+0.1 million tonnes) and surface mining output up by 9.2 per cent (+0.2 million tonnes). **(Chart 2.1)**

Coal imports were down 9.1 per cent (-1.1 million tonnes) on levels shown in quarter 1 2014, as demand fell, especially for use by electricity generators. **(Charts 2.1 and 2.2)**

The demand for coal by electricity generators in the first quarter of 2015, was 15 per cent (-1.9 million tonnes) lower than demand in the first quarter of 2014 as more gas, nuclear and renewables were used for electricity generation. **(Chart 2.3)**

Total stock levels were up 40 per cent (+5.5 million tonnes) to 19.3 million tonnes compared to quarter 1 2014 and were up by 1.3 million tonnes on quarter 4 2014. **(Chart 2.4)**

### Chart 2.1 Coal supply



Coal production in the first quarter of 2015 at 3.0 million tonnes was 7.9 per cent higher than the first quarter of 2014.

Imports of coal in the first quarter of 2015 were 9.1 per cent lower than in the first quarter of 2014 at 11.5 million tonnes. The decrease reflects the fact that consumption by electricity generators was down. The decline was due to a number of reasons: the closure of Uskmouth and the partial closure of Ferrybridge C during 2014, a second unit of Drax being converted to biomass and changes in the relative prices of coal and gas.

### Table 2A Coal imports by origin

	Thousand Tonnes			
	2013	2014p	2014 Q1	2015 Q1 p
European Union	1,228	764	203	142
Russia	20,250	17,262	6,165	5,302
Colombia	11,494	9,278	2,600	2,632
USA	12,196	10,706	3,251	2,663
Australia	2,147	1,249	132	291
Other Countries	2,087	1,388	301	477
<b>Total imports</b>	<b>49,402</b>	<b>40,645</b>	<b>12,653</b>	<b>11,507</b>

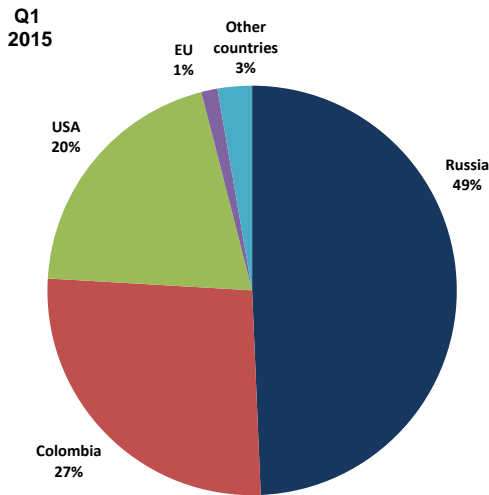
Total coal imports in the first quarter of 2015 decreased by 9.1 per cent to 11.5 million tonnes, with 46 per cent of total coal imports coming from Russia.

Steam coal imports in the first quarter of 2015 fell by 11.4 per cent to 9.9 million tonnes and accounted for 86 per cent of total coal imports.

Coking coal imports in the first quarter of 2015 rose by 9.7 per cent to 1.6 million tonnes and accounted for 14 per cent of total coal imports.

## Solid Fuels and Derived Gases

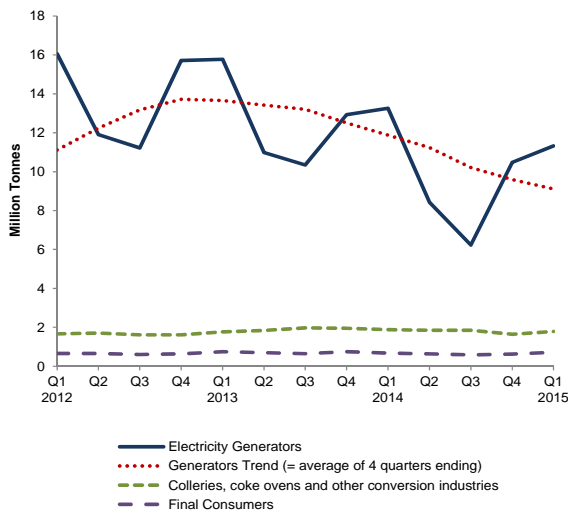
### Chart 2.2 Steam coal imports by origin



All but four per cent of UK steam coal imports came from just three countries: Russia (49 per cent), Colombia (27 per cent) and the USA (20 per cent).

Large falls for steam coal imports were recorded from Russia (15.3 per cent), and the USA (20 per cent).

### Chart 2.3 Coal consumption



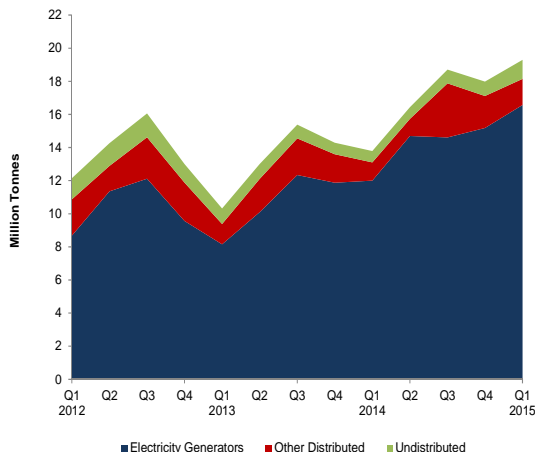
Total demand for coal in the first quarter of 2015, at 13.8 million tonnes, was 13 per cent lower than in the first quarter of 2014. Consumption by electricity generators was down by 15 per cent to 11.3 million tonnes.

Electricity generators accounted for 82 per cent of total coal use in the first quarter of 2015; compared with 84 per cent a year earlier.

Sales to industrial users rose by 3.9 per cent in the first quarter of 2015 and sales to other final consumers including domestic increased by 11 per cent to 0.2 million tonnes during the first quarter of 2015, reflecting colder temperatures.



**Chart 2.4 Coal stocks**



Coal stocks showed a seasonal rise of 1.3 million tonnes during the first quarter of 2015 and stood at 19.3 million tonnes, 5.5 million tonnes higher than at the end of March 2014. This was the highest value since quarter 3 2010.

The level of coal stocks at power stations at the end of the first quarter of 2015 was 16.6 million tonnes, 4.6 million tonnes higher than at the end of March 2014, reflecting lower use for generation from coal.

Stocks held by coke ovens were 0.8 million tonnes at the quarter 1 2015, this was 0.5 million tonnes higher than stock levels at the end of March 2014.

Stocks held by producers (undistributed stocks) at the end of the first quarter of 2015 were 1.1 million tonnes, 0.5 million tonnes higher than at the end of March 2014.

**Relevant tables**

2.1: Supply and consumption of coal.....Page 16  
 2.2: Supply and consumption of coke oven coke, coke breeze and other manufactured solid fuels.....Page 17  
 2.3: Supply and consumption of coke oven gas, blast furnace gas, benzole and tars.....Page 18

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## 2 SOLID FUEL AND DERIVED GASES

### Table 2.1 Supply and consumption of coal

Thousand tonnes

	2013	2014 p	per cent change	2013 1st quarter	2013 2nd quarter	2013 3rd quarter	2013 4th quarter	2014 1st quarter	2014 2nd quarter	2014 3rd quarter	2014 4th quarter	2015 1st quarter p	per cent change <sup>1</sup>
<b>SUPPLY</b>													
Indigenous production	12,847	11,535	-10.2	3,754	3,465	2,898	2,731	2,818	2,975	2,991	2,750	3,040	+7.9
Deep mined	4,089	3,685	-9.9	1,350	1,124	785	829	932	936	916	901	980	+5.2
Surface mining <sup>2</sup>	8,584	7,849	-8.6	2,404	2,268	2,011	1,902	1,887	2,038	2,075	1,849	2,060	+9.2
Other sources	175	-	-100.0	-	73	102	-	-	-	-	-	-	
Imports <sup>3</sup>	49,402	40,645	-17.7	12,035	12,843	12,540	11,983	12,653	10,631	8,026	9,334	11,507	-9.1
Exports <sup>4</sup>	593	425	-28.4	186	127	95	185	129	79	112	105	102	-20.5
Stock change <sup>5</sup>	-1,298	-3,663	(+)	+2,686	-2,683	-2,383	+1,082	+529	-2,644	-2,272	+724	-593	(-)
<b>Total supply</b>	<b>60,358</b>	<b>48,092</b>	<b>-20.3</b>	<b>18,289</b>	<b>13,498</b>	<b>12,960</b>	<b>15,611</b>	<b>15,873</b>	<b>10,883</b>	<b>8,633</b>	<b>12,703</b>	<b>13,852</b>	<b>-12.7</b>
Statistical difference	-46	-52	+11.0	-7	-17	-7	-15	+53	-28	-28	-49	+33	-37.9
<b>Total demand</b>	<b>60,405</b>	<b>48,143</b>	<b>-20.3</b>	<b>18,297</b>	<b>13,515</b>	<b>12,966</b>	<b>15,627</b>	<b>15,820</b>	<b>10,911</b>	<b>8,661</b>	<b>12,751</b>	<b>13,819</b>	<b>-12.6</b>
<b>TRANSFORMATION</b>	<b>57,561</b>	<b>45,617</b>	<b>-20.7</b>	<b>17,544</b>	<b>12,819</b>	<b>12,318</b>	<b>14,880</b>	<b>15,140</b>	<b>10,275</b>	<b>8,079</b>	<b>12,123</b>	<b>13,101</b>	<b>-13.5</b>
Electricity generation	50,042	38,398	-23.3	15,777	10,984	10,348	12,933	13,257	8,431	6,232	10,478	11,320	-14.6
Heat generation <sup>6</sup>	609	609	-	179	143	129	157	179	143	129	157	151	-15.7
Coke manufacture	5,288	4,839	-8.5	1,242	1,310	1,404	1,331	1,235	1,252	1,230	1,122	1,165	-5.7
Blast furnaces	1,411	1,513	+7.3	294	325	393	399	411	377	416	309	423	+2.9
Patent fuel manufacture	212	258	+22.0	52	57	43	60	57	72	72	57	42	-25.7
Energy industry use	3	1	-78.0	1	0	0	0	0	0	-	-	-	-100.0
<b>FINAL CONSUMPTION</b>	<b>2,841</b>	<b>2,525</b>	<b>-11.1</b>	<b>751</b>	<b>695</b>	<b>648</b>	<b>747</b>	<b>680</b>	<b>635</b>	<b>582</b>	<b>628</b>	<b>718</b>	<b>+5.6</b>
Iron & steel	53	55	+3.7	13	13	13	13	14	14	14	14	14	+0.2
Other industries	2,094	1,798	-14.2	547	514	485	549	501	460	414	423	521	+4.0
Domestic	646	590	-8.6	179	160	139	168	155	149	139	148	165	+7.0
Other final users	48	82	+72.3	12	9	11	16	11	13	15	43	18	+68.7
<b>Stocks at end of period</b>													
Distributed stocks	13,591	17,114	+25.9	9,385	12,104	14,548	13,591	13,101	15,726r	17,873	17,114r	18,147	+38.5
Of which:													
Major power producers <sup>7</sup>	11,871	15,183	+27.9	8,151	10,093	12,336	11,871	11,999	14,701r	14,609	15,183r	16,573	+38.1
Coke ovens	518	795	+53.3	558	1,170	952	518	323	473	739	795r	836	(+)
Undistributed stocks	696	865	+24.3	933	897	836	696	686	705	838	865r	1,145	+66.9
<b>Total stocks<sup>8</sup></b>	<b>14,287</b>	<b>17,979</b>	<b>+25.8</b>	<b>10,317</b>	<b>13,000</b>	<b>15,383</b>	<b>14,287</b>	<b>13,787</b>	<b>16,431r</b>	<b>18,711</b>	<b>17,979r</b>	<b>19,292</b>	<b>+39.9</b>

1. Percentage change between the most recent quarter and the same quarter a year earlier.

2. The term 'surface mining' has now replaced opencast production. Opencast production is a surface mining technique.

3. For a detailed breakdown of UK Imports by country and grade of coal refer to Table 2.4 Coal imports (internet table only).

4. Trade is counted as an export under three conditions, when it is recorded as an import and is subsequently exported; it enters the UK port with the intention of being imported but due to a change of ownership at the port it is exported without having cleared the port; and when items leave the warehouse and are exported. Trade is not classified as exports when it is resting at a UK port and the UK is not the intended final destination.

5. Stock fall (+), stock rise (-).

6. Heat generation is based on an annual figure and is then split over a quarterly period. The 2014 heat generation will not be published until the end of July 2015. Therefore, the 2013 figure is used as an estimate for 2014.

7. This includes stocks held at ports.

8. For some quarters, closing stocks may not be consistent with stock changes, due to additional stock adjustments

## 2 SOLID FUEL AND DERIVED GASES

Table 2.2 Supply and consumption of coke oven coke, coke breeze and other manufactured solid fuels

<i>Thousand tonnes</i>													
	2013	2014 p	<i>per cent change</i>	2013 1st quarter	2013 2nd quarter	2013 3rd quarter	2013 4th quarter	2014 1st quarter	2014 2nd quarter	2014 3rd quarter	2014 4th quarter	2015 1st quarter p	<i>per cent change<sup>3</sup></i>
<b>SUPPLY</b>													
Indigenous production	4,136	3,906	-5.6	984	1,052	1,053	1,047	994	1,025	990	897	895	-10.0
Coke Oven Coke	3,769	3,601	-4.4	894	958	969	949	919	940	912	830	854	-7.1
Coke Breeze	32	31	-2.6	8	8	8	8	8	8	8	7	5	-42.1
Other MSF	336	274	-18.4	83	87	76	90	67	77	70	60	36	-45.9
Imports	834	940	+12.7	105	327	235	167	204	202	283	251	302	+48.3
Exports	117	112	-4.3	36	35	20	26	40	30	29	13	23	-44.1
Stock change <sup>1</sup>	-123	-212	+72.5	+91	-98	-111	-5	+42	-92	-75	-87	-10	(-)
Transfers	0	-5		-	0	0	-0	-1	-13	9	-	-2	(+)
<b>Total supply</b>	4,730	4,518	-4.5	1,144	1,246	1,157	1,183	1,199	1,093	1,177	1,049	1,162	-3.1
Statistical difference	-2	-1	-67.2	-1r	-	-0	-1	-0	-	-0	-0	-0	
<b>Total demand</b>	4,732	4,519	-4.5	1,145	1,246	1,157	1,184	1,200	1,093	1,177	1,049	1,162	-3.1
<b>TRANSFORMATION</b>	3,713	3,585	-3.4	902	987	913	911	958	856	929	842	925	-3.4
Coke manufacture	-	-		-	-	-	-	-	-	-	-	-	
Blast furnaces	3,713	3,585	-3.4	902	987	913	911	958	856	929	842	925	-3.4
Energy industry use	-	-		-	-	-	-	-	-	-	-	-	
<b>FINAL CONSUMPTION</b>	1,019	934	-8.4	243	259	244	273	242	237	248	207	237	-2.0
Iron & steel	626	634	+1.2	141	156	159	169	165	161	174	134	165	-
Other industries	83	45	-46.4	14	25	22	23	11	10	10	14	10	-7.1
Domestic	310	256	-17.5	88	78	63	81	66	66	64	59	62	-6.3
<b>Stocks at end of period<sup>2</sup></b>	714	712	-0.3	500	689	599	714	465	525	624	712	626	+34.6

1. Stock fall (+), stock rise (-).

2. For some quarters, closing stocks may not be consistent with stock changes, due to additional stock adjustments

3. Percentage change between the most recent quarter and the same quarter a year earlier.

## 2 SOLID FUEL AND DERIVED GASES

Table 2.3 Supply and consumption of coke oven gas, blast furnace gas, benzole and tars

	GWh												
	2013	2014 p	per cent change	2013 1st quarter	2013 2nd quarter	2013 3rd quarter	2013 4th quarter	2014 1st quarter	2014 2nd quarter	2014 3rd quarter	2014 4th quarter	2015 1st quarter p	per cent change <sup>1</sup>
<b>SUPPLY</b>													
Indigenous production	25,625	25,441	-0.7	5,915	6,502	6,660	6,548	6,628	6,393	6,673	5,748	6,923	+4.5
Coke oven gas	8,479	8,473	-0.1	2,004	2,140	2,216	2,119	2,132	2,211	2,199	1,931	2,283	+7.1
Blast furnace gas	15,515	15,386	-0.8	3,516	3,959	4,027	4,013	4,075	3,762	4,094	3,455	4,276	+4.9
Benzole & tars	1,630	1,582	-3.0	395	403	417	416	421	420	380	361	364	-13.5
Transfers	56	140	(+)	28	11	13	4	9	25	40	66	90	(+)
<b>Total supply</b>	25,680	25,581	-0.4	5,943	6,513	6,673	6,552	6,637	6,418	6,713	5,813	7,013	+5.7
Statistical difference	-29	-55	+88.3	+20	-21	-16	-13	-18	-21	-10	-5	-2	
<b>Total demand</b>	25,710	25,636	-0.3	5,923	6,534	6,688	6,565	6,656	6,440	6,723	5,818	7,016	+5.4
<b>TRANSFORMATION</b>	11,522	10,983	-4.7	2,778	3,009	2,887	2,849	2,885	2,816	2,708	2,575	3,195	+10.7
Electricity generation	10,925	10,386	-4.9	2,629	2,860	2,737	2,699	2,735	2,666	2,558	2,426	3,045	+11.3
Heat generation <sup>2</sup>	598	598	-	149	149	149	149	149	149	149	149	149	-
Energy industry use	9,041	9,331	+3.2	2,070	2,289	2,358	2,323	2,463	2,333	2,381	2,154	2,532	+2.8
Losses	2,500	2,517	+0.7	445	604	755	697	579	561	926	452	653	+12.8
<b>FINAL CONSUMPTION</b>	2,646	2,804	+6.0	629	632	689	695	729	729	709	637	636	-12.7
Iron & steel	842	1,058	+25.7	181	196	231	235	277	265	285	232	228	-17.5
Other industries	174	165	-5.3	53	33	42	45	32	45	44	44	44	+39.1
Non-Energy Use <sup>3</sup>	1,630	1,582	-3.0	395	403	417	416	421	420	380	361	364	-13.5

1. Percentage change between the most recent quarter and the same quarter a year earlier.

2. For Heat generation, the 2014 figures currently shown are the 2013 figures carried forward - these will be updated in July 2015.

3. From 2009, unclassified final consumption for benzole and tars has been recorded under non energy use

## Section 3 - Oil and Oil Products

### Key results show:

Total indigenous UK production of crude oil and Natural Gas Liquids (NGL) in Q1 2015 was 5.2 per cent lower than a year ago but production had been relatively high in Q1 of 2014. Production has been in general decline since the 1990s. **(Chart 3.1)**

Indigenous production of petroleum products was 4.8 per cent lower in the first quarter of 2015 compared with the same quarter in 2014. This was partly driven by the closure of Milford Haven in 2014 but is part of an ongoing decline in UK refinery production **(Chart 3.2)**

Imports of petroleum products increased by 5.8 per cent compared with Q1 2014 and exports of petroleum products decreased by 21.1 per cent. As a result, the UK was a net importer of petroleum products in Q1 2015, for the seventh consecutive quarter, by 2.3 million tonnes. This follows a long period where the UK was generally a net exporter of petroleum products. **(Chart 3.2)**

Net imports of primary oils (crude oil, NGLs and feedstocks) in Q1 2015 decreased to 5.1 million tonnes (down 12.5 per cent) due to lower refinery demand. This met around 30 per cent of the UK's refinery demand. **(Chart 3.3)**

In Q1 2015 total deliveries of key transport fuels increased by 1.9 per cent compared with Q1 2014. Motor Spirit deliveries were down by 2.7 per cent, DERV (diesel) deliveries were up by 4.4 per cent, while deliveries of Aviation Turbine Fuel increased by 2.3 per cent. **(Chart 3.5)**

Overall stocks of crude oil and petroleum products were up by 3.0 per cent at end of the Q1 2015 compared to a year earlier (0.4 million tonnes). **(Chart 3.7)**

**Chart 3.1 Production and trade of crude oil and NGLs**



Indigenous crude oil production was lower by 4.6 per cent in Q1 2015 compared with the same quarter a year ago. However, this rate of decline is slower than that seen recently, on average crude production has been falling by around 8 per cent in the last 10 years.

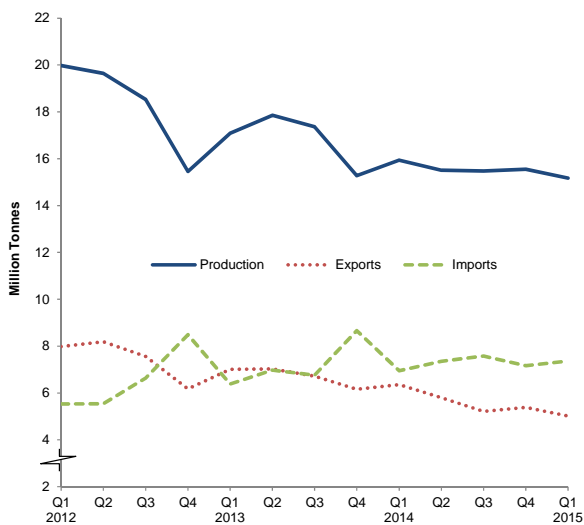
Production of Natural Gas Liquids (NGLs) decreased by 14.6 per cent on the same quarter of last year. Production had been especially high in Q1 2014.

Taken together, indigenous production of crude and NGLs was 5.2 per cent lower. Production has now fallen by 39 per cent since Q1 2010.

Despite the fall in production, imports of crude oil and NGL's were 2.6 per cent lower compared with the same period a year ago, reflecting lower demand from the UK's refinery industry. Exports of crude oil and NGL's decreased by 3.4 per cent in the latest three months. However, exports of feedstocks increased considerably, refineries may be processing more crude rather due to the recent low prices rather than other types of feedstock.

Overall, net imports of primary oils (crude, NGL's and feedstocks) were 4.5 million tonnes in Q1 2014 compared with 5.1 million tonnes in the same quarter of 2014.

**Chart 3.2 Production and trade of petroleum products**

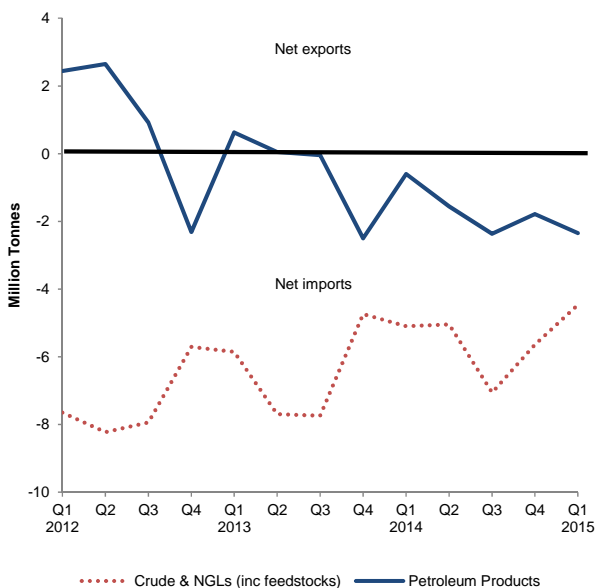


Indigenous production of petroleum products in Q1 2014 was lower by 4.8 per cent lower compared with the same quarter in 2014 and is now at its lowest level since our quarterly records began in 1999. Output has been hit by the suspension of refining at Milford Haven as well as an ongoing decline in UK refinery production. Net imports continue to meet the shortfall in production.

Imports of petroleum products increased by 5.8 per cent in Q1 2015 compared with the same quarter in 2014. Exports decreased by more than a fifth with diesel exports decreasing by nearly a half.

In overall terms, the UK was a net importer (2.3 million tonnes) of petroleum products in Q1 2015, the seventh consecutive quarter where imports have outweighed exports.

**Chart 3.3 Overall trade of crude oil and NGLs, and petroleum products**

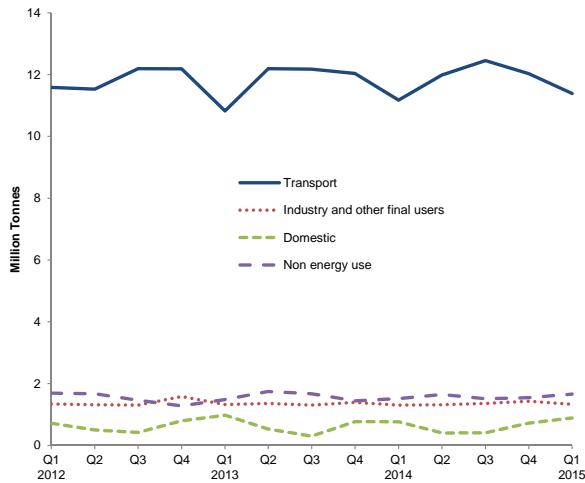


In Q1 2015, net imports of primary oils (crude, NGL's and feedstocks) decreased to 4.5 million tonnes compared with 5.1 million tonnes in Q1 2014, a decrease of 12.5 per cent. There has been a fall in indigenous production of primary oils but net imports have decreased as a result of lower refinery demand.

The UK's overall net import dependence for primary oils (crude, NGL's and feedstocks) was about 30 per cent in Q1 2015, down from nearly 33 per cent in Q1 2014.

In Q1 2015 the UK was a net importer of petroleum products, by 2.3 million tonnes, up from 0.6 million tonnes in the first quarter of 2014. There have now been 7 consecutive quarters where the UK has imported more petroleum products than it exported. This follows decades where the UK has been a net exporter of petroleum. In 2014 as a whole, the UK was a net importer by 6.3 million tonnes, the highest such figure since 1984 when industrial action in the coal industry increased demand for oil products.

**Chart 3.4 Final consumption of oil**



In Q1 2015, final consumption of petroleum products was higher by 3.4 per cent compared with Q1 2014. Within this:

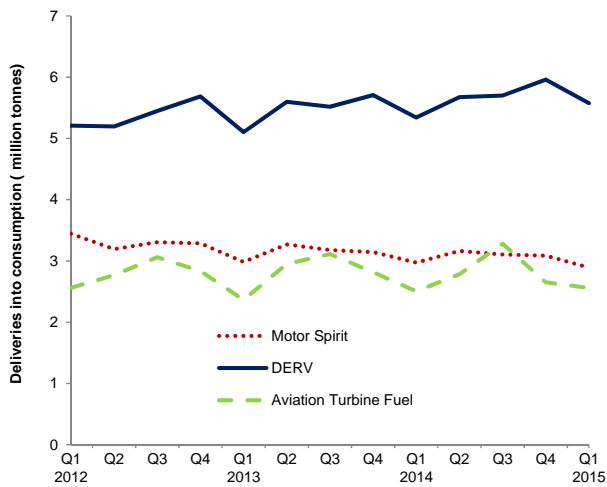
Transport, which accounts for about three-quarters of UK final consumption, was higher by 1.9 per cent. (See chart 3.5 for more detail).

Final consumption within the Industry and other final users sector in Q1 2014 also increased slightly.

The largest increase came in domestic consumption which was up by 16 per cent on the first quarter of 2015. Domestic use of oil is mainly for heating and average temperatures were around 1.3 degrees colder in Q1 2015 than Q1 2014.

Demand for oil for non-energy use was down by around 9 per cent in the latest quarter.

**Chart 3.5 Demand for key transport fuels**



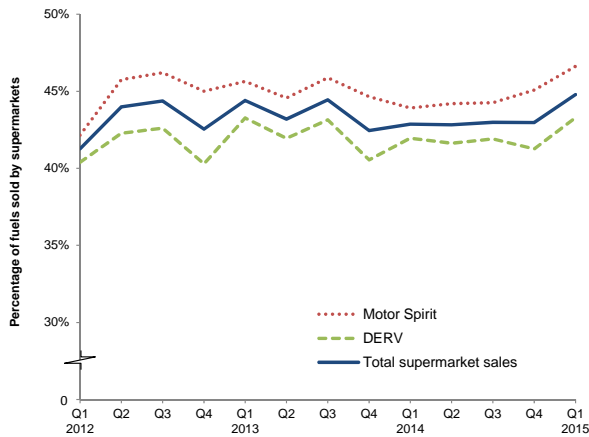
In Q1 2015, total deliveries of the three key transport fuels were higher by 1.9 per cent. Within this:

Motor spirit (petrol) deliveries were down by 2.7 per cent on the first quarter of 2014 while DERV (road diesel) demand increased by 4.4 per cent. These are both a continuation of a long term trend as more motorists switch from motor spirit to diesel.

These figures and chart 3.5 do not include the blended bio fuel element. Biofuels represented 3.0 per cent of total road fuels.

Demand for aviation fuels was lower than in the previous two quarters in line with seasonal patterns. There are more air passengers in the summer months. However, demand was up on the same quarter of 2014 by 2.3 per cent.

**Chart 3.6 Supermarket share of road fuel sales**

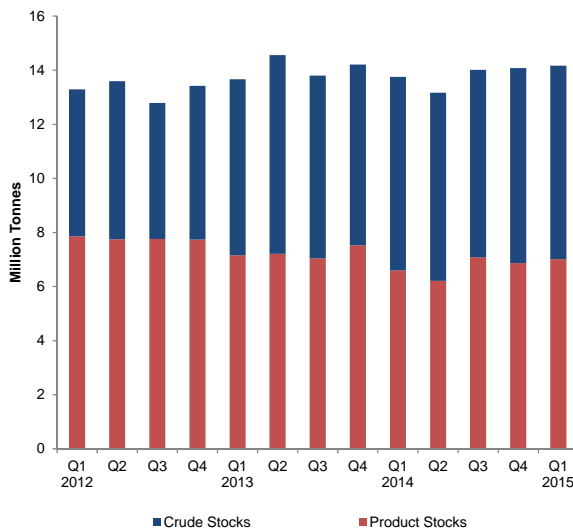


In Q1 2015, supermarkets increase their market share of road fuel sales. The overall volume of motor spirit (petrol) sales, including the bio-fuel element, decreased by 2.7 per cent, supermarkets sold nearly 47 per cent of that volume, up from 44 the same period last year.

Sales of diesel (again including the bio-fuel element) increased by 4.4 per cent, of which the supermarket share increased to 43 per cent from 42 per cent in Q1 2014.

On an overall basis, supermarket outlets accounted for nearly 45 per cent of total retail sales, up from 43 per cent in the same quarter of 2014. At least some of that increase will be due to timing differences in our survey data which is likely to distort the share figure slightly upward.

**Chart 3.7 UK oil stocks**



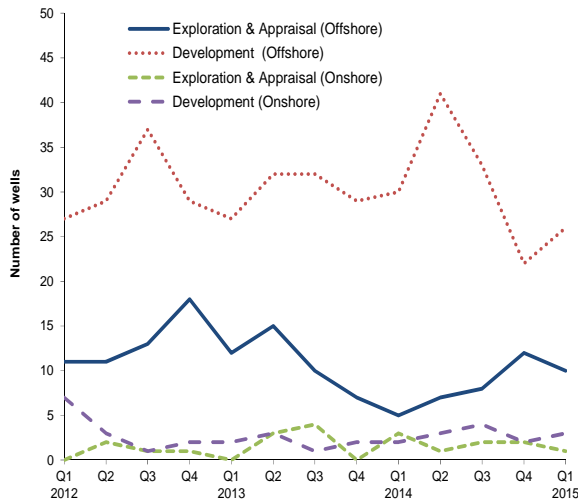
At the end of Q1 2015 total stocks of crude and products were on the same point of 2014 by 3.0 per cent. Stocks of crude and feedstocks were almost unchanged but stocks of products increased by 6.2 per cent.

There was a large increase in petroleum product stocks held abroad for the UK (under bilateral agreements), being up by more than 20 per cent on the previous year.

Chart 3.7 shows crude and product stocks held for the UK. At the end of Q1 2015, UK companies held stocks equal to around 79 days of consumption.



**Chart 3.8 Drilling activity on the UKCS**



There were 10 exploration and appraisal wells started offshore in the first quarter of 2015, compared to 5 in the corresponding quarter of 2014.

There were 26 development wells drilled offshore in the first quarter of 2015, compared to 30 in the corresponding quarter of 2014.

There was 1 exploration and appraisal well started onshore in the first quarter of 2015, compared to 3 in the corresponding quarter of 2014.

There were 3 development wells drilled onshore in the first quarter of 2015, compared to 2 in the corresponding quarter of 2014.

**Relevant tables**

3.1: Supply and use of crude oil, natural gas liquids and feedstocks..... Page 24  
 3.2: Supply and use of petroleum products..... Page 25  
 3.3: Supply and use of petroleum products - annual data..... Page 26  
 3.4: Supply and use of petroleum products - latest quarter..... Page 27  
 3.5: Demand for key petroleum products..... Page 28  
 3.6: Stocks of petroleum at end of period..... Page 29  
 3.7: Drilling activity on the UK Continental Shelf..... Page 30

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# 3 OIL AND OIL PRODUCTS

## Table 3.1 Supply and use of crude oil, natural gas liquids and feedstocks<sup>1</sup>

Thousand tonnes

	2013	2014 p	per cent change	2013 1st quarter	2013 2nd quarter	2013 3rd quarter	2013 4th quarter	2014 1st quarter	2014 2nd quarter	2014 3rd quarter	2014 4th quarter	2015 1st quarter p	per cent change <sup>8</sup>
<b>SUPPLY</b>													
Indigenous production <sup>2</sup>	40,646	39,928r	-1.8	10,600	10,397	9,108	10,541	11,052	10,278	8,195r	10,402r	10,472	-5.2
Crude oil	38,456	37,474r	-2.6	10,006	9,729	8,647	10,074	10,369	9,634	7,692r	9,779r	9,889	-4.6
NGLs <sup>3</sup>	2,190	2,453	+12.0	594	668	461	466	683	644	503	623	583	-14.6
Imports <sup>4</sup>	59,137	53,798r	-9.0	14,541	16,344	15,195	13,056	13,118r	12,521r	13,984r	14,174r	12,385	-5.6
Crude oil & NGLs	52,470	48,890r	-6.8	12,880	14,773	13,533	11,284	11,619r	11,340r	12,831r	13,101r	11,316	-2.6
Feedstocks	6,667	4,907	-26.4	1,660	1,571	1,662	1,773	1,499	1,182	1,153	1,074	1,069	-28.7
Exports <sup>4</sup>	33,105r	30,946r	-6.5	8,686r	8,649r	7,452r	8,318r	8,017r	7,474r	6,924r	8,532r	7,920	-1.2
Crude Oil & NGLs	31,670r	29,887r	-5.6	8,290r	8,287r	7,028r	8,065r	7,796r	7,192r	6,651r	8,248r	7,535	-3.4
Feedstocks	1,436r	1,060r	-26.2	396r	362r	424r	253r	221r	282r	273r	284r	385	+74.6
Stock change <sup>5</sup>	+724	-592r		+555	-222	+615	-224	-288r	+63r	+199r	-566r	-282	
Transfers <sup>6</sup>	-1,758r	-1,361r		-521r	-598r	-507r	-132r	-338r	-296r	-288r	-438r	-56	
<b>Total supply</b>	65,644r	60,826r	-7.3	16,490r	17,271r	16,960r	14,922r	15,527r	15,093r	15,165r	15,041r	14,599	-6.0
Statistical difference <sup>7</sup>	-44	+3r		-93r	-21	+51	+20r	+21r	-2r	-24r	+8r	-48	
<b>Total demand</b>	65,687r	60,823r	-7.4	16,583r	17,293r	16,909r	14,903r	15,505r	15,095r	15,189r	15,033r	14,647	-5.5
<b>TRANSFORMATION</b>													
Petroleum refineries	65,687r	60,823r	-7.4	16,583r	17,293r	16,909r	14,903r	15,505r	15,095r	15,189r	15,033r	14,647	-5.5

1. As there is no use made of primary oils and feedstocks by industries other than the oil and gas extraction and petroleum refining industries, other industry headings have not been included in this table. As such, this table is a summary of the activity of what is known as the Upstream oil industry.
2. Includes offshore and onshore production.
3. Natural Gas Liquids (NGLs) are condensate and petroleum gases derived at onshore treatment plants.
4. Foreign trade as recorded by the Petroleum Industry which may differ from the figures published by HM Revenue and Customs in the Overseas Trade Statistics. Data are subject to further revision as revised information on imports and exports becomes available.
5. Stock fall (+), stock rise (-). Stocks include stocks held at refineries, at oil terminals and also those held in tanks and partially loaded vessels at offshore facilities.
6. Mostly direct disposals to petrochemical plants.
7. Total supply minus total demand.
8. Percentage change between the most recent quarter and the same quarter a year earlier.

# 3 OIL AND OIL PRODUCTS

Table 3.2 Supply and use of petroleum products

Thousand tonnes

	2013	2014 p	per cent change	2013 1st quarter	2013 2nd quarter	2013 3rd quarter	2013 4th quarter	2014 1st quarter	2014 2nd quarter	2014 3rd quarter	2014 4th quarter	2015 1st quarter p	per cent change <sup>1</sup>
<b>SUPPLY</b>													
Indigenous production <sup>2</sup>	67,596r	62,477r	-7.6	17,094r	17,852r	17,370r	15,280r	15,943r	15,507r	15,472r	15,556r	15,174	-4.8
Imports <sup>3</sup>	28,769r	29,055r	+1.0	6,379r	6,975r	6,758r	8,657r	6,954r	7,353r	7,581r	7,167r	7,359	+5.8
Exports <sup>3</sup>	26,910r	22,748r	-15.5	7,010r	7,025r	6,718r	6,157r	6,353r	5,796r	5,212r	5,387r	5,014	-21.1
Marine bunkers	2,540	2,340	-7.9	626	677	645	591	600	563	582	595	579	-3.5
Stock change <sup>4</sup>	+106	+292		+30	+53	+63	-41	+204	+227	-324	+184	-63	
Transfers <sup>5</sup>	-463	-817		-13	-29	-49	-371	-238	-272	-181	-125	-515	
<b>Total supply</b>	66,559r	65,920r	-1.0	15,855	17,150	16,778	16,776	15,910r	16,456r	16,754r	16,800r	16,362	+2.8
Statistical difference <sup>6</sup>	-69r	-180r		-36	+9	-14	-29	-22r	-10r	-105r	-43r	-24	
<b>Total demand</b>	66,628r	66,100r	-0.8	15,890	17,141	16,791	16,806	15,932r	16,467r	16,859r	16,843r	16,386	+2.9
<b>TRANSFORMATION</b>													
Electricity generation	722r	630r	-12.7	200r	155r	187r	179r	173r	153r	147r	157r	154	-11.0
Heat generation	546r	471r	-13.8	155r	113r	148r	131r	129r	113r	110r	120r	121	-6.2
Other Transformation	65	68r	+5.6	16	16	16	16	17r	17r	17r	17r	17	-
	111	91	-17.8	29	26	24	32	27	24	20	20	16	-39.7
<b>Energy industry use</b>													
Petroleum Refineries	4,378r	3,892r	-11.1	1,085r	1,153r	1,153r	987r	996r	958r	978r	960r	967	-2.9
Blast Furnaces	3,759r	3,245r	-13.7	930r	998r	999r	832r	834r	796r	816r	798r	805	-3.4
Others	-	-		-	-	-	-	-	-	-	-	-	-
	619	647r	+4.4	155	155	155	155	162r	162r	162r	162r	162	-
<b>FINAL CONSUMPTION</b>													
Iron & steel	61,528r	61,578r	+0.1	14,605r	15,832r	15,451r	15,640r	14,763r	15,355r	15,734r	15,726r	15,265	+3.4
Other industries	4	7r	+80.3	1	2	1	1	1	2	2	2	3	+86.4
Transport	4,013r	4,026r	+0.3	986r	1,006r	963r	1,057r	1,011r	984r	966r	1,065r	1,030	+1.9
Domestic	47,222r	47,648r	+0.9	10,823r	12,191r	12,173r	12,035r	11,177r	11,988r	12,454r	12,030r	11,385	+1.9
Other final users	2,580r	2,299r	-10.9	978r	532r	301r	770r	764r	403r	411r	721r	890	+16.4
	1,365r	1,379r	+1.0	333r	354r	342r	337r	291r	333r	393r	363r	295	+1.5
Non energy use	6,344r	6,220r	-2.0	1,484r	1,748r	1,671r	1,441r	1,518r	1,647r	1,508r	1,546r	1,662	+9.5

1. Percentage change between the most recent quarter and the same quarter a year earlier.
2. Includes refinery production and petroleum gases extracted as products during the production of oil and gas.
3. Foreign trade as recorded by the Petroleum Industry which may differ from the figures published by HM Revenue and Customs in the Overseas Trade Statistics.  
Data are subject for further revision as revised information on imports and exports becomes available.
4. Stock fall (+), stock rise (-).
5. Mainly transfers from product to feedstock.
6. Total supply minus total demand.

# 3 OIL AND OIL PRODUCTS

## Table 3.3 Supply and use of petroleum products - annual data

*Thousand tonnes*

	2013										2014 p										
	Total Petroleum Products	Motor spirit	DERV <sup>3</sup>	Gas oil <sup>1</sup>	Aviation turbine fuel	Fuel oils	Petroleum gases <sup>2</sup>	Burning oil	Other products <sup>3</sup>		Total Petroleum Products	Motor spirit	DERV <sup>3</sup>	Gas oil <sup>1</sup>	Aviation turbine fuel	Fuel oils	Petroleum gases <sup>2</sup>	Burning oil	Other products <sup>3</sup>		
<b>SUPPLY</b>																					
Indigenous production <sup>4</sup>	67,596r	17,691r	14,831	8,193	4,527	6,574r	6,630r	2,705	6,445r		62,477r	15,709r	13,726	8,049	4,635	5,409r	6,153r	2,093	6,702r		
Imports <sup>5</sup>	28,769r	4,442r	10,115r	1,208r	8,219r	620r	431r	678r	3,057		29,055r	3,482r	11,460r	1,423r	8,157r	1,004r	422r	619r	2,489r		
Exports <sup>5</sup>	26,910r	10,809r	2,843	3,310	970	4,677r	1,165	381	2,755		22,748r	8,683r	1,942r	3,463	1,072	4,148r	898	164	2,378		
Marine bunkers	2,540	-	-	1,248	-	1,292	0	-	-		2,340	-	-	1,280	-	1,059	-	-	-		
Stock change <sup>6</sup>	+106	-356	+46	+91	-20	+93	+11	+52	188		+292	+113	-61	+24	+123	+107	-30	-15	31		
Transfers <sup>7</sup>	-463	+1,606r	-253	+250r	-519	-401	+23	+447r	-1,617r		-817	+1,610r	-509r	+489r	-642	-616	+23	+621	-1,793r		
<b>Total supply</b>	<b>66,559r</b>	<b>12,575</b>	<b>21,896r</b>	<b>5,185r</b>	<b>11,238r</b>	<b>916r</b>	<b>5,930r</b>	<b>3,501r</b>	<b>5,318r</b>		<b>65,920r</b>	<b>12,232r</b>	<b>22,674r</b>	<b>5,241r</b>	<b>11,201r</b>	<b>696r</b>	<b>5,669r</b>	<b>3,154r</b>	<b>5,052r</b>		
Statistical difference <sup>8</sup>	-69r	+1	-30	+11r	-4r	+5r	+3r	-6r	-51r		-180r	-94r	-1r	-0r	-19r	-32r	-15r	-26r	+5r		
<b>Total demand</b>	<b>66,628r</b>	<b>12,574</b>	<b>21,926</b>	<b>5,174r</b>	<b>11,242r</b>	<b>911r</b>	<b>5,926r</b>	<b>3,507r</b>	<b>5,369r</b>		<b>66,100r</b>	<b>12,326</b>	<b>22,675</b>	<b>5,241r</b>	<b>11,220r</b>	<b>728r</b>	<b>5,684r</b>	<b>3,179r</b>	<b>5,046r</b>		
<b>TRANSFORMATION</b>	722r	-	-	93	-	237r	229r	-	162		630r	-	-	114r	-	200r	225r	-	91		
Electricity generation	546r	-	-	88	-	185r	222r	-	51		471r	-	-	109r	-	147r	214r	-	0		
Heat generation	65	-	-	5	-	53	7	-	-		68	-	-	5	-	52r	11r	-	-		
Petroleum refineries	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		
Coke manufacture	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		
Blast furnaces	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		
Patent fuel manufacture	111	-	-	-	-	-	-	-	111		91	-	-	-	-	-	-	-	91		
Energy industry use	4,378	-	-	619	-	344r	2,112r	-	1,303		3,892r	-	-	647r	-	174r	1,907r	-	1,164r		
<b>FINAL CONSUMPTION</b>	<b>61,528r</b>	<b>12,574</b>	<b>21,926</b>	<b>4,461r</b>	<b>11,242r</b>	<b>330</b>	<b>3,585r</b>	<b>3,507r</b>	<b>3,903r</b>		<b>61,578r</b>	<b>12,326</b>	<b>22,675</b>	<b>4,480r</b>	<b>11,220r</b>	<b>355r</b>	<b>3,552r</b>	<b>3,179r</b>	<b>3,791r</b>		
Iron & steel	4	-	-	-	-	3	1	-	-		7r	-	-	-	-	4	3r	-	-		
Other industries	4,013r	-	-	1,833r	-	147	203r	1,383r	-		4,026r	-	-	1,873r	-	167r	352r	1,270r	-		
Transport	47,222r	12,574	21,926	1,282r	11,242r	89	94	-	16		47,648r	12,326	22,675	1,234r	11,220r	87	88	-	18		
Domestic	2,580r	-	-	156r	-	-	300	2,125r	-		2,299r	-	-	159r	-	-	231	1,909r	-		
Other final users	1,365r	-	-	1,173r	-	90	102	-	-		1,379r	-	-	1,198r	-	96r	85	-	-		
<b>Non energy use</b>	<b>6,344r</b>	<b>-</b>	<b>-</b>	<b>17r</b>	<b>-</b>	<b>-</b>	<b>2,885r</b>	<b>-</b>	<b>3,442r</b>		<b>6,220r</b>	<b>-</b>	<b>-</b>	<b>17r</b>	<b>-</b>	<b>-</b>	<b>2,793r</b>	<b>-</b>	<b>3,410r</b>		

1. Includes: Middle distillate feedstock destined for use in the petrochemical industry and marine diesel oil

2. Includes ethane, propane, butane and other petroleum gases.

3. Includes naphtha, industrial and white spirits, lubricants, bitumen, petroleum waxes, petroleum coke and other oil products.

4. Includes refinery production and petroleum gases extracted as products during the production of oil and gas.

5. Foreign trade as recorded by the Petroleum Industry which may differ from the figures published by HM Revenue and Customs in the Overseas Trade Statistics

Data are subject to further revision as revised information on imports and exports becomes available.

6. Stock fall (+), stock rise (-).

7. Mainly transfers from product to feedstock.

8. Total supply minus total demand.

9. See page 15 of the March 2011 edition of Energy Trends for a note concerning changes to this table.

# 3 OIL AND OIL PRODUCTS

Table 3.4 Supply and use of petroleum products - latest quarter

Thousand tonnes

	2014 1st quarter									2015 1st quarter p								
	Total Petroleum Products	Motor spirit	DERV <sup>a</sup>	Gas oil <sup>1</sup>	Aviation turbine fuel	Fuel oils	Petroleum gases <sup>2</sup>	Burning oil	Other products <sup>3</sup>	Total Petroleum Products	Motor spirit	DERV <sup>a</sup>	Gas oil <sup>1</sup>	Aviation turbine fuel	Fuel oils	Petroleum gases <sup>2</sup>	Burning oil	Other products <sup>3</sup>
<b>SUPPLY</b>																		
Indigenous Production <sup>4</sup>	15,943r	4,295r	3,407	1,930	967	1,334r	1,555r	756	1,699r	15,174	4,076	3,032	1,779	1,136	1,301	1,590	675	1,586
Imports <sup>5</sup>	6,954r	918r	2,673r	261	1,871r	291	149r	179r	612r	7,359	939	2,816	455	1,985	269	120	354	420
Exports <sup>5</sup>	6,353r	2,647r	610	880	240	1,013r	232	94	637	5,014	2,408	318	610	284	669	141	24	559
Marine bunkers	600	-	-	306	-	294	-	-	-	579	-	-	441	-	138	-	-	-
Stock change <sup>6</sup>	+204	+19	-5	+57	+107	+31	-55	+7	+44	-63	-100	+157	-22	-79	-97	+32	+12	+32
Transfers <sup>7</sup>	-238	399r	-125r	121r	-201	-142	+6	+194	-490r	-515	+381	-105	+62	-198	-478	-	+198	-375
<b>Total supply</b>	<b>15,910r</b>	<b>2,984r</b>	<b>5,339r</b>	<b>1,183r</b>	<b>2,504r</b>	<b>206</b>	<b>1,422r</b>	<b>1,043r</b>	<b>1,228r</b>	<b>16,362</b>	<b>2,888</b>	<b>5,582</b>	<b>1,223</b>	<b>2,561</b>	<b>188</b>	<b>1,602</b>	<b>1,214</b>	<b>1,104</b>
Statistical difference <sup>8</sup>	-22r	10r	-2r	0r	+0	-5	-22r	-16	+12r	-24	-4	+6	+2	+0	+1	+1	+8	-38
<b>Total demand</b>	<b>15,932r</b>	<b>2,974</b>	<b>5,341</b>	<b>1,183r</b>	<b>2,504r</b>	<b>212</b>	<b>1,444</b>	<b>1,059r</b>	<b>1,216r</b>	<b>16,386</b>	<b>2,892</b>	<b>5,575</b>	<b>1,221</b>	<b>2,560</b>	<b>188</b>	<b>1,601</b>	<b>1,206</b>	<b>1,142</b>
<b>TRANSFORMATION</b>	173r	-	-	31r	-	59r	56r	-	27	154	-	-	29	-	52	56	-	16
Electricity generation	129r	-	-	29r	-	46r	54r	-	0	121	-	-	28	-	39	54	-	-
Heat generation	17r	-	-	1r	-	13r	3r	-	-	17	-	-	1	-	13	3	-	-
Petroleum refineries	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Patent fuel manufacture	27	-	-	-	-	-	-	-	27	16	-	-	-	-	-	-	-	16
Energy industry use	996	-	-	162r	-	61r	462r	-	311r	967	-	-	162	-	62	468	-	275
<b>FINAL CONSUMPTION</b>	<b>14,763r</b>	<b>2,974</b>	<b>5,341</b>	<b>990r</b>	<b>2,504r</b>	<b>91</b>	<b>926r</b>	<b>1,059r</b>	<b>878r</b>	<b>15,265</b>	<b>2,892</b>	<b>5,575</b>	<b>1,030</b>	<b>2,560</b>	<b>73</b>	<b>1,077</b>	<b>1,206</b>	<b>850</b>
Iron & steel	1	-	-	-	-	1	-	-	-	3	-	-	-	-	2	-	-	-
Other industries	1,011r	-	-	396r	-	53	32r	422r	107r	1,030	-	-	414	-	46	46	476	48
Transport	11,177r	2,974	5,341	305r	2,504r	25	22	-	7	11,385	2,892	5,575	310	2,560	24	22	-	2
Domestic	764r	-	-	33r	-	-	94	637r	-	890	-	-	36	-	-	124	730	-
Other final users	291r	-	-	252r	-	12	27	-	-	295	-	-	268	-	1	27	-	-
Non energy use	1,518r	-	-	4r	-	-	750r	-	765r	1,662	-	-	4	-	-	857	-	801

1. Includes middle distillate feedstock destined for use in the petrochemical industry and marine diesel
2. Includes ethane, propane, butane and other petroleum gases.
3. Includes naphtha, industrial and white spirits, lubricants, bitumen, petroleum waxes, petroleum coke and other oil products.
4. Includes refinery production and petroleum gases extracted as products during the production of oil and gas.
5. Foreign trade as recorded by the Petroleum Industry which may differ from the figures published by HM Revenue and Customs in the Overseas Trade Statistics.  
Data are subject to further revision as revised information on imports and exports becomes available.
6. Stock fall (+), stock rise (-).
7. Mainly transfers from product to feedstock.
8. Total supply minus total demand.

# 3 OIL AND OIL PRODUCTS

## Table 3.5 Demand for key petroleum products<sup>1</sup>

Thousand tonnes

			per cent change	2013	2013	2013	2013	2014	2014	2014	2014	2015	per cent change <sup>2</sup>
	2013	2014 p		1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter p	
<b>MOTOR SPIRIT</b>													
of which, Hydrocarbon <sup>3</sup>	12,574	12,326	-2.0%	2,983	3,268	3,178	3,145	2,974	3,163	3,103	3,086	2,892	-2.7%
of which, Bio-ethanol <sup>4</sup>	650	645	-0.9%	151	161	178	160	152	164	168	160	150	-1.6%
<b>Total Motor Spirit including Bio-ethanol</b>	<b>13,224</b>	<b>12,971</b>	<b>-1.9%</b>	<b>3,134</b>	<b>3,429</b>	<b>3,355</b>	<b>3,305</b>	<b>3,126</b>	<b>3,327</b>	<b>3,271</b>	<b>3,247</b>	<b>3,042</b>	<b>-2.7%</b>
of which, sold through Supermarkets <sup>5</sup>	5,974	5,755	-3.7%	1,431	1,528	1,539	1,476	1,373	1,471	1,448	1,464	1,418	3.3%
of which, sold through Refiners, and other traders <sup>6</sup>	7,250	7,216	-0.5%	1,704	1,901	1,816	1,829	1,753	1,856	1,823	1,783	1,624	-7.4%
of which, sold via commercial sales <sup>7</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>DIESEL ROAD FUEL</b>													
Hydrocarbon <sup>8</sup>	21,926	22,675	3.4%	5,104	5,598	5,518	5,706	5,341	5,674	5,701	5,960	5,575	4.4%
Bio-diesel <sup>9</sup>	682	850	24.7%	114	170	197	201	174	230	243	204	111	-35.9%
<b>Total Diesel Road Fuel including Bio-diesel</b>	<b>22,607</b>	<b>23,525</b>	<b>4.1%</b>	<b>5,218</b>	<b>5,768</b>	<b>5,715</b>	<b>5,907</b>	<b>5,514</b>	<b>5,903</b>	<b>5,944</b>	<b>6,164</b>	<b>5,687</b>	<b>3.1%</b>
of which, sold through Supermarkets <sup>10</sup>	6,217	6,394	2.8%	1,471	1,577	1,607	1,562	1,508	1,602	1,625	1,658	1,605	6.4%
of which, sold through Refiners, and other traders <sup>11</sup>	8,519	8,946	5.0%	1,929	2,182	2,118	2,289	2,087	2,247	2,252	2,360	2,103	0.8%
of which, sold via commercial sales <sup>12</sup>	7,871	8,185	4.0%	1,817	2,008	1,989	2,056	1,919	2,054	2,067	2,146	1,979	3.1%
<b>OTHER GAS DIESEL OIL<sup>13</sup></b>	<b>5,174r</b>	<b>5,241r</b>	<b>1.3%</b>	<b>1,217r</b>	<b>1,322r</b>	<b>1,313r</b>	<b>1,321r</b>	<b>1,183r</b>	<b>1,288r</b>	<b>1,485r</b>	<b>1,286r</b>	<b>1,221</b>	<b>3.3%</b>
<b>AVIATION FUELS</b>													
<b>Total sales</b>	<b>11,257r</b>	<b>11,238r</b>	<b>-0.2%</b>	<b>2,367</b>	<b>2,954r</b>	<b>3,119</b>	<b>2,817r</b>	<b>2,510r</b>	<b>2,788</b>	<b>3,284</b>	<b>2,655r</b>	<b>2,562</b>	<b>2.1%</b>
Aviation spirit	16	18	15.7%	3	4	5	3	7	5	4	3	2	-74.9%
Aviation turbine fuel	11,242r	11,220r	-0.2%	2,365	2,950r	3,113r	2,814r	2,504r	2,784r	3,280r	2,652r	2,560	2.3%
<b>FUEL OIL</b>													
<b>Total Sales</b>	<b>569r</b>	<b>554r</b>	<b>-2.7%</b>	<b>171r</b>	<b>144r</b>	<b>133r</b>	<b>120r</b>	<b>150r</b>	<b>136r</b>	<b>136r</b>	<b>132r</b>	<b>125</b>	<b>-16.6%</b>
Light	219r	175r	-20.3%	78r	57r	65r	19r	29r	74r	68r	3r	39	35.3%
Medium	139r	126r	-10.0%	32	45	31	32	32r	31r	31r	32r	28	-10.9%
Heavy	209r	255r	21.5%	61	43	37	69	89r	32r	37r	97r	58	-35.3%

1. Monthly data for inland deliveries of oil products are available - See DECC website: <https://www.gov.uk/government/collections/oil-statistics>

2. Percentage change between the most recent quarter and the same quarter a year earlier

3. Demand excluding bioethanol. Based on HMRC data.

4. Bioethanol based on HMRC data and excludes other renewables

5. Data for sales by supermarkets collected by a monthly reporting system. Includes Asda, Morrisons, Sainsburys and Tesco only.

6. Equals total motor spirit sales minus supermarket and commercial sales.

7. Commercial sales are estimated through returns provided by the UK's refiner.

8. Demand excluding biodiesel. Based on HMRC data

9. Biodiesel based on HMRC data and excludes other renewables.

10. Data for sales by supermarkets collected by a monthly reporting system. Includes Asda, Morrisons, Sainsburys and Tesco only.

11. Equals total diesel sales minus supermarket and commercial sales.

12. Commercial sales are estimated through returns provided by the UK's refiners

13. This includes gas diesel oil used for other purposes such as heating and middle distillate feedstock destined for use in the petrochemical industry.

### 3 OIL AND OIL PRODUCTS

Table 3.6 Stocks of petroleum<sup>1</sup> at end of period

		Crude oil and refinery process oil					Petroleum products						Total stocks			
		Refineries <sup>2</sup>	Terminals <sup>3</sup>	Offshore <sup>4</sup>	Net bilaterals of Crude and Process oil <sup>5</sup>	Total <sup>5</sup>	Motor Spirit <sup>6</sup>	Kerosene <sup>7</sup>	Gas/Diesel Oil <sup>8</sup>	Fuel oils	Other products <sup>9</sup>	Net bilaterals of products <sup>5</sup>	Total products	Total Net bilaterals <sup>5</sup>	Total Stocks in UK <sup>10</sup>	Total stocks
2010		4,110	1,049	520	210	5,889	797	1,397	1,946	544	917	2,563	8,164	2,773	11,280	14,053
2011		3,889	694	540	151	5,274	696	1,454	1,949	525	845	2,100	7,569	2,251	10,592	12,843
2012		3,829	1,194	473	195	5,690	605	1,427	1,931	491	841	2,441	7,735	2,636	10,790	13,425
2013		3,592	1,102	513	1,469	6,677	1,041	1,419	1,539	404	693	2,432	7,528	3,901	10,304	14,205
2014 p		3,876	1,147r	460	1,728	7,211r	947	1,178	1,656r	253r	773	2,064	6,871r	3,792	10,290r	14,082r
2013	1st quarter	3,588	965	392	1,562	6,507	1,073	1,103	1,704	490	963	1,827	7,160	3,388	10,278	13,666
	2nd quarter	3,843	1,274	508	1,719	7,344	987	1,235	1,634	481	872	2,005	7,213	3,724	10,833	14,557
	3rd quarter	3,314	1,020	473	1,943	6,750	1,015	1,276	1,641	469	804	1,841	7,047	3,784	10,012	13,797
	4th quarter	3,592	1,102	513	1,469	6,677	1,041	1,419	1,539	404	693	2,432	7,528	3,901	10,304	14,205
2014	1st quarter	3,538	1,216	452	1,946	7,152	1,066	1,210	1,477r	368r	710	1,769	6,600r	3,715	10,037r	13,752r
	2nd quarter	3,384	1,226	548	1,799	6,956	887	1,118	1,715r	241r	718	1,529	6,208r	3,328	9,837r	13,164r
	3rd quarter	3,248	1,309	512	1,863	6,932	914	1,259	1,681r	330r	684	2,215	7,083r	4,078	9,938r	14,016r
	4th quarter	3,876	1,147r	460	1,728	7,211r	947	1,178	1,656r	253r	773	2,064	6,871r	3,792	10,290r	14,082r
2015	1st quarter p	4,058	949	462	1,686	7,154	1,304	1,136	1,527	277	640	2,126	7,010	3,812	10,353	14,164
<i>Per cent change<sup>11</sup></i>		+14.7	-22.0	+2.2	-13.4	-	+22.3	-6.1	+3.4	-24.7	-9.9	+20.2	+6.2	+2.6	+3.1	+3.0

1. Stocks held at refineries, terminals and power stations. Stocks in the wholesale distribution system and certain stocks at offshore fields (UK Continental Shelf [UKCS]), and others held under approved bilateral agreements also included.

2. Stocks of crude oil, NGLs and process oil at UK refineries.

3. Stocks of crude oil and NGLs at UKCS pipeline terminals.

4. Stocks of crude oil in tanks and partially loaded tankers at offshore fields (UKCS).

5. The difference between stocks held abroad for UK use under approved bilateral agreements and the equivalent stocks held in the UK for foreign use. From 2013 onwards, EU Directive 2009/119/EC came into effect and this has led to changes in how UK companies manage their stock-holding. The increase in crude stocks held abroad was at the expense of a decrease in product stocks held under similar agreements.

6. Motor spirit and aviation spirit.

7. Aviation turbine fuel and burning oil.

8. Gas oil, DERV fuel, middle distillate feedstock (mdf) and marine diesel oil.

9. Ethane, propane, butane, other petroleum gases, naphtha (ldf), industrial and white spirits, bitumen, petroleum wax, lubricating oil, petroleum coke, and miscellaneous products.

10. Stocks held in the national territory or elsewhere on the UKCS

11. Percentage change between the most recent quarter and the same quarter a year earlier.

# 3 OIL AND OIL PRODUCTS

## Table 3.7 Drilling activity<sup>1</sup> on the UKCS

		<i>Number of wells started</i>					
		Offshore				Onshore	
		Exploration &		Exploration &			
		Exploration	Appraisal	Appraisal	Development <sup>2</sup>	Appraisal	Development <sup>2</sup>
2010		28	34	62	130	9	12
2011		14	28	42	123	14	11
2012		22	31	53	122	4	13
2013		15	29	44	120	7	8
2014 p		14	18	32	126	8	11
<i>Per cent change</i>		-6.7	-37.9	-27.3	+5.0	+14.3	+37.5
2013	1st quarter	7	5	12	27	-	2
	2nd quarter	3	12	15	32	3	3
	3rd quarter	3	7	10	32	4	1
	4th quarter	2	5	7	29	-	2
2014	1st quarter	3	2	5	30	3	2
	2nd quarter	4	3	7	41	1	3
	3rd quarter	3	5	8	33	2	4
	4th quarter	4	8	12	22	2	2
2015	1st quarter p	2	8	10	26	1	3
<i>Per cent change<sup>3</sup></i>		-33.3	(+)	+100.0	-13.3	-66.7	+50.0

1. Including sidetracked wells

2. Development wells are production or injection wells drilled after development approval has been granted.

3. Percentage change between the most recent quarter and the same quarter a year earlier.



## Section 4 - Gas

### Key results show:

Gross UK production of natural gas in Q1 2015 was similar to that in Q1 2014 (**Chart 4.1**). Within this, production of associated gas was 4.0 per cent higher, and dry gas production was 6.0 per cent lower. (**Chart 4.2**).

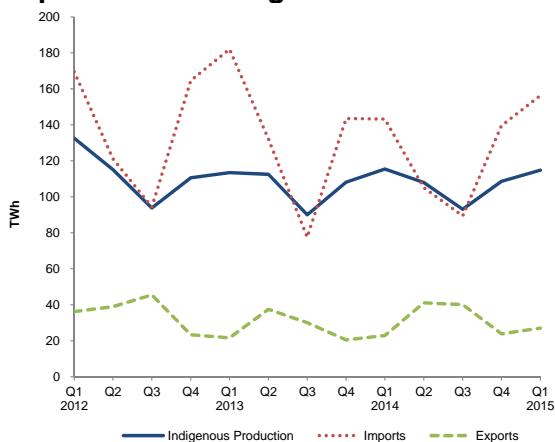
Gas available in Q1 2015 was 3.3 per cent higher than in Q1 2014, at 232 TWh. (**Chart 4.3**)

Pipeline imports of gas were marginally lower in Q1 2015 compared with the same quarter in 2014. Shipped imports of LNG were 156 per cent higher. (**Chart 4.4**). Pipeline imports accounted for 80 per cent of all imports in Q1 2015, the same as that in Q1 2014 (**Chart 4.5**).

Exports increased 18 per cent on Q1 2014 (**Chart 4.4**).

UK gas demand increased by 9.7 per cent compared to Q1 2014, driven by the colder temperatures seen in Q1 2015 compared to Q1 2014. (**Chart 4.6**)

**Chart 4.1 Production and imports and exports of natural gas**



Revised figures for 2013 and 2014 show production of natural gas was 0.2 per cent higher in 2014 than in 2013. The first year-on-year increase since the 2000 peak.

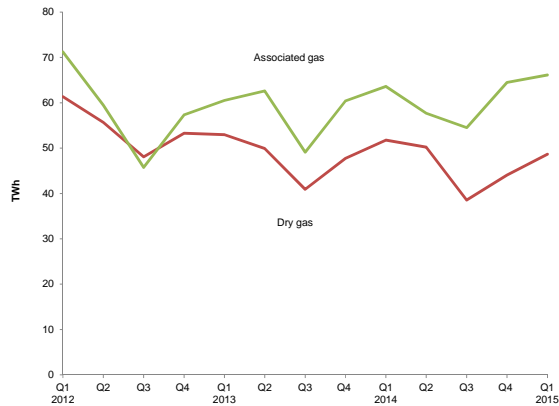
Gas exports were 17 per cent higher and imports 11 per cent lower than in 2013. The trade position for 2014 showed net imports (difference between imports and exports) were 18 per cent lower than in 2013.

In the first quarter of 2015, gross production of natural gas was similar to that in Q1 2014 at 0.5 per cent lower.

Imports were 9.1 per cent higher in Q1 2015 compared with the same period last year, whilst exports were 18 per cent higher. This reflects higher demand with colder temperatures seen in the first quarter of 2015 versus quarter 1 2014.

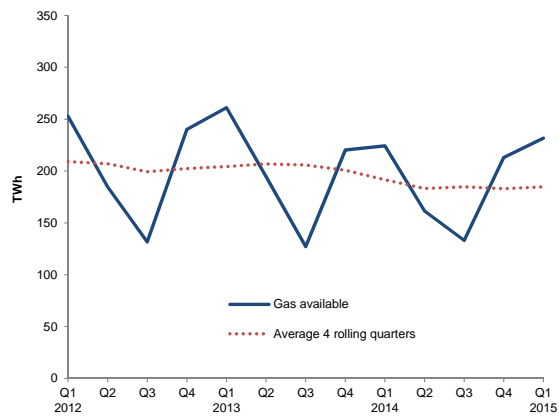
## Gas

**Chart 4.2 Production of dry gas and associated gas**



Q1 2015 associated gas production increased by 4.0 per cent versus Q1 2014. This increase partly reflects steady production from a number of new, relatively large condensate fields in the North Sea. Dry gas production in quarter 1 2014 was 6.0 per cent lower than Q1 2014.

**Chart 4.3 Gas availability**

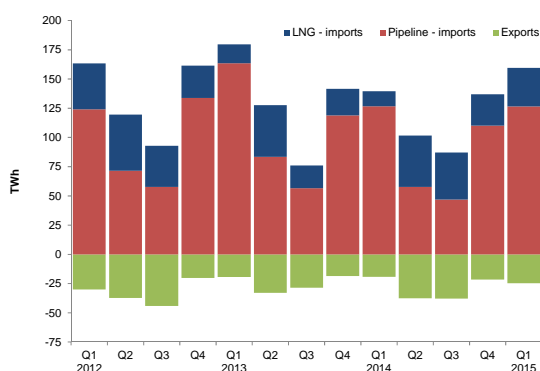


Gas available at terminals is equal to the gross gas production; minus producers own use, plus net imports.

Gas availability is seasonal, mirroring gas demand, and peaks during Q4 and Q1 each year. Gas available in Q1 2015 increased by 3.3 per cent compared to Q1 2014 to 232 TWh. This was largely driven by an increase in domestic and other final users' consumption, with average temperatures in the first quarter of 2015 being cooler than in the same quarter in 2014.

The long-term picture shows that the average availability over 4 rolling quarters had remained fairly constant since the start of 2012 before decreasing slightly since the start of 2014.

Chart 4.4 Import and exports



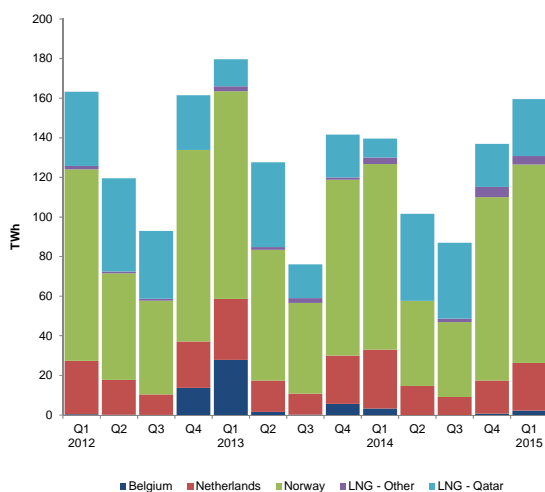
In 2014, exports of natural gas were 17 per cent higher compared with 2013 reflecting higher UK production and decreased demand for gas. Gas imports were lower by 11 per cent in 2014, whilst net imports were 18 per cent lower than 2013.

Pipeline imports in 2014 were lower by 19 per cent. Liquefied Natural Gas (LNG) imports in 2014 were just over one-fifth higher than in 2013. LNG imports accounted for 26 per cent of total imports in 2014 compared with 20 per cent in 2013. LNG imports in 2014 were under half the 2011 peak. The recent increase in LNG imports is likely due to a combination of factors, including increasing global supply and weaker than expected demand in Asia.

Total imports in Q1 2015 increased by 9.1 per cent compared with Q1 2014; exports were 18 per cent higher than in Q1 2014. The trade position for quarter 1 2015 widened and showed net imports (difference between imports and exports) to be 7.4 per cent higher than in the same quarter in 2014.

Pipeline imports of gas were marginally lower than in Q1 2015 compared with the same quarter in 2014. Shipped imports of LNG were 156 per cent higher. This reflects increased gas demand with cooler temperatures in Q1 2015 versus Q1 2014.

Chart 4.5 Imports by origin

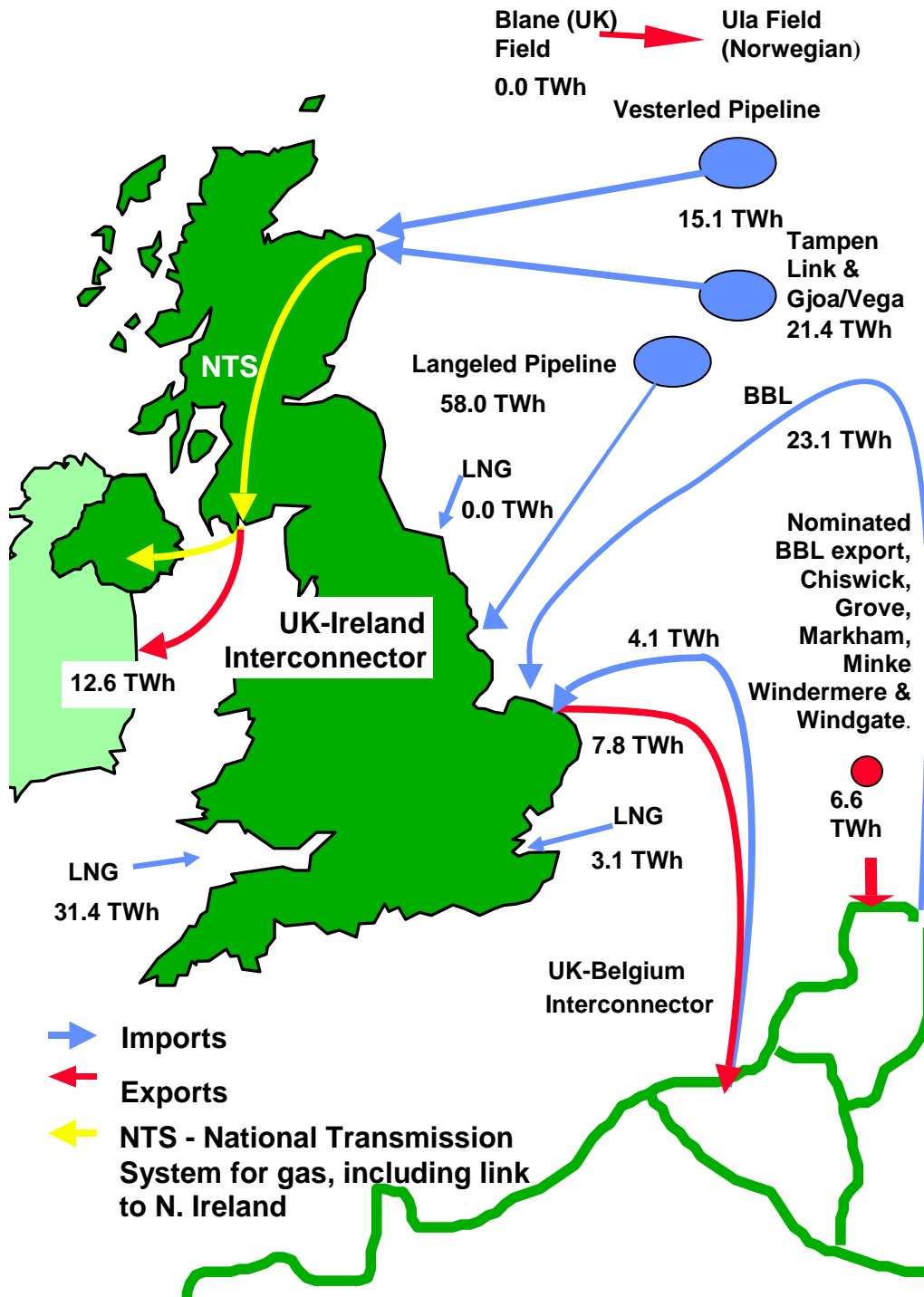


In 2014, the 19 per cent decrease in pipeline imports was mainly driven by a decrease in gas demand following significantly warmer temperatures compared to 2013. Imports from Belgium decreased by 89 per cent in 2014 compared with 2013. Imports from the Netherlands and Norway were also lower by 14 per cent and 13 per cent respectively.

The increase in LNG imports in 2014 was driven by increasing global supply and weaker than expected demand in Asia.

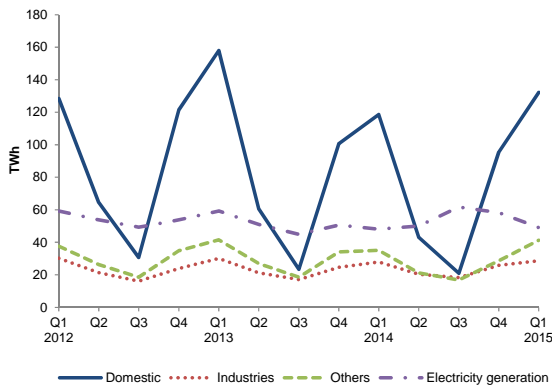
In Q1 2015, imports of LNG and all pipeline imports increased compared to Q1 2014 reflecting the increased demand seen in Q1 2015 versus Q1 2014. LNG imports from Qatar were up three fold and pipeline imports from Belgium decreased substantially.

Map: UK imports and exports of gas Q1 2015<sup>1</sup>



1. Please note that imports and exports in this map uses nominated flows through the UK-Belgium Interconnector and BBL pipeline as in table 4.1. The figures here will differ from those in ET Table 4.3 which uses actual physical flows through the Interconnector.

**Chart 4.6 UK demand for natural gas**



Gas demand in Q1 2015 was 9.7 per cent higher compared to Q1 2014. An increase in gas use versus Q1 2014 was seen across all sectors, with domestic and other final use showing increases ranging between approximately 12 and 14 per cent. This was driven primarily by the cooler average temperatures in Q1 2015 versus Q1 2014.

Demand for natural gas from the industrial sector also increased in Q1 2015 versus Q1 2014, being 8.4 per cent higher for the iron and steel industry and 2.3 per cent higher for other industries (see Table 4.1). These smaller increases in gas demand reflect the industrial sector relying less on gas for space heating than other sectors.

**Relevant table**

4.1: Natural gas supply and consumption.....Page 36

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# 4 GAS

## Table 4.1. Natural gas supply and consumption

GWh

	2013	2014 p	per cent change	2013 1st quarter	2013 2nd quarter	2013 3rd quarter	2013 4th quarter	2014 1st quarter	2014 2nd quarter	2014 3rd quarter	2014 4th quarter	2015 1st quarter p	per cent change <sup>1</sup>
<b>SUPPLY</b>													
Indigenous production	424,153	424,897r	+0.2	113,470	112,494	90,047	108,142	115,395	107,923r	93,050r	108,529r	114,803	-0.5
Imports	535,105	477,163	-10.8	181,972	132,068	77,546	143,520	143,212	105,078	89,405	139,468	156,315	+9.1
of which LNG	102,620	123,912	+20.7	16,226	44,196	19,428	22,771	12,911	43,973	40,151	26,877	34,555	(+)
Exports	109,664	127,907r	+16.6	21,692	37,423	30,106	20,443	22,862	41,063	40,102	23,880r	27,059	+18.4
Stock change <sup>2</sup>	+621	-2,383		+40,380	-25,196	-14,890	+327	+16,992	-18,072	-7,057	+5,754	+34,500	
Transfers	-61	-140r		-29	-12	-14	-5	-9r	-25r	-40r	-66r	-91	
<b>Total supply</b>	<b>850,155</b>	<b>771,630r</b>	<b>-9.2</b>	<b>314,100</b>	<b>181,931</b>	<b>122,583</b>	<b>231,541</b>	<b>252,728r</b>	<b>153,841r</b>	<b>135,256r</b>	<b>229,806r</b>	<b>278,468</b>	<b>+10.2</b>
Statistical difference	1,888r	-867r		507r	247r	660r	474r	-272r	-715r	-682r	802r	1,133	
<b>Total demand</b>	<b>848,267r</b>	<b>772,497r</b>	<b>-8.9</b>	<b>313,594r</b>	<b>181,684r</b>	<b>121,922r</b>	<b>231,067r</b>	<b>253,000r</b>	<b>154,556r</b>	<b>135,937r</b>	<b>229,004r</b>	<b>277,335</b>	<b>+9.6</b>
<b>TRANSFORMATION</b>													
Electricity generation	230,559r	243,972r	+5.8	67,302r	56,560r	49,502r	57,194r	55,835r	56,466r	67,322r	64,350r	58,597	+4.9
Heat generation	205,832r	217,944r	+5.9	59,251r	51,012r	44,906r	50,664r	47,868r	50,741r	62,229r	57,106r	50,630	+5.8
Energy industry use	24,727r	26,028r	+5.3	8,051r	5,549r	4,597r	6,530r	7,967r	5,725r	5,093r	7,243r	7,967	-
Losses	53,775r	49,281r	-8.4	14,740r	14,399r	11,853r	12,783r	13,167r	12,316r	10,895r	12,903r	14,817	+12.5
<b>FINAL CONSUMPTION</b>	<b>556,460r</b>	<b>472,388r</b>	<b>-15.1</b>	<b>229,589r</b>	<b>108,655r</b>	<b>58,953r</b>	<b>159,263r</b>	<b>182,038r</b>	<b>84,201r</b>	<b>56,065r</b>	<b>150,083r</b>	<b>201,882</b>	<b>+10.9</b>
Iron & steel	5,338r	5,448r	+2.1	1,492r	1,288r	1,223r	1,335r	1,455r	1,350r	1,303r	1,339r	1,578	+8.4
Other industries	87,652r	87,032r	-0.7	28,610r	19,929r	15,879r	23,233r	26,430r	19,065r	17,087r	24,450r	27,073	+2.4
Domestic	342,501r	278,101r	-18.8	157,956r	60,537r	23,367r	100,641r	119,112r	42,542r	20,825r	95,621r	134,005	+12.5
Other final users	115,372r	96,377r	-16.5	40,132r	25,502r	17,084r	32,654r	33,684r	19,886r	15,492r	27,316r	37,869	+12.4
Non energy use <sup>3</sup>	5,598	5,430r	-3.0	1,399r	1,399r	1,399r	1,399r	1,357r	1,357r	1,357r	1,357r	1,357	-

1. Percentage change between the most recent quarter and the same quarter a year earlier.

2. Stock fall (+), stock rise (-).

3. For non energy use, the 2014 figures currently shown are the 2013 figures carried forward - these will be updated in July 2015.

## Section 5 – Electricity

### Key results show:

Electricity generated in the first quarter of 2015 rose by 1.3 per cent, from 93.7 TWh a year earlier to 94.9 TWh. **(Chart 5.1).**

Renewables' share of electricity generation increased from 19.6 per cent in the first quarter of 2014 to 22.3 per cent in the first quarter of 2015. **(Chart 5.2).**

Coal's share of generation decreased from 37.0 per cent to 31.3 per cent, whilst gas's share of generation rose from 23.2 per cent in the first quarter of 2014 to 25.0 per cent in the first quarter of 2015. **(Chart 5.2).**

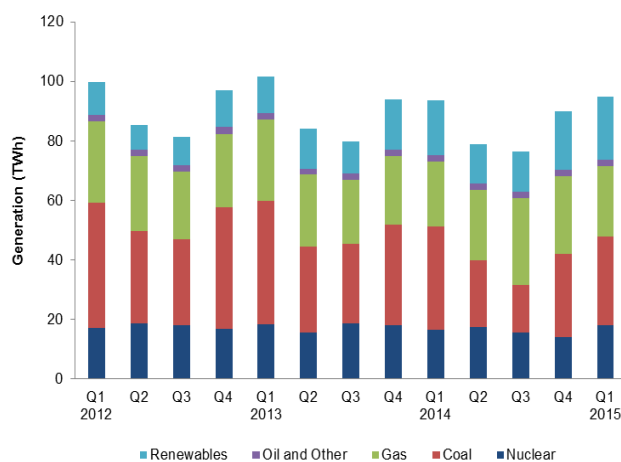
Nuclear's share of generation increased from 17.6 per cent in the first quarter of 2014 to 19.1 per cent in the first quarter of 2015. **(Chart 5.2).**

Low carbon electricity's share of generation increased from 37.3 per cent in the first quarter of 2014 to 41.4 per cent in the first quarter of 2015. **(Chart 5.3).**

The UK remains a net importer with 5.2 per cent of electricity supplied from net imports in the first quarter of 2015. **(Chart 5.4).**

Final consumption of electricity during the first quarter of 2015, at 83.5 TWh, was provisionally 0.7 per cent higher than in the same period last year. Domestic sales rose by 2.0 per cent. **(Chart 5.5).**

**Chart 5.1 Electricity generated by fuel type**



In 2015 Q1, total electricity generated rose 1.3 per cent from 93.7 TWh in 2014 Q1 to 94.9 TWh.

In 2015 Q1, coal fired generation fell by 14.3 per cent from 34.7 TWh to 29.7 TWh.

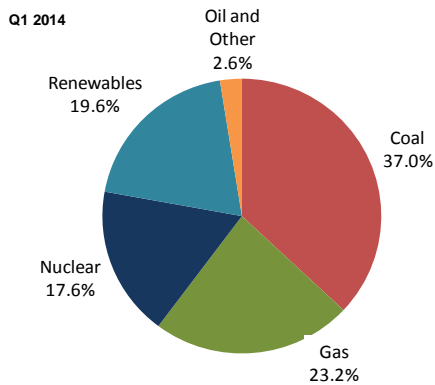
In 2015 Q1, gas fired generation increased 9.2 per cent from 21.8 TWh to 23.8 TWh. This was due to several gas stations running at low levels or opting not to run at all in Q1 2014.

In 2015 Q1, nuclear generation rose 10.0 per cent from 16.5 TWh to 18.2 TWh.

In 2015 Q1, wind and PV generation rose 7.6 per cent from 11.6 TWh to 12.4 TWh, due to an increase in capacity. Hydro generation fell 10.5 per cent from 2.2 TWh to 2.0 TWh.

## Electricity

### Chart 5.2 Shares of electricity generation

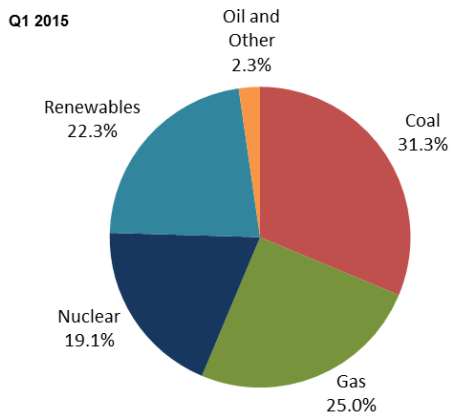


The share of generation from coal decreased from 37.0 per cent in 2014 Q1 to 31.3 per cent in 2015 Q1.

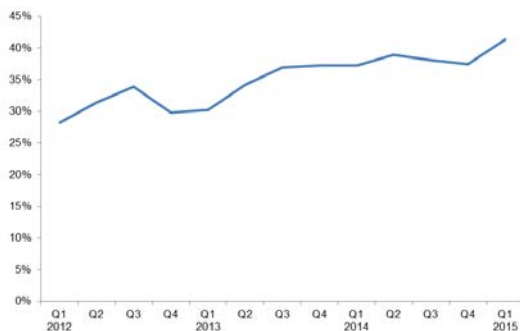
Gas's share of generation increased from 23.2 per cent in 2014 Q1 to 25.0 per cent in 2015 Q1.

Nuclear's share of generation rose from 17.6 per cent in 2014 Q1 to 19.1 per cent in 2015 Q1.

The share of renewables (hydro, wind and other renewables) increased from 19.6 per cent in 2014 Q1 to 22.3 per cent in 2015 Q1. This was due to increased wind generation capacity.



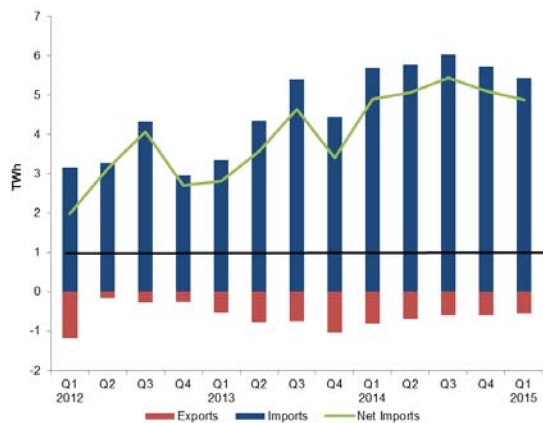
### Chart 5.3 Low carbon electricity's share of generation



Low carbon electricity's share of generation increased from 37.3 per cent in 2014 Q1 to 41.4 per cent in 2015 Q1, due to higher renewables and nuclear generation.



Chart 5.4 UK trade in electricity

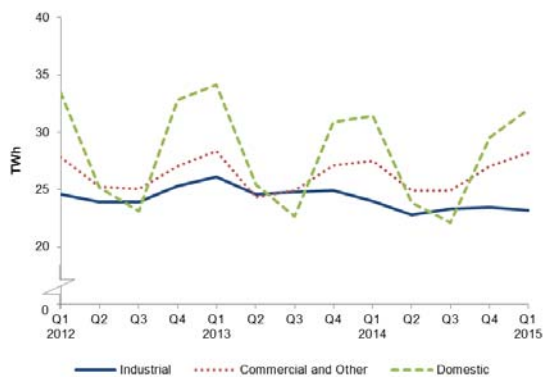


In 2015 Q1, compared with the same period in 2014, imports of electricity fell by 4.6 per cent (-0.3 TWh), whilst exports fell by 32 per cent (-0.3 TWh). For every quarter from 2010 Q2, the UK has been a net importer after two quarters of being a net exporter (2009 Q4 and 2010 Q1).

Net imports of electricity remained broadly unchanged at 4.9 TWh in quarter 1 2015, due to increased imports from the Netherlands via the interconnector which came into full operation in April 2011 as well as an increase in imports from France. Net imports represented 5.2 per cent of electricity supplied in 2014 Q1.

In 2015 Q1, the UK was a net importer from France, the Netherlands and Ireland with net imports of 3.2 TWh, 2.1 TWh and 0.04 TWh respectively.

Chart 5.5 Electricity final consumption



Final consumption of electricity rose by 0.7 per cent in 2015 Q1, from 82.9 TWh in 2013 Q1, to 83.5 TWh.

Domestic increased by 2.0 per cent, from 31.4 TWh to 32.0 TWh.

Industrial use of electricity fell 3.4 per cent, from 24.0 TWh to 23.1 TWh, while consumption by commercial and other users<sup>1</sup> rose by 2.6 per cent, from 29.5 TWh to 28.3 TWh.

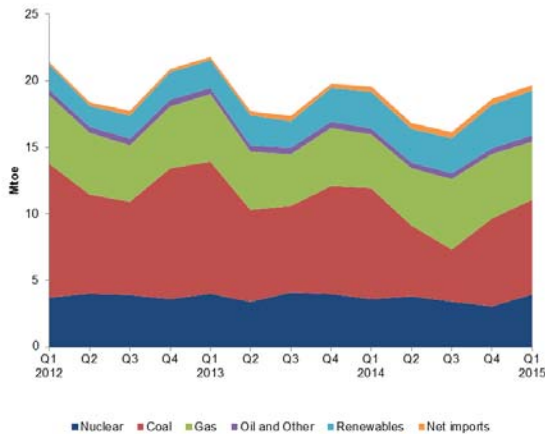
In 2015 Q1, temperatures were on average 1.3 degrees lower than in 2014 Q1.<sup>2</sup>

<sup>1</sup> Includes commercial, transport and other final users.

<sup>2</sup> Temperature data comes from table ET 7.1, at: [www.gov.uk/government/publications/energy-trends-section-7-weather](http://www.gov.uk/government/publications/energy-trends-section-7-weather)

## Electricity

### Chart 5.6 Fuel used for electricity generation



Fuel used by generators in 2014 Q1 rose 0.6 per cent, from 19.6 mtoe in 2014 Q1 to 19.7 mtoe in 2015 Q1.

In 2015 Q1, gas use was 7.8 per cent higher than in 2014 Q1. Coal use during the quarter was 14.6 per cent lower than a year earlier, while nuclear sources were 10.0 per cent higher.

<sup>3</sup> For wind (and other primary renewable sources), the fuel used is assumed the same as the electricity generated, unlike thermal generation where conversion losses are incurred.

### Relevant tables

5.1: Fuel used in electricity generation and electricity supplied .....	Page 41
5.2: Supply and consumption of electricity.....	Page 42

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# 5 ELECTRICITY

Table 5.1. Fuel used in electricity generation and electricity supplied

	2013	2014 p	per cent change	2013 1st quarter	2013 2nd quarter	2013 3rd quarter	2013 4th quarter	2014 1st quarter	2014 2nd quarter	2014 3rd quarter	2014 4th quarter	2015 1st quarter p	per cent change <sup>1</sup>
<b>FUEL USED IN GENERATION</b>													
<b>All generating companies</b>											<b>Million tonnes of oil equivalent</b>		
Coal	31.45r	24.14	-23.2	9.92	6.90	6.50	8.12	8.33	5.30	3.91	6.59r	7.11	-14.6
Oil	0.59	0.57	-3.1	0.14	0.11	0.17	0.16	0.15r	0.16r	0.13r	0.12r	0.14	-7.3
Gas	17.71r	18.50	+4.5	5.08r	4.37r	3.89r	4.36r	4.05r	4.31r	5.30r	4.85r	4.36	+7.8
Nuclear	15.44	13.85	-10.3	4.00	3.38	4.09	3.97	3.59r	3.80r	3.40r	3.05r	3.95	+10.0
Hydro	0.40	0.51	+25.2	0.11	0.08	0.06	0.15	0.19	0.10	0.07	0.15	0.17	-10.1
Wind and Solar <sup>2</sup>	2.62	3.10	+18.5	0.60r	0.62	0.48	0.92r	0.99r	0.57r	0.58r	0.97r	1.07	+7.6
Bioenergy <sup>3</sup>	5.85r	7.56	+29.2	1.38	1.57	1.45r	1.45r	1.57r	1.87r	1.98r	2.15r	2.12	+35.5
Other fuels	1.31	1.18	-9.6	0.31	0.35	0.32	0.32	0.30	0.27	0.30	0.31	0.34	+16.0
Net imports	1.24	1.76	+42.1	0.24	0.31	0.40	0.29	0.42	0.44	0.47	0.44	0.42	-0.1
<b>Total all generating companies</b>	<b>76.61r</b>	<b>71.17</b>	<b>-7.1</b>	<b>21.79r</b>	<b>17.71r</b>	<b>17.36r</b>	<b>19.76r</b>	<b>19.58r</b>	<b>16.82r</b>	<b>16.14r</b>	<b>18.63r</b>	<b>19.69</b>	<b>+0.6</b>
<b>ELECTRICITY GENERATED</b>													
<b>All generating companies</b>											<b>TWh</b>		
Coal	130.77	100.71	-23.0	41.53	28.97	26.69	33.58	34.67r	22.21r	16.01r	27.81r	29.70	-14.3
Oil	2.09r	1.88	-10.0	0.56r	0.46r	0.59r	0.48r	0.54r	0.50r	0.44r	0.41r	0.47	-12.8
Gas	96.03r	100.93	+5.1	27.23r	24.22r	21.39r	23.19r	21.76r	23.78r	29.15	26.23	23.76	+9.2
Nuclear	70.61	63.75	-9.7	18.28	15.47	18.69	18.16	16.53	17.50	15.66	14.06	18.17	+10.0
Hydro (natural flow)	4.70	5.88	+25.2	1.25r	0.97	0.74	1.74r	2.24r	1.11r	0.78r	1.75r	2.01	-10.5
Wind and Solar <sup>2</sup>	30.42r	36.07	+18.6	7.04r	7.18r	5.54r	10.65r	11.55r	6.58r	6.70r	11.24r	12.42	+7.6
- of which, Offshore <sup>o</sup>	11.47r	13.40	+16.8	2.82r	2.63r	1.98r	4.03r	4.38r	2.09r	2.24r	4.69r	4.66	+6.3
Bioenergy <sup>3</sup>	18.16r	22.70	+25.0	4.19r	5.07r	4.46r	4.44r	4.59r	5.48r	5.94r	6.68r	6.70	+45.7
Pumped Storage	2.90	2.88	-0.7	0.74	0.69	0.71	0.76	0.79	0.67	0.63r	0.79r	0.63	-20.4
Other fuels	3.49r	4.13	+18.1	0.87r	0.91	0.86r	0.86r	1.05r	1.00r	1.02r	1.05r	1.07	+2.2
<b>Total all generating companies</b>	<b>359.17r</b>	<b>338.93</b>	<b>-5.6</b>	<b>101.70r</b>	<b>83.95r</b>	<b>79.67r</b>	<b>93.87r</b>	<b>93.71r</b>	<b>78.85r</b>	<b>76.34r</b>	<b>90.03r</b>	<b>94.93</b>	<b>+1.3</b>
<b>ELECTRICITY SUPPLIED<sup>4</sup></b>													
<b>All generating companies</b>											<b>TWh</b>		
Coal	124.06	95.53	-23.0	39.40	27.48	25.32	31.86	32.89r	21.07r	15.19r	26.39	28.18	-14.3
Oil	1.89r	1.71	-9.8	0.50r	0.42r	0.54r	0.44r	0.49r	0.46r	0.40r	0.37r	0.42	-12.6
Gas	94.21r	99.27	+5.4	26.71r	23.76r	21.00r	22.74r	21.39r	23.40r	28.68r	25.80	23.31	+9.0
Nuclear	64.13	57.90	-9.7	16.61	14.05	16.97	16.50	15.01	15.90	14.22	12.77	16.51	+10.0
Hydro	4.67r	5.84	+25.2	1.24r	0.96	0.74	1.72	2.23r	1.10r	0.77r	1.74r	1.99	-10.5
Wind and Solar <sup>2</sup>	30.42r	36.07	+18.6	7.04r	7.19r	5.54r	10.65r	11.55r	6.58r	6.70r	11.24r	12.42	+7.6
- of which, Offshore <sup>o</sup>	11.47r	13.40	+16.8	2.82r	2.63r	1.98r	4.03r	4.38r	2.09r	2.24r	4.69r	4.66	+6.3
Bioenergy <sup>3</sup>	15.73r	19.69	+25.2	3.62r	4.41r	3.86r	3.83r	3.94r	4.73r	5.23r	5.80r	5.82	+47.8
Pumped Storage (net supply) <sup>5</sup>	-1.04	-1.01	-2.4	-0.27	-0.26	-0.26	-0.25	-0.26	-0.25	-0.24	-0.26r	-0.25	-2.7
Other fuels	3.27r	3.85	+17.9	0.81	0.85	0.80	0.80	0.98r	0.94r	0.95r	0.99r	1.00	+2.2
Net imports	14.43	20.51	+42.1	2.82	3.56	4.65	3.40	4.89	5.08	5.43	5.11	4.89	-0.1
<b>Total all generating companies</b>	<b>351.78r</b>	<b>339.36</b>	<b>-3.5</b>	<b>98.49r</b>	<b>82.42r</b>	<b>79.17r</b>	<b>91.70r</b>	<b>93.09r</b>	<b>79.00r</b>	<b>77.34r</b>	<b>89.93r</b>	<b>94.28</b>	<b>+1.3</b>

1. Percentage change between the most recent quarter and the same quarter a year earlier.

2. Includes wave and tidal

3. Up to 2006 Q4, this includes non-biodegradable wastes. From 2007 Q1, this is included in 'Other fuels' (as it is not considered a renewable source).

4. Electricity supplied net of electricity used in generation

5. Net supply from pumped storage is usually negative, as electricity used in pumping is deducted.

6. This now includes a small amount of offshore wind generation from other generators

# 5 ELECTRICITY

## Table 5.2 Supply and consumption of electricity

GWh

	2013	2014 p	Per cent change	2013 1st quarter	2013 2nd quarter	2013 3rd quarter	2013 4th quarter	2014 1st quarter	2014 2nd quarter	2014 3rd quarter	2014 4th quarter	2015 1st quarter p	Per cent change <sup>1</sup>
<b>SUPPLY</b>													
Indigenous production	359,175r	338,927	-5.6	101,697r	83,945r	79,666r	93,866r	93,714r	78,850r	76,338r	90,025r	94,928	+1.3
Major power producers <sup>2,3</sup>	321,299r	297,411	-7.4	92,315r	74,483r	70,711r	83,791r	83,079r	68,721r	66,226r	79,385r	84,057	+1.2
Auto producers	34,971r	38,632	+10.5	8,641r	8,771r	8,247r	9,313r	9,844r	9,458r	9,483r	9,847r	10,241	+4.0
Other sources <sup>4</sup>	2,904r	2,883	-0.7	742	692r	708r	763r	791r	671r	628r	793r	630	-20.4
Imports	17,533	23,230	+32.5	3,354	4,340	5,402	4,436	5,701	5,771	6,031	5,726	5,436	-4.6
Exports	3,103	2,720	-12.4	538	777	751	1,038	807	695	602	616	546	-32.4
Transfers	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total supply</b>	<b>373,604r</b>	<b>359,437</b>	<b>-3.8</b>	<b>104,514r</b>	<b>87,509r</b>	<b>84,317r</b>	<b>97,265r</b>	<b>98,608r</b>	<b>83,926r</b>	<b>81,767r</b>	<b>95,136r</b>	<b>99,819</b>	<b>+1.2</b>
Statistical difference	-1,221r	-42		-408r	-306r	-365r	-141r	391r	-198r	-108r	-127r	-110	
<b>Total demand</b>	<b>374,825r</b>	<b>359,479</b>	<b>-4.1</b>	<b>104,922r</b>	<b>87,815r</b>	<b>84,682r</b>	<b>97,406r</b>	<b>98,217r</b>	<b>84,124r</b>	<b>81,875r</b>	<b>95,263r</b>	<b>99,928</b>	<b>+1.7</b>
<b>TRANSFORMATION</b>													
Energy industry use <sup>5</sup>	29,460r	27,121	-7.9	7,978r	6,998	7,057r	7,426r	7,315r	6,684r	6,141r	6,981r	7,244	-1.0
Losses	27,000	27,438	+1.6	8,272	6,443	5,236	7,048	7,965r	5,833r	5,418r	8,221r	9,205	+15.6
<b>FINAL CONSUMPTION</b>	<b>318,365r</b>	<b>304,921</b>	<b>-4.2</b>	<b>88,671r</b>	<b>2,904</b>	<b>72,389r</b>	<b>82,931r</b>	<b>82,937r</b>	<b>71,607r</b>	<b>70,317r</b>	<b>80,060r</b>	<b>83,480</b>	<b>+0.7</b>
Iron & steel	3,803	3,789	-0.4	950	967	946	939	957r	945r	937r	949r	970	+1.4
Other industries	96,599r	89,740	-7.1	25,169r	23,635r	23,816r	23,979r	23,037r	21,836r	22,365r	22,502r	22,202	-3.6
Transport	4,268r	4,259	-0.2	1,067r	1,067r	1,067r	1,067r	1,065r	1,065r	1,065r	1,065r	1,065	-
Domestic	113,180r	106,981	-5.5	34,173r	25,429r	22,684r	30,895r	31,409r	23,889r	22,119r	29,564r	32,047	+2.0
Other final users	100,515r	100,151	-0.4	27,313r	23,275r	23,876r	26,050r	26,468r	23,872r	23,831r	25,980r	27,195	+2.7
Non energy use	-	-	-	-	-	-	-	-	-	-	-	-	-

1. Percentage change between the most recent quarter and the same quarter a year earlier.

2. Companies that produce electricity from nuclear sources plus all companies whose prime purpose is the generation of electricity are included under the heading "Major Power Producers". At the end of December 2014 they were:

AES Electric Ltd., Baglan Generation Ltd., British Energy plc., Centrica Energy, Coolkeeragh ESB Ltd., Corby Power Ltd., Coryton Energy Company Ltd.,

Dong Energy Burbo UK Ltd., Drax Power Ltd., EDF Energy plc., Eggborough Power Ltd., E.On UK plc., Energy Power Resources, Falck Renewables Ltd., Fred Olsen, Greencoat UK Wind plc.,

HG Capital, Immingham CHP, Infinis plc, International Power Mitsui, London Waste Ltd., Magnox North Ltd., Peel Energy Ltd., Premier Power Ltd., Renewable Energy Systems, Riverside Resource Recovery Ltd.,

Rocksavage Power Company Ltd., RWE Npower plc, Scottish Power plc, Scottish and Southern Energy plc., Seabank Power Ltd., SELCHP Ltd., Spalding Energy Company Ltd., Statkraft Energy Ltd.,

Third Energy Trading Ltd., Vattenfall Wind Power

3. This table includes the change of definition of Major power producers (MPPs) to include major wind farm companies. Details of this change of definition were given in an article on pages 43 to 48 of the September 2008 edition of Energy Trends.

4. Gross supply from pumped storage hydro

5. Includes electricity used in generation and for pumping

## Section 6 – Renewables

### Key results show:

Renewables' share of electricity generation was a record 22.3 per cent in 2015 Q1, up 2.6 percentage points on the share in 2014 Q1, mostly reflecting increased capacity. Wind speeds were slightly lower than last year and rainfall marginally higher. **(Chart 6.1)**

Renewable electricity generation was a record 21.1 TWh in 2015 Q1, an increase of 15 per cent on the 18.4 TWh in 2014 Q1. **(Chart 6.2)**

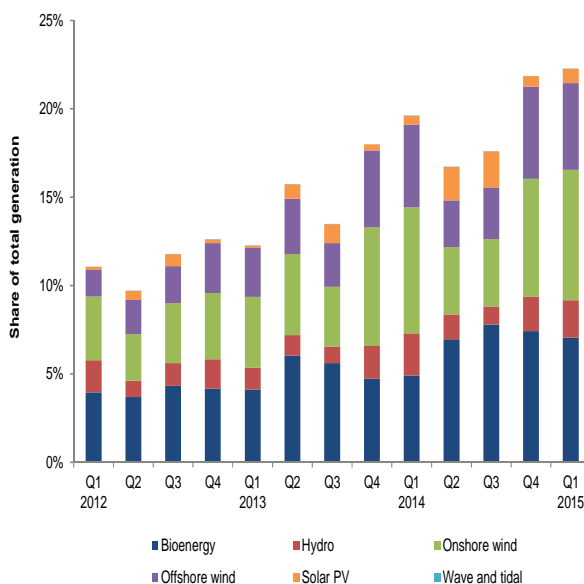
Plant biomass showed the highest increase in both absolute and percentage change in generation in 2015 Q1, almost doubling from 2.2 TWh in 2014 Q1 to 4.3 TWh. Solar photovoltaics also showed strong growth at 60% from 0.5 TWh to 0.8 TWh, due to increased capacity. Wind generation increased by 5.3 per cent to 11.7 TWh with increasing capacity particularly in offshore, offsetting a slightly lower wind speed. **(Chart 6.2)**

Renewable electricity capacity was 26.4 GW at the end of 2015 Q1, a 23 per cent increase (5.0 GW) on a year earlier, and a 7.4 per cent increase (1.8 GW) on the previous quarter. Of the 1.8 GW increase in 2015 Q1, over two-thirds was due to new, mainly large-scale, solar photovoltaic capacity. **(Chart 6.3)**

In 2015 Q1, 148 MW of capacity joined the Feed in Tariff scheme, increasing the total to 3,567 MW, approximately 14 per cent of all renewable installed capacity. Of this increase, solar PVs contributed 143 MW, and wind contributed 3 MW. **(Chart 6.5)**

Liquid biofuels consumption decreased by 19 per cent, from 387 million litres in 2014 Q1 to 314 million litres in 2015 Q1. This represented 2.9 per cent of petrol and diesel consumed in road transport. **(Chart 6.6)**

**Chart 6.1 Renewables' share of electricity generation**



Renewables' share of electricity generation increased from 19.6 per cent in 2014 Q1 to a record 22.3 per cent in 2015 Q1, and by 0.4 percentage points on 2014 Q4's 21.8 per cent.<sup>1</sup>

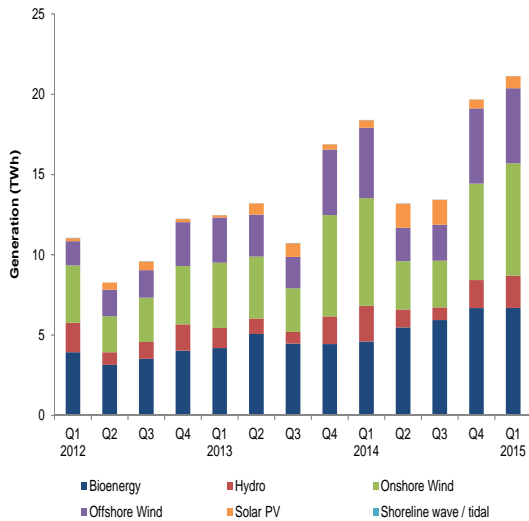
The increase on a year earlier reflects increased capacity, particularly in solar PV and onshore and offshore wind. Average wind speeds and rainfall were both similar to last year.

Total electricity generated from renewables in 2015 Q1 was up by 15 per cent on 2014 Q1, from 18.4 TWh to a new record of 21.1 TWh.

Overall electricity generation was 94.9 TWh in 2015 Q1, up 1.3 per cent on a year earlier (93.7 TWh), due to higher demand, partly due to colder average temperatures. This increase in overall generation decreased renewables' share of electricity generation by 0.3 percentage points.

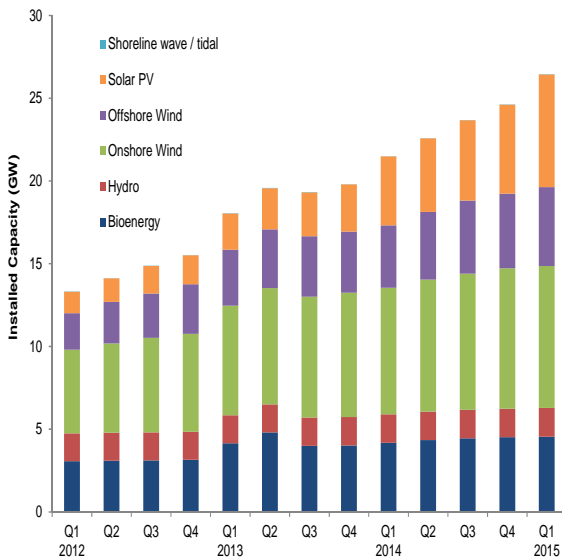
<sup>1</sup> Total electricity generation figures (all generating companies) can be found in table ET 5.1, at: [www.gov.uk/government/publications/electricity-section-5-energy-trends](http://www.gov.uk/government/publications/electricity-section-5-energy-trends)

**Chart 6.2 Renewable electricity generation**



*To note that the solar PV (and onshore wind) figures not only include installations confirmed on the FITs scheme, but also a large number of sub 50 kW installations commissioned, and registered on the Microgeneration Certification Scheme, that are awaiting confirmation on FITs (as well as any capacity not supported by FITs).*

**Chart 6.3 Renewable electricity capacity (as at end of quarter)**



In 2015 Q1, generation from bioenergy<sup>2</sup> increased by 46 per cent on a year earlier, from 4.6 TWh to 6.7 TWh, the majority of which was from plant biomass. This was mainly due to a second conversion at Drax Power Station from co-firing to dedicated biomass.

Electricity generated from onshore wind increased by 4.7 per cent in 2015 Q1, from 6.7 TWh in 2014 Q1 to 7.0 TWh, and generation from offshore wind increased by 6.3 per cent to 4.7 TWh. Both increases were due to increased capacity; although average wind speeds were high at 10.6 knots compared to the 10 year mean for the quarter, 9.8 knots, they were slightly lower than 2014 Q1 at 11 knots.<sup>3</sup>

Generation from solar photovoltaics increased by 41 per cent (0.2 GWh) from the previous quarter to 0.8 TWh. This was largely due to increased capacity. Compared to 2014 Q1, generation was 0.3 TWh (60 per cent) higher.

Hydro generation decreased by 10 per cent on a year earlier, from 2.2 TWh to 2.0 TWh, despite a slight increase in average rainfall (in the main hydro catchment areas).

Onshore wind had the largest share of generation (33 per cent) with, 32 per cent from bioenergy, 22 per cent from offshore wind, 9.5 per cent from hydro and 3.6 per cent from solar PV.

At the end of 2015 Q1, the UK's renewable electricity capacity totalled 26.4 GW, an increase of 7.4 per cent (1.8 GW) on that installed at the end of 2014 Q4, and 23 per cent (5.0 GW) on that installed a year earlier.

Of the 1.8 GW increase during 2015 Q1, 79 per cent (1.4 GW) came from photovoltaics, mostly large scale (>5 MW) schemes. Compared to 2014 Q1, capacity increased by 2.7 GW (64 per cent) to 6.8 GW.

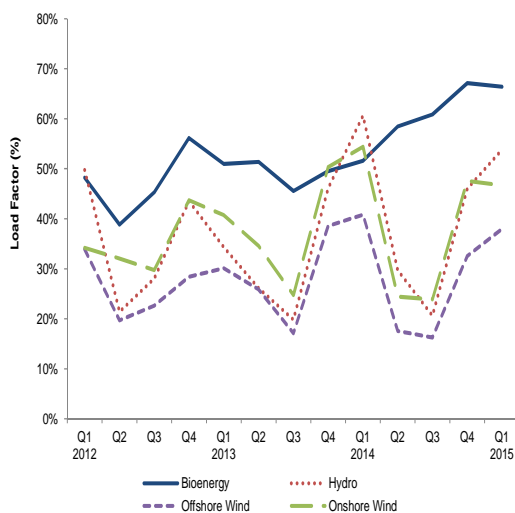
Onshore wind capacity increased by 0.9 GW (12.1 per cent) compared to 2014 Q1, and offshore wind by 1.0 GW (26 per cent). The increase in offshore was due to the new Humber Gateway scheme that came on line in February 2015, and also increased capacity at the Gwynt y Mor and West of Duddon Sands installations.

Despite the high increase in solar photovoltaic capacity, wind retained the largest share of overall capacity at 13.3 GW (50 per cent share). Solar photovoltaic capacity held a 26 per cent share (6.8 GW), bioenergy, 17 per cent (4.6 GW), and hydro 6.5 per cent (1.7 GW).

<sup>2</sup> Bioenergy consists of: landfill gas, sewage gas, energy from waste, plant biomass, animal biomass, anaerobic digestion and co-firing (generation only)

<sup>3</sup> Statistics on weather (temperature, wind speeds, rainfall and sun levels) can be found in tables ET 7.1 – 7.4, at: [www.gov.uk/government/publications/energy-trends-section-7-weather](http://www.gov.uk/government/publications/energy-trends-section-7-weather)

**Chart 6.4 Renewable electricity load factors**



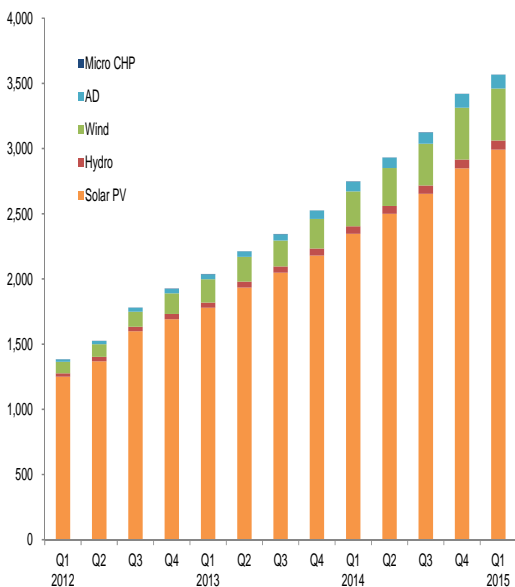
In 2015 Q1, onshore wind's load factor fell by 2.9 percentage points, from 40.8 per cent in 2014 Q1 to 37.9 per cent. Meanwhile, offshore wind's load factor fell by 7.7 percentage points, from 54.4 per cent in 2014 Q1 to 46.7 per cent in 2015 Q1. Both were relatively high over the time-period covered<sup>4</sup>, though 2015 Q1 was lower than the previous year reflecting slightly lower average wind speeds.<sup>5</sup>

Compared with 2014 Q4, onshore wind's load factor in 2015 Q1 was up by 5.4 percentage points, while offshore wind's was down by 0.9 percentage points, despite average wind speeds being 1.4 knots higher.

Hydro's load factor in 2015 Q1 fell by 6.8 percentage points, from 60.6 per cent in 2014 Q1, a record, to 53.8 per cent, with average rainfall up by 2.1 per cent. Compared with 2014 Q4, hydro's load factor in 2015 Q1 rose by 7.8 percentage points, from 46 per cent, though average rainfall fell by 1.2 per cent.

For plant biomass, the load factor in 2015 Q1, at 88.7 per cent, was up by 36.8 percentage points on a year earlier reflecting the completion of the conversion to dedicated biomass of the second unit at Drax. The load factor increased by 2.7 percentage points on 2014 Q4.

**Chart 6.5 Feed in Tariffs: eligible installed capacity (as at end of quarter)**



At the end of 2015 Q1, 3,567 MW of capacity was eligible for the GB Feed in Tariff (FiTs) scheme. This was a 4.3 per cent increase on the 3,420 MW confirmed on the scheme at the end of 2014 Q4, and 30 per cent more than the amount confirmed at the end of 2014 Q1<sup>6</sup>.

In terms of number of installations, at the end of 2015 Q1, there were 682,511 eligible for the FiT scheme, a 5.5 per cent increase on the 646,971 confirmed at the end of the previous quarter, and 25 per cent higher than the 544,673 schemes confirmed at the end of 2014 Q1.

Solar photovoltaics (PVs) represent the majority of both installations and installed capacity confirmed on FiTs, with, respectively, 99 per cent and 84 per cent of the total. The majority of PV installations are sub-4 kW retrofitted schemes, which increased by 32,235 (103 MW) from 2014 Q4 to bring the total to 550,154 (1,698 MW) at the end of 2015 Q1<sup>7</sup>.

Renewable installations confirmed on FiTs (all except MicroCHP) represented 13 per cent of all renewable installed capacity.

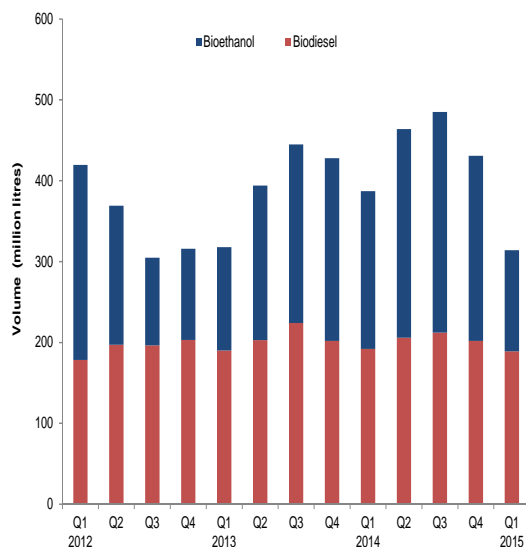
<sup>4</sup> Quarterly load factors for renewables have been calculated since 2010 Q1.

<sup>5</sup> Load Factors are calculated using an average of capacity at the start and end of the quarter. Therefore, they can be influenced by the time in the quarter when any new capacity came online. This may particularly be the case for large wind farms, such as London Array offshore, that come online incrementally throughout the quarter.

<sup>6</sup> Statistics on Feed in Tariff can be found at: [www.gov.uk/government/collections/feed-in-tariff-statistics](http://www.gov.uk/government/collections/feed-in-tariff-statistics)

<sup>7</sup> To note that Feed in Tariff uptake statistics are based on the *confirmation* date, which can be several months later than the commissioning (installation) date. Hence the amount of capacity installed in a quarter may differ substantially from that confirmed on the FiTs scheme in the same quarter.

**Chart 6.6 Liquid biofuels for transport consumption**



In 2015 Q1, 314 million litres of liquid biofuels were consumed in transport, a decrease of 19 per cent on the total in 2014 Q1 (387 million litres). This is the lowest level since 2012 Q3 when consumption was 305 million litres.

Bioethanol consumption fell by 1.6 per cent, from 192 million litres to 189 million litres. Biodiesel consumption fell by 36 per cent, from 195 million litres in 2014 Q1 to 125 million litres in 2015 Q1.

In 2015 Q1, biodiesel accounted for 1.8 per cent of total diesel consumed in transport, and bioethanol 4.6 per cent of motor spirit. The combined contribution of the two fuels was 2.9 per cent, 0.7 percentage points lower than 2014 Q1's share and 0.8 percentage points lower than in 2014 Q4. Although the contribution of biofuels to total road transport fuel consumption varies between quarters, this is the largest decrease over the last four years.

In 2015 Q1, bioethanol contributed the largest share of biofuels consumption (60 per cent) for the first time since 2014 Q1 where the balance was 50 per cent.

**Relevant tables**

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 6.2: Liquid biofuels for transport consumption.....Page 48

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# 6 RENEWABLES

Table 6.1. Renewable electricity capacity and generation

	2013	2014 p	per cent change	2013 1st quarter	2013 2nd quarter	2013 3rd quarter	2013 4th quarter	2014 1st quarter	2014 2nd quarter	2014 3rd quarter	2014 4th quarter	2015 1st quarter p	per cent change <sup>11</sup>
<b>Cumulative Installed Capacity<sup>1</sup></b>													
Onshore Wind	7,519	8,486	+12.9	6,631	7,025	7,309	7,519	7,655r	7,977	8,236	8,486	8,580	+12.1
Offshore Wind	3,696	4,501	+21.8	3,381	3,544	3,657	3,696	3,764r	4,084	4,420	4,501	4,749	+26.2
Shoreline wave / tidal	7	9	+19.0	6	6	7	7	8	9	9	9	9	+9.4
Solar photovoltaics	2,851	5,378	+88.6	2,187	2,496	2,642	2,851	4,160r	4,441	4,842	5,378	6,823	+64.0
Small scale Hydro	231	246	+6.7	217	222	224	231	239r	240	242	246	255	+7.0
Large scale Hydro	1,477	1,477	-	1,477	1,477	1,477	1,477	1,477	1,477	1,477	1,477	1,477	-
Landfill gas	1,043	1,051	+0.8	1,043	1,043	1,043	1,043	1,049r	1,050	1,050	1,051	1,052	+0.3
Sewage sludge digestion	198	208	+5.3	196	197	198	198	204r	205	205	208	208	+2.0
Energy from waste	550	696	+26.7	543	550	550	550	597r	644	652	696	696	+16.6
Animal Biomass (non-AD) <sup>2</sup>	111	111	-	111	111	111	111	111	111	111	111	111	-
Anaerobic Digestion	164	216	+31.5	126	133	141	164	189r	198	203	216	218	+15.1
Plant Biomass <sup>3</sup>	1,955	2,244	+14.8	2,125	2,773	1,955	1,955	2,029r	2,144	2,224	2,244	2,270	+11.9
<b>Total</b>	<b>19,801</b>	<b>24,623</b>	<b>+24.4</b>	<b>18,043</b>	<b>19,575</b>	<b>19,313</b>	<b>19,801</b>	<b>21,481r</b>	<b>22,578</b>	<b>23,670</b>	<b>24,623</b>	<b>26,448</b>	<b>+23.1</b>
Co-firing <sup>4</sup>	35	15	-66.8	35	35	35	35	15r	15r	15	15	19	+25.0
<b>Generation<sup>5</sup></b>													
													<b>GWh</b>
Onshore Wind <sup>6</sup>	16,950	18,611	+9.8	4,077	3,858	2,705	6,309	6,690r	3,003	2,909	6,010	7,001	+4.7
Offshore Wind <sup>6, 7</sup>	11,472	13,404	+16.8	2,805	2,615	1,965	4,087	4,384r	2,092	2,242	4,686	4,662	+6.3
Shoreline wave / tidal <sup>6</sup>	6	2	-62.3	2	2	1	1	0	1	0	1	1	+58.7
Solar photovoltaics <sup>6</sup>	1,989	4,050	(+)	140	691	849	310	474r	1,486	1,550	540	761	+60.4
Hydro <sup>6</sup>	4,702	5,885	+25.2	1,255	968	744	1,734	2,240r	1,114	782	1,748	2,007	-10.4
Landfill gas <sup>6</sup>	5,160	5,045	-2.2	1,295	1,291	1,270	1,304	1,268r	1,266	1,245	1,266	1,189	-6.2
Sewage sludge digestion <sup>6</sup>	761	846	+11.1	180	202	184	196	195r	228	212	211	204	+4.2
Energy from waste <sup>8</sup>	1,649	1,950	+18.2	415	401	420	414	481r	478	498	493	501	+4.0
Co-firing with fossil fuels	309	133	-56.8	170	49	39	50	25r	37	37	34	41	+62.2
Animal Biomass (non-AD) <sup>2, 6</sup>	628	614	-2.3	166	167	144	151	159r	161	132	162	166	+4.7
Anaerobic Digestion	722	1,009	+39.7	166	168	183	205	233r	247	256	273	273	+17.2
Plant Biomass <sup>3, 6</sup>	8,930	13,105	+46.8	1,799	2,791	2,224	2,115	2,233r	3,064	3,565	4,242	4,322	+93.5
<b>Total</b>	<b>53,278</b>	<b>64,654</b>	<b>+21.4</b>	<b>12,469</b>	<b>13,203</b>	<b>10,729</b>	<b>16,876</b>	<b>18,384r</b>	<b>13,177</b>	<b>13,426</b>	<b>19,667</b>	<b>21,127</b>	<b>+14.9</b>
Non-biodegradable wastes <sup>9</sup>	1,481	1,951	+31.7	372	360	377	372	482	478	498	493	501	+4.0
<b>Load Factors<sup>10</sup></b>													
Onshore Wind	28.8%	26.5%		30.1%	25.9%	17.1%	38.5%	40.8%	17.6%	16.2%	32.6%	38.0%	
Offshore Wind	39.1%	37.3%		40.7%	34.6%	24.7%	50.3%	54.4%	24.4%	23.9%	47.6%	46.7%	
Hydro	31.6%	39.2%		34.3%	26.1%	19.8%	46.1%	60.6%	29.7%	20.6%	46.0%	53.8%	
Landfill gas	56.6%	55.0%		57.7%	56.7%	55.1%	56.6%	56.1%	55.2%	53.7%	54.6%	52.4%	
Sewage sludge digestion	43.2%	47.5%		41.5%	47.1%	42.2%	44.7%	44.9%	51.1%	46.7%	46.2%	45.2%	
Energy from waste	35.3%	35.8%		36.2%	33.6%	34.6%	34.1%	38.9%	35.3%	34.8%	33.1%	33.3%	
Animal Biomass (non-AD)	64.9%	63.4%		69.5%	69.3%	59.1%	61.9%	66.6%	66.7%	54.1%	66.4%	69.7%	
Anaerobic Digestion	58.3%	60.5%		62.7%	59.3%	60.6%	60.8%	60.9%	58.5%	57.8%	59.0%	58.2%	
Plant Biomass	65.2%	71.2%		50.6%	52.2%	42.6%	49.0%	51.9%	67.3%	73.9%	86.0%	88.7%	
<b>Total (excluding co-firing and non-biodegradable wastes)</b>	<b>34.2%</b>	<b>33.2%</b>		<b>33.9%</b>	<b>32.0%</b>	<b>24.9%</b>	<b>39.0%</b>	<b>41.2%</b>	<b>27.3%</b>	<b>26.2%</b>	<b>36.8%</b>	<b>38.2%</b>	

1. Cumulative capacity at the end of the quarter/year

2. Includes the use of poultry litter and meat and bone.

3. Includes the use of straw and energy crops. Also includes enhanced co-firing (>85% biomass).

4. This is the amount of fossil fuelled capacity used for co-firing of renewables based on the proportion of generation accounted for by the renewable source over the course of the year.

5. Generation figures for the latest quarter are highly provisional, particularly for the thermal renewable technologies (such as landfill gas) in the lower half of the table.

6. Actual generation figures are given where available, but otherwise are estimated using a typical load factor or the design load factor, where known. All solar photovoltaic generation is estimated this way.

7. For 2009, shoreline wave and tidal are included in offshore wind.

8. Biodegradable part only.

9. Non-biodegradable part of municipal solid waste plus waste tyres, hospital waste and general industrial waste.

10. Load factors are calculated based on installed capacity at the beginning and the end of the quarter/year. These can be influenced by the time in the period when new capacity came online.

Load factors on an *unchanged configuration* basis, which consider just those sites operational throughout the year, are available annually in table DUKES 6.5, at:

<https://www.gov.uk/government/publications/renewable-sources-of-energy-chapter-6-digest-of-united-kingdom-energy-statistics-dukes>

11. Percentage change between the most recent quarter and the same quarter a year earlier.

## 6 RENEWABLES

Table 6.2. Liquid biofuels for transport consumption

	<i>per cent change</i>		2013	2013	2013	2013	2014	2014	2014	2014	2015	<i>per cent change</i> <sup>1</sup>	
	2013	2014 p	1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter	1st Quarter p		
<b>Volume (million litres)</b>												<b>Million litres</b>	
Bioethanol	819	812	-0.9	190	203	224	202	192	206	212	202	189	-1.6
Biodiesel	766	955	+24.7	128	191	221	226	195	258	273	229	125	-35.9
<b>Total biofuels for transport</b>	<b>1,585</b>	<b>1,767</b>	<b>+11.5</b>	<b>318</b>	<b>394</b>	<b>445</b>	<b>428</b>	<b>387</b>	<b>464</b>	<b>485</b>	<b>431</b>	<b>314</b>	<b>-18.9</b>
<b>Energy (thousand toe)</b>												<b>Thousand tonnes of oil equivalent</b>	
Bioethanol	462	458	-0.9	107	114	126	114	108	116	120	114	107	-1.6
Biodiesel	629	785	+24.7	105	157	182	186	160	212	224	188	103	-35.9
<b>Total biofuels for transport</b>	<b>1,091</b>	<b>1,242</b>	<b>+13.9</b>	<b>212</b>	<b>271</b>	<b>308</b>	<b>300</b>	<b>268</b>	<b>328</b>	<b>344</b>	<b>302</b>	<b>209</b>	<b>-22.1</b>
<b>Shares of road fuels</b>													
Bioethanol as per cent of Motor Spirit	4.5%	4.6%		4.4%	4.3%	4.9%	4.5%	4.5%	4.5%	4.8%	4.6%	4.6%	
Biodiesel as per cent of DERV	2.8%	3.4%		2.1%	2.8%	3.2%	3.2%	3.0%	3.7%	3.9%	3.1%	1.8%	
<b>Total biofuels as per cent of road fuels</b>	<b>3.5%</b>	<b>3.9%</b>		<b>3.0%</b>	<b>3.4%</b>	<b>3.9%</b>	<b>3.7%</b>	<b>3.6%</b>	<b>4.0%</b>	<b>4.2%</b>	<b>3.7%</b>	<b>2.9%</b>	

1. Percentage change between the most recent quarter and the same quarter a year earlier.

Source: HM Revenue and Customs Hydrocarbon Oils Bulletin, available at [www.uktradeinfo.com/Statistics/Pages/TaxAndDutybulletins.aspx](http://www.uktradeinfo.com/Statistics/Pages/TaxAndDutybulletins.aspx)

## Renewable energy in 2014

### Introduction

This article updates the information on renewable energy published in the June 2014 edition of Energy Trends, and in the 2014 edition of the Digest of UK Energy Statistics. It also presents additional information to that provided in the “Section 6 Renewables” section of this edition of Energy Trends, including an early indication of the UK’s progress against the Renewable Energy Directive, and discusses key policies that impact on the delivery of renewable energy.

### Key messages

In 2014, renewable energy provisionally accounted for 7.0 per cent of final energy consumption, as measured using the 2009 Renewable Energy Directive (RED) methodology. This is an increase from the revised 2013 position of 1.4 percentage points, reflecting a significant growth in the contribution of renewable electricity whilst renewable heating and transport contributions also rose. Averaged over 2013 and 2014, The UK has now achieved 6.3 per cent renewable energy, 0.9 percentage points in excess of the interim target which was set at 5.4 per cent (see page 54).

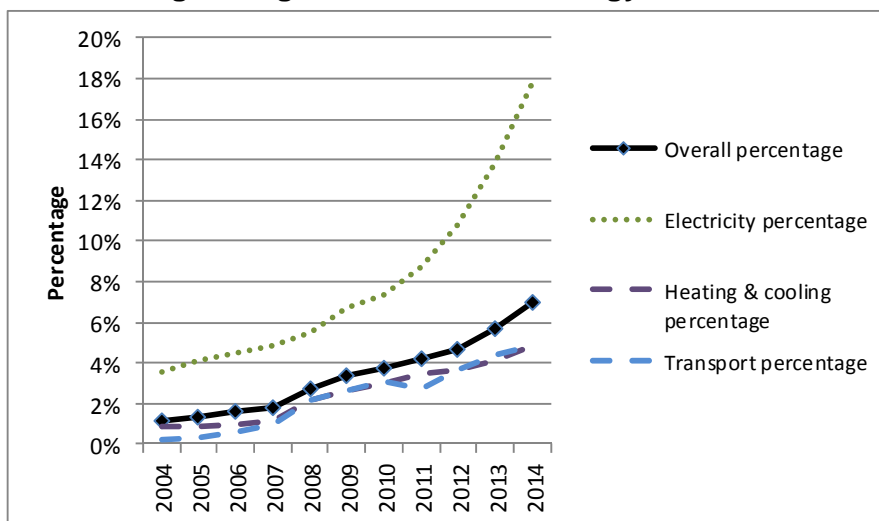
When 2013 progress against the RED was originally reported in 2014, renewable energy was 5.2 per cent of final energy consumption. This has now been revised up to 5.6 per cent following an improvement in methodologies for calculating various sources of renewable heat, the most substantial revision being to domestic wood combustion (see Renewable heat section).

The amount of electricity generated from renewable sources in 2014 was 64,654 GWh, a 21 per cent increase on 2013. Plant biomass generation was the largest contributor to the overall increase in renewable electricity generation; generation increased by 4,176 GWh, 47 per cent. Generation from solar photovoltaics was 4,050 GWh in 2014, more than double the generation in 2013.

Offshore wind increased by 17 per cent and onshore wind by 10 per cent, taking total wind generation to 32,016 GWh. The increases in wind generation were driven by high growth in installed capacity, as wind speeds were similar to 2013. Hydro generation increased by 1,183 GWh (25 per cent) to a record 5,885 GWh, largely due to high rainfall in the main catchment areas (see “The normalisation approach” box for detail on the impact of differing wind and rain patterns).

Generation from wind represented 50 per cent of total renewable electricity generation in 2014, compared with 35 per cent for bioenergy, 9.1 per cent for hydro and 6.3 per cent for solar photovoltaics.

**Chart 1: Progress against Renewable Energy Directive**



## *Special feature – Renewable energy in 2014*

Renewable electricity generation capacity increased by 4.8 GW (24 per cent) to 24.6 GW. The main sources of this increase were solar photovoltaics (up 2.5 GW, 89 per cent), onshore wind (up 1.0 GW, 13 per cent), offshore wind (up 0.8 GW, 22 per cent), and plant biomass (up 0.3 GW, 15 per cent).

Heat from renewable sources increased by 4.6 per cent during 2014 (to 2,730 ktoe). This includes heat supported by the Renewable Heat Incentive and Renewable Heat Premium Payment schemes.

Renewable biofuels used for transport rose by 14 per cent (to 1,243 ktoe), accounting for 3.9 per cent by volume of road transport fuels in 2014. Bioethanol, as a proportion of motor spirit, increased slightly to 4.6 per cent, whilst biodiesel as a proportion of DERV increased by 0.6 percentage points to 3.4 per cent.

### **The normalisation approach**

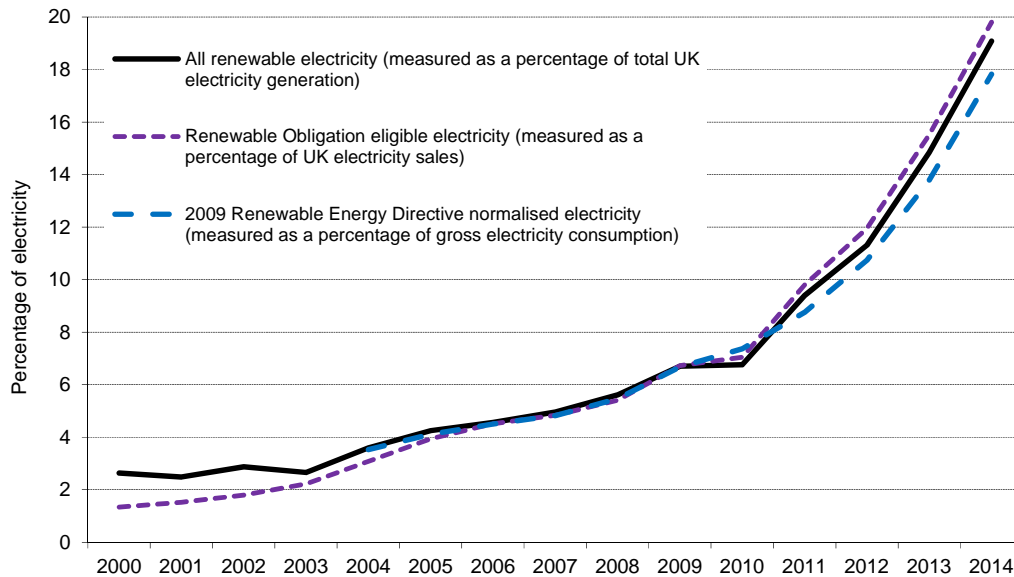
Generation from wind and hydro sources are very dependent on the weather (wind speeds and rainfall). In order to negate the effects of variable generation due to weather differentials from one year to the next, the 2009 Renewable Energy Directive (RED) measure specifies the normalisation of wind and hydro generation. Normalisation is carried out by calculating generation by applying an average load factor to current capacity. For wind, the load factor is calculated as the average of the past five years (including the present one), with current capacity taken as an average of the start and end of year capacity. For hydro, the load factor is the average of the past 15 years, applied to capacity at the end of the current year. The generation figures obtained from this procedure replace the actual generation figures for wind and hydro in the RED calculation.

### **Renewable electricity targets**

Renewable electricity's share of all electricity ranged from 17.8 per cent to 19.8 per cent, under three key measures (RED, Renewables Obligation and International Basis) in 2014. Section 6 of the March 2015 edition of Energy Trends contained provisional estimates for the international and Renewable Energy Directive (RED) measures of the share of electricity obtained from renewable sources. These data have now been revised following receipt of new data, and an additional measure, reflecting the Renewables Obligation (RO) definition, has been added. All measures are shown in Table 1 at the end of this article.

On the "international definition basis" renewables provided 19.1 per cent of the electricity generated in the United Kingdom in 2014, a 4.2 percentage point increase on the 2013 proportion. Total electricity generation from renewables in 2014, as shown in Table 3 at the end of this article, amounted to 64,654 GWh, an increase of 11,377 GWh (21 per cent) on 2013. Chart 2 shows the growth in the proportion of electricity generation from renewable sources and also progress under the RO, which is measured as a proportion of UK electricity sales; the RO measure grew by 4.2 percentage points to 19.8 per cent in 2014.

The RED introduced a further measure, which involves normalising wind and hydro generation over 5 and 15 year periods respectively, and measuring against gross electricity consumption. Similar wind speeds in 2014 compared to 2013 meant that normalised wind generation tended towards the non-normalised generation, whereas higher than average rainfall resulted in normalised hydro generation growing more slowly than the non-normalised measure. In 2014, the normalised electricity component of the Renewable Energy Directive increased by 4.0 percentage points, to 17.8 per cent.

**Chart 2: Growth in electricity generation from renewable sources since 2000**

The normalised electricity component of the 2009 Renewable Energy Directive measure is also shown in Chart 2; by comparing this line with the non-normalised lines, it illustrates the impact that low wind speeds and little rain had on renewable electricity generation in 2010, and how this was reversed in 2011, returning to more normal levels in 2012. In 2013, normalisation again reduced the impact that high wind speeds had on generation and in 2014, high rainfall resulted in a similar impact.

### Renewable electricity generation

The largest absolute increase in generation came from plant biomass, rising by 4,176 GWh to 13,105 GWh, due to increased capacity with the conversion of a second unit at Drax Power Station from coal to dedicated biomass and also several new smaller schemes. This was partially offset by a capacity reduction at Ironbridge.

Generation from solar photovoltaics rose by 2,060 GWh, to 4,050 GWh, an increase of 104 per cent. The majority of the increase was due to new capacity from larger schemes supported by the Renewables Obligation, as well as smaller schemes under the Feed in Tariff. The average sun hours per day were 4.4, just 0.2 higher than in 2013 and in line with the ten year average.

Offshore wind generation increased by 1,933 GWh to 13,404 GWh (17 per cent), partly due to an increase in capacity. Onshore wind generation also increased though to a lesser extent; a 10 per cent increase on 2014 to 18,611 GWh, also mostly due to an increase in capacity; average wind speeds were largely similar in 2014 compared to 2013, at 8.6 knots. Wind speeds varied considerably across 2014, from a record low of 5.5 knots in September 2014, to a high of 13.0 knots in February 2014 (the highest since February 2002).

Generation from hydro, a record, in 2014, increased by 1,183 GWh (25 per cent) on 2013, due to higher rain fall (in the main hydro catchment areas). Average monthly rainfall in 2014 was 1,522 mm compared to 1,322 mm in 2014, an increase of 15 per cent, and 6 per cent higher than the ten year mean.

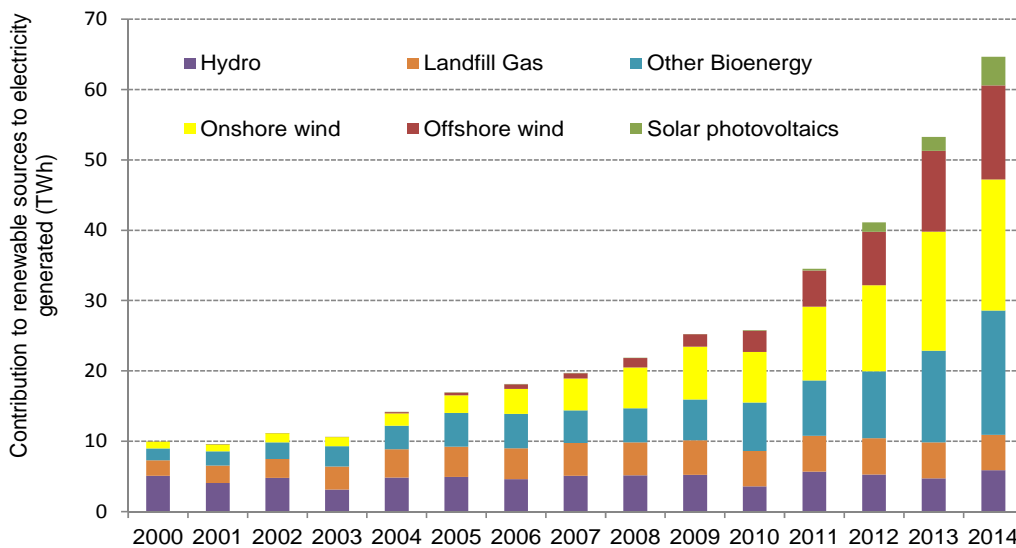
## Special feature – Renewable energy in 2014

Other sources showing increases during the year included anaerobic digestion (an increase of 287 GWh, 40 per cent higher), sewage gas increased by 11 per cent to 846 GWh. Landfill gas, however, fell by 115 GWh (2 per cent) to 5,045 GWh.

Onshore wind continued to be the leading individual technology for the generation of electricity from renewable sources during 2014, with 29 per cent of renewables generation coming from this source; a further 21 per cent came from offshore wind, 20 per cent from plant biomass, and 9 per cent from hydro. However the combined generation from the variety of different bioenergy sources accounted for 35 per cent of renewable generation, with plant biomass accounting for over one half of bioenergy generation (58 per cent) and landfill gas accounting for 22 per cent.

Total generation from bioenergy and hydro sources were each 25 per cent higher than in 2013, while wind was 13 per cent higher. Chart 3 shows the growth in generation, by main renewable source, since 2000.

**Chart 3: Electricity generation by main renewable source since 2000**



Note: Wind includes wave and tidal which in 2014 was 0.002 TWh

### Renewable electricity capacity

Total renewable electricity capacity at the end of 2014, as shown in Table 3, amounted to 24,643 MW, compared with 19,801 MW at the end of 2013; this excludes the capacity within conventional generation station that was used for co-firing (16 MW). The largest contributor towards this 24 per cent capacity increase was 2,526 MW from solar photovoltaics, 968 MW from onshore wind, and 805 from offshore wind. Plant biomass capacity increased by 289 MW, with the extra capacity from the conversion of a second unit at Drax power station and several smaller new installations exceeding a reduction in capacity at Ironbridge power station .

In capacity terms, onshore wind accounted for 35 per cent of capacity, followed by solar photovoltaics at 22 per cent. Offshore winds share was 18 per cent, plant biomass 9.1 per cent, hydro was 7.0 per cent, and landfill gas 4.3 per cent.

### Load factors

Load factors express the average hourly quantity of electricity generated as a percentage of the average capacity at the beginning and end of the year. Load factors for most technologies are presented in Table 4. As well as the traditionally calculated load factors, additional load factors are also calculated only for those schemes that have operated throughout the calendar year with

an unchanged configuration. These differences are particularly prominent for plant biomass, where the large capacity and operational changes can alter traditionally calculated load factors. Wind speeds and rainfall levels have also had a major impact on load factors.<sup>1</sup>

Load factors in 2014, on an unchanged configuration basis, ranged from 26.4 per cent for onshore wind to 70.6 per cent for plant biomass. The load factor for hydro was 38.8 per cent, the highest since 2011.

### **Renewable heat**

Around 20 per cent of renewable sources were used to generate heat during 2014. The four categories of renewable heat production in the United Kingdom are the direct combustion of various forms of bioenergy (94 per cent of the total), active solar heating, geothermal, and heat pumps. Together they produced energy equivalent to 2,730 thousand tonnes of oil equivalent (or 31.7 TWh) in 2014, a 4.6 per cent increase during the year. Using the RED methodology, renewable heat sources accounted for 4.9 per cent of total heat demand in 2014, a 0.7 percentage point increase on 2013.

Renewables used to generate heat have grown in recent years, following a decline up to 2005 as a result of tighter emission controls which discouraged on-site burning of biomass, especially wood waste. Policies such as the Renewable Heat Incentive (RHI) and Renewable Heat Premium Payment (RHPP) schemes are designed to support renewable heat production. Around 4.5 per cent of renewable heat during 2014 was supported through the receipt of RHI payments (123 thousand tonnes of oil equivalent, or 1,427 GWh). Domestic use of wood is the main contributor to renewables used for heat – comprising around 57 per cent of the renewable heat total. Non-domestic use of wood and wood waste, and plant biomass formed the next largest components, at around 17 per cent and 14 per cent respectively. Heat pumps (mainly in the domestic sector) contributed around 4 per cent of the renewable heat total.

This year, there have been significant revisions to renewable heat estimates. For domestic wood, estimates were previously based on a historic survey; however, this year, a comprehensive survey was conducted to bring the estimate into line with current wood use trends. Other smaller revisions were made to renewable heat estimates and further details will be provided in the Digest of UK Energy Statistics 2015 which will be published on 30 July 2015.

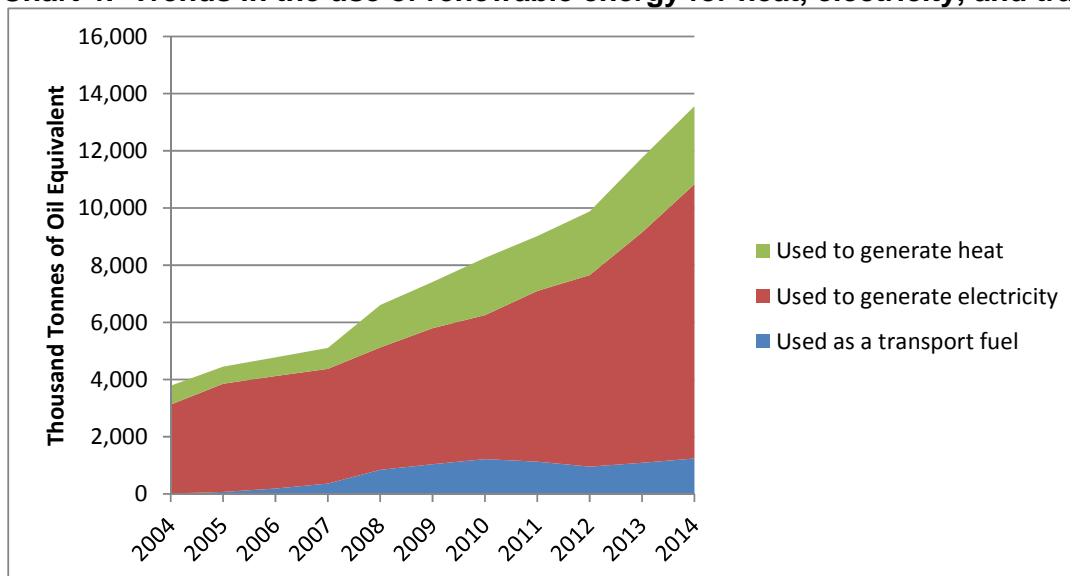
### **Liquid biofuels for transport**

Liquid biofuels for transport comprised around 9 per cent of total renewable sources. Two road transport fuels, biodiesel and bioethanol, are sold blended with diesel and petrol. Figures from HM Revenue and Customs based on road fuel taxation statistics show that 954 million litres of biodiesel and 814 million litres of bioethanol were consumed in 2014; biodiesel consumption was 24.5 per cent higher than in 2013, whilst bioethanol consumption was 0.7 per cent lower. Biodiesel has a higher energy content than bioethanol, meaning that the combined total energy content of these fuels equates to 1,243 thousand tonnes of oil equivalent, 14 per cent higher than in 2013. During 2014, biodiesel accounted for 3.4 per cent of diesel, and bioethanol 4.6 per cent of motor spirit; the combined contribution of biodiesel and bioethanol was 3.9 per cent by volume, 0.3 percentage points higher than in 2013. The Renewable Energy Directive introduced various sustainability criteria for transport biofuels; certain biofuels derived from waste products (for example, waste cooking oil) have extra weighting when monitoring progress against the transport component, but not the overall target, of the Directive.

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<sup>1</sup> The load factors reported in Table 4 draw on data on ROCs produced by Ofgem, but at the time that this article was written the ROC data for 2014 were still provisional. In particular this can have an impact on the schemes included in the unchanged configuration definition as new data could include or remove particular schemes. This should be kept in mind if users subsequently reanalyse these results.

**Chart 4: Trends in the use of renewable energy for heat, electricity, and transport**



### All renewable fuels

When renewables used for transport and heat are combined with the use of renewable sources for electricity generation, renewable sources accounted for 7.0 per cent of the United Kingdom's total primary energy requirements in 2014, up from 5.8 per cent in 2013. Use of non-biodegradable wastes accounted for an additional 0.5 per cent of total primary energy. The trends in the use of renewable energy for transport, heat and electricity are shown in Chart 4; data are shown in Table 5 disaggregating the totals by various technologies.

On the basis for measuring progress towards the Renewable Energy Directive (RED), provisionally in the UK during 2013, 7.0 per cent of final energy consumption was from renewable sources. This compares to 5.6 per cent in 2013, and 4.7 per cent in 2012.

In addition to the headline figure, the RED monitors three constituent parts separately, and these are shown in Table 2. It should be noted that the overall figure is not a simple calculation based around the three constituent parts. The finalised 2014 figures for all member states will be published by Eurostat during 2016. The RED introduced interim targets for member states to achieve on their route to attaining the 2020 proportion. The second interim target, across 2013 and 2014, is 5.4 per cent, and this has now been exceeded with an average of 6.3 per cent.

### EU Renewable Energy Directive

In March 2007, the European Council agreed to a common strategy for energy security and tackling climate change. An element of this was establishing a target of 20 per cent of the EU's energy to come from renewable sources by 2020. During 2008, a Directive was negotiated on this basis and resulted in the agreement of country "shares" of this target being included in the final 2009 Renewable Energy Directive. For the UK, 15 per cent of **final energy consumption** - calculated on a net calorific basis (i.e. excluding the energy required to evaporate the water content from the fuel; and as opposed to the gross basis that is generally used in presenting data in *Energy Trends* and *the Digest of UK Energy Statistics*), and with a cap on fuel used for air transport - should be accounted for by energy from renewable sources. In reporting against these measures, normalised wind and hydro is used (see "the normalisation approach" box).



## UK renewables policy

The United Kingdom has a number of policy measures to further increase renewables deployment. These include:

- Putting in place appropriate financial incentives to bring forward and support the take-up of renewable energy, including the “banded” Renewables Obligation (RO), the Electricity Market Reform (EMR), Feed-in Tariffs (FiTs) for small scale (under 5 MW) electricity generation, the Renewable Heat Incentive (RHI) tariff domestic and non-domestic schemes, the Renewable Heat Premium Payment Scheme (for households), and the Renewable Transport Fuel Obligation (RTFO);
- Identifying and removing the most significant non-financial barriers to renewables deployment, including measures to improve existing grid connection arrangements; and
- Overcoming supply chain blockages and promoting business opportunities in the renewables sector in the UK.

### The Renewables Obligation (RO)

The Renewables Obligation<sup>2</sup> is an obligation on electricity suppliers to source a specific, and annually increasing, proportion of electricity sales from eligible renewable sources, or pay a penalty; this is intended to incentivise an increase in the level of renewable generating capacity and so contribute to our climate change targets.

The Office for Gas and Electricity Markets (Ofgem), which administers the RO, issues **Renewables Obligation Certificates** (ROCs) to qualifying renewables. These certificates may be sold by generators directly to licensed electricity suppliers or traders. ROCs can be traded separately from the electricity to which they relate. Suppliers present ROCs to Ofgem to demonstrate their compliance with the obligation.

When the Obligation was first introduced, 1 ROC was awarded for each MWh of renewable electricity generated. In 2009, ‘banding’ was introduced into the RO, meaning different technologies now receive different numbers of ROCs depending on their costs, relative market maturity, and potential for large scale deployment. A list of technologies eligible for the RO, details of the RO banding review, and the level of ROCs received, is available at:

[www.gov.uk/calculating-renewable-obligation-certificates-rocs](http://www.gov.uk/calculating-renewable-obligation-certificates-rocs)

### Electricity Market Reform (EMR)

EMR will replace the RO in 2017. The reforms tackle the risks and uncertainties of the underlying economics of different forms of electricity generation by offering long term contracts for low carbon energy.

Companies will get, in effect, a fixed and secure price at which they can sell their electricity to consumers. This will allow investors to be confident about the returns of their capital in advance of investing billions into new infrastructure schemes. It will also encourage banks to lend at cheaper rates because the projects are less risky.

Further details of the reforms are available at:

[www.gov.uk/government/policies/maintaining-uk-energy-security--2/supporting-pages/electricity-market-reform](http://www.gov.uk/government/policies/maintaining-uk-energy-security--2/supporting-pages/electricity-market-reform)

### Feed-in Tariffs (FiTs)

Feed-in tariffs are a financial support scheme for eligible low-carbon electricity technologies, aimed at small-scale installations with a capacity of less than 5 Megawatts (MW). FiTs support new anaerobic digestion (AD), solar photovoltaic (PV), small hydro and wind, by requiring

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<sup>2</sup> The Renewables Obligation covering England and Wales and the analogous Renewables (Scotland) Obligation came into effect in April 2002. Northern Ireland introduced a similar Renewables Obligation in April 2005.

## *Special feature – Renewable energy in 2014*

electricity suppliers to make payments (generation tariffs) to these generators based on the number of kilowatt hours (kWh) they generate. An additional guaranteed export tariff is paid for electricity generated that is not used on site and exported to the grid. The scheme also supports micro combined heat and power installations with an electrical capacity of 2kW or less, as a pilot programme.

PV installations increased rapidly at the start of the FIT scheme. The rate of increase slowed significantly after August 2012 following tariff reductions introduced after a comprehensive review of the scheme. A depression mechanism was also introduced following the comprehensive review. This cost control mechanism allows solar PV tariffs to decrease every 3 months (depending on deployment levels). Tariffs for Non-PV technologies depress every year (with a six-month contingent depression if deployment is high in the first half of the year).

Tariff changes implemented as a result of the review only affect new entrants to the scheme. Policy information and statistical reports relating to FiTs can be found at:

[www.gov.uk/government/policies/increasing-the-use-of-low-carbon-technologies/supporting-pages/feed-in-tariffs-scheme](http://www.gov.uk/government/policies/increasing-the-use-of-low-carbon-technologies/supporting-pages/feed-in-tariffs-scheme) and [www.gov.uk/government/organisations/department-of-energy-climate-change/series/feed-in-tariff-statistics](http://www.gov.uk/government/organisations/department-of-energy-climate-change/series/feed-in-tariff-statistics)

The latest tariffs can be found on Ofgem's website:

[www.ofgem.gov.uk/environmental-programmes/feed-tariff-fit-scheme/tariff-tables](http://www.ofgem.gov.uk/environmental-programmes/feed-tariff-fit-scheme/tariff-tables)

### **Renewable Heat Incentive (RHI) and Renewable Heat Premium Payment**

The RHI scheme is a government financial incentive scheme introduced to encourage a switch to renewable heating systems in place of fossil fuels. The tariff based scheme is split into two parts:

- The non-domestic RHI scheme which has been open to commercial, industrial, public sector, not for profit and community generators of renewable heat since November 2011.
- The domestic RHI scheme which opened on 9 April 2014 and is available to homeowners, private and social landlords and people who build their own homes.

Further information on this scheme, including details of the technologies, can be found at:

[www.gov.uk/government/policies/increasing-the-use-of-low-carbon-technologies/supporting-pages/renewable-heat-incentive-rhi](http://www.gov.uk/government/policies/increasing-the-use-of-low-carbon-technologies/supporting-pages/renewable-heat-incentive-rhi).

The RHPP voucher scheme made one-off payments to householders to help them buy renewable heating technologies. This scheme closed on the 31 March 2014 prior to the introduction of the domestic RHI scheme. Further information on the RHPP can be found at: [www.gov.uk/renewable-heat-premium-payment-scheme](http://www.gov.uk/renewable-heat-premium-payment-scheme).

Data and statistical reports relating to both the RHI and RHPP can be found at:

[www.gov.uk/government/organisations/department-of-energy-climate-change/series/renewable-heat-incentive-renewable-heat-premium-payment-statistics](http://www.gov.uk/government/organisations/department-of-energy-climate-change/series/renewable-heat-incentive-renewable-heat-premium-payment-statistics).

### **Renewable Transport Fuel Obligation (RTFO)**

The Renewable Transport Fuel Obligation introduced in April 2008, placed a legal requirement on transport fuel suppliers (who supply more than 450,000 litres of fossil fuel per annum to the UK market) to ensure that 4.75 per cent (by volume) of their overall fuel sales are from a renewable source by 2013/14, with incremental levels starting from 2.5 per cent (by volume) for 2008/09. The Department for Transport publish policy and statistical reports on the scheme at:

[www.gov.uk/government/publications/rtfo-guidance](http://www.gov.uk/government/publications/rtfo-guidance) and [www.gov.uk/government/organisations/department-for-transport/series/biofuels-statistics](http://www.gov.uk/government/organisations/department-for-transport/series/biofuels-statistics)

### **Data collection**

The UK collection of renewable energy statistics began in 1989, when all relevant renewable energy sources were identified and, where possible, information was collected on the amounts of energy derived from each source.

The Renewable Energy STATisticS (RESTATS) database now contains 26 years of data from 1989 to 2014 and this database has been used to provide the detailed figures on renewable sources of energy contained within this article and also within the forthcoming 2015 edition of the Digest of UK Energy Statistics, to be published on 30 July 2015.

### **Regional statistics**

A further renewable statistics article will be produced in the September 2015 edition of Energy Trends, containing a regional breakdown of the renewable electricity generation and capacity statistics.

For further information on renewable energy statistics please contact either of the following

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DECC Renewables Statistics

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#### **James Hemingway**

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E-mail: [James.Hemingway@decc.gsi.gov.uk](mailto:James.Hemingway@decc.gsi.gov.uk)

**Table 1: Percentages of electricity derived from renewable**

	2005	2010	2011	2012	2013	2014
Overall renewables percentage – International basis (Electricity generated from all renewables except non-biodegradable wastes, as a percentage of all <b>electricity generated</b> in the UK)	4.3%	6.8%	9.4%	11.3%	14.8%	19.1%
Percentage on a Renewables Obligation basis (Electricity generated from renewables eligible for the Renewables Obligation as a percentage of <b>electricity sales</b> by licensed suppliers in the UK)	3.9%	7.0%	9.8%	11.9%	15.5%	19.8%
Percentage on a 2009 Renewable Energy Directive basis ( <i>Normalised</i> hydro & wind generation combined with actual generation from other sources except non-biodegradable wastes, as a percentage of UK <b>gross electricity consumption, calculated on a net calorific value basis</b> )	4.1%	7.4%	8.8%	10.7%	13.8%	17.8%

**Table 2: Progress against the 2009 Renewable Energy Directive**

	2005	2010	2011	2012	2013	2014
Percentage of <b>electricity</b> from renewable sources (normalised)	4.1%	7.4%	8.8%	10.7%	13.8%	17.8%
Percentage of <b>heating and cooling</b> from renewable sources	0.9%	3.0%	3.4%	3.7%	4.1%	4.8%
Percentage of <b>transport</b> energy from renewable sources	0.3%	3.1%	2.7%	3.7%	4.4%	4.8%
<b>Overall renewable consumption as a percentage of capped gross final energy consumption using net calorific values (normalised) [not directly calculated from the three percentages above]</b>	1.4%	3.8%	4.2%	4.7%	5.6%	7.0%

**Table 3: Capacity of, and electricity generated from, renewable sources**

	2012	2013	2014
<b>Installed Capacity (MWe)</b>			
Wind:			
Onshore	5,904	7,519	8,486
Offshore	2,995	3,696	4,501
Shoreline wave / tidal	7	7	9
Solar photovoltaics	1,756	2,851	5,377
Hydro:			
Small scale	218	231	246
Large scale (1)	1,477	1,477	1,477
Bioenergy:			
Landfill gas	1,037	1,043	1,051
Sewage sludge digestion	204	198	208
Energy from waste (2)	517	550	696
Animal Biomass (non-AD)(3)	111	111	111
Anaerobic digestion	119	164	216
Plant Biomass (4)	1,171	1,955	2,244
<b>Total bioenergy and wastes</b>	<b>3,159</b>	<b>4,021</b>	<b>4,526</b>
<b>Total</b>	<b>15,515</b>	<b>19,801</b>	<b>24,623</b>
Co-firing (5)	204	35	16
<b>Generation (GWh)</b>			
Wind:			
Onshore (6)	12,232	16,950	18,611
Offshore	7,603	11,472	13,404
Shoreline wave / tidal (7)	4	6	2
Solar photovoltaics	1,352	1,989	4,050
Hydro:			
Small scale (6)	654	676	832
Large scale (1)	4,631	4,026	5,053
Bioenergy:			
Landfill gas	5,145	5,160	5,045
Sewage sludge digestion	719	761	846
Biodegradable energy from waste (8)	1,774	1,649	1,950
Co-firing with fossil fuels	1,783	309	133
Animal Biomass (3)	643	628	614
Anaerobic digestion	501	722	1,009
Plant Biomass (4)	4,083	8,929	13,105
<b>Total bioenergy</b>	<b>14,648</b>	<b>18,159</b>	<b>22,702</b>
<b>Total generation</b>	<b>41,124</b>	<b>53,277</b>	<b>64,654</b>
Non-biodegradable energy from wastes (9)	1,429	1,481	1,951
<b>Total generation from sources eligible for the Renewable Obligation (10)</b>	<b>33,406</b>	<b>44,948</b>	<b>52,745</b>

(1) Excluding pumped storage stations. Capacities are as at the end of December.

(2) Includes capacity for municipal solid waste, waste tyres, hospital waste, and general industrial waste.

(3) Includes the use of poultry litter and meat & bone.

(4) Includes the use of straw combustion and short rotation coppice energy crops.

(5) This is the proportion of fossil fuelled capacity used for co-firing of renewables based on the proportion of generation accounted for by the renewable source.

(6) Actual generation figures are given where available, but otherwise are estimated using a typical load factor or the design load factor, where known.

(7) Includes electricity from the EMEC test facility.

(8) Biodegradable part only.

(9) Non-biodegradable part of municipal solid waste plus waste tyres, hospital waste and general industrial waste.

(10) See page 54 for definition and coverage.

**Table 4: Load factors for renewable electricity generation**

	Per cent		
	2012	2013	2014
<b>Load factors - based on average beginning and end of year capacity (1)</b>			
Wind	29.4	32.3	30.2
Onshore wind	26.4	28.9	26.5
Offshore wind	35.8	39.1	37.3
Marine energy (wave and tidal stream)	8.3	9.6	3.2
Solar photovoltaics	11.2	9.9	11.2
Hydro	35.7	31.6	39.2
Hydro (small scale)	35.5	34.4	39.8
Hydro (large scale)	35.7	31.1	39.1
Bioenergy (excludes cofiring and non-biodegradable wastes)	46.9	56.8	60.3
Landfill gas	56.1	56.6	55.0
Sewage sludge digestion	40.7	43.2	47.5
Energy from waste (3)	39.5	35.3	35.8
Animal Biomass (4)	66.2	64.9	63.4
Anaerobic Digestion	60.3	58.3	60.5
Plant Biomass (5)	40.1	65.2	71.2
<b>All renewable technologies (excluding cofiring and non-biodegradable wastes)</b>	<b>32.3</b>	<b>34.3</b>	<b>33.1</b>
<b>Load factors - for schemes operating on an unchanged configuration basis (2)</b>			
Wind	28.1	31.0	30.2
Onshore wind	25.6	27.9	26.4
Offshore wind	34.1	37.6	37.7
Hydro	35.3	31.5	38.8
Hydro (small scale)	36.7	35.2	39.6
Hydro (large scale)	35.1	31.2	38.8
Bioenergy (excludes cofiring and non-biodegradable wastes)	63.5	59.9	65.2
Landfill gas	58.8	57.0	55.3
Sewage sludge digestion	48.0	50.2	49.9
Energy from waste (3)	40.1	34.7	34.8
Animal Biomass (4)	66.2	70.4	63.4
Anaerobic Digestion	60.6	60.7	59.3
Plant Biomass (5)	67.2	61.6	70.6
<b>All renewable technologies (excluding cofiring and non-biodegradable wastes)</b>	<b>36.2</b>	<b>35.5</b>	<b>39.3</b>

(1) Calculated as the average hourly quantity of electricity generated as a percentage of the average capacity at the beginning and end of the year.

(2) Load factors calculated as above but restricted to those schemes that have operated throughout the calendar year with an unchanged configuration.

(3) Calculation is based on biodegradable energy from waste generation but all energy from waste capacity; this reduces the load factor.

(4) Includes the use of poultry litter and meat & bone.

(5) Includes the use of straw combustion and short rotation coppice energy crops.

**Table 5: Renewable sources used to generate electricity and heat, and for transport fuels** <sup>(1)(2)</sup>

Thousand tonnes of oil equivalent

	2012	2013	2014
<b>Used to generate electricity (3)</b>			
Wind:	1,705.5	2,443.8	2,752.9
Onshore	1,051.8	1,457.4	1,600.3
Offshore	653.8	986.4	1,152.6
Shoreline wave/Tidal (4)	0.3	0.5	0.2
Solar photovoltaics	116.3	171.1	348.2
Hydro:	454.4	404.3	506.0
Small scale	56.2	58.1	71.5
Large scale (5)	398.2	346.2	434.5
Bioenergy:			
Landfill gas	1,687.6	1,692.4	1,654.6
Sewage sludge digestion	235.9	249.6	277.4
Municipal solid waste combustion (6)	638.5	564.7	551.1
Co-firing with fossil fuels	400.5	53.7	25.1
Animal Biomass (7)	225.0	226.4	224.8
AD	164.3	236.8	330.8
Plant Biomass (8)	1,062.3	2,009.1	2,912.9
Total bioenergy	4,414.1	5,032.7	5,976.8
<b>Total</b>	<b>6,690.6</b>	<b>8,052.3</b>	<b>9,584.1</b>
Non-biodegradable wastes (9)	520.3	513.1	557.4
<b>Used to generate heat</b>			
Active solar heating	47.8	50.1	52.1
Bioenergy:			
Landfill gas	13.6	13.6	13.6
Sewage sludge digestion	63.7	68.3	67.7
Wood combustion - domestic	1,392.3	1,626.7	1,554.4
Wood combustion - industrial	289.5	342.9	459.4
Animal Biomass (10)	31.5	29.1	34.5
AD	14.5	18.7	43.0
Plant Biomass (11)	276.6	340.9	373.1
Municipal solid waste combustion (6)	29.8	30.1	23.3
Total bioenergy	2,111.5	2,470.2	2,569.1
Geothermal aquifers	0.8	0.8	0.8
Heat Pumps (12)	68.4	88.2	107.6
<b>Total</b>	<b>2,228.4</b>	<b>2,609.3</b>	<b>2,729.6</b>
Non-biodegradable wastes (9)	144.1	155.0	159.3
<b>Renewable sources used as transport biofuels</b>			
as Bioethanol	436.9	462.2	458.8
as Biodiesel	520.9	629.4	783.8
<b>Total</b>	<b>957.8</b>	<b>1,091.6</b>	<b>1,242.7</b>
<b>Total use of renewable sources and wastes</b>			
Solar heating and photovoltaics	164.0	221.2	400.3
Onshore wind	1,051.8	1,457.4	1,600.3
Offshore wind	653.8	986.4	1,152.6
Shoreline wave/Tidal (4)	0.3	0.5	0.2
Hydro	454.4	404.3	506.0
Bioenergy:	6,525.6	7,502.8	8,545.9
Geothermal aquifers	0.8	0.8	0.8
Heat Pumps	68.4	88.2	107.6
Transport biofuels	957.8	1,091.6	1,242.7
<b>Total</b>	<b>9,876.9</b>	<b>11,753.2</b>	<b>13,556.4</b>
Non-biodegradable wastes (9)	664.4	668.1	716.7
<b>All renewables and wastes (13)</b>	<b>10,541.2</b>	<b>12,421.3</b>	<b>14,273.1</b>

(1) Includes some waste of fossil fuel origin.

(2) See paragraphs 6.39 to 6.74 of the 2014 Digest of UK Energy Statistics for technical notes and definitions of the categories used in this table.

(3) For wind, solar PV and hydro, the figures represent the energy content of the electricity supplied but for biomass the figures represent the energy content of the fuel used.

(4) Includes the EMEC test facility

(5) Excluding pumped storage stations.

(6) Biodegradable part only.

(7) Includes electricity from poultry litter combustion and meat &amp; bone combustion

(8) Includes electricity from straw and energy crops.

(9) Non-biodegradable part of municipal solid waste plus waste tyres, hospital waste, and general industrial waste.

(10) Includes heat from farm waste digestion, meat and bone combustion and sewage sludge combustion.

(11) Includes heat from straw, energy crops, paper and packaging.

(12) Includes heat pumps for the first time

(13) The figures in this row correspond to the total demand and total supply figures in Tables 6.1, 6.2 and 6.3.

## Fuel Poverty levels in England, 2013

Fuel poverty in England is measured using the Low Income High Costs (LIHC) indicator. In March 2015 the Government published ‘Cutting the cost of keeping warm: a fuel poverty strategy for England’<sup>1</sup>, setting out in detail its statutory target to raise as many fuel poor homes in England as is reasonably practicable to Band C by 2030. The strategy also set out interim milestones to lift as many fuel poor homes in England as is reasonably practicable to Band E by 2020 and Band D by 2025, alongside a strategic approach to developing policy to make progress towards those targets.

Under the Low Income High Costs definition, a household is considered to be fuel poor if:

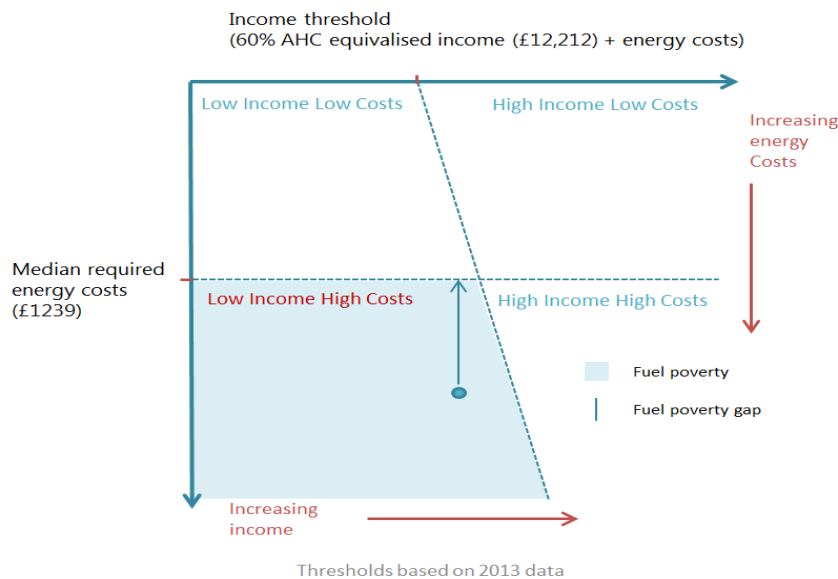
- they have required fuel costs that are above average (the national median level);
- were they to spend that amount, they would be left with a residual income below the official poverty line.

The Low Income High Costs indicator consists of two components:

- the **number** of households that have both low incomes and high fuel costs (shown by the shaded area in bottom left hand quadrant in Figure 1 below); and
- the **depth** of fuel poverty amongst these fuel poor households. This is measured through a fuel poverty gap (shown by the vertical arrow) which represents the difference between the required fuel costs for each household and the median required fuel costs.

The fuel poverty gap for each individual household is then aggregated across all fuel poor households to produce an overall fuel poverty gap which gives a sense of the depth of fuel poverty on a national level.

**Figure 1: Fuel poverty under the Low Income High Costs indicator**



### Headline figures

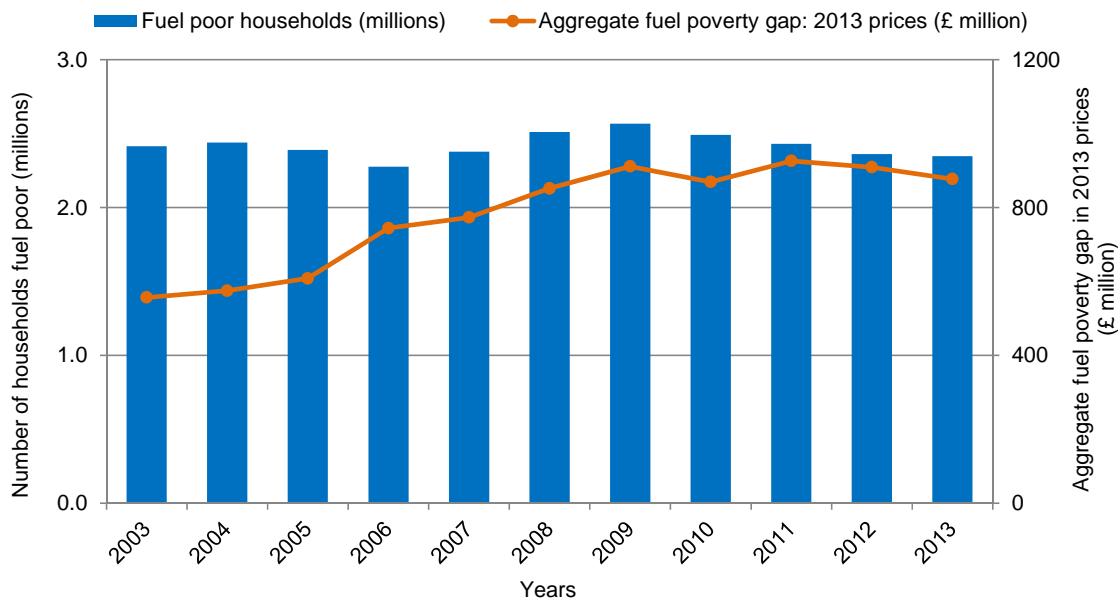
In 2013, the number of households in fuel poverty in England was estimated at around 2.35 million, representing approximately 10.4 per cent of all English households. This is broadly unchanged from 2.36 million households in 2012 (a change of around 0.5 per cent). The aggregate fuel

<sup>1</sup>[www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/408644/cutting\\_the\\_cost\\_of\\_keeping\\_warm.pdf](http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/408644/cutting_the_cost_of_keeping_warm.pdf)



poverty gap fell by four per cent in real terms, from £909 million in 2012 to £877 in 2013, and the average fuel poverty gap also fell, in real terms, from £385 to £375.

**Chart 1: Fuel poverty in England, 2003 – 2013**



In 2014 Government set a target to improve the energy efficiency of fuel poor homes, by getting as many households as reasonably practicable to a minimum standard of band C by 2030. Table 1 shows fuel poor households by the Fuel Poverty Energy Efficiency rating<sup>2</sup> of their dwellings. As can be seen, the proportion of fuel poor households in band C has increased from two to five per cent between 2010 and 2013. There has also been an increase in the proportion of households in band D and a reduction in fuel poor households in bands E and F.

**Table 1: Fuel Poverty by the FP Energy Efficiency Rating, 2010- 2013**

Band	2010		2013	
	Number	Proportions	Number	Proportions
A/B				
C	0.04	2%	0.11	5%
D	0.69	28%	1.09	46%
E	1.23	49%	0.84	36%
F	0.39	16%	0.23	10%
G	0.14	6%	0.08	3%
Total	2.49	100.0%	2.35	100%

### Interpreting Fuel poverty

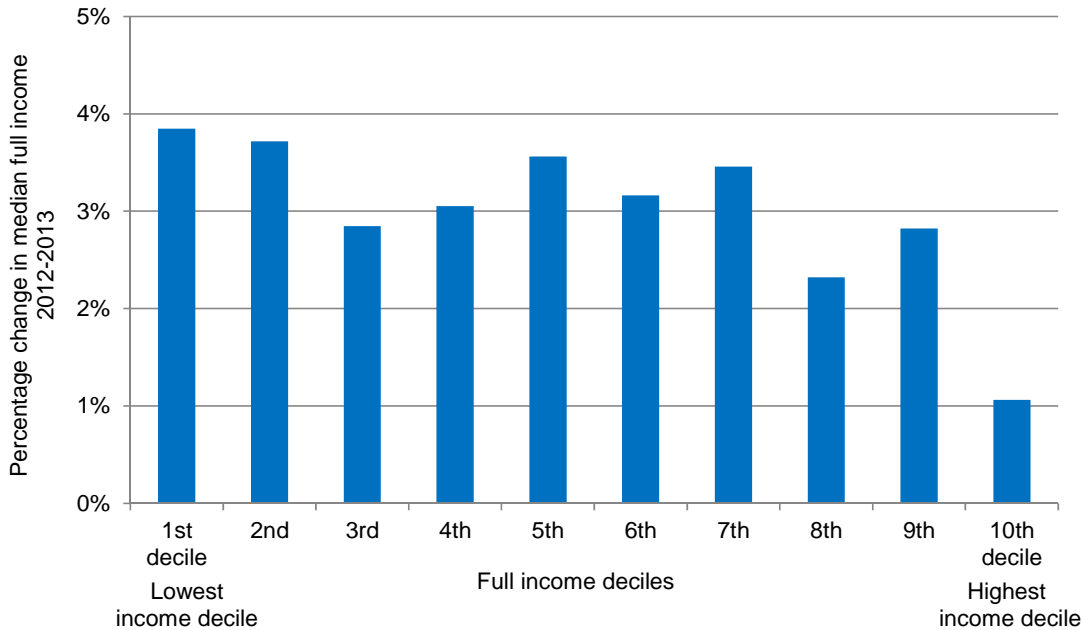
The fuel poverty status of a household is driven by an interaction of three key factors: incomes, fuel prices and energy efficiency.

### Income

In 2013, average median full income (before housing costs) continued to increase. However, as the chart below shows, this increase was not evenly spread across the income decile groups. Those households in the lower income deciles saw a greater rise in their income than those in the higher income deciles.

<sup>2</sup> For details on the Fuel Poverty Energy Efficiency Rating Methodology see: [www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/332236/fpeer\\_methodology.pdf](http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/332236/fpeer_methodology.pdf)

**Chart 2: Annual percentage change in median full income by income deciles, 2012 – 2013**

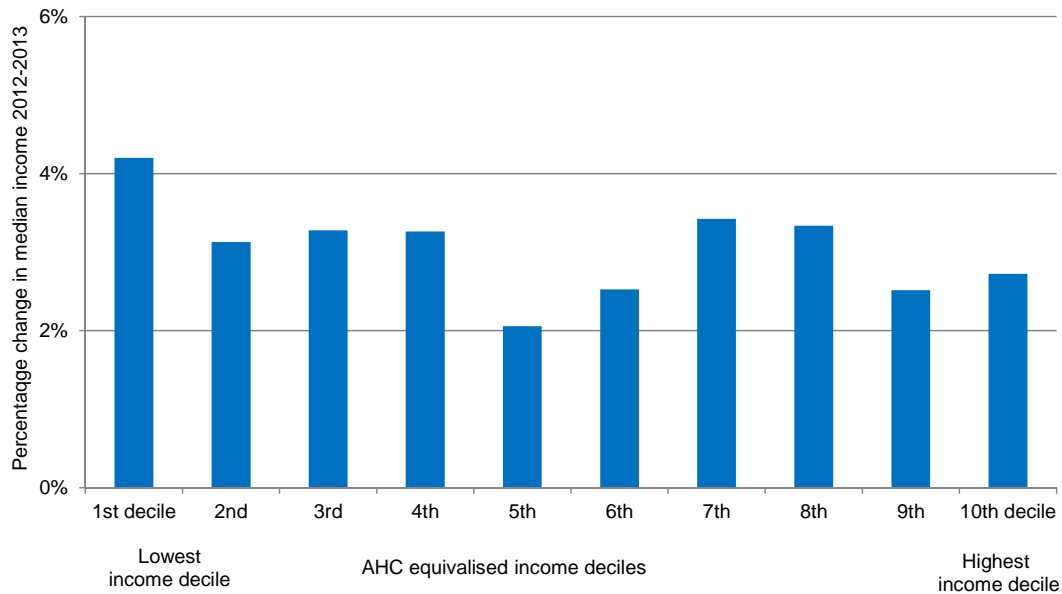


Households in the lower income deciles are predominantly in receipt of state benefit, tax credits and housing related income. In contrast, incomes of households in the higher deciles are dominated by earnings. As a result, increases in state benefits and housing income are a major factor behind income rises in the lower deciles, whilst in general earnings saw smaller increases, affecting the incomes of households in the higher income deciles. Household income is made up of various elements, including benefits, earnings and income from additional adults. In 2013 there has been an increase in income from additional adults in the household, across all deciles, reflecting the growth in multi-person households.

Under the LIHC indicator, housing costs are taken off the income of each household. This is to reflect that money spent on housing costs cannot be spent on fuel. Once housing costs are deducted, incomes are then equivalised to reflect the fact that different household types will have different spending requirements. For example, a single person on a given income will usually have more disposable income than a family of four on the same income.

In the past, households in the lower income deciles have seen smaller increases in AHC equivalised income, as they are most likely to have housing costs. However, in 2013 households in the lower deciles have seen a larger increase in AHC equivalised income. This is because median housing costs for the bottom decile have risen by just 0.6 per cent between 2012 and 2013, compared to 4.0 per cent for the population as a whole. Moreover, rent payments for the bottom decile have risen by just two per cent. This coupled with an increase in the proportion of households renting in the bottom decile (from 68 to 74 per cent), has led to income increases outstripping the rise in housing costs.

**Chart 3: Annual percentage change in median AHC equivalised income by income deciles, 2012 – 2013**

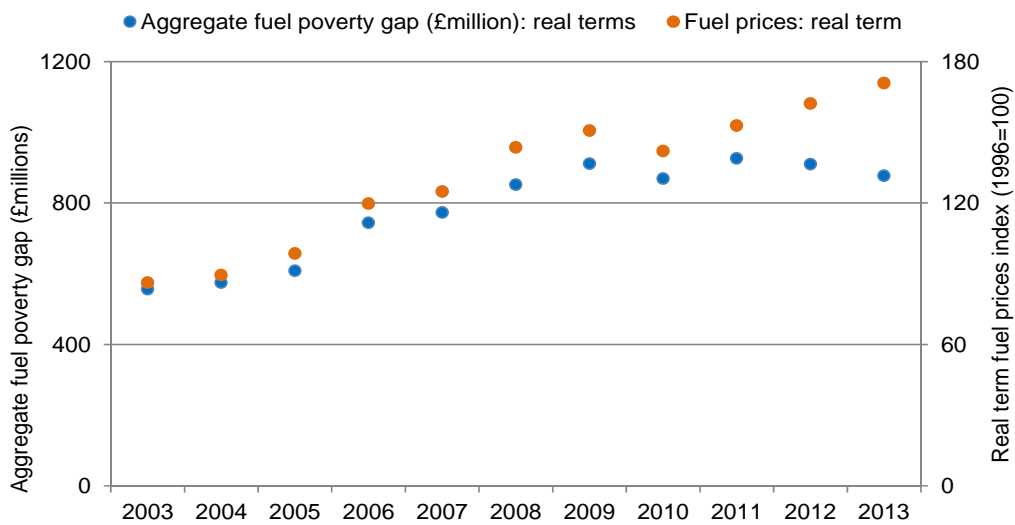


An increase in equivalised AHC income for households in the very bottom decile is however unlikely to have a large impact under the LIHC indicator, as despite their income increasing they are still likely to be classed as having ‘low incomes’.

**Prices**

Historically there has been a strong relationship between fuel prices and the aggregate fuel poverty gap as can be seen by Chart 4. As prices increased steadily between 2003 and 2009, the fuel poverty gap also increased; and when prices fell sharply in 2010, the aggregate fuel poverty gap showed a corresponding reduction

**Chart 4: Aggregate fuel poverty gap and real term fuel prices, 2003 – 2013**



However, despite rising fuel prices in 2013, both the aggregate and average fuel poverty gap fell. This is largely due to rising incomes among the low income group, which helped to temper any increase in fuel costs. This effectively moved fuel poor households closer to the income threshold

### Special feature – Fuel Poverty levels

(Figure 1). In addition, the fuel costs of the LIHC group increased by less than the overall median fuel costs, bringing them closer to the fuel cost threshold.

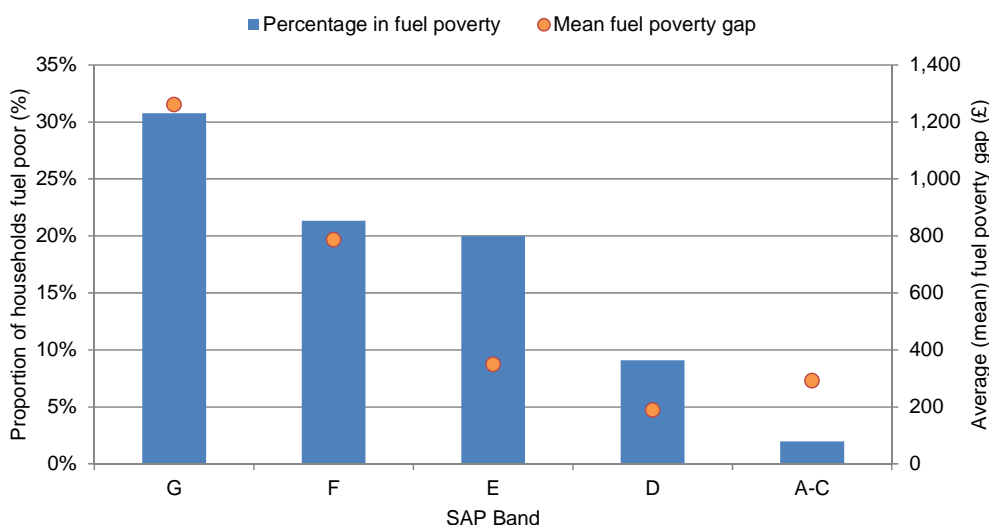
It should be noted that the correlation between prices and fuel poverty is weakened by the fact that each fuel poverty dataset is actually a combination of two consecutive years' worth of data (i.e. the 2013 data is a combination of 2012/13 and 2013/14 data).

### Energy Efficiency

The energy efficiency of a dwelling is a key driver of the likelihood of a household being fuel poor, as it is strongly linked to the fuel cost incurred by a household. The average energy efficiency of households, as indicated by the SAP 12 continued to increase in 2013, rising to 60 from 58.7 in 2012. In line with this, a greater proportion of dwellings are now classed SAP band D or above (75% of dwellings in 2013 compared to 69% in 2012 and 64% in 2011).

Chart 5 shows the fuel poverty rates by different SAP rating bands (based on SAP12 methodology) under the low income high cost indicator.

**Chart 5: Fuel poverty by SAP band, 2013**



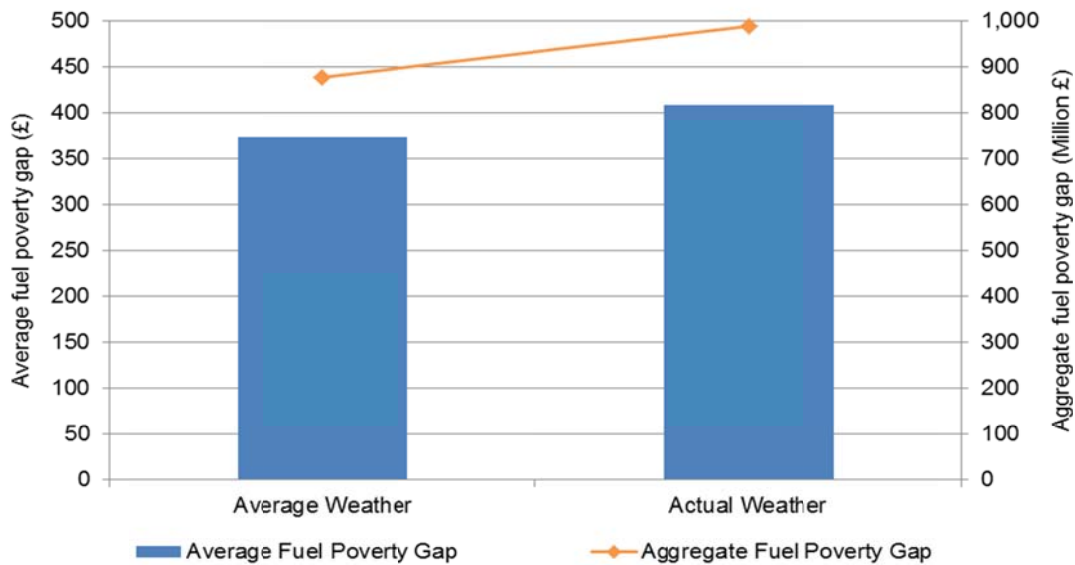
It can be seen that both the likelihood of being fuel poor and the fuel poverty gap increase in the lower SAP bands. In 2013, 31 per cent of households living in G rated properties were fuel poor compared to only two and nine per cent of households living in A/B/C and D rated properties respectively. The corresponding average fuel poverty gap is also three and half times higher in G rated properties compared to A/B/C rated properties and six times higher than in D rated properties (with an average fuel poverty gap of around £1274 in G rated properties compared to £370 in A/B/C rated properties and £209 in D rated properties).

In addition, in 2013 there were some methodological changes to the English Housing Survey which may have caused some of the reduction in the fuel poverty gap (see the full report section 1.5.2 for more details).

### Weather

Fuel poverty is calculated using standardised temperatures over a 20 year period, in order to be able to assess long term changes and identify where improvements can be made. However, for 2013 some additional analysis was undertaken looking at the impact of using actual annual temperature data on fuel poverty. It was found the number of households in fuel poverty would have been 2.42 million in 2013, using 2012 and 2013 temperature data. The aggregate and average gap would also have increased by 12 and nine per cent respectively (Chart 6).

**Chart 6: Mean and aggregate fuel gap for 2013 for average and actual temperature model runs.**



However, predicting the impact of weather on fuel poverty is complex due to the fact the fuel poverty dataset covers a two year period. Whilst it is likely that a colder year will see more households move into fuel poverty and the fuel poverty gap increase, it is plausible that different regional and local temperature effects may actually lead to a small fall in fuel poverty.

### Summary

Due to the relative nature of the LIHC measure, it is difficult to accurately isolate absolute reasons for changes. However, in summary, low income households have seen larger rises in incomes and a smaller increase in fuel costs, than the overall population. The rise in incomes has largely been concentrated in very low income households and so has not changed their fuel poverty status, resulting in the number of fuel poor households staying broadly the same.

Rising incomes and improvements in energy efficiency amongst fuel poor households, and a smaller increase in fuel bills than experienced in the population as a whole has meant there has been a decrease in the fuel poverty aggregate and average gap.

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## **Energy Consumption in the United Kingdom: publication of data**

Energy consumption in the UK (ECUK) consists of five factsheets and a comprehensive set of tables containing the actual datasets. The five fact sheets relate to Overall Energy, Transport, Domestic, Industrial and Services consumption. They provide a brief overview of the trends and some key drivers that have influenced energy consumption in the UK since 1970. The overall consumption data are sourced from The Digest of UK Energy Statistics (DUKES) and provide tables based on both primary energy (including conversion losses), and final end use. More disaggregated breakdowns are based on various additional sources and either modelled or interpolated.

The majority of tables are reliant on DUKES data or other readily available data sources so the bulk of the tables will be published alongside DUKES on 30 July 2015.

However, DECC is currently undertaking a Business Energy Efficiency Survey (BEES), the results of which will provide additional evidence for certain ECUK tables, notably in the services sector. The results of this survey will not be available for analysis until later in 2015 or early 2016, and so these tables will not be updated for the main release on 30 July;

- Service sector energy consumption by sub-sector and end use by fuel
- Final energy consumption in the service sector by sub-sector and end use
- Service sector final energy consumption by sub-sector and end use, by fuel

Table 1.07, “Overall energy consumption for heat and other end uses by fuel 2014” will be updated using current methodologies for estimating services consumption as this table provides the overall sector breakdown and is a key table. This will be revised along with the other services tables later in 2015 or early 2016.

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## **Recent and forthcoming publications of interest to users of energy statistics**

### **Smart Meters quarterly statistics**

This quarterly publication provides estimates of the number of Smart Meters installed and operating in homes and businesses in Great Britain. The latest release, covering estimates of the number of Smart Meters deployed up to the end of March 2015, was published on 11 June 2015 at: [www.gov.uk/government/collections/smart-meters-statistics](http://www.gov.uk/government/collections/smart-meters-statistics)

### **Green Deal and ECO monthly and quarterly statistics**

These publications provide estimates of various elements of the rollout of the Green Deal and ECO policy, including number of assessments, plans, and measures installed. The latest releases were published on 18 June 2015 at:

[www.gov.uk/government/collections/green-deal-and-energy-company-obligation-eco-statistics](http://www.gov.uk/government/collections/green-deal-and-energy-company-obligation-eco-statistics)

### **Estimates of home insulation levels in Great Britain**

This quarterly publication, released alongside the quarterly Green Deal and ECO statistics, provides estimates of the number of homes in Great Britain with cavity wall insulation, loft insulation and solid wall insulation. The latest release, detailing estimates of home insulation levels in Great Britain: March 2015, was published on 18 June 2015 at:

[www.gov.uk/government/collections/green-deal-and-energy-company-obligation-eco-statistics](http://www.gov.uk/government/collections/green-deal-and-energy-company-obligation-eco-statistics)

### **Sub-national road transport consumption during 2013**

This annual publication provides estimates of road transport fuel consumption in the United Kingdom, by vehicle and fuel type. Data for 2013 will be released on 25 June 2015 at:

[www.gov.uk/government/collections/road-transport-consumption-at-regional-and-local-level](http://www.gov.uk/government/collections/road-transport-consumption-at-regional-and-local-level)

### **National Energy Efficiency Data-framework 2015**

This publication presents analysis from the National Energy Efficiency Data-Framework (NEED). It provides updated domestic energy consumption results to include 2013 gas and electricity consumption data. It also includes updated estimates of the impact of installing energy efficiency measures on a household's gas consumption for measures installed in 2012. The publication will be released on 25 June 2015 at:

[www.gov.uk/government/collections/national-energy-efficiency-data-need-framework](http://www.gov.uk/government/collections/national-energy-efficiency-data-need-framework)

### **Digest of United Kingdom Energy Statistics**

This annual publication provides essential information for everyone involved in energy, from economists to environmentalists, and from energy suppliers to energy users. The 2015 edition will be published on 30 July 2015. With extensive tables, charts and commentary covering all the major aspects of energy, it provides a detailed and comprehensive picture of energy production and use over the last 5 years. It will be available to purchase from The Stationery Office, and it can also be accessed for free on the Internet (along with additional annexes and key series back to 1970) at:

[www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes](http://www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes)

### **UK Energy in Brief**

This annual publication summarises the latest statistics on energy production, consumption, prices and climate change in the United Kingdom. The figures are primarily taken from the Digest of United Kingdom Energy Statistics (see above). The 2015 edition will be published on 30 July 2015 and will be available free from DECC. It can also be accessed on the Internet at:

[www.gov.uk/government/collections/uk-energy-in-brief](http://www.gov.uk/government/collections/uk-energy-in-brief)

### **Energy Flow Chart**

This annual publication illustrates the flow of primary fuels from home production and imports to their eventual final uses. The flows are shown in their original state and after being converted into different kinds of energy by the secondary fuel producers, and are measured in million tonnes of oil

### *Special feature – Recent and forthcoming publications*

equivalent, with the widths of the bands approximately proportional to the size of the flows they represent. The 2015 edition of the chart, showing the flows for 2014, will be published on 30 July 2015. The Chart will be available free from DECC and it can also be accessed on the Internet at: [www.gov.uk/government/collections/energy-flow-charts](http://www.gov.uk/government/collections/energy-flow-charts)

#### **Sub-national consumption of other fuels, 2013**

This factsheet presents the findings of the residual fuels sub-national energy consumption analysis in the UK for the period covering 1 January to 31 December 2013. Other fuels are defined as non-gas, non-electricity and non-road transport fuels, and cover consumption of coal, petroleum, manufactured solid fuels and bioenergy and waste not used for electricity generation or road transport. The release will be published on 24 September 2015 at: [www.gov.uk/government/collections/sub-national-consumption-of-other-fuels](http://www.gov.uk/government/collections/sub-national-consumption-of-other-fuels)

#### **Sub-national total final energy consumption, 2013**

This factsheet presents the findings of the sub-national energy consumption analysis in the UK for all fuels, for the period covering 1 January to 31 December 2013. The release will be published on 24 September 2015 at: [www.gov.uk/government/collections/total-final-energy-consumption-at-sub-national-level](http://www.gov.uk/government/collections/total-final-energy-consumption-at-sub-national-level)



# Explanatory notes

## General

More detailed notes on the methodology used to compile the figures and data sources are available on the DECC section of the gov.uk website.

## Notes to tables

- Figures for the latest periods and the corresponding averages (or totals) are provisional and are liable to subsequent revision.
- The figures have not been adjusted for temperature or seasonal factors except where noted.
- Due to rounding the sum of the constituent items may not equal the totals.
- Percentage changes relate to the corresponding period a year ago. They are calculated from unrounded figures but are shown only as (+) or (-) when the percentage change is very large.
- Quarterly figures relate to calendar quarters.
- All figures relate to the United Kingdom unless otherwise indicated.
- Further information on Oil and Gas is available at: [www.gov.uk/browse/business/generating-energy/oil-and-gas-exploration-and-production](http://www.gov.uk/browse/business/generating-energy/oil-and-gas-exploration-and-production)

## Abbreviations

ATF	Aviation turbine fuel
CCGT	Combined cycle gas turbine
DERV	Diesel engine road vehicle
LNG	Liquefied natural gas
MSF	Manufactured solid fuels
NGLs	Natural gas liquids
UKCS	United Kingdom continental shelf

## Symbols used in the tables

- .. not available
- nil or not separately available
- p provisional
- r revised; where a column or row shows 'r' at the beginning, most, but not necessarily all, of the data have been revised.
- e estimated; totals of which the figures form a constituent part are therefore partly estimated

## Conversion factors

1 tonne of crude oil =	7.55 barrels
1 tonne =	1,000 kilograms
1 gallon (UK) =	4.54609 litres
1 kilowatt (kW) =	1,000 watts
1 megawatt (MW) =	1,000 kilowatts
1 gigawatt (GW) =	1,000 megawatts
1 terawatt (TW) =	1,000 gigawatts

All conversion of fuels from original units to units of energy is carried out on the basis of the gross calorific value of the fuel. More detailed information on conversion factors and calorific values is given in Annex A of the Digest of United Kingdom Energy Statistics.

## Conversion matrices

To convert from the units on the left hand side to the units across the top multiply by the values in the table.

To:	Thousand toe	Terajoules	GWh	Million therms
<b>From</b>	<b>Multiply by</b>			
Thousand toe	1	41.868	11.630	0.39683
Terajoules (TJ)	0.023885	1	0.27778	0.0094778
Gigawatt hours (GWh)	0.085985	3.6000	1	0.034121
Million therms	2.5200	105.51	29.307	1

To:	Tonnes of oil equivalent	Gigajoules	kWh	Therms
<b>From</b>	<b>Multiply by</b>			
Tonnes of oil equivalent	1	41.868	11,630	396.83
Gigajoules (GJ)	0.023885	1	277.78	9.4778
Kilowatt hours (kWh)	0.000085985	0.003600	1	0.034121
Therms	0.0025200	0.105510	29.307	1

Note that all factors are quoted to 5 significant figures

## Sectoral breakdowns

The categories for final consumption by user are defined by the Standard Industrial Classification 2007, as follows:

Fuel producers	05-07, 09, 19, 24.46, 35
Final consumers	
Iron and steel	24 (excluding 24.4, 24.53 and 24.54)
Other industry	08, 10-18, 20-23, 24.4 (excluding 24.46), 24.53, 24.54, 25-33, 36-39, 41-43
Transport	49-51
Other final users	
Agriculture	01-03
Commercial	45-47, 52-53, 55-56, 58-66, 68-75, 77-82
Public administration	84-88
Other services	90-99
Domestic	Not covered by SIC 2007

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