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of Energy &
Climate Change



A National Statistics Publication



ENERGY TRENDS

JUNE 2014

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- meet identified user needs
- are well explained and readily accessible
- are produced according to sound methods, and
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This document is also available from our website at: www.gov.uk/government/collections/energy-trends

Explanatory notes are to be found inside the back cover

Contents

	Page
Introduction	3
The main points for the first quarter of 2014	4
Section 1 - Total Energy	5
Tables	
1.1: Indigenous production of primary fuels	9
1.2: Inland energy consumption: primary fuel input basis	10
1.3: Supply and use of fuels	11
Section 2 - Solid Fuels and Derived Gases	13
Tables	
2.1: Supply and consumption of coal	16
2.2: Supply and consumption of coke oven coke, coke breeze and other manufactured solid fuels	17
2.3: Supply and consumption of coke oven gas, blast furnace gas, benzole and tars	18
Section 3 - Oil and Oil Products	19
Tables	
3.1: Supply and use of crude oil, natural gas liquids and feedstocks	24
3.2: Supply and use of petroleum products	25
3.3: Supply and use of petroleum products - annual data	26
3.4: Supply and use of petroleum products - latest quarter	27
3.5: Demand for key petroleum products	28
3.6: Stocks of petroleum at end of period	29
3.7: Drilling activity on the UK Continental Shelf	30
Section 4 - Gas	31
Table	
4.1: Natural gas supply and consumption	36
Section 5 - Electricity	37
Tables	
5.1: Fuel used in electricity generation and electricity supplied	41
5.2: Supply and consumption of electricity	42
Section 6 - Renewables	43
Tables	
6.1: Renewable electricity capacity and generation	47
6.2: Liquid biofuels for transport consumption	48

Contents continued

Special feature articles	Page
Renewable energy in 2013	49
Fuel Poverty levels in England, 2012	62
Energy price variation in the domestic energy market	69
Future changes to Energy Consumption in the UK (ECUK)	74
Domestic Renewable Heat Incentive scheme	76
Enhancements to Energy Trends gas tables	78
Changes to oil demand data	82
Recent and forthcoming publications of interest to users of energy statistics	84
List of special feature articles published in Energy Trends between June 2013 and March 2014	86

The cover illustration used for Energy Trends and other DECC energy statistics publications is from a photograph by David Askew. It was a winning entry in the DTI News Photographic Competition in 2002.

Introduction

Energy Trends and Quarterly 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 2013 edition of the Digest was published on 25 July 2013. Printed and bound copies of the 2013 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

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

Annual data for 2013 included within this edition is on a provisional basis. New data are continually received and revisions to previous data made. Finalised figures for 2013 will be published on the 31 July 2014 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.

Information on Prices can be found in the Quarterly Energy Prices publication and on the DECC section of the gov.uk website at: www.gov.uk/government/collections/quarterly-energy-prices

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The main points for the first quarter of 2014:

- Total energy production was under ½ per cent lower than in the first quarter of 2013. This small decline in production was due to falls in coal as a result of mine closures and in nuclear output as a result of outages and maintenance at stations, offset by strong growth in output from wind and natural flow hydro.
- Oil production rose by 3½ per cent when compared with the first quarter of 2013, the second consecutive quarter of growth, in part reflecting new production facilities.
- Natural gas production was broadly unchanged when compared to the first quarter of 2013. Gas imports decreased by 21 per cent, with pipeline and LNG imports both down by around 20 per cent.
- Coal production in the first quarter of 2014 was 28 per cent lower than the first quarter of 2013 due to mine closures, and was at a record low level. Coal imports were 3 per cent lower with generators' demand for coal down by 18 per cent.
- Total primary energy consumption for energy uses fell by 10½ per cent. However, when adjusted to take account of weather differences between the first quarter of 2013 and the first quarter of 2014, primary energy consumption fell by 2 per cent.
- Temperatures in the quarter were on average 3.1 degrees warmer than a year earlier, with March the warmest month of the quarter, 4.6 degrees warmer than a year earlier.
- Final energy consumption was provisionally 10½ per cent lower than in the first quarter of 2013, within which domestic consumption fell by 21 per cent reflecting the warmer weather. On a temperature adjusted basis, final energy consumption was down 2 per cent.
- Total deliveries of the key transport fuels were up 1½ per cent when compared to the same period last year. Motor spirit deliveries were down 4½ per cent, DERV deliveries were up 2 per cent while aviation turbine fuel deliveries were up 7½ per cent on a low first quarter of 2013 figure.
- Electricity generated in the first quarter of 2014 fell by 8 per cent, from 101.7 TWh a year earlier to 93.3 TWh.
- Shares of generation of fossil fuels fell in the first quarter of 2014 compared to a year earlier. Coal's share decreased from 40.8 per cent to 37.1 per cent, whilst gas's share fell from 26.6 per cent to 23.4 per cent, its lowest share for at least 16 years. Nuclear's share of generation fell from 18.0 per cent in the first quarter of 2013 to 17.7 per cent in the first quarter of 2014 due to stations on outage or closed for maintenance in the first quarter of 2014.
- Renewables' share of electricity generation increased to 19.4 per cent from the 12.4 per cent share in the first quarter of 2013. Hydro generation increased by 78 per cent on the first quarter of 2013 as a result of higher rainfall compared to the same quarter last year. Over the same period, wind generation increased by 59 per cent, of which offshore wind generation rose by 53 per cent due to much increased capacity. Overall hydro, wind and solar PV generation was up 43 per cent.
- In the first quarter of 2014, 145 MW of capacity joined the Feed in Tariff scheme, increasing the total to 2,386 MW, approximately 11 per cent of all renewable installed capacity.

Section 1 - Total Energy

Key results show:

Total energy production was 0.2 per cent lower than in the first quarter of 2013.
(Charts 1.1 & 1.2)

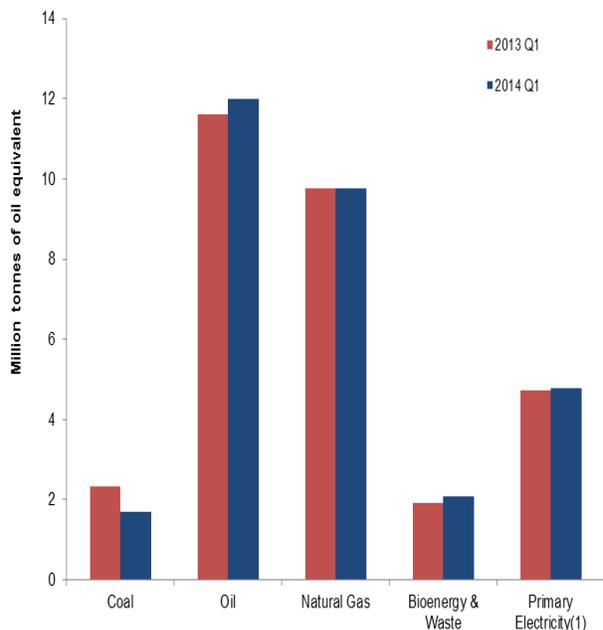
Total primary energy consumption for energy uses fell by 10.7 per cent. However, when adjusted to take account of weather differences between the first quarter of 2013 and the first quarter of 2014, primary energy consumption is estimated to have fallen by 1.9 per cent. (Chart 1.3)

Final energy consumption fell by 10.3 per cent compared to the first quarter of 2013 reflecting the warmer weather in the quarter. Domestic consumption fell by 20.7 per cent, other final users' consumption fell by 10.3 per cent, industrial consumption fell by 6.2 per cent, whilst transport consumption rose by 2.2 per cent. (Chart 1.4)

Net import dependency was 43.6 per cent, broadly unchanged from the first quarter of 2013. (Chart 1.6)

Fossil fuel dependency was 86.0 per cent in the first quarter of 2014. (Chart 1.7)

Chart 1.1 Production of indigenous primary fuels



Total production in the first quarter of 2014 stood at 30.3 million tonnes of oil equivalent, 0.2 per cent lower than in the first quarter of 2013.

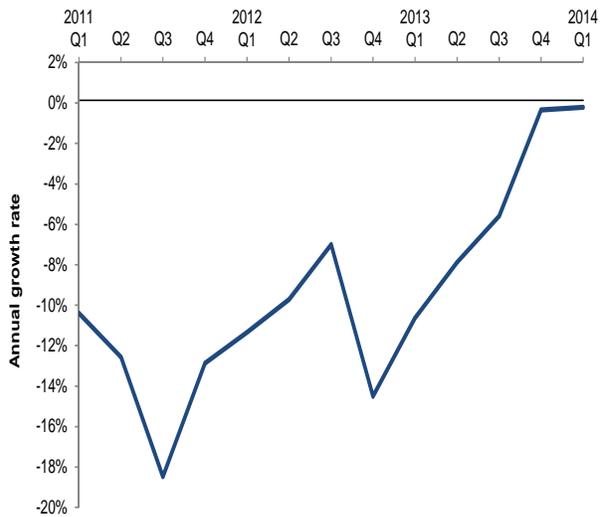
Production of natural gas fell slightly by 0.2 per cent but production of oil rose by 3.5 per cent compared to the first quarter of 2013, as a result of a new Floating, Production, Storage and Offloading (FPSO) vessel.

Primary electricity output in the first quarter of 2014 was 1.2 per cent higher than in the first quarter of 2013, within which nuclear electricity output was 9.7 per cent lower due to outages and maintenance at stations. However, output from wind and natural flow hydro was 61.6 per cent higher than the same period in 2013, due to the continued increase in wind capacity and both increased wind speeds and rainfall.

(1) Nuclear and wind & natural flow hydro electricity.

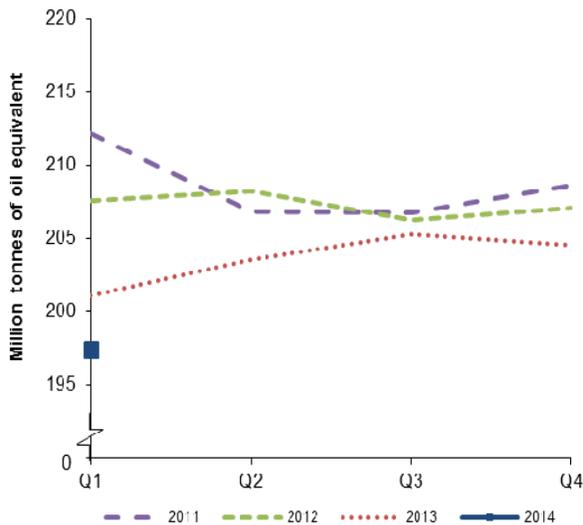
Total Energy

Chart 1.2 UK production (annual growth rate)



In the first quarter of 2014, the annual growth rate of UK production was -0.2 per cent. The growth in oil and renewable electricity generation were not sufficient to offset the falls in coal production (due to mine closures) and nuclear output.

Chart 1.3 Total inland consumption (primary fuel input basis)⁽¹⁾



Total inland consumption on a primary fuel input basis (temperature corrected, seasonally adjusted annualised rate), was 197.4 million tonnes of oil equivalent in the first quarter of 2014, 1.9 per cent lower than in the first quarter of 2013. On an unadjusted basis inland consumption was down 10.7 per cent, due to the mild weather in the first quarter of 2014 when the average temperature was 3.1 degree Celsius warmer than the same period a year earlier.

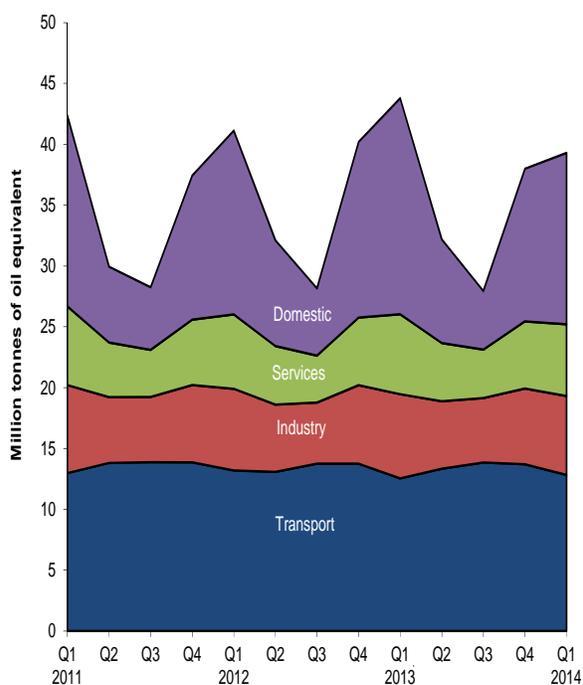
Between the first quarter of 2013 and the first quarter of 2014 (on a seasonally adjusted and temperature corrected basis) coal and other solid fuel consumption rose by 1.1 per cent.

Also on a seasonally adjusted and temperature corrected basis, oil consumption fell by 0.2 per cent between the first quarter of 2013 and the first quarter of 2014.

On the same basis, natural gas consumption fell by 8.0 per cent between the first quarter of 2013 and the first quarter of 2014. Unadjusted demand was down 19.9 per cent, with a large fall in domestic demand due to the milder weather.

(1) Seasonally adjusted and temperature corrected annual rates

Chart 1.4 Final energy consumption by user



Total final energy consumption fell by 10.3 per cent between the first quarter of 2013 and the first quarter of 2014.

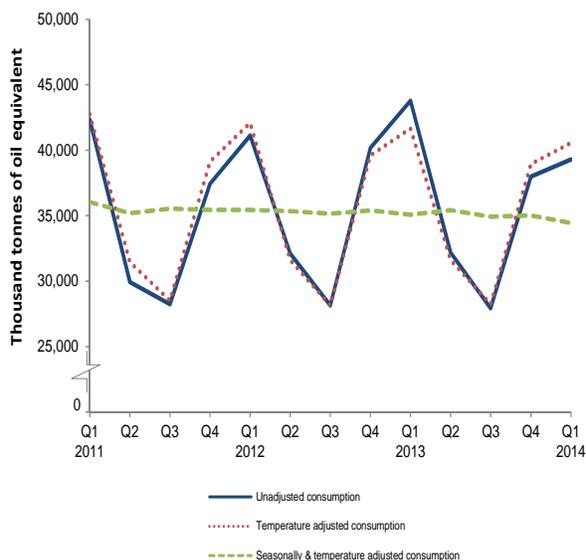
Domestic sector energy consumption fell by 20.7 per cent, reflecting the warmer weather compared to a year earlier.

Service sector energy consumption fell by 10.3 per cent.

Industrial sector energy consumption fell by 6.2 per cent.

Transport sector energy consumption rose by 2.2 per cent.

Chart 1.5 Seasonally adjusted and temperature corrected final energy consumption



Total unadjusted final energy consumption (excluding non-energy use) fell by 10.3 per cent between the first quarter of 2013 and the first quarter of 2014.

On a seasonally and temperature adjusted basis final energy consumption (excluding non-energy use) fell by 1.8 per cent between the first quarter of 2013 and the first quarter of 2014.

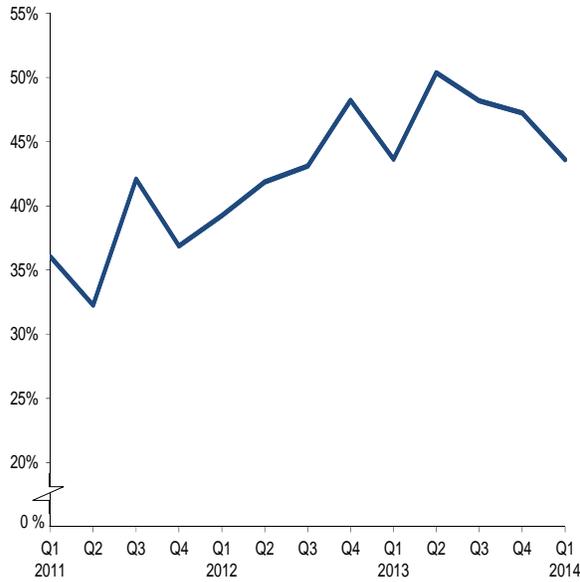
Unadjusted domestic consumption fell by 21 per cent over this same period, and was down 2.5 per cent on a temperature and seasonally adjusted basis.

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/publications/total-energy-section-1-energy-trends

Total Energy

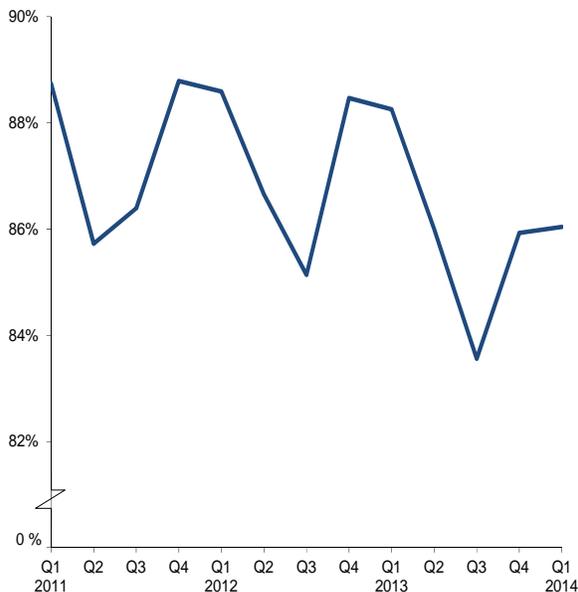
Chart 1.6 Net import dependency



In the first quarter of 2014 net import dependency was 43.6 per cent, down compared to the previous three quarters, but broadly unchanged from the first quarter of 2013.

Compared to a year earlier, imports of gas were down 21 per cent, with total imports down 9.4 per cent. The warmer weather resulted in lower energy demand, especially for heating fuels, which resulted in the overall dependency level being unchanged.

Chart 1.7 Fossil fuel dependency



In the first quarter of 2014 fossil fuel dependency was 86.0 per cent, down 2.2 percentage points from the first quarter of 2013.

Relevant tables

- 1.1: Indigenous production of primary fuels..... Page 9
- 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						
		Total	Coal ¹	Petroleum ²	Natural gas ³	Bioenergy & waste ^{4,5}	Nuclear	Wind and natural flow hydro ⁶
2009		166.8r	11.0	74.7	59.7	4.8r	15.2	1.22r
2010		157.9	11.5	69.0	57.2	5.2	13.9	1.19
2011		136.8	11.6	56.9	45.3	5.5r	15.6	1.84
2012		122.0r	10.6	48.8	38.9	6.2r	15.2	2.25r
2013 p		114.3r	8.0	44.5r	36.5	6.9	15.4r	2.99r
<i>Per cent change</i>		-6.3	-24.8	-8.8	-6.2	+10.4	+1.6	+32.9
2013	Quarter 1	30.4r	2.3	11.6	9.8	1.9	4.0r	0.72
	Quarter 2	29.1r	2.2	11.4	9.7	1.7r	3.4r	0.70r
	Quarter 3	25.6	1.8	10.0	7.8	1.4r	4.1r	0.54r
	Quarter 4	29.3r	1.7	11.5	9.3	1.8r	4.0r	1.03r
2014	Quarter 1 p	30.3r	1.7	12.0	9.8	2.1r	3.6	1.16r
<i>Per cent change⁷</i>		-0.2	-27.7	+3.5	-0.2	+7.2	-9.7	+61.6

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

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

	Total	Coal ¹	Petroleum ²	Natural gas ³	Bioenergy & waste ^{4,5}	Primary electricity			Total	Coal	Petroleum	Natural gas	Bioenergy & waste	Primary electricity				
						Nuclear	Wind and natural	Net imports						Nuclear	Wind and natural	Net imports		
	<i>Unadjusted⁷</i>									<i>Seasonally adjusted and temperature corrected^{8,9} (annualised rates)</i>								
2009	211.3r	31.3	70.9r	86.3r	6.1r	15.2	1.22r	0.25	212.5r	31.7	70.9r	87.1r	6.1r	15.2	1.22r	0.25		
2010	218.8r	32.8r	70.2r	93.6r	6.9	13.9	1.19	0.23	213.1r	31.3r	70.2r	89.4r	6.9	13.9	1.19	0.23		
2011	203.1r	32.4	67.8r	77.6r	7.2r	15.6	1.84	0.53	208.6r	34.2	67.8r	81.4r	7.2r	15.6	1.84	0.53		
2012	207.3r	41.1	66.9r	73.3r	7.7r	15.2	2.25r	1.02r	207.3r	41.0	66.9r	73.3r	7.7r	15.2	2.25r	1.02r		
2013 p	206.0r	39.3	65.5r	72.7r	8.8r	15.4r	2.99r	1.24r	203.6r	38.9	65.5r	70.7r	8.8r	15.4r	2.99r	1.24r		
<i>Per cent change</i>	<i>-0.7</i>	<i>-4.4</i>	<i>-2.0</i>	<i>-0.8</i>	<i>+15.0</i>	<i>+1.6</i>	<i>+32.9</i>	<i>+21.6</i>	<i>-1.8</i>	<i>-5.1</i>	<i>-2.0</i>	<i>-3.5</i>	<i>+15.0</i>	<i>+1.6</i>	<i>+32.9</i>	<i>+21.6</i>		
2013																		
Quarter 1	61.9r	11.8	15.9r	26.9	2.3r	4.0r	0.72	0.24	201.1r	36.1	63.6r	73.7	9.2r	15.0r	2.59r	0.97		
Quarter 2	47.3r	8.8	16.3r	15.5	2.2r	3.4r	0.70r	0.31	203.6r	40.0	65.2r	71.5r	8.9r	13.3r	3.36r	1.23		
Quarter 3	42.6r	8.5	16.7r	10.4	2.0r	4.1r	0.54r	0.40	205.2r	41.9	66.7r	67.6r	7.9r	16.8r	2.71r	1.60		
Quarter 4	54.2r	10.2	16.7r	19.8	2.3	4.0r	1.03r	0.29	204.6r	37.5	66.6r	70.1r	9.2r	16.7r	3.28r	1.17		
2014																		
Quarter 1 p	55.3r	10.1r	15.9r	21.5	2.5r	3.6r	1.16r	0.42	197.4r	36.5r	63.5r	67.8	10.1r	13.6r	4.21r	1.68		
<i>Per cent change¹⁰</i>	<i>-10.7</i>	<i>-14.2</i>	<i>-0.2</i>	<i>-19.9</i>	<i>+9.5</i>	<i>-9.7</i>	<i>+61.6</i>	<i>+73.8</i>	<i>-1.9</i>	<i>+1.1</i>	<i>-0.2</i>	<i>-8.0</i>	<i>+9.5</i>	<i>-9.0</i>	<i>+62.2</i>	<i>+73.8</i>		

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

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

<https://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

	2012	2013 p	per cent change	2012 1st quarter	2012 2nd quarter	2012 3rd quarter	2012 4th quarter	2013 1st quarter	2013 2nd quarter	2013 3rd quarter	2013 4th quarter	2014 1st quarter p	per cent change ¹
SUPPLY													
Indigenous production	122,016r	114,335r	-6.3	33,946r	31,546r	27,102r	29,422r	30,353r	29,054r	25,580r	29,348r	30,297	-0.2
Imports	174,040r	177,947r	+2.2	45,233r	42,588r	39,817r	46,401r	47,361r	45,836r	40,117r	44,632r	42,914	-9.4
Exports	-80,297r	-76,184r	-5.1	-21,114	-21,375	-20,199r	-17,609r	-19,292r	-20,643r	-18,328r	-17,920r	-17,833	-7.6
Marine bunkers	-2,812r	-2,691r	-4.3	-691r	-681r	-738r	-702r	-665r	-714r	-684r	-629r	-662	-0.4
Stock change ²	+1,603	-14r		+3,410	-2,085	-1,208	+1,486	+5,886	-4,235r	-2,136r	+470r	+2,154	
Primary supply	214,550r	213,393r	-0.5	60,785r	49,993r	44,774r	58,998r	63,644r	49,299r	44,550r	55,901r	56,870	-10.6
Statistical difference ³	-381r	340r		-266r	-48r	-173r	106r	151r	47r	15r	127r	200	
Primary demand	214,932r	213,053r	-0.9	61,051r	50,042r	44,947r	58,892r	63,493r	49,252r	44,534r	55,774r	56,670	-10.7
Transfers ⁴	-55r	3r		-14r	-17r	-12r	-12r	0r	-2	-5r	9r	-11	
TRANSFORMATION													
Electricity generation	-49,612r	-47,869r	-3.5	-13,399r	-11,712r	-11,202r	-13,299r	-13,724r	-10,963r	-10,892r	-12,291r	-11,884	-13.4
Heat generation	-45,871r	-43,755r	-4.6	-12,590r	-10,737r	-10,297r	-12,247r	-12,656r	-10,013r	-9,914r	-11,173r	-10,687	-15.6
Petroleum refineries	-1,382r	-1,179r	-14.7	-399r	-318r	-276r	-389r	-405r	-265r	-218r	-291r	-414	+2.1
Coke manufacture	-74r	-75r	+2.1	37r	-23r	-9r	-79r	-14r	35r	-4r	-92r	-10	-31.5
Blast furnaces	-355r	-341	-3.9	-78r	-91	-107	-79	-82	-59	-117	-84	-67	-18.5
Patent fuel manufacture	-1,830	-2,381	+30.1	-337	-519	-489	-485	-531	-627	-609	-614	-665	+25.2
Energy industry use	-100r	-137r	+38.1	-33r	-23r	-24r	-19r	-36r	-34r	-30r	-38r	-42	+17.1
Losses	13,262r	12,641r	-4.7	3,593r	3,450r	3,167r	3,052r	3,282r	3,281r	3,075r	3,002r	3,000	-8.6
FINAL CONSUMPTION	148,752r	149,367r	+0.4	43,112r	34,052r	29,877r	41,711r	45,562r	34,226r	29,917r	39,662r	40,857	-10.3
Iron & steel	1,224r	1,458r	+19.1	286r	332r	298r	308r	399r	341r	350r	367r	331	-17.2
Other industries	22,493r	22,527r	+0.2	6,424r	5,202r	4,723r	6,145r	6,519r	5,204r	4,945r	5,860r	6,161	-5.5
Transport	53,769r	53,418r	-0.7	13,193r	13,075r	13,753r	13,749r	12,543r	13,336r	13,841r	13,698r	12,823	+2.2
Domestic	43,737r	43,627r	-0.3	15,098r	8,690r	5,521r	14,428r	17,751r	8,522r	4,814r	12,540r	14,075	-20.7
Other Final Users	20,337r	20,868r	+2.6	6,118r	4,806r	3,861r	5,552r	6,572r	4,785r	3,987r	5,524r	5,897	-10.3
Non energy use	7,192r	7,469r	+3.9	1,992r	1,947r	1,721r	1,530r	1,777r	2,039r	1,980r	1,673r	1,571	-11.6
DEPENDENCY⁵													
Net import dependency	43.1% r	47.1% r		39.2%	41.9% r	43.1% r	48.2% r	43.6% r	50.4% r	48.2% r	47.3% r	43.6%	
Fossil fuel dependency	87.4% r	86.2% r		88.6% r	86.7% r	85.1% r	88.5% r	88.3% r	86.0% r	83.6% r	85.9% r	86.0%	
Low carbon share	11.8% r	12.9% r		10.8% r	12.5% r	13.7% r	10.9%	11.1%	13.0% r	15.1% r	13.2% r	12.8%	

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

	2013 Quarter 1									2014 Quarter 1 p								
	Coal	Manufactured fuels ⁴	Primary oil	Petroleum Products	Natural gas ⁵	Bioenergy & waste ⁶	Primary electricity	Electricity	Heat sold	Coal	Manufactured fuels ⁴	Primary oil	Petroleum Products	Natural gas ⁵	Bioenergy & waste ⁶	Primary electricity	Electricity	Heat sold
SUPPLY																		
Indigenous production	2,335	-	11,598	-	9,770	1,930	4,719	-	-	1,687	-	12,012	-	9,751	2,070	4,777	-	-
Imports	7,765	74	15,900	7,265	15,647	422	-	288	-	7,622	146	14,446	7,410	12,314	486	-	490	-
Exports	-139	-26	-9,743	-7,425	-1,865	-48	-	-46	-	-94	-29	-9,261	-6,486	-1,859	-34	-	-69	-
Marine bunkers	-	-	-	-665	-	-	-	-	-	-	-	-	-662	-	-	-	-	-
Stock change ¹	+1,723	+66	+609	+17	+3,472	-	-	-	-	+822	+30	-333	+174	+1,461	-	-	-	-
Primary supply	11,684	114	18,364	-807	27,023	2,304	4,719	242	-	10,037	146	16,863	436	21,668	2,522	4,777	421	-
Statistical difference ²	+40	-0	-116	+72	+127	-8	-	+35	-	+77	-2	-10	+129	+37	-	-	-31	-
Primary demand	11,643	114	18,480	-879	26,896	2,312	4,719	207	-	9,960	148	16,874	307	21,631	2,522	4,777	452	-
Transfers ³	-	2	-588	+589	-3	-	-720	+720	-	-	+0	-552	+543	-3	-	-1,165	+1,165	-
TRANSFORMATION	-11,203	389	-17,892	17,668	-5,664	-1,400	-3,999	7,962	414	-9,545	329	-16,322	16,134	-4,535	-1,539	-3,612	6,792	414
Electricity generation	-9,884	-192	-	-167	-5,015	-1,361	-3,999	7,962	-	-8,112	-230	-	-138	-3,887	-1,501	-3,612	6,792	-
Heat generation	-103	-13	-	-17	-648	-39	-	-	414	-111	-13	-	-17	-648	-39	-	-	414
Petroleum refineries	-	-	-17,892	17,877	-	-	-	-	-	-	-	-16,322	16,312	-	-	-	-	-
Coke manufacture	-918	837	-	-	-	-	-	-	-	-939	872	-	-	-	-	-	-	-
Blast furnaces	-224	-307	-	-	-	-	-	-	-	-312	-352	-	-	-	-	-	-	-
Patent fuel manufacture	-75	64	-	-	-	-	-	-	-	-71	52	-	-	-	-	-	-	-
Energy industry use	1	168	-	1,150	1,302	-	-	620	42	0	207	-	1,102	1,086	-	-	563	42
Losses	-	38	-	-	169	-	-	711	-	-	49	-	-	175	-	-	688	-
FINAL CONSUMPTION	439	299	-	16,228	19,760	912	-	7,559	365	415	222	-	15,882	15,833	983	-	7,158	365
Iron & steel	9	181	-	1	132	-	-	76	-	10	125	-	0	119	-	-	76	-
Other industries	285	48	-	1,060	2,628	196	-	2,103	199	274	11	-	1,000	2,538	183	-	1,957	199
Transport	3	-	-	12,239	-	212	-	88	-	3	-	-	12,463	-	268	-	88	-
Domestic	137	69	-	991	13,195	397	-	2,944	20	124	51	-	754	10,084	333	-	2,709	20
Other final users	6	-	-	280	3,685	107	-	2,348	147	4	-	-	249	2,970	198	-	2,328	147
Non energy use	-	-	-	1,657	120	-	-	-	-	-	35	-	1,415	120	-	-	-	-

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:

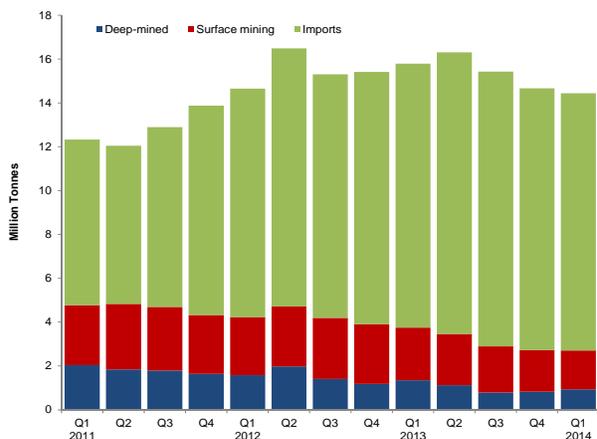
Overall production fell to a new record low and was down 28 per cent (-1.0 million tonnes to 2.7 million tonnes) compared to quarter 1 2013 with deep-mined output down 31 per cent (-0.4 million tonnes) and surface mining output down by 26 per cent (-0.6 million tonnes). **(Chart 2.1)**

Coal imports were down 2.5 per cent (-0.3 million tonnes) on levels shown in quarter 1 2013. **(Charts 2.1 and 2.2)**

The demand for coal by electricity generators in the first quarter of 2014, was 18 per cent (-2.8 million tonnes) lower than demand in the first quarter of 2013 reflecting both a switch away from coal and lower overall generation. **(Chart 2.3)**

Total stock levels were up 26 per cent (+2.7 million tonnes) to 13.1 million tonnes compared to quarter 1 2013 but were down by 1.3 million tonnes on quarter 4 2013. **(Chart 2.4)**

Chart 2.1 Coal supply



Provisional figures for the first quarter of 2014 show that coal production fell to a new record low at 2.7 million tonnes and was 28 per cent lower than the first quarter 2013. The decrease was a result of the mothballing of Maltby Colliery and the closure of Daw Mill Colliery as a result of a fire during February 2013, forcing the mine to close the following month.

Imports of coal in the first quarter of 2014 were 2.5 per cent lower than in the first quarter of 2013 at 11.7 million tonnes.

Table 2A Coal imports by origin

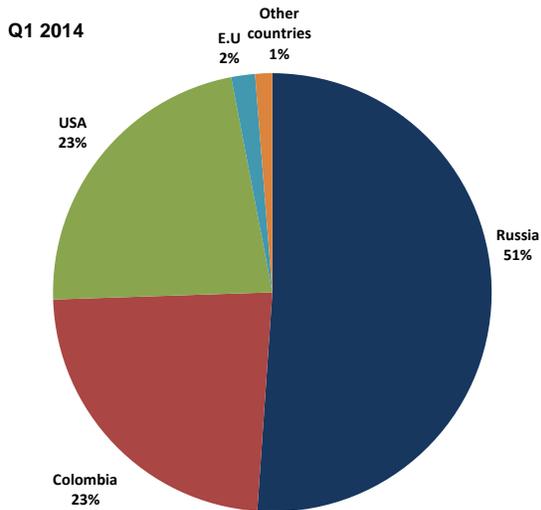
	Thousand Tonnes			
	2012	2013p	2013 Q1	2014 Q1 p
European Union	693	1,228	192	199
Russia	18,053	20,240	4,541	5,635
Colombia	11,749	11,494	3,015	2,395
USA	10,790	12,173	3,553	3,073
Australia	2,360	2,131	305	132
Other Countries	1,170	2,087	429	295
Total imports	44,815	49,354	12,035	11,729

Total coal imports in Q1 2014 decreased by 2.5 per cent to 11.7 million tonnes with 48 per cent of total coal imports coming from Russia.

Steam coal imports, largely for the power stations market, fell by 6.5 per cent to 10.2 million tonnes and accounted for 87 per cent of total coal imports.

Coking coal imports increased by 40 per cent to 1.5 million tonnes and accounted for 12 per cent of total coal imports.

Chart 2.2 Steam coal imports by origin

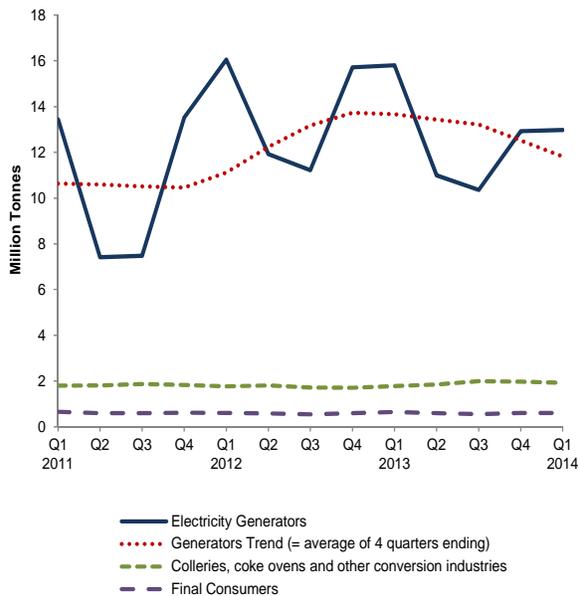


All but 3 per cent of UK steam coal imports came from just three countries: Russia (51 per cent), Colombia (23 per cent) and the USA (23 per cent).

American and Colombian steam coal imports decreased by 26 per cent (-0.8 million tonnes) and 21 per cent (-0.6 million tonnes), respectively, from quarter 1 2013.

This was offset by steam coal imports from Russia in quarter 1 2014, which rose by 21 per cent compared to the same period last year to 5.2 million tonnes.

Chart 2.3 Coal consumption

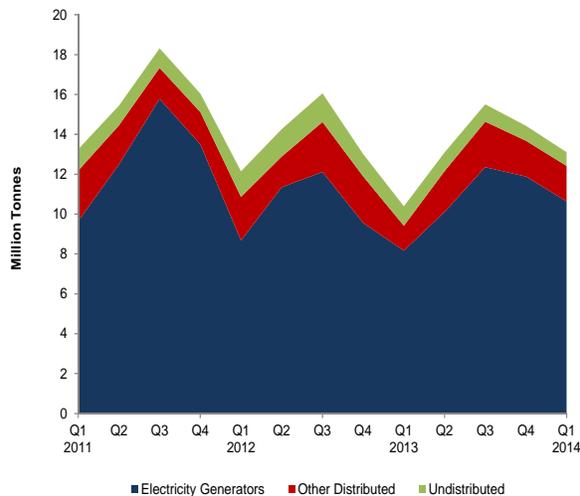


Total demand for coal in the first quarter of 2014, at 15.5 million tonnes, was 15 per cent lower than in the first quarter of 2013. Consumption by electricity generators was down by 18 per cent to 13.0 million tonnes.

Electricity generators accounted for 84 per cent of total coal use in the first quarter of 2014; compared with 87 per cent a year earlier.

Sales to industrial users decreased by 3.5 per cent in quarter 1 2014 and sales to other final consumers including domestic decreased by 9.9 per cent to 0.2 million tonnes during quarter 1 2014.

Chart 2.4 Coal stocks



Coal stocks showed a seasonal fall of 1.3 million tonnes during the first quarter of 2014 and stood at 13.1 million tonnes, 2.7 million tonnes higher than at the end of March 2013.

The level of coal stocks at power stations at the end of the first quarter of 2014 was 10.6 million tonnes, 2.5 million tonnes higher than at the end of March 2013.

Stocks held by coke ovens were at a record low of 0.3 million tonnes at the quarter 1 2014, this was 0.3 million tonnes lower than stock levels at the end of quarter 1 2013 (0.6 million tonnes).

Stocks held by producers (undistributed stocks) during the first quarter of 2014 to stand at a new record low of 0.7 million tonnes, 0.3 million tonnes lower than at the end of March 2013.

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

	2012	2013 p	per cent change	2012 1st quarter	2012 2nd quarter	2012 3rd quarter	2012 4th quarter	2013 1st quarter	2013 2nd quarter	2013 3rd quarter	2013 4th quarter	2014 1st quarter p	per cent change ¹
SUPPLY													
Indigenous production	17,047	12,839	-24.7	4,233	4,717	4,190	3,907	3,754	3,461	2,893	2,731	2,711	-27.8
Deep mined	6,153	4,089	-33.6	1,585	1,978	1,406	1,184	1,350	1,124	785	829	931	-31.0
Surface mining ²	10,134	8,584	-15.3	2,458	2,540	2,585	2,550	2,404	2,268	2,011	1,902	1,779	-26.0
Other sources	760	167	(-)	190	198	198	173	-	69	97	-	-	
Imports ³	44,815	49,354	+10.1	10,418	11,775	11,117	11,505	12,035	12,843	12,540	11,935	11,729	-2.5
Exports ⁴	488	593	+21.5	119	133	102	134	186	127	95	185	125	-32.5
Stock change ⁵	+2,953	-1,412		+3,822	-2,113	-1,799	+3,043	+2,626	-2,709	-2,409	+1,080	+1,246	
Total supply	64,327	60,187	-6.4	18,354	14,245	13,406	18,322	18,229	13,468	12,929	15,561	15,561	-14.6
Statistical difference	+120	+130		-71	-58	-60	+309	-0	+33	+34	+62	+53	
Total demand	64,206	60,058	-6.5	18,425	14,303	13,466	18,013	18,229	13,435	12,895	15,499	15,508	-14.9
TRANSFORMATION													
Electricity generation	54,906	50,087	-8.8	16,056	11,918	11,217	15,715	15,814	10,990	10,354	12,929	12,977	-17.9
Heat generation ⁶	592	592	-	165	140	128	159	165	140	128	159	179	+8.4
Coke manufacture	5,079	5,150	+1.4	1,328	1,330	1,244	1,177	1,208	1,276	1,370	1,296	1,235	+2.2
Blast furnaces	987	1,411	+43.0	199	253	255	279	294	325	393	399	411	+39.7
Patent fuel manufacture	322	427	+32.7	72	79	83	88	105	111	97	114	99	-5.7
Energy industry use	4	3		1	1	1	1	1	0	0	0	0	
FINAL CONSUMPTION	2,317	2,389	+3.1	603	583	538	593	641	593	553	601	606	-5.5
Iron & steel	51	50		13	12	12	13	12	12	12	13	14	+12.8
Other industries	1,552	1,628	+4.9	410	387	368	386	430	406	386	406	413	-3.9
Domestic	674	673	-0.2	170	174	146	184	186	167	146	174	169	-9.2
Other final users	40	38	-5.7	10	10	11	10	13	8	9	8	10	-20.6
Stocks at end of period													
Distributed stocks	11,896	13,682	+15.0	10,863	12,887	14,620	11,896	9,420	12,165	14,635	13,682	12,416	+31.8
Of which:													
Major power producers ⁷	9,561	11,886	+24.3	8,676	11,348	12,118	9,561	8,166	10,108	12,351	11,886	10,640	+30.3
Coke ovens	846	518	-38.7	1,127	1,018	941	846	558	1,170	952	518	323	-42.1
Undistributed stocks	1,120	747	-33.4	1,284	1,374	1,439	1,120	970	934	873	747	689	-29.0
Total stocks⁸	13,016	14,428	+10.9	12,147	14,260	16,059	13,016	10,390	13,099	15,508	14,428	13,105	+26.1

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 2013 heat generation figure will not be published until the end of July 2014. Therefore, the 2012 figure is used as an estimate for 2013.

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>													
	2012	2013 p	<i>per cent change</i>	2012 1st quarter	2012 2nd quarter	2012 3rd quarter	2012 4th quarter	2013 1st quarter	2013 2nd quarter	2013 3rd quarter	2013 4th quarter	2014 1st quarter p	<i>per cent change³</i>
SUPPLY													
Indigenous production	4,000	4,136	+3.4	1,040	1,056	956	948	984	1,052	1,053	1,047	994	+1.1
Coke Oven Coke	3,712	3,769	+1.5	993	983	884	853	894	958	969	949	919	+2.8
Coke Breeze	31	32	+3.2	8	8	8	8	8	8	8	8	8	+7.0
Other MSF	258	336	+30.4	40	66	65	87	83	87	76	90	67	-18.8
Imports	207	834	(+)	11	17	23	156	105	327	235	167	204	+94.9
Exports	552	117	(-)	325	143	43	42	36	35	20	26	40	+11.5
Stock change ¹	+93	-122		-68	+150	+52	-41	+91	-98	-111	-5	+42	
Transfers	-	-		-	-	-	-	-	-	-	-	-1	
Total supply	3,748	4,730	+26.2	658r	1,080	988	1,022	1,144	1,246	1,157	1,184	1,199	+4.8
Statistical difference	-5	-1		-1r	-	-1	-2	-1r	-	-0	-0	-0	
Total demand	3,753	4,732	+26.1	659	1,080	990	1,024	1,145	1,246	1,157	1,184	1,200	+4.8
TRANSFORMATION													
Coke manufacture	2,930	3,713	+26.7	515	848	786	781	851	1,015	924	922	975	+14.6
Blast furnaces	-	-		-	-	-	-	-	-	-	-	-	
Energy industry use	2,930	3,713	+26.7	515	848	786	781	851	1,015	924	922	975	+14.6
FINAL CONSUMPTION													
Iron & steel	823	1,019	+23.8	145	232	203	243	294	230	233	262	225	-23.7
Other industries	518	626	+20.8	86	156	132	144	192	128	148	158	148	-23.1
Domestic	45	83	+83.2	5	13	12	15	14	25	22	23	11	-19.4
Stocks at end of period ²	260	310	+19.3	53	64	59	84	88	78	63	81	66	-25.5
Stocks at end of period²	854	521	+26.2	1,016	845	780	854	500	689	599	521	465	-7.0

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

	<i>GWh</i>												
	2012	2013 p	<i>per cent change</i>	2012 1st quarter	2012 2nd quarter	2012 3rd quarter	2012 4th quarter	2013 1st quarter	2013 2nd quarter	2013 3rd quarter	2013 4th quarter	2014 1st quarter p	<i>per cent change</i> ¹
SUPPLY													
Indigenous production	21,502	25,619	+19.1	4,663	5,729	5,458	5,651	5,733	6,586	6,712	6,588	6,442	+12.4
Coke oven gas	8,266	8,479	+2.6	2,151	2,105	2,021	1,989	1,872	2,204	2,253	2,151	2,060	+10.0
Blast furnace gas	11,692	15,515	+32.7	2,101	3,224	3,080	3,286	3,466	3,981	4,042	4,026	3,973	+14.6
Benzole & tars	1,543	1,625	+5.3	411	400	357	375	395	402	416	411	409	+3.7
Transfers	56	61	+8.7	11	4	14	26	29	12	14	5	9	(-)
Total supply	21,557	25,679	+19.1	4,675	5,733	5,472	5,677	5,762	6,598	6,726	6,593	6,451	+12.0
Statistical difference	-157	-24		+72	-93	-62	-73	+7	-16	-10	-4	-18	
Total demand	21,714	25,703	+18.4	4,603	5,827	5,534	5,750	5,755	6,614	6,737	6,597	6,469	+12.4
TRANSFORMATION													
Electricity generation	9,305	9,494	+2.0	1,804	2,528	2,454	2,519	2,233	2,524	2,388	2,349	2,676	+19.8
Heat generation ²	598	598	-	149	149	149	149	149	149	149	149	149	-
Energy industry use	8,145	9,041	+11.0	1,774	2,126	2,104	2,141	1,959	2,340	2,391	2,351	2,404	+22.7
Losses	1,009	2,500	(+)	178	319	213	300	446	599	757	699	573	+28.5
FINAL CONSUMPTION	2,657	4,071	+53.2	699	704	613	642	969	1,002	1,051	1,049	668	-31.1
Iron & steel	916	2,272	(+)	236	253	209	219	521	567	593	592	226	(-)
Other industries	1,741	1,798	+3.3	463	451	404	423	448	435	459	457	441	-1.6

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

2. For Heat generation, the 2013 figures currently shown are the 2012 figures carried forward - these will be updated in July 2014.

Section 3 - Oil and Oil Products

Key results show:

Total indigenous UK production of crude oil and Natural Gas Liquids (NGL) in Q1 2014 was 3.5 per cent higher than a year ago, the second consecutive quarter of growth driven in part by new production facilities. Also though, production had been low in Q1 of 2013 due to maintenance issues. **(Chart 3.1)**

Indigenous production of petroleum products was 8.3 per cent lower in the first quarter of 2014 compared with the same quarter in 2013. This was the result of a combination of planned maintenance and unplanned disruption at some refineries as well as a general decline in UK refinery production. **(Chart 3.2)**

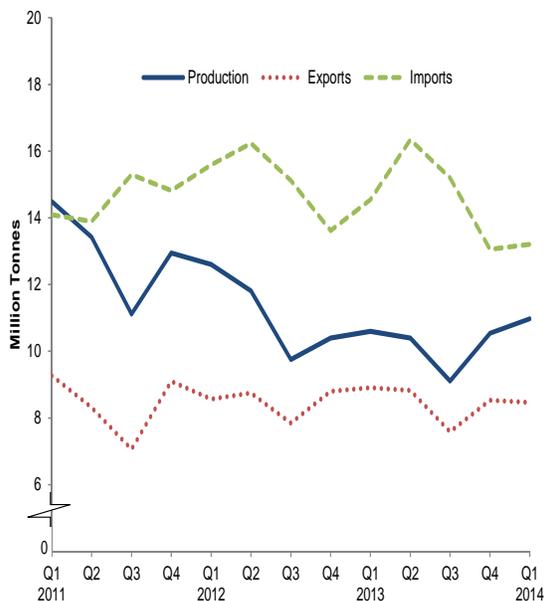
Imports of petroleum products increased by 2.1 per cent compared with Q1 2013 and exports of petroleum products decreased by 12.7 per cent. As a result, the UK was a net importer of petroleum products in Q1 2014, for the third consecutive quarter, by 0.8 million tonnes. This follows a long period where the UK was generally a net exporter of petroleum products. **(Chart 3.2)**

Net imports of primary oils (crude oil, NGLs and process oils) in Q1 2014 decreased to 4.7 million tonnes (down 15.9 per cent) due to lower refinery demand. This met nearly 32 per cent of UK's refinery demand. **(Chart 3.3)**

In Q1 2014 total deliveries of key transport fuels increased by 1.3 per cent compared with Q1 2013. Motor Spirit deliveries were down by 4.3 per cent, DERV deliveries were up by 1.9 per cent, while deliveries of Aviation Turbine Fuel increased by 7.6 per cent. **(Chart 3.5)**

Overall stocks of crude oil and petroleum products were up by 0.6 per cent at end of the Q1 2014 compared to a year earlier (0.1 million tonnes). **(Chart 3.7)**

Chart 3.1 Production and trade of crude oil and NGLs



Indigenous crude oil production was higher by 2.8 per cent in Q1 2014 compared with the same quarter a year ago. Production was boosted by a new Floating, Production, Storage and Offloading vessel (FPSO).

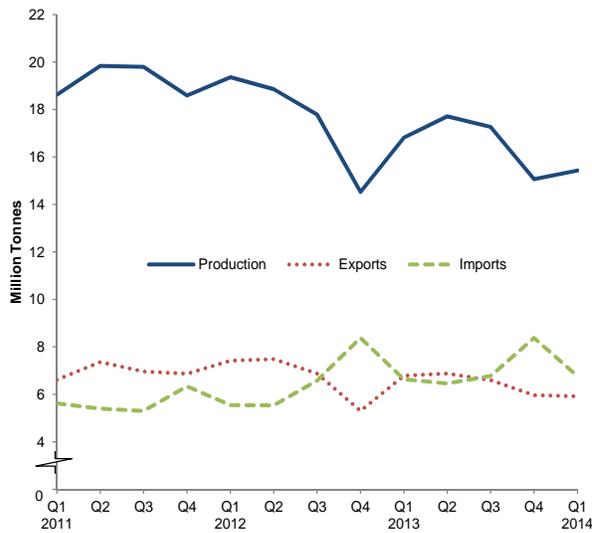
Production of Natural Gas Liquids (NGLs) increased by 15 per cent on the same quarter in 2013. Production had been especially low in Q1 2013.

Taken together, indigenous production of crude and NGLs was 3.5 higher, the second consecutive quarter of growth. This follows a long period of general decline, where production had fallen on the same quarter of the previous year for 23 consecutive quarters. Despite the recent increase, production has fallen by 36 per cent since Q1 2010.

In Q1 2014, imports of crude oil and NGL's were 9.2 per cent lower compared with the same period a year ago, reflecting both higher indigenous production and lower demand for primary oils for the UK's refinery industry. Exports of crude oil and NGL's decreased by 4.9 per cent in the latest three months.

Overall, net imports of primary oils (crude, NGL's and feedstocks) were 4.7 million tonnes in Q1 2014 compared with 5.6 million tonnes in the same quarter in 2013.

Chart 3.2 Production and trade of petroleum products

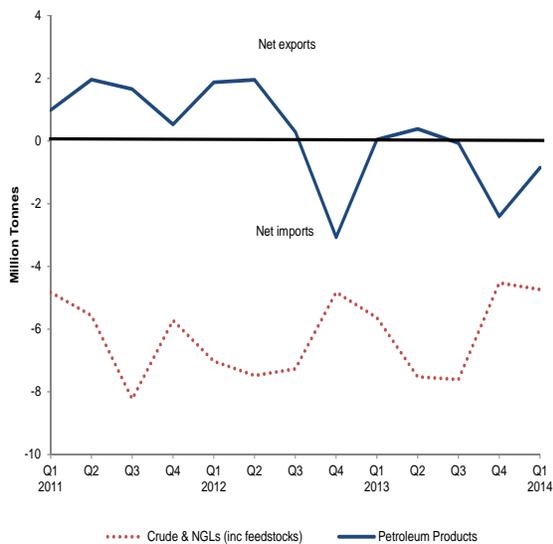


Indigenous production of petroleum products in Q1 2014 was lower by 8.3 per cent compared with the same quarter in 2013. However, production was up slightly (2.4 per cent) on the last quarter of 2013 where it had been dented by a temporary closure of a major refinery.

Imports of petroleum products increased by 2.1 per cent in Q1 2014 compared with the same quarter in 2013. Whilst the overall volume was similar to last years, imports of aviation fuel were up a fifth which was partially balanced by a decrease of a quarter in motor spirit imports. Exports decreased by 12.7 per cent, with diesel and fuel oil imports decreasing by 24 per cent and 22 per cent respectively.

In overall terms, the UK was a net importer (0.8 million tonnes) of petroleum products in Q1 2014, the third consecutive quarter where imports have outweighed exports.

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

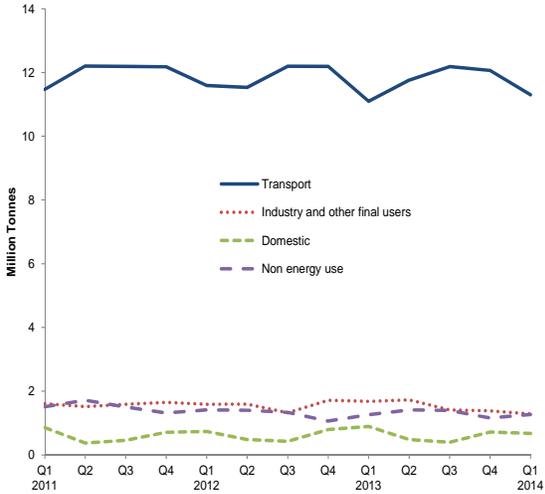


In Q1 2014, net imports of primary oils (crude, NGL's and feedstocks) decreased to 4.7 million tonnes compared with 5.6 million tonnes in Q1 2013, a decrease of 15.9 per cent. This is again indicative of lower refinery production of petroleum products.

The UK's overall net import dependence for primary oils (crude, NGL's and feedstocks) was nearly 32 per cent in Q1 2013, down from just over 34 per cent in Q1 2011.

In Q1 2014 the UK was a net importer of petroleum products, by 0.8 million tonnes. However, in the same quarter of 2013, the UK had been a net exporter by 0.2 million tonnes. There have now been 3 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 2013 as a whole, the UK was a net importer, the first time this has happened since 1984 when there was industrial action in the coal industry.

Chart 3.4 Final consumption of oil



In Q1 2014, final consumption of petroleum products was lower by 1.4 per cent compared with Q1 2013. Within this:

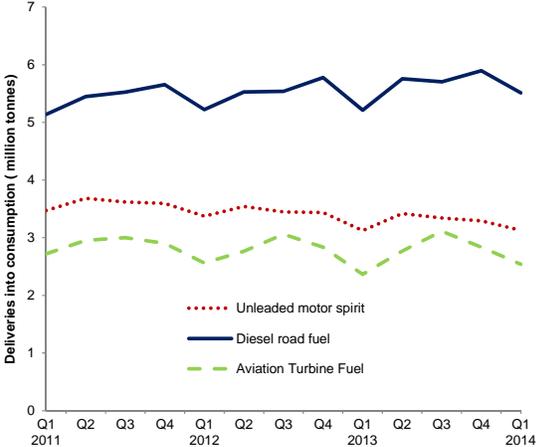
Transport, which accounts for about three-quarters of UK final consumption, was higher by 1.9 per cent. (See chart 3.5 for more detail).

Final consumption within the Industry and other final users sector in Q1 2014 was at the roughly the same level as Q1 2013.

Domestic consumption of oil was significantly lower by 24 per cent - oil is mostly used for heating and average temperatures were around 3.1 degrees warmer in Q1 2014 than Q1 2013.

Demand for oil for non-energy use was lower by 13.9 per cent in the latest quarter.

Chart 3.5 Demand for key transport fuels



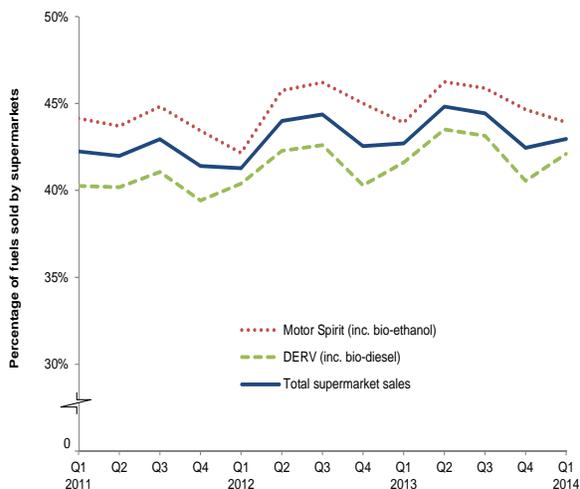
In Q1 2014, total deliveries of key hydrocarbon transport fuels were higher by 1.3 per cent. Within this:

Motor spirit deliveries were down by 4.3 per cent on the first quarter of 2013. This is a continuation of a long term trend of declining demand as more motorists switch to diesel.

DERV demand increased by 1.9 per cent.

Demand for aviation fuels was lower than in the previous two quarters in line with seasonal patterns. Demand was up by 7.5 per cent on what was a particularly low consumption in 2013 Q1.

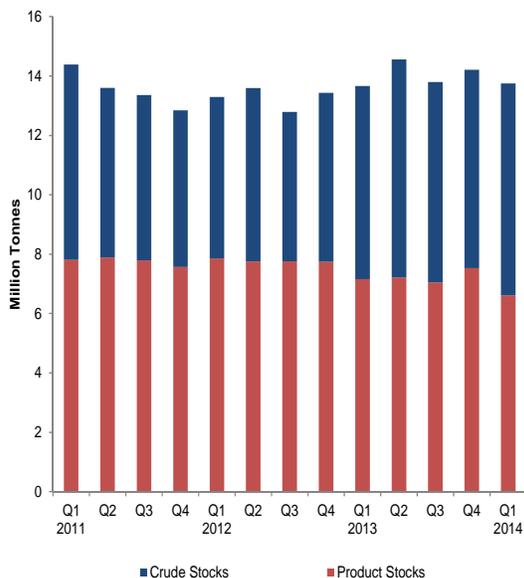
Chart 3.6 Supermarket shares of road fuel sales



In Q1 2014, the total shares of road fuel sales remained broadly consistent. Whilst the overall volume of motor spirit sales (including the bio-fuel element) decreased by 4.1 per cent, supermarkets sold 43.9 per cent of that volume, virtually identical to the same period last year. Sales of diesel fuel (again including the bio-fuel element) increased by 3.0 per cent, of which the supermarket share increased to 42.1 per cent from 41.6 per cent in Q1 2013.

On an overall basis, supermarket outlets accounted for 43.0 per cent of total retail sales, up from 42.7 per cent in the same quarter in 2013.

Chart 3.7 UK oil stocks



At the end of Q1 2013, total stocks for all oil were higher by 0.6 per cent (0.1 million tonnes) compared with Q1 2013.

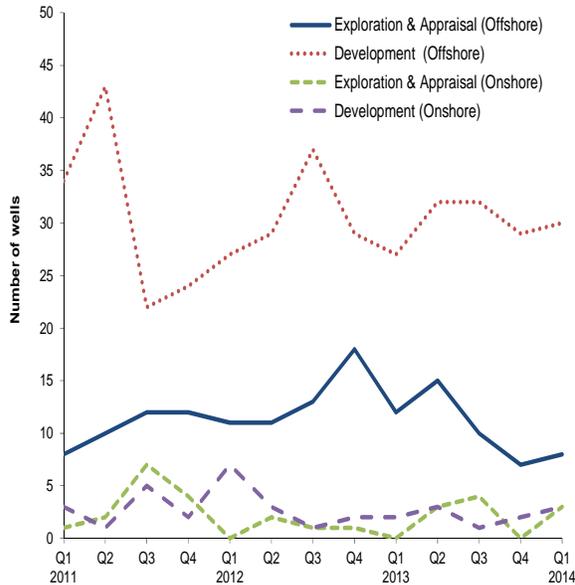
Total stocks of crude and process oils were 9.7 per cent (0.6 million tonnes) higher at the end of Q1 2014 compared with the same quarter a year earlier. This was the result of a large increase in crude stocks held abroad for the UK (under bilateral agreements). From 2013 onwards, EU Directive 2009/119/EC 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. It has taken some time for the effects to be seen fully.

The increase in crude stocks was largely at the expense of stocks of petroleum products, which were lower by 7.6 per cent (0.5 million tonnes) at the end of March 2014.

Chart 3.7 combines stocks of products with the product equivalent of stocks of crude oil to give an overall level of UK stocks of key products.

At the end of the Q1 2014, the UK had stocks equal to around 73 days of demand.

Chart 3.8 Drilling activity on the UKCS



There were 8 exploration and appraisal wells started offshore in the first quarter of 2014, compared to 12 in the corresponding quarter of 2013.

There were 30 development wells drilled offshore in the first quarter of 2014, compared to 27 in the corresponding quarter of 2013.

There were 3 exploration and appraisal wells started onshore in the first quarter of 2014; there were no exploration and appraisal wells started onshore in the first quarter of 2013.

There were 3 development wells drilled onshore in the first quarter of 2014, compared to 2 in the corresponding quarter of 2013.

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 feedstocks¹

Thousand tonnes

	2012	2013 p	per cent change	2012 1st quarter	2012 2nd quarter	2012 3rd quarter	2012 4th quarter	2013 1st quarter	2013 2nd quarter	2013 3rd quarter	2013 4th quarter	2014 1st quarter p	per cent change ⁸
SUPPLY													
Indigenous production ²	44,561	40,646r	-8.8	12,604	11,812	9,751	10,394	10,600	10,397r	9,108r	10,541r	10,972	+3.5
Crude oil	42,052	38,456r	-8.6	11,764	11,111	9,361	9,816	10,006	9,729r	8,647r	10,074r	10,289	+2.8
NGLs ³	2,508	2,190	-12.7	840	701	390	578	594	668	461	466	683	+15.0
Imports ⁴	60,559	59,137r	-2.3	15,591	16,229	15,120	13,619	14,541r	16,344r	15,195r	13,056	13,203	-9.2
Crude oil & NGLs	55,340	52,470r	-5.2	14,090	14,629	13,823	12,798	12,880r	14,773r	13,533r	11,284	11,705	-9.1
Feedstocks	5,218	6,667r	+27.8	1,501	1,599	1,297	821	1,660r	1,571r	1,662	1,773	1,498	-9.8
Exports ⁴	33,961	33,844r	-0.3	8,569	8,746	7,848	8,798	8,905r	8,821r	7,587	8,531	8,464	-4.9
Crude Oil & NGLs	29,939	31,754r	+6.1	7,620	7,782	6,815	7,722	8,314r	8,314r	7,045	8,082r	7,824	-5.9
Feedstocks	4,021	2,089	-48.0	949	964	1,033	1,076	590	507	542	450	640	+8.5
Stock change ⁵	-486	+724r		-197	-223	+673	-740	+555	-222r	+615r	-224r	-304	
Transfers ⁶	-1,934	-1,674r		-655	-582	-306	-391	-496r	-572r	-490r	-116	-457	
Total supply	68,738	64,990r	-5.5	18,773	18,490	17,390	14,085	16,296r	17,126r	16,842r	14,726r	14,950	-8.3
Statistical difference ⁷	-124	-44r		-11	+102	-114	-101	-93r	-21r	+51r	+20r	+3	
Total demand	68,862	65,034r	-5.6	18,784	18,388	17,504	14,186	16,389r	17,148r	16,791r	14,706r	14,947	-8.8
TRANSFORMATION													
Petroleum refineries	68,862	65,034r	-5.6	18,784	18,388	17,504	14,186	16,389r	17,148r	16,791r	14,706r	14,947	-8.8

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

	2012	2013 p	per cent change	2012 1st quarter	2012 2nd quarter	2012 3rd quarter	2012 4th quarter	2013 1st quarter	2013 2nd quarter	2013 3rd quarter	2013 4th quarter	2014 1st quarter p	per cent change ¹
SUPPLY													
Indigenous production ²	70,522r	66,865r	-5.2	19,358	18,854	17,785	14,525	16,821	17,710	17,265	15,068	15,430	-8.3
Imports ³	26,028r	28,245r	+8.5	5,541	5,533	6,579	8,375	6,631r	6,460r	6,779r	8,375r	6,768	+2.1
Exports ³	27,083	26,223r	-3.2	7,419	7,486	6,874	5,304	6,783r	6,879r	6,600r	5,961r	5,921	-12.7
Marine bunkers	2,663r	2,540r	-4.6	654r	645r	698r	666r	626r	677r	645r	591r	624	-0.4
Stock change ⁴	+128	+106r		+25	+209	-102	-5	+30	+53	+63	-41r	+163	
Transfers ⁵	+53	-463r		+47	+50	-17	-27	-13r	-29	-49	-371r	-108	
Total supply	66,985r	65,990r	-1.5	16,899r	16,515r	16,673r	16,899r	16,061r	16,638r	16,812r	16,479r	15,709	-2.2
Statistical difference ⁶	-85r	-124r		-84r	+37r	+29r	-68r	+63r	-6r	-132r	-49r	+5	
Total demand	67,070r	66,114r	-1.4	16,983r	16,477r	16,644r	16,966r	15,998r	16,644r	16,944r	16,528r	15,704	-1.8
TRANSFORMATION													
Electricity generation	853r	726r	-14.9	237r	209r	171r	236r	203r	155r	190r	178r	169	-16.7
Heat generation	694r	551r	-20.7	203r	169r	134r	188r	158r	112r	151r	130r	125	-20.7
Other Transformation	76r	65r	-14.5	19r	19r	19r	19r	16r	16r	16r	16r	16	-
	83r	111r	+33.0	14r	21r	19r	29r	29r	26r	24r	32r	27	-6.9
Energy industry use													
Petroleum Refineries	4,916r	4,387r	-10.8	1,384r	1,325r	1,234r	974r	1,087r	1,155r	1,156r	989r	1,040	-4.3
Blast Furnaces	4,299r	3,768r	-12.4	1,230r	1,170r	1,080r	819r	932r	1,000r	1,001r	834r	885	-5.0
Others	-	-		-	-	-	-	-	-	-	-	-	-
	617r	619r	+0.4	154r	154r	154r	154r	155r	155r	155r	155r	155	-
FINAL CONSUMPTION													
Iron & steel	61,300r	61,000r	-0.5	15,362r	14,943r	15,238r	15,756r	14,708r	15,334r	15,598r	15,361r	14,495	-1.4
Other industries	5	4	-17.6	1	1	1	1	1	2	1	1	0	-40.3
Transport	4,177r	4,059r	-2.8	1,097r	1,012r	859r	1,210r	996r	1,091r	1,067r	904r	1,022	+2.6
Domestic	47,515r	47,104r	-0.9	11,595r	11,534r	12,196r	12,190r	11,093r	11,761r	12,184r	12,066r	11,301	+1.9
Other final users	2,433	2,489	+2.3	733	480	425	795	890	483	398	719	677	-23.9
Non energy use	1,166r	1,113	-4.5	273	285	310	299	256	289	288	280	228	-11.2
	6,004r	6,231r	+3.8	1,664r	1,632r	1,446r	1,262r	1,471r	1,709r	1,660r	1,392r	1,266	-13.9

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

	2012										2013 p									
	Total Petroleum Products	Motor spirit	DERV ⁹	Gas oil ¹	Aviation turbine fuel	Fuel oils	Petroleum gases ²	Burning oil	Other products ³	Total Petroleum Products	Motor spirit	DERV ⁹	Gas oil ¹	Aviation turbine fuel	Fuel oils	Petroleum gases ²	Burning oil	Other products ³		
SUPPLY																				
Indigenous production ⁴	70,522r	17,013r	15,772	8,941	5,775	7,164	6,666	2,268	6,924r	66,865r	17,572r	14,831	8,193	4,527	6,483	6,546r	2,705	6,008		
Imports ⁵	26,028r	4,184	9,541	1,186	7,127	660	293	702	2,334r	28,245r	4,511r	10,145r	589	8,077	626	414r	637	3,246		
Exports ⁵	27,083	8,561	3,377	4,270	1,320	5,300	1,147	112	2,996	26,223r	10,213	2,843	3,310r	970	4,586	1,165	381	2,755		
Marine bunkers	2,663r	-	-	1,123r	-	1,540r	-	-	-	2,540r	-	-	1,248r	-	1,292r	-	-	-		
Stock change ⁶	+128	+26	-133	+7	+96	+90	+9	+40	-6	+106r	-356	+46	+91	-20	+93	+11	+52	188		
Transfers ⁷	+53	+560r	-268	+217	-479	-14	+23	+446	-432r	-463r	+1,060r	-253r	+250r	-535	-401r	+23	+463	-1,070		
Total supply	66,985r	13,222	21,535	4,958r	11,199	1,059r	5,844	3,343	5,824	65,990r	12,574	21,926	4,566r	11,080	922r	5,828r	3,477	5,617		
Statistical difference ⁸	-85r	-8	-3	-33r	-22	+8r	-0	+14	-42	-124r	+0	+0	-65r	-3	+9r	-37r	+16	-45		
Total demand	67,070r	13,231	21,538	4,990r	11,221	1,052r	5,844	3,329	5,866	66,114r	12,574	21,926	4,631r	11,083	913r	5,865r	3,460	5,662		
TRANSFORMATION	853r	-	-	60	-	390r	209	-	194	726r	-	-	105r	-	252r	207r	-	162		
Electricity generation	694r	-	-	54r	-	337r	191	-	111	551r	-	-	100r	-	199r	201r	-	51		
Heat generation	76r	-	-	5	-	52r	18	-	-	65r	-	-	5	-	53	7r	-	-		
Petroleum refineries	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Coke manufacture	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Patent fuel manufacture	83r	-	-	-	-	-	-	-	83r	111r	-	-	-	-	-	-	-	111		
Energy industry use	4,916r	-	-	617r	-	346r	2,348	-	1,606	4,387r	-	-	619r	-	331r	2,133r	-	1,303		
FINAL CONSUMPTION	61,300r	13,231	21,538	4,313r	11,221	316r	3,287	3,329	4,066r	61,000r	12,574	21,926	3,907r	11,083	330r	3,524r	3,460	4,197		
Iron & steel	5	-	-	-	-	2	2	-	-	4	-	-	-	-	3	-	-	-		
Other industries	4,177r	-	-	1,878r	-	120r	377	1,332	-	4,059r	-	-	1,520r	-	147r	276r	1,400	-		
Transport	47,515r	13,231	21,538	1,326r	11,221	89r	93	-	17	47,104r	12,574	21,926	1,323r	11,083	89r	94	-	16		
Domestic	2,433	-	-	140	-	-	297	1,996	-	2,489	-	-	129	-	-	300	2,060	-		
Other final users	1,166r	-	-	954	-	105	108	-	-	1,113	-	-	921	-	90	102	-	-		
Non energy use	6,004r	-	-	15	-	-	2,410r	-	3,579r	6,231r	-	-	14r	-	-	2,751r	-	3,466r		

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

	2013 1st quarter									2014 1st quarter p								
	Total Petroleum Products	Motor spirit	DERV ^a	Gas oil ¹	Aviation turbine fuel	Fuel oils	Petroleum gases ²	Burning oil	Other products ³	Total Petroleum Products	Motor spirit	DERV ^a	Gas oil ¹	Aviation turbine fuel	Fuel oils	Petroleum gases ²	Burning oil	Other products ³
SUPPLY																		
Indigenous Production ⁴	16,821	4,323	3,648	2,052	1,043	1,622	1,600	908	1,625r	15,430	3,940	3,407	1,930	967	1,232	1,584	756	1,614
Imports ⁵	6,631r	1,409r	2,332r	131	1,581	144	141r	200	693r	6,768	1,016	2,624	135	1,908	183	154	126	622
Exports ⁵	6,783r	2,380	798	933r	245	1,168r	336	130	793	5,921	2,329	610	880	240	912	232	81	637
Marine bunkers	626r	-	-	332r	-	295r	-	-	-	624	-	-	330	-	294	-	-	-
Stock change ⁶	+30	-346	+93	+119r	+112	+11r	-20	+110	-49	+163	+19	-5	+57	+107	+31	-55	+7	+2
Transfers ⁷	-13r	+102r	-36r	+50r	-130r	-32r	+6	+104	-78r	-108	+329	-75	+71	-201	-42	+6	+194	-390
Total supply	16,061r	3,108r	5,239	1,088r	2,362r	283r	1,391r	1,192	1,397r	15,709	2,975	5,341	983	2,541	198	1,457	1,003	1,211
Statistical difference ⁸	+63r	-0r	+0	-61r	-3r	+10r	+1r	+132	-17r	+5	+2	+0	-10	+0	+5	-2	+5	+5
Total demand	15,998r	3,108	5,239	1,149r	2,365	272r	1,391r	1,060	1,414r	15,704	2,974	5,341	992	2,541	193	1,458	998	1,207
TRANSFORMATION	203r	-	-	28r	-	79r	52r	-	44r	169	-	-	26	-	63	52	-	27
Electricity generation	158r	-	-	27r	-	66r	50r	-	15	125	-	-	25	-	50	50	-	-
Heat generation	16r	-	-	1	-	13	2r	-	-	16	-	-	1	-	13	2	-	-
Petroleum refineries	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Patent fuel manufacture	29r	-	-	-	-	-	-	-	29r	27	-	-	-	-	-	-	-	27
Energy industry use	1,087r	-	-	155r	-	98r	506r	-	328	1,040	-	-	155	-	58	508	-	320
FINAL CONSUMPTION	14,708r	3,108	5,239	966r	2,365	95r	833r	1,060	1,042r	14,495	2,974	5,341	811	2,541	72	899	998	859
Iron & steel	1	-	-	0	-	1	-	-	-	0	-	-	-	-	0	-	-	-
Other industries	996r	-	-	381r	-	37r	3r	350	225r	1,022	-	-	174	-	33	169	469	177
Transport	11,093r	3,108	5,239	331r	2,365	25r	23	-	3	11,301	2,974	5,341	393	2,541	25	22	-	7
Domestic	890	-	-	62	-	0	118	710	-	677	-	-	54	-	-	94	529	-
Other final users	256	-	-	188	-	33	36	-	-	228	-	-	188	-	13	27	-	-
Non energy use	1,471r	-	-	4r	-	-	652r	-	814r	1,266	-	-	3	-	-	587	-	676

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.
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 3.5 Demand for key petroleum products¹

Thousand tonnes

			per cent change	2012	2012	2012	2012	2013	2013	2013	2013	2014	per cent change ²
	2012	2013 p		1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter p	
MOTOR SPIRIT													
of which, Hydrocarbon ³	13,231	12,574	-5.0%	3,447	3,191	3,305	3,288	3,108	3,143	3,178	3,145	2,974	-4.3%
of which, Bio-ethanol ⁴	615r	650r	5.8%	141r	156r	156r	161r	151r	161r	178r	160r	152	1.1%
Total Motor Spirit including Bio-ethanol	13,845r	13,224r	-4.5%	3,588r	3,348r	3,460r	3,449r	3,259r	3,304r	3,355r	3,305r	3,126	-4.1%
of which, sold through Supermarkets ⁵	6,196	5,974	-3.6%	1,513	1,532	1,599	1,552	1,431	1,528	1,539	1,476	1,373	-4.0%
of which, sold through Refiners, and other traders ⁶	7,649r	7,250r	-5.2%	2,075r	1,816r	1,861r	1,897r	1,829r	1,776r	1,816r	1,829r	1,753	-4.1%
of which, sold via commercial sales ⁷	-	-	-	-	-	-	-	-	-	-	-	-	-
DIESEL ROAD FUEL													
Hydrocarbon ⁸	21,538	21,926	1.8%	5,209	5,196	5,447	5,685	5,239	5,463	5,518	5,706	5,341	1.9%
Bio-diesel ⁹	563r	682r	21.0%	214r	152r	97r	101r	114r	170r	197r	201r	174	52.3%
Total Diesel Road Fuel including Bio-diesel	22,101r	22,607r	2.3%	5,423r	5,349r	5,544r	5,786r	5,353r	5,633r	5,715r	5,907r	5,514	3.0%
of which, sold through Supermarkets ¹⁰	5,959	6,217	4.3%	1,455	1,446	1,539	1,519	1,471	1,577	1,607	1,562	1,508	2.5%
of which, sold through Refiners, and other traders ¹¹	8,446r	8,519r	0.9%	2,147r	1,975r	2,073r	2,251r	2,064r	2,047r	2,118r	2,289r	2,073	0.4%
of which, sold via commercial sales ¹²	7,696	7,871	2.3%	1,821	1,928	1,931	2,015	1,817	2,008	1,989	2,056	1,932	6.3%
OTHER GAS DIESEL OIL¹³	4,990r	4,631r	-7.2%	1,286r	1,200r	1,258r	1,246r	1,149r	1,143r	1,166r	1,173r	992	-13.6%
AVIATION FUELS													
Total sales	11,238	11,099	-1.2%	2,564	2,771	3,064	2,839	2,367	2,774	3,119	2,838	2,547	7.6%
Aviation spirit	17	16	-10.3%	3	5	5	4	3	4	5	3	7	145.0%
Aviation turbine fuel	11,221	11,083	-1.2%	2,560	2,766	3,059	2,835	2,365	2,770	3,114	2,835	2,541	7.5%
FUEL OIL													
Total Sales	707r	653r	-7.5%	187r	155r	177r	188r	174r	147r	136r	123r	135	-22.7%
Light	367r	274r	-25.4%	53r	86r	98r	130r	81r	60r	69r	19r	20	-75.7%
Medium	118r	141r	19.4%	33r	21r	30r	35r	32r	45r	31r	32r	32	-1.7%
Heavy	221r	239r	7.7%	102r	48r	49r	23r	61r	43r	37r	72r	84	36.6%

1. Monthly data for inland deliveries of oil products are available - See DECC website: www.gov.uk/government/organisations/departments-of-energy-climate-change/series/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 petroleum¹ at end of period

	Crude oil and refinery process oil					Petroleum products						Total stocks			
	Refineries ²	Terminals ³	Offshore ⁴	Net bilaterals of Crude and Process oil ⁵	Total ⁵	Motor Spirit ⁶	Kerosene ⁷	Gas/Diesel Oil ⁸	Fuel oils	Other products ⁹	Net bilaterals of products ⁵	Total products	Total Net bilaterals ⁵	Total Stocks in UK ¹⁰	Total stocks
2009	3,848	1,136	682	367	6,033	817	1,633	2,124	690	1,182	2,728	9,173	3,095	12,112	15,206
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	1,940	491	841	2,441	7,743	2,636	10,798	13,434
2013 p	3,592r	1,102r	513	1,469r	6,677r	1,041r	1,419r	1,539r	404r	693	2,432r	7,528r	3,901r	10,304r	14,205r
<i>Per cent change</i>	-6.2	-7.6	+8.4	(+)	+17.3	+72.2	-0.5	-20.6	-17.8	-17.6	-0.3	-2.8	+48.0	-4.6	+5.7
2012 1st quarter	4,006	861	488	90	5,445	731	1,357	1,934	699	853	2,277	7,851	2,367	10,930	13,296
2nd quarter	3,825	1,248	522	247	5,843	750	1,171	1,958	595	843	2,431	7,747	2,678	10,912	13,590
3rd quarter	3,344	988	456	245	5,033	692	1,193	1,954	539	929	2,448	7,756	2,693	10,096	12,788
4th quarter	3,829	1,194	473	195	5,690	605	1,427	1,940	491	841	2,441	7,743	2,636	10,798	13,434
2013 1st quarter	3,588r	965r	392	1,562r	6,507r	1,073	1,103	1,704r	490r	963	1,827r	7,160r	3,388r	10,278r	13,666r
2nd quarter	3,843r	1,274r	508	1,719r	7,344r	987r	1,235r	1,634r	481	872	2,005r	7,213r	3,724r	10,833r	14,557r
3rd quarter	3,314r	1,020r	473	1,943r	6,750r	1,015r	1,276r	1,641r	469r	804	1,841r	7,047r	3,784r	10,012r	13,797r
4th quarter	3,592r	1,102r	513	1,469r	6,677r	1,041r	1,419r	1,539r	404r	693	2,432r	7,528r	3,901r	10,304r	14,205r
2014 1st quarter p	3,496	1,215	479	1,946	7,136	1,066	1,210	1,454	364	752	1,769	6,615	3,715	10,036	13,751
<i>Per cent change</i> ¹¹	-2.6	+26.0	+22.1	+24.6	+9.7	-0.7	+9.7	-14.7	-25.6	-21.9	-3.2	-7.6	+9.6	-2.4	+0.6

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 activity¹ on the UKCS

		<i>Number of wells started</i>					
		Offshore				Onshore	
		Exploration &		Exploration &			
		Exploration	Appraisal	Appraisal	Development ²	Appraisal	Development ²
2009		23	41	64	131	15	11
2010		28	34	62	130	9	12
2011		14	28	42	123	14	11
2012		22	31	53	122	4	13
2013 p		15	29	44	120	7	8
<i>Per cent change</i>		-31.8	-6.5	-17.0	-1.6	+75.0	-38.5
2012	1st quarter	5	6	11	27	-	7
	2nd quarter	5	6	11	29	2	3
	3rd quarter	4	9	13	37	1	1
	4th quarter	8	10	18	29	1	2
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 p	6	2	8	30	3	3
<i>Per cent change³</i>		-14.3	-60.0	-33.3	+11.1	+	+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 2014 was similar to that in Q1 2013 (**Chart 4.1**). Within this, production of associated gas was 3.7 per cent higher, and dry gas production was 4.6 per cent lower. (**Chart 4.2**).

Gas available in Q1 2014 was 14.1 per cent lower than in Q1 2013, at 224 TWh. (**Chart 4.3**)

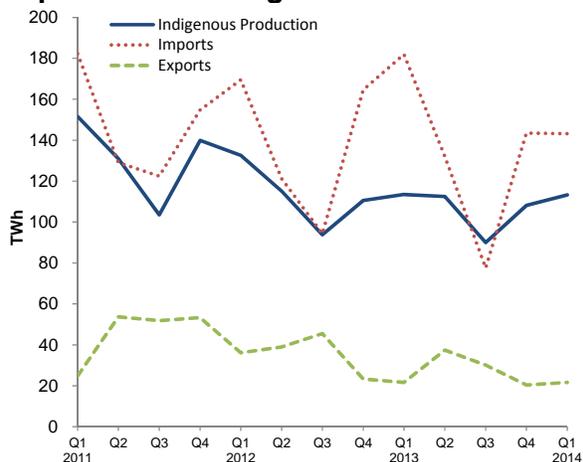
Pipeline imports of gas and shipped imports of LNG were both approximately one fifth lower in Q1 2014 compared with the same quarter in 2013 (**Chart 4.4**). Pipeline imports accounted for 91 per cent of all imports in Q1 2014, the same as that in Q1 2013 (**Chart 4.5**).

Exports decreased only marginally on Q1 2013 but are at their lowest level since 2008 (**Chart 4.4**).

UK gas demand decreased by 19.6 per cent compared to Q1 2013, driven by the warmer temperatures seen in Q1 2014 compared to Q1 2013. (**Chart 4.6**)

This edition of Energy Trends includes an article on improvements to the gas tables which has resulted in some minor changes to import volumes, energy industry use and the breakdown of gas consumption by sector.

Chart 4.1 Production and imports and exports of natural gas



Revised figures for 2012 and 2013 show production of natural gas was 6.2 per cent lower in 2013 than in 2012. This reflects the continuing long-term decline in UK natural gas production.

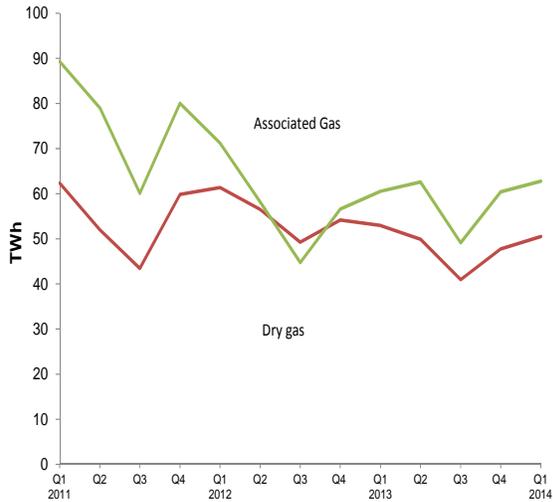
Gas exports and imports were 24 per cent and 2.6 per cent lower respectively than in 2012. The trade position for 2013 showed net imports (difference between imports and exports) were 4.9 per cent higher than in 2012.

In the first quarter of 2014, gross production of natural gas was similar to that in quarter 1 2013, being 0.2 per cent lower than in the same period a year ago.

Imports were 21 per cent lower in the first quarter of 2014 versus quarter 1 2013, whilst exports were similar, being 0.3 per cent lower in Q1 2014. This reflects lower demand with warmer temperatures seen in the first quarter of 2014 versus quarter 1 2013.

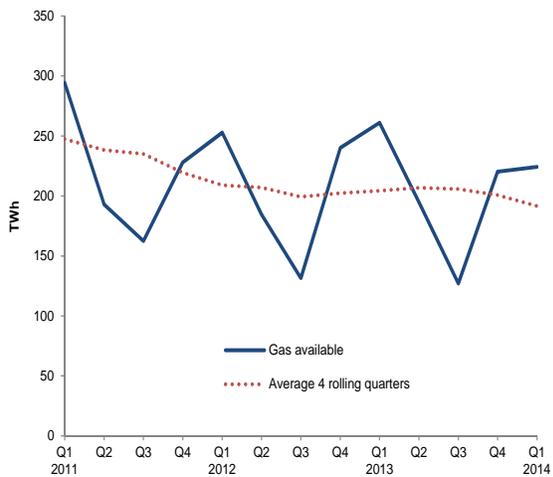
Gas

Chart 4.2 Production of dry gas and associated gas



Q1 2014 associated gas production increased by 3.7 per cent versus Q1 2013. This increase reflects the resolution of the Elgin gas leak, which impacted on associated gas production from March 2012 until mid-2013. Dry gas production in quarter 1 2014 was 4.6 per cent lower than Q1 2013, reflecting the continuing long-term decline in UK natural gas production.

Chart 4.3 Gas availability

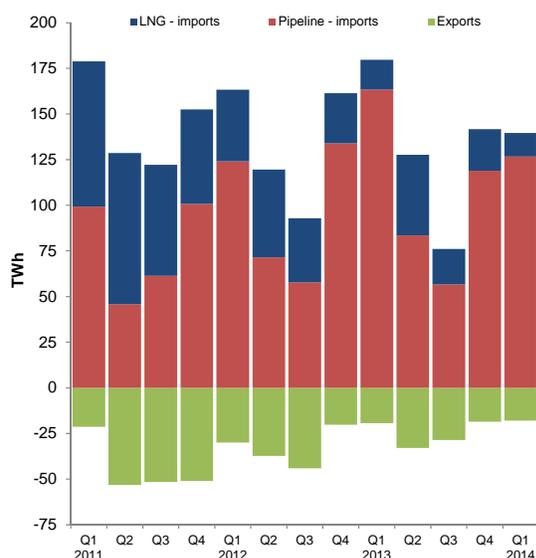


Gas available at terminals is equal to the gross gas production, minus producers own use, plus net imports.

Gas availability is seasonal, mirroring gas demand, and peaks during Q4 and Q1 each year. Gas available in Q1 2014 decreased by 14.1 per cent compared to Q1 2013 to 224 TWh. This was largely driven by a decrease in domestic and other final users' consumption, with average temperatures in the first quarter of 2014 being warmer than in the same quarter in 2013.

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

Chart 4.4 Import and exports



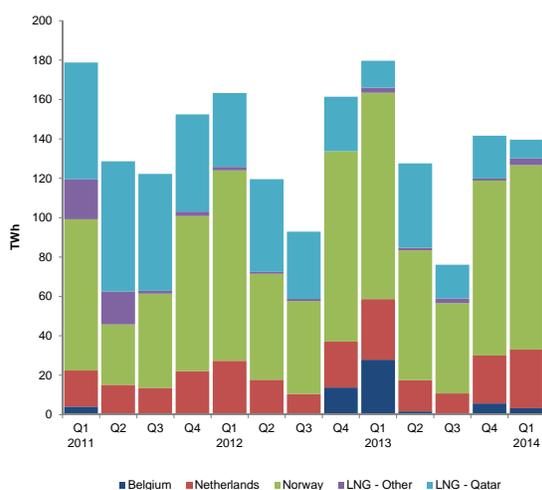
In 2013, exports of natural gas were around a quarter lower compared with 2012 reflecting lower UK production and decreased imports of gas in 2013. Gas imports were lower by 2.6 per cent in 2013, whilst net imports were 4.9 per cent higher than 2012.

Pipeline imports in 2013 were higher by 8.3 per cent. Liquefied Natural Gas (LNG) imports in 2013 were just over two-thirds of the level of 2012. LNG imports accounted for 19.2 per cent of total imports in 2013 compared with around a quarter of those in 2012 and half of those in 2011. The fall in LNG imports is likely to be due to a combination of factors, such as the decline in UK gas demand and the strong competition for LNG in the global market, especially Japan following the closure of their nuclear facilities in 2011.

Total imports in Q1 2014 decreased by 21.3 per cent compared with Q1 2013; exports were 0.3 per cent lower than in Q1 2013. The trade position for quarter 1 2014 narrowed and showed net imports (difference between imports and exports) to be 24 per cent lower than in the same quarter in 2013.

Pipeline imports of gas and shipped imports of LNG were both approximately one fifth lower in Q1 2014 compared with the same quarter in 2013. This reflects decreased gas demand with warmer temperatures in Q1 2014 versus Q1 2013.

Chart 4.5 Imports by origin

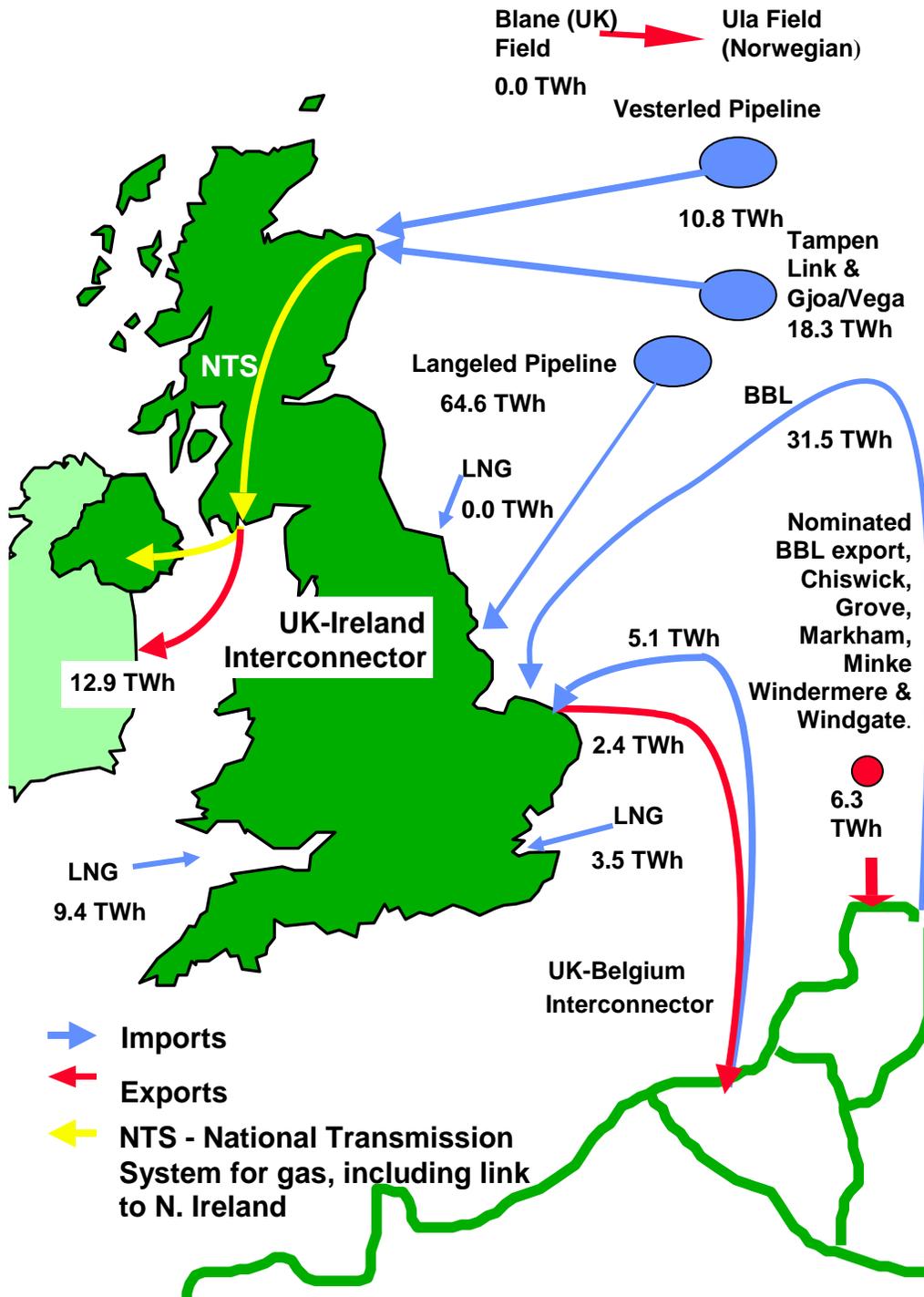


In 2013, the 8.3 per cent increase in pipeline imports was mainly driven by an increase in Belgian pipeline imports in Q1 2013. Imports from Belgium more than doubled in 2013 compared with 2012. Imports from the Netherlands and Norway were also higher by 4.2 per cent and 3.7 per cent respectively.

The fall in LNG imports in 2013 were driven by a sharp fall in imports from Qatar, which were lower by 35 per cent.

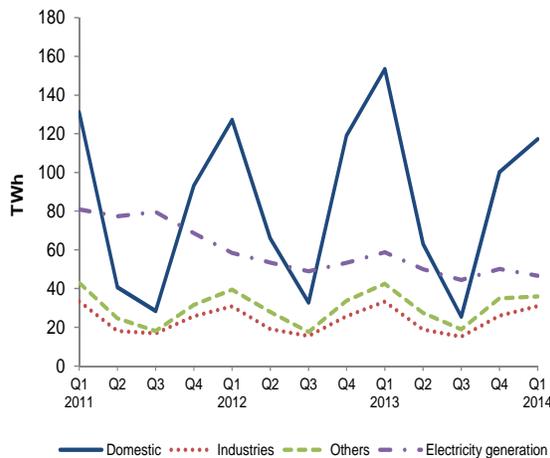
In Q1 2014, imports of LNG and all pipeline imports decreased compared to Q1 2013 reflecting the reduced demand seen in Q1 2014 versus Q1 2013. LNG imports from Qatar were down 31 per cent, pipeline imports from Belgium decreased substantially as did pipeline imports into St Fergus Frigg.

Map: UK imports and exports of gas Q1 2014¹



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 2014 was 19.6 per cent lower compared to Q1 2013. A reduction in gas use versus Q1 2013 was seen across all sectors, with electricity generation, domestic and other final use showing larger drops ranging between approximately 16 and 24 per cent. This was driven primarily by the warmer average temperatures in Q1 2014 versus Q1 2013 and by a continued shift away from gas for electricity generation.

Demand for natural gas from the industrial sector also fell in Q1 2014 versus Q1 2013, being 9.5 per cent lower for the iron and steel industry and 3.4 per cent lower for other industries (see Table 4.1). These smaller drops 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

	2012	2013 p	per cent change	2012 1st quarter	2012 2nd quarter	2012 3rd quarter	2012 4th quarter	2013 1st quarter	2013 2nd quarter	2013 3rd quarter	2013 4th quarter	2014 1st quarter p	per cent change ¹
SUPPLY													
Indigenous production	452,094	424,153	-6.2	132,563	115,118	93,807	110,606	113,470	112,494	90,047r	108,142	113,257	-0.2
Imports	549,518r	535,105r	-2.6	169,452r	121,188r	94,305r	164,573r	181,972r	132,068r	77,546r	143,520r	143,212	-21.3
<i>of which LNG</i>	<i>150,098r</i>	<i>102,620r</i>	<i>-31.6</i>	<i>39,224r</i>	<i>48,076r</i>	<i>35,223r</i>	<i>27,573r</i>	<i>16,226r</i>	<i>44,196r</i>	<i>19,428r</i>	<i>22,771r</i>	<i>12,911</i>	<i>-20.4</i>
Exports	144,023	109,664	-23.9	36,215	38,953	45,507	23,348	21,692	37,423	30,106r	20,443r	21,617	-0.3
Stock change ²	-269	+621		+13,504	-9,544	-8,427	+4,198	+40,380	-25,196	-14,890	+327	+16,992	
Transfers	-56	-61		-11	-4	-14	-26	-29	-12	-14	-5	-29	
Total supply	857,265r	850,155r	-0.8	279,293r	187,805r	134,164r	256,002r	314,100r	181,931r	122,583r	231,541r	251,814	-19.8
Statistical difference	-1,900r	2,354r		-1,492r	-910r	-418r	920r	1,476r	329r	294r	256r	436	
Total demand	859,164r	847,801r	-1.3	280,785r	188,715r	134,582r	255,082r	312,625r	181,602r	122,289r	231,285r	251,378	-19.6
TRANSFORMATION													
Electricity generation	214,151r	201,599r	-5.9	58,408r	53,435r	48,965r	53,344r	58,204r	49,668r	44,016r	49,711r	45,080	-22.5
Heat generation ³	25,091r	23,158r	-7.7	7,372r	5,728r	4,914r	7,077r	7,541r	5,197	4,305	6,116	7,541	-
Energy industry use	57,235r	55,275r	-3.4	15,305r	14,911r	12,955r	14,064r	15,116r	14,775r	12,228r	13,158r	12,601	-16.6
Losses	7,888r	7,471r	-5.3	2,235r	1,843r	1,916r	1,894r	1,962r	2,068r	1,613r	1,828r	2,029	+3.4
FINAL CONSUMPTION													
Iron & steel	5,174r	5,492r	+6.1	1,436r	1,360r	1,187r	1,191r	1,534r	1,326r	1,259r	1,373r	1,388	-9.5
Other industries	85,880r	87,658r	+2.1	29,335r	17,704r	14,269r	24,571r	30,557r	16,948r	14,428r	25,725r	29,515	-3.4
Domestic	345,080r	342,282r	-0.8	127,244r	65,808r	32,807r	119,221r	153,458r	63,196r	25,451r	100,177r	117,282	-23.6
Other final users	112,894r	119,268r	+5.6	38,007r	26,483r	16,125r	32,277r	42,854r	27,025r	17,589r	31,799r	34,544	-19.4
Non energy use ³	5,771r	5,598r	-3.0	1,443r	1,443r	1,443r	1,443r	1,399r	1,399r	1,399r	1,399r	1,399	-

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

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

3. For Heat generation and 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 2014 fell by 8.2 per cent, from 101.7 TWh a year earlier to 93.3 TWh. **(Chart 5.1).**

Renewables' share of electricity generation increased from 12.4 per cent in the first quarter of 2013 to 19.4 per cent in the first quarter of 2014. **(Chart 5.2).**

Shares of generation from fossil fuels have fallen in the first quarter of 2014 compared to a year earlier. Coal's share decreased from 40.8 per cent to 37.1 per cent, whilst gas's share of generation fell from 26.6 per cent in the first quarter of 2013 to 23.4 per cent in the first quarter of 2014, its lowest share for at least 16 years. **(Chart 5.2).**

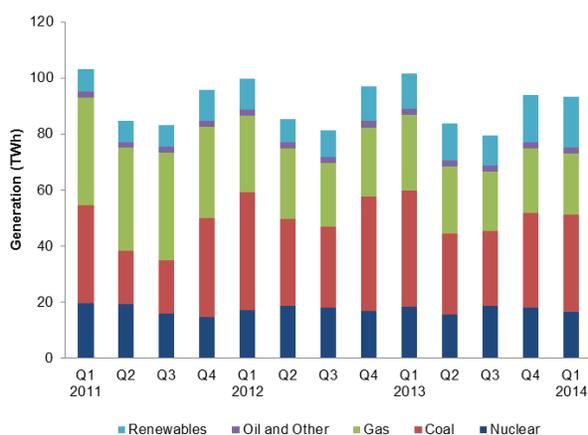
Nuclear's share of generation fell from 18.0 per cent in the first quarter of 2013 to 17.7 per cent in the first quarter of 2014 due to stations on outage or closed for maintenance in the first quarter of 2014. **(Chart 5.2).**

Low carbon electricity's share of generation increased from 30.4 per cent in the first quarter of 2013 to 37.1 per cent in the first quarter of 2014. **(Chart 5.3).**

The UK remains a net importer with 5.3 per cent of electricity supplied from net imports in the first quarter of 2014 **(Chart 5.4).**

Final consumption of electricity during the first quarter of 2014, at 83.3 TWh, was provisionally 5.3 per cent lower than in the same period last year. Domestic sales fell by 8.0 per cent. **(Chart 5.5).**

Chart 5.1 Electricity generated by fuel type



In 2014 Q1, total electricity generated fell 8.2 per cent from 101.7 TWh in 2013 Q1 to 93.3 TWh, reflecting lower demand, in part caused by warmer weather.

In 2014 Q1, coal fired generation fell by 16.5 per cent from 41.5 TWh to 34.7 TWh.

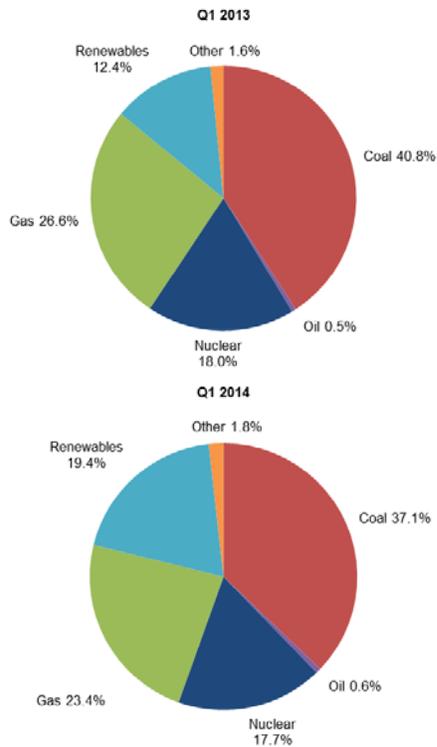
In 2014 Q1, gas fired generation fell 19.5 per cent from 27.1 TWh to 21.8 TWh, its lowest first quarter level for at least sixteen years. This was due to several gas stations running at low levels or opting not to run at all.

In 2014 Q1, nuclear generation fell 9.7 per cent from 18.3 TWh to 16.5 TWh, due to stations on outage and closed for maintenance.

In 2014 Q1, wind and PV generation rose 59 per cent from 7.1 TWh to 11.3 TWh, due to increased wind speeds as well as an increase in capacity. Hydro generation rose 78 per cent from 1.3 TWh to 2.2 TWh, due to rainfall increasing to over twice the amount seen in 2013 Q1.

Electricity

Chart 5.2 Shares of electricity generation



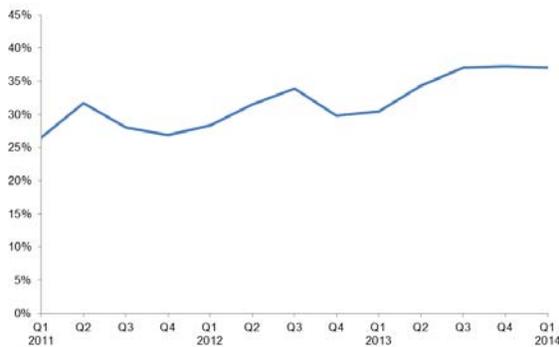
The share of generation from coal decreased from 40.8 per cent in 2013 Q1 to 37.1 per cent in 2014 Q1.

Gas's share of generation decreased from 26.6 per cent in 2013 Q1 to 23.4 per cent in 2014 Q1, its lowest first quarter share for at least sixteen years.

Nuclear's share of generation fell from 18.0 per cent in 2013 Q1 to 17.7 per cent in 2014 Q1.

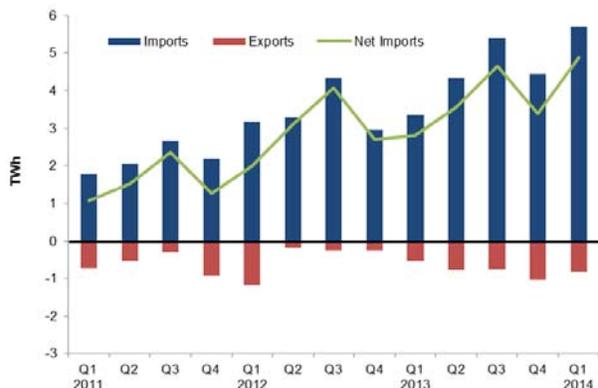
The share of renewables (hydro, wind and other renewables) increased from 12.4 per cent in 2013 Q1 to 19.4 per cent in 2014 Q1. This was due to increased wind generation capacity as well as large increases in wind speeds and rainfall.

Chart 5.3 Low carbon electricity's share of generation



Low carbon electricity's share of generation increased from 30.4 per cent in 2013 Q1 to 37.1 per cent in 2014 Q1, due to higher renewables generation.

Chart 5.4 UK trade in electricity

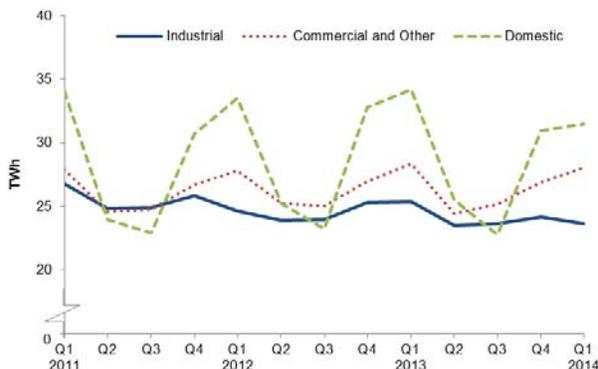


In 2014 Q1, compared with the same period in 2013, imports of electricity rose by 70 per cent (2.3 TWh), whilst exports rose by 50 per cent (+0.3 TWh). For every quarter from 2010 Q2, the UK has been a net importer after two quarters of being a net exporter (2009 Q4 and 2010 Q1).

Net imports of electricity rose by 74 per cent from 2.8 in 2013 Q1 to 4.9 TWh in quarter 1 2014, 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 5.3 per cent of electricity supplied in 2014 Q1.

In 2014 Q1, the UK was a net importer from France and the Netherlands with net imports of 3.6 TWh and 2.0 TWh respectively.

Chart 5.5 Electricity final consumption



Final consumption of electricity fell by 5.3 per cent in 2014 Q1, from 87.9 TWh in 2013 Q1, to 83.3 TWh.

Domestic use fell by 8.0 per cent, from 34.2 TWh to 31.5 TWh.

Industrial use of electricity fell 6.7 per cent, from 25.3 TWh to 23.6 TWh, while consumption by commercial and other users ¹ fell by 0.8 per cent, from 28.3 TWh to 28.1 TWh.

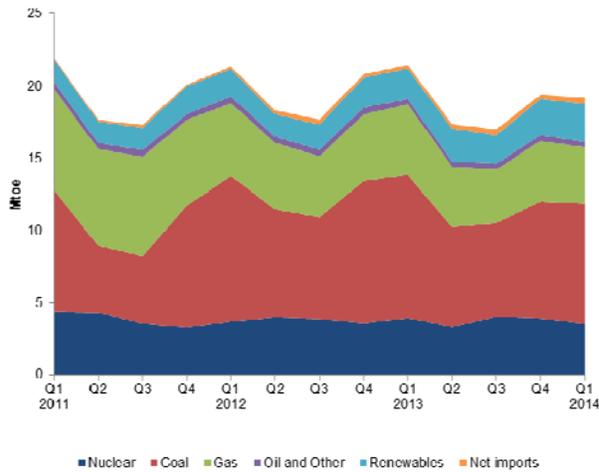
In 2014 Q1, temperatures were on average 3.1 degrees higher than in 2013 Q1.²

¹ Includes commercial, transport and other final users.

² Temperature data comes from table ET 7.1, at: 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 fell 10.4 per cent, from 21.4 mtoe in 2013 Q1 to 19.2 mtoe in 2014 Q1.

In 2014 Q1, gas use was 20 per cent lower than in 2013 Q1. Coal use during the quarter was 16.1 per cent lower than a year earlier, while nuclear sources were 9.7 per cent lower.

³ 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

	2012	2013 p	per cent change	2012 1st quarter	2012 2nd quarter	2012 3rd quarter	2012 4th quarter	2013 1st quarter	2013 2nd quarter	2013 3rd quarter	2013 4th quarter	2014 1st quarter p	per cent change ¹
FUEL USED IN GENERATION													
All generating companies													
Million tonnes of oil equivalent													
Coal	34.33	31.31	-8.8	10.04	7.45	7.01	9.83	9.88	6.87	6.47	8.08	8.29	-16.1
Oil	0.78	0.69r	-12.2	0.24	0.19	0.16	0.19	0.16	0.15	0.20r	0.18r	0.17	+9.9
Gas	18.41	16.95r	-8.0	5.02	4.59	4.21	4.59	4.88r	4.19r	3.71r	4.18r	3.89	-20.3
Nuclear	15.21	15.25	+0.3	3.71	4.00	3.89	3.60	3.95	3.34	4.04	3.92	3.57	-9.7
Hydro	0.45	0.40r	-10.8	0.16	0.07r	0.09	0.14	0.11	0.08	0.06	0.15	0.19	+77.5
Wind and Solar ²	1.80r	2.62r	+45.8	0.45r	0.37r	0.43r	0.55	0.61	0.62r	0.48r	0.91r	0.97	+58.8
Bioenergy ³	4.95r	5.78r	+16.7	1.28r	1.11r	1.21r	1.35r	1.36r	1.56r	1.42r	1.43r	1.45	+6.6
Other fuels	1.06r	0.84r	-21.3	0.23r	0.23r	0.31r	0.29r	0.21	0.20r	0.21r	0.21	0.21	-0.4
Net imports	1.02r	1.24	+21.6	0.17	0.27	0.35	0.23r	0.24	0.31	0.40	0.29	0.42	+73.8
Total all generating companies	78.01r	75.07r	-3.8	21.29r	18.29r	17.66r	20.77r	21.40r	17.32r	16.99r	19.36r	19.16	-10.4
ELECTRICITY GENERATED													
All generating companies													
TWh													
Coal	143.16r	130.77r	-8.7	42.14r	31.22r	28.79	41.01r	41.53r	28.97r	26.69r	33.58r	34.67	-16.5
Oil	2.57r	2.14r	-16.9	0.71r	0.55r	0.56r	0.75r	0.54r	0.48r	0.61r	0.50r	0.57	+4.9
Gas	100.15r	95.61r	-4.5	27.22r	25.24r	22.96r	24.74r	27.10r	24.11r	21.22r	23.19	21.83	-19.5
Nuclear	70.41	70.61	+0.3	17.20	18.53	18.03	16.65	18.28	15.47	18.69	18.16	16.52	-9.7
Hydro (natural flow)	5.28	4.70r	-11.1	1.82r	0.79r	1.05r	1.63	1.26	0.97	0.74r	1.73r	2.23	+77.7
Wind and Solar ²	21.01r	30.48r	+45.0	5.22r	4.28r	4.98r	6.53r	7.12r	7.23r	5.53r	10.59r	11.31	+58.8
- of which, Offshore	7.55r	11.44r	+51.6	1.49	1.64	1.69	2.73r	2.85	2.61r	1.96r	4.01r	4.37	+53.1
Bioenergy ³	14.91r	18.49r	+24.0	4.01r	3.21r	3.59r	4.10r	4.28r	5.15r	4.55r	4.51r	4.55	+6.4
Pumped Storage	2.97	2.90	-2.3	0.79	0.67	0.71	0.79	0.74	0.69	0.71	0.76	0.79	+6.8
Other fuels	2.94r	3.46r	+17.9	0.66r	0.74r	0.77r	0.77r	0.86r	0.86r	0.87r	0.87r	0.86	-0.7
Total all generating companies	363.40r	359.15r	-1.2	99.77r	85.23r	81.43r	96.97r	101.72r	83.93r	79.60r	93.90r	93.33	-8.2
ELECTRICITY SUPPLIED⁴													
All generating companies													
TWh													
Coal	135.54r	124.06r	-8.5	39.86r	29.51r	27.31r	38.85r	39.40r	27.48r	25.32r	31.86r	32.89	-16.5
Oil	2.58r	1.94r	-25.0	0.77r	0.61r	0.50r	0.70r	0.49r	0.44r	0.56r	0.46r	0.52	+6.3
Gas	98.22r	93.82r	-4.5	26.69r	24.77r	22.52r	24.25r	26.59r	23.64r	20.84r	22.75	21.41	-19.5
Nuclear	63.95	64.13	+0.3	15.62	16.83	16.38	15.12	16.61	14.05	16.97	16.50	15.00	-9.7
Hydro	5.25	4.66r	-11.2	1.81r	0.78r	1.04r	1.62	1.25	0.96r	0.74	1.72r	2.22	+78.0
Wind and Solar ²	20.93r	30.48r	+45.6	5.22r	4.28r	4.97r	6.45r	7.12r	7.23r	5.53r	10.59r	11.31	+58.8
- of which, Offshore	7.46	11.44r	+53.3	1.49	1.64	1.69	2.64	2.85	2.61r	1.96r	4.01r	4.37	+53.1
Bioenergy ³	13.11r	16.05r	+22.4	3.53r	2.82r	3.16r	3.61r	3.71r	4.49r	3.95r	3.90r	3.94	+6.4
Pumped Storage (net supply) ⁵	3.98r	-1.04r		1.05r	0.92r	0.95r	1.06r	-0.27	-0.26	-0.26	-0.25	-0.26	
Other fuels	2.77r	3.26r	+17.9	0.62r	0.69r	0.73r	0.73r	0.81r	0.81r	0.82r	0.82r	0.81	-0.7
Net imports	12.04	14.43	+19.8	1.99	3.19	4.08	2.78	2.82	3.56	4.65	3.40	4.89	+73.8
Total all generating companies	358.37r	351.78r	-1.8	97.16r	84.39r	81.64r	95.18r	98.52r	82.41r	79.11r	91.74r	92.73	-5.9

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.

5 ELECTRICITY

Table 5.2 Supply and consumption of electricity

													<i>GWh</i>										
				2012		2012		2012		2012		2013		2013		2013		2013		2014			
		2012	2013 p	<i>Per cent change</i>	1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter p	<i>Per cent change</i> ¹					
SUPPLY																							
Indigenous production	363,402r	359,152r	-1.2	99,771r	85,228r	81,428r	96,974r	101,719r	83,932r	79,598r	93,903r	93,332	-8.2										
Major power producers ^{2,3}	325,221r	320,806r	-1.4	89,976r	75,893	72,123	87,230r	92,365r	74,298r	70,411r	83,731r	82,800	-10.4										
Auto producers	35,214r	35,448r	+0.7	9,001r	8,661r	8,600r	8,952r	8,612r	8,944r	8,481r	9,411r	9,740	+13.1										
Other sources ⁴	2,966	2,898r	-2.3	794	675	705	793	742r	690r	706r	761r	792	+6.8										
Imports	13,742r	17,533	+27.6	3,169	3,280r	4,333r	2,960r	3,354	4,340	5,402	4,436	5,701	+70.0										
Exports	1,871r	3,103	+65.8	1,182	161r	267r	262r	538	777	751	1,038	807	+50.1										
Transfers	-	-	-	-	-	-	-	-	-	-	-	-	-										
Total supply	375,272r	373,581r	-0.5	101,758r	88,348r	85,494r	99,672r	104,535r	87,495r	84,250r	97,301r	98,226	-6.0										
Statistical difference	-955r	2,360r	-375r	-426r	264r	-418r	412r	665r	439r	844r	-365	-	-										
Total demand	376,228r	371,222r	-1.3	102,134r	88,774r	85,231r	100,090r	104,124r	86,830r	83,811r	96,457r	98,591	-5.3										
TRANSFORMATION																							
Energy industry use ⁵	29,677r	29,366r	-1.0	7,826r	7,097r	7,022r	7,732r	7,947r	6,975r	7,031r	7,413r	7,342	-7.6										
Losses	28,911r	27,000r	-6.6	8,357r	7,315r	5,975r	7,263r	8,272r	6,443r	5,236r	7,048r	7,998	-3.3										
FINAL CONSUMPTION																							
Iron & steel	3,366	3,546r	+5.4	820	840	857	848	886r	886r	886r	886r	886	-										
Other industries	94,454	93,093r	-1.4	23,791r	23,099r	23,114r	24,451r	24,457r	22,591r	22,764r	23,282r	22,757	-6.9										
Transport	4,097r	4,109r	+0.3	1,024r	1,024r	1,024r	1,024r	1,027r	1,027r	1,027r	1,027r	1,027	-										
Domestic	114,763r	113,445r	-1.1	33,527r	25,206	23,231r	32,799r	34,233r	25,519r	22,754r	30,939r	31,502	-8.0										
Other final users	100,959r	100,663r	-0.3	26,789r	24,192r	24,006r	25,972r	27,302r	23,388r	24,112r	25,861r	27,077	-0.8										
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 2013 they were:

AES Electric Ltd., Baglan Generation Ltd., Barking Power 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., GDF Suez Teesside Power Ltd.,

Immingham CHP, Infinis plc, International Power Mitsui, London Waste Ltd., Magnox North Ltd., Peel Energy Ltd., Premier Power Ltd., RGS Energy Ltd, 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.

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 19.4 per cent in 2014 Q1, up 6.9 percentage points on the share in 2013 Q1, reflecting increased capacity, high wind speeds and rainfall, and low overall demand for electricity. **(Chart 6.1)**

Renewable electricity generation was a record 18.1 TWh in 2014 Q1, an increase of 43 per cent on the 12.7 TWh in 2013 Q1. **(Chart 6.2)**

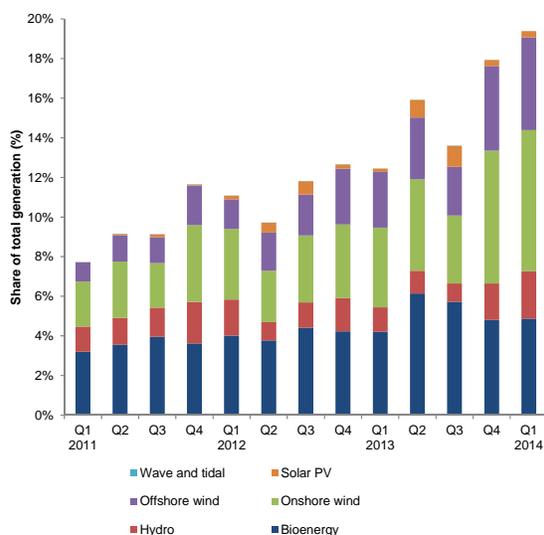
Onshore wind showed the highest absolute increase in generation in 2014 Q1, increasing by 62 per cent, from 4.1 TWh in 2013 Q1 to 6.6 TWh, as a result of much increased capacity and high wind speeds. Similarly, offshore wind increased by 53 per cent, from 2.9 TWh to 4.4 TWh. High rainfall in Scotland led to generation from hydro increasing by 78 per cent to a record quarterly level of 2.2 TWh. **(Chart 6.2)**

Renewable electricity capacity was 20.8 GW at the end of 2014 Q1, a 15 per cent increase (2.7 GW) on a year earlier, and a 5.4 per cent increase (1.1 GW) on the previous quarter. Of the 1.1 GW increase in 2014 Q1, two-thirds was due to new, mainly large-scale, solar photovoltaic capacity. **(Chart 6.3)**

In 2014 Q1, 145 MW of capacity joined the Feed in Tariff scheme, increasing the total to 2,386 MW, approximately 11 per cent of all renewable installed capacity. Of this increase, solar PVs contributed 107 MW, wind contributed 13 MW and Anaerobic Digestion 7 MW. **(Chart 6.5)**

Liquid biofuels consumption rose by 22 per cent, from 318 million litres in 2013 Q1 to 387 million litres in 2014 Q1, 3.6 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 12.4 per cent in 2013 Q1 to a record 19.4 per cent in 2014 Q1, and by 1.5 percentage points on 2013 Q4's 17.9 per cent.¹

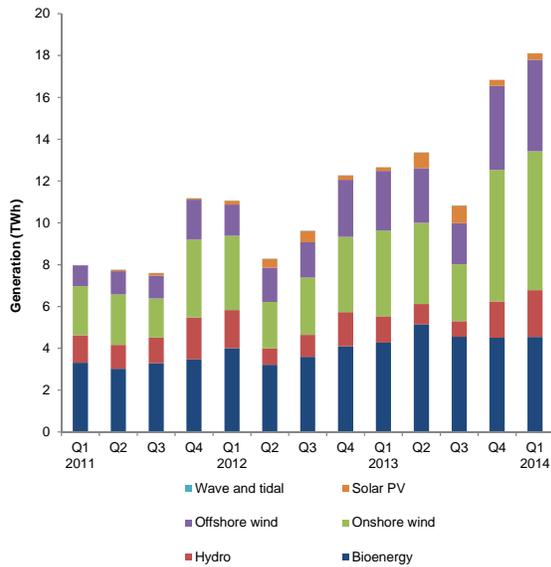
The increase on a year earlier reflects increased capacity, particularly in onshore and offshore wind, as well as high wind speeds and rainfall.

Total electricity generated from renewables in 2014 Q1 was up by 43 per cent on 2013 Q1, from 12.7 TWh to a new record of 18.1 TWh.

Overall electricity generation was 93.3 TWh in 2014 Q1, down 8.2 per cent on a year earlier (101.7 TWh), due to the warmest first quarter for seven years, following the very cold first quarter of 2013. This reduction in overall generation contributed 1.6 percentage points of the 6.9 percentage point increase in the renewables share.

¹ 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

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).

In 2014 Q1, hydro generation rose by 78 per cent on a year earlier, from 1.3 TWh to a record 2.2 TWh, with rainfall (in the main hydro areas) in the quarter double that of a year earlier, following higher than average rainfall in 2013 Q4.

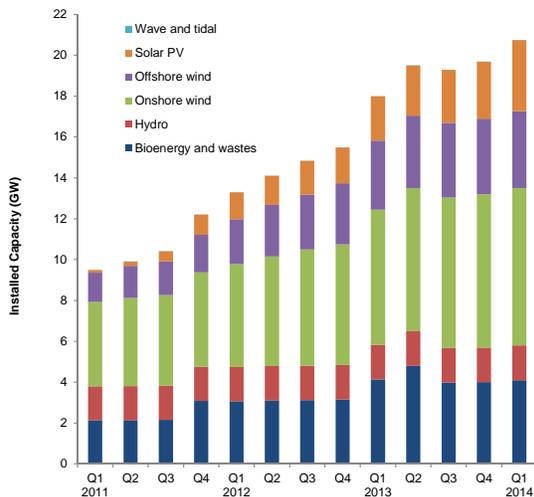
Electricity generated from onshore wind increased by 62 per cent in 2014 Q1, from 4.1 TWh in 2013 Q1 to 6.6 TWh, while generation from offshore wind increased by 53 per cent on a year earlier, from 2.9 TWh to 4.4 TWh. Both increases were due to increased capacity on a year earlier, and very high wind speeds. Average wind speeds for 2014 Q1 were 11.0 knots, the highest in the first quarter for six years, and 2.5 knots higher than a year earlier. At 13.0 knots, wind speeds in February 2014 were the highest since January 2007.²

In 2014 Q1, generation from bioenergy³ increased by 6.3 per cent on a year earlier, from 4.3 TWh to 4.5 TWh. Generation from plant biomass increased by one quarter, from 1.8 TWh to 2.2 TWh, with the impacts of new generation from Drax (unit one) and Ironbridge conversions (from coal) exceeding that of the closure of Tilbury during the year. However, as a result of these conversions, generation from co-firing (with coal) fell by 73 per cent, from 0.2 TWh to less than 0.1 TWh.

In 2014 Q1, onshore wind had the largest share of generation (37 per cent) with 24 per cent from offshore wind, 25 per cent from bioenergy, 12 per cent from hydro and 1.6 per cent from solar PV.

At the end of 2014 Q1, the UK's renewable electricity capacity totalled 20.8 GW, an increase of 5.4 per cent (1.1 GW) on that installed at the end of 2013 Q4, and 15 per cent (2.7 GW) on that installed a year earlier.

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



Of the 1.1 GW increase during 2014 Q1, two-thirds (701 MW) came from solar photovoltaics, with the majority of this from large-scale (>5 MW) schemes commissioning ahead of the cut in Renewables Obligation support on 1 April 2014. In addition, 190 MW came from several new onshore wind farms (including the first 50 MW at Berry Burn), and 62 MW from the beginning of operations at the West of Duddon Sands, and the continued expansion of the Gwynt-y-Mor, offshore wind farms.

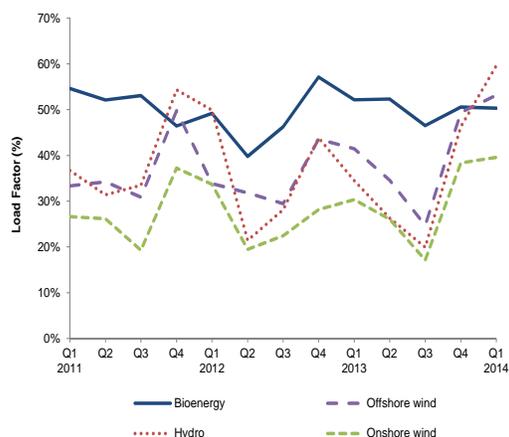
Solar PV capacity stood at 3.5 GW at the end of 2014 Q1, increasing its share to 17 per cent of all renewables capacity.

At the end of 2014 Q1, onshore wind had the highest share of capacity (37 per cent, 7.7 GW) followed by bioenergy (20 per cent, 4.1 GW) and offshore wind (18 per cent, 3.8 GW).

² 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

³ Bioenergy consists of: landfill gas, sewage gas, energy from waste, plant biomass, animal biomass, anaerobic digestion and co-firing (generation only)

Chart 6.4 Renewable electricity load factors



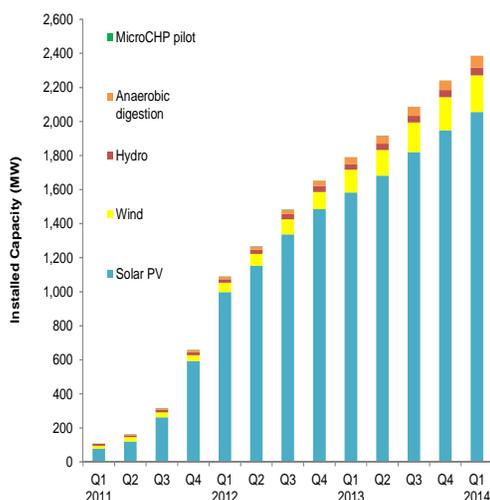
In 2014 Q1, onshore wind's load factor rose by 10 percentage points, from 30.3 per cent in 2013 Q1 to 40.4 per cent. Meanwhile, offshore wind's load factor increased by 13 percentage points, from 41.4 per cent in 2013 Q1 to 54.3 per cent in 2014 Q1. Both were record highs over the time-period covered⁴, and reflect high wind speeds (2.5 knots higher than in 2013 Q1).⁵

Compared with 2013 Q4, onshore wind's load factor in 2014 Q1 was up by 2.1 percentage points, while offshore wind's was up by 4.9 percentage points, with average wind speeds 1.0 knots higher.

Hydro's load factor in 2014 Q1 rose by 26 percentage points, from 34.5 per cent in 2013 Q1 to a record 61.0 per cent, with average rainfall double that of a year earlier. Compared with 2013 Q4, hydro's load factor in 2014 Q1 rose by 15 percentage points, from 46.3 per cent.

For bioenergy, the load factor in 2014 Q1, at 51.4 per cent, was down slightly (0.7 percentage points) on a year earlier, but up slightly (0.9 percentage points) on 2013 Q4. With Ironbridge not yet reaching full operations, the load factor has remained lower than its peak of 57.1 per cent in 2012 Q4.

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



At the end of 2014 Q1, 2,386 MW of capacity was confirmed on the GB Feed in Tariff (FiTs) scheme. This was a 6.5 per cent increase on the 2,240 MW confirmed on the scheme at the end of 2013 Q4, and 33 per cent more than the amount confirmed at the end of 2013 Q1.⁶

In terms of number of installations, at the end of 2014 Q1, there were 470,892 confirmed on the FiT scheme, a 5.1 per cent increase on the 448,140 confirmed at the end of the previous quarter.

Solar photovoltaics (PVs) represent the majority of both installations and installed capacity confirmed on FiTs, with, respectively, 99 per cent and 86 per cent of the total. The majority of PV installations are sub-4 kW retrofitted schemes, which increased by 20,745 (69 MW) from 2013 Q4 to bring the total to 464,520 (2,056 MW) at the end of 2014 Q1.⁷

Renewable installations confirmed on FiTs (all except MicroCHP) represented 11 per cent of all renewable installed capacity.

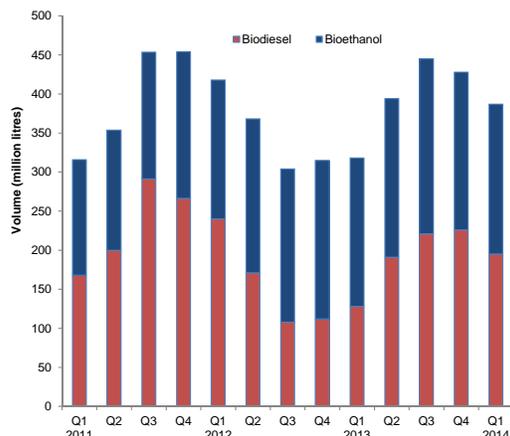
⁴ Quarterly load factors for renewables have been calculated since 2010 Q1.

⁵ 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.

⁶ Statistics on Feed in Tariff uptake, and generation, can be found in the monthly central Feed-in-Tariff register statistics table and Feed-in-Tariff generation statistics table, at: www.gov.uk/government/organisations/department-of-energy-climate-change/series/feed-in-tariff-statistics

⁷ 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 2014 Q1, 387 million litres of liquid biofuels were consumed in transport, a rise of 22 per cent on the total in 2013 Q1 (318 million litres), but still 15 per cent lower than 2011 Q4's record high of 454 million litres.

In 2014 Q1, biodiesel accounted for 3.0 per cent of diesel, and bioethanol 4.5 per cent of motor spirit. The combined contribution of the two fuels was 3.6 per cent, 0.5 percentage points higher than 2013 Q1's share.

Bioethanol consumption rose by 1.1 per cent, from 190 million litres to 192 million litres. Biodiesel consumption rose by 52 per cent, from 128 million litres in 2013 Q1 to 195 million litres in 2014 Q1.

In 2014 Q1, biodiesel contributed the largest share of biofuels consumption, for the second successive quarter (following six successive quarters of bioethanol having the majority share), with 50.4 per cent. Bioethanol represented 49.6 per cent of biofuels consumption.

Biodiesel consumption in 2012-13 had fallen considerably due to several factors, including policy changes, from 1 April 2012: the doubling of credits, under the Renewable Transport Fuel Obligation for some types of biodiesel (such as waste cooking oil) - meaning less needs to be blended with diesel; and the ending of a reduced duty rate on cooking oil used for biodiesel, increasing duty payable by 20 pence per litre.

Relevant tables

- 6.1: Renewable electricity capacity and generation.....Page 47
- 6.2: Liquid biofuels for transport consumption.....Page 48

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6 RENEWABLES

Table 6.1. Renewable electricity capacity and generation

	2012	2013 p	per cent change	2012 1st quarter	2012 2nd quarter	2012 3rd quarter	2012 4th quarter	2013 1st quarter	2013 2nd quarter	2013 3rd quarter	2013 4th quarter	2014 1st quarter p	per cent change ¹¹
Cumulative Installed Capacity¹													MW
Onshore Wind	5,899	7,513	+27.4	5,038r	5,369r	5,696r	5,899r	6,620r	7,011r	7,360r	7,513r	7,703	+16.4
Offshore Wind	2,995	3,696	+23.4	2,200	2,516	2,682	2,995	3,381	3,544	3,657	3,696	3,758	+11.1
Shoreline wave / tidal	7	7	+7.5	5	7	7	7	6r	6r	7r	7r	7	+16.2
Solar photovoltaics	1,747	2,780	+59.1	1,307r	1,425r	1,653r	1,747r	2,170r	2,462r	2,593r	2,780r	3,481	+60.4
Small scale Hydro	216	222	+2.8	204r	211r	212r	216r	216r	219r	220r	222	228	+5.3
Large scale Hydro	1,471	1,471	-	1,471	1,471	1,471	1,471	1,471	1,471	1,471	1,471	1,471	-
Landfill gas	1,036	1,042	+0.5	1,034	1,034	1,035	1,036	1,041r	1,042r	1,042r	1,042r	1,042	-
Sewage sludge digestion	204	198	-3.1	203r	203r	204r	204r	196r	197r	198r	198r	199	+1.2
Energy from waste	521	553	+6.1	516r	516r	516r	521r	546r	553r	553r	553r	588	+7.6
Animal Biomass (non-AD) ²	111	111	-	111	111	111	111	111	111	111	111	111	-
Anaerobic Digestion	118	150	+26.5	70r	87r	97r	118r	126r	132r	136r	150r	150	+18.9
Plant Biomass ³	1,166	1,949	+67.1	1,136	1,159	1,161	1,166r	2,118r	2,767r	1,949r	1,949r	2,014	-4.9
Total	15,491	19,690	+27.1	13,295r	14,109r	14,844r	15,491r	18,003r	19,514r	19,296r	19,690r	20,751	+15.3
Co-firing ⁴	203	35	-82.7	203r	203r	203r	203r	35r	35r	35r	35r	22	-38.7
Generation⁵													GWh
Onshore Wind ⁶	12,111	16,992	+40.3	3,550r	2,215	2,742r	3,605r	4,100r	3,875r	2,720r	6,297r	6,647	+62.1
Offshore Wind ^{6,7}	7,550	11,441	+51.5	1,493	1,637	1,691	2,728r	2,855r	2,614r	1,963r	4,010r	4,372	+53.1
Shoreline wave / tidal ⁶	4	6	+64.8	1	1	1	1	2r	2	1	1r	1	-42.4
Solar photovoltaics ⁶	1,351	2,036	+50.7	178r	430r	544r	199r	166r	743r	843r	284r	294	+77.1
Hydro ⁶	5,285	4,698	-11.1	1,823r	786r	1,045r	1,631r	1,256r	968r	744r	1,730r	2,233	+77.7
Landfill gas ⁶	5,154	5,169	+0.3	1,299	1,278	1,280	1,297	1,297r	1,293r	1,272r	1,306r	1,223	-5.7
Sewage sludge digestion ⁶	719	761	+5.8	188	181	173	178	180r	202r	184r	196r	174	-3.3
Energy from waste ⁸	2,034	1,987	-2.3	480r	497r	535r	521r	499r	484r	506r	499r	491	-1.6
Co-firing with fossil fuels	1,783	309	-82.7	703	530	410	140	170	49r	39r	50r	47	-72.5
Animal Biomass (non-AD) ^{2,6}	643	628	-2.3	177	141	144	180	166r	167r	144r	151r	168	+1.3
Anaerobic Digestion	499	707	+41.6	96r	116r	133r	154r	166r	168r	180r	192r	201	+20.9
Plant Biomass ^{3,6}	4,083	8,933	(+)	1,064r	471r	918r	1,630r	1,800r	2,792r	2,226r	2,116r	2,246	+24.8
Total	41,214	53,667	+30.2	11,051r	8,282r	9,616r	12,265r	12,657r	13,355r	10,823r	16,833r	18,096	+43.0
Non-biodegradable wastes ⁹	1,170	1,144	-2.2	276r	286r	308r	300r	287r	278r	291r	287r	283	-1.6
Load Factors¹⁰													
Onshore Wind	26.2%	28.9%		33.7%	19.5%	22.4%	28.2%	30.3%	26.0%	17.1%	38.4%	40.4%	
Offshore Wind	35.6%	39.0%		33.9%	31.8%	29.5%	43.5%	41.4%	34.6%	24.7%	49.4%	54.3%	
Hydro	35.8%	31.7%		23.2%	21.4%	28.1%	43.8%	34.5%	26.3%	19.9%	46.3%	61.0%	
Landfill gas	56.2%	56.8%		57.1%	56.6%	56.0%	56.7%	57.8%	56.8%	55.3%	56.8%	54.4%	
Sewage sludge digestion	40.7%	43.2%		42.9%	40.8%	38.4%	39.5%	41.5%	47.1%	42.2%	44.7%	40.5%	
Energy from waste	45.2%	42.3%		43.1%	44.1%	47.0%	45.5%	43.3%	40.3%	41.4%	40.9%	39.9%	
Animal Biomass (non-AD)	66.2%	64.9%		73.3%	58.5%	59.1%	74.0%	69.5%	69.3%	59.1%	61.9%	70.4%	
Anaerobic Digestion	60.2%	60.2%		62.3%	67.5%	65.6%	64.9%	62.9%	59.5%	60.9%	60.8%	62.0%	
Plant Biomass	40.2%	65.5%		42.6%	18.8%	35.9%	63.5%	50.7%	52.3%	42.7%	49.2%	52.5%	
Total (excluding co-firing and non-biodegradable wastes)	32.4%	34.6%		37.2%	25.9%	28.8%	36.2%	34.5%	32.5%	25.2%	39.0%	41.3%	

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.

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

	2012	2013 p	per cent change	2012 1st quarter	2012 2nd quarter	2012 3rd quarter	2012 4th quarter	2013 1st quarter	2013 2nd quarter	2013 3rd quarter	2013 4th quarter	2014 1st quarter p	per cent change ¹
Volume													
Million litres													
Bioethanol	774	819	+5.8	178	197	196	203	190	203	224	202	192	1.1
Biodiesel	631	766	+21.4	240	171	108	112	128	191	221	226	195	52
Total biofuels for transport	1,405	1,585	+12.8	418	368	304	315	318	394	445	428	387	21.7
Energy													
Thousand tonnes of oil equivalent													
Bioethanol	436	462	+5.8	100	111	110	114	107	114	126	114	108	+1.1
Biodiesel	518	629	+21.4	197	141	89	92	105	157	182	186	160	+52.3
Total biofuels for transport	955	1,091	+14.3	298	252	199	206	212	271	308	300	268	+26.5
Shares of road fuels													
Bioethanol as per cent of Motor Spirit	4.1%	4.5%		3.9%	4.1%	4.2%	4.3%	4.4%	4.3%	4.9%	4.5%	4.5%	
Biodiesel as per cent of DERV	2.4%	2.8%		3.8%	2.6%	1.6%	1.6%	2.1%	2.8%	3.2%	3.2%	3.0%	
Total biofuels as per cent of road fuels	3.1%	3.5%		3.9%	3.2%	2.7%	2.7%	3.0%	3.4%	3.9%	3.7%	3.6%	

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

Renewable energy in 2013

Introduction

This article updates the information on renewable energy published in the June 2013 edition of Energy Trends, and in the 2013 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.

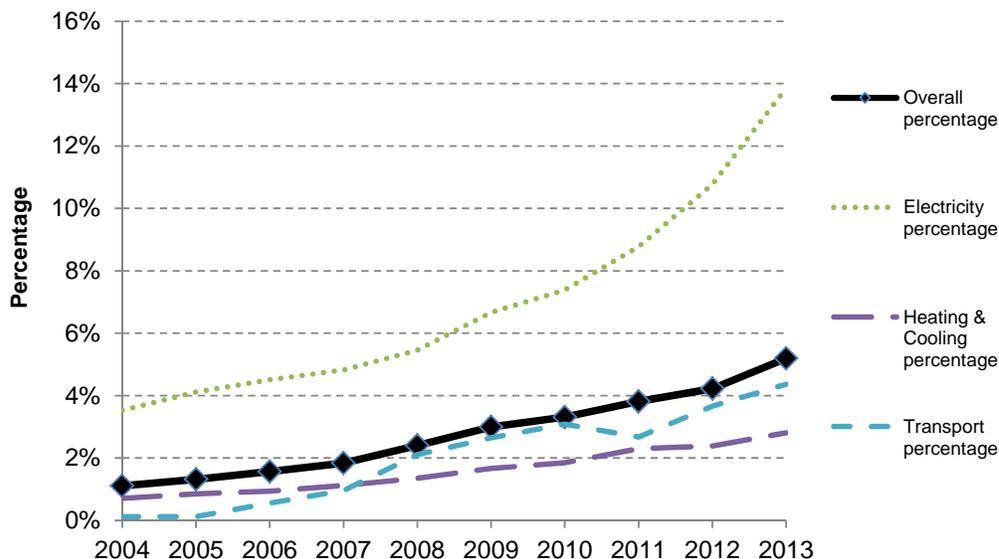
Key messages

In 2013, renewable energy provisionally accounted for 5.2 per cent of final energy consumption, as measured using the 2009 Renewable Energy Directive (RED) methodology. This is an increase from the 2012 position of 4.2 per cent, reflecting a significant growth in the contribution of renewable electricity whilst renewable heating and transport contributions also rose. The next interim target under the RED is for an average of 5.41 per cent across 2013 and 2014 (see page 54).

The amount of electricity generated from renewables sources in 2013 was 53,667 GWh, a 30 per cent increase on 2012. Wind generation was the largest contributor to the overall increase in renewable electricity generation; offshore wind increased by 52 per cent and onshore wind by 40 per cent, taking total wind generation to 28,434 GWh. Generation from solar photovoltaics was up by 51 per cent on 2012, while plant biomass generation more than doubled, largely a result of increased generation due to the conversion of coal plant to dedicated biomass. Hydro generation meanwhile fell by 11 per cent, due to lower rainfall in catchment areas.

Generation from wind represented 53 per cent of total renewable electricity generation in 2013, compared with 34 per cent for bioenergy, 9 per cent for hydro and 4 per cent for solar photovoltaics. The increases in wind generation were driven by high growth in installed capacity, as well as higher wind speeds across the year, and especially the final quarter.

Chart 1: Progress against Renewable Energy Directive



Renewable electricity generation capacity increased by 4.2 GW (27 per cent) to 19.7 GW. The main sources of this increase were onshore wind (up 1.6 GW, 27 per cent), solar photovoltaics (up 1.0 GW, 59 per cent), plant biomass (up 0.8 GW, 67 per cent) and offshore wind (up 0.7 GW, 23 per cent).

The weather had a major impact on renewable electricity generation during 2013. Average wind speeds were 0.4 knots higher than in 2012; although broadly similar to the average over the last five years, it was the windiest December (which is the month in the year when the most installed capacity is operational) in the last 13 years. Countering this, average rainfall levels (in hydro catchment areas) were 9.2 per cent lower than in 2012. Whilst these factors affect the raw 2013 generation outputs of renewables, the Renewable Energy Directive measure uses a normalisation approach to smooth the year on year impacts of differing wind and rain patterns.

Heat from renewable sources increased by 19 per cent during 2013 (to 1,729 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 1,091 ktoe), accounting for 3.5 per cent by volume of road transport fuels in 2013. Bioethanol, as a proportion of motor spirit, increased by 0.4 percentage points to 4.5 per cent, whilst biodiesel as a proportion of DERV rose by 0.4 percentage points to 2.8 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 13.9 per cent to 14.9 per cent, under the three measures (RED, Renewables Obligation and International Basis) in 2013. Section 6 of the March 2014 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.

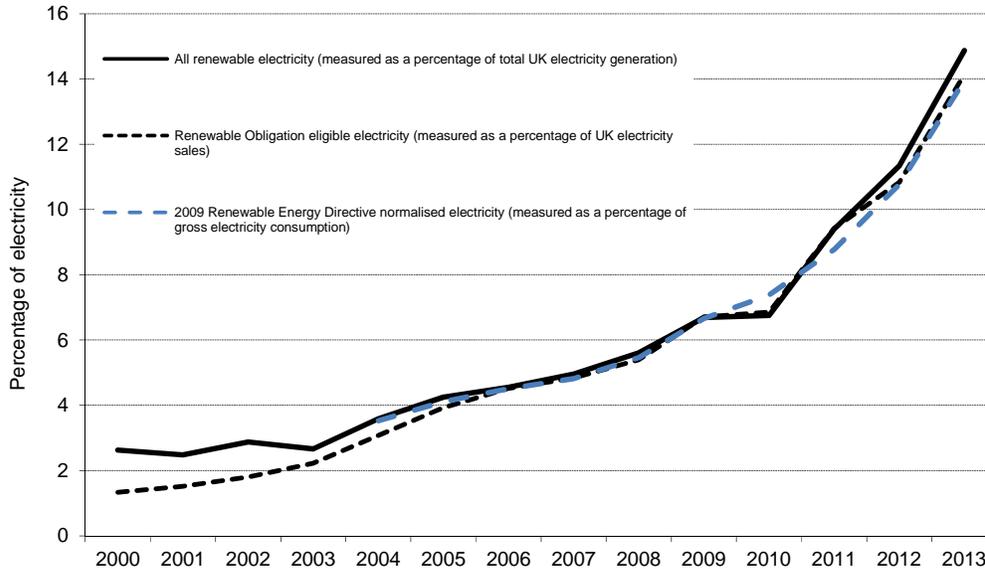
On the "international definition basis" renewables provided 14.9 per cent of the electricity generated in the United Kingdom in 2013, a 3.5 percentage point increase on the 2012 proportion. Total electricity generation from renewables in 2013, as shown in Table 3 at the end of this article, amounted to 53,667 GWh, an increase of 12,453 GWh (30 per cent) on 2012. 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 3.3 percentage points to 14.1 per cent in 2013.

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.¹ In 2011, higher than average wind speeds and rain fall resulted in the normalised measures showing lower increases than non-normalised measures; however this pattern was reversed in 2012. In

¹ See page 54 for further details of the methodology behind the RED

2013, higher than average wind speeds once again resulted in the normalised measure showing a lower increase; this reduction was only partially offset by a positive normalisation adjustment to hydro, on account of lower than average rainfall. In 2013, the normalised electricity component of the Renewable Energy Directive increased by 3.1 percentage points, to 13.9 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.

Renewable electricity generation

The largest absolute increase in generation came from onshore wind, rising by 4,880 GWh to 16,992 GWh, due to increased capacity and higher wind speeds across 2013. Similar factors helped offshore wind generation increase by 3,892 GWh to 11,411 GWh (52 per cent higher).

Generation from plant biomass rose by 4,850 GWh, to 8,933 GWh, more than double the previous year's contribution. This was due to the conversion of one of Drax (coal power station)'s six units to burn dedicated biomass, as well as increased generation from the Tilbury conversion (despite its closure under the Large Combustion Plant Directive in August 2013), following the fire in 2012. The conversion of the Drax unit, as well as Ironbridge, resulted in a further reduction (1,474 GWh) in the co-firing of renewables with fossil fuels.

Greater uptake of solar photovoltaics, particularly from larger schemes supported by the Renewables Obligation, as well as smaller schemes under the Feed in Tariff, led to generation in 2013 increasing by over one half on 2012 (by 685 GWh, from 1,351 GWh to 2,036 GWh).

Other sources showing increases during the year included anaerobic digestion (an increase of 208 GWh, 42 per cent higher), sewage gas (42 GWh, 5.8 per cent higher), and landfill gas (15 GWh, 0.3 per cent higher).

Generation from hydro fell by 587 GWh (11 per cent) due to reduced rain fall, while biodegradable waste (by 46 GWh, 2.3 per cent) and animal biomass (by 14 GWh, 2.2 per cent) also fell.

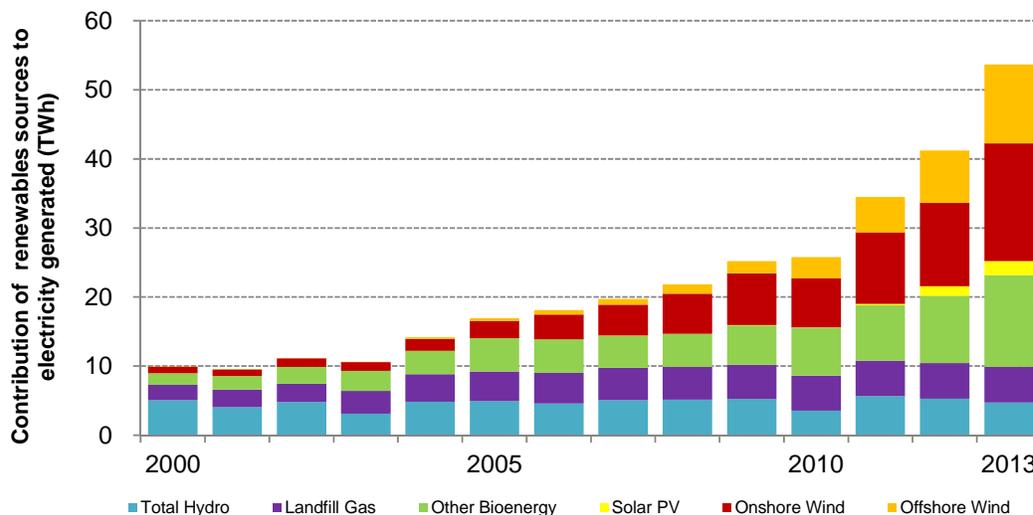
Onshore wind continued to be the leading individual technology for the generation of electricity from renewable sources during 2013, with 32 per cent of renewables generation coming from this

Special feature – Renewable energy in 2013

source; a further 21 per cent came from offshore wind, and 8.8 per cent came from hydro. However the combined generation from the variety of different bioenergy sources accounted for 34 per cent of renewable generation, with plant biomass accounting for almost one half of bioenergy generation and landfill gas accounting for 28 per cent. Despite the large annual increase, just 3.8 per cent of renewable generation came from solar photovoltaics.

Total generation from bioenergy sources was 24 per cent higher than in 2012, with wind being 45 per cent higher, whilst hydro's contribution was 11 per cent lower. Chart 3 shows the growth in generation, by main renewable source, since 2000.

Chart 3: Electricity generation by main renewable source since 2000



Note: Hydro bar includes shoreline wave/tidal (0.006TWh in 2013)

Renewable electricity capacity

Total renewable electricity capacity at the end of 2013, as shown in Table 3, amounted to 19.7 GW, compared with 15.5 GW at the end of 2012; this excludes the capacity within conventional generation station that was used for co-firing (less than 0.1 GW). The largest contributor towards this 27 per cent capacity increase was 1,614 MW from onshore wind, with a further 1,033 MW from solar photovoltaics and 701 MW from offshore wind. Plant biomass capacity increased by 783 MW, with the extra capacity from two new conversions (Drax unit one and Ironbridge) exceeding the reduction from the closure of Tilbury during the year.

In capacity terms, onshore wind accounted for 38 per cent of capacity, followed by offshore wind (19 per cent), solar photovoltaics (14 per cent), plant biomass (9.9 per cent), hydro (8.6 per cent) and landfill gas (5.3 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 (750MW) and operational changes in 2011 at the (now closed) Tilbury

generation station, and the fire there during 2012, reduced traditionally calculated load factors. Wind speeds and rainfall levels have also had a major impact on load factors.²

Heat production

Around 15 per cent of renewable sources were used to generate heat during 2013. The four categories of renewable heat production in the United Kingdom are the direct combustion of various forms of bioenergy (84 per cent of the total), active solar heating, geothermal, and heat pumps. Together they produced energy equivalent to 1,729 thousand tonnes of oil equivalent (or 20.1 TWh) in 2013, a 19 per cent increase during the year. Using the Renewable Energy Directive methodology, renewable heat sources accounted for 2.8 per cent of total heat demand in 2013, a 0.5 percentage point increase on 2012.

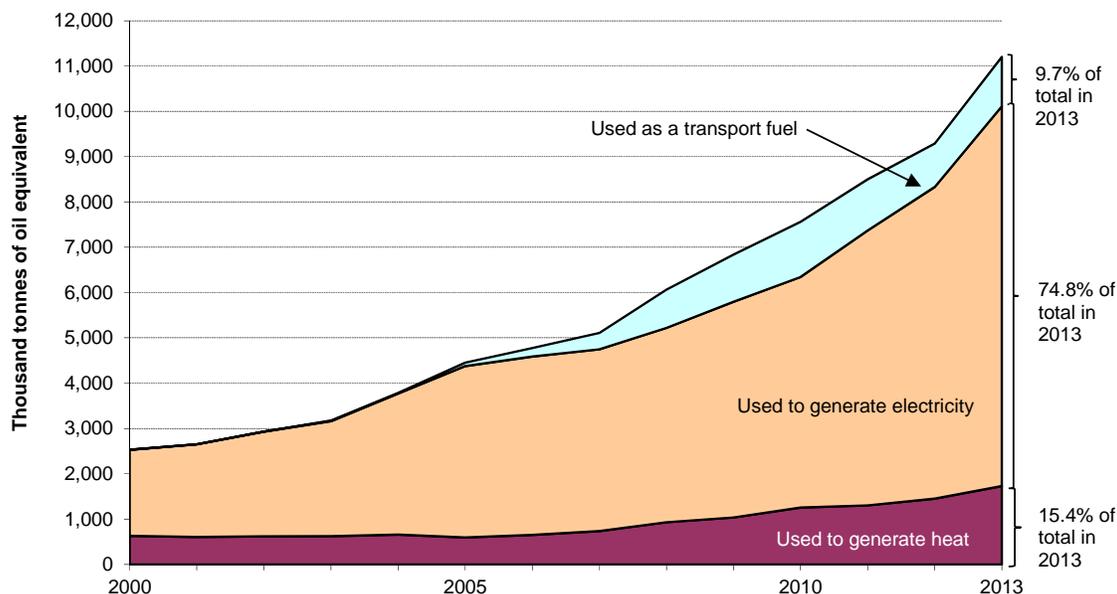
Renewables used to generate heat have grown in recent years, following a decline up to 2005 as a result of tighter emission controls which discouraged on-site burning of biomass, especially wood waste. Policies such as the Renewable Heat Incentive (RHI) and Renewable Heat Premium Payment (RHPP) schemes are designed to support renewable heat production. Around 3 per cent of renewable heat during 2013 was supported through the receipt of RHI payments (50 thousand tonnes of oil equivalent, or 586 GWh). Domestic use of wood is the main contributor to renewables used for heat – comprising around 35 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 20 per cent each. Heat pumps (mainly in the domestic sector) contributed around 5 per cent of the renewable heat total.

Liquid biofuels for transport

Liquid biofuels for transport comprised around 10 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 766 million litres of biodiesel and 819 million litres of bioethanol were consumed in 2013; biodiesel consumption was 21 per cent higher than in 2012, whilst bioethanol consumption was 5.8 per cent higher. Biodiesel has a higher energy content than bioethanol, meaning that the combined total energy content of these fuels equates to 1,091 thousand tonnes of oil equivalent, 14 per cent higher than in 2012. During 2013, biodiesel accounted for 2.8 per cent of diesel, and bioethanol 4.5 per cent of motor spirit; the combined contribution of biodiesel and bioethanol was 3.5 per cent by volume, 0.4 percentage points higher than in 2012. 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.

² 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 2013 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 5.2 per cent of the United Kingdom's total primary energy requirements in 2013, up from 4.3 per cent in 2012. Use of non-biodegradable wastes accounted for an additional 0.3 per cent of 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, 5.2 per cent of final energy consumption was from renewable sources. This is an increase from the 2012 figure of 4.2 per cent, and 3.8 per cent in 2011.

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 2013 figures for all member states will be published by Eurostat during 2015. The RED introduced interim targets for member states to achieve on their route to attaining the 2020 proportion. The UK was broadly in line with its first interim target of 4.04 per cent across 2011-2012, achieving 4.01 per cent. The second interim target, across 2013 and 2014, is 5.41 per cent, and will be reported against in June 2015.

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 Obligation³ 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

The 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:

<https://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 electricity suppliers to make payments (generation tariffs) to these generators based on the number of

³ 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 2013

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 and 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

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.

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.

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.

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 and 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 25 years of data from 1989 to 2013 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 2014 edition of the Digest of UK Energy Statistics, to be published on 31 July 2014.

Regional statistics

A further renewable statistics article will be produced in the September 2014 edition of Energy Trends, containing a regional breakdown of the renewable electricity generation and capacity statistics.

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Table 1: Percentages of electricity derived from renewable sources

	2005	2006	2007	2008	2009	2010	2011	2012	2013
Overall renewables percentage – International basis (Electricity generated from all renewables except non-biodegradable wastes, as a percentage of all electricity generated in the UK)	4.3	4.6	5.0	5.6	6.7	6.8	9.4	11.3	14.9
Percentage on a Renewables Obligation basis (Electricity generated from renewables eligible for the Renewables Obligation as a percentage of electricity sales by licensed suppliers in the UK)	3.9	4.5	4.8	5.4	6.7	6.9	9.4	10.8	14.1
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 gross electricity consumption, calculated on a net calorific value basis)	4.1	4.5	4.8	5.5	6.7	7.4	8.8	10.8	13.9

Table 2: Progress against the 2009 Renewable Energy Directive

	2005	2006	2007	2008	2009	2010	2011	2012	2013
Percentage of electricity from renewable sources (normalised)	4.1	4.5	4.8	5.5	6.7	7.4	8.8	10.8	13.9
Percentage of heating and cooling from renewable sources	0.8	0.9	1.1	1.4	1.7	1.9	2.3	2.4	2.8
Percentage of transport energy from renewable sources	0.1	0.6	1.0	2.1	2.6	3.1	2.7	3.7	4.4
Overall renewable consumption as a percentage of capped gross final energy consumption using net calorific values (normalised) [not directly calculated from	1.4	1.6	1.8	2.4	3.0	3.3	3.8	4.2	5.2

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

	2011	2012	2013
Installed Capacity (MWe)			
Wind:			
Onshore	4,620.3	5,899.1	7,513.3
Offshore	1,838.0	2,995.2	3,695.7
Shoreline wave / tidal	3.1	6.7	7.2
Solar photovoltaics	994.2	1,746.8	2,779.8
Hydro:			
Small scale	201.6	215.6	221.7
Large scale (1)	1,470.9	1,470.9	1,470.9
Bioenergy:			
Landfill gas	1,050.3	1,036.0	1,041.7
Sewage sludge digestion	198.0	204.4	198.0
Energy from waste (2)	504.1	520.8	552.7
Animal Biomass (non-AD)(3)	110.5	110.5	110.5
Anaerobic digestion	70.3	118.3	149.6
Plant Biomass (4)	1,148.8	1,166.3	1,949.0
Total bioenergy and wastes	3,082.1	3,156.3	4,001.6
Total	12,210.1	15,490.5	19,690.2
Co-firing (5)	338.2	203.5	35.2
Generation (GWh)			
Wind:			
Onshore (6)	10,347	12,112	16,992
Offshore	5,126	7,549	11,441
Shoreline wave / tidal (7)	1	4	6
Solar photovoltaics	244	1,351	2,036
Hydro:			
Small scale (6)	693	653	672
Large scale (1)	4,989	4,631	4,026
Bioenergy:			
Landfill gas	5,092	5,154	5,169
Sewage sludge digestion	764	719	761
Biodegradable energy from waste (8)	1,643	2,034	1,987
Co-firing with fossil fuels	2,964	1,783	309
Animal Biomass (3)	615	643	628
Anaerobic digestion	272	499	707
Plant Biomass (4)	1,749	4,083	8,933
Total bioenergy	13,098	14,914	18,494
Total generation	34,498	41,214	53,667
Non-biodegradable energy from wastes (9)	945	1,170	1,143
Total generation from sources eligible for the Renewable Obligation (10)	29,034	33,428	43,359

(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		
	2011	2012	2013
Load factors - based on average beginning and end of year capacity (1)			
Wind	29.8	29.2	32.3
Onshore wind	27.2	26.2	28.9
Offshore wind	36.8	35.6	39.0
Shoreline wave / tidal	3.8	8.3	9.7
Solar photovoltaics	5.1	11.2	10.3
Hydro	39.2	35.8	31.7
Hydro (small scale)	41.0	35.7	35.1
Hydro (large scale)	39.0	35.8	31.2
Bioenergy (excludes cofiring and non-biodegradable wastes)	44.8	47.9	58.0
Landfill gas	56.5	56.2	56.8
Sewage sludge digestion	44.6	40.7	43.2
Energy from waste (3)	40.3	45.2	42.3
Animal Biomass (4)	63.5	66.2	64.9
Anaerobic Digestion	61.6	60.2	60.2
Plant Biomass (5)	27.3	40.2	65.5
All renewable technologies (excluding cofiring and non-biodegradable wastes)	33.6	32.4	34.6
Load factors - for schemes operating on an unchanged configuration basis (2)			
Wind	29.4	28.0	31.0
Onshore wind	27.2	25.6	27.9
Offshore wind	35.0	33.7	37.5
Hydro	41.7	35.3	31.6
Hydro (small scale)	43.2	35.9	35.2
Hydro (large scale)	41.5	35.3	31.3
Bioenergy (excludes cofiring and non-biodegradable wastes)	61.1	62.8	60.0
Landfill gas	59.5	58.5	57.3
Sewage sludge digestion	53.5	48.0	50.2
Energy from waste (3)	40.2	44.5	41.9
Animal Biomass (4)	69.0	66.2	70.4
Anaerobic Digestion	57.5	60.5	57.9
Plant Biomass (5)	60.9	67.2	62.3
All renewable technologies (excluding cofiring and non-biodegradable wastes)	37.2	36.0	35.6

(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 ⁽¹⁾⁽²⁾

	Thousand tonnes of oil equivalent		
	2011	2012	2013
Used to generate electricity ⁽³⁾			
Wind:			
Onshore	889.6	1,041.4	1,461.1
Offshore	440.7	649.1	983.8
Shoreline wave / tidal ⁽⁴⁾	0.1	0.3	0.5
Solar photovoltaics	21.0	116.1	175.0
Hydro:			
Small scale	59.6	56.2	57.8
Large scale ⁽⁵⁾	429.0	398.2	346.2
Bioenergy:			
Landfill gas	1,670.1	1,690.3	1,695.1
Sewage sludge digestion	250.4	235.9	249.6
Biodegradable energy from waste	677.8	838.9	819.8
Co-firing with fossil fuels	763.5	400.5	53.7
Animal Biomass ⁽⁶⁾	224.0	225.0	226.4
Anaerobic digestion	89.1	163.6	231.7
Plant Biomass ⁽⁷⁾	553.7	1,062.3	2,079.9
Total bioenergy	4,228.7	4,616.6	5,356.3
Total	6,068.8	6,878.0	8,380.6
Non-biodegradable energy from waste ⁽⁸⁾	395.9	488.5	477.5
Used to generate heat			
Active solar heating	122.4	152.3	189.5
Bioenergy:			
Landfill gas	13.6	13.6	13.6
Sewage sludge digestion	64.3	63.7	68.3
Wood combustion - domestic	401.9	507.7	600.3
Wood combustion - industrial	281.9	289.5	342.9
Animal Biomass ⁽⁹⁾	35.8	31.5	29.1
Anaerobic digestion	9.7	15.0	18.7
Plant Biomass ⁽¹⁰⁾	288.5	275.1	339.0
Biodegradable energy from waste ⁽⁶⁾	36.2	34.1	36.2
Total bioenergy	1,131.8	1,230.2	1,448.1
Deep geothermal	0.8	0.8	0.8
Heat Pumps	46.9	68.2	90.6
Total	1,301.9	1,451.5	1,729.1
Non-biodegradable wastes ⁽⁸⁾	149.6	139.7	148.8
Renewable sources used as transport fuels			
as Bioethanol	367.5	436.9	461.7
as Biodiesel	760.0	520.9	629.4
Total	1,127.5	957.8	1,091.0
Total use of renewable sources and wastes			
Solar heating and photovoltaics	143.4	268.4	364.6
Onshore wind	889.6	1,041.4	1,461.1
Offshore wind	440.7	649.1	983.8
Shoreline wave / tidal	0.1	0.3	0.5
Hydro	488.6	454.4	404.0
Bioenergy	5,360.5	5,846.8	6,804.4
Deep geothermal	0.8	0.8	0.8
Heat Pumps	46.9	68.2	90.6
Transport biofuels	1,127.5	957.8	1,091.0
Total	8,498.3	9,287.3	11,200.7
Non-biodegradable energy from waste ⁽⁸⁾	545.5	628.2	626.3
All renewables and wastes	9,043.7	9,915.5	11,827.0

(1) Includes some waste of fossil fuel origin.

(2) See the 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 bioenergy the figures represent the energy content of the fuel used.

(4) Includes the EMEC test facility.

(5) Excluding pumped storage stations.

(6) Includes electricity from poultry litter combustion and meat & bone combustion.

(7) Includes electricity from straw and energy crops.

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

(9) Includes heat from farm waste digestion, and meat and bone combustion.

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

Fuel Poverty levels in England, 2012

Through the Energy Act 2013, the Government has laid the ground for a new legal framework to monitor fuel poverty in England using the Low Income High Costs Indicator (LIHC). This new measure of fuel poverty was first proposed in Professor Hills' review of Fuel Poverty¹ and following consultation, the Government confirmed its intention to adopt the indicator in July 2013². In the accompanying strategic framework document, 'Fuel Poverty: a framework for future action'³, Government set out how the new indicator will inform the strategic approach to tackling fuel poverty, including setting a new fuel poverty target which will be underpinned by a new fuel poverty strategy. Further details will be published in due course.

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

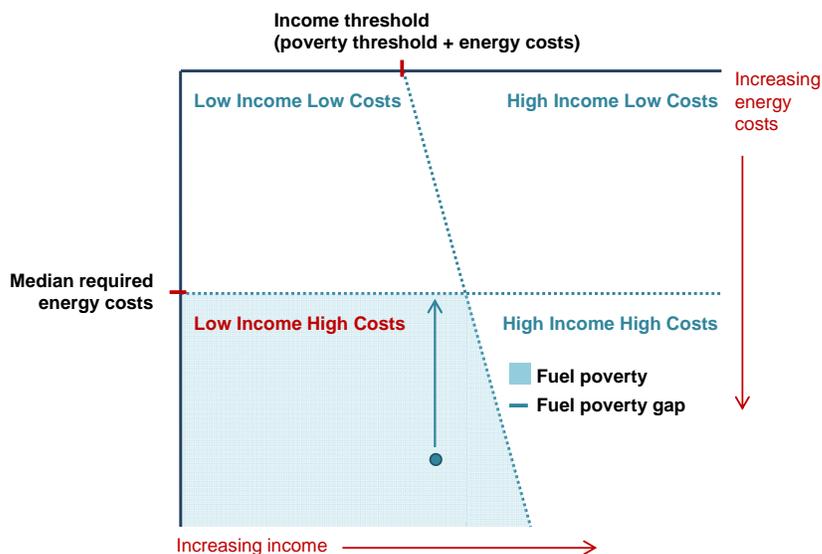
- they have required fuel costs that are above average (the national median level)
- were they to spend that amount, they would be left with a residual income below the official poverty line.

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 aggregate 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



¹ See www.gov.uk/government/publications/final-report-of-the-fuel-poverty-review

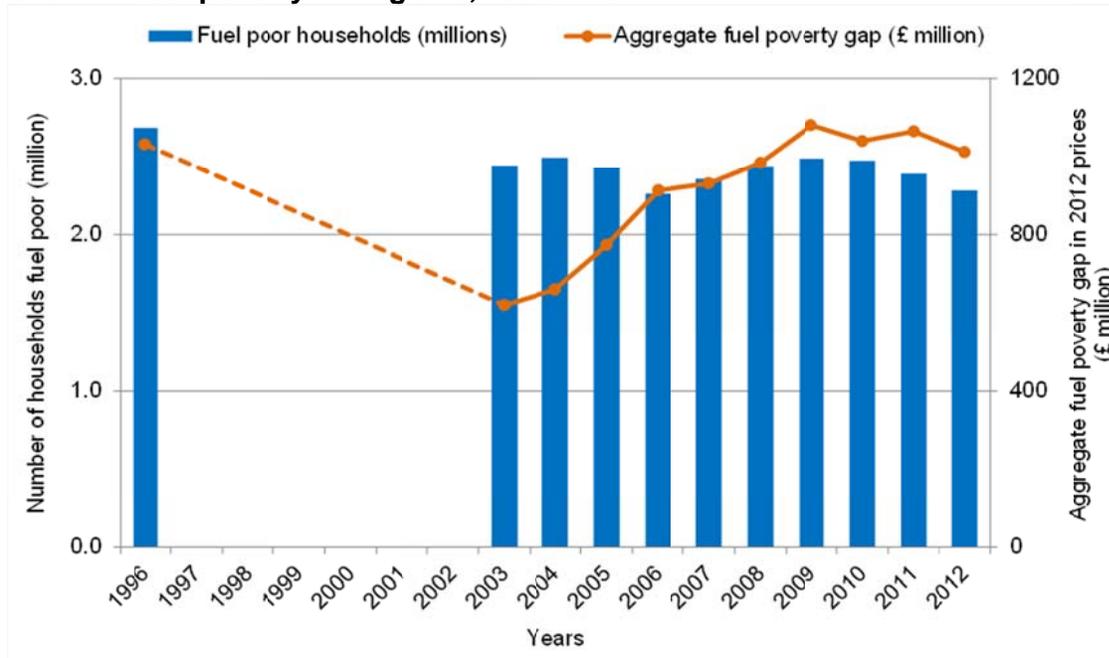
² See www.gov.uk/government/consultations/fuel-poverty-changing-the-framework-for-measurement

³ See www.gov.uk/government/publications/fuel-poverty-a-framework-for-future-action

Headline figures

In 2012, the number of households in fuel poverty in England was estimated at around 2.28 million, representing approximately 10.4 per cent of all English households. This is a fall from 2.39 million households in 2011 (a reduction of almost 5%). In line with this, the aggregate fuel poverty gap, in real terms, also dropped by around five per cent, from £1.06 billion in 2011 to £1.01 billion in 2012. The average fuel poverty gap in real terms over this period decreased from £445 to £443.

Chart 1: Fuel poverty in England, 1996 – 2012



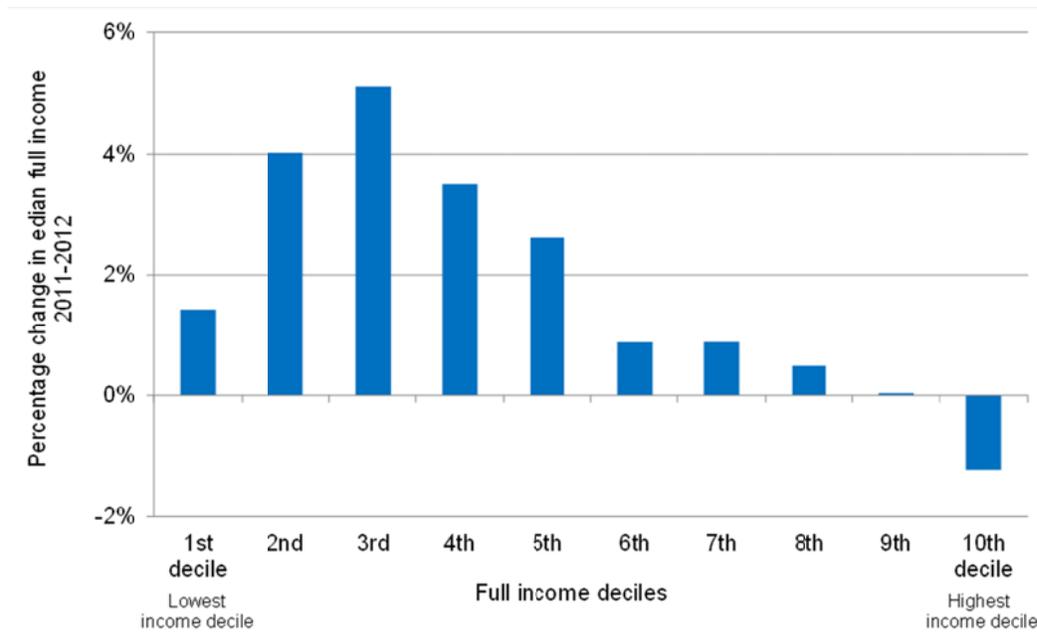
Interpreting changes in fuel poverty

The fuel poverty status of a household depends on the interaction between three key factors: incomes, fuel prices and energy efficiency.

Income

In 2012, average median full income (before housing costs) increased. However, as the chart below shows, incomes did not rise equally across all income decile groups. Households in the lower income deciles who are predominantly in receipt of state benefit, tax credits and housing related income saw the largest increases. In contrast, incomes of households in the higher deciles are dominated by earnings. Rises in earnings between 2011 and 2012 saw much smaller increases. This is shown in the change in median full incomes from 2011 to 2012 in Chart 2 below:

Chart 2: Annual percentage change in median full income by income deciles



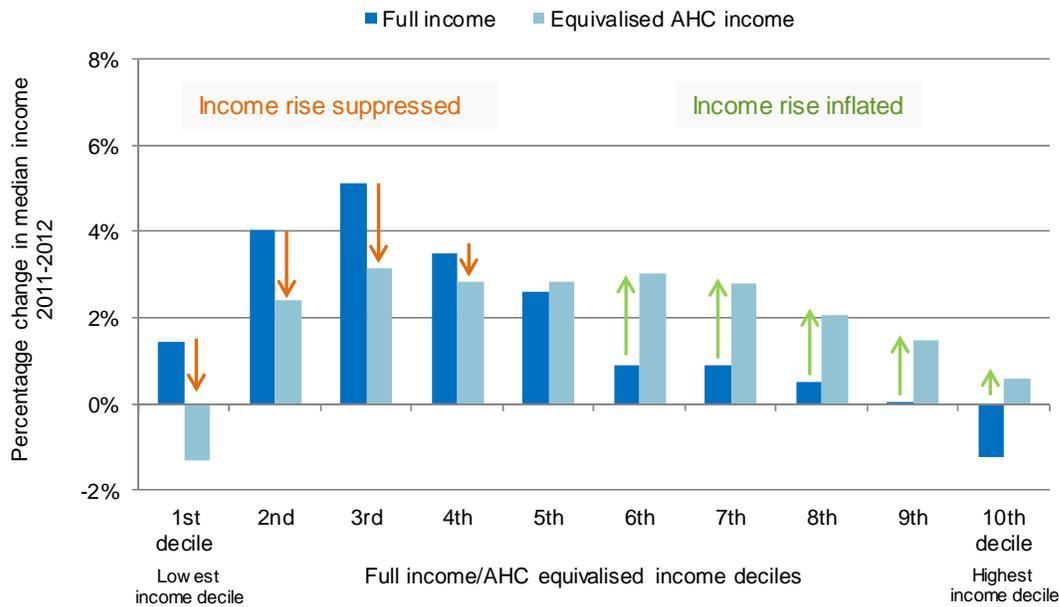
Under the LIHC indicator, housing costs are taken off the income of each household. This is to reflect that money spent on housing costs cannot be spent on fuel. Once housing costs are deducted, incomes are then equivalised to reflect the fact that different household types will have different spending 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.

Between 2011 and 2012, reported average housing costs increased considerably for households in the social housing sector and more modestly for those in the private rental sector.

Households in the lower half of the equivalised After Housing Costs (AHC) income deciles live in around 81% of all social sector housing. Therefore despite the rises seen in the full incomes of these households, increases in their housing costs act to suppress the income rise. Conversely, the lower housing costs in the higher income decile groups work to inflate the income rises.

The equivalised AHC income changes therefore show a fairly consistent income rise across the income distribution, as seen in Chart 3.

Chart 3: Annual percentage change in median income by income deciles



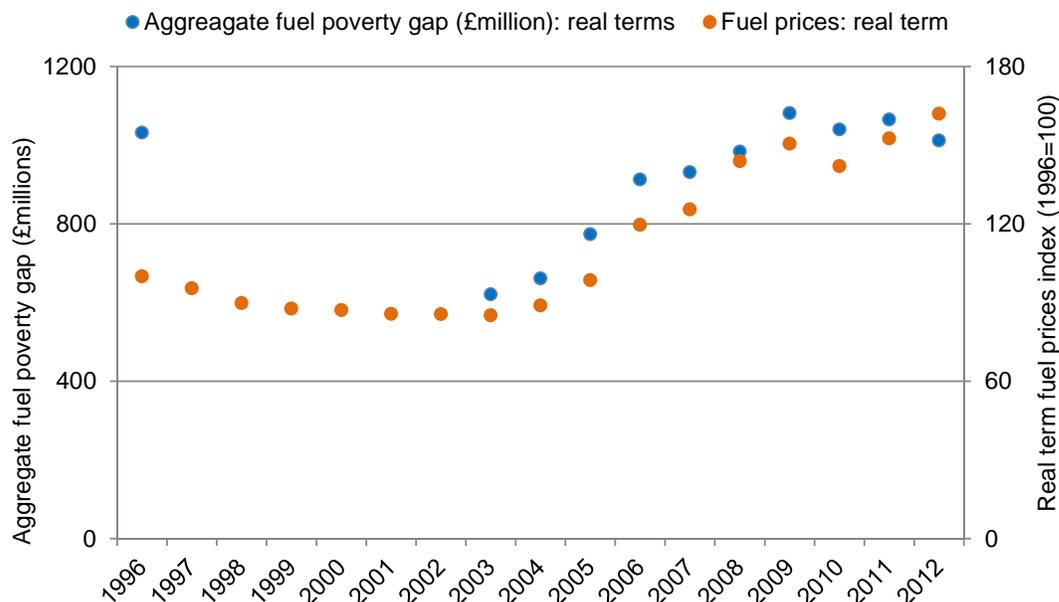
Prices

There is a strong correlation between fuel prices in real terms and the depth of fuel poverty as shown by the aggregate fuel poverty gap. As prices increased steadily between 2003 and 2009, the fuel poverty gap also increased; and when prices fell in 2010, the aggregate fuel poverty gap showed a corresponding reduction.

In 2012, despite a rise in real term fuel prices, the aggregate fuel poverty gap shows a reduction. This is mostly due to fewer households being classed as fuel poor in 2012, and part due to the change to the new model used to calculate fuel consumption (see the Annual fuel poverty report for further details).

It should be noted that each fuel poverty dataset is actually a combination of two consecutive years' worth of data. This means that the effects of price changes are staggered over a two year period.

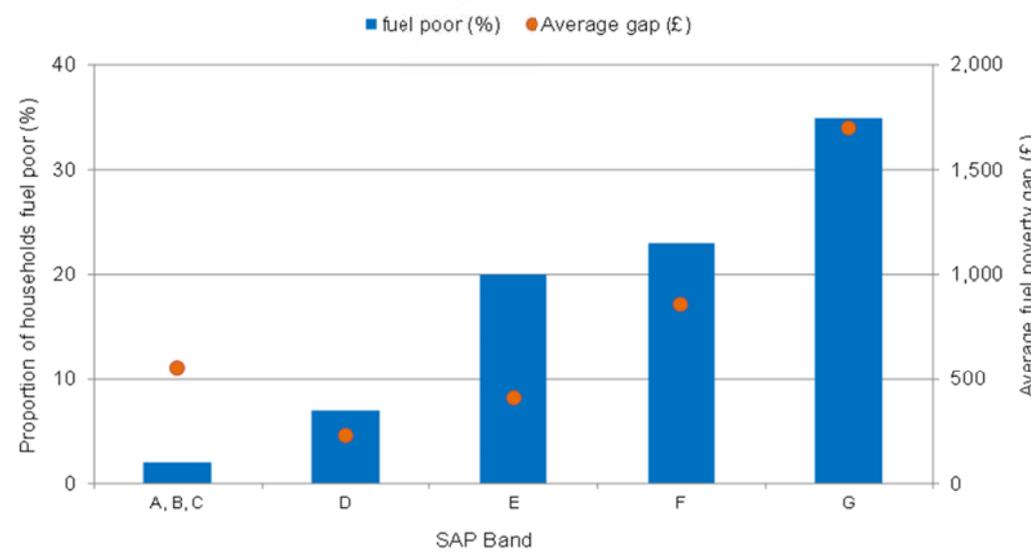
Chart 4: Aggregate fuel poverty gap and real term fuel prices, 1996 – 2012



Energy efficiency

The energy efficiency of dwellings is a key driver of the likelihood of a household being fuel poor, as it is strongly linked to the fuel costs incurred by the household. Chart 5 shows the fuel poverty rates by different SAP rating bands (based on SAP09 methodology) under the low income high cost indicator.

Chart 5: Fuel poverty and average fuel poverty gap by SAP rating bands, 2012

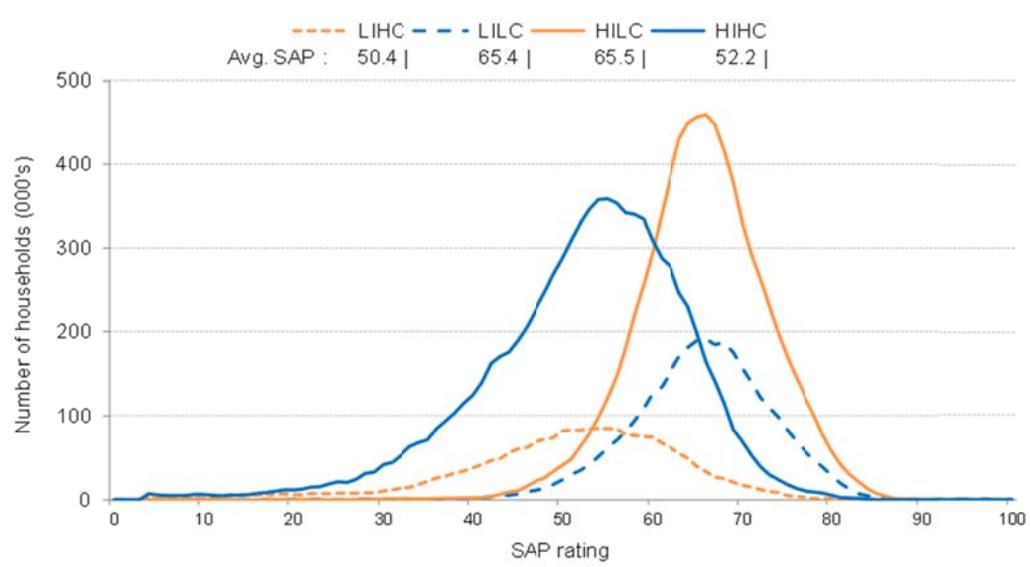


The above chart shows that the depth and likelihood of fuel poverty increases markedly with lower SAP scores. In 2012, 35 per cent of households living in G rated properties were fuel poor compared to only two and seven per cent of households living in A/B/C and D rated properties respectively. The corresponding average fuel poverty gap is also three times higher in G rated properties compared to A-C rated properties and seven times higher than in D rated properties (with an average fuel poverty gap of around £1,702 in G rated properties compared to £552 in A-C rated properties and £228 in D rated properties in 2012). The average fuel poverty gap is higher for households living in properties in bands A/B/C than households living in properties banded D or E as incomes for fuel poor households in this group are generally lower by comparison. The median

equivalised AHC income for fuel poor households in bands A/B/C was less than £6,000 pounds in 2012 compared to approximately £9,000 for fuel poor households in bands D or E. Caution should be taken when looking at the fuel poor in bands A/B/C as the number of households in this group are quite small, although the same pattern was observed in 2011.

Chart 6 shows the distribution of SAP ratings across households in all four quadrants. Fuel poor households (LIHC) and households with high incomes and high costs (HIHC) have notably lower median SAP ratings, at 50.4 and 52.2 respectively. This compares to an average SAP rating of 65.4 in low income low cost (LILC) and 65.5 in high income low costs (HILC) households.

Chart 6: Distribution of SAP ratings for each quadrant under the LIHC indicator, 2012



The average energy efficiency of households, as indicated by the Standard Assessment Procedure (SAP 09) continued to increase in 2012, rising to 58.6 from 56.8 in 2011⁴.

The table below shows that households who already have low fuel costs have seen smaller improvements in SAP (so fewer energy efficiency improvements). Whereas high costs households, which are likely to be more energy inefficient and thus have more scope for such improvements, have seen a larger increase in SAP.

⁴ Note, this figure excludes vacant homes, and therefore differs from the SAP changes recorded in the EHS report. For more information on SAP ratings, see www.bre.co.uk/filelibrary/SAP/2009/SAP-2009_9-90.pdf

Table 1: Median SAP ratings by each quadrant of the LIHC metric, 2011-2012

	Median SAP score		
	2011	2012	Change
Low Income High Costs	50.4	52.2	1.8
Low Income Low Costs	64.3	65.8	1.5
High Income Low Costs	64.1	65.6	1.5
High Income High Costs	51.9	53.9	2.0
Overall population	58.7	60.6	2.0

Summary

Due to the relative nature of the LIHC measure, it is difficult to accurately isolate absolute reasons for changes. However, in summary, changes in income, fuel costs and energy efficiency levels amongst fuel poor households are broadly consistent with the changes seen for the population as a whole. Hence the overall change in the number of households in fuel poverty was relatively small – with the reduction happening mainly due to income increases around higher income fuel poor households.

This reduction in the number of fuel poor households, coupled with the improvements to incomes and energy efficiency levels for households have reduced the aggregate and average fuel poverty gap.

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Energy price variation in the domestic energy market

Introduction

Households pay a variety of prices for their energy for a number of different reasons. Firstly, the domestic energy market consists of multiple energy suppliers who offer different types of tariffs to compete for market share.

Companies offer various tariffs which differ in price due to the different attributes of the tariff. Customers can pay by standard credit, direct debit or through a pre-payment meter. On average, direct debit is the cheapest form of payment¹, with most consumers in 2013 choosing to pay by direct debit². Another factor is regional variation, and prices will vary across individual tariffs according to the Public Electricity Supply (PES) region it is offered in.

Another factor which influences the price paid by customers is the type of tariff. Fixed tariffs have their prices fixed at a certain level for a pre-determined period of time. These tend to be higher initially but the prices are immune to any announced price changes up until the tariff expiry date, in contrast to standard tariffs. Some other tariff types include green tariffs, which support energy produced using renewable sources and can tend to have higher prices, and social tariffs, which are offered to support vulnerable consumers and often have lower comparable prices.

Discounts are also available for dual fuel consumers, who use the same supplier for both gas and electricity, and consumers opting for paperless billing by managing their bills online, whilst households who have not switched energy supplier are likely to pay more.

As such, customers will pay a variety of prices, and therefore a range of bills. Consumer bills will also be influenced by consumption, which is affected by a wider range of factors, including weather patterns, regional differences, different property attributes, energy efficiency measures and individual consumer behaviour.

This article will look at the distribution of bills that customers paid for fixed levels of consumption of electricity and gas in 2013, to provide a fuller picture of price variation compared to averages published in Quarterly Energy Prices (QEP).

Methodology

The basis of this analysis is the data collected in DECC's quarterly Domestic Fuel Inquiry survey, which contains tariff by tariff pricing details alongside the number of consumers on each tariff. The survey covers the six main suppliers and some of the smaller suppliers, across all PES regions in the UK, accounting for around 95 per cent of the market. From this data bill estimates on an annual basis can be calculated³.

In essence each bill is split into a variable component, expressed as a price per unit of fuel consumed, and a fixed component, expressed in terms of a set cost per day. Any discounts the tariff may contain are applied to the fixed component. To translate these prices into a bill, DECC use fixed annual consumption levels per household, of 3,800kWh for electricity and 15,000kWh for gas.⁴ These broadly represent mean consumption levels typical for 2013. Data is not available to combine actual household consumption levels with the detailed tariff information.

¹ Average unit prices are published in Quarterly Energy Prices (QEP) tables 2.2.3 (Electricity) and 2.3.3 (Gas) available at www.gov.uk/government/statistical-data-sets/annual-domestic-energy-price-statistics

² Variation of payment method is published in QEP tables 2.4.2 (Electricity) and 2.5.2 (Gas) available at www.gov.uk/government/statistical-data-sets/quarterly-domestic-energy-price-statistics

³ See 'Domestic energy prices: data sources and methodology' for full details of how these estimates are made www.gov.uk/government/publications/domestic-energy-prices-data-sources-and-methodology

⁴ For details on DECC's fuel consumption assumptions see special feature article in the March 2014 edition of Energy Trends available at www.gov.uk/government/collections/energy-trends-articles

Special feature – Energy price variation in the domestic energy market

Using these bill estimates by tariff, distributions can be produced showing variation in bills paid, where the variance is driven by pricing differences between each tariff. For each distribution chart data has been plotted based on a three point moving average, giving the best representation of the number of customers paying various bills while remaining non-disclosive to particular tariffs.

Variation in annual bills

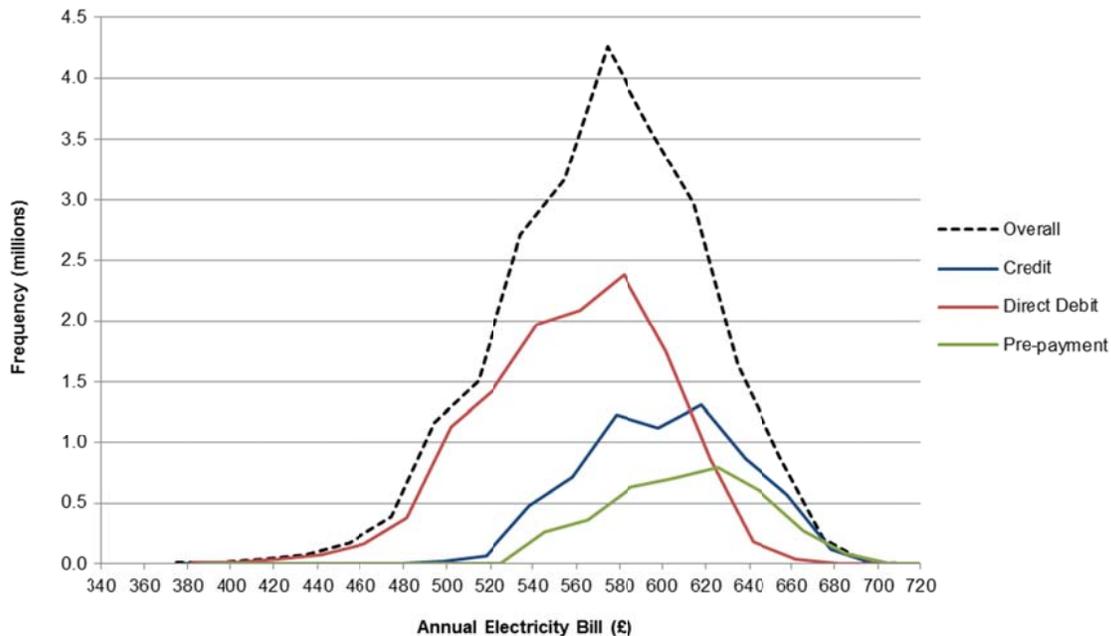
Charts 1 and 2 show the spread in fixed consumption 2013 electricity and gas bills by customer and payment type. Both charts display a relatively symmetrical distribution.

Chart 1 shows that in 2013, the modal customer paid a standard electricity bill between £570 and £590 per year, whilst chart 2 shows that the modal customer paid a gas bill of about £730-£790. Looking at combined bills, this gives a 2013 annual bill of £1,300-£1,380 paid by the modal consumer.

It is also clear that customers paying by direct debit paid less for both electricity and gas. This difference in bills is more exaggerated for gas than electricity. The modal customer paying for electricity by direct debit paid an annual standard electricity bill between £550 and £570, compared to £570-£590 for customers paying by standard credit and £590-£610 for pre-payment customers.

However for gas, the modal customer paying by direct debit paid an annual bill between £690 and £710. This is about £80 cheaper than the modal annual gas bill paid by standard credit customers of £770-£790. Customers paying by pre-payment paid a modal gas bill of £730-£750.

Chart 1 – Distribution of bills for standard electricity customers in the UK, 2013 (based on fixed annual consumption of 3,800kWh)⁵



⁵ Each value displayed represents the mid-point of an interval used to construct this distribution. For example, the £580 mark includes all bill estimates from £570 up to £590. This format applies to charts 2 and 3 also.

Chart 2 – Distribution of bills for gas customers in Great Britain, 2013 (based on fixed annual consumption of 15,000kWh)⁶

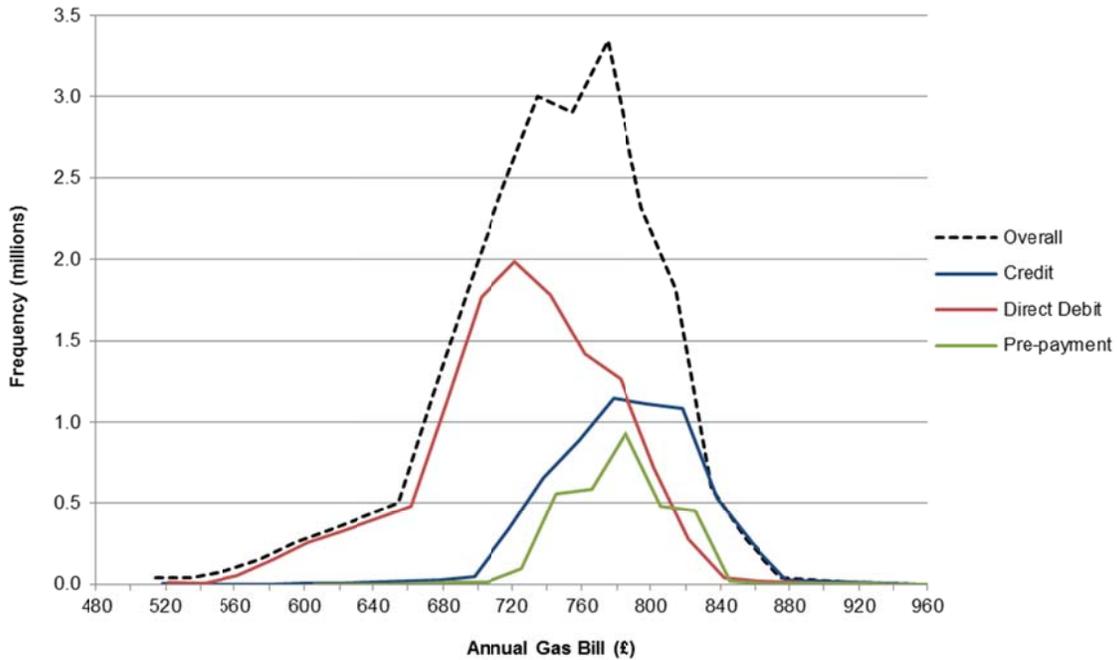
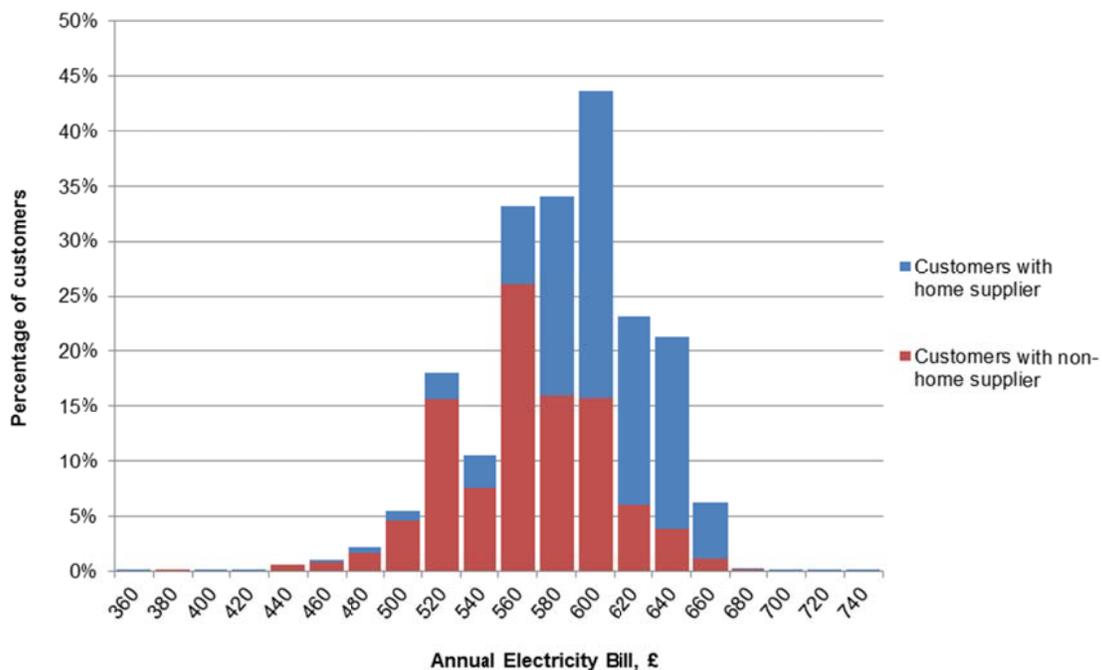


Chart 3 shows the distribution of electricity bills, split between whether the consumer is with the home or a non-home supplier. The home supplier is the default supplier for each PES region, whereby all consumers used the home supplier for their region before the market opened up to competition.

Chart 3 – Distribution of bills for standard electricity customers in the UK, 2013, split by home/non-home supplier



⁶ Gas data is not available for Northern Ireland, as the market has only recently opened up to competition there.

Special feature – Energy price variation in the domestic energy market

Bills paid by customers with their home suppliers are distributed around the modal bill amount of £590-£610, with 28 per cent of customers paying this. Whereas, customers with a non-home supplier pay cheaper bills with the distribution focused around the modal bill category of £550-£570, which 26 per cent of customers pay.

Similar analysis cannot be done for the distribution of gas bills with a home and non-home supplier split since British Gas was the home supplier for the whole of Great Britain, and this data would be disclosive.

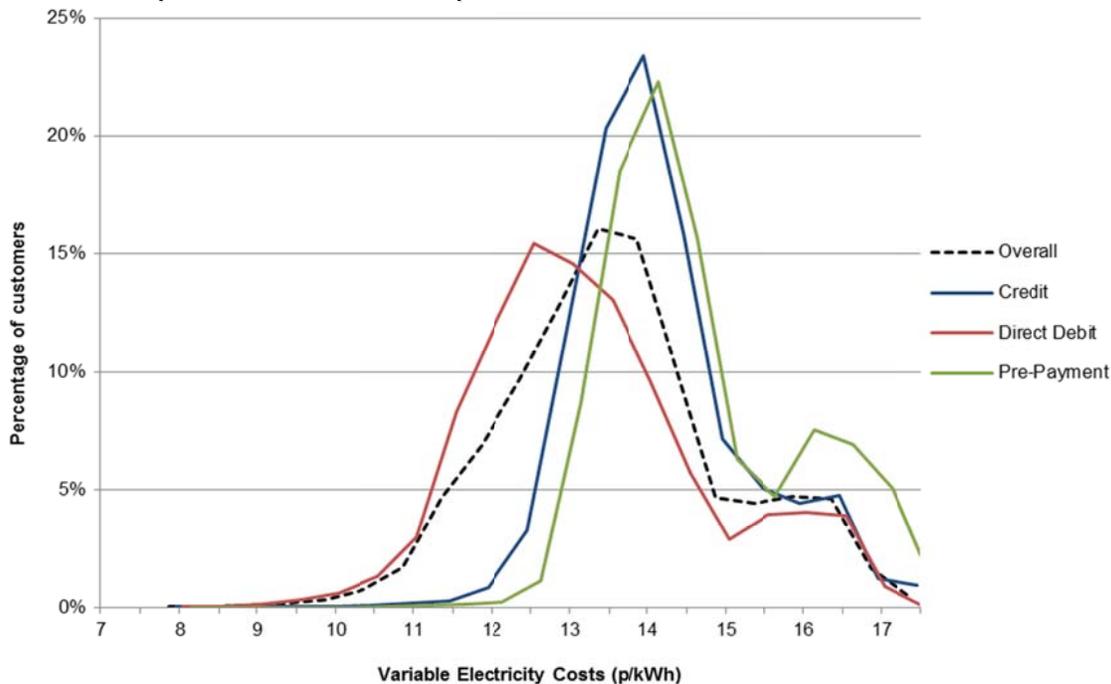
Price Variation

Underpinning the distribution of electricity and gas bills are the variable and fixed costs that customers pay. There is variation in the variable and fixed costs paid by customers, in particular variation by payment type, and this is shown in charts 4 and 5 below for variable costs.

There is no evidence to suggest a positive correlation between variable and fixed costs, indicating that it is not necessarily true that if a customer has a high variable cost, they will also have a high fixed cost – although this may be the case for some tariffs.

Chart 4 shows that 57 per cent of direct debit customers pay variable electricity prices that are less than 13 p/kWh – a price band that is not widely available to credit and pre-payment customers.

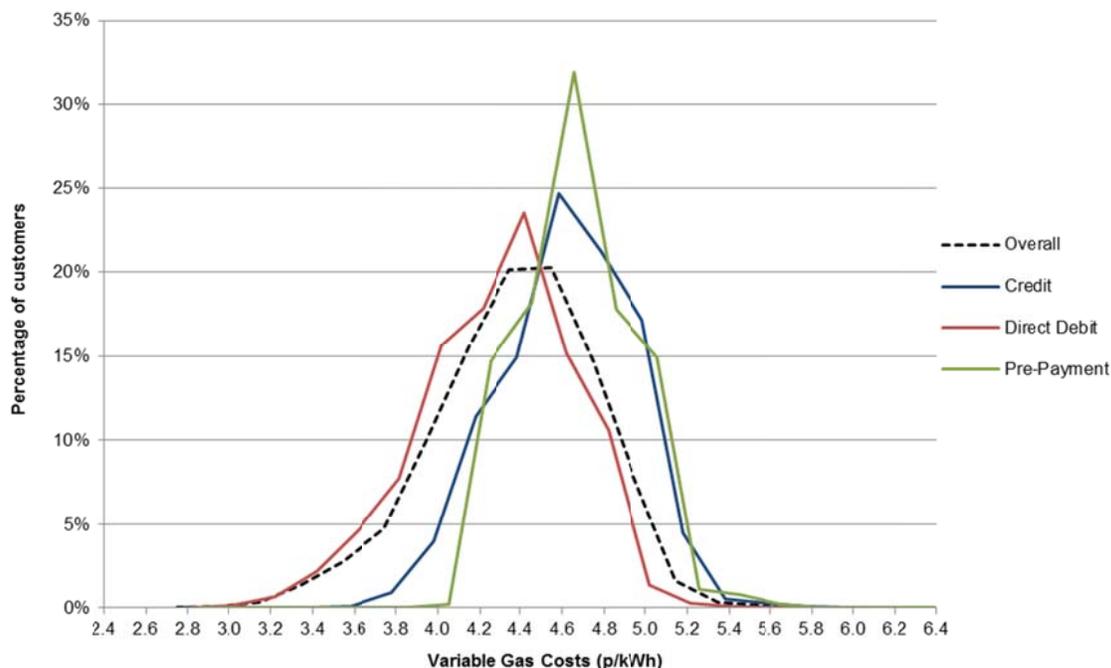
Chart 4 – Distribution of variable prices paid by standard electricity customers in the UK, 2013 (excludes fixed costs)⁷



⁷ Each value displayed represents the lower limit of an interval used to construct this distribution. For example, the 12p/kWh mark includes all prices from 12.0-12.5 p/kWh.

Chart 5 shows that for gas, while variable prices paid by direct debit customers appear to be lower than that of credit and pre-payment customers, this difference is smaller than for electricity.

Chart 5 – Distribution of variable prices paid by gas customers in Great Britain, 2013 (excludes fixed costs)⁸



Conclusion

From the distributions presented in this article it is clear that there is considerable variation in the bills and prices paid by electricity and gas consumers. Some of this variation can be attributed to the different methods of payment available, but there are a range of other factors influencing the differences, such as the different types of tariffs available.

User views

The prices team are interested in views on this article, and whether such analysis is preferred to showing data currently in table 2.2.3 and 2.3.3 for electricity and gas respectively of maximum and minimum prices and bills⁹. DECC is considering stopping the publication of the maximum and minimum values in these tables. Please contact either of the article authors using the contact details below.

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⁸ Each value displayed represents the mid-point of an interval used to construct this distribution. For example, the 4.6p/kWh mark includes all prices from 4.5-4.7 p/kWh.

⁹ www.gov.uk/government/statistical-data-sets/annual-domestic-energy-price-statistics

Future changes to Energy Consumption in the UK (ECUK)

Energy Consumption in the UK (ECUK) was first released over a decade ago to bring together a wide range of published data on energy use. Through the raw data and subsequent secondary analysis, the statistics examine changes since 1970, but with greater focus since 1990. The format of this release has changed over the years, following varying degrees of consultation with users: from a hard copy publication to an expanded range of internet only tables with a complementary suite of fact-sheets containing commentary.

Over time, the availability of information for inclusion in ECUK, and the associated uses of energy data, have changed:

- Data on headline energy use by fuel continues to be collected from the energy companies, and is published in the Digest of UK Energy statistics; with the increasing proportion of energy coming from renewable sources, analysis of this data has continued to expand.
- Data on use of energy in households has expanded through work such as of the National Energy Efficiency Data (NEED) framework¹; the promotion of domestic energy efficiency policies has provided a variety of associated administrative data sources; new statistical series have been developed by DECC on deployment and associated metrics relating to feed-in tariffs, renewable heat, green deal, ECO, and smart meters.
- Data on services and industrial energy has become increasingly out of date. One of the key sources of detailed industrial energy use was the ONS Purchases Inquiry (PI); this has not been carried out for a number of years and as such the latest data from that survey cannot robustly be extrapolated to reflect current energy uses. The ONS are planning to reinstate the PI, with data relating to 2016 being made available in 2018.
- Data contained in a few tables within ECUK are available elsewhere online. This is typically within the transport chapter where data on underlying factors affecting the use of energy for transport – such as kilometres (km) driven, number of journeys, and mode of transport, continues to be published by the Department for Transport in its “Transport Statistics Great Britain”² and associated statistical releases.

In addition to ECUK, a series of complementary releases – such as the Energy Efficiency Deployment Office Statistical Summary³, and the development of the NEED framework - have been released since.

Much of the end-uses for services and industrial energy information remains modelled, with some models being developed over 10 years ago, and based on sectorial level data that no-longer reflects the structure of non-domestic energy users. To help fill this gap, DECC are undertaking both quantitative and qualitative research projects to improve our knowledge of non-domestic energy use and new outputs from this work are planned for inclusion in future editions of ECUK; these include Non-domestic NEED⁴, more detailed use of policy linked administration data, and the Building Energy Efficiency Survey research project⁵.

As such the value of large sections of the ECUK publication are currently less than it was when launched and is in a transitional period prior to new data sources being available for the industrial and service sector.

¹ www.gov.uk/government/collections/national-energy-efficiency-data-need-framework.

² www.gov.uk/government/collections/transport-statistics-great-britain.

³ www.gov.uk/government/publications/energy-efficiency-strategy-2013-update.

⁴ www.gov.uk/government/publications/the-non-domestic-national-energy-efficiency-data-framework-nd-need.

⁵ www.gov.uk/government/collections/non-domestic-buildings-energy-use-project.

Our plans for the future

Over the coming two years, DECC plan to reshape and refocus the information contained within the ECUK release.

Information that is currently directly available from other non-DECC published sources – such as Transport Statistics Great Britain - will not be duplicated within the ECUK release. These tables will be clearly marked and web links to the published material will be provided.

Where the underlying information behind the calculations is considered not to reflect the current situation, tables will not be updated until more robust information becomes available. This mainly reflects the industrial and service sector chapters, and associated uses of this data in the overall chapter. The current published material for these tables will remain on the ECUK part of the .gov.uk website until it can be updated through other sources.

Information on energy use in the domestic sector will continue to be developed, and over the coming year a new quarterly statistical report on domestic energy use and associated policies aimed in the household sector will be produced; this will build on and incorporate the content of the existing Green Deal / ECO / Insulation stats release. Some data sources will change – for instance different modelling methods will be used to produce some end uses of energy data. Other data sets will be obtained from the administration of domestic energy efficiency and other policies will be used to develop this release.

As a result of using different data sources, some tables will be updated on a phased basis and so not all data will become available at the end of July when ECUK has previously been updated. However data will be released as soon as it has been produced and quality assured, as required by the code of practice for official statistics. For the 2014 release, many tables will be released on 31 July 2014, however some will be updated on 25 September 2014. The update plans for the 2014 release are available at: www.gov.uk/government/collections/energy-consumption-in-the-uk.

For any questions relating to these changes please contact:

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Domestic Renewable Heat Incentive scheme

Introduction

The domestic Renewable Heat Incentive (RHI) is a government financial incentive scheme introduced to encourage a switch to renewable heating systems in the domestic sector. Launched on the 9 April 2014 in Great Britain, participants of the scheme receive tariff payments for the heat generated from an eligible renewable heating system which is heating a single dwelling.

This article provides a brief background to the scheme and introduces statistics on the number of applications and accreditations from the 9 April 2014 (launch date) to the 31 May 2014.

Overview to the scheme

Changing the way the UK produces and consumes heat is key to meeting UK carbon reduction and renewables targets.

The domestic RHI scheme provides financial incentives to install renewable heating in place of fossil fuels, helping the UK reduce greenhouse gas emissions and meet targets for reducing the effects of climate change.

The scheme covers single domestic dwellings and is open to owner-occupiers, private landlords, social landlords and self-builders and is targeted at, but not limited to, homes off the gas grid. Those without mains gas have the most potential to save on fuel bills and decrease carbon emissions.

There are four eligible technologies these are:

- Air-source heat pumps
- Ground and water-source heat pumps
- Biomass-only boilers and biomass pellet stoves with integrated boilers
- Solar thermal panels (flat plate and evacuated tube for hot water only)

The tariffs for individual technologies are designed to bridge the gap between the cost of fossil fuel heat sources and renewable heat alternatives. Owners of participating installations are provided with financial support in the form of tariff payments per unit (kWh) of renewable heat produced.

Further information on the domestic RHI scheme, including eligibility criteria, can be found at:

<https://www.gov.uk/government/policies/increasing-the-use-of-low-carbon-technologies/supporting-pages/renewable-heat-incentive-rhi>

It should be noted that the domestic RHI superseded the Renewable Heat Premium Payment (RHPP) scheme which has now closed. The RHPP was introduced as an interim measure in the absence of the domestic RHI. Further information on the RHPP can be found at:

<https://www.gov.uk/renewable-heat-premium-payment-scheme>

Analysis

The information presented below is based on data collected by Ofgem as part of the application process. These data are presented as a snapshot of applications statuses as at the 31 May 2014.

Key facts

- Over the period 9 April 2014 (launch date) to 31 May 2014 there had been 2,296 applications (defined as an attempted online application, including both successful and unsuccessful submissions) to join the scheme, of which 1,154 were accredited. An accredited application is an application which has gone through full checks by Ofgem to ensure it complies with the relevant conditions and has been accepted onto the scheme.
- Of the 1,154 accreditations, 79 were from non-legacy applicants, these are applicants who systems were installed after the launch of the scheme.
- As at the 31 May 2014, 38% (442) of accreditations were from air source heat pumps, with solar thermal and biomass accounting for roughly a quarter of accreditations each. Ground source heat pumps accounted for 10 per cent of accreditations.

Table 1 - Number of applications and total capacity by technology type

Tariff band	Applications		Accreditations	
	Number	% of total	Number	% of total
Air source heat pump	913	40%	442	38%
Ground source heat pump	363	16%	114	10%
Biomass	467	20%	286	25%
Solar thermal	553	24%	312	27%
Total	2,296		1,154	

Future releases

Going forward these data will be released on a monthly basis at:

www.gov.uk/government/collections/renewable-heat-incentive-renewable-heat-premium-payment-statistics

A timetable of forthcoming releases over the next 12 months can be found at:

www.gov.uk/government/publications/statistical-releases-timetable-for-twelve-months-ahead

User Feedback

Please send any comments or queries regarding these statistics to the contact details below:

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Enhancements to Energy Trends gas tables

Background

This paper describes methodological changes to the UK's gas import volumes and energy industry use of gas (upstream gas) and the sectoral breakdown of gas consumed in the UK (downstream gas).

Changes to gas import volumes.

Previous methodology

DECC publishes three gas tables each month along with a further quarterly table ([Energy Trends table 4.1](#)) at the end of each quarter.

[Energy Trends table 4.2](#) contains data relating to natural gas production, overall balances and supply and demand. [Energy Trends table 4.3](#) contains trade figures and [Energy Trends table 4.4](#) contains a more detailed breakdown of natural gas imports. Energy Trends table 4.1 uses information from tables 4.2 to 4.4 alongside a breakdown of gas use.

Revised methodology

Our current methodology does not capture 'gas own use' in liquefied natural gas (LNG) terminals or in the UK's storage facilities. With the substantial increase of LNG imports into the UK, this means that both imports and the gas industry use of gas were underestimated. Therefore from this edition of Energy Trends we have introduced a number of changes, most notably to table 4.2, to reflect this. The new version of table 4.2, highlighting additional columns is presented in Annex A.

Gas own use at LNG terminals

1. Table 4.2 now includes an estimate of gas own use at the LNG terminals from January 2008. The terminal's use of gas is estimated to be 1.5% of gas entering the National Transmission System (NTS) from the LNG terminals. This estimate has been agreed with the LNG terminals.
2. In order to properly balance this increased use of gas in the gas industry, the supply of gas into the UK needs to increase. Given that the NTS is an accurate estimate of the gas exiting the LNG terminal, we need to add the LNG terminals use – for regasification - to the entry figures at the NTS to accurately capture the gas imported into the UK. As a result of doing that, net imports and gas available at terminals increase and balance supply and demand.
3. With respect to the gas output from the transmission system, the LNG terminal own use is then subtracted from gas input into transmission thus leaving gas output from transmission systems unchanged from previously published data.

Gas own use at gas storage

1. Table 4.2 now includes an estimate for gas use for the UK's storage. This is based on energy consumption from the *Rough* Storage facility, a depleted gas field that is the UK's largest gas storage facility. In time, we hope to extend gas use for storage to other facilities.
2. The addition of a new column on storage own use has led to some small scale revisions to our data on stock changes. Data on stock changes are provided by National Grid but the figures represent National Grid's input and output from storage and do not take account of gas own use after delivery and before receipt. The stock changes reported in table 4.2 have been adjusted to reflect this use and therefore differ slightly from National Grid's stock change data.

Impact of revisions

The impact of the revisions are relatively small and chiefly affects the data on imports, net imports, gas available at terminals and gas input into the transmission system.

Special Feature – Enhancements to Energy Trends gas tables

Overall the data on imports has increased by around 0.4 per cent between January 2008 and December 2013. In line with this net imports, gas available at terminals and gas input into transmission have all increased by the same magnitude. Changes in import figures are shown in the table below.

Changes in import figures (GWh)

	2008	2009	2010	2011	2012	2013
Previous	407,054	455,789	589,497	584,414	547,300	533,589
Revised	407,188	457,447	592,554	588,475	549,518	535,105

Tables 41, 4.3 and 4.4 remain unchanged apart from increases to LNG imports and thus total imports and net imports following in the inclusion of gas own use at LNG terminals mentioned above. As with the previous methodology the overall net trade between table 4.2 and 4.3 remains the same.

Changes to sectoral consumption of gas

We have amended both the data collection methodology and data analysis for downstream gas:

Previous methodology

DECC publishes one gas table focussing on downstream gas each quarter within Energy Trends: [Energy Trends 4.1](#).

Revised data collection methodology

1. Data collection has been revised for the 2013 annual gas data and for quarterly data from 2014 onwards.
2. For companies supplying more than 1,750GWh to final consumers, both quarterly and detailed annual gas returns are required, which make up the main constituent of the data feeding into DECC's downstream gas data. These questionnaires, known as AG1 (Annual Gas 1) and QG1 to 4 (Quarterly Gas 1 to 4), have been amended this year. The majority of these changes were minor and were done to remove redundant data and improve ease of use.
3. There were two more significant changes to AG1 and QG data: firstly, an additional category was added for gas transfers to parent/sister companies for electricity generation. Previous data had significantly under-reported these sales of gas for electricity generation. One of the causes of this is that transfers of gas to a 'parent/sister' company have not counted as sales. We have amended this in the new quarterly and annual forms. Secondly, granularity of the quarterly data has been improved. Previously, the divisions for quarterly gas sales were broad and did not meet the current requirements for DECC analysis of within-year gas trends. We have amended this in the 2014 quarterly forms.
4. Annual data are also collected for companies supplying less than 1,750GWh to final consumers in the Annual Gas 2 (AG2) questionnaire. Prior to 2013 data collection, supply was required as a single total. For 2013 data onwards we now request these data broken down into the broad consumption categories shown in Energy Trends Table 4.1.

Revised data analysis

1. Data for 2008 to 2013 (annual and quarterly) have been revised this year. Prior to 2013, there was historically a shortfall between gas demand reported by companies supplying gas and the gas supply. Demand then had to be increased to meet supply using estimates based on a number of sources including the Index of Production and Services (IOP and IOS) data, along with EU Emissions Trading Scheme (EU-ETS) data.
2. With the change in data collection for 2013 annual data, this shortfall was greatly reduced (due to improved reporting by companies and inclusion of companies who previously were

Special Feature – Enhancements to Energy Trends gas tables

not reporting data). As such, we can now use 2013 annual data as an accurate baseline to cross-check the historical data.

- Using the 2013 data set we re-ran our analysis on 2008 to 2012 data. To ensure accurate representations of annual and quarterly data, we cross-checked the analysis of 2008 to 2012 data using the sources listed below. We attempted to minimise the difference between these other sources and the annual and quarterly gas data.

Downstream Gas Cross-Checking Data Sources

Produce Price Index (PPI) Survey (ONS)	www.ons.gov.uk/ons/taxonomy/index.html?nscl=Producer+Price+Indices
Price Transparency Survey (DECC)	www.gov.uk/government/publications/statistical-surveys
EU-ETS Data	http://ec.europa.eu/clima/policies/ets/index_en.htm
IOP Data (ONS)	www.ons.gov.uk/ons/rel/iop/index-of-production/index.html
IOS Data (ONS)	www.ons.gov.uk/ons/rel/ios/index-of-services/index.html
ONS Purchases Inquiry 2007 (Table 4.13)	www.gov.uk/government/uploads/system/uploads/attachment_data/file/238798/industry.xls
Temperature Data (DECC)	www.gov.uk/government/publications/energy-trends-section-7-weather

Impact of revisions

The revised data collection and analysis has had an impact on other industries and other final users, with a minimal impact on all other sectors. The 2013 data collection showed too much of gas demand had been attributed to industry use. After amendments, approximately 20TWh was transferred out of industry use and into other final use. Within other final users, gas demand in the commercial sector increased the most, suggesting gas demand had previously been underestimated in this category. These amendments were then used to adjust data back to 2008.

Further developments

As ever, DECC welcome comments on the methodology and suggestions for its improvement.

Acknowledgements

DECC would like to acknowledge the work done by Clive Evans and the constructive discussions with stakeholders in assisting to enhance the gas tables.

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Annex A: Energy Trends Table 4.2 under the new methodology

GAS

TABLE 4.2 Natural gas production and supply

GWh

	Upstream gas industry					Gas available at terminals ⁵	Downstream gas industry					Gas output from transmission systems ¹²	
	Gross gas production ¹	Less Producers' own use ²	Plus Exports ³	Imports	Net imports ⁴		Gas input into transmission systems ⁶	Less Operators' own use ⁷	LNG Terminals' Own Use ⁸	Storage Own Use ⁹	Stock changes ¹⁰		Metering differences ¹¹
2009	693,965	61,110	137,100	457,447	+320,348	953,203	954,375	2,810	1,659	682	+4,194	9,111	935,920
2010	664,353	61,124	176,399	592,554	+416,155	1,019,384	1,019,316	3,211	3,057	665	-15,936	10,848	1,017,471
2011	526,030	53,163	183,689	588,475	+404,786	877,653	878,316	1,791	4,061	652	+21,971	8,037	841,804
2012	452,094	48,461	144,023	549,518	+405,495	809,129	809,460	1,682	2,218	595	-326	6,099	799,191
2013	424,153	46,556	109,664	535,105	+425,441	803,038	803,478	2,017	1,517	644	-1,265	5,697	794,869
Percentage change	-6.2	-3.9	-23.9	-2.6	+4.9	-0.8	-0.7	+19.9	-31.6	+8.3			-0.5
2013 January - April	151,065	16,753	30,814	234,973	+204,159	338,471	338,338	1,079	428	37	-35,178	1,949	370,023
2014 January - April	150,396	14,270	32,596	179,028	+146,432	282,558	282,817	687	378	30	-12,103	1,778	292,047
Percentage change	-0.4	-14.8	+5.8	-23.8	-28.3	-16.5	-16.4	-36.3	-11.8	-19.9			-21.1
2013 February	35,323	3,892	6,633	53,665	+47,033	78,463	78,499	305	71	13	-17,685	426	95,370
March	38,209	4,441	6,903	68,101	+61,198	94,966	94,986	312	64	9	-8,352	423	102,531
April	37,595	4,089	9,122	53,001	+43,879	77,385	77,346	172	189	0	+5,239	586	71,161
Total	111,126	12,422	22,657	174,768	+152,110	250,814	250,832	789	323	22	-20,798	1,435	269,061
2014 February	35,906	3,319	5,851	45,271	+39,420	72,007	72,042	222	56	13	-7,825	444	79,131
March	38,126	3,762	9,276	45,761	+36,484	70,848	71,090	143	82	-	-947	455	71,357
April p	37,139	3,633	10,979	35,816	+24,837	58,344	58,330	83	187	-	+4,919	396	52,745
Total	111,171	10,714	26,106	126,847	+100,742	201,199	201,461	448	325	13	-3,853	1,295	203,233
Percentage change ¹³	-	-13.8	+15.2	-27.4	-33.8	-19.8	-19.7	-43.2	+0.7	-39.0			-24.5

1. Includes waste and producers own use, but excludes gas flared.
2. Gas used for drilling, production and pumping operations.
3. Includes exports direct from UKCS as well as others carried out by the downstream gas industry from the national transmission system.
4. A negative figure means the UK was a net exporter of gas.
5. Gas available at terminals for consumption in the UK as recorded by the terminal operators.
6. Gas received as reported by the pipeline operators. This differs from gas available at terminals due to different methods for calculating the volumes of gas involved being used by the terminal and pipeline operators. Pipeline operators include Transco, who run the national pipeline network, and other pipelines that take North Sea gas supplies direct to consumers.
7. Gas consumed by pipeline operators in pumping operations etc.
8. Estimated at 1.5 per cent of gas from LNG terminals entering the National Transmission Systems.
9. Gas used in the Rough Storage facility.
10. Stocks of gas held in specific storage sites, either as liquefied natural gas, pumped into salt cavities or stored by pumping the gas back into fields.
11. The National Transmission System (NTS) consists of 276 discrete metering points with a degree of measuring uncertainty associated with each individual meter. The complexity of the system makes it difficult to ensure that all meters are accurate so that errors or bias in the flow calculations may occur. These errors/biases may occur for a number of reasons such as liquid contamination in the meter tube or on the plate itself, plate installation issues, dull plate edge, damage to plate edge, warped plate, grease on plate and incorrect parameters within the flow computer configuration.
12. Including public gas supply, direct supplies by North Sea producers, third party supplies and stock changes. These figures differ from those for total consumption in Table 1.2 which include producers and operators own use of gas excluded in this table.
13. Percentage change from the most recent 3 months compared with the same period a year earlier.

Changes to oil demand data

Background

This note documents changes to the oil commodity balances presented in Energy Trends and in the Digest of the United Kingdom's Energy Statistics (DUKES).

Changes to oil consumption by industrial sector

Tables 3.2 through 3.4 of Energy Trends provides a breakdown of oil demand, showing the volumes consumed in domestic and international marine navigation, the various industrial sectors, transport, domestic, retail and a range of other final users. DECC also provide an estimate of non-energy use (mainly oil delivered to the petrochemical sector to act as a feedstock for the petrochemical industry, but also oil delivered for lubrication and bitumen for road and other purposes). DUKES provides a similar, but more detailed, breakdown.

Estimating consumption by category of final consumer is problematic for many types of oil. Whilst the vast bulk of oil is used for transport, other oils can be used for a range of different purposes across a range of different industries. Typically, DECC has estimated consumption of these sectors via a survey of refiners but increasingly refiners deliver to third parties who then resell these products to final consumers so that the final sector remains opaque to the refiner who provided the fuel originally. Additionally, large volumes of product are now sold directly to consumers via importers whose deliveries to the market are not currently surveyed. Both these trends are increasing and make estimation of consumption by sector difficult and for 2014 we are making two changes to the breakdown for the years 2008 to 2013.

Non-Energy Use

The final consumption of eight products in DECC's oil balance (Ethane, Other gases, Naphtha, White Spirit, Lubricants, Bitumen, Petroleum Coke, and Miscellaneous Products) are currently shown as being consumed entirely for non-energy use. The final consumption of three other products (Propane, Butane, and Gas Oil) are split between energy and non-energy use, and the remaining products are regarded as being consumed entirely for energy use (mainly for transport).

For 2014, we have made a number of changes to the split between energy and non-energy use. In particular, we have reduced the volume of petroleum coke delivered into non-energy use and have also decreased our estimate of the volumes of butane, naphtha and gas oil delivered into non-energy use. Conversely, the amount of propane delivered into non-energy use has increased. The estimates make improved use of data on trade and data from DECC's refinery survey to calculate deliveries into the petrochemical sector, net of any backflows from the petrochemical industry to refineries. The non-energy use of propane, butane and naphtha consumed also contain – as they did previously - deliveries that go from the source (typically from the UK Continental Shelf) to the petrochemical sector without passing through an oil refinery.

The net result of these changes is a decrease in the amount of product delivered to non-energy use. In 2012, the total volume of deliveries to non-energy use decreased by 7 per cent, with the biggest reduction in petroleum coke. For the current edition of DUKES, these volumes have been reallocated to unclassified industrial use.

Marine fuel use

Both fuel oil and gas oil are used as marine fuels, either as *marine bunkers* (ships engaged in international travel) or for *national navigation* (ships engaged in transport from one point in the UK to another). The estimation of these volumes are difficult for the reasons noted above, very few refiners now deliver products to shipping directly and we do not currently survey resellers or importers of marine fuels.

For 2014, we have fully aligned energy demand for shipping in line with the estimates of marine fuel use used in the UK's National Atmospheric Emissions Inventory. The NAEI figures use DECC's estimate of marine fuels and derive the split between international and domestic use

Special feature – Changes to oil demand data

based on an activity based study of the UK's marine fuel use¹. For 2008 through 2013, this has resulted in an uplift in the estimates of national navigation of approximately 400 to 500kt per annum, with a corresponding decrease in the figures for international shipping.

Future changes

The increased fragmentation and increasing complexity of the downstream oil market will negatively affect the quality of the sectoral estimates of some oil products, particularly gas oil, fuel oil and liquid petroleum gases. As a result, DECC are considering changes to sampling methodology and additional surveys to better capture these data going forward.

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¹ http://uk-air.defra.gov.uk/assets/documents/reports/cat15/1012131459_21897_Final_Report_291110.pdf.

Recent and forthcoming publications of interest to users of energy statistics

National Energy Efficiency Data-Framework (NEED): anonymised data 2014

This publication makes household level data from NEED available to users outside DECC for the first time. DECC have published a public use file on the DECC section of the gov.uk website, containing around 50,000 records and available to all. A more detailed (approximately 4 million record) dataset is due to be published on the UK Data Archive within the next few weeks and will be available via an end user licence. The datasets contain information on households' energy consumption, energy efficiency measures installed and property attributes. More information is available at: www.gov.uk/government/publications/national-energy-efficiency-data-framework-need-anonymised-data-2014.

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 2014, was published on 12 June 2014 at: 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 19 June 2014 at:

www.gov.uk/government/collections/green-deal-and-energy-company-obligation-eco-statistics

Estimates of Home Insulation Levels in Great Britain

This quarterly publication 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: April 2014, was published on 19 June 2014 at:

www.gov.uk/government/collections/green-deal-and-energy-company-obligation-eco-statistics

National Energy Efficiency Data-Framework 2014

This publication presents analysis from the National Energy Efficiency Data-Framework (NEED). It provides updated domestic energy consumption results to include 2012 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 2011. Latest estimates were published on 26 June 2014 at:

www.gov.uk/government/collections/national-energy-efficiency-data-need-framework.

Road Transport fuels consumption at local authority level during 2012

This annual publication provides sub-regional estimates for road transport fuel consumption in the United Kingdom, by vehicle and fuel type. The latest release was published on 26 June 2014 at:

www.gov.uk/government/collections/road-transport-consumption-at-regional-and-local-level

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 2014 edition will be published on 31 July 2014. 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

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 2014 edition will be published on 31 July 2014 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

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 equivalent, with the widths of the bands approximately proportional to the size of the flows they represent. The 2014 edition of the chart, showing the flows for 2013, will be published on 31 July 2014. 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

Sub-national residual fuel use, 2012

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 2012. Residual 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 25 September 2014 at:

www.gov.uk/government/collections/sub-national-consumption-of-other-fuels

Sub-national total energy use, 2012

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 2012. The release will be published on 25 September 2014 at:

www.gov.uk/government/collections/total-final-energy-consumption-at-sub-national-level

Northern Ireland electricity consumption

These publications present estimates of the latest analysis of electricity consumption in Northern Ireland at District Council level. Domestic electricity and non-domestic electricity consumption data for 2012, and will be published on 25 September 2014 at:

www.gov.uk/government/collections/sub-national-electricity-consumption-in-northern-ireland

List of special feature articles published in Energy Trends between June 2013 and March 2014

Energy

- September 2013 Running hours during winter 2012/13 for plants opted-out of the Large Combustion Plant Directive (LCPD)
Estimates of heat use in the United Kingdom in 2012
DECC report on surveys of businesses and local authorities - 2012/13
- March 2014 Changes to total energy tables in Energy Trends

Combined Heat and Power (CHP)

- September 2013 Combined Heat and Power in Scotland, Wales, Northern Ireland and the regions of England in 2012

Electricity

- December 2013 Electricity generation and supply figures for Scotland, Wales, Northern Ireland and England, 2009 to 2012
- March 2014 Seasonal variations in electricity demand

Energy efficiency

- June 2013 National Energy Efficiency Data-Framework analysis
- December 2013 Areas and types of properties off the gas grid
International comparisons of energy efficiency indicators

Energy prices

- June 2013 Electricity bill variations by tariff type
The effect of the cold 2012/13 winter on energy bills
- December 2013 Proposed changes to DECC domestic energy bills estimates
- March 2014 Revisions to DECC domestic energy bill estimates
Domestic energy bills in 2013: The impact of variable consumption

Feed-in Tariffs

- December 2013 Small scale solar PV cost data
Estimating generation from Feed in Tariff installations

Fuel Poverty

- September 2013 Fuel Poverty levels in England, 2011
- December 2013 Modelling the likelihood of being fuel poor

Gas

- June 2013 Physical gas flows across Europe and security and diversity of gas supply in 2011
- March 2014 Physical gas flows across Europe and diversity of gas supply in 2012

Petroleum (oil and oil products)

September 2013 Diversity of supply for oil and oil products in OECD countries

March 2014 Supermarket share of retail sales

Renewables

June 2013 Renewable energy in 2012

September 2013 Renewable electricity in Scotland, Wales, Northern Ireland and the regions of England in 2012
New Solar Photovoltaics deployment table

UK Continental Shelf (UKCS)

March 2014 UKCS capital expenditure survey 2013

PDF versions of the special feature articles appearing in Energy Trends since 2012 can be accessed on the DECC section of the gov.uk website at:

www.gov.uk/government/collections/energy-trends-articles

Articles published before 2012 can be accessed via the National Archives version of the DECC website at:

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

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.

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
From	Multiply by			
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
From	Multiply by			
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

ENERGY TRENDS

Energy is a major natural resource and a key factor in the economy and environment of the United Kingdom. Data on energy supply and demand, energy prices and values and trade in energy are vital components of this country's main economic and environmental indicators.

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Price £40 per annum UK

www.gov.uk/government/collections/quarterly-energy-prices
and

www.gov.uk/government/collections/energy-trends

Single copies available from the Publications Orderline
priced £6 for Energy Trends and £8 for Quarterly Energy Prices.



UK Energy in Brief

Available from the Publications Orderline

www.gov.uk/government/collections/uk-energy-in-brief



Digest of UK Energy Statistics

Available from the Stationery Office (0870 600 5522)

www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes

Energy Consumption in the UK

Available on the Internet at:

www.gov.uk/government/collections/energy-consumption-in-the-uk

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