

Electricity generation and supply figures for Scotland, Wales, Northern Ireland and England, 2014 to 2017

Introduction

This article shows how generation and consumption of electricity varies across the four countries of the United Kingdom. It updates and extends a previous version published in December 2017¹. The UK figures shown in this article are taken from chapters 5 and 6 of the Digest of United Kingdom Energy Statistics (DUKES) 2018² and so the definitions used are identical to those in the Digest. Tables 1 and 2 are included at the end of the main text and cover the last four years, with revised data for 2004 to 2017 available in the accompanying Excel spreadsheet.

Revisions

In previous versions of this article, generation from small-scale biodegradable waste was not separated from non-biodegradable waste and so was classified as 'other' in the percentage shares of generation. In order to match the definitions given in DUKES, this generation has been reallocated to 'thermal renewables', with revisions made back to 2010.

Previous versions of the figures remain available online for comparison at:

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

Key points

- England and Scotland both saw slight increases in their share of total generation compared to 2016, with England's increasing from 71.2 per cent to 72.3 per cent, and Scotland's rising to 14.4 per cent (up 0.9 percentage points). Wales saw a fall from 12.6 per cent to 10.5 per cent, while Northern Ireland's share remained stable at 2.9 per cent.
- The share of electricity generation from coal continued to fall across the UK in 2017, reaching just 6.7 per cent. Coal generation in Scotland fell to zero with the closure of its final coal plant, Longannet. Gas' overall share also decreased (down 1.9 pp), due to a drop in gas generation in England. However, it saw slight increases in share in Scotland, Wales and Northern Ireland, as gas was used to help replace coal in the energy mix.
- The share of renewable generation rose in 2017 to 29.3 per cent, surpassing the previous record from 2015 by 4.5 percentage points. Scotland continued to have the highest share, where renewables were responsible for more than half of total generation for the first time. England, Wales and Northern Ireland also saw record shares of renewable generation of 26.0 per cent (up 2.9 pp), 20.0 per cent (up 7.7 pp) and 34.0 per cent (up 8.7 pp). This jump in renewable generation came despite weather conditions remaining broadly similar to 2016 as significant increases to wind and solar capacity bolstered generation.
- In Scotland, the share of nuclear electricity generation fell from 42.9 per cent to 36.6 per cent as maintenance outages curtailed generation at Scotland's two nuclear reactors. However, its share of UK generation remained stable at 20.8 per cent.
- Autogenerators accounted for 14.7 per cent of total generation in 2017, supplying a record 7.7 per cent of UK public electricity (up 0.6 pp). This increase continues the trend observed since 2013, which has come with the growth of small-scale renewable capacity and falling large-scale fossil fuel capacity. Autogenerators are responsible for a particularly large share of generation in Scotland and Northern Ireland, with shares of 18.1 per cent and 25.5 per cent, respectively.

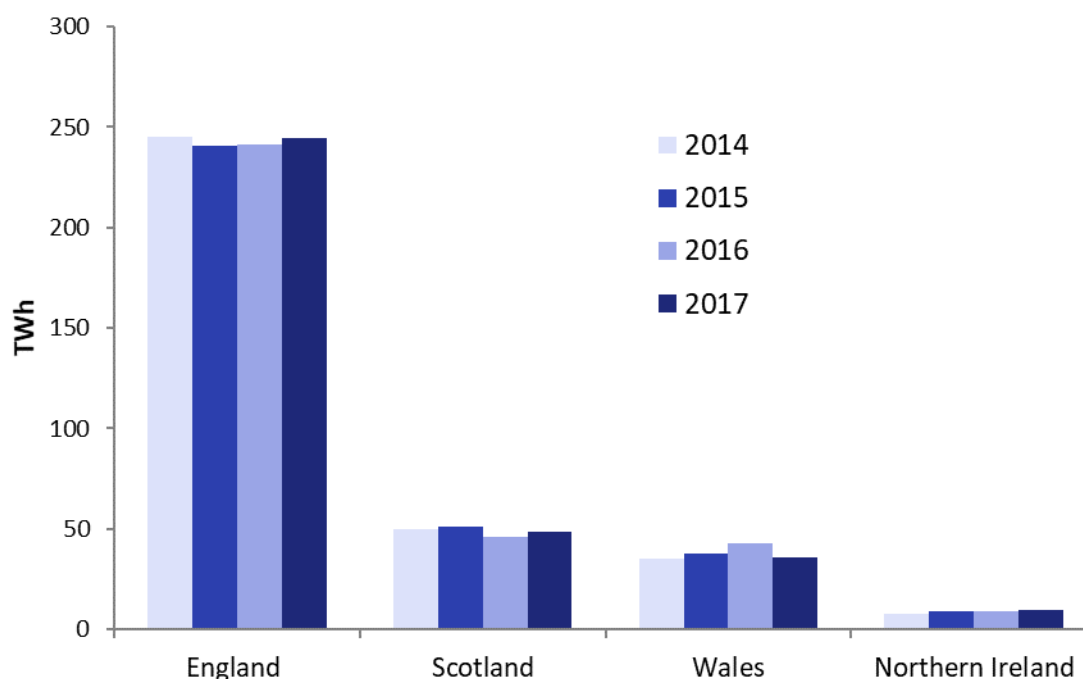
¹ Electricity generation and supply figures for Scotland, Wales, Northern Ireland and England, 2012 to 2016: www.gov.uk/government/publications/energy-trends-december-2017-special-feature-articles

² Digest of UK Energy Statistics (DUKES) 2018: www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes

Generation and trade

Chart 1 shows total generation of electricity in each UK country between 2014 and 2017.

Chart 1: Total generation by country (all generating companies) 2014-2017



Between 2016 and 2017, England's share of total generation increased from 71.2 per cent to 72.3 per cent, after remaining stable between 2015 and 2016. Scotland's share also increased slightly to 14.4 per cent (up 0.9 pp). Meanwhile, Wales saw a significant fall in share from 12.6 per cent to 10.5 per cent due to large drops in its generation from coal (down 62 per cent) and gas (down 17 per cent). Northern Ireland's share of generation remained broadly stable at 2.9 per cent (up 0.2 pp). The picture has not changed significantly over the past four years: on average, 71.7 per cent of UK electricity generation has taken place in England, 14.5 per cent in Scotland, 11.2 per cent in Wales and 2.6 per cent in Northern Ireland.

England is a net importer of electricity from Scotland, Wales and from continental Europe (via the France and Netherlands interconnectors). Total net imports from Europe fell to 5.2 per cent of consumption from public supply in the UK, down from 6.1 per cent in 2016. This was mainly due to a 26 per cent drop in net imports from France to 7.2 TWh, caused by a combination of damage to the interconnector from the end of November 2016 to March 2017 and unusually high electricity prices in France later in the year. Net imports from the Netherlands were also down, falling 6.1 per cent to 6.9 TWh.

In 2017, Scotland exported 26 per cent of the electricity generated there to consumers elsewhere in the UK, up from just 21 per cent last year. This came as total consumption in Scotland remained broadly similar compared to last year and generation increased 6.4 per cent from the unusually low levels observed in 2016.

In 2017, Wales exported 30 per cent of its total generation to England, the lowest proportion since 2011. This was due to Wales seeing a 17 per cent drop in generation as a result of reduced gas and coal generation, whilst consumption increased 2.9 per cent compared to 2016. Wales started trading with the Republic of Ireland in 2012 and was a net importer from them for the first time in 2016. Net imports from the Republic of Ireland more than doubled between 2016 and 2017, now accounting for 5 per cent of consumption from public supply in Wales.

In 2017, Northern Ireland became a net exporter of electricity to the Republic of Ireland for the first time since 2013, after record net imports in 2016. Northern Ireland usually imports electricity from Scotland via the Moyle interconnector but was a net exporter to Scotland for the first time in 2016. This continued in 2017, though Northern Ireland's net imports across the interconnector fell 43 per cent compared to 2016.

Generation by fuel

For each of the four UK countries, Table A shows the percentage shares of the generation of electricity by fuel category for 2016 and 2017. Because the mix of generating plants is not the same in each country, the overall percentage for each fuel type in individual years will change according to the fuels and stations that are available and the most advantageous to use.

The data for 2017 is also shown in Chart 2.

Table A: Percentage shares of generation, by fuel type, 2016 and 2017

2016	Scotland	Wales	Northern Ireland	England	UK
Coal	3.9%	17.1%	23.3%	8.0%	9.0%
Gas	6.9%	62.8%	50.1%	45.0%	42.3%
Nuclear	42.9%	0.0%	0.0%	21.6%	21.1%
Renewables	42.8%	12.3%	25.3%	23.2%	24.5%
Oil and Other	3.6%	7.8%	1.3%	2.2%	3.1%
2017					
Coal	0.0%	7.8%	14.3%	7.5%	6.7%
Gas	8.9%	63.4%	50.7%	42.9%	40.4%
Nuclear	36.6%	0.0%	0.0%	21.4%	20.8%
Renewables	51.7%	20.0%	34.0%	26.0%	29.3%
Oil and Other	2.8%	8.7%	1.0%	2.1%	2.9%

Coal's share of UK generation has fallen significantly over the past 5 years, from 39.2 per cent in 2012 down to a record low of just 6.7 per cent in 2017. The UK's coal capacity has fallen steeply over this period after the closure or partial closure of multiple coal plants that were opted out of the Large Combustion Plant Directive (LCPD) and its successor, the Industrial Emissions Directive. Coal generation in Scotland fell to zero with the closure of its only remaining coal plant, Longannet, in March 2016. Meanwhile, both Wales and Northern Ireland saw significant falls compared to 2016, with coal's share of generation down 9.2 and 9.0 percentage points, respectively. Wales saw the closure of Uskmouth power station in April 2017, however these falls were largely due to market conditions, which reduced the profitability of coal generation relative to gas. Whilst fuel costs for coal-fired generation are lower than for gas, emissions from coal are higher so generators must pay a greater carbon price per GWh produced. Coal's share of generation in England fell by 0.5 percentage points compared to 2016, after falling 15.8 percentage points between 2015 and 2016. This slowing in the decline of coal came due to higher overall generation in England in 2017. England's coal capacity has been steadily falling with the closure of coal plants and the conversion of coal units at Drax to biomass. This continued in 2016, as two coal plants, Ferrybridge C and Rugeley, were closed.

The share of gas generation in the UK fell to 40.4 per cent in 2017, however there were increases in its share in Scotland (up 2.0 pp), Wales (up 0.6 pp) and Northern Ireland (up 0.6 pp). England's share decreased from 45.0 per cent to 42.9 per cent, as higher renewable generation reduced the need for gas. This comes after a 43 per cent jump in gas-fired generation in England between 2015 and 2016, as coal was replaced in the energy mix. Although renewable generation also increased in Scotland, Wales and Northern Ireland, these countries also saw significant falls in coal's share of generation and so higher gas generation was required to offset this.

Special feature – Sub national electricity figures

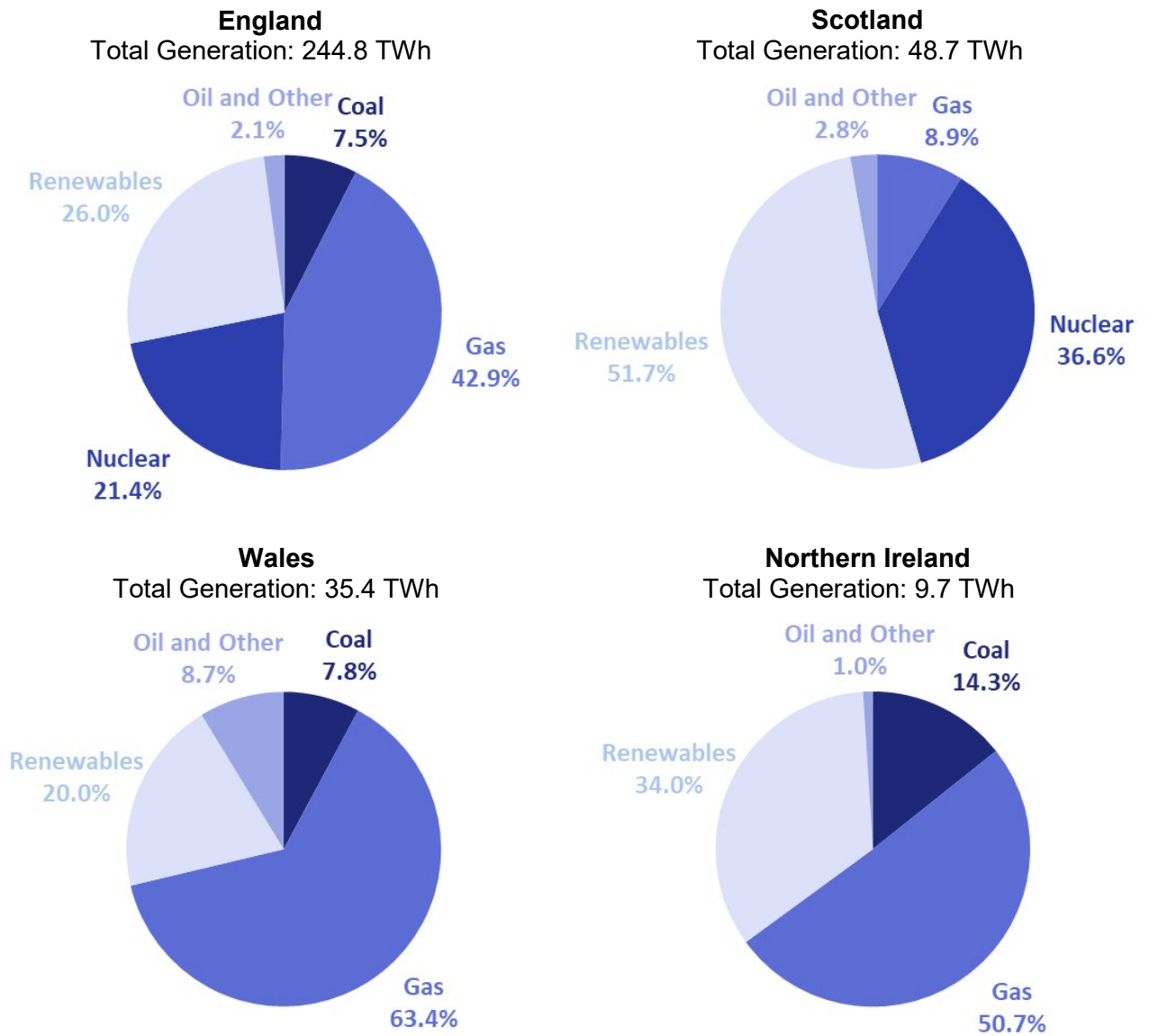
The share of nuclear generation remained steady compared to 2016, at 20.8 per cent. In Scotland, the share of nuclear generation dropped from 42.9 per cent to 36.6 per cent, due to both an increase in overall Scottish generation and lower nuclear generation, which fell due to an increase in the number of maintenance outages at Scotland's two nuclear reactors. However, more than three quarters of the UK's nuclear capacity is in England, where there was only a slight fall in share from 21.6 per cent to 21.4 per cent. There has been no nuclear generation in Wales since the closure of Wylfa in December 2015.

Renewable's share of generation rose to a new high of 29.3 per cent, driven by a 29 per cent increase in generation from wind, wave and solar. This was up 4.8 pp from 2016 and 4.7 pp from the previous record share, set in 2015. Weather conditions were broadly similar to last year however wind saw a particularly large increase in capacity from 2016 (up 23 per cent), whilst solar capacity also rose by 7.3 per cent.

All four countries saw record shares of renewable generation in 2017. In Scotland, renewables accounted for more than half of generation (up 8.9 pp from 2016), whilst Wales and Northern Ireland both saw large increases in share (up 7.7 pp and 8.7 pp, respectively). This came as the energy mix in all of these countries moved significantly away from coal towards renewable technologies. With large rises in renewable capacity in all three countries (up 15 per cent in Scotland, 12 per cent in Wales and 39 per cent in Northern Ireland³), renewable generation is now able to play a significant role in filling the gap left by coal, which only in 2014 accounted for 21.2 per cent of generation in Scotland, Wales and Northern Ireland. The increase in renewables' share in England was more marginal (up 2.9 pp to 26.0 per cent), as coal's share of generation remained similar to 2016 and overall generation increased. However, absolute renewable generation did see a 14 per cent increase due to a 12 per cent increase in renewable capacity.

³ Renewable energy in Scotland, Wales, Northern Ireland and the regions of England in 2017 – Energy Trends September 2018, page 64:
www.gov.uk/government/publications/energy-trends-september-2018-special-feature-articles

Chart 2: Generation by fuel type for each country in 2017 (all generating companies)



Special feature – Sub national electricity figures

The share of electricity supply accounted for by generators other than major power producers (autogenerators) has steadily increased since 2013, reaching a new high of 14.7 per cent in 2017 (up 5.4 pp compared to 2013). All countries saw an increase in the share of other generators compared to 2016, because of increases in smaller-scale renewables capacity across the UK. In 2017, in Scotland the share was 18.1 per cent (up 1.0 pp), in England 14.0 per cent (up 0.5 pp), in Wales 12.1 per cent up (3.5 pp) and in Northern Ireland 25.5 per cent (up 6.1 pp). These rises meant that autogenerators supplied a record share of UK public electricity consumption, at 7.7 per cent (up 0.6 pp compared to 2016).

Overall the UK saw a 0.2 per cent decrease in total generation compared to 2016, as a 9.7 per cent increase in generation from other generators was offset by a 1.8 per cent fall in MPP generation. The largest fall in generation share was from coal, which was down 2.4 percentage points to 6.7 per cent. This was caused by the closure of a number of coal-fired plants in 2016 due to the Large Combustion Plant Directive (LCPD) and Industrial Emissions Directive (IED), together with adverse market conditions that reduced the profitability of coal electricity generation. Renewables experienced the largest increase in generation share (up 4.8 pp), as increases in wind and solar capacity drove renewable generation to record levels. This led to a fall in gas' share of generation (down 1.9 pp to 40.4 per cent), as the high renewable generation reduced the need for gas, particularly in England.

Renewables

The share of renewables in electricity generation for the four years from 2014 to 2017 are given in Table B, split by country. Note previous editions of this article included a discussion of the percentage of electricity sales accounted for by renewables eligible under the Renewables Obligation (RO). This is no longer included given that the RO closed to new generating capacity in March 2017 with the last grace period expiring in September 2018. However, for reference, the amount of electricity generated by renewables eligible under the RO is still included in Table 2.

Table B: Percentage shares of renewable generation, 2014 to 2017

	Scotland	Wales	Northern Ireland	England	UK
2014	38.1	9.6	21.6	16.5	19.1
2015	42.4	13.7	25.5	22.5	24.6
2016	42.8	12.3	25.3	23.2	24.5
2017	51.7	20.0	34.0	26.0	29.3

The renewable share of generation reached a record high in 2017 for each of the four nations and for the UK as a whole, as all countries saw significant increases in renewable generation. Weather conditions were broadly similar to 2016 (average wind speeds up 3.9 per cent, average daily sun hours down 2.8 per cent and average rainfall down 3.6 per cent⁴) but there was a significant rise in renewable capacity across the UK. In England capacity increased 12 per cent, in Scotland 15 per cent, in Wales 12 per cent and in Northern Ireland 39 per cent, with the majority of the new capacity being wind and solar⁵. Interestingly, although similar to 2016, weather conditions for 2017 were poorer than average across the board, suggesting that the full potential of the UK's increasing renewable capacity is yet to be realised.

The large increase in 2017 comes after renewables' share of generation fell slightly between 2015 and 2016. This was due to poor weather conditions in 2016 compared to 2015, which offset

⁴ Energy Trends: weather
www.gov.uk/government/statistics/energy-trends-section-7-weather

⁵ Renewable energy in Scotland, Wales, Northern Ireland and the regions of England in 2017 – Energy Trends September 2018, page 64:
www.gov.uk/government/publications/energy-trends-september-2018-special-feature-articles

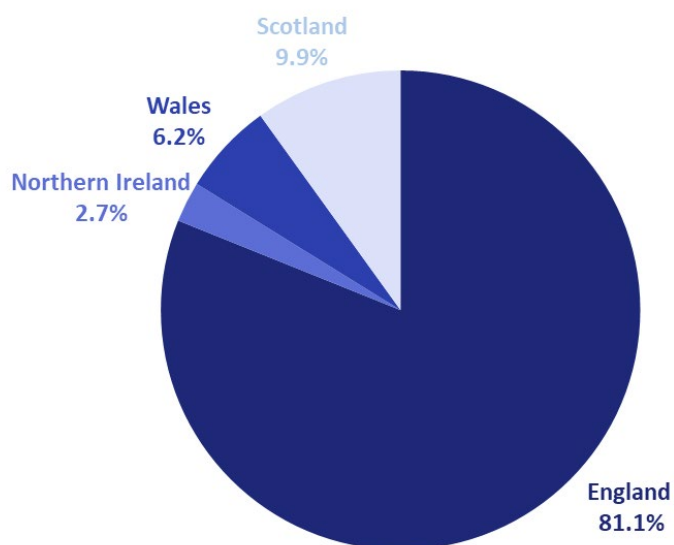
increases in renewable capacity. However, this fall can be considered an exception to the long-term trend; since 2014, the UK's share of renewable generation has increased 10.2 percentage points, as renewable capacity has grown significantly in all four countries over the period (up 71 per cent in England, 39 per cent in Scotland, 75 per cent in Wales and 92 per cent in Northern Ireland).

In Scotland, the renewables target to reach 100 per cent by 2020 is expressed as generation as a proportion of gross electricity consumption (defined as generation plus transfers into Scotland less transfers out of Scotland). This measure increased from 49.8 per cent in 2014 to 59.5 per cent in 2015, surpassing the interim target of reaching 50 per cent by 2015. However, in 2016 due to both lower renewable generation and a reduction in net imports, this measure dropped to 53.8 per cent. In 2017, with record renewable generation in Scotland, the figure has now risen to 70.1 per cent.

Detailed renewables statistics for 2016 on a sub-national and regional basis were published in the September 2018 issue of Energy Trends⁶.

⁶ Renewable energy in Scotland, Wales, Northern Ireland and the regions of England in 2017 – Energy Trends September 2018, page 64:
www.gov.uk/government/publications/energy-trends-september-2018-special-feature-articles

Chart 3: Electricity consumption in 2017



Consumption and sales

Transmission and distribution losses are not separately available for Scotland, Wales, Northern Ireland and England, so estimates have been made using the UK proportions for generation and sales. Consumption figures have then been calculated by deducting net transfers, own use, and losses figures from the electricity generated figures shown in Table 1. Chart 3 shows that in 2017, 9.9 per cent of electricity consumption in the UK was in Scotland, 6.2 per cent in Wales, 2.7 per cent in Northern Ireland and 81.1 per cent in England. These remain similar to the average percentage shares for each country between 2014 and 2017, namely 81.5 per cent for England, 10.1 per cent for Scotland, 5.7 per cent for Wales and 2.7 per cent for Northern Ireland.

Separate data is collected for sales of electricity from the public supply system in Scotland, England and Wales, and Northern Ireland. This is published in monthly table ET 5.5 on the BEIS Energy Statistics website⁷, but for this article the breakdown between England and Wales has been estimated. Because of definitional and other differences set out in the technical notes to Chapter 5 of DUKES 2017, there is a statistical difference between the calculated consumption and the sales data in Table 1.

As part of its commitment to improving the quality of its statistics, BEIS continues to examine this statistical difference (-0.1 per cent for the UK in 2017) and look further at the component series to see where the differences might be arising and thus where improvements to the data might be made.

Chart 4 shows the relationship between generation and consumption of electricity in each of the countries by means of a flow diagram.

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⁷ Energy Trends monthly table 5.5:
www.gov.uk/government/statistics/electricity-section-5-energy-trends

References:

Digest of UK Energy Statistics 2018 (DUKES); available on BEIS's energy statistics website at:
www.gov.uk/government/statistics/electricity-chapter-5-digest-of-united-kingdom-energy-statistics-dukes

Electricity generation and supply figures for Scotland, Wales, Northern Ireland and England, 2012 to 2016:
www.gov.uk/government/publications/energy-trends-december-2017-special-feature-articles

Capacity of, and electricity generated from, renewable sources (Energy Trends 6.1):
www.gov.uk/government/statistics/energy-trends-section-6-renewables

Renewable energy in Scotland, Wales, Northern Ireland and the regions of England in 2017 – Energy Trends September 2018, page 64:
www.gov.uk/government/publications/energy-trends-september-2018-special-feature-articles

Energy Trends monthly table 5.5:
www.gov.uk/government/statistics/electricity-section-5-energy-trends

Energy Trends: weather
www.gov.uk/government/statistics/energy-trends-section-7-weather

Chart 4: Electricity generation and consumption flow chart, 2017

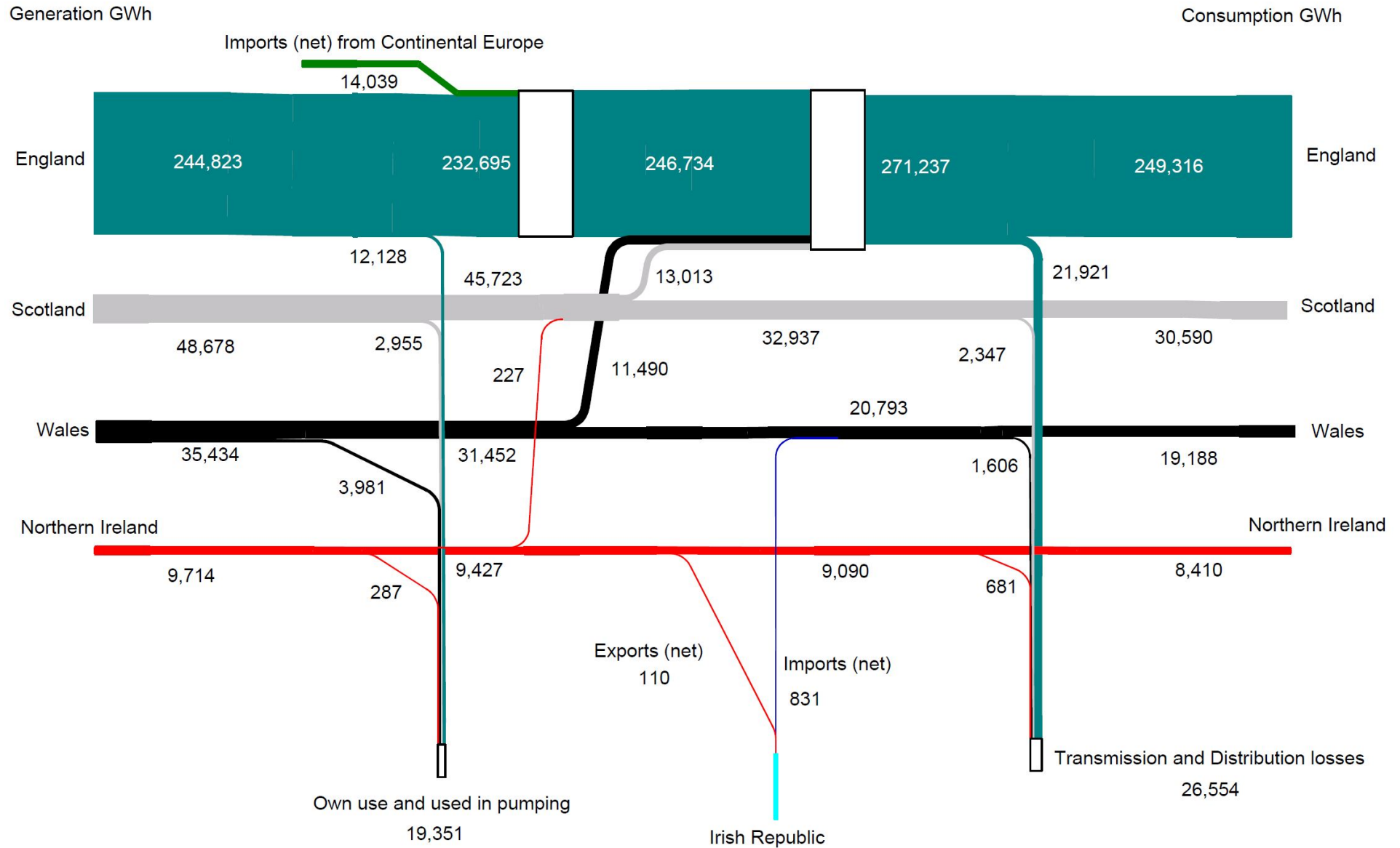


Table 1: Generation and supply of electricity in Scotland, Wales, Northern Ireland and England, 2014 to 2017 *GWh*

		2014					2015				
		UK total	Scotland	Wales	Northern Ireland	England	UK total	Scotland	Wales	Northern Ireland	England
Generated by	Major power producers	300,822	43,164	32,287	6,661	218,710	295,991	43,714	34,457	7,066	210,754
	Other generators	37,274	6,878	2,982	1,220	26,195	42,886	7,623	3,469	1,695	30,099
Total generated		338,096	50,042	35,268	7,880	244,906	338,876	51,336	37,926	8,761	240,853
Own use by Other generators		2,522	334	174	39	1,976	2,834	344	209	57	2,223
Electricity supplied (net) by Other generators		34,752	6,544	2,808	1,180	24,220	40,052	7,278	3,260	1,637	27,876
Used in pumping at pumped storage and other own use by MPPs		17,842	2,758	4,359	180	10,544	17,529	2,836	4,430	192	10,070
Electricity supplied (net) by MPPs		282,980	40,406	27,927	6,481	208,166	278,462	40,877	30,027	6,874	200,684
Electricity transferred to England (net of receipts)		0	10,770	11,136	0	-21,906	0	14,598	13,372	0	-27,970
Electricity transferred to Northern Ireland (net of receipts)		0	1,044	0	-1,044	0	0	191	0	-191	0
Electricity transferred to Europe (net of receipts)		-20,520	0	2,408	-121	-22,807	-21,106	0	1,065	-334	-21,837
Transfers from other generators to public supply		15,084	2,840	1,219	512	10,513	19,057	3,463	1,551	779	13,264
Transmission losses		6,509	613	308	164	5,423	7,394	644	385	183	6,183
Distribution losses		22,142	2,195	1,095	566	18,286	19,903	1,819	1,073	511	16,500
Consumption from public supply [A]		289,934	28,624	14,198	7,429	239,682	291,328	27,088	15,682	7,485	241,072
Consumption by autogenerators		19,668	3,704	1,589	668	13,707	20,994	3,815	1,709	858	14,612
Total electricity consumption		309,601	32,328	15,787	8,097	253,389	312,322	30,903	17,391	8,344	255,685
Electricity sales (public supply) [B]		291,153	28,863	14,398	7,438	240,454	290,007	26,505	15,639	7,445	240,417
Statistical difference between calculated consumption [A] and sales [B]		-1,220	-239	-200	-9	-772	1,321	583	43	40	656

Figures in this table do not sum exactly to the UK totals shown because of rounding.

Table 1 continued: Generation and supply of electricity in Scotland, Wales, Northern Ireland and England, 2014 to 2017 *GWh*

		2016					2017				
		UK total	Scotland	Wales	Northern Ireland	England	UK total	Scotland	Wales	Northern Ireland	England
Generated by	Major power producers	292,943	38,138	39,302	7,358	208,146	287,796	39,937	31,343	7,182	209,334
	Other generators	46,358	7,633	3,513	1,820	33,391	50,853	8,741	4,091	2,532	35,488
Total generated		339,301	45,771	42,815	9,177	241,538	338,649	48,678	35,434	9,714	244,823
Own use by Other generators		2,928	345	190	87	2,307	3,779	477	278	124	2,900
Electricity supplied (net) by Other generators		43,430	7,289	3,324	1,733	31,085	47,073	8,264	3,813	2,408	32,588
Used in pumping at pumped storage and other own use by MPPs		16,361	2,624	4,241	195	9,302	15,571	2,478	3,703	163	9,227
Electricity supplied (net) by MPPs		276,582	35,514	35,061	7,163	198,844	272,225	37,459	27,640	7,019	200,107
Electricity transferred to England (net of receipts)		0	9,639	18,523	0	-28,162	0	13,013	11,490	0	-24,503
Electricity transferred to Northern Ireland (net of receipts)		0	-252	0	252	0	0	-145	0	145	0
Electricity transferred to Europe (net of receipts)		-17,745	0	-313	-399	-17,034	-14,760	0	-831	110	-14,039
Transfers from other generators to public supply		20,501	3,441	1,569	818	14,673	21,861	3,838	1,771	1,118	15,134
Transmission losses		6,235	553	357	155	5,170	6,506	559	385	151	5,410
Distribution losses		19,861	1,903	1,169	512	16,277	20,048	1,788	1,221	529	16,510
Consumption from public supply [A]		288,732	27,111	16,894	7,461	237,267	282,292	26,164	17,146	7,120	231,862
Consumption by autogenerators		22,929	3,848	1,755	915	16,411	25,212	4,426	2,042	1,290	17,454
Total electricity consumption		311,661	30,959	18,648	8,376	253,678	307,504	30,590	19,188	8,410	249,316
Electricity sales (public supply) [B]		288,129	27,603	16,956	7,428	236,142	282,651	25,202	17,213	7,459	232,777
Statistical difference between calculated consumption [A] and sales [B]		603	-492	-62	33	1,125	-359	962	-68	-339	-914

Figures in this table do not sum exactly to the UK totals shown because of rounding.

Table 2: Generation of electricity by fuel in Scotland, Wales, Northern Ireland and England, 2014 to 2017 GWh

		2014					2015				
		UK total	Scotland	Wales	Northern Ireland	England	UK total	Scotland	Wales	Northern Ireland	England
Major power producers:	Coal	100,167	10,157	7,368	2,160	80,482	75,812	8,275	8,153	2,102	57,283
	Oil	530	192	148	24	166	683	188	163	42	290
	Gas	88,871	880	18,513	3,817	65,661	88,461	126	16,859	4,187	67,289
	Nuclear	63,748	16,633	1,953	0	45,162	70,345	17,763	3,887	0	48,696
	Thermal renewables	12,698	645	0	0	12,053	17,694	789	7	0	16,898
	Other thermal	528	0	0	0	528	689	0	0	0	689
	Hydro natural flow	4,635	4,393	213	0	28	4,907	4,605	273	0	28
	Hydro pumped storage	2,883	494	2,389	0	0	2,739	523	2,217	0	0
	Non-thermal renewables	26,762	9,769	1,702	660	14,632	34,662	11,445	2,899	735	19,582
	Total		300,822	43,164	32,287	6,661	218,710	295,991	43,714	34,457	7,066
Other Generators:	Coal	72	0	0	39	33	66	0	0	38	28
	Oil	1,390	639	43	39	668	1,354	693	30	40	592
	Gas	12,021	1,843	853	101	9,224	11,415	1,793	693	115	8,814
	Thermal renewables ¹	9,921	1,071	577	168	8,105	11,563	1,075	748	270	9,471
	Other thermal	1,991	135	621	0	1,235	2,054	207	594	0	1,252
	Hydro natural flow	1,253	1,090	64	27	72	1,391	1,209	78	29	74
	Non-thermal renewables	9,253	2,076	824	844	5,509	13,149	2,621	1,193	1,204	8,131
	Non-biodegradable wastes	1,372	22	0	0	1,349	1,894	26	132	0	1,735
Total		37,274	6,878	2,982	1,220	26,195	42,886	7,623	3,469	1,695	30,099
Total generation by fuel		338,096	50,042	35,268	7,880	244,906	338,876	51,336	37,926	8,761	240,853
<i>within which:</i> Renewables	Hydro natural flow	5,888	5,484	277	27	100	6,297	5,814	352	29	103
	Wind, wave, solar	36,016	11,845	2,526	1,504	20,140	47,811	14,066	4,092	1,939	27,714
	Thermal	22,619	1,716	577	168	20,158	29,257	1,864	755	270	26,369
	Total	64,522	19,045	3,380	1,699	40,398	83,365	21,744	5,199	2,237	54,185
Renewables eligible under the renewables obligation	53,207	15,096	2,628	1,602	33,881	68,134	17,078	4,212	2,116	44,728	
Percentage shares of generation:	Coal	29.6	20.3	20.9	27.9	32.9	22.4	16.1	21.5	24.4	23.8
	Oil	0.6	1.7	0.5	0.8	0.3	0.6	1.7	0.5	0.9	0.4
	Gas	29.8	5.4	54.9	49.7	30.6	29.5	3.7	46.3	49.1	31.6
	Nuclear	18.9	33.2	5.5	0.0	18.4	20.8	34.6	10.2	0.0	20.2
	Hydro natural flow	1.7	11.0	0.8	0.3	0.0	1.9	11.3	0.9	0.3	0.0
	Other renewables	17.3	27.1	8.8	21.2	16.5	22.7	31.0	12.8	25.2	22.5
	Other	2.0	1.3	8.5	0.0	1.3	2.2	1.5	7.8	0.0	1.5
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Figures in this table do not sum exactly to the UK totals shown because of rounding.

1. In this version of the article, biodegradable waste generation from 'other generators' was reallocated to thermal renewables, with revisions made back to 2010.

Table 2 continued: Generation of electricity by fuel in Scotland, Wales, Northern Ireland and England, 2014 to 2017 GWh

		2016					2017				
		UK total	Scotland	Wales	Northern Ireland	England	UK total	Scotland	Wales	Northern Ireland	England
Major power producers:	Coal	30,613	1,806	7,316	2,107	19,384	22,481	0	2,780	1,361	18,339
	Oil	606	156	180	68	201	390	120	54	59	156
	Gas	131,972	1,523	26,092	4,489	99,868	124,512	2,547	21,707	4,815	95,445
	Nuclear	71,726	19,630	0	0	52,096	70,336	17,827	0	0	52,509
	Thermal renewables	17,400	756	33	0	16,611	17,766	880	19	0	16,866
	Other thermal	968	0	0	0	968	1,276	0	0	0	1,276
	Hydro natural flow	3,951	3,692	235	0	25	4,179	3,890	276	0	12
	Hydro pumped storage	2,959	486	2,474	0	0	2,872	573	2,299	0	0
	Non-thermal renewables	32,748	10,089	2,972	694	18,993	43,984	14,099	4,207	948	24,730
	Total	292,943	38,138	39,302	7,358	208,146	287,796	39,937	31,343	7,182	209,334
	Other Generators:	Coal	56	0	0	36	20	49	0	0	28
Oil		1,285	527	36	42	679	1,225	543	42	39	601
Gas		11,384	1,618	804	108	8,854	12,233	1,786	768	106	9,573
Thermal renewables ¹		12,664	1,143	691	458	10,371	14,103	1,573	922	553	11,055
Other thermal		2,834	432	544	7	1,850	1,842	79	569	0	1,194
Hydro natural flow		1,439	1,243	86	24	86	1,750	1,466	141	30	113
Non-thermal renewables		14,926	2,644	1,238	1,145	9,898	17,549	3,258	1,519	1,776	10,996
Non-biodegradable wastes		1,771	25	113	0	1,633	2,102	37	129	0	1,936
Total	46,358	7,633	3,513	1,820	33,391	50,853	8,741	4,091	2,532	35,488	
Total generation by fuel		339,301	45,771	42,815	9,177	241,538	338,649	48,678	35,434	9,714	244,823
<i>within which:</i>	Renewables	5,390	4,935	321	24	110	5,928	5,356	417	30	125
	Hydro natural flow	47,674	12,734	4,210	1,839	28,891	61,533	17,357	5,726	2,724	35,726
	Wind, wave, solar	30,064	1,899	725	458	26,982	31,869	2,453	941	553	27,922
	Thermal	83,127	19,568	5,255	2,321	55,984	99,330	25,166	7,085	3,306	63,773
Renewables eligible under the renewables obligation		63,241	14,098	4,060	1,937	43,146	17,631	4,552	1,404	602	11,073
Percentage shares of generation:	Coal	9.0	3.9	17.1	23.3	8.0	6.7	0.0	7.8	14.3	7.5
	Oil	0.6	1.5	0.5	1.2	0.4	0.5	1.4	0.3	1.0	0.3
	Gas	42.3	6.9	62.8	50.1	45.0	40.4	8.9	63.4	50.7	42.9
	Nuclear	21.1	42.9	0.0	0.0	21.6	20.8	36.6	0.0	0.0	21.4
	Hydro natural flow	1.6	10.8	0.7	0.3	0.0	1.8	11.0	1.2	0.3	0.1
	Other renewables	22.9	32.0	11.5	25.0	23.1	27.6	40.7	18.8	33.7	26.0
	Other	2.5	2.1	7.3	0.1	1.8	2.4	1.4	8.5	0.0	1.8
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Figures in this table do not sum exactly to the UK totals shown because of rounding.

1. In this version of the article, biodegradable waste generation from 'other generators' was reallocated to thermal renewables, with revisions made back to 2010.