

# Electricity generation and supply in Scotland, Wales, Northern Ireland and England, 2016 to 2019

## Introduction

This article examines the variation of electricity generation and consumption in the four nations of the United Kingdom. It updates and extends the [previous version](#), published in December 2019. The UK data in this article are taken from chapters 5 and 6 of the [Digest of United Kingdom Energy Statistics \(DUKES\) 2020](#); the definitions are thus identical to those in DUKES. Tables 1 and 2 are included at the end of the main text and cover the latest four years (2016 to 2019 inclusive), with a revised timeseries for 2004 to 2019 in the accompanying Excel spreadsheet.

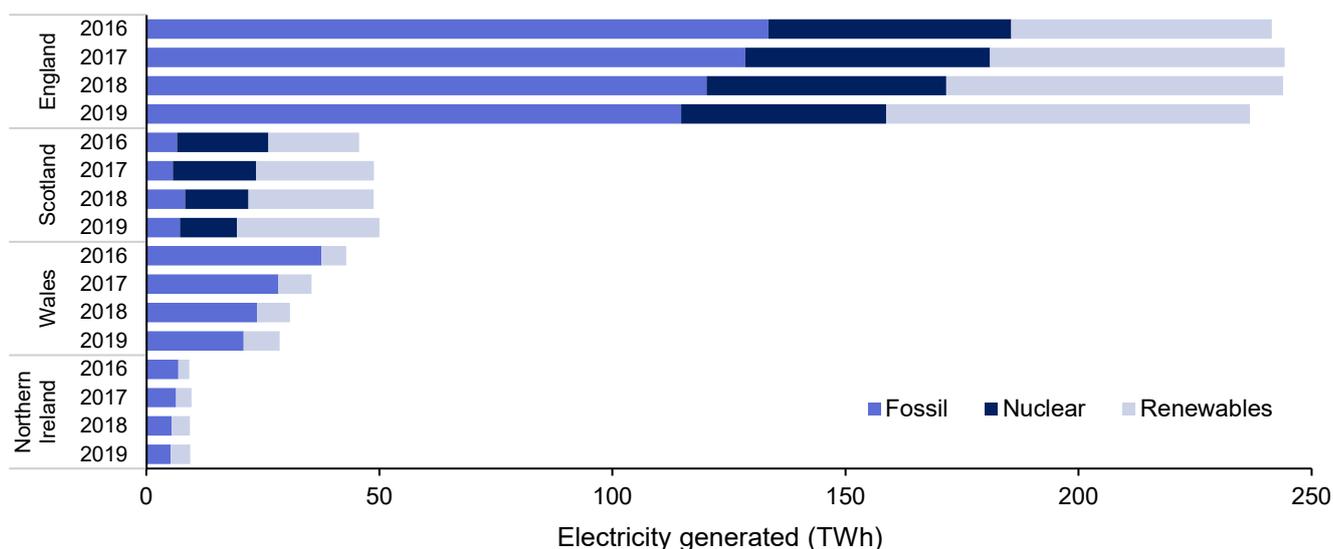
## Key headlines

- UK total electricity generation in 2019 was 2.4 per cent lower than the previous year, at 325 TWh, which is the lowest value in the published time series. This was predominantly driven by a 2.9 per cent reduction in electricity generation in England in 2019, as coal fired generation fell by 65 per cent in 2019 compared to the previous year.
- The decreased generation was partially offset by a 1.3 per cent fall in demand. Net imports increased to 21.2 TWh, with England receiving a net 21.8 TWh from France, Belgium and the Netherlands, and Wales receiving 0.2 TWh from the Republic of Ireland. The interconnector from Northern Ireland to Ireland remained the UK's only net exporting interconnector, with total net exports amounting to 0.8 TWh.
- Fossil fuel generation fell in all four nations to record low levels in England, Wales and Northern Ireland, with the sharpest falls in Scotland (16 per cent) and Wales (11 per cent). In Scotland, fossil fuels accounted for just 12.7 per cent of electricity generated in 2019, a 2.7 pp decrease on the previous year. Coal-fired power in particular continued to play an increasingly minor role in the UK's generation mix, with UK-wide generation falling by 59 per cent to a record low share of just 2.1 per cent.
- Renewable generation rose to a record 121 TWh in 2019 with the renewable share of UK generation rising by 4.0 pp to 37.1 per cent, surpassing 2018's record. Scotland continued to have the highest share, rising to 61.1 per cent, up 6.0 pp on 2018. Each UK nation saw record generation and record shares of generation, with shares of 44.6 per cent in Northern Ireland (up 2.4 pp), 33.0 per cent in England (up 3.4 pp) and 26.9 per cent in Wales (up 4.1 pp).
- The increase in renewable generation was driven by capacity, which increased by 6.5 per cent in 2019. Generation increased despite less favourable conditions for renewables compared to 2018, with both wind and solar generators restricted by low wind speeds and fewer daily sun hours. Hydro generators were supported by increased rainfall, which saw an increase in generation despite unchanged capacity.
- Low carbon generation reached a record high share of 54.4 per cent in 2019 (up 1.8 pp). This was despite a UK-wide 14 per cent fall in nuclear generation due to outages. Nuclear's share of generation in England fell to 18.6 per cent and 24.5 per cent in Scotland, which was the lowest value in the published timeseries.

## Generation, consumption and trade

Electricity generation within the UK decreased to 325 TWh in 2019, down 2.4 per cent on 2018 and the lowest level on the published time series. This follows a four-year period from 2014 to 2017 wherein generation remained broadly stable at an average of 339 TWh, before falling by 1.6 per cent in 2018. Chart 1 shows total electricity generation by UK country, between 2016 and 2019, with generation divided by fossil fuel, nuclear and renewable technologies.

**Chart 1: Total electricity generation by country (all generating companies), 2016 to 2019.**



Shares of electricity supplied by nation remained stable compared to the previous year with generation in England in 2019 accounting for 72.7 per cent of the UK's total, down 0.3 pp on 2018. Electricity generated in England and Wales fell by 2.7 per cent and 7.1 per cent respectively, as fossil fuel generation fell in all four nations. This was seen most notably in Scotland (-16 per cent) and Wales (-11 per cent). In England and Northern Ireland coal fired electricity generation fell by 65 per cent and 32 per cent respectively, as coal use continued to decline in 2019. In Scotland, fossil fuels accounted for just 12.7 per cent of electricity generated in 2019, a 2.7 pp decrease on 2018.

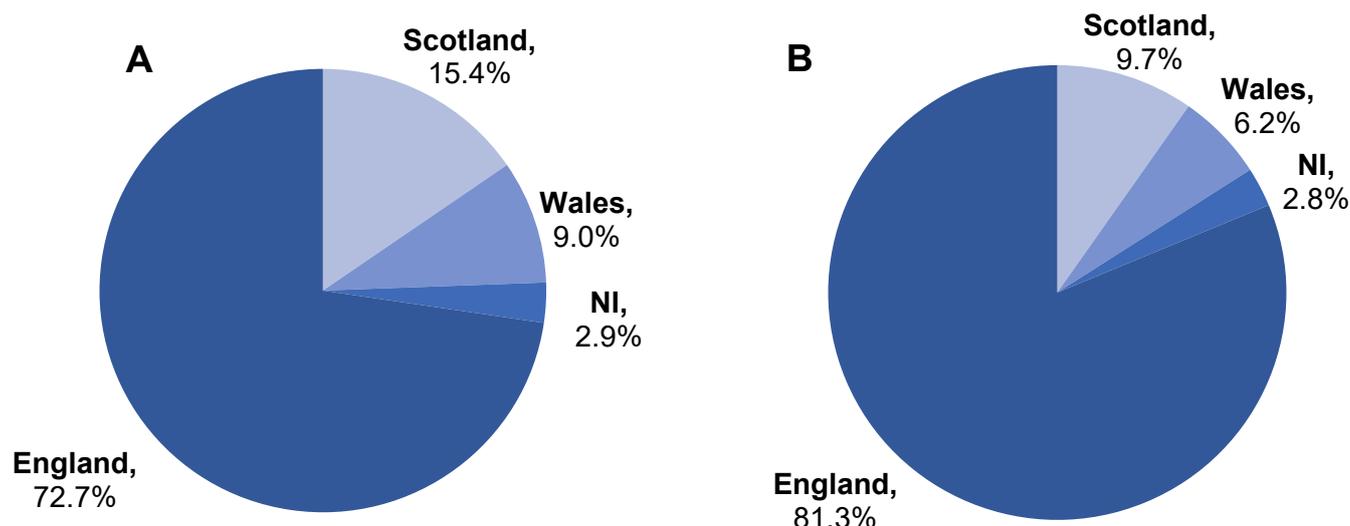
UK-wide nuclear generation fell to its lowest level since 2008, accounting for less than a quarter of generation in Scotland for the first time in the published time series, and falling to 18.6 per cent in England. Since the closure of Wylfa in Wales in December 2015, there has been no nuclear generation in Wales or Northern Ireland.

While fossil fuel and nuclear generation fell, renewable generation rose to record levels in all four nations in 2019. Scotland has a target to reach 100 per cent renewable electricity generation as a proportion of gross electricity consumption (defined as generation plus transfers into Scotland less transfers out of Scotland). In 2019, Scotland reached a record 89.5 per cent of the renewable target, up 13 pp on 2017 and up 30 pp on the 2015 value.

Shares of annual electricity consumption of the respective UK nations did not significantly differ from 2018, with the overwhelming majority of demand coming from England (81.3 per cent), 9.7 per cent from Scotland, 6.6 per cent from Wales and 2.8 per cent from Northern Ireland. This reflected little difference to the 2016-18 period where consumption shares were 81.3 per cent, 9.9 per cent, 6.1 per cent and 2.7 per cent respectively. Chart 2 shows shares of electricity supply and demand in the UK by country in 2019.

The difference between England's electricity generation and demand is met through net positive transfers from Scotland and Wales, as well as net imports from continental Europe (via the France, Netherlands and Belgium interconnectors). These sources provided 18.0 per cent of total electricity consumed in England in 2019, up 1.2 pp on 2018.

**Chart 2: Shares of electricity supply (A) and demand (B) in the UK by country in 2019.**



In 2019, Scotland exported a record 31.7 per cent of its generation in net transfers to England and Northern Ireland totalling 15.9 TWh. Scotland's renewable capacity has expanded dramatically in recent years, offsetting the fall in fossil fuel generation to result in an increase in total generation of 9.4 per cent from 2016 to 2019. In this period, Scotland's electricity demand fell by 5.0 per cent, resulting in an increase in electricity available for exports. Meanwhile, Wales exported 26.2 per cent of its total generation to England in 2019, the lowest proportion since 2007. Total generation has fallen by a third in Wales since 2016, predominantly driven by the reduction of coal and gas-fired generation in the period. A flow chart illustrating electricity generation, consumption and trade in the UK nations is provided in Appendix A.

### **Electricity generation by fuel**

In recent years, the closure of coal and gas fired power stations and an increase in the number of renewable generators shifted the UK's generation mix from fossil fuels towards renewables. As the fossil fuel share of generation fell across the UK, the renewable share rose from 24.5 per cent in 2016 to a record 37.1 per cent in 2019. This was driven by decreases in fossil fuel shares of generation in all UK nations since 2016. Notably, fossil fuel generation dropped by 45 per cent in Wales since 2016, with the winding down of operations at major Welsh coal plants, including Aberthaw B and Uksmouth resulting in coal generation falling 91 per cent from 2019 to 2016. Falls in fossil fuel generation were offset by a 45 per cent increase in UK renewable generation in the same period.

The introduction of the Carbon Price Floor (CPF) in April 2013 resulted in the swift decline of coal generation, which accounted for 39.2 per cent of the UK generation mix in 2012, compared to a record-low share of just 2.1 per cent in 2019. Unfavourable economics, as well as the impact of EU regulations saw the closure of almost all the UK's coal plants. 2019 saw the closure of Cottam, and the final full year of generation at Fiddlers Ferry and Aberthaw B, both of which closed in March 2020. In England and Northern Ireland, coal generation decreased by 65 per cent and 32 per cent respectively on the previous year, with coal power accounting for less than 10 per cent of Northern Ireland's share of generation for the first time in the published time series. In Wales, generation rose slightly, although from a low baseline, as remaining coal stocks were used before the closure of Aberthaw B, the last coal plant in Wales. Since the closure of Longannet in 2016 there has been no coal generation in Scotland.

The UK's four remaining coal plants will be phased out by October 2024 as the UK works towards net zero carbon emissions by 2050. Drax will close its remaining coal units in 2021, whilst Kilroot plans to convert to gas by winter 2023. Plans for the closure of Ratcliffe and West Burton are yet to be finalised.

A map showing the locations of MPP sites in each UK nation is provided in Appendix B.

Overall, the share of UK gas generation rose slightly to 40.6 per cent in 2019, up 1.1 pp on 2018. Gas displaced the bulk of coal in the generation mix in 2016 and its share of generation has fluctuated around the 40 per cent mark since. As coal use continued to fall back in 2019, there was a 3.9 per cent increase in gas generation in England. Gas generation fell by 17 per cent in Scotland, whilst rising 5.1 per cent in Northern Ireland. In Wales, fossil fuel generation accounted for less than two thirds of the total for the first time since 2011 as gas generation fell by 12 per cent. Despite this, Wales remains more reliant on gas than the other nations, with it accounting for 63.1 per cent share of total generation in 2019.

As the UK's nuclear power stations continue to age, nuclear generation fell for the third consecutive year due to maintenance outages. Generation was suppressed by 14.6 per cent and 10.2 per cent on 2018 at nuclear plants in England and Scotland respectively. Since the closure of Wylfa in 2015, there has been no nuclear generation in Wales. With the closures of Hinkley Point B and Hunterston B by 2022, 3.2 GW of capacity is to be replaced by Hinkley Point C, which is expected to commence operations in 2023. Combined with high renewables generation, shares of low carbon electricity generation in 2019 were 85.5 per cent in Scotland and 51.5 per cent in England.

Renewable generators saw record levels of generation in 2019, accounting for 37.1 per cent of the UK's total (up 4.0 pp on 2018) as the UK expanded wind and bioenergy capacity, with generation up 13 per cent and 6.8 per cent respectively. In Scotland, 61.1 per cent of electricity was generated by renewable fuels in 2019, accounting for one quarter of the UK's renewable electricity. While Scotland remains the UK leader for renewable generation, all four nations saw record shares with renewable electricity accounting for 44.6 per cent, 33.0 per cent and 26.9 per cent of generation in Wales, England and Northern Ireland respectively. Chart 3 shows the renewable share of total electricity generation in each UK country from 2016 to 2019, in comparison to the UK average.

**Chart 3: Renewable share of electricity generation by country, 2005 to 2019.**

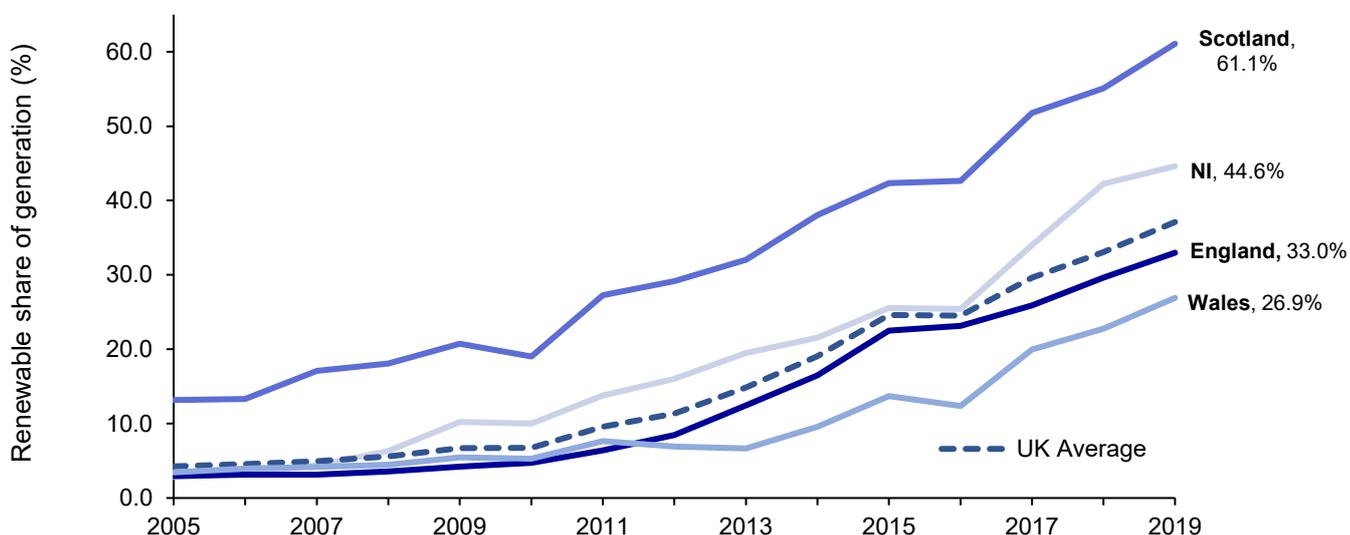
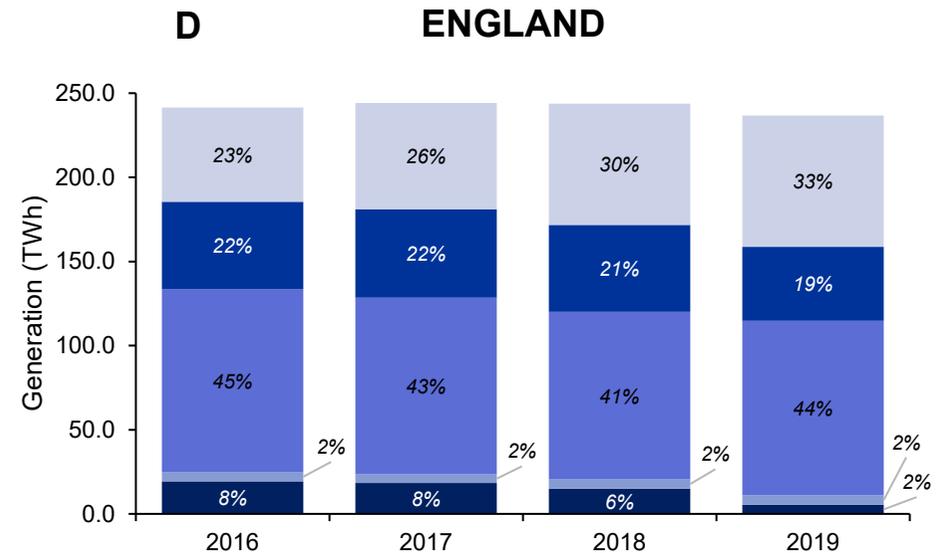
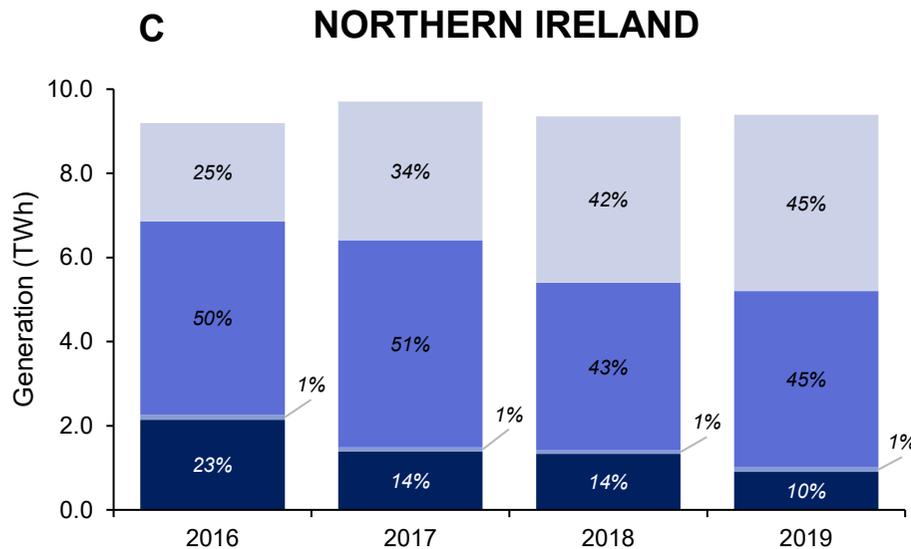
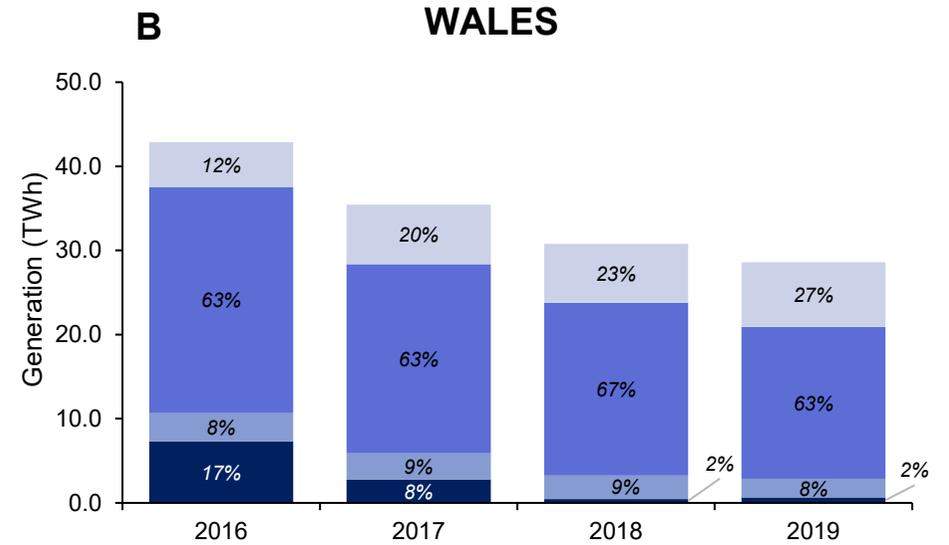
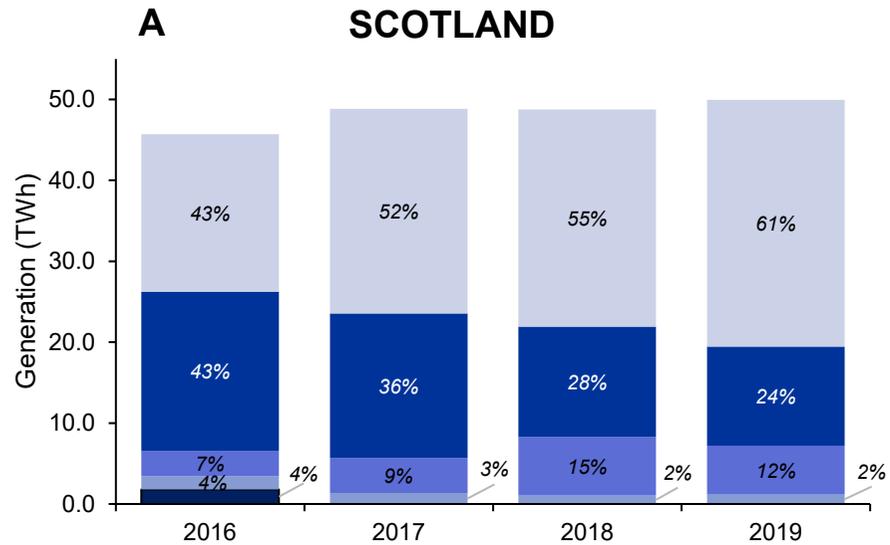


Chart 4 below shows electricity generation by fuel (in all generating companies) in each UK country for the period 2016 to 2019. To illustrate the generation mix in each country, shares of electricity generated by fuel are shown as data labels.

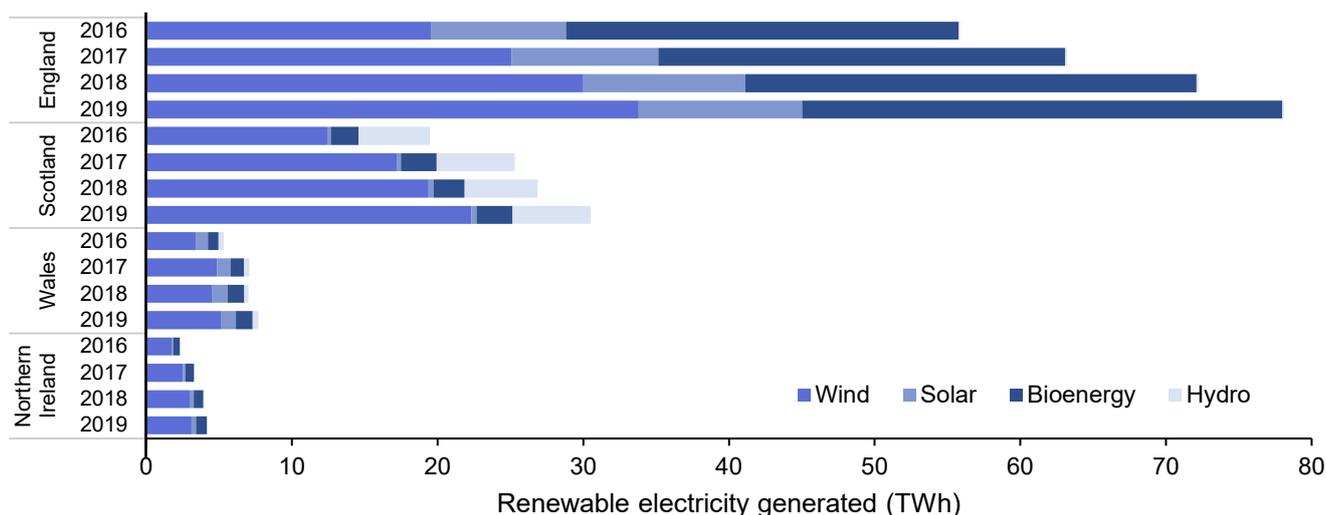
**Chart 4: Electricity generation by fuel (with shares of electricity generated) in all generating companies, in Scotland (A), Wales (B), Northern Ireland (C) and England (D), 2016 to 2019.**



## Renewable electricity

Renewable electricity generation and capacity has increased dramatically in recent years as the UK strives towards a cleaner future, working towards its goal to achieve net zero carbon emissions by 2050. In 2019, the UK became the [first global economy to enshrine this commitment in law](#). Chart 5 shows electricity generation by renewable technology in each UK nation between 2016 and 2019.

**Chart 5: Renewable electricity generation by technology, in each UK nation between 2016 and 2019.**



The upsurge in renewable generation in recent years has been driven by the dramatically increasing capacity for renewable generators, with UK capacity rising by 6.5 per cent in 2019 to reach 47,163 MW. Wind generation has been particularly prominent, with a 73 per cent increase in UK wind generation between 2016 and 2019. Wind power accounted for close to half of Scotland's total generation in 2019 (over double the UK average of 19.7 per cent), following an 80 per cent increase in generation since 2016. The UK recently announced its intent to increase its installed capacity for offshore wind generation to 40 GW by 2030, increasing overall wind capacity to over 50 GW, in line with its commitment to achieve net zero carbon emissions by 2050.

Bioenergy now represents a sixth of UK generation capacity, with an 11.5 per cent share of generation in 2019 following the first full year since Lynemouth converted its 420 MW coal unit to biomass in 2018. Since the conversion of four Drax coal units to biomass, the majority of biomass generation capacity by major producers now takes place at these two sites which are both in England.

Solar generators produced 1.4 per cent more electricity in 2019 than in the previous year, despite average daily sun hours being down by 0.2 hours, as de-rated capacity increased by 2.1 per cent. Most UK solar farms are in England, where generation increased by 1.1 per cent. In Scotland, Northern Ireland and Wales, solar generation rose by 9.1 per cent, 5.7 per cent and 1.2 per cent respectively.

The vast majority of the UK's hydro generation assets are in Scotland, where generation increased 7.4 per cent on the previous year. This was in line with a 5.5 per cent increase in UK rainfall, weighted by location of UK hydro resource, as hydro capacity remained unchanged.

For further, detailed renewable statistics on a sub-national and regional basis, please refer to the [special feature article](#) published in the September 2020 issue of Energy Trends. For weather data, weighted by location of renewable resources, refer to [Energy Trends section 7: weather](#).

Note that previous versions of this article included reference to renewable generation under the Renewables Obligation (RO). This is no longer included since the RO closed to new generating capacity in March 2017, with a grace period ending in 2018. Since this date, the expansion of renewable capacity renders renewable generation under the RO less significant.

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## Revisions

Previous versions of the data in this article remain available online for comparison at:

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

## References

Digest of UK Energy Statistics 2020 (DUKES) – Electricity (Chapter 5):

<https://www.gov.uk/government/statistics/electricity-chapter-5-digest-of-united-kingdom-energy-statistics-dukes>

Electricity generation and supply article and accompanying data for Scotland, Wales, Northern Ireland and England, 2015 to 2018:

<https://www.gov.uk/government/publications/energy-trends-december-2019-special-feature-articles>

UK electricity generation and consumption (Energy Trends 5.1 to 5.6):

<https://www.gov.uk/government/statistics/electricity-section-5-energy-trends>

Renewable electricity generation and capacity (Energy Trends 6.1):

<https://www.gov.uk/government/statistics/energy-trends-section-6-renewables>

Renewable electricity in Scotland, Wales, Northern Ireland and the regions of England in 2019:

<https://www.gov.uk/government/publications/energy-trends-september-2020-special-feature-articles>

Energy Trends: weather

<http://www.gov.uk/government/statistics/energy-trends-section-7-weather>

**Table 1a: Generation and supply of electricity in Scotland, Wales, Northern Ireland and England, 2016 and 2017**

GENERATION AND SUPPLY OF ELECTRICITY (GWh)	2016					2017				
	UK Total	Scotland	Wales	Northern Ireland	England	UK Total	Scotland	Wales	Northern Ireland	England
Electricity generated by Major Power Producers (MPPs)	292,943	38,138	39,302	7,358	208,146	287,744	39,885	31,343	7,182	209,334
Electricity generated by other generators	46,221	7,541	3,561	1,836	33,283	50,453	8,956	4,087	2,525	34,885
<b>TOTAL ELECTRICITY GENERATED</b>	<b>339,164</b>	<b>45,679</b>	<b>42,863</b>	<b>9,193</b>	<b>241,429</b>	<b>338,197</b>	<b>48,841</b>	<b>35,429</b>	<b>9,707</b>	<b>244,219</b>
Own use by other generators	2,921	341	190	88	2,302	3,758	475	275	129	2,880
Net electricity supplied by other generators	43,300	7,200	3,371	1,748	30,981	46,695	8,481	3,812	2,397	32,005
Used in pumping at pumped storage and other own use by MPPs	16,361	2,701	1,173	354	12,133	15,571	2,494	859	353	11,865
Net electricity supplied by MPPs	276,582	35,437	38,129	7,004	196,013	272,173	37,391	30,483	6,829	197,469
Electricity transferred to England (net of receipts)	0	9,639	21,591	0	-31,230	0	13,013	14,333	0	-27,346
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	20,400	3,392	1,588	823	14,596	21,544	3,913	1,759	1,106	14,767
Transmission losses	6,233	552	357	151	5,173	6,497	555	385	149	5,409
Distribution losses and theft	19,855	1,775	1,169	504	16,407	20,021	1,770	1,221	525	16,505
Consumption from public supply [A]	288,639	27,115	16,912	7,319	237,292	281,959	26,111	17,135	7,006	231,708
Consumption by autogenerators	22,900	3,808	1,783	924	16,385	25,151	4,568	2,053	1,291	17,239
<b>TOTAL ELECTRICITY CONSUMED</b>	<b>311,539</b>	<b>30,924</b>	<b>18,695</b>	<b>8,243</b>	<b>253,678</b>	<b>307,110</b>	<b>30,679</b>	<b>19,188</b>	<b>8,297</b>	<b>248,946</b>
Electricity sales (public supply) [B]	288,331	25,771	16,982	7,312	238,266	281,641	24,899	17,170	7,389	232,183
Statistical difference between calculated consumption [A] and sales [B]	308	1,345	-69	6	-974	318	1,212	-35	-383	-476

**Table 1b: Generation and supply of electricity in Scotland, Wales, Northern Ireland and England, 2018 and 2019**

GENERATION AND SUPPLY OF ELECTRICITY (GWh)	2018					2019				
	UK Total	Scotland	Wales	Northern Ireland	England	UK Total	Scotland	Wales	Northern Ireland	England
Electricity generated by Major Power Producers (MPPs)	281,330	39,588	26,829	6,279	208,634	269,192	40,585	24,663	6,222	197,723
Electricity generated by other generators	51,446	9,182	3,959	3,076	35,228	55,569	9,385	3,945	3,168	39,071
<b>TOTAL ELECTRICITY GENERATED</b>	<b>332,776</b>	<b>48,770</b>	<b>30,788</b>	<b>9,355</b>	<b>243,862</b>	<b>324,761</b>	<b>49,969</b>	<b>28,608</b>	<b>9,389</b>	<b>236,794</b>
Own use by other generators	4,323	664	346	158	3,155	4,985	847	376	185	3,577
Net electricity supplied by other generators	47,122	8,518	3,613	2,918	32,073	50,584	8,538	3,569	2,983	35,494
Used in pumping at pumped storage and other own use by MPPs	14,481	2,050	646	342	11,443	12,209	1,722	527	257	9,704
Net electricity supplied by MPPs	266,849	37,538	26,183	5,937	197,191	256,983	38,863	24,136	5,965	188,019
Electricity transferred to England (net of receipts)	0	12,810	10,013	0	-22,823	0	14,873	7,502	0	-22,375
Electricity transferred to Northern Ireland (net of receipts)	0	707	0	-707	0	0	981	0	-981	0
Electricity transferred to Europe (net of receipts)	-19,108	0	-504	471	-19,075	-21,170	0	-180	825	-21,815
Transfers from other generators to public supply	22,245	4,021	1,705	1,378	15,141	25,300	4,270	1,785	1,492	17,752
Transmission losses	6,497	546	379	140	5,432	7,627	631	461	168	6,368
Distribution losses and theft	19,355	1,619	1,160	548	16,028	18,785	1,535	1,160	505	15,585
Consumption from public supply [A]	282,349	25,877	16,841	6,862	232,769	277,041	25,113	16,977	6,941	228,010
Consumption by autogenerators	24,878	4,497	1,907	1,541	16,933	25,284	4,268	1,784	1,491	17,741
<b>TOTAL ELECTRICITY CONSUMED</b>	<b>307,227</b>	<b>30,374</b>	<b>18,748</b>	<b>8,402</b>	<b>249,702</b>	<b>302,325</b>	<b>29,381</b>	<b>18,761</b>	<b>8,431</b>	<b>245,751</b>
Electricity sales (public supply) [B]	282,402	23,625	16,920	8,000	233,857	276,827	22,624	17,101	7,435	229,668
Statistical difference between calculated consumption [A] and sales [B]	-53	2,252	-79	-1,138	-1,088	214	2,490	-123	-494	-1,658

**Table 2a: Generation of electricity by fuel in Scotland, Wales, Northern Ireland and England, 2016 and 2017**

		2016					2017				
		UK total	Scotland	Wales	Northern Ireland	England	UK total	Scotland	Wales	Northern Ireland	England
<b>ELECTRICITY GENERATED (GWh)</b>											
<b>Major power producers (MPPs):</b>											
	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
	Hydro natural flow	3,951	3,692	235	0	25	4,179	3,890	276	0	12
	Wind	30,712	10,081	2,776	690	17,165	40,954	14,038	3,920	879	22,117
	Solar	2,035	8	196	3	1,828	2,978	10	287	68	2,613
	Bioenergy	17,400	756	33	0	16,611	17,766	880	19	0	16,866
	Other fuels	968	0	0	0	968	1,276	0	0	0	1,276
	Hydro pumped storage	2,959	486	2,474	0	0	2,872	573	2,299	0	0
<b>TOTAL MPPs</b>		<b>292,943</b>	<b>38,138</b>	<b>39,302</b>	<b>7,358</b>	<b>208,146</b>	<b>287,744</b>	<b>39,885</b>	<b>31,343</b>	<b>7,182</b>	<b>209,334</b>
<b>Other generators</b>											
	Coal	56	0	0	36	20	49	0	0	28	21
	Oil	1,285	263	16	37	969	1,225	278	18	36	893
	Gas	11,384	1,618	804	108	8,854	12,233	1,814	775	105	9,540
	Hydro natural flow	1,419	1,224	104	24	67	1,703	1,466	95	30	113
	Wind	6,447	2,335	653	1,043	2,416	8,687	3,163	931	1,626	2,967
	Solar	8,360	238	610	108	7,404	8,479	280	627	117	7,455
	Shoreline wave and tidal	0	0	0	0	0	4	4	0	0	0
	Bioenergy	12,665	1,142	696	469	10,359	14,128	1,570	919	580	11,059
	Other fuels	4,605	722	678	11	3,194	3,944	380	723	3	2,838
<b>TOTAL OTHER GENERATORS</b>		<b>46,221</b>	<b>7,541</b>	<b>3,561</b>	<b>1,836</b>	<b>33,283</b>	<b>50,453</b>	<b>8,956</b>	<b>4,087</b>	<b>2,525</b>	<b>34,885</b>

**Table 2b: Generation of electricity by fuel in Scotland, Wales, Northern Ireland and England, 2016 and 2017**

		2016					2017				
		UK total	Scotland	Wales	Northern Ireland	England	UK total	Scotland	Wales	Northern Ireland	England
<b>ELECTRICITY GENERATED (GWh)</b>											
<b>All generating companies</b>	<b>Fossil fuels</b>	175,915	5,365	34,408	6,844	129,297	160,891	4,760	25,334	6,404	124,393
within which	Coal	30,669	1,806	7,316	2,143	19,405	22,530	0	2,780	1,390	18,360
	Oil	1,890	419	196	105	1,171	1,614	399	72	95	1,049
	Gas	143,356	3,141	26,897	4,597	108,722	136,746	4,361	22,481	4,920	104,984
	<b>Nuclear</b>	71,726	19,630	0	0	52,096	70,336	17,827	0	0	52,509
	<b>Renewables</b>	82,990	19,476	5,303	2,338	55,874	98,879	25,301	7,074	3,301	63,203
within which	Hydro natural flow	5,370	4,916	339	24	92	5,882	5,356	371	30	125
	Wind	37,159	12,416	3,430	1,734	19,581	49,641	17,201	4,851	2,505	25,084
	Solar	10,395	247	806	111	9,232	11,457	290	914	185	10,068
	Shoreline wave and tidal	0	0	0	0	0	4	4	0	0	0
	Bioenergy	30,066	1,898	729	469	26,970	31,894	2,450	938	580	27,926
	<b>Other fuels</b>	5,573	722	678	11	4,162	5,219	380	723	3	4,114
	<b>Pumped storage</b>	2,959	486	2,474	0	0	2,872	573	2,299	0	0
<b>TOTAL ALL GENERATING COMPANIES</b>		<b>339,164</b>	<b>45,679</b>	<b>42,863</b>	<b>9,193</b>	<b>241,429</b>	<b>338,197</b>	<b>48,841</b>	<b>35,429</b>	<b>9,707</b>	<b>244,219</b>
<b>Shares of total generation (%)</b>	<b>Fossil fuels</b>	51.9	11.7	80.3	74.4	53.6	47.6	9.7	71.5	66.0	50.9
within which	Coal	9.0	4.0	17.1	23.3	8.0	6.7	0.0	7.8	14.3	7.5
	Oil	0.6	0.9	0.5	1.1	0.5	0.5	0.8	0.2	1.0	0.4
	Gas	42.3	6.9	62.8	50.0	45.0	40.4	8.9	63.5	50.7	43.0
	<b>Nuclear</b>	21.1	43.0	0.0	0.0	21.6	20.8	36.5	0.0	0.0	21.5
	<b>Renewables</b>	24.5	42.6	12.4	25.4	23.1	29.2	51.8	20.0	34.0	25.9
within which	Hydro natural flow	1.6	10.8	0.8	0.3	0.0	1.7	11.0	1.0	0.3	0.1
	Wind	11.0	27.2	8.0	18.9	8.1	14.7	35.2	13.7	25.8	10.3
	Solar	3.1	0.5	1.9	1.2	3.8	3.4	0.6	2.6	1.9	4.1
	Bioenergy	8.9	4.2	1.7	5.1	11.2	9.4	5.0	2.6	6.0	11.4
	<b>Other fuels</b>	1.6	1.6	1.6	0.1	1.7	1.5	0.8	2.0	0.0	1.7
	<b>Pumped storage</b>	0.9	1.1	5.8	0.0	0.0	0.8	1.2	6.5	0.0	0.0
	<b>Low carbon</b>	45.6	85.6	12.4	25.4	44.7	50.0	88.3	20.0	34.0	47.4

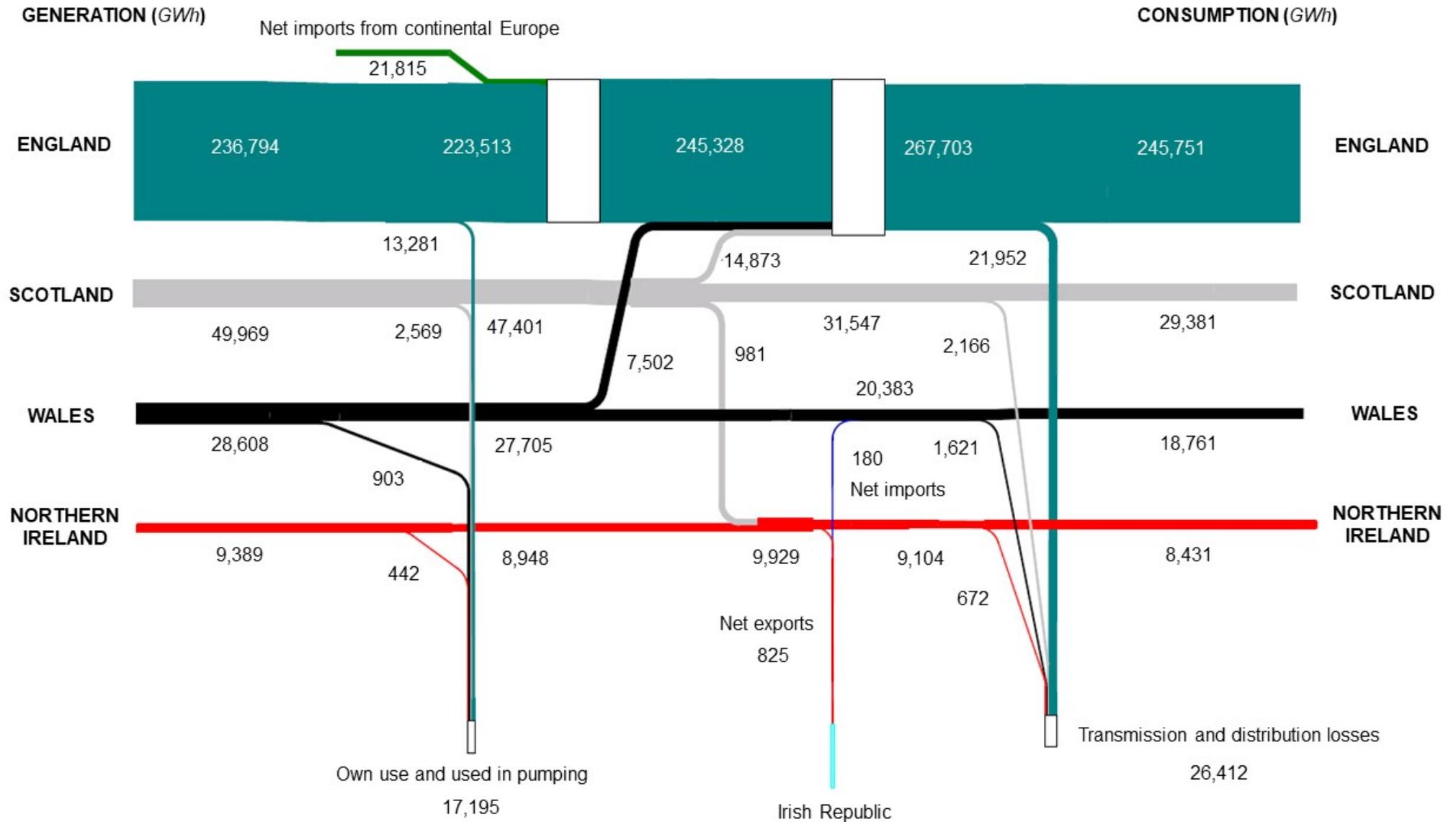
**Table 2c: Generation and supply of electricity by fuel in Scotland, Wales, Northern Ireland and England, 2018 and 2019**

ELECTRICITY GENERATED (GWh)	2018					2019				
	UK total	Scotland	Wales	Northern Ireland	England	UK total	Scotland	Wales	Northern Ireland	England
<b>Major power producers (MPPs):</b>										
Coal	16,778	0	473	1,303	15,003	6,841	0	665	877	5,298
Oil	625	121	34	43	426	695	124	40	50	480
Gas	119,632	5,234	19,724	3,868	90,806	118,593	4,322	17,491	4,073	92,708
Nuclear	65,064	13,611	0	0	51,453	56,184	12,226	0	0	43,958
Hydro natural flow	3,800	3,572	208	0	21	4,190	3,902	265	0	22
Wind	48,182	15,877	3,952	940	27,414	55,074	18,695	4,443	1,097	30,839
Solar	3,653	28	393	125	3,108	3,860	38	418	124	3,280
Bioenergy	19,965	691	1	0	19,273	20,836	859	2	0	19,976
Other fuels	1,132	0	0	0	1,132	1,162	0	0	0	1,162
Hydro pumped storage	2,498	454	2,045	0	0	1,756	418	1,339	0	0
<b>TOTAL MPPs</b>	<b>281,330</b>	<b>39,588</b>	<b>26,829</b>	<b>6,279</b>	<b>208,634</b>	<b>269,192</b>	<b>40,585</b>	<b>24,663</b>	<b>6,222</b>	<b>197,723</b>
<b>Other generators</b>										
Coal	53	0	0	32	21	50	0	0	29	21
Oil	947	162	18	36	731	1,022	183	21	36	782
Gas	11,857	2,007	818	116	8,917	13,338	1,723	567	117	10,932
Hydro natural flow	1,644	1,423	84	30	107	1,745	1,460	143	35	107
Wind	8,724	3,506	590	2,039	2,588	9,261	3,631	664	2,013	2,952
Solar	9,082	290	646	152	7,995	9,058	309	633	168	7,948
Shoreline wave and tidal	9	9	0	0	0	14	14	0	0	0
Bioenergy	14,989	1,469	1,136	668	11,716	16,477	1,614	1,131	752	12,981
Other fuels	4,140	316	667	3	3,153	4,604	451	786	18	3,348
<b>TOTAL OTHER GENERATORS</b>	<b>51,446</b>	<b>9,182</b>	<b>3,959</b>	<b>3,076</b>	<b>35,228</b>	<b>55,569</b>	<b>9,385</b>	<b>3,945</b>	<b>3,168</b>	<b>39,071</b>

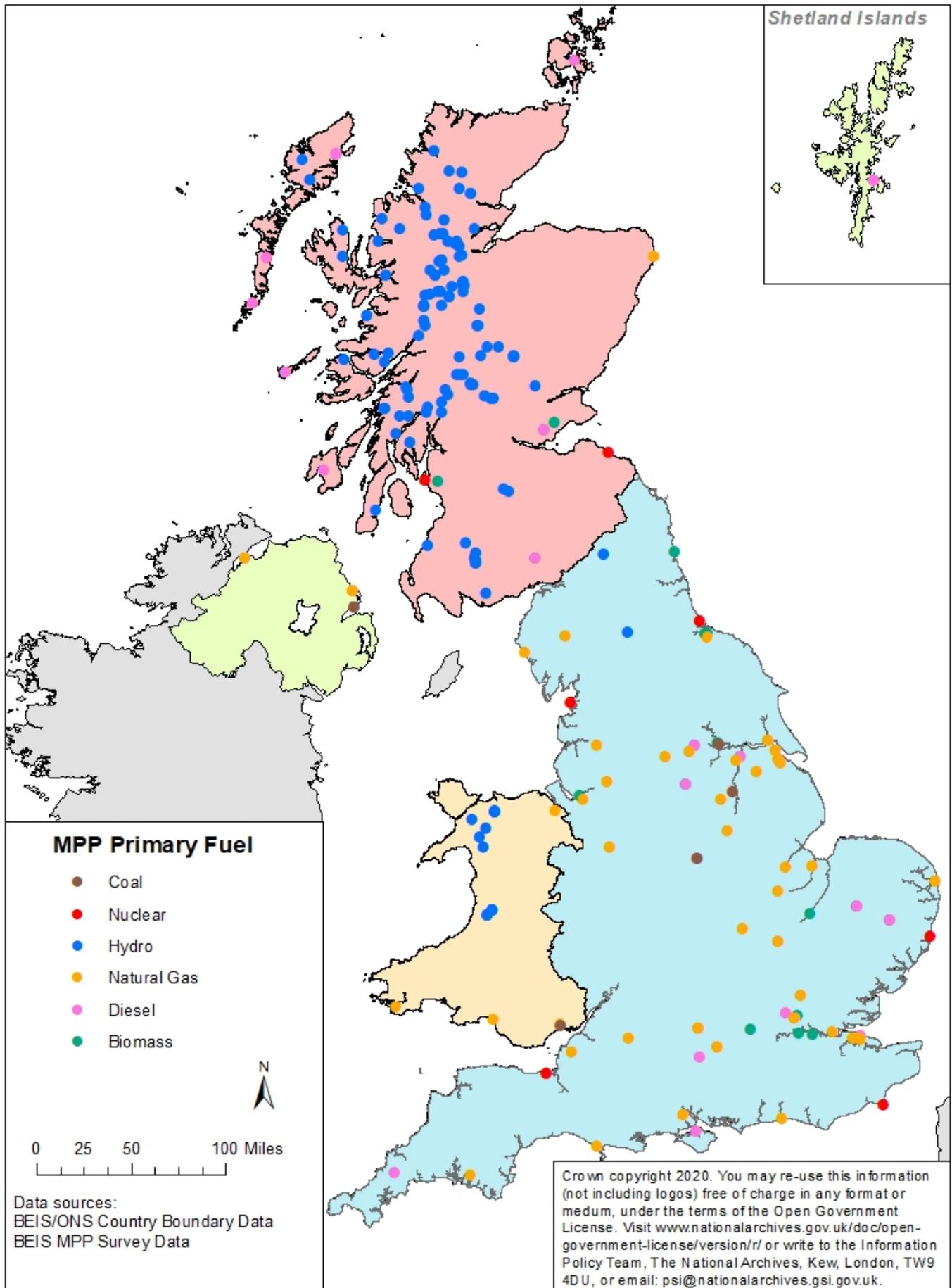
**Table 2d: Generation of electricity by fuel in Scotland, Wales, Northern Ireland and England, 2018 and 2019**

ELECTRICITY GENERATED (GWh)		2018					2019				
		UK total	Scotland	Wales	Northern Ireland	England	UK total	Scotland	Wales	Northern Ireland	England
<b>All generating companies</b>	<b>Fossil fuels</b>	149,893	7,525	21,067	5,398	115,904	140,539	6,353	18,784	5,182	110,221
within which	Coal	16,831	0	473	1,334	15,024	6,891	0	665	907	5,319
	Oil	1,572	284	52	79	1,157	1,717	307	62	86	1,262
	Gas	131,490	7,241	20,542	3,985	99,722	131,931	6,045	18,057	4,189	103,640
	<b>Nuclear</b>	65,064	13,611	0	0	51,453	56,184	12,226	0	0	43,958
	<b>Renewables</b>	110,049	26,865	7,010	3,954	72,221	120,515	30,521	7,700	4,189	78,105
within which	Hydro natural flow	5,444	4,995	292	30	127	5,935	5,362	408	35	129
	Wind	56,906	19,383	4,542	2,979	30,002	64,335	22,326	5,108	3,110	33,791
	Solar	12,736	318	1,039	276	11,102	12,918	347	1,051	292	11,228
	Shoreline wave and tidal	9	9	0	0	0	14	14	0	0	0
	Bioenergy	34,954	2,160	1,137	668	30,989	37,314	2,472	1,133	752	32,957
	<b>Other fuels</b>	5,272	316	667	3	4,285	5,766	451	786	18	4,511
	<b>Pumped storage</b>	2,498	454	2,045	0	0	1,756	418	1,339	0	0
<b>TOTAL ALL GENERATING COMPANIES</b>		<b>332,776</b>	<b>48,770</b>	<b>30,788</b>	<b>9,355</b>	<b>243,862</b>	<b>324,761</b>	<b>49,969</b>	<b>28,608</b>	<b>9,389</b>	<b>236,794</b>
<b>SHARES OF TOTAL GENERATION (%)</b>	<b>Fossil fuels</b>	45.0	15.4	68.4	57.7	47.5	43.3	12.7	65.7	55.2	46.5
within which	Coal	5.1	0.0	1.5	14.3	6.2	2.1	0.0	2.3	9.7	2.2
	Oil	0.5	0.6	0.2	0.8	0.5	0.5	0.6	0.2	0.9	0.5
	Gas	39.5	14.8	66.7	42.6	40.9	40.6	12.1	63.1	44.6	43.8
	<b>Nuclear</b>	19.6	27.9	0.0	0.0	21.1	17.3	24.5	0.0	0.0	18.6
	<b>Renewables</b>	33.1	55.1	22.8	42.3	29.6	37.1	61.1	26.9	44.6	33.0
within which	Hydro natural flow	1.6	10.2	0.9	0.3	0.1	1.8	10.7	1.4	0.4	0.1
	Wind	17.1	39.7	14.8	31.8	12.3	19.8	44.7	17.9	33.1	14.3
	Solar	3.8	0.7	3.4	3.0	4.6	4.0	0.7	3.7	3.1	4.7
	Bioenergy	10.5	4.4	3.7	7.1	12.7	11.5	4.9	4.0	8.0	13.9
	<b>Other fuels</b>	1.6	0.6	2.2	0.0	1.8	1.8	0.9	2.7	0.2	1.9
	<b>Pumped storage</b>	0.8	0.9	6.6	0.0	0.0	0.5	0.8	4.7	0.0	0.0
	<b>Low carbon</b>	52.6	83.0	22.8	42.3	50.7	54.4	85.5	26.9	44.6	51.5

## Appendix A: Electricity generation and consumption in Scotland, Wales, Northern Ireland and England



## UK Major Power Producer Sites (operational May 2020)





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