

# Electricity Generation in the UK:

Where is it now and where is it going?

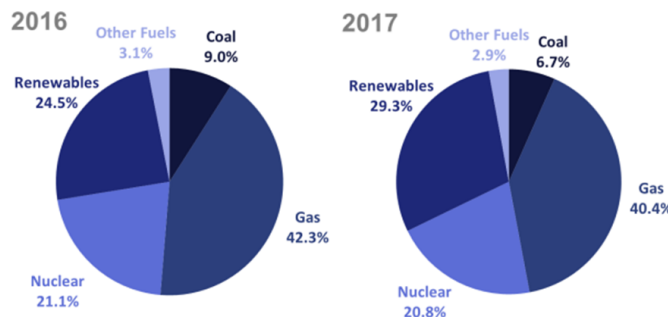


## 2016 vs 2017

### Non Renewables

**Coal:** The shift away from coal continues as generation fell from 9% in 2016 to 6.7% in 2017.

**Gas:** In 2016 there was a large increase in gas generation. In 2017 it continues to make up just over 40% of all generation.



Source: Digest of UK Energy Statistics 2018 Chapter 5: Electricity

The main reason for the shift in generation from coal to gas is due to an increase in the carbon price floor in 2015. The carbon price floor is a policy where the power sector have to pay per tonne of carbon emitted. In 2015 the carbon price floor increased from £9 per tonne of CO<sub>2</sub> to £18 per tonne of CO<sub>2</sub>. Coal generation produces more than double the CO<sub>2</sub> per Gwh (gigawatt hour) of electricity supplied compared to gas, making coal much more expensive. Therefore now it tends to be that coal fired generation is reserved for the periods of highest demand for electricity.

### Renewables

There has been an increase in renewable generation from 24.5% in 2016 to 29.3% in 2017. Renewable generation has trebled since 2010 and should continue to rise to meet and hopefully exceed national and international carbon reduction targets.

From 2016 to 2017 there has been:

**Wind:** 22.6% increase in wind capacity.

**Solar:** 7.3% increase in solar capacity.

**Natural Hydro:** 10% increase in generation.

**Bio-Energy:** 6% increase in generation. The past 7 years have seen the closure and conversion of several large power stations to biomass.



**Geothermal:** It is believed that we have untapped geothermal resources, such as hot crystalline rocks, in the UK which could have the potential to meet approximately 20% of the UK's current energy demands.



## Nuclear

Since 1994, there has been many nuclear plant closures. Currently Hinkley Point C is the only approved nuclear power station with an operating date beyond 2035. It has a planned closure date of 2083. All other current nuclear power stations are due to close between 2023 and 2025.

However, there are several proposals for new nuclear plants at various stages of planning.



The Digest of UK Energy Statistics 2018 report (reporting on 2017 compared to 2016) was released on 26th July 2018. The information that you have read above all came from the 2018 report. The 2019 report (reporting on 2018 compared to 2017) is expected in July 2019.