



Energy Statistics for Scotland

Q3 2019 Figures

December 2019

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This publication is a summary of the key statistics relating to energy in Scotland.

Energy statistics database:

<https://www2.gov.scot/Topics/Statistics/Browse/Business/Energy/Database>

Interactive energy app:

<https://scotland.shinyapps.io/sg-scottish-energy-statistics/>

Key Points:

- Final figures for **2018** indicate that the equivalent of **76.2%** of gross **electricity** consumption was from **renewables**, up from **70.1%** in **2017**.
- Provisional figures indicate that progress towards the **renewable energy** target is **20.9%** in **2018**, up from **19.2%** in **2017**.
- Provisional figures for **2018** indicate **energy consumption** in Scotland was broadly consistent in 2018 compared to 2017. Energy **consumption** is **below** the **12%** target compared to baseline consumption in 2005-07 (12.1% lower).
- Scotland continued its strong start to 2019 in terms of **renewable electricity generation** - **6,815 GWh** between **July – September 2019**, by far the **highest** for any **quarter 3** to date. Generation this quarter is the equivalent of **powering two-thirds of all Scottish households** for a year.
- Scotland generated **21,688 GWh** of renewable electricity in the first nine months of **2019**, up **23.0%** from the same point in 2018.
- Scotland's overall renewable electricity **capacity** was **11.7 GW** as of **September 2019**, up by **0.9 GW** from September 2018. A further **12.9 GW** of capacity is in the **pipeline** (i.e. either under construction, awaiting construction or in planning).
- Almost **55%** of the **electricity** that **Scotland generated** in **2018** came from **renewable** sources in comparison to **29%** in **England and Wales**.
- **Electricity generation** from **fossil fuels increased**, up from **10.3%** in **2017** to **15.7%** in **2018**. Generation from natural **gas** reached its highest point since 2011. Gas electricity generation may be making up for a **drop** in **nuclear** electricity generation (**36.8%** of all generation in **2017** to **28.2%** in **2018**) stemming from long-term outages at Hunterston B towards the end of 2018.

Revisions from last quarter:

Overall renewable energy target - The 2017 figure revised from 19.1% to **19.2%**

Energy Productivity target - The 2017 figure revised from -1.5% to **-1.2%**

Renewable electricity - The 2018 figure was revised from 76.3% to **76.2%**.

Energy Consumption - The 2017 figure revised from -11.9% to **-12.1%**

Energy Targets:

		Latest	Target
Overall renewable energy target	ESTIMATED	20.9%	50%
Total Scottish energy consumption from renewables		in 2018	by 2030
Renewable electricity target		76.2%	100%
Gross electricity consumption from renewables		in 2018	by 2020
Renewable heat target	ESTIMATED	6.3%	11%
Non-electrical heat demand from renewables		in 2018	by 2020
Energy consumption target	ESTIMATED	↓ 12.1%	↓ 12%
Reduction in total energy consumption from 2005-07		in 2018	by 2020
Energy productivity target	ESTIMATED	↑ 0.3%	↑ 30%
% change in gross value added achieved from the input of one gigawatt hour of energy from 2015.		in 2018	in 2030

Sources

Links to the original BEIS sources can be found in the Energy Statistics Database, references to the data in the ESD have been provided
Energy Targets - Energy Statistics Database: 'Renewable energy target'

In 2018, **20.9%** of total Scottish energy consumption came from renewable sources, 1.7 percentage points higher than 2017.

Much of this increase is due to wind being used to produce renewable electricity; in 2018 there was a 1.0 GW increase in wind capacity on 2017, which contributed to over 1,300 GWh increase in electricity generation via wind.

Scotland has a target to deliver the equivalent of **50%** of total energy consumption from renewable sources by **2030**.

In 2018, energy productivity was **0.3% higher** than the 2015 baseline in the latest provisional estimate for 2018.

Energy productivity is the Gross Value Added (GVA) from the input of one gigawatt hour. Higher energy productivity means "squeezing" more out of every unit of energy consumed.

This is a **1.5 percentage point** increase compared to **2017**, thanks to a **1.4% increase** in **GVA**.

Overall renewable energy target

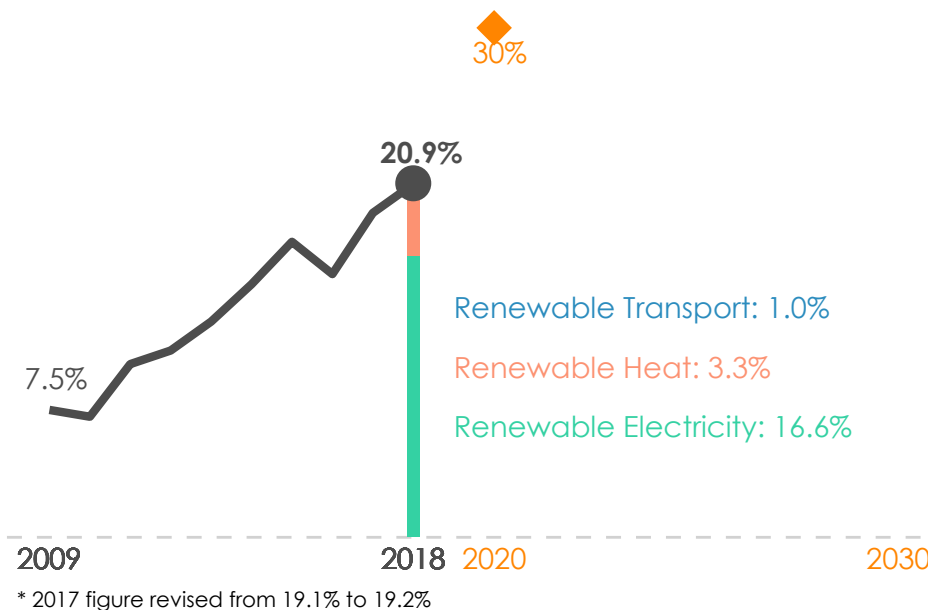
ESTIMATED

2009-2018

↑ **13.4 percentage points** from 2009 to 2018

↑ **1.7 percentage points** from 2017 to 2018

50%



Energy productivity target

ESTIMATED

2015 - 2018

↑ **0.3%** from 2015 to 2018

↑ **1.5 percentage points** from 2017 to 2018

30%



Sources

Overall Renewable Energy Target - Energy Statistics Database: 'Renewable energy target'
 Energy Productivity Target - Energy Statistics Database: 'Energy productivity'

In 2018, **76.2%** of gross electricity consumption came from renewable sources, up **6.1 percentage points** from 2017.

Scotland has a target to deliver the equivalent of **100%** of gross electricity consumption from renewables by **2020**.

In 2018, **6.3%** of non-electrical heat demand in Scotland was generated from renewable sources. The majority of the rise this year is due to increased heat output from **biomass**.

Scotland has a target to deliver the equivalent of **11%** of heat demand from renewable sources by **2020**.

In 2018, estimated total final energy consumption was **12.1% lower** than the **2005-07 baseline**.

Scotland remains within the target to reduce consumption by 12% by 2020.

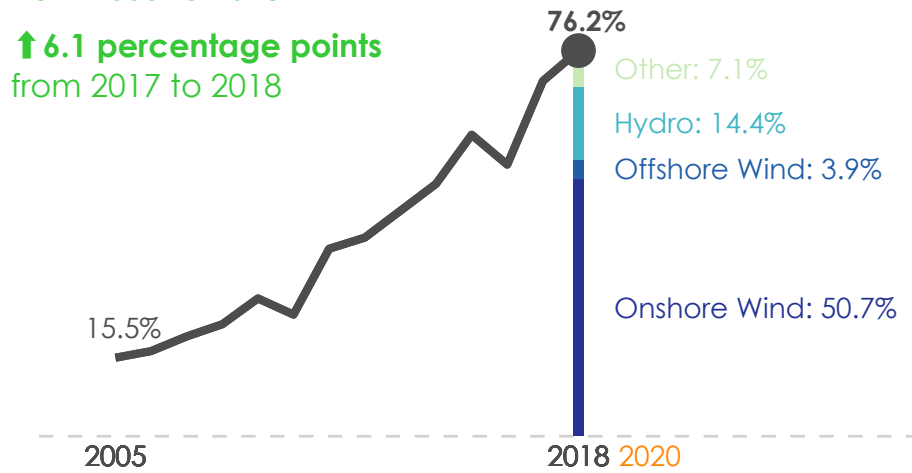
Provisional figures for **2018** suggest energy consumption in Scotland was broadly consistent in 2018 as in 2017.

Renewable electricity target

2005-2018

↑ 60.8 percentage points from 2005 to 2018

↑ 6.1 percentage points from 2017 to 2018



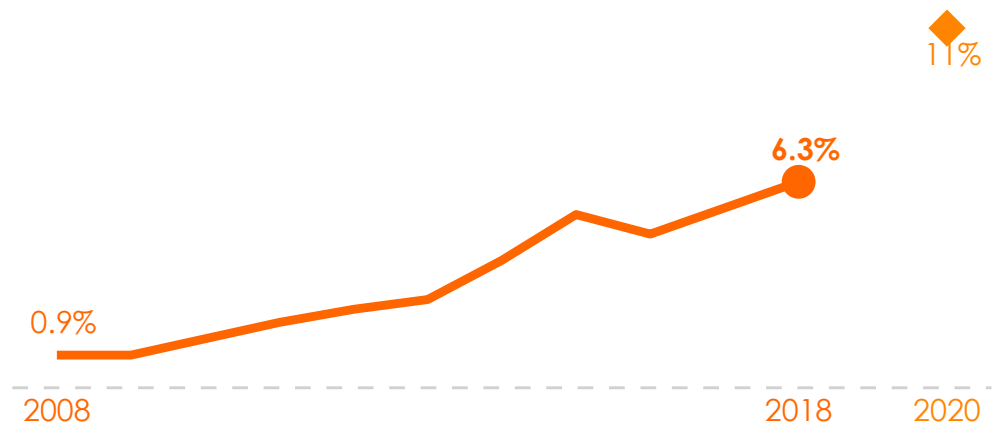
The 2018 figure was revised from 76.3% to 76.2%.
The 2017 figure was revised from 69.8% to 70.1%

Renewable heat target

2008 - 2018

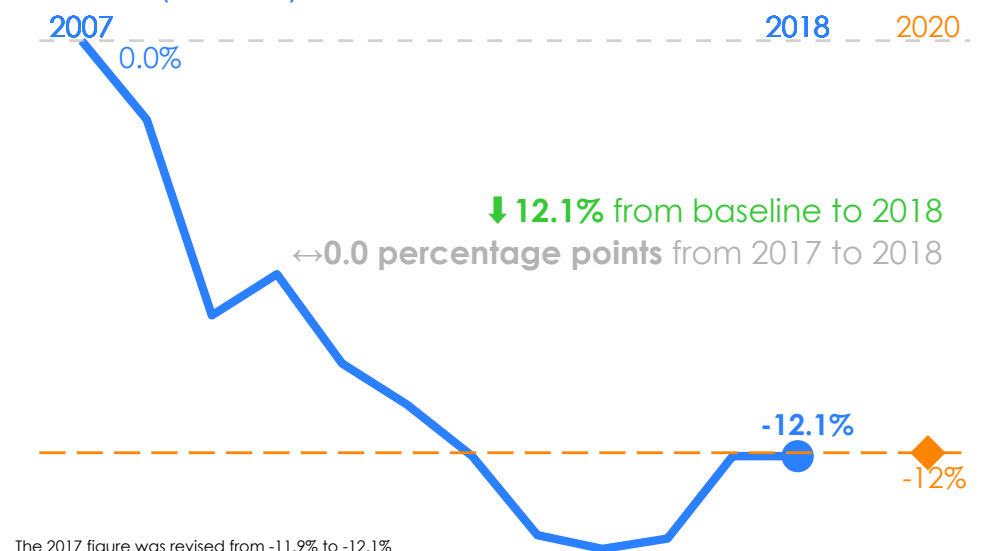
↑ 5.4 percentage points from 2008 to 2018

↑ 0.8 percentage points from 2017 to 2018



Energy consumption

Baseline (2005-07) - 2018



The 2017 figure was revised from -11.9% to -12.1%

Sources

Renewable Electricity Target - Energy Statistics Database: 'Renewable elec target'
Renewable Heat Target - Energy Statistics Database: 'Renewable heat'
Energy Consumption Target - Energy Statistics Database: 'Energy consumption target'

Scotland has generated **21,688 GWh** of renewable electricity in the first nine months of **2019, up 23%** from the first nine months of 2018.

Scotland's overall renewable electrical **capacity** was **11.7 GW** as of **September 2019**.

A further **12.9 GW** of capacity is in the **pipeline** (i.e. either under construction, awaiting construction or in planning).

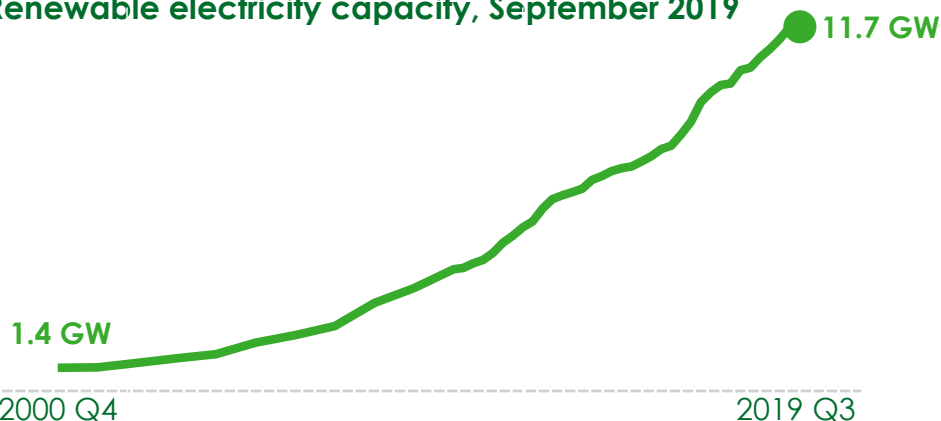
Almost **55%** of the electricity that **Scotland** generated in **2018** came from **renewable** sources, in comparison to **29%** in **England and Wales**.

Consumption of electricity in the domestic sector **decreased** by **3.2%** from 2017 to 2018, but **increased 2.6%** in the non-domestic sector.

Renewable electricity generation, Jan - Sept, 2016 - 2019

	Q1	Q2	Q2	Q1 + Q2 + Q3
2016	6,033 GWh	3,829 GWh	4,356 GWh	14,218 GWh
2017	6,850 GWh	5,195 GWh	5,139 GWh	17,185 GWh
2018	7,592 GWh	4,971 GWh	5,067 GWh	17,631 GWh
2019	8,971 GWh	5,902 GWh	6,815 GWh	21,688 GWh

Renewable electricity capacity, September 2019



Pipeline Capacity - September 2019

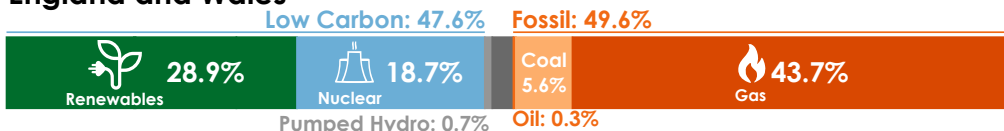
Under Construction	Awaiting Construction	In Planning	Total
1.2 GW	7.9 GW	3.8 GW	12.9 GW

Electricity Generation Fuel Mix - 2018

Scotland



England and Wales



Energy Consumption - 2018 (GWh)

(Change from 2017)

	Domestic	Non-Domestic	Total
Electricity	9,686 (-3.2%)	14,509 (+2.6%)	24,195 (+0.2%)
Gas	28,361 (+0.0%)	19,217 (-0.7%)	47,578 (-0.3%)

Sources

Renewable Electricity - Energy Statistics Database: 'Renewable elec by fuel'
 Renewable Electricity Generation by Source - Energy Statistics Database: 'Renewable elec by fuel'
 Renewable Capacity in Scotland - Energy Statistics Database: 'Renewable elec planning'