



Energy Statistics for Scotland

Q2 2019 Figures

September 2019

Published: 26th September 2019
Next update: 19th December 2019
Contact: energystatistics@gov.scot

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/>

Revisions from last quarter:

Renewable energy - figure for 2017 has been revised from 19.8% to **19.1%**.

Renewable electricity - figure for 2018 has been revised from 73.9% to **76.3%**.

Renewable heat - figure for 2017 has been revised from 5.9% to **5.5%**.

Energy consumption - figure for 2017 has been revised from 13.3% below the baseline to **11.8%** below the baseline

Energy productivity - 2017 figure has been revised from 0.4% below the baseline to **1.5% below** the baseline.

Key Points:

- Scotland's energy **consumption** in **2017 increased** by **3.5%** compared to **2016**, and has **increased** across **all sectors**. This pushes Scotland back above the 2020 **target** to reduce consumption by **12%**
- Progress towards the energy productivity target is now **1.5% lower** than the **2015 baseline**, meaning that the growth in the economy has not compensated for the increase in consumption.
- Final figures of Scottish consumption have meant that **19.1%** of total Scottish **energy** consumption came from **renewable** sources in **2017** and **5.5%** of non-electrical **heat** demand was generated from **renewable** sources in **2017**.
- Scotland has continued its strong start to the year in terms of renewable electricity generation. Scotland generated **14,896 GWh** of renewable electricity in the first half of **2019**, up 19% from the first six months of **2018**.
- Scotland's overall renewable electricity **capacity** was **11.6 GW** as of **June 2019**, up by **1.2 GW** from **June 2018**. A further **13.0 GW** of capacity is in the **pipeline**.

Energy Targets:

	Latest	Target
Overall renewable energy target Total Scottish energy consumption from renewables	19.1% in 2017	50% by 2030
Renewable electricity target Gross electricity consumption from renewables	76.3% in 2018	100% by 2020
Renewable heat target Non-electrical heat demand from renewables	5.5% in 2017	11% by 2020
Energy consumption target Reduction in total energy consumption from 2005-07	↓ 11.8% in 2017	↓ 12% by 2020
Energy productivity target % change in gross value added achieved from the input of one gigawatt hour of energy from 2015.	↓ 1.5% in 2017	↑ 30% in 2030

Notes on methodology and revisions:

• BEIS made revisions to energy consumption data; the entire Scottish consumption time series estimates were revised to include petroleum in public administration and agriculture.

• A gross electricity consumption estimate for 2018 was developed this quarter, using an estimate for 2018 non-renewable electricity generation. This replaces the previous approach of rolling forward the 2017 gross electricity consumption figure and gives a better indicator of progress towards the renewable electricity target.

• Renewable heat output was revised due to improvements of the quality of the data collected.

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 2017, **19.1%** of total Scottish energy consumption came from renewable sources, 3.6 percentage points higher than 2016.

Much of this increase is due to wind being used to produce renewable electricity; in 2017 there was a 1.2 GW increase in wind capacity on 2016, which contributed to a 4,500 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 2017, energy productivity was **1.5% lower** than the 2015 baseline in the latest provisional estimate for 2017.

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.

The reason for the drop in energy productivity is an estimated 3.5% rise in energy consumption between 2016 and 2017. In the same period GVA increased by 1.1%, which is not enough to compensate for the increase in consumption.

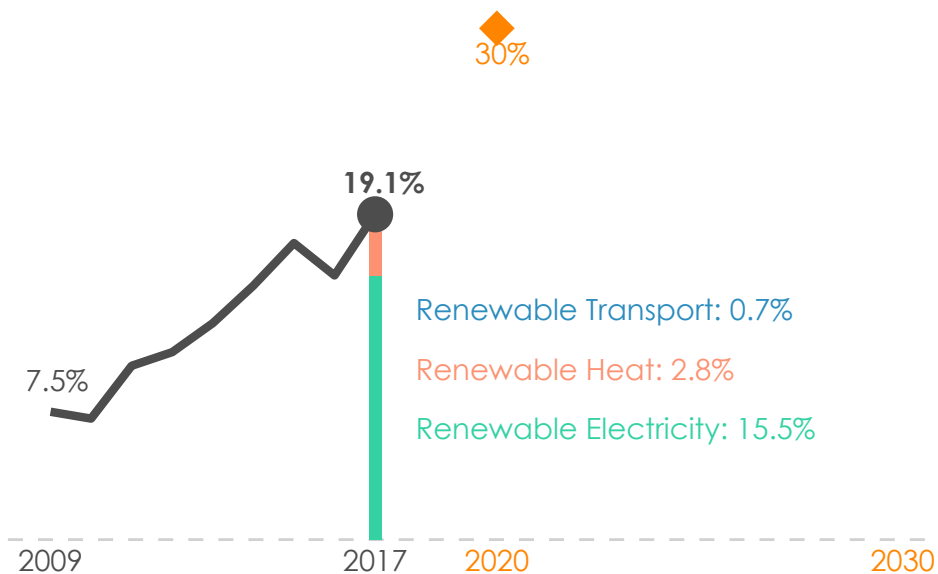
Overall renewable energy target

2009-2017

↑ **11.6 percentage points** from 2009 to 2017

↑ **3.6 percentage points** from 2016 to 2017

50%



*The 2016 figure was revised from 15.8% to 15.5%. The 2017 figure was revised from 19.8% to 19.1%

Energy productivity target

2015 - 2017

↓ **1.5%** from 2015 to 2017

↓ **2.3 percentage points** from 2016 to 2017

30%



*The 2016 figure was revised from 0.6% to 0.8%. 2017 figure revised from -0.4% to -1.5%

Sources

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

In **2017**, total final energy **consumption** in Scotland **increased** by **3.5%** to its highest point since 2012.

Consumption has **increased** in all sectors: **heat** by **4.0%**, **transport** by **2.9%** and **electricity** by **2.4%**.

This mirrors the trend witnessed across Europe, where energy consumption has increased between 2016 and 2017 in most countries.

The increase in consumption means that total final energy consumption in 2017 is **11.8% lower** than the **2005-07 baseline**.

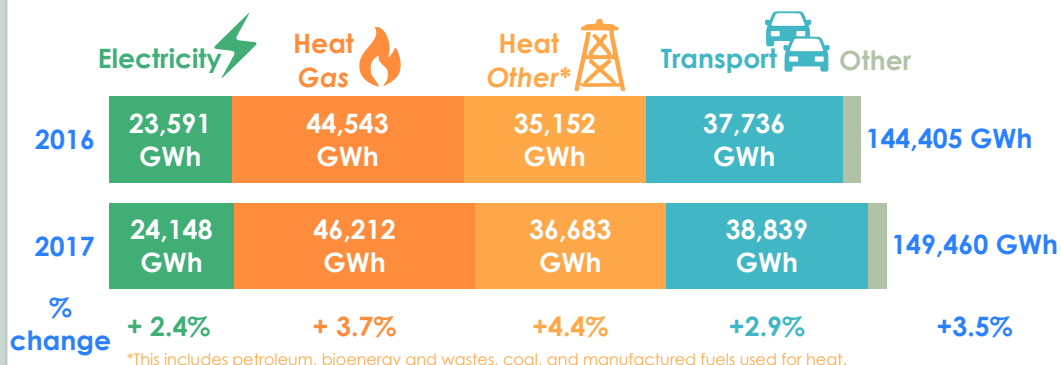
This pushes Scotland back above the 2020 **target** to reduce energy consumption by **12%**. Scotland's total final energy consumption was 12% below the baseline from 2013- 2016.

In 2017, **5.5%** of non-electrical heat demand in Scotland was generated from renewable sources. The majority of the rise this year is due to increased generation from existing large commercial sites.

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

Energy consumption

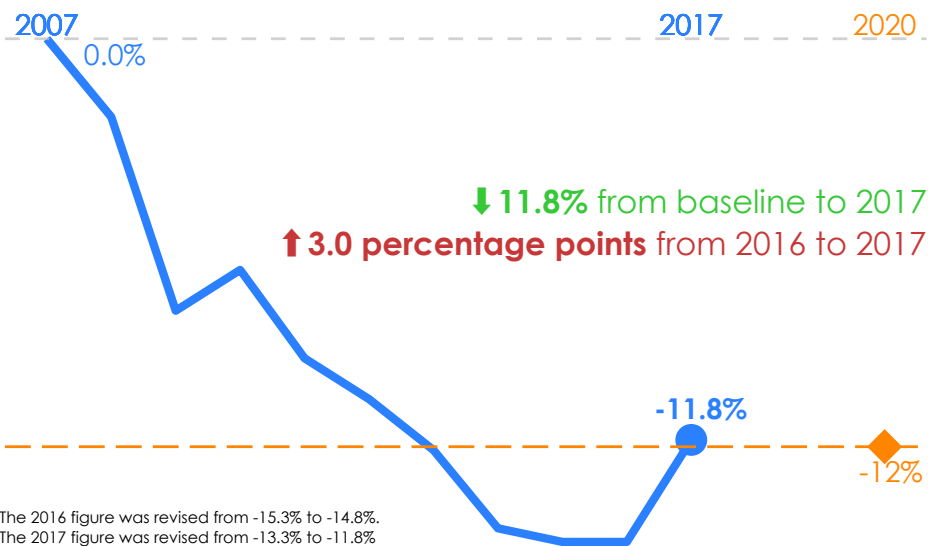
Baseline (2005-07) - 2017



Domestic energy consumption
42,285 GWh
+ 1.7% since 2016



Non-domestic energy consumption
63,253 GWh
+ 5.2% since 2016

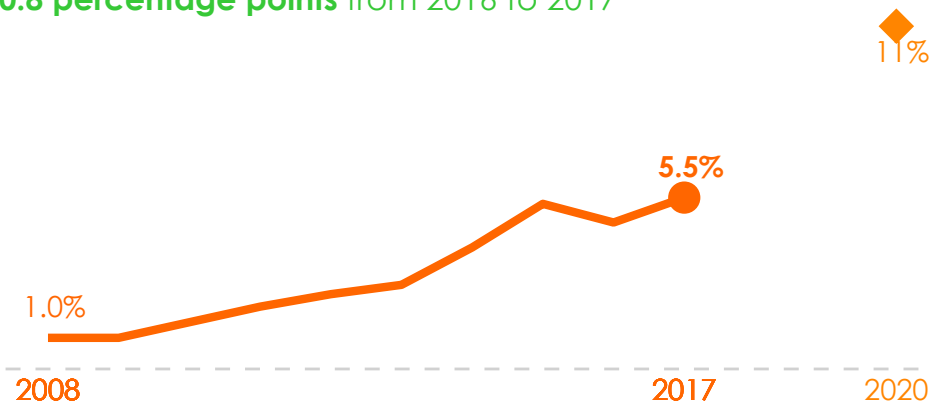


Renewable heat target

2008 - 2017

↑ 4.5 percentage points from 2008 to 2017

↑ 0.8 percentage points from 2016 to 2017



The 2017 figure was revised from 5.9% to 5.5%

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'

In 2018, an estimated **76.3%** of gross electricity consumption came from renewable sources, up **6.6 percentage points** from 2017.

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

The 1.2 GW increase in renewable electricity capacity between 2016 and 2017 has contributed to continued growth in renewable electricity output.

Scotland has generated **14,896 GWh** of renewable electricity in the first half of **2019**, up **19%** from the first six months of 2018.

Scotland's overall renewable electrical **capacity** was **11.6 GW** as of **June 2019**, up by **0.3 GW** from **March 2019** and **1.2 GW** from **June 2018**.

A further **13.0 GW** of capacity is in the **pipeline** (i.e. either under construction, awaiting construction or in planning).

Renewable electricity target

ESTIMATED

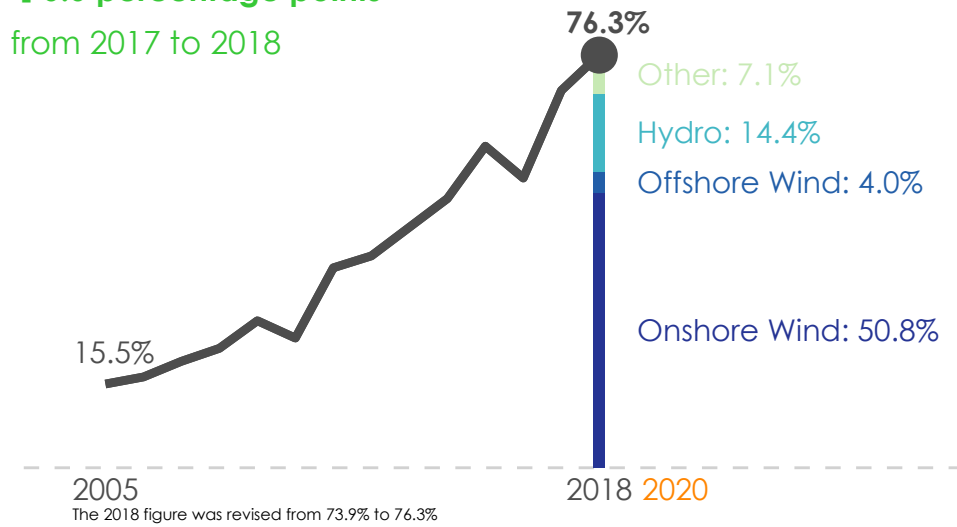
2005-2018

↑ 60.9 percentage points

from 2005 to 2018

↑ 6.6 percentage points

from 2017 to 2018



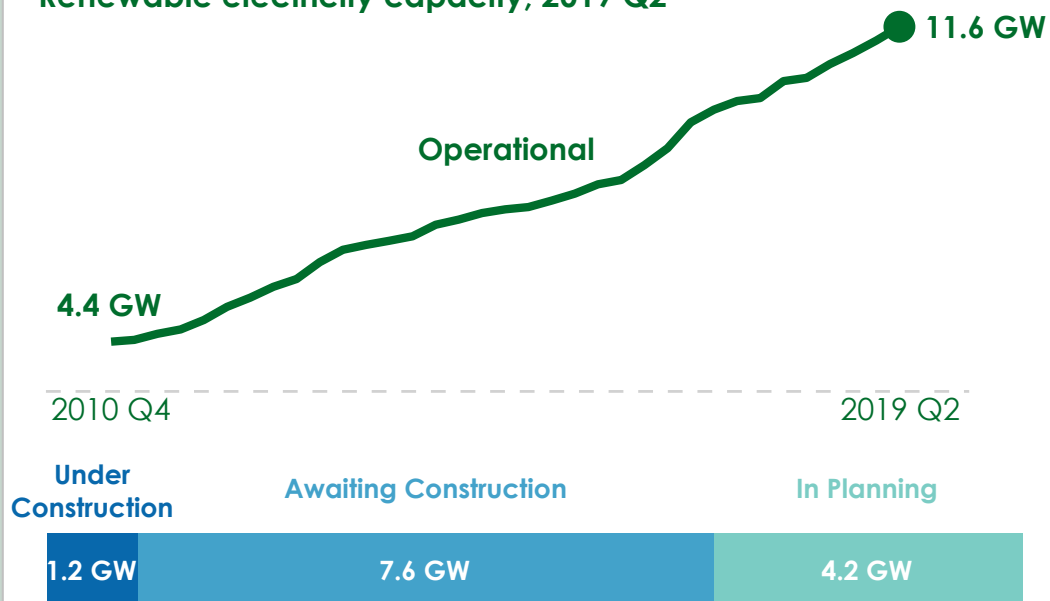
Renewable electricity generation, Jan - Jun, 2016 - 2019

	Q1	Q2	Q1 + Q2
2016	6,033 GWh	3,829 GWh	9,862 GWh
2017	6,850 GWh	5,195 GWh	12,046 GWh
2018	7,592 GWh	4,971 GWh	12,564 GWh
2019	8,972 GWh	5,923 GWh	14,896 GWh



Generation in Q1 & Q2 would power the equivalent of **all households** in Scotland for approximately **18 months**. (based on average annual household electricity consumption)

Renewable electricity capacity, 2019 Q2



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'