

Energy Statistics for Scotland

Q1 2019 Figures

June 2019

Published: 27th June 2019
Next update: 26th September 2019
Coverage: Scotland
Frequency: Quarterly
Theme: Business, Industry, Trade and Energy
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Key Points:

- **Quarter 1 2019** is a record quarter for Scottish renewable electricity generation, with **8,877 GWh** of **renewable electricity generated**, almost **1,300 GWh up** on **Q1 2018**.
- Generation via **offshore wind**, **onshore wind** and **hydro** are all higher compared to **Q1 2018**.
- The continued growth of Scotland's renewable electricity **capacity** underlies this generation; capacity rose from **10.4 GW** in **March 2018** to **11.3 GW** in **March 2019**. A further **12.9 GW** of capacity is in the **pipeline**.
- Perhaps a consequence of the high renewable electricity generation this quarter, Scotland's **net electricity exports** is at its highest since Q4 2017, with a net **4,543 GWh** exported.
- Total final **energy consumption** in Scotland for **2017** is **13.3% lower** than the **2005-7 baseline** as per the latest provisional estimate. This is still within the target to reduce consumption by 12% by 2020, however, energy consumption has **risen** to its **highest level since** Scotland first met the target in **2013**. This is driven by an estimated **2.4% increase** in energy consumption between **2016** and **2017**.

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

Accompanying this publication, updated statistics are available here:

Energy statistics database:

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

Interactive energy app:

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

Changes/revisions from last quarter:

Renewable energy - provisional figure for 2017 has been revised from 20.0% to **19.8%**.

Renewable electricity - provisional figure for 2018 has been revised from 74.6% to **73.9%**.

Energy consumption - provisional figure for 2017 has been revised from 13.9% below the baseline to **13.3%**

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

Energy Targets:

		Latest	Target
Overall renewable energy target	PROVISIONAL	19.8%	50%
Total Scottish energy consumption from renewables		in 2017	by 2030
Renewable electricity target	PROVISIONAL	73.9%	100%
Gross electricity consumption from renewables		in 2018	by 2020
Renewable heat target	PROVISIONAL	5.9%	11%
Non-electrical heat demand from renewables		in 2017	by 2020
Energy consumption target	PROVISIONAL	↓ 13.3%	↓ 12%
Reduction in total energy consumption from 2005-07		in 2017	by 2020
Energy productivity target	PROVISIONAL	↓ 0.4%	↑ 30%
% change in gross value added achieved from the input of one gigawatt hour of energy from 2015.		in 2017	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'

The first quarter of 2019 is a record quarter for renewable electricity generation in Scotland. 16.9% more renewable electricity was generated in quarter 1 2019 compared to the first quarter of 2018.

Two-thirds of all renewable generation comes from onshore wind.

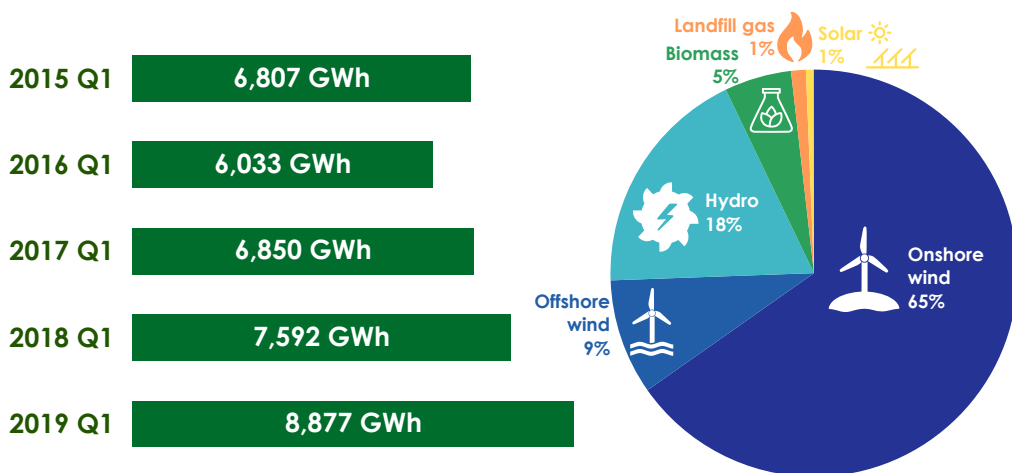
Scotland's net electricity exports is at its highest since the last quarter of 2017, with a net 4,543 GWh exported.

This is the equivalent of powering more than 1.1 million households for a year.

Scotland's renewable electricity capacity rose from 10.4 GW in March 2018 to 11.3 GW in March 2019.

A further 12.9 GW is either under construction, awaiting construction of in planning.

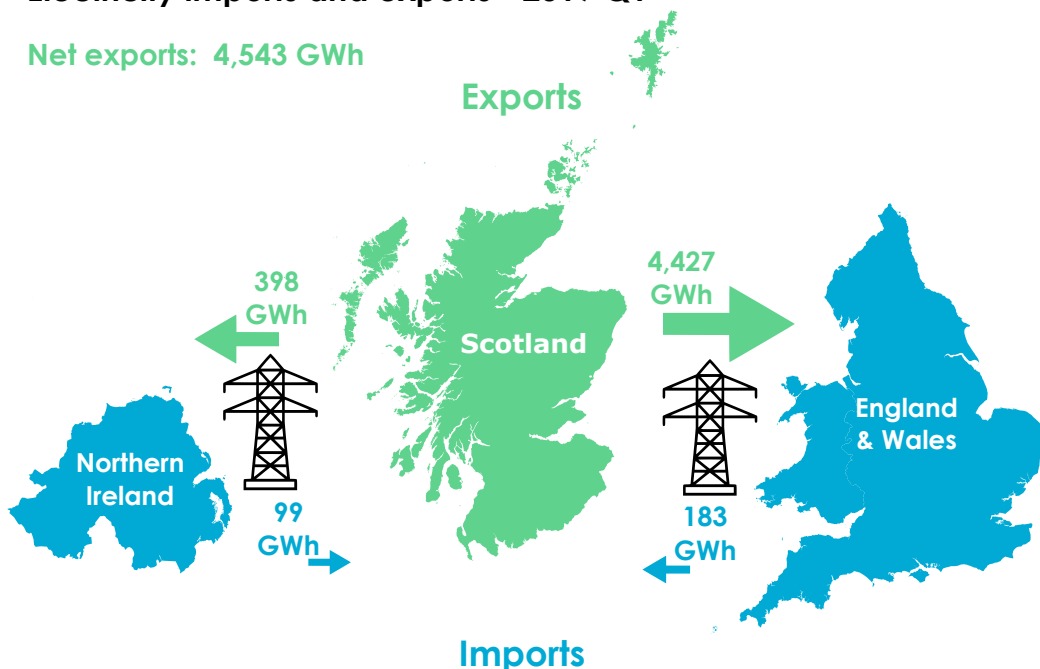
Renewable electricity generation, 2015 Q1 - 2019 Q1



This would power the equivalent of **88%** of all households in Scotland for a year.

Electricity imports and exports - 2019 Q1

Net exports: 4,543 GWh



Renewable electricity capacity, 2018 Q1 vs 2019 Q1

	Operational		Pipeline	
	As at 2018 Q1	As at 2019 Q1	As at 2018 Q1	As at 2019 Q1
Wind Onshore	7,751 MW	8,091 MW	5,796 MW	7,355 MW
Wind Offshore	246 MW	752 MW	3,986 MW	4,509 MW
Hydro	1,662 MW	1,653 MW	28 MW	50 MW
Other	776 MW	835 MW	1,106 MW	1,030 MW

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'
 Net Electricity Exports - Energy Statistics Database: 'Elec imports & exports'

In 2017, **19.8%** of total Scottish energy consumption came from renewable sources, 3.9 percentage points higher than 2016.

Much of this increase is due to wind being used to produce renewable electricity; in 2017 there was a 1.1 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 **0.4% 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 2.4% rise in energy consumption between 2016 and 2017. In the same period GVA increased by 1.4%.

Overall renewable energy target

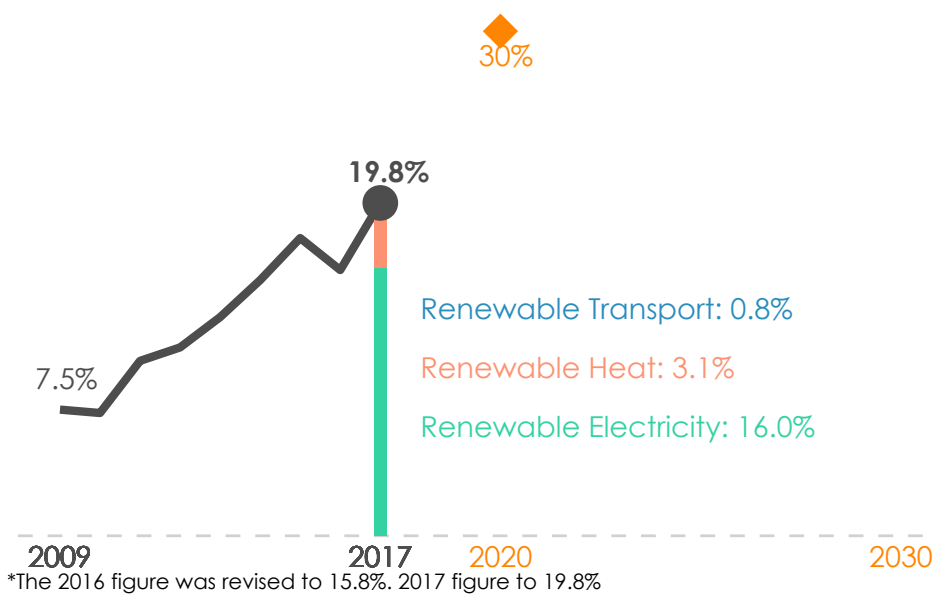
PROVISIONAL

2009-2017

↑ **12.3 percentage points** from 2009 to 2017

↑ **3.9 percentage points** from 2016 to 2017

◆
50%



Energy productivity target

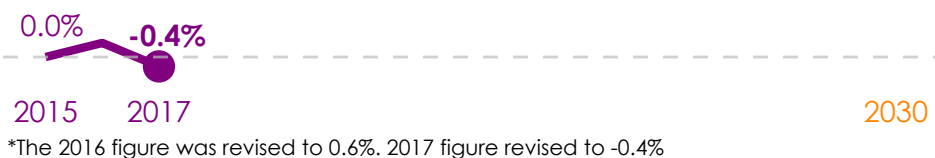
PROVISIONAL

2015 - 2017

↓ **0.4%** from 2015 to 2017

↓ **1.0 percentage points** from 2016 to 2017

◆
30%



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 was **13.3%** lower than the 2005-07 baseline.

This is still within the target to reduce consumption by 12% by 2020, however, energy consumption has increased to its highest level since 2013. This is driven by an increase in energy consumption across the board; gas consumption has risen by 3.8% from 2016 to 2017, road fuel consumption has increased by 3.0% and electricity consumption by 2.4%

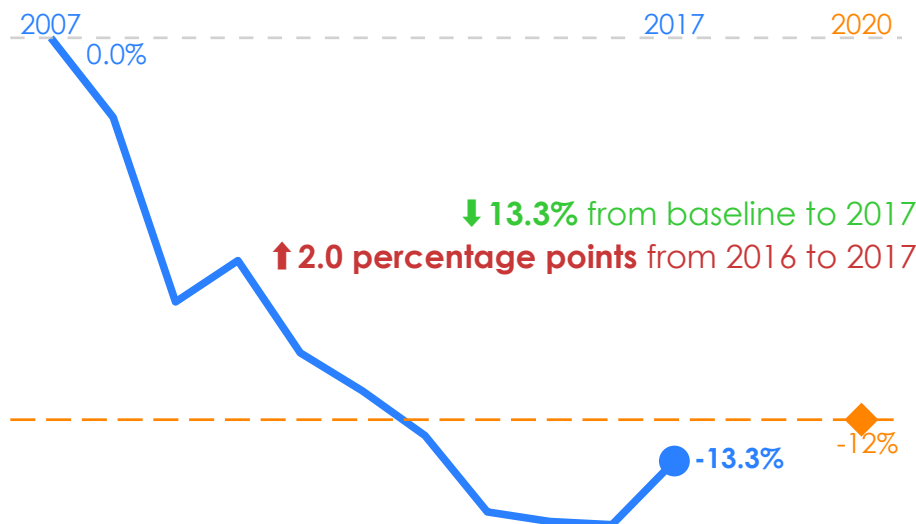
The increase in energy consumption is witnessed across Europe.

According to Eurostat 24 out of the 28 EU countries increased their consumption from 2016 to 2017.

Energy consumption target

PROVISIONAL*

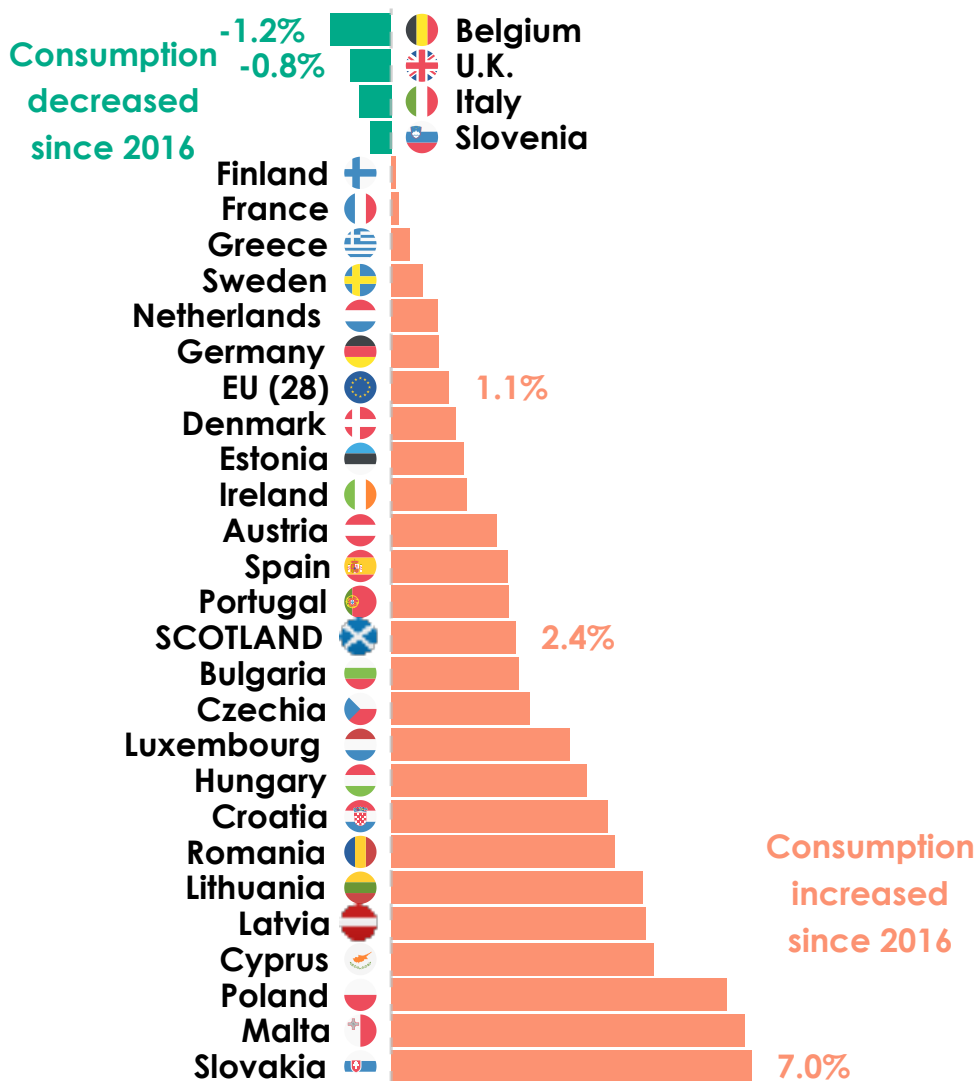
Baseline (2005-07) - 2017



* 2017 provisional figure uses residual fuels from 2016. The 2016 figure was revised to -15.3%, 2017 revised to -13.3%

Change in final energy consumption across EU countries

2016 - 2017



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 **73.9%** of gross electricity consumption came from renewable sources, up **4.1 percentage points** from 2017.

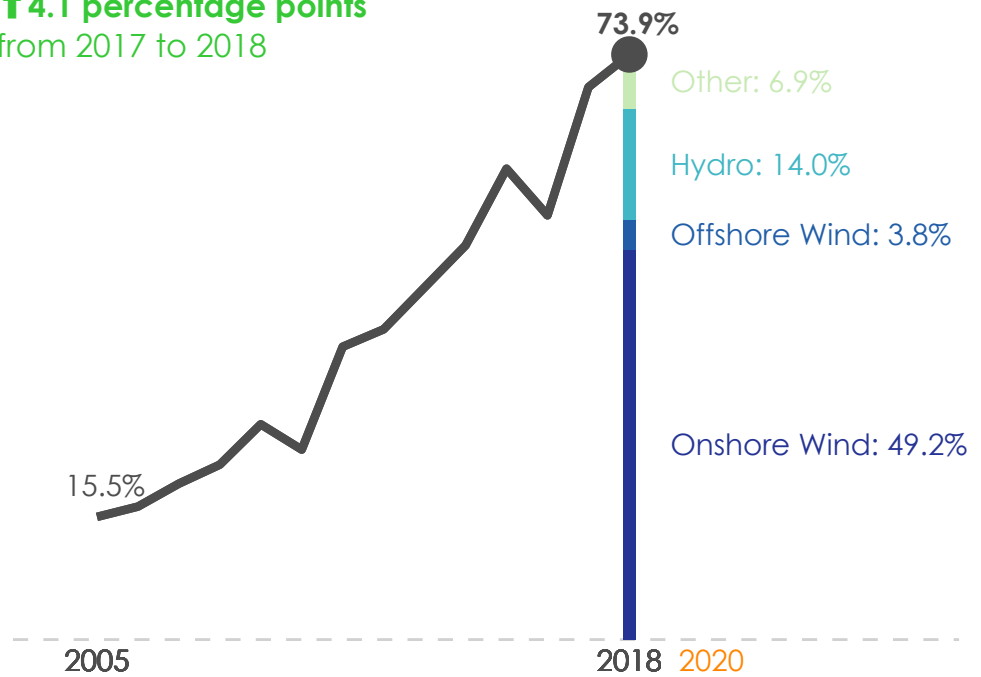
Scotland has a target to deliver the equivalent of **100%** of gross electricity consumption from renewables by **2020**.

Renewable electricity target

2005-2018

↑ 58.5 percentage points
from 2005 to 2018

↑ 4.1 percentage points
from 2017 to 2018



PROVISIONAL

* The 2017 figure was revised to 69.8%. The 2018 figure was revised 73.9%

In 2017, **5.9%** of heat demand in Scotland was generated from renewable sources

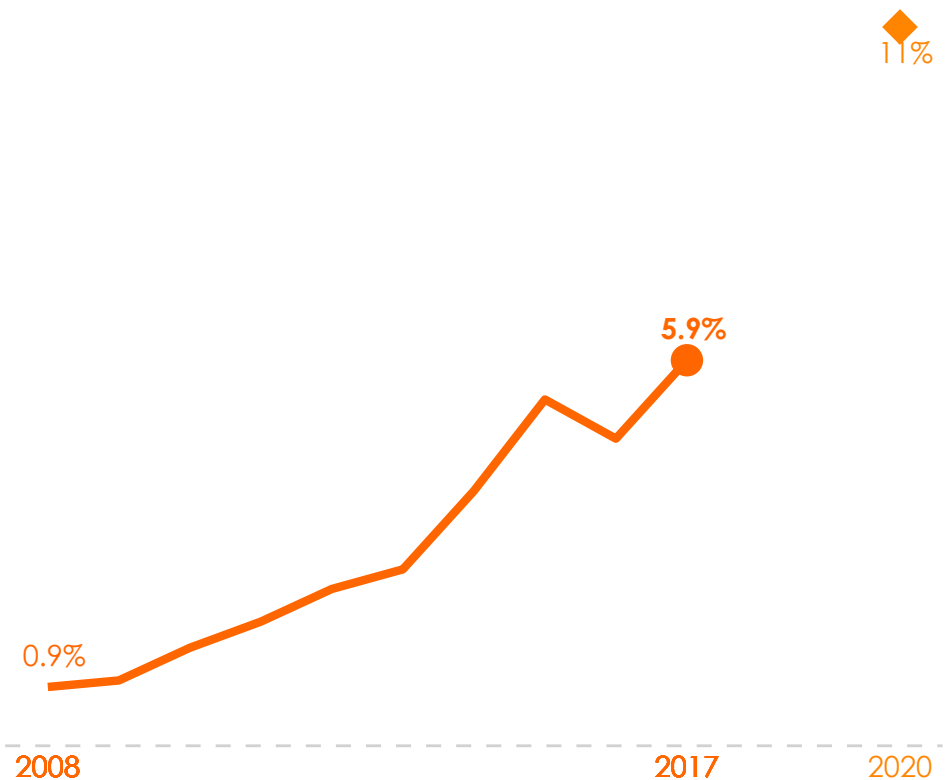
Scotland has a target to deliver the equivalent of **11%** of heat demand from renewable sources by **2020**.

Renewable heat target

2008 - 2017

↑ 5.0 percentage points from 2008 to 2017

↑ 1.2 percentage points from 2016 to 2017



PROVISIONAL

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'