



Energy Statistics for Scotland

Q3 2019 Figures

December 2020

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We have recently launched a Scottish energy statistics hub, which is a 'one-stop shop' for all Scottish energy data. It will be updated as new data is available.

Scottish Energy Statistics Hub:
<https://scotland.shinyapps.io/sg-energy>

Scottish Energy Strategy.
<https://www.gov.scot/publications/scottish-energy-strategy-future-energy-scotland-9781788515276/>

Key Points:

- In **2019**, **24.0%** of total Scottish **energy consumption** came from **renewable** sources, up from **21.1%** in **2018**. This increase is mainly driven by the strong growth in wind, particularly offshore wind, to generate electricity in 2019.
- **61.1%** of all **electricity generated** in **2019** in **Scotland** is from **renewable** sources and **86.4%** is from **low carbon** sources. Both **increased** since **2018**, and are significantly higher than **England and Wales** (**32.3% renewables** and **48.9% low carbon**).
- The high level of renewable electricity generation in Scotland means that in **2019**, **89.5%** of the equivalent of **all electricity** used in **Scotland** (total generation minus net exports) comes from **renewable** sources.
- However, what may harm future progress is the fact that **renewable electricity capacity** has **not grown** since June 2019. This has played a role in **renewable electricity generation** in **quarter 3 2020** being **8.5% lower** than the same quarter in **2019**.
- Scotland is still set for a **record year** of **renewable electricity generation** in **2020**, **up 7.8%** after nine months on **2019**. This is mainly due to a strong quarter 1, possibly due to favourable weather conditions for wind and hydro generation.
- Scotland's **electricity** and **gas consumption** both **dropped** in **2019**, down **2.2%** and **0.3%** on **2018** respectively. This means that provisional overall **energy consumption** is **13.4%** lower than **2005-2007**, and still below the 2020 target of a reduction of 12% below the baseline.
- **Energy productivity** is now **3.9% greater** than the **2015** benchmark as outlined in Scotland's Energy Strategy, due to energy consumption reduction and improvement in GVA.

Revisions:

Renewable electricity target was revised to **89.5%** from 90.1%, after gross electricity consumption was revised up.

Energy Targets:

	Latest	Target
Overall renewable energy target Total Scottish energy consumption from renewables	24.0% in 2019	50% by 2030
Renewable electricity target Gross electricity consumption from renewables	89.5% in 2019	100% by 2020
Renewable heat target Non-electrical heat demand from renewables	6.5% in 2019	11% by 2020
Energy consumption target Reduction in total energy consumption from 2005-07	↓ 13.4% in 2019	↓ 12% by 2020
Energy productivity target % change in gross value added achieved from the input of one gigawatt hour of energy from 2015.	↑ 3.9% in 2019	↑ 30% in 2030

Sources

Renewable energy target: <https://scotland.shinyapps.io/Energy/?Section=WholeSystem&Chart=RenEnTgt>
 Renewable electricity target: <https://scotland.shinyapps.io/Energy/?Section=RenLowCarbon&Subsection=RenElec&Chart=RenElecTarget>
 Renewable heat target: <https://scotland.shinyapps.io/Energy/?Section=RenLowCarbon&Subsection=RenHeat&Chart=RenHeat>
 Energy Consumption target: <https://scotland.shinyapps.io/Energy/?Section=EnergyEfficiency&Subsection=DemandReduction&Chart=EnConsumptionTgt>
 Energy productivity target: <https://scotland.shinyapps.io/Energy/?Section=WholeSystem&Chart=EnProd>

In 2019, **24.0%** of total Scottish energy consumption came from renewable sources, 2.9 percentage points higher than 2018.

Much of this increase is due to wind being used to produce renewable electricity; there was a 3.7 TWh increase in renewable electricity generated in 2019 compared to 2018, mainly from wind.

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

In 2019, useful renewable heat generated in Scotland was equivalent to **6.5%** of fuels (besides electricity) consumed for heat, up from 6.2% in 2018. The majority of the rise is due to increased biomethane output.

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

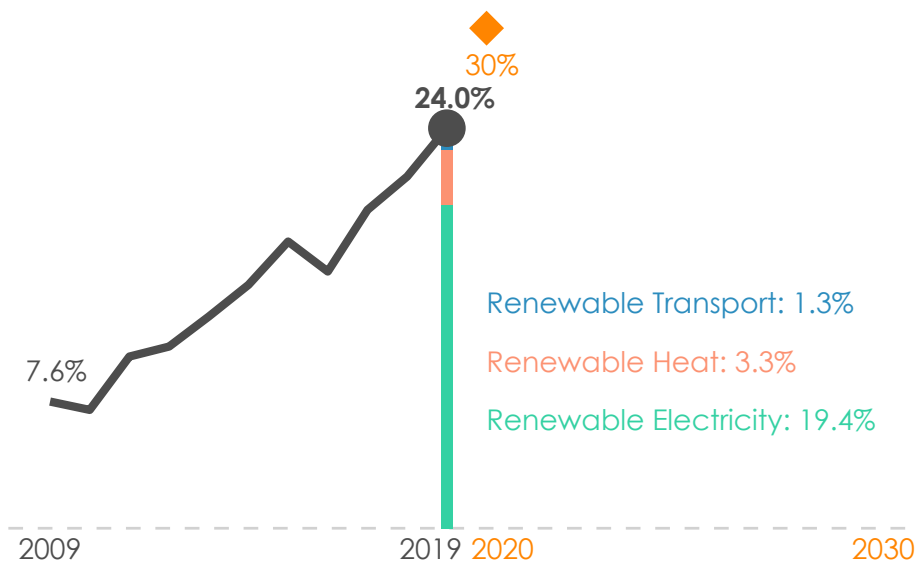
Overall renewable energy target

2009-2019

↑ **16.4 percentage points** from 2009 to 2019

↑ **2.9 percentage points** from 2018 to 2019

◆
50%



* 2018 figure revised from 21.3% to 21.1%

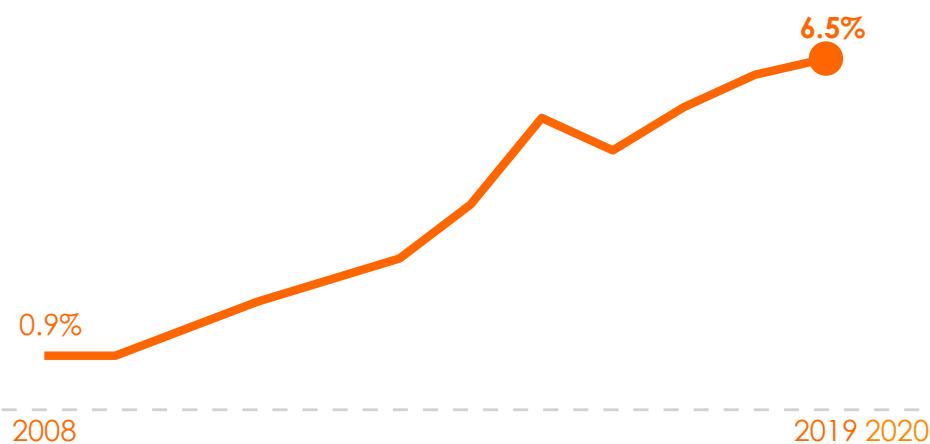
Renewable heat target

2008 - 2019

↑ **5.6 percentage points** from 2008 to 2019

↑ **0.3 percentage points** from 2018 to 2019

◆
11%



* 2018 figure revised from 6.6% to 6.2%

Over **60%** of the electricity that **Scotland** generated in **2019** came from **renewable** sources, in comparison to **32%** in **England and Wales**

To calculate the progress towards **Scotland's renewable target**, we take the renewable electricity generated and divide by the equivalent of electricity used in Scotland (all electricity generated minus net electricity exports)

In 2019, **89.5%** of gross electricity consumption came from renewable sources, up **13.3 percentage points** from 2018.

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

Electricity Generation Fuel Mix

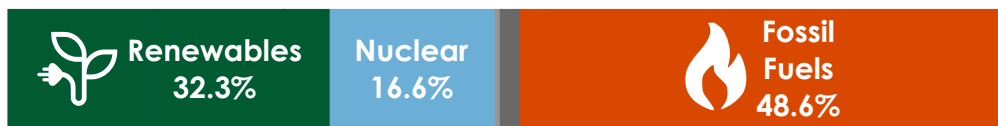
2019

Scotland



Low Carbon: 86.4%

England and Wales



Low Carbon: 48.9%

Renewable electricity target calculation

2019

Electricity generation fuel mix

61.1% of Scotland's electricity generation fuel mix coming from renewable sources



Net Exports:

-15,854 GWh

Gross Consumption

34,116 GWh

The denominator is gross consumption: generation minus net exports

89.5%

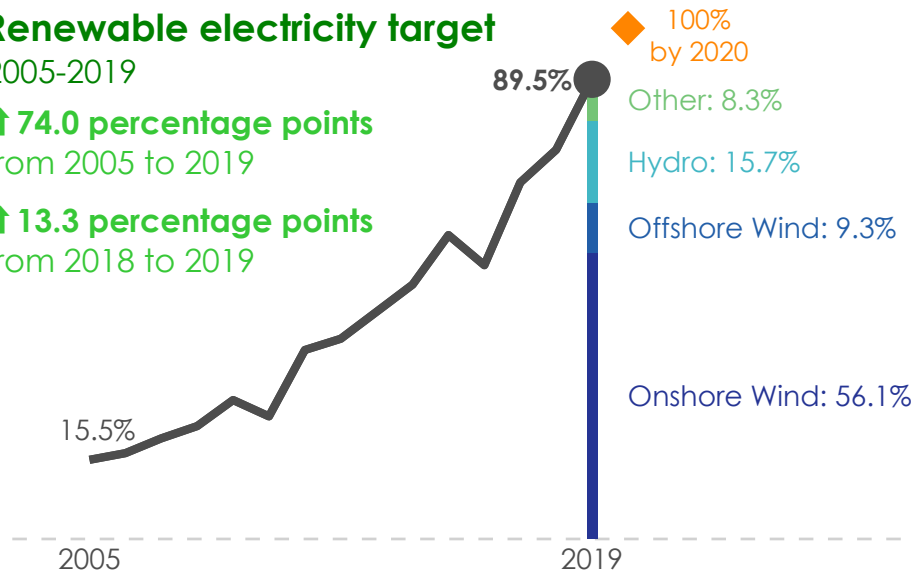
equivalent of Scotland's own electricity demand from renewable sources

Renewable electricity target

2005-2019

↑ **74.0 percentage points** from 2005 to 2019

↑ **13.3 percentage points** from 2018 to 2019



* 2019 figure revised from 90.1% to 89.5% and 2018 figure revised from 76.7% to 76.2%, after gross electricity consumption was revised up.

In the last twelve months renewable electricity capacity has stabilised, remaining at **11.8 GW** in September 2020.

There is 13.9 GW of renewable electricity projects in the pipeline in Scotland, with 2.0 GW currently under construction.

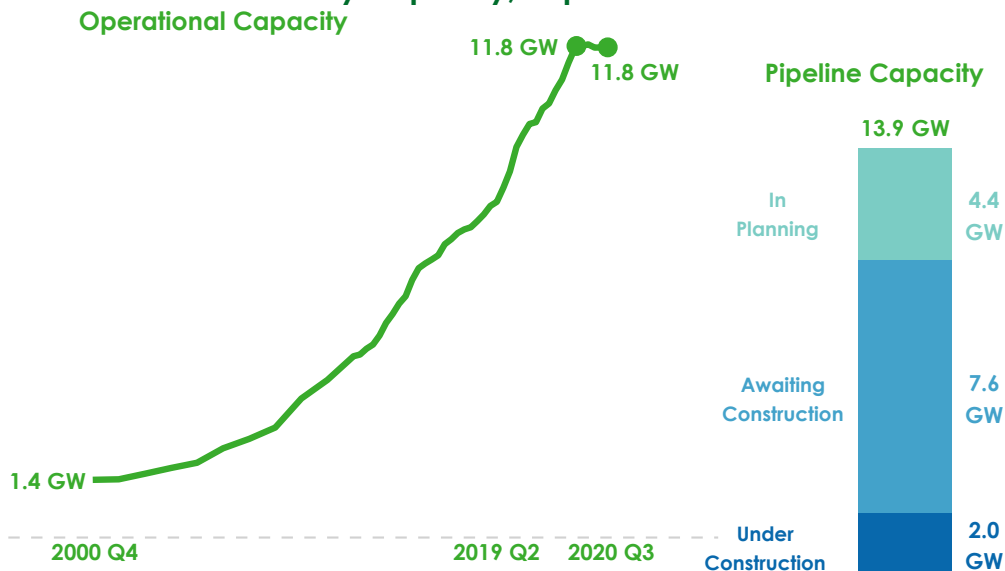
Scotland generated **6.3 TWh** of renewable electricity in **2020 Q3**, down **8.5%** on the same quarter last year. This may be a consequence of capacity leveling off, meaning weather plays a greater role in electricity generated.

However, Scotland is still on course for a record year of renewable electricity generation; in the first three quarters, Scotland generated **23.7 TWh**, up **7.8%** on the same point in 2019, and is the equivalent Scotland's annual electricity consumption. Increases in rainfall and wind speed in Q1 2020 have contributed to this.

As of **September 2020**, over **22,000** ultra low emission vehicles (ULEVs) were licenced in Scotland.

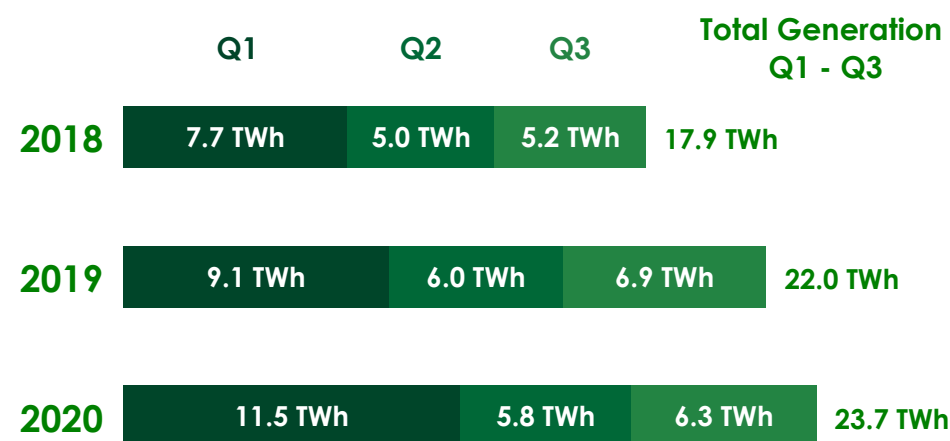
Even though ULEVs only make up less than 1% of all vehicles licenced in Scotland, growth has been rapid; compared to twelve months prior, ULEVs licenced rose by **50.4%**

Renewable electricity capacity, September 2020



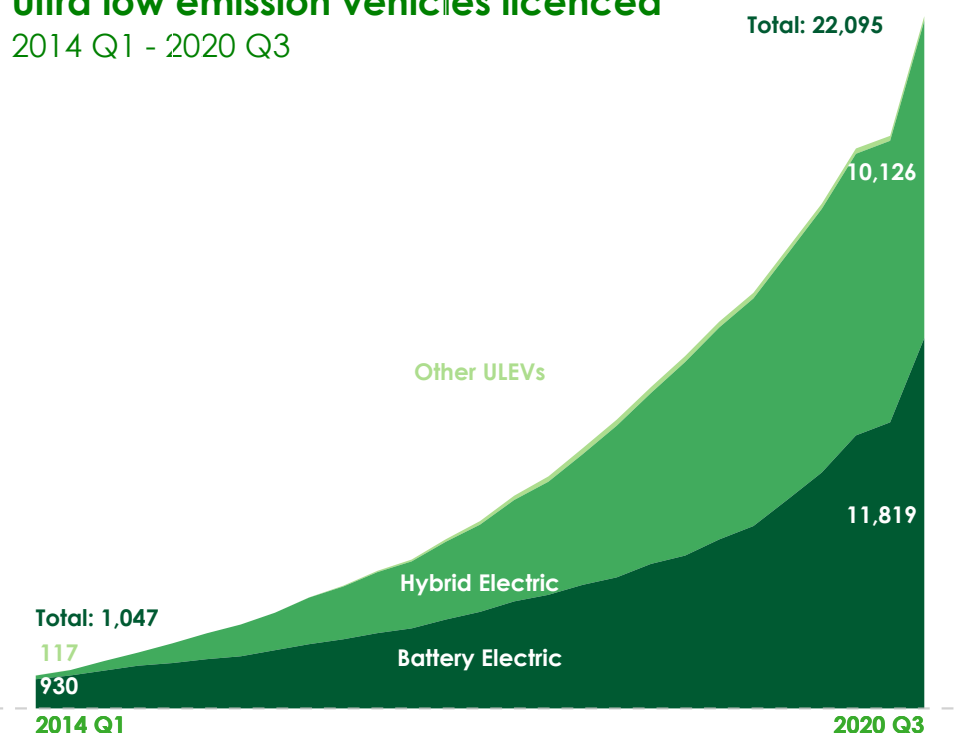
Renewable electricity generation 2018 - 2020

2018 - 2020



Ultra low emission vehicles licenced

2014 Q1 - 2020 Q3



Sources

Renewable electricity generation: <https://scotland.shinyapps.io/sg-energy/?Section=RenLowCarbon&Subsection=RenElec&Chart=RenElecGen>
 Renewable electricity capacity: <https://scotland.shinyapps.io/sg-energy/?Section=RenLowCarbon&Subsection=RenElec&Chart=RenElecCapacity>
 Renewable electricity pipeline: <https://scotland.shinyapps.io/sg-energy/?Section=RenLowCarbon&Subsection=RenElec&Chart=RenElecPipeline>
 ULEVs: <https://scotland.shinyapps.io/sg-energy/?Section=RenLowCarbon&Subsection=RenTransport&Chart=ULEVs>

Consumption of electricity between 2018 and 2019 **decreased** in both the domestic sector, by **1.0%** and the non-domestic sector, by **3.1%**.

Non-domestic gas consumption also fell, **down 3.2%**, however domestic consumption **increased by 1.7%**

Decreases in electricity and gas consumption mean that Scotland's provisional total energy consumption in 2019 dropped to its lowest level since 2016.

Provisional 2019 data shows that consumption **remains below 12%** and is now **13.4%** lower than the baseline.

The drop in consumption and a **0.8% increase** in gross value added (GVA) between 2018 and 2019 means that energy productivity increased by **1.3 percentage points**. It is now **3.9%** greater than the 2015 benchmark as outlined in Scotland's Energy Strategy.

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

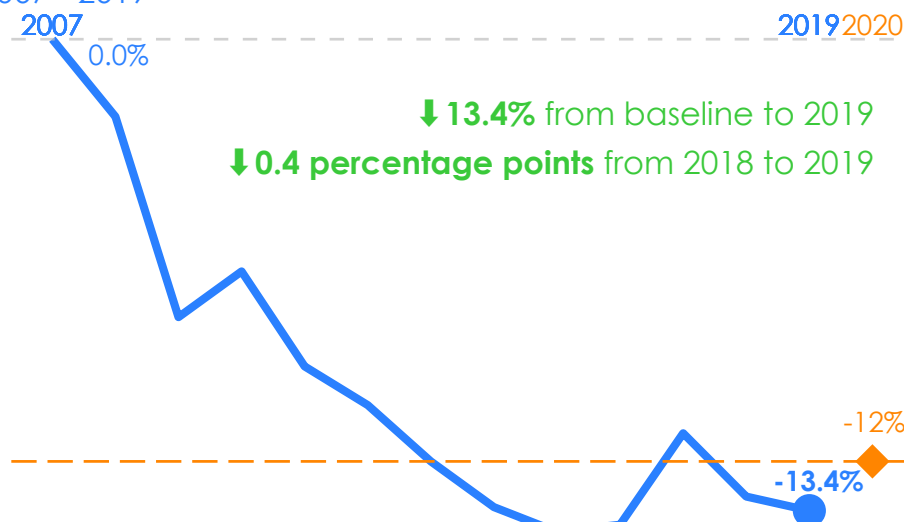
Energy Consumption - 2019 (GWh)

(Change from 2018)



Total energy consumption

2007 - 2019



* 2018 figure revised from 13.1% to 13.0% below the 2005-07 baseline

Energy Productivity

2015 - 2019

↑ 3.9% from 2015 to 2019

↑ 1.3 percentage points from 2018 to 2019

30%



* 2018 figure revised from 1.6% to 2.6% above the 2015 baseline