



Energy Statistics for Scotland

Q1 2022 Figures

June 2022

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The Scottish energy statistics hub 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:

- **Renewable electricity generation** in **Q1 2022** in Scotland **increased** by **24%** compared to Q1 2021 – **11.1 TWh** were **generated** between **January and March 2022**. This most likely came from an increase in the amount of wind in Q1 2022 compared to Q1 2021.
- **Renewable electricity capacity** has **increased in Q1 2022**. In **March 2022** Scotland had **13.3 GW installed capacity**, which is a **1.0 GW increase** from December 2021. This is the biggest increase in a single quarter and is due to an offshore windfarm becoming operational in East Moray.
- There is an **additional 16.0 GWh** of **renewable electricity capacity** at various stages of development in the **pipeline**, of which **10.6 GW** are **onshore wind** projects.
- In **2020**, each **kilowatt hour** of electricity generated in Scotland added an estimated **33.6grams** of **carbon dioxide** into the atmosphere (gCO₂e/ kWh). This remains below the **50 gCO₂e/kWh** ambition for **2020** outlined in the Climate Change Plan.
- Average daily **electricity demand** in Scotland increased to **77.3 GWh** in the first six months of **2022**. This is an **8% increase** compared to **2021**. This reflects the trend seen in 2020 and 2021 that saw drops in **electricity demand** when the most stringent lockdown restrictions were in place during the COVID-19 pandemic.
- In **2020**, **road transport energy consumption** **decreased** by **21%** compared to **2019**. This is likely due to the COVID-19 lockdowns in 2020.

Energy Targets:

	Latest	Target
Overall renewable energy target Total Scottish energy consumption from renewables	Provisional 25.4% in 2020	50% by 2030
Energy consumption target Reduction in total energy consumption from 2005-07	Provisional ↓ 14.4% in 2020	↓ 12% by 2020
Energy productivity target % change in gross value added achieved from the input of one gigawatt hour of energy from 2015.	Provisional ↓ 5.9% in 2020	↑ 30% in 2030

Sources

Renewable energy target: <https://scotland.shinyapps.io/Energy/?Section=WholeSystem&Chart=RenEnTgt>
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>

Renewable Electricity Generation in the **first quarter** of the year saw an **increase**.

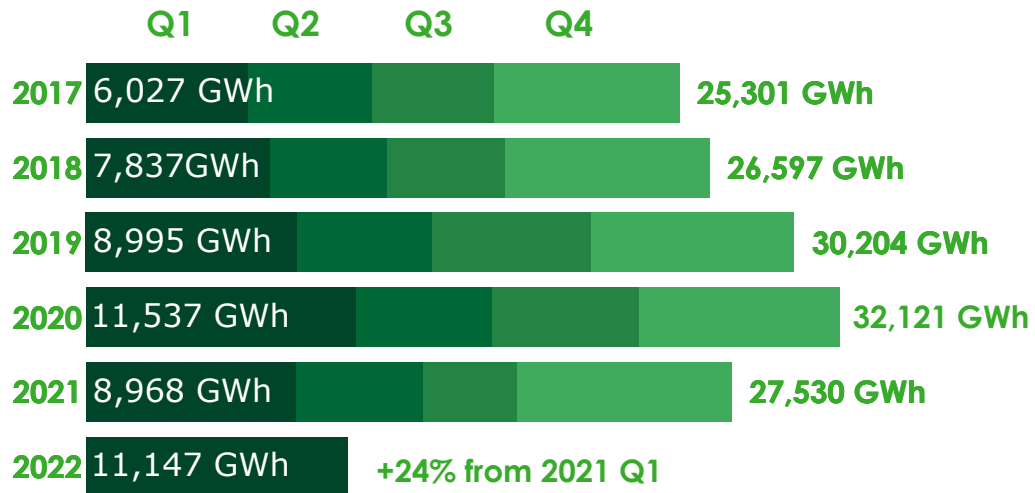
11,147 GWh of renewable electricity was generated in **2022 Q1**, **up 24%** from **2021 Q1**. This most likely came from an increase in the amount of wind in Q1 2022 compared to Q1 2021.

Renewable electricity capacity has increased – in **March 2022** Scotland had **13.3 GW** installed capacity, **up 1.0 GW** from December 2021.

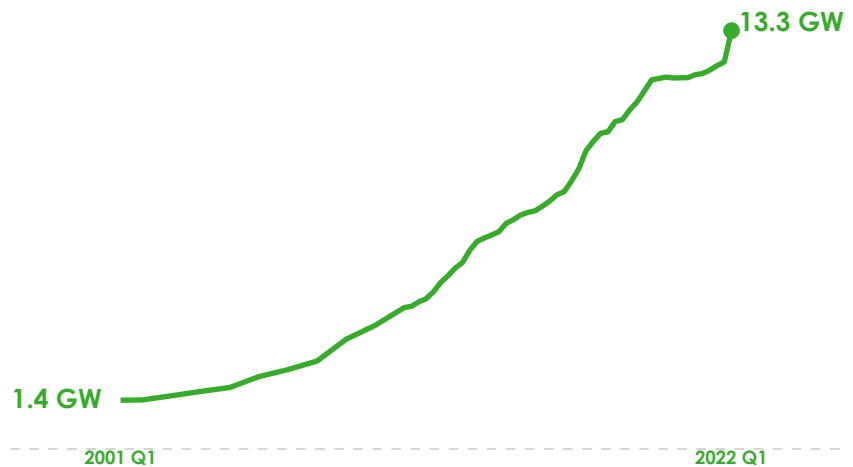
Renewable electricity generation

2017-2022

Total Annual Generation



Renewable electricity capacity, March 2022



Pipeline Capacity - March 2022



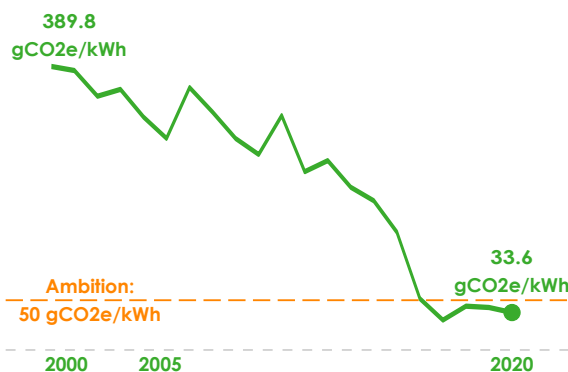
Sources

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

In **2020**, each kilowatt hour of electricity generated in Scotland added an estimated **33.6** grams of carbon dioxide into the atmosphere (gCO₂e/kWh). This has **fallen 7.3 gCO₂e/kWh** from **2019**.

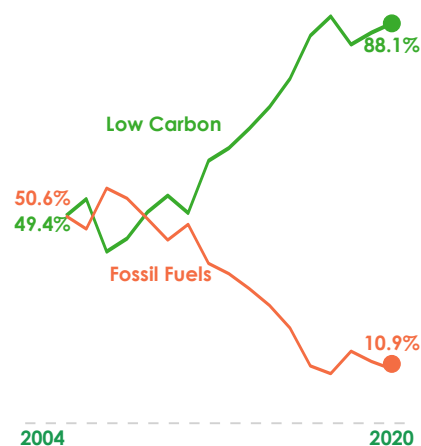
Grid Emissions

2000 - 2020



Electricity Generation: Low Carbon vs Fossil Fuels

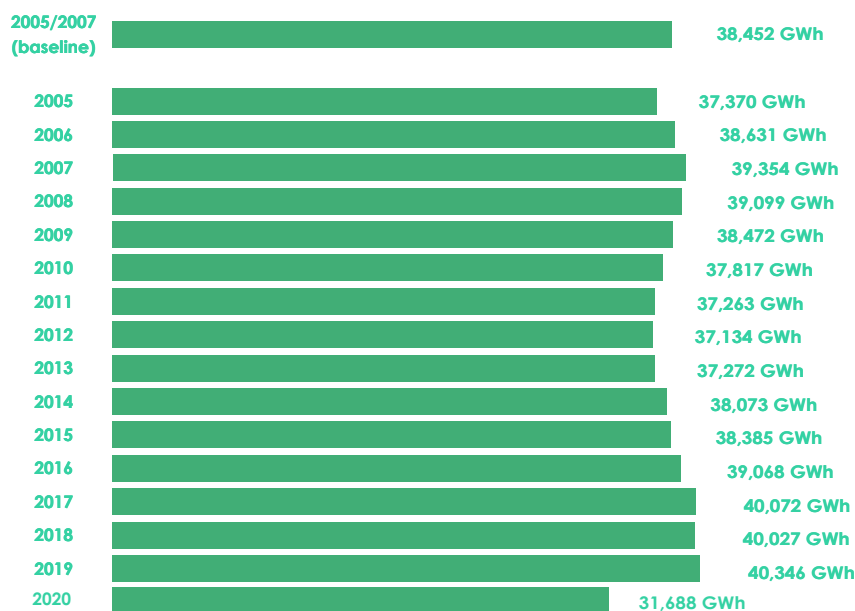
2004 - 2020



Latest road transport energy consumption figures shows that, total energy consumption in 2020 was at its lowest level, **down 21%** from 2019.

Road transport energy consumption

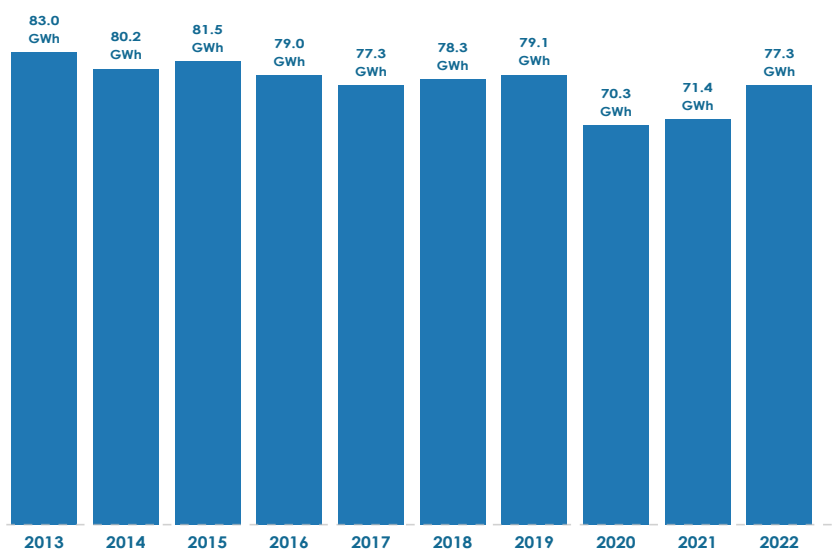
2005 - 2020



Average daily electricity demand in Scotland increased to **77.3 GWh** in the first six months of **2022**. This is an **8% increase** compared to **2021**. This reflects the trend seen in 2020 and 2021 that saw drops in **electricity demand** when the most stringent lockdown restrictions were in place during the COVID-19 pandemic.

Average daily electricity demand

Scotland, 2013- 2022



Sources

Grid Emissions:

Electricity generation:

Road transport consumption:

Electricity Daily Demand:

<https://scotland.shinyapps.io/Energy/?Section=RenLowCarbon&Subsection=RenElec&Chart=GridEmissions>

<https://scotland.shinyapps.io/Energy/?Section=RenLowCarbon&Subsection=RenElec&Chart=ElecGen>

<https://scotland.shinyapps.io/Energy/?Section=EnergyEfficiency&Subsection=DemandReduction&Chart=TransportEnConsumption>

<https://scotland.shinyapps.io/Energy/?Section=SystemSecurity&Chart=DailyDemand>