

Climate Change Assessment

- In 2015, governments worldwide committed to the Paris agreement, to keep global heating rise below 1.5°C
- We've just passed that marker and emissions are at an all-time high and still rising.
- 2024 was the hottest on record.
- To make matters worse Donald Trump is expected to drive up emissions in the US (and elsewhere) and slow down environmental action. Drill – Baby – Drill!

Climate Change Hits Home Floods in Spain



Climate Change Hits Home Fires in Los Angeles



Climate Change hits home

As temperatures rise, the ground dries out and the atmosphere can hold more moisture. So more fires, and heavier bursts of rainfall.

- Droughts/fires, and flooding are two sides of the same Climate Crisis coin.
- And so far we only have 1.5C of warming.
- The IPCC has predicted that we are on track to experience 3.8C of warming by the end of the century.
- And that's assuming that world governments stay on track with their Zero Emissions plans!

2100 Temperature Projections

GLOBAL Temperature Rise 2100 PROJECTIONS

In 2100, more than 55 countries are projected to have warming above 4°C in comparison to their 1850-1900 averages, and nearly 100 above 3.5°C.

TEMPERATURE RISE relative to average 1850-1900 temperatures



● NATIONAL AVERAGE, 2100	
3.80°C	
● MAX	● MIN
5.21°C	2.67°C



Warming 5.2°C above pre-industrial levels, Canada is expected to have the highest rise in temperatures in 2100, followed by Russia, Mongolia, and Kuwait.

Ireland and the UK are projected to warm the least by 2100 at 2.67 and 2.82°C, respectively.

AT THIS WARMING LEVEL, THE IPCC IS HIGHLY CONFIDENT THAT:

- 3-39% of terrestrial species will face very high risks of extinction
- Water scarcity will considerably affect cities, farms, and hydro plants
- Droughts, floods, and heatwaves will greatly strain global food production and access

Source: Berkeley Earth, Intergovernmental Panel on Climate Change
 This map shows warming projections based on the IPCC's "middle-of-the-road" scenario (titled SSP2-4.5), which is the closest to expected emissions under current policies.

Projection data provided by BERKELEY EARTH.

The Hard Facts

- The world is failing on Climate Change
- Extreme weather will become more extreme and more frequent
 - billions of people will face serious food shortages
 - mass migration northwards will pose a huge moral dilemma
 - global energy and global food supplies will be threatened
- Increasingly common disasters tell us that:
 - the climate crisis is starting to pick up in ferocity
 - we are failing badly on reducing fossil fuel use

What to do?

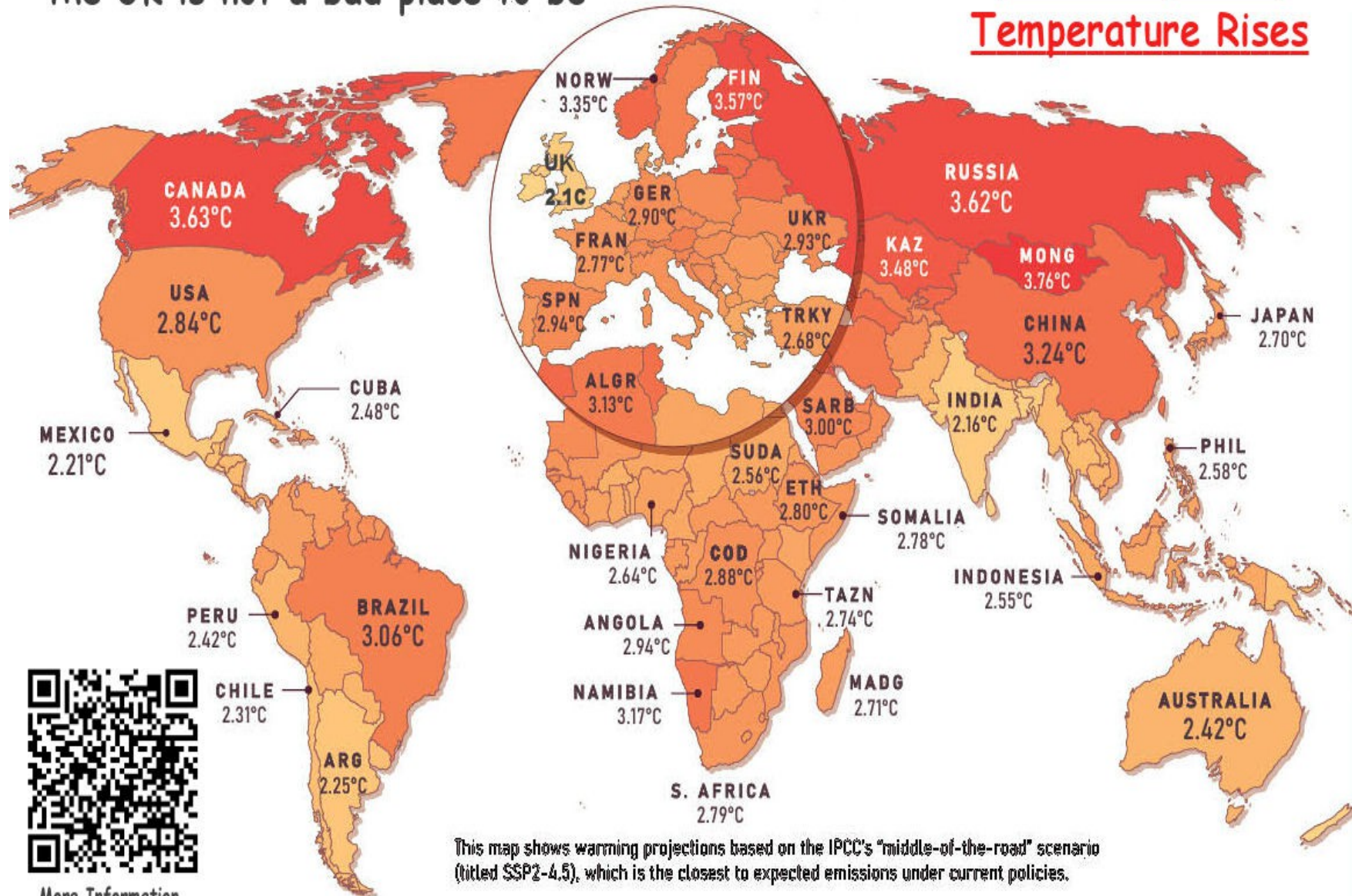
- We simply can't afford to give up on efforts to slow Climate Change
- Maybe we should change focus to Climate Survival
 - becoming self sufficient in energy (today's focus)
 - becoming self sufficient in food (another story)
- If not for ourselves, then for future generations

Some Good News!

- The UK is in an incredibly fortunate geographical location with regards being able to survive Climate Crisis heating
- The average UK temp rise by 2050 is predicted by the IPCC to be 2.1C (average rise is expected to be 2.7C with a max of 3.8C)
- We'll still be affected by global weather changes especially rain.

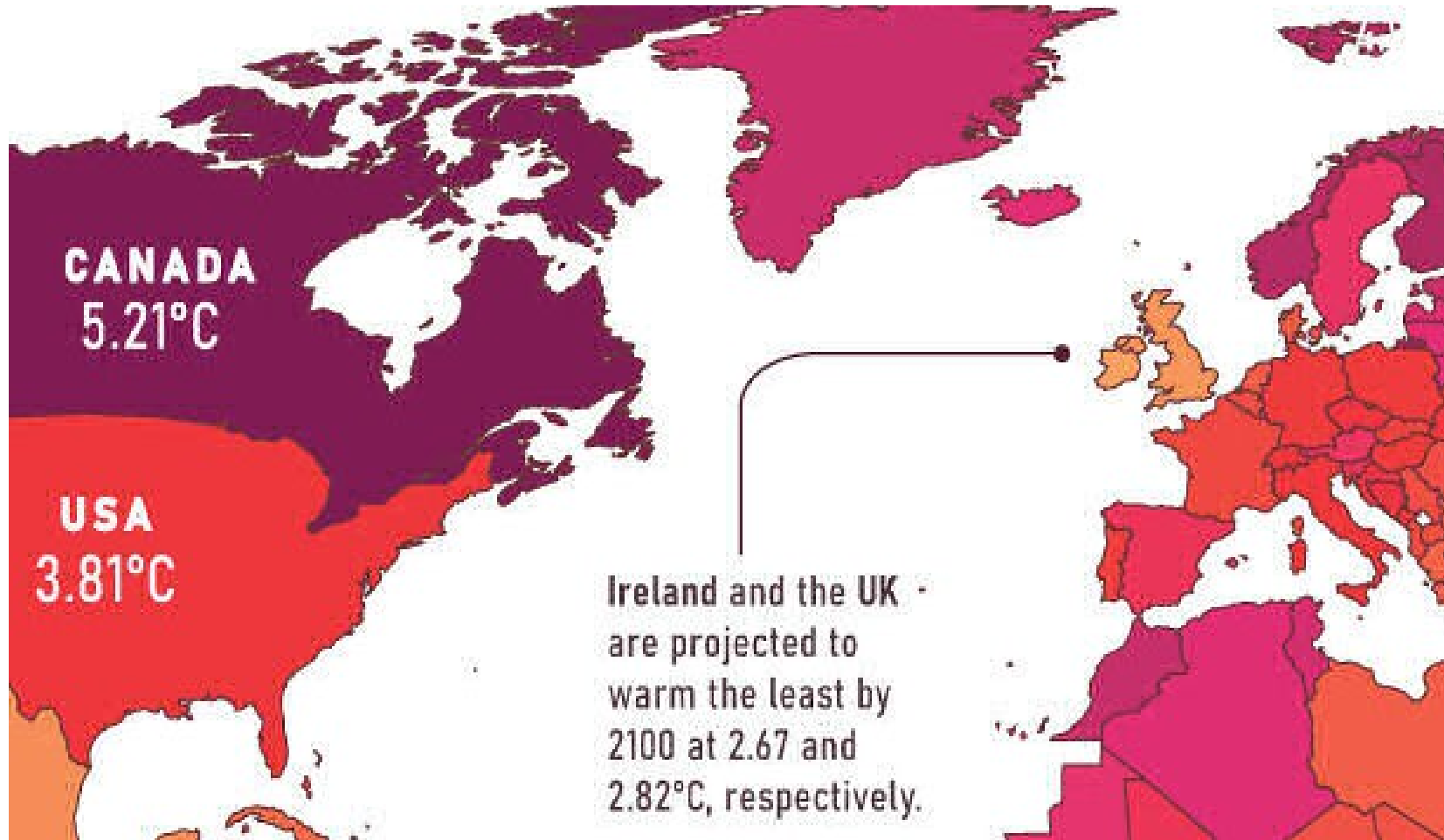
the UK is not a bad place to be

2050 Projected Temperature Rises



2100 Temp Rise Projection

<https://www.visualcapitalist.com/mapped-global-temperature-rise-by-country>



Our government has got the message

One of the first things the new government did after being elected was to effectively nationalise NESO (National Energy System Operator) at a cost of £650m, paid to National Grid plc, a company owned by a number of overseas investment firms

Nat Grid is still responsible for the construction & maintenance of our high voltage electricity transmission network.

NESO now reports to the **Secretary of State for Energy Security and Net Zero**, Ed Milliband.

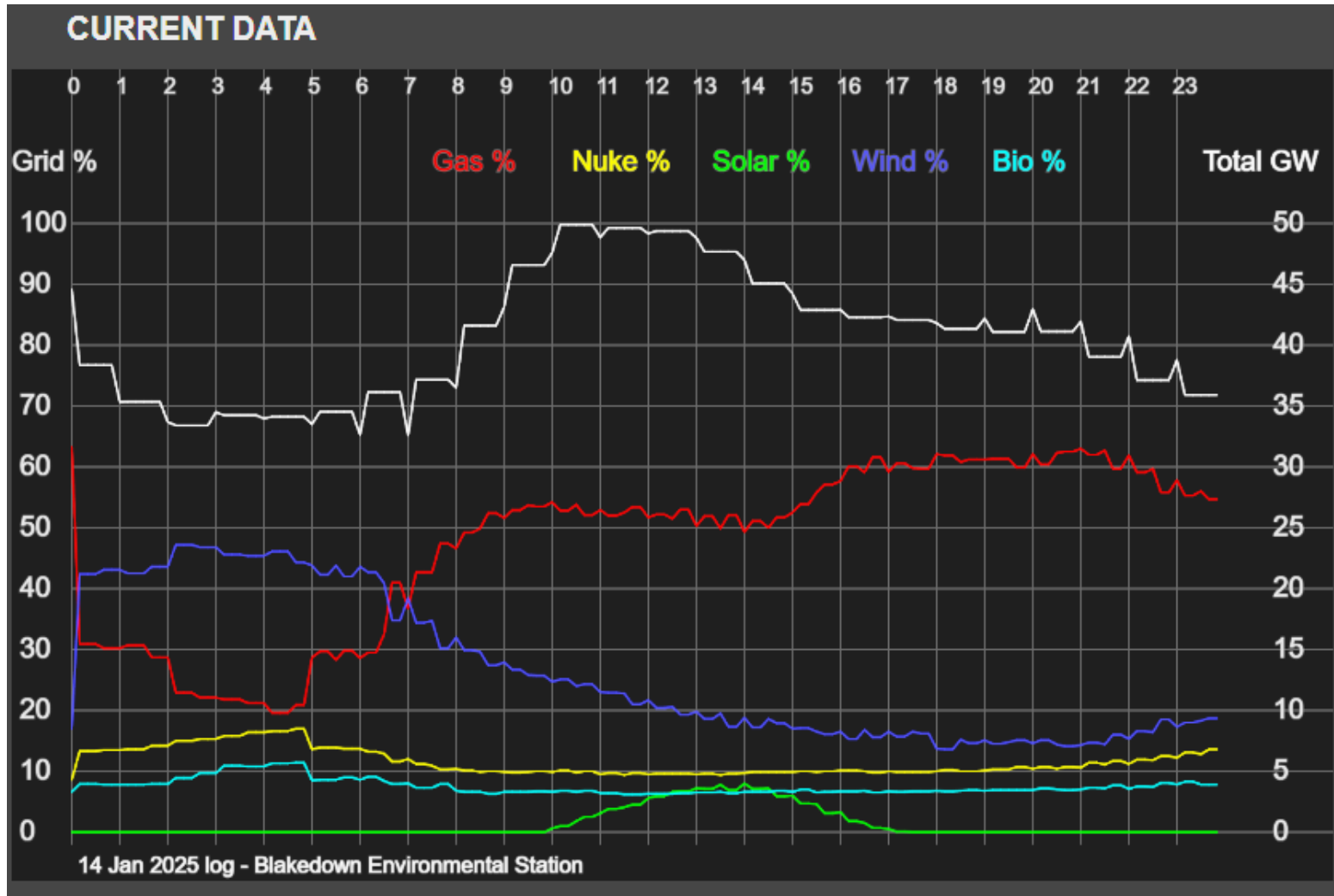
NESO manages the day to day supply of energy to end users, and purchases energy from a variety of sources.

In November NESO produced a report “Clean Power 2030” setting out its and the Government’s, strategy to achieve clean power for Great Britain by 2030.

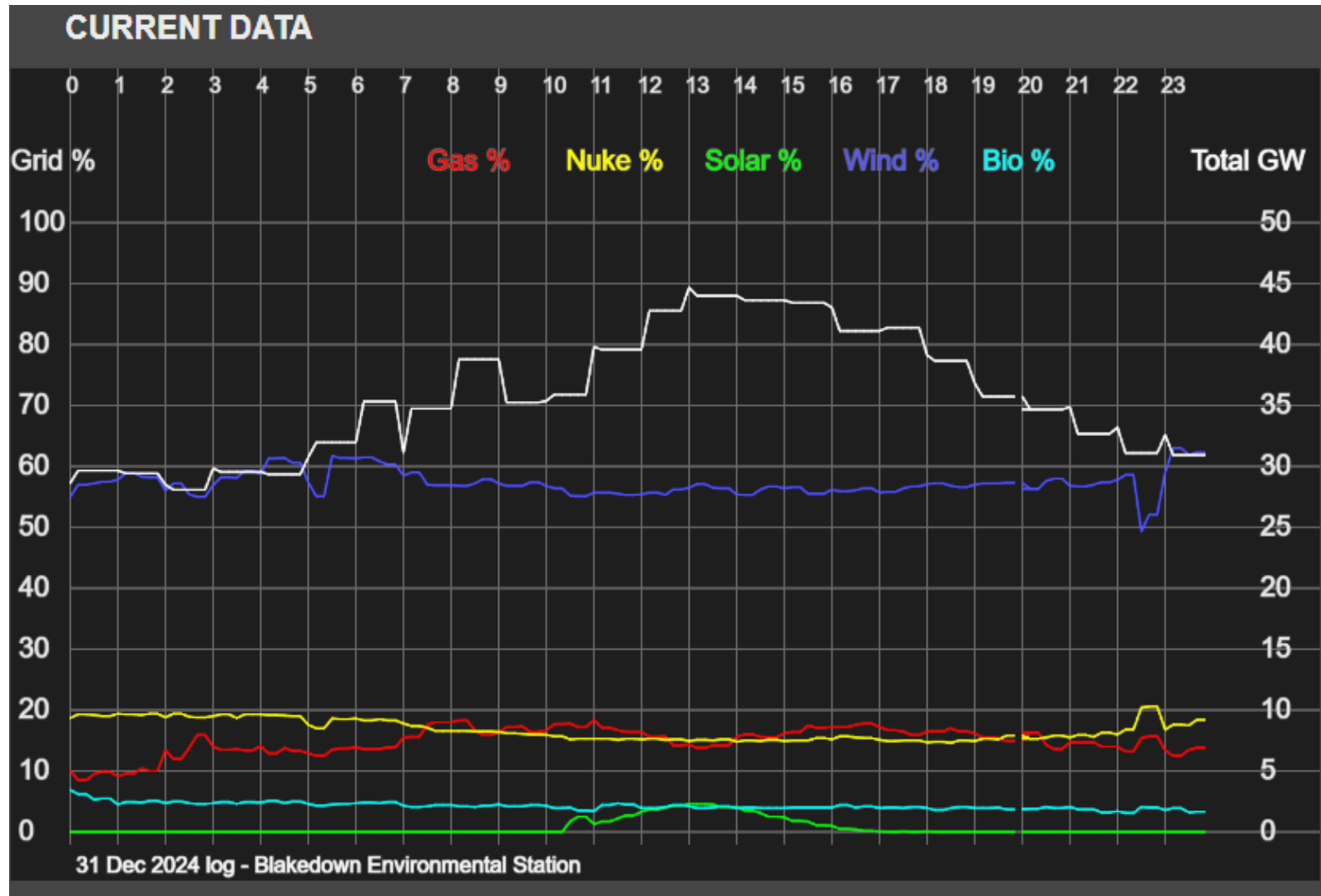
Energy Security

- The objective is self sufficiency and energy security by 2030
 - **triple** the UK's offshore wind capacity to 50 GW
 - **double** our onshore wind capacity to 27 GW
 - **triple** our solar power capacity to 47 GW
 - **quadruple** battery storage to 22 GW
 - plus a **£60Bn program** to upgrade/expand the National Grid
- This will increase the UK's **energy security** in a volatile world
- It will help meet future increase in electricity demand (EVs Hps etc)
- Increase in renewables may result in **cheaper energy** in the long term
- Will also help achieve 2050 net-zero emissions target

A wind to gas cross-over day



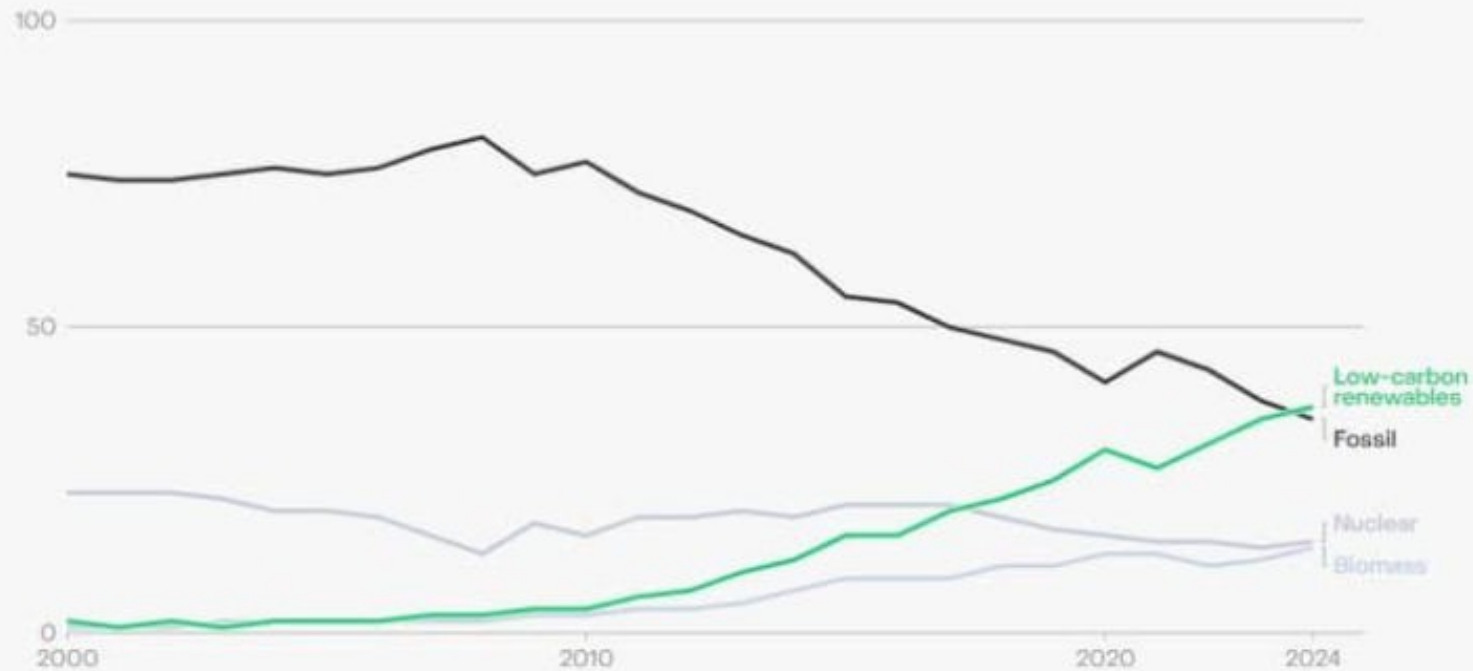
A good day - wind power 60%



But from 2024 Renewables are winning!

Low-carbon renewables to generate more power than fossil fuels for the first time in the UK in 2024

Proportion of total generation (%)*



Source: [Yearly electricity data](#), Ember

Renewables includes wind, solar and hydro power.

*Includes actual generation data from January to November and Ember's December forecasts. Projected data is subject to change.

Shifting the balance

- There will be high gas usage days
- And low gas usage days
- We can shift the gas-renewables balance by
 - increasing renewable capacity
 - export/import of non-fossil energy
 - Building system inertia to compensate for low inertia renewables
 - developing a smarter, more flexible grid
 - increasing energy storage

Moving energy users off gas

Government can offer inducements

- **£7,500 grants** for heat pump installations (up to March 2028)
- **Phasing out** of new petrol/diesel cars in 2030
- **Insulation grants**

The ball is in the energy users' court

It requires personal action if we are to benefit from the new clean energy infra-structure otherwise we'll remain dependent on fossil fuels.

Moving to greener energy is a huge step in both greening your home and improving UK energy security and attaining net zero

For ourselves and for future generations.

Move to Greener Energy

- Examine your options – today!
- If not now, when?
- Invest in your future, the UK's future & future generations' future

Move to Greener Energy

- If you have cash not doing anything think about investing it in greener heating
- And if you don't have spare cash think about finance options.

- Thank you for coming!
- Q&A follows for those interested
- Talk downloadable off WFGA website from tomorrow