

Keeping the lights on with renewables: Jobs in energy generation, distribution and storage

“Net zero” by 2050 is far too weak:

- As a global target it only gives a **50:50** chance of staying within 1.5 degrees
- Takes no account of our historic responsibility for emissions, or unequal resources
- Gives UK far too big a share of the remaining carbon budget
- The “net” part of “net zero” depends on unproven and/or ineffective carbon capture technologies that are supposed to be available in the future, enabling fossil fuel companies to continue business as usual, and potentially locking in dependency on gas and oil.
- It also includes ineffective “market” solutions such as carbon trading and offsetting.

We need to decarbonise deeper, faster!

What we need to do

- **End fossil fuels**
- Approximately **double overall electricity generation**
- Approximately **halve the amount of energy** we use overall (the main subject of the remaining chapters)
- Use only **renewables** technologies that can be available quickly – wind, solar, water, geothermal
- **Accelerate research and implementation of safe energy storage for flexible supply and load spreading**
- **Expand and train or retrain the workforce** – for young people, jobseekers and those moving from high-emissions jobs to jobs in the low-carbon economy.
- **Bring the energy system into public ownership** – the core employment model direct public employment within a National Climate Service.

A National Climate Service could....

- Get rid of the **distortions and blocks** which the **market** and **vested interests** bring to the transition pathway.
- Support renewables technologies that are needed but currently held back by lack of investment, eg tidal stream & wave energy.
- Ensure a **fair transition of workers** – **create millions of** decent secure jobs, including at least half a million in energy generation, distribution and storage.
- Ensure **equitable access to affordable energy**. Policies of subsidies to private home owners to retrofit, install renewables etc are both inefficient and inequitable.
- Support supply chain industries, and new industries recycling materials.
- Enable democratic and integrated planning of a complex system involving large and smaller-scale generation, transmission and distribution, storage and load-spreading technologies.

NB the domestic sector is key to efficient load-spreading as well as energy saving, and a NCS could support this through a programme of retrofit as public works.

No business as usual - resource limitations, health/environmental damage of minerals extraction, global solidarity on labour rights, justice for communities

- Eg, labour abuses in cobalt mining in Democratic Republic of Congo; extraction of lithium, nickel etc
- Impacts of silicon mining; toxic silicon tetrachloride & hydrofluoric acid from PV cell manufacture
- Scale of resource requirements: for example, just 40GW of wind power requires 4m tonnes of steel, 125,000 tonnes of copper, 40,000 tonnes of concrete.
- Land (and ocean) use requirements of wind and solar – land needed for food, rewilding, reforestation etc

No unlimited renewables –

- Prioritise reducing energy demand through socially beneficial/equitable means
- Prioritise **reduction, reuse and recycling** of materials
- Research safer technologies for energy generation and storage (e.g. batteries)

Technologies we come out against:

- Gas with CCS; hydrogen from methane with CCS
- Biofuels (e.g. woodchip with CCS) ; biofuel for transport/aviation
- Nuclear – unsafe, polluting, not carbon-neutral or GHG-free, inflexible, and long time scale brings huge opportunity costs.