

Nuclear-enabled Hydrogen

Opportunities for the use of nuclear-enabled hydrogen as an enabler for new nuclear



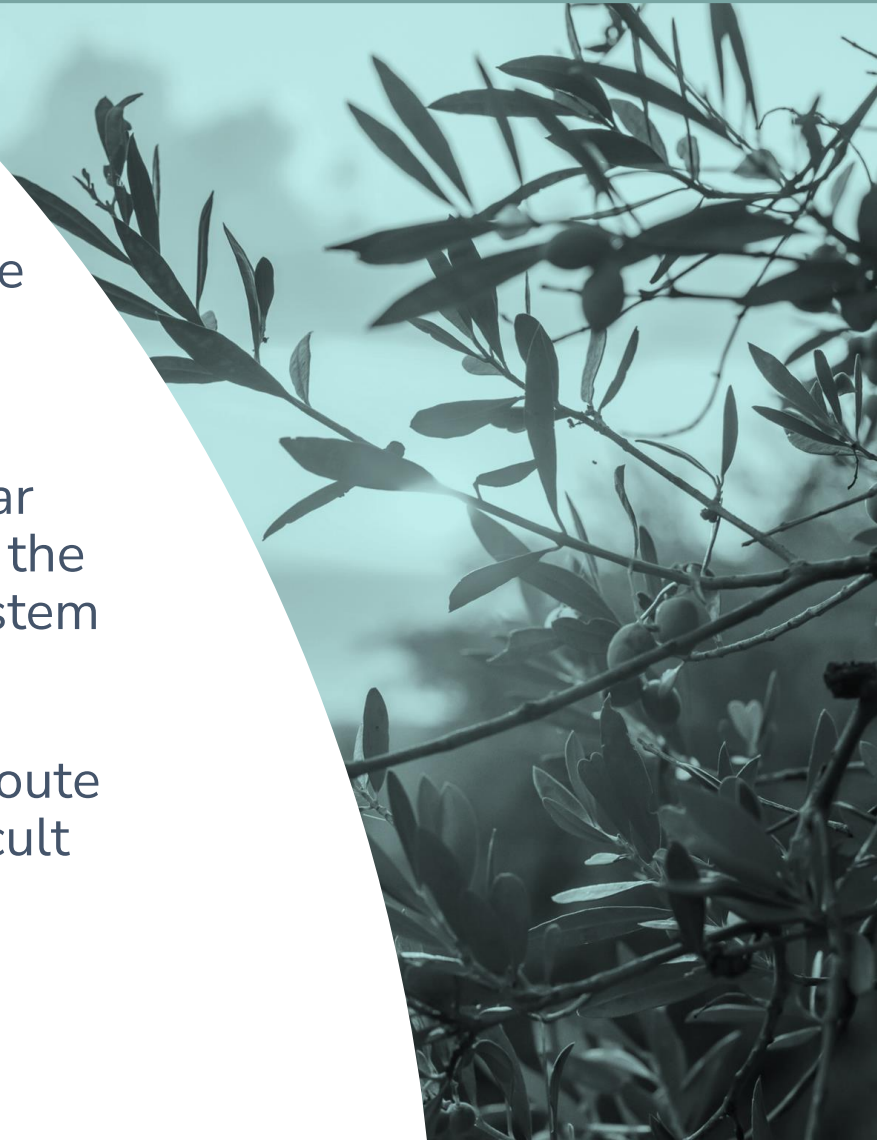
Equilibrion has been set up for one purpose; to work with businesses to fulfil the potential of nuclear energy to decarbonise our heat, transport and industrial sectors



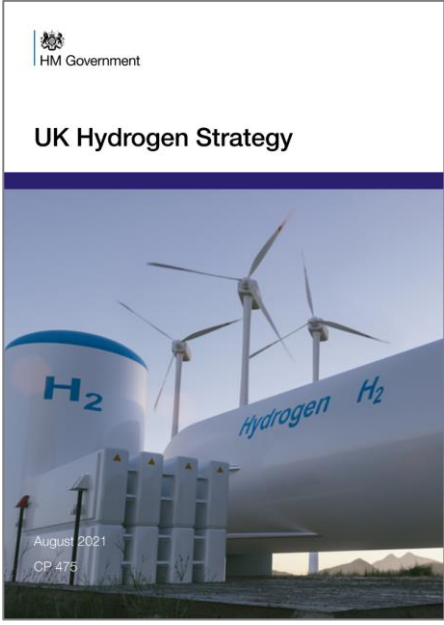
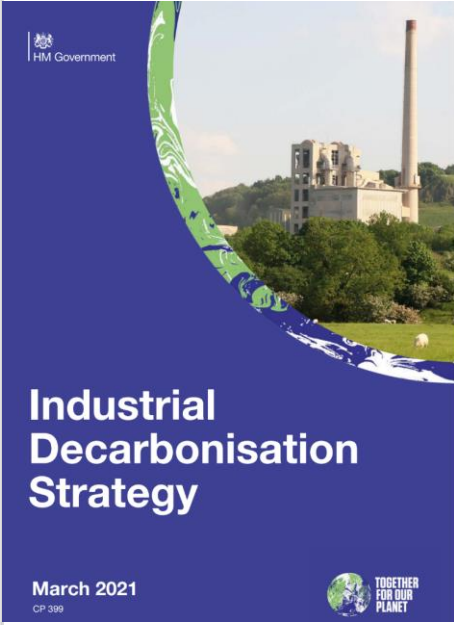
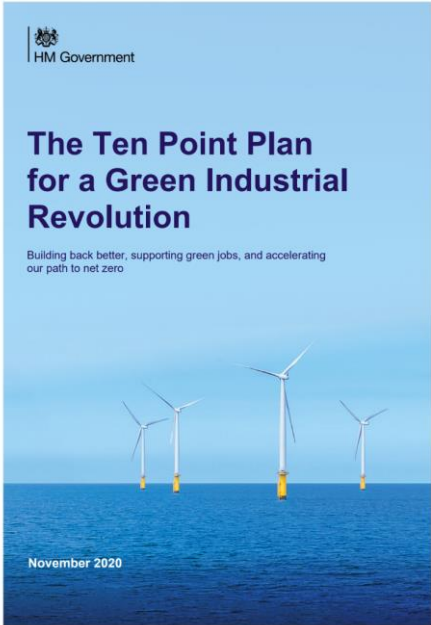
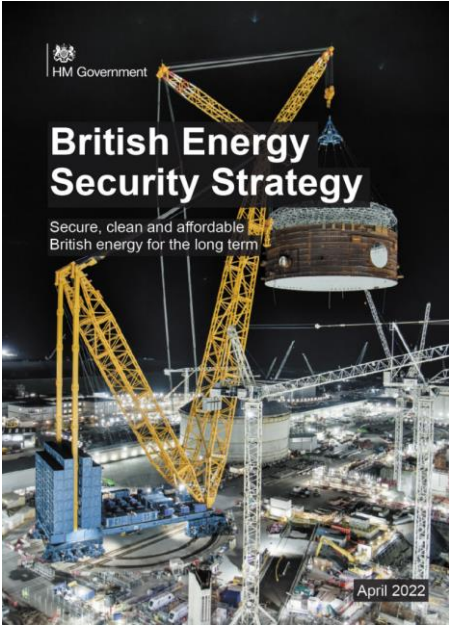
Our knowledge bridges the gap between nuclear and non-nuclear technologies to offer advice and create value chains that deliver on the opportunity for nuclear energy to decarbonise our global energy system



We are a vehicle for change: addressing perception and creating a route by which nuclear heat can tackle decarbonisation of the most difficult parts of the energy system



Government Policy and Nuclear Energy



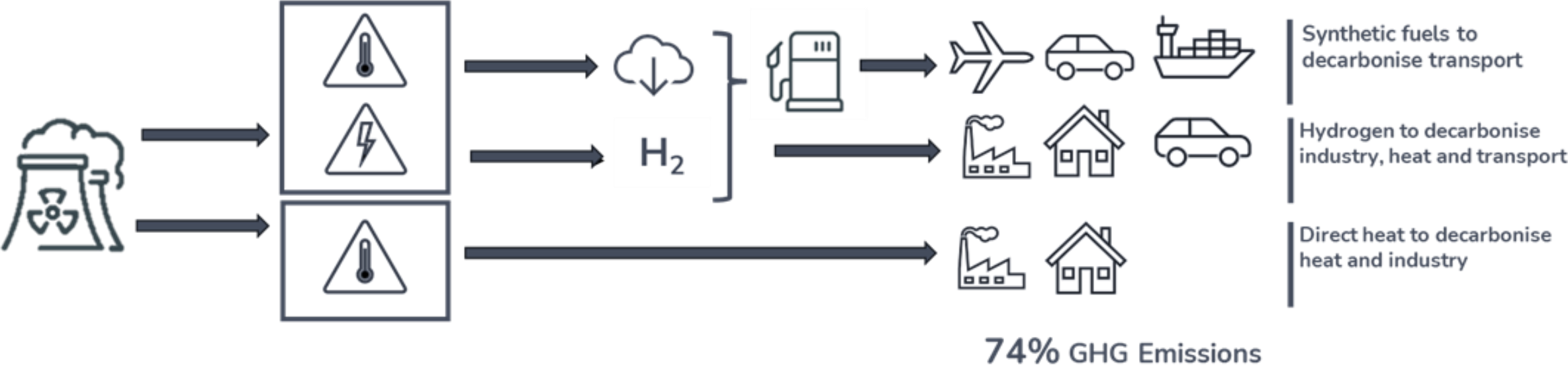
Government
Commitment to 24GW
new nuclear power by
2050

Commitment to
AMR funded
demonstration and
SMR deployment

Inclusion in the non-nuclear decarbonisation policies for the first
time

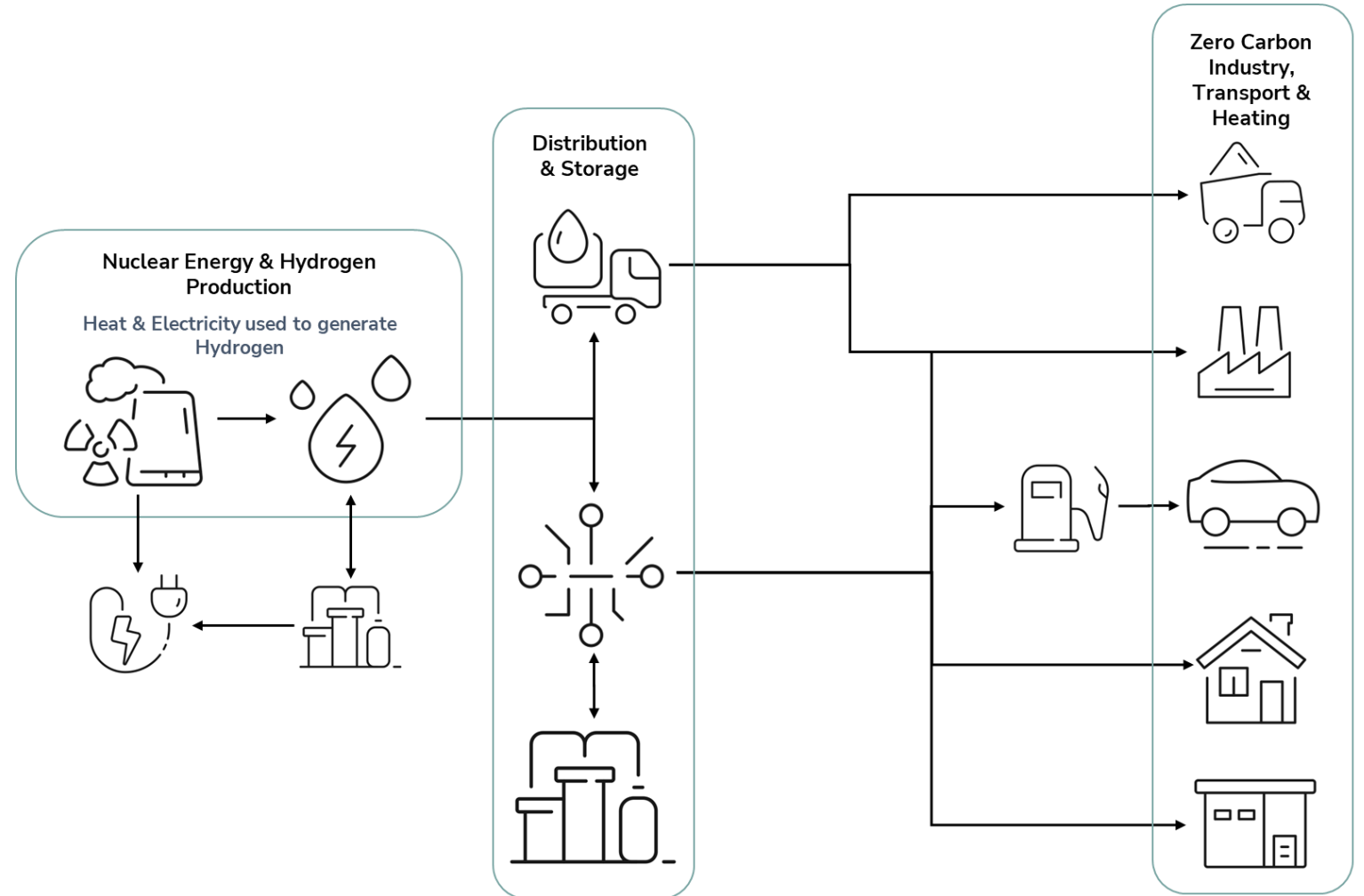
Nuclear Energy and the Decarbonisation Challenge

Nuclear Energy is a huge, dense energy source that can support the production of hydrogen, low carbon fuels and CO₂ removal technologies

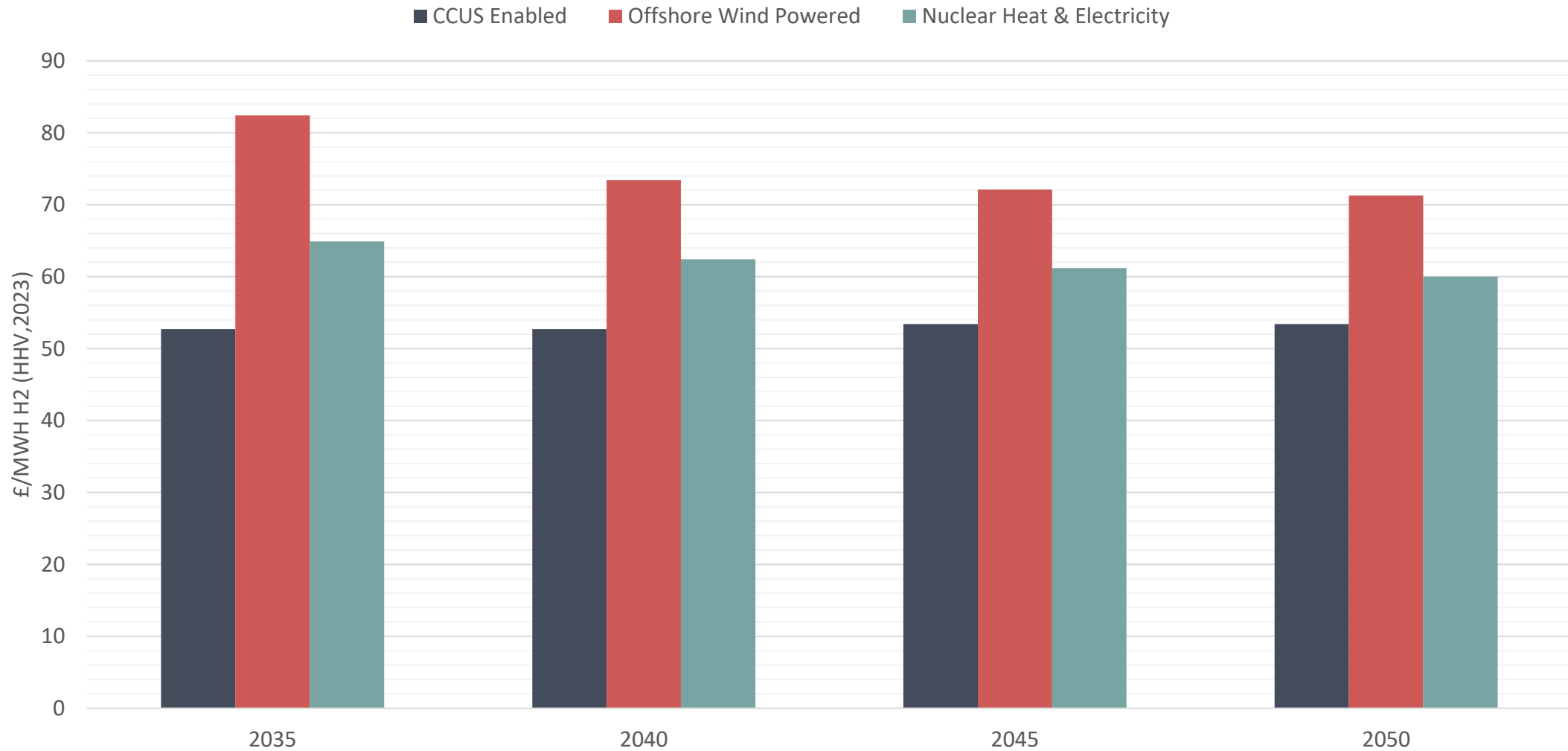


Evolution of Hydrogen Production

- Hydrogen production capacity will **evolve over time**
- Early production is less likely to be directly network connected, a **minimum amount of production capacity is required** to enable any network transition
- Offtake, production and supply chain all need to **grow in sync** to enable wider opportunity

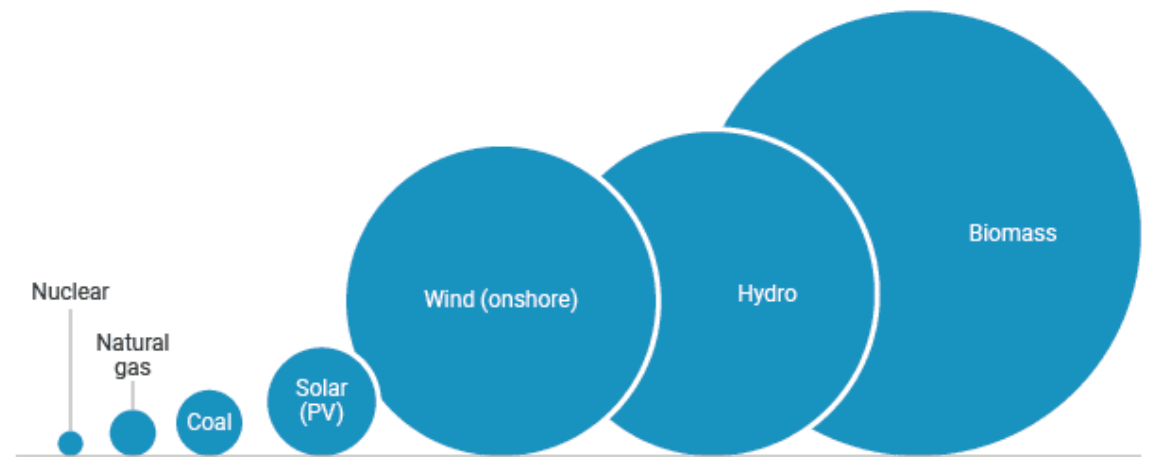
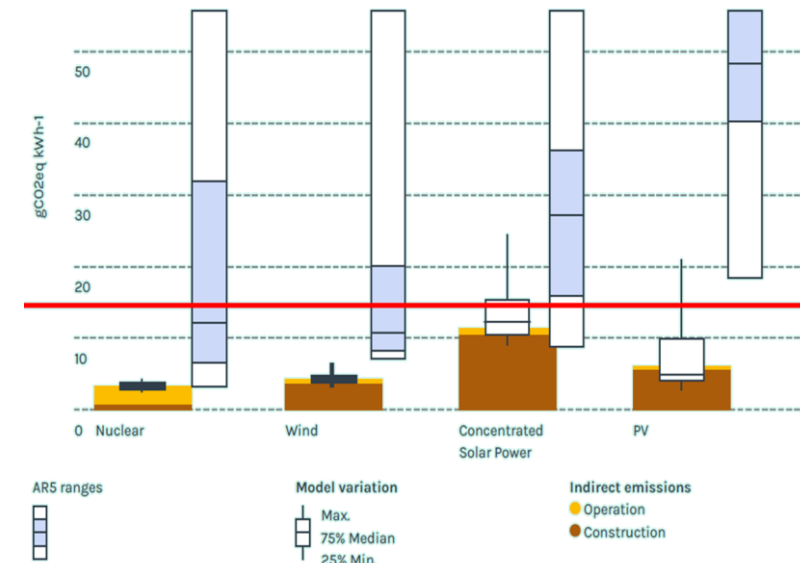


NEH has Cost Advantages



NEH is Low Carbon & Low Impact

- Nuclear energy is low-carbon, with lifecycle emissions estimates in line with other renewable technologies
- Nuclear requires significantly less land than any other generation technology
- It also requires less input of critical minerals per MW of capacity than solar or offshore wind



More Flexible Siting is Possible

- Smaller, modern nuclear reactors offer the potential for more flexible siting, **near to off-takers**
- Previous studies have identified many sites across the UK with the technical potential to host nuclear reactors
- Siting policy is expected to be updated to explicitly capture a broader range of sites than currently



Thank You

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