



KEVIN SLATER
TECHNICAL DIRECTOR
HKA

Energy Transition - What does it mean from a skills perspective?

Energy Transition is the global energy move from fossil fuels (hydrocarbons) to Green Energy (renewables) to reduce carbon emissions.

The world is warming at an alarming rate due to CO₂ emissions from fossil fuels. If we do not change course by reducing emissions, we are heading towards a climate catastrophe (see graph below).

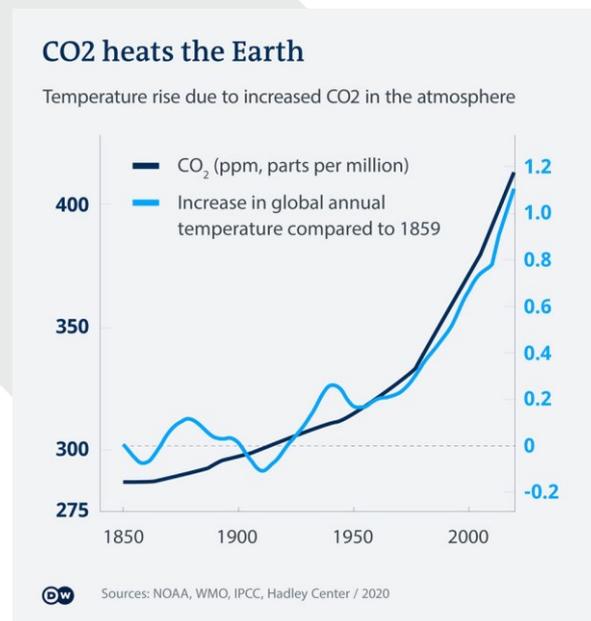


Figure 1 Data from NOAA (National Oceanic and Atmospheric Administration)

The Paris Climate Agreement set at the UN Climate Change Conference (COP 21) in 2015 proposed a goal of limiting global warming to well below 2°C, preferably to 1.5°C, compared to pre-industrial levels.

This year, the UK will host the COP 26 in Glasgow (November 1-12th). This presents a fantastic opportunity for the UK government to set out its policies regarding its commitment to reducing carbon emissions and how this will be achieved.

Governments are setting new legislation i.e., UK net zero carbon emissions by 2050, EU net zero by 2050, China net zero by 2060. The USA, under its new president Joe Biden, has rejoined the Paris Climate Agreement.

The UK government has committed to a 10-point 'Green Energy Revolution' plan; its purpose is to focus on the skills needed to achieve net zero, identify solutions to provide a short and long term supply of talent, increase diversity and support transition from high carbon industries and develop recommendations for government, business, education institutions.

In Dec 2020, the government produced its long awaited energy white paper "Powering our Net Zero Future" which outlines what must be done to combat climate change.

Notwithstanding the above, to meet the target of net zero carbon emissions by 2050 is a huge task and will require continued commitment from governments around the world. It is estimated that 75 to 100GW of UK electricity generation will be required by 2050 to meet UK net zero

emissions; this will put a huge strain on the existing and future supply chains. Offshore wind production alone will not be sufficient to meet these targets. It is widely accepted other technologies will need to be developed and put into practice to help mitigate emissions and achieve these targets, including hydrogen production, CCUS (carbon capture, utilisation and storage), biomass, solar, and energy storage.

From now to 2030 (only nine years) the UK offshore wind market will require an increase of around 400% to meet UK targets of 40GW; jobs will increase from 11,000 to around 27,000. Exports are expected to increase from £0.5bn to 2.6bn/yr.

The scaling up (rate of change) in capacity will be the biggest hurdle the UK will face. From accelerated planning, approval, investment, development, construction, and installation, to operation and maintenance; all of this will place a huge strain on the existing supply chain, manufacturing, SME's government bodies, installation vessels, training etc. If not achieved, this will threaten the targets.

The Government and industry must focus on the skills shortage and the transition from existing industries. From education at schools, colleges, universities laying out a clear path for students to follow to guide them into the clean energy sector.

Currently there are various energy clusters around the UK such as offshore wind clusters, hydrogen and carbon capture; some of these areas are more developed than others for example the Humber Local Enterprise Partnership (LEP) has been actively involved in supporting the skills transition for many years; linking up with regional universities, colleges, and schools, councils and industry, in an effort to ensure sufficient supply of skill to meet demand.

However, the targets have been raised substantially, therefore more needs to be done from a regional and national perspective to ensure that the UK plc works collectively as a team; local governments working with national government and vice versa to provide clear communication flow and following lessons learned over the past decade of offshore wind production to fulfil the demand for new skills.

“The scaling up in capacity will be the biggest hurdle the UK will face.”

Oil and Gas

The UK oil & gas industry provides a real advantage. The UK has an experienced workforce of 45,000 subsea experienced workforce and an existing supply chain; decades of O&G experience; operational experience in remote areas; managing large complex offshore facilities; world leading expertise in moorings, subsea flowlines and structures, cables, and connectors.

Oil, and especially gas, will form part of the transition from fossil fuels to carbon free energy. Now the government has set a clear path forward with a determined end point to achieve the required energy mix to obtain net carbon free emissions targets by 2030 to 2050. From a business perspective this is a golden opportunity, the demand is confirmed. The revised Oil and Gas Authority (OGA) strategy came into force 11th February 2021. It features net zero obligations on the oil and gas industry including reducing production emissions, supporting carbon capture and

storage projects, and unlocking clean hydrogen production. More details can be found at <https://bit.ly/3jyLSvY>



COVID-19

There has been a real alignment around many factors due to Covid-19 which is solidifying the consensus concerning CO2 emissions and the need for the energy transition to take place. The advent of the Covid-19 pandemic has shown that large scale human behavioral change is possible and has consolidated the thinking concerning the need for change in many areas including industrial, social, and political. Businesses had to restructure overnight; the peak reduction in greenhouse gases occurred in April, when globally averaged CO2 emissions and nitrogen oxides fell by roughly 30 percent from baseline, due to human inactivity.

The future

The future of energy transition will depend on a group of likeminded businesses which will come together to make it happen along with government legislation and education.

HKA is uniquely positioned to assist in this transition. With over 40 years' experience in risk mitigation and dispute resolution, operating from 42 offices in 22 countries around the world, we have over 5,500 clients worldwide including government agencies, local authorities, investors, developers, contractors, construction managers, lawyers etc.

Our vision is to make the energy transition to net zero carbon emissions a success not just in the UK but around the world, because it is a global emergency.

If you require any further information, please contact Kevin Slater at kevinslater@hka.com.