

ENERGY BAROMETER 2020

Daniel de Wijze takes a look at an energy industry moving towards net zero, through the lens of the views of Energy Institute members.



Renewables paving the path to net zero

The Energy Institute (EI) published the 2020 *Energy Barometer* report on 8 July, based on a survey of over 350 of its members. The annual survey, now in its sixth year, is designed to capture the views of energy professionals to inform future policy and the public debate about energy. This year, the *Barometer* took a closer look at the UK's net zero ambitions; respondents reflected on the successes and missed opportunities over the past decade and voiced their expectations for upcoming emissions reduction targets through to 2050.

Biggest challenges

Every year EI members are asked to identify the biggest challenges facing the energy industry. Low-carbon energy, sustainability and climate change, energy policy, and the COVID-19 pandemic have all risen to the top of the agenda in 2020. These challenges highlight an uncertainty around the best way to ensure that the UK energy system and economy remain strong and resilient while undergoing a low-carbon transformation.

With the legislation of a target of net zero greenhouse gas (GHG)

emissions by 2050, the UK is more committed than ever before to the energy transition. However, EI members are concerned that the UK is not on track to meet this target, or even interim targets for the 2030s. While 46% of respondents believe that, given current policies, the UK will meet the emission reduction targets set in the fifth carbon budget, for the 2050 net zero target this figure drops to just 11%.

On a more positive note, the adoption of a more ambitious 2050 target (compared to the original 80% reduction on 1990 levels) has undoubtedly shifted respondents' thinking on what is possible. In 2019, just 3% of EI members predicted the UK would achieve an 88% or greater reduction in emissions by 2050 — that figure has jumped to 37% this year.

Renewables are a key enabler

The *Barometer* results illustrate that the UK's current policy trajectory is not sufficient to meet emission reduction targets, and renewables feature prominently in the path to net zero. EI members believe that there is already a strong case for more investment in offshore wind and solar PV — these technologies are seen as low-risk options.

However, the Committee on Climate Change (CCC) also stresses the need for investment in new low-carbon technologies, such as hydrogen and carbon capture usage and storage (CCUS), to complement existing renewables.

The case for renewables can be seen in EI members' reflections on the past decade; over half of all respondents (54%) think that increasing the proportion of electricity provided by renewables was the greatest success story for the UK energy industry in the 2010s.

Energy policy plays a key role

Respondents are clear that active government policy played a key role in the big success stories of the past decade. For example, the increasing proportion of renewables in the electricity mix was partly driven by direct financial support for specific low-carbon technologies, such as offshore wind. After Contracts for Difference auctions were introduced in 2014, prices plummeted from £114–120/MWh in 2015, to just £40/MWh in 2019.

Looking at another emissions reduction success story, the switch from coal to natural gas for electricity generation, respondents cite the introduction of mandatory standards and regulations as a key enabler. The share of coal in the electricity mix has dropped from an average of 30% in 2010 to under 2% in 2019, and the few remaining coal power plants in the UK will be closed by 2025 due to new pollution standards.

In both success stories, members send a clear message that progress is correlated with stable government policy, which set a clear direction of travel for the sector. However, despite these successes, energy professionals currently do not feel that either the government or the energy industry itself is currently doing enough to move towards net zero. In particular, hard-to-decarbonise sectors, such as home heating and transport, pose a huge challenge, and new policy developments are needed here.

Hard-to-decarbonise sectors

The *Barometer* survey asked respondents for the first steps the government should take over the next decade to tackle emissions from hard-to-decarbonise sectors. An increased uptake of renewables

'Energy efficiency is indeed the biggest missed opportunity of the last decade. But it can also be the best investment of the next; at the core of a drive to refurbish our buildings and make them fit for the future. Government and the energy sector must put high energy performance buildings at the heart of the energy system of the future, to 'build back better' and set us firmly on the road to net zero.'

Dr Joanne Wade
OBE FEI, Deputy
Director, the
Association for
Decentralised
Energy

will be an inherent part of a number of these steps, whether that be for heat electrification, biofuels for aviation or clean hydrogen production.

For the aviation sector, EI members recommend increasing funding for research and development into low-carbon biofuels and synthetic fuels, as well as encouraging a shift to greater usage of other modes of transport. The impact of COVID-19 on the aviation industry may reduce passenger demand for years to come and could act as catalyst for reforming the sector.

Another area of transport requiring immediate policy action to move towards net zero is road freight. Here, EI members recommend shifting freight demand from road to rail and incentivising the development of hydrogen heavy goods vehicles (each with corresponding infrastructure upgrades).

Regarding home heating, energy efficiency is seen as key. Incentivising energy efficiency improvements for existing housing stock is the preferred first step of EI members, alongside incentivising low-carbon heating technology such as heat pumps and hydrogen boilers.

Will COVID-19 help or hinder?

There is an additional, unexpected challenge facing the energy industry this year — the COVID-19 pandemic. Over the month that the *Energy Barometer* survey was open (March 2020), the virus spread across the world, sparking a global health crisis and impacting many sectors of the UK economy as part of a national lockdown. For the energy industry in particular, COVID-19 has

led to challenges such as volatile energy prices, a huge drop in industrial and transport demand, and sector heavyweights such as Shell and BP announcing that they plan to cut thousands of jobs.

However, there is also hope among EI members that the pandemic will provide the industry with an opportunity to embrace the energy transition and build back 'better and greener'. In May 2020, the CCC wrote a letter to the Prime Minister Boris Johnson, setting out how 'effective climate policy can and should play a part in the recovery [from COVID-19]'.

EI members were in overwhelming agreement that the CCC's recommendations should be implemented by the government — at least 70% agree or strongly agree with each recommendation. The recommendations include prioritising climate-related investments to support economic recovery and job growth; and making support for emissions-intensive sectors contingent on them taking real, lasting action on climate change.

Furthermore, the pandemic has led to a change in social norms, which could be capitalised upon — for example, more people are working from home and avoiding business travel, which reduces demand, and therefore carbon emissions, in the transport sector. After experiencing benefits such as reduced air pollution and less time spent commuting, EI members recognise that the public may be more supportive of these sorts of new decarbonisation policies.

Citizen and consumer pressure is a crucial driver of the low-carbon transition, and it is important that individuals feel empowered to make

a meaningful contribution. EI members believe that the government can best enable this by investing in low-carbon infrastructure, and by making low-carbon products and services less expensive, for instance via subsidies.

When it comes to changing personal behaviours, energy professionals state that they themselves are ready and willing to change. This includes reducing air travel, switching to an electric or other low-carbon vehicle, and decarbonising home heating. For each option, at least 65% of respondents are fairly or very willing to change and feel fairly or fully able to do so.

Energy efficiency is a missed opportunity

Improving energy efficiency has been strongly advocated for by EI members consistently in *Energy Barometer* surveys, and it is also clear to see in their reflections on the past decade. Respondents named the lack of action on energy efficiency as the greatest missed opportunity for the industry in the 2010s — energy efficiency is seen as a low risk, 'no-regrets' option that has been constantly overlooked.

Indeed, an energy efficient retrofit of UK housing has been identified by EI members as the number one route to net zero and to recovery from COVID-19, because of its economic, social and environmental co-benefits. While some short-term measures have been announced, such as the Government's new £2bn Green Homes Grant, a scheme that will subsidise the cost of efficiency improvements including double glazing and insulation, this is not enough to kick-start or sustain the robust energy efficiency industry that EI members think is needed.

Despite the success of decarbonising the power sector, it is clear that the UK has a long way to go in order to meet its ambitious overall emission reduction targets. The pace of change will need to increase in the 2020s in order to meet the huge challenge of maintaining a UK energy industry that is resilient, sustainable and low-carbon. ●

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What do you think are the biggest challenges for the energy industry in 2020?

