

## VIEWPOINT

# Safety first for low carbon technology



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**T**he flash flooding causing damage to a dam near Whaley Bridge in northern England, Greenland's melting ice sheet and hurricane Dorian's destructive force in the Bahamas have been the latest stark reminders of the sort of impacts we can expect of our changing climate, and the need for radical change in how we power and fuel our way of life.

The rapid growth of low carbon technologies is vital to combatting climate change and transitioning to a low carbon future, and I'm inspired by the ingenuity of the engineers and other professionals bringing them forward. Whether it's floating wind turbines to reduce the carbon footprint of offshore oil production, trials injecting hydrogen into gas networks or the deployment of super-fast electric vehicle (EV) charging infrastructure, innovation across the world of energy is coming thick and fast.

But it's important we apply the same levels of discipline, rigour and good practice around health and safety (H&S) when working with these new, often unfamiliar, technologies, as we have for decades in conventional fuels.

So I'm glad to report the Energy Institute (EI) is doing precisely that as we extend our work into these new areas using the expertise in H&S that we've developed, applied and honed over the past century in oil and gas. We're extending the benefits to more of the workforce, in more parts of the industry, in more dynamic ways.

Let me give you three recent examples.

## *A new voice for safety in onshore wind*

Onshore wind is one of the cheapest sources of low carbon electricity. With almost 8,000 turbines in the UK generating enough power for 8mn homes, it's a dynamic industry employing thousands.

But it's also one that's experienced recent, tragic loss of life. So I'm very pleased about the establishment of SafetyOn, facilitated by the EI, to drive

collaborative improvements in H&S performance.

With 19 leading companies from the sector and the close involvement of the regulator, the SafetyOn programme is modelled on the EI's tried-and-tested G+ Offshore Wind Health and Safety Organisation, providing leadership in H&S, promoting transparency, and identifying and dealing with emerging risks through co-operation and shared learning.

The initiative has moved fast since it was set up in April. We are already embarking on collecting H&S incident data for the second half of 2019, which will start to inform the group's work programme and discussions at the first stakeholder forum in Edinburgh later in the year.

## *Storing up flexibility*

But the wind is intermittent and, with renewable power now meeting a third of the UK's electricity demand, the question of managing this variability has become pressing. It was one of the red flags raised by our UK members in this year's *Energy Barometer* survey. More than four in every five respondents called for incentivisation of technologies to provide system flexibility.

Battery storage is one of these technologies, helping time-shift generation as well as balance grid load – and it's another area where the EI is now active. We've just published guidance to help battery storage operators plan and assess risk, and for local authorities dealing with the huge surge in planning applications for storage facilities. Further work on dealing with battery fires and construction and maintenance are to follow.

The prescience of this work was brought home by the 9 August 2019 power failure which left almost a million homes and businesses in England and Wales without electricity. Not only were batteries instrumental in preventing more widespread problems, but concern to avoid a repeat of the incident has given the *Energy Barometer's* call for flexibility incentives fresh currency.

## *Putting safety in your hands*

It's not just the sectors we work in that are evolving, it's also how we get our H&S advice and guidance to those who need it. With the world, our workplaces and our expectations increasingly digital, the third innovation I'm pleased to mention is Toolbox, the EI's new web-based app (see p32–33).

Free to use, online or offline, on smartphone, tablet or laptop, Toolbox holds bite-sized incident lessons and safety information shared by the EI's global energy company partners. The ultimate goal is to ensure that those working in hazardous environments at the front line, in all parts of the world and all fields of energy, get home safely.

It's a great example of the EI using technology to fulfil its social purpose, and we were proud to demonstrate it to delegates at Offshore Europe in Aberdeen, and the World Energy Congress in Abu Dhabi, last month, where it got a very positive reception.

## *Tomorrow's energy professionals*

As the world in which we operate evolves, so do we. In collaboration with our industry partners and other stakeholders, the EI is working to define new good practice needed in storage, carbon capture, use and storage (CCUS), hydrogen and integrated networks.

Diversifying and expanding our work in this way means we continue our vital role in supporting operational excellence across the energy system. We are striving to ensure today's and tomorrow's energy professionals remain safe as they develop and deploy the exciting low carbon energy technologies needed to avert the worst impacts of climate change. ●

### Useful links:

EI battery storage guidance – [energy-inst.org/batterystorage](https://energy-inst.org/batterystorage)

Energy Barometer 2019 – [www.energyinst.org/barometer/2019](https://www.energyinst.org/barometer/2019)

Toolbox app – [toolbox.energyinst.org](https://toolbox.energyinst.org)

SafetyOn initiative – [safetyon.com](https://safetyon.com)

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