Editor's note

As new wind energy projects are rapidly constructed, onshore and offshore, the world's installed wind generation capacity is only set to escalate. But with growth comes challenges. In this issue of PES, we take a look at how the innovators in our industry are coming together to make light work of them.

How is lidar helping respond to the need for accurate and reliable wind measurement data? Can the problem of rain erosion damage to wind turbine blades be eradicated with leading edge maintenance? And is it really possible for underwater robotic systems to improve the efficiency of maintaining offshore wind monopiles and foundations? PES asks all these questions, and lots more, of the experts in the following pages.

We also look at the enormous potential that the North Sea holds for offshore wind, taking a trip to Norway, which after decades as a major exporter of oil and gas to mainland Europe, is now looking to offshore wind in its drive to transition to cleaner energy sources.

The focus turns to London in June, for the return of Global Offshore Wind 2023. The destination is timely, given that the UK now generates more of its electricity from wind turbines than gas.

According to research from Imperial College London, in the first three months of this year, a third of the country's electricity came from wind farms, with National Grid also confirming that April saw a record period of solar energy generation. By 2035 the UK aims for all of its electricity to have net zero emissions. Global Offshore Wind 2023 therefore promises to be a really good place to get to grips with the latest project achievements, market trends, innovations and ambitions for the sector as a whole, in the UK and beyond.

Later in the year, attention moves to Northern Ireland, for RenewableNI's Smart Energy Conference in October. Again, there is a lot to learn from this territory, which is striving to meet a goal of renewable electricity by 2030 and a carbon free power system by 2035.

Just days before this issue of PES Wind was completed, experts at the World Meteorological Organisation announced that there is now a 66% chance we will pass the 1.5C global warming threshold between now and 2027. That's a key temperature limit that has become a symbol of global climate change negotiations including the Paris agreement. Scientists say there is still time to restrict global warming by cutting emissions sharply, and no doubt the onus will now, more than ever before, be on wind farms, to help make that possible.

Only time will tell, but what is certain is that those involved in the sector are going to do their very best to turn goals into reality. The focus on harnessing wind power remains as important as ever and we look forward to continuing to bring you the latest news, views and solutions. Just days before this issue of PES Wind was completed, experts at the World Meteorological Organisation announced that there is now a 66% chance we will pass the 1.5C global warming threshold between now and 2027. That's a key temperature limit that has become a symbol of global climate change negotiations including the Paris agreement. Scientists say there is still time to restrict global warming by cutting emissions sharply, and no doubt the onus will now, more than ever before, be on wind farms, to help make that possible.

Elaine W Perjor

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POWER & ENERGY SOLUTIONS

Directors

Stuart Gillies Mark Smith Stefann Perrigot

Client Liaison Manager

Vikki Birch

Editor

Elaine Perrigot elaine.perrigot@pes.eu.com

Associate Editors

Stephen Pearson Zachary George

Design

Andrew Jenkins andrew.jenkins@pes.eu.com

Production

Paul Lawson paul.lawson@pes.eu.com

Sales Enquiries

sales@pes.eu.com

General Enquiries

enquiries@pes.eu.com

Media Partnership Enquiries

enquiries@pes.eu.com

Advertising Opportunities

sales@pes.eu.com

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P&G Media Ltd PO Box 310, Bristol, BS10 5WT, United Kingdom

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