

End-of-Life Issues for Wind Farms

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Introduction

Welcome to the second WindValue Conference To everyone who is here with us in the Environmental Research Institute Ellen Hutchins Building , today, and those who are joining us online.

The wind energy industry in Ireland and beyond is going to play a critical role in the decarbonisation of our energy systems. But it is faced with challenges on many fronts. Building out the new wind capacity is critical to meet climate action targets – for example 7 GW needs to be developed offshore in Ireland alone, as well as around 5 GW onshore, by a very ambitious target date of 2030. Very often the focus is on the challenge of building new capacity. There has been huge success. Around 100 GW per year is being added throughout the world , and the trend is upwards. We are now approaching an installed based of almost a terawatt of global wind energy capacity. However, nearly one-quarter of the onshore wind in North America will reach end of lifetime by 2030 and 34 GW of capacity will face decommissioning globally by 2030.

This is a significant part of the wind portfolio. Here in Ireland, much of the fleet was installed in the early 2000s and is now moving closer to end-of-life. The choices facing wind farms at the end of their planning permission or their end-of-life, include: decommissioning, life extension and repowering. But this raises questions about planning consent and financial decision making, two of the themes to be addressed at the conference. We'll hear different international approaches to the end-of-life of current wind farms, from Italy, the UK and Ireland. Repurposing of composite wind turbine blades has also emerged as a technically feasible and scalable solution to the issue of dealing with composite wind turbine blades at end-of-life and we will hear more about that from our first speaker Dr. Angie Nagle, CEO and co-founder of BladeBridge. I'm looking forward to the discussions today and thanks to the Irish Research Council for supporting this event and of course to Dr. Peter Deeney the Principal Investigator of WindValue for convening it.

Sources GWEC 2022 report