

Attwood Outlines Opportunities for Composite Industry Beyond COVID-19

Significant growth in wind energy and electric vehicles bodes well for the composites industry, as outlined in a presentation by Julia Attwood, Head of Advanced Materials for Bloomberg New Energy Finance (BloombergNEF). BloombergNEF is the global research arm of Bloomberg.

Attwood was a featured presenter at the IACMI Fall 2020 Virtual Members Meeting on Oct. 7.

It has been a difficult period for the aerospace industry and electric vehicle manufacturing during the COVID-19 pandemic. But if there is a bright spot for composites in the current COVID period, it is in the wind industry. Although orders were significantly down in the second and third quarters, Attwood said the wind industry is “what passes for a resilient industry these days. I should really stress that this is not as bad as we expected it to be. In fact, we have to keep continuing to revise our forecast upwards because wind power developers – they just keep building things.”

By far, the most promising opportunity is in the global on-shore and off-shore wind industry, particularly in Europe. “Installations grow steadily all the way to 2030,” she said. “Even in an enduring pandemic, there’s a clear rebound in 2021 from the low in 2020 because of all the uncertainty and a significant jump by 2026.”

“Overall, there’s been a march toward turbines with greater capacity and that naturally means greater blade lengths,” Attwood said. “By 2050, one turbine could be supplying as much as 12 megawatts,” she said, compared to the average of 4-5 megawatts for an onshore installation today. Offshore installations by 2050 could grow to 20 megawatts per turbine with rotor diameters as large as 300 meters, “which means significantly larger blades. That also means you need to start incorporating much more carbon fiber because you need that strength to support this much weight.”

Glass fiber is expected to be the dominant material in the structure of the blades, “but there is a growing and significant amount of carbon fiber,” she said