

Press Release · Pressemitteilung

WindEnergy Hamburg: Artificial Intelligence maximises performance

The digital transformation delivers additional impetus to the onshore and offshore wind energy industry. At WindEnergy Hamburg from 22 to 25 September 2026, innovative exhibitors will present AI tools enabling manufacturers and operators to boost the performance and efficiency of their units.

Hamburg, 30 July 2026 – Outwardly plain and inconspicuous, but packed with high-tech: Wind turbine systems use significantly more digital innovations and advanced technology than one might think at first sight, from smart network integration and highly efficient control systems to digital remote monitoring and AI-supported failure prediction. Especially AI and big data analytics are gaining in importance in the green energy business. Maintenance cycles are planned proactively, performance data evaluated with high precision, and operating strategies optimised progressively. A dedicated area in Hall A3 at WindEnergy Hamburg will feature exhibitors specialising in digitalisation and Artificial Intelligence solutions. “This is where companies will showcase software applications and smart technologies that enable manufacturers to tap new potential to maximise power generating performance,” says **Andreas Arnheim**, Director WindEnergy Hamburg and WindEnergy Asia-Pacific powered by RECHARGE.

Smart tools for more efficient operations

Wind forecasts play a critical role in this. More accurate predictions allow operators to plan the output of their turbines more precisely to enhance grid stability. Japanese exhibitor **BlueWX** will demonstrate an especially innovative solution. “Leveraging our patented wind prediction technology proven in aviation weather applications, we develop deep learning-based, site-specific, high accuracy wind prediction tools,” says Chief Executive Officer **Kaz Watanabe**. “We are very excited to demonstrate our technology and product in this exhibition and look forward to dialogues with those interested in improving forecasting.”

Increasing wind turbine yield with the help of AI is the purpose of the RegViento Controller offered by the Stuttgart-based company **MesH Engineering**, which aims to optimise wind farm performance through smart, coordinated turbine control. “At WindEnergy Hamburg, operators can directly use our tool RegViento Explorer to understand the capabilities of our controller and see the improved yield of a wind farm as it benefits from optimised central control,” says **Dr.-Ing. Matthias Kretschmer**, RegViento Project Head at MesH Engineering. “For example, it might make sense to slightly reduce the output of the front-line units or optimise their heading in a precisely controlled manner to minimise performance losses in the downwind portion of the wind farm. This can enhance the overall efficiency of the entire site.”

Another smart solution tailored to the industry's complex requirements will be demonstrated by AI specialist **Octonomy**. The platform stores all documentation related to a wind farm (including manuals, schematics, wiring diagrams etc.), answering queries with 96 per cent accuracy within seconds. Based in Cologne, the software company serves customers such as Prokon, one of Germany's biggest energy companies. Prokon operates and services wind farms across Germany. The software helps service teams diagnose system issues with greater accuracy, and plan interventions more efficiently. "Octonomy helps us reduce our service trips by 50 per cent. Their system gives us the level of security our critical infrastructure needs," says **Dr. Yousef Farschtschi**, Head of IT at Prokon.

Sophisticated algorithms for troubleshooting

Today's wind turbine systems are equipped with plenty of advanced technology. Various sensors constantly capture monitoring data during operation and transmit them to the centralised control stations and monitoring systems. Smart panoramic cameras avoid collisions with protected birds of prey such as red kites and white-tailed eagles. Advanced software companies provide the means to perform smart evaluations based on operating data. The Turkish exhibitor Kavaken has developed an AI-based platform that identifies anomalies (deviations) in equipment behaviour, such as an unusual temperature increase in a critical component or a sudden loss of wind turbine performance. Interventions like these enable operators to avoid major damage by making minor adjustments, thereby extending the equipment lifespan.

Early detection of hidden damage is the aim of the British startup company Werover and its product "Windrover". The system uses a sensor magnetically attached to the wind turbine tower to record acoustic signals emitted by the rotor blades. It detects sonic anomalies, for example when a blade has been hit by lightning. Balca Yilmaz, CEO and co-founder of Werover, explains: "With Windrover, operators don't need to physically inspect blades regularly, so this reduces downtime and costs."

Integrated Process Data Management (IPM) is the name of a well-established industry solution offered by **CSP Intelligence**. The Bavarian software firm's platform likewise uses Artificial Intelligence to evaluate process and quality information, detect inconsistencies early, and improve quality assurance in production. "Our Curve Anomaly AI automatically reports on safety-critical bolted connections, using camera-based computer vision technology to verify correct execution of an assembly step," explains **Philipp Glässer**, Product Manager at CSP. This holds great benefits for wind turbine manufacturers: Monitoring high-stress bolted connections at the tower, the rotor blades and nacelle are checked during assembly avoids execution errors that could have severe consequences at a later time.

The solutions presented by these and other exhibitors demonstrate how data-driven innovations are changing the industry. "Whether it is manufacturers and suppliers or wind farm operators and software specialists, whether they are well-established companies or innovative startups, we can see that direct interaction between industry stakeholders is a key prerequisite for a successful digital transformation," says **Claus Ulrich Selbach**, Vice President Exhibitions Maritime & Energy at Hamburg Messe und Congress. "WindEnergy Hamburg provides a unique opportunity to establish new business ties in face-to-face conversations, maintain networks, and pick up some fresh ideas for one's own business."

About WindEnergy Hamburg

From 22 to 25 September 2026, WindEnergy Hamburg, the world's leading wind industry fair, will once again be the pivotal networking hub for experts, companies and investors from around the world: At the exhibition complex of Hamburg Messe und Congress, right in the heart of the famous German port city, more than 1,600 companies from roughly 40 countries will present their innovations and solutions to 43,000 participants from around 100 different nations. Covering more than 83,000 m² of exhibition floor, equipment manufacturers and suppliers representing all stages of the onshore and offshore wind energy value chain will provide a comprehensive market overview. The new Energy Storage expo area, located in a hall of its own (A2) with roughly 3,600 square metres of floor space, will put the spotlight of the flagship fair on energy storage technology. The exhibition will be accompanied by freely accessible conference sessions where top-ranking experts will address the industry's key topics. Featuring more than 300 renowned speakers on six open stages, this free conference programme is organised by the WindEnergy Hamburg team jointly with its partners, including the Global Wind Energy Council (GWEC), the European industry organisation WindEurope, the national industry associations Verband Deutscher Maschinen- und Anlagenbau (VDMA, Europe's largest engineering association) and Bundesverband WindEnergie (BWE), as well as leading industry media and enterprises. Highlighting its global relevance, WindEnergy Hamburg is pleased to announce a successful cooperation project: On 19 and 20 May, the RECHARGE Wind Power Summit Asia-Pacific powered by WindEnergy Hamburg had its premiere in Singapore. A continuation of the format titled WindEnergy Asia-Pacific powered by RECHARGE is planned in Singapore from 25 to 27 May 2027.

WindEnergy Hamburg Connect

The smart event & networking platform [WindEnergy Hamburg Connect](#) provides digital features complementing the physical trade fair to let participants prepare and organise their presence and follow up with ease. The platform is available to exhibitors and visitors as both, a desktop and mobile app. It provides all key information from a single source to help ensure a seamless and successful trade fair experience. Registration for the app requires a valid trade fair ticket or exhibitor pass.

Opening hours and further information

WindEnergy Hamburg 2026 will open from 10:00am to 06:00pm Tuesday 22 September to Thursday 24 September, and from 10:00am to 04:00pm on Friday 25 September. It is accessible from the entrances at Messeplatz (Centre), St. Petersburger Straße (East), Karolinenstraße (South) und Lagerstraße (West). All visitors in possession of an online ticket will be able to travel to the flagship fair in an especially sustainable manner: Every visitor ticket purchased online includes a ticket to and from the fair on Hamburg's public transport system.

For more information as well as photos and press releases for downloading, please visit [Join the global on & offshore event - WindEnergy Hamburg](#) or the [LinkedIn](#) or [Instagram](#) channels.

Press contact: Jusrah Doosry ph.: +49 (0)40 3569-2447
E-mail: jusrah.doosry@hamburg-messe.de