



TELL US ABOUT THE COMPANY'S BACKGROUND AND HOW IT CAME TO BE FOUNDED.

WindGuard North America is a company within the WindGuard Group, which is headquartered in Germany. The main company, Deutsche WindGuard GmbH, was founded by Dr. Knud Rehfeldt in 2000. He had established the DEWI office in Spain prior to launching the company. DEWI is a state-funded entity that conducts research and provides various services to the international wind industry. He was on his own in the early days, focusing on due diligence and site assessment, and then former colleagues from DEWI began joining him as the company grew, lending their expertise to help build Deutsche WindGuard's range of services and capabilities. So this is a company made up of a team of professionals that are literally second to none.

WHEN DID YOU ESTABLISH NORTH AMERICAN OPERATIONS?

The decision was made in 2007 to start offering our services in the U.S. The office here in Springfield, Virginia, was opened in 2010 so that we could share our services with OEMs, wind farm owner/operators, and others throughout North America. I mentioned that we are a company within the WindGuard Group, and we have sister companies devoted to technical inspections, offshore, consulting, and site assessment services, among others. We represent all of those companies and related services here at WindGuard North America. I am a trained technical inspector for wind turbines myself, so when a client requires technical inspections I pull together and lead a team from Germany, determining the size of the group by the scale of the project. We are accredited by the DAkkS—the

Deutsche Akkreditierungsstelle GmbH, which is the national accreditation body for the Federal Republic of Germany—as an inspection body for wind turbines according to DIN EN ISO/IEC 17020, so we are held to very high standards in terms of our technical knowledge and skills. We can also help settle disputes between owners and OEMs providing inspection services, where we conduct our own inspection as an independent third party and present the results for the purposes of comparison. Other services we provide in the area of technical inspections and management include rotor blade inspections, video endoscopy and oil analysis, technical management, and performance optimization. We have also developed the WONDERv2 wind farm management system, which provides a platform for collecting and analyzing wind turbine operational data and can be used with any turbine with remote monitoring capabilities. WONDER is currently transitioned to be net-based. We also conduct power curve measurements to make sure turbines are performing as expected, and vibration analysis to ensure system integrity and help to avoid expensive breakdowns. Our site assessment activities involve everything from wind measurement—we'll sell customers the equipment or do the work ourselves, and we generally suggest gathering at least 12 months of uninterrupted data to get a clear idea of a site's potential—in addition to site assessments, anemometer calibration, and LIDAR/SODAR remote wind sensing. Offshore services include consulting and safety training. Another scenario might involve a bank or a developer requiring due diligence, where we would assemble a group from WindGuard Consulting to handle that project. So we provide a full range of services, as you can see, and we possess expertise in nearly every aspect of the wind energy industry.

DESCRIBE YOUR WIND TUNNEL CENTER IN GERMANY. IT SOUNDS VERY IMPRESSIVE.

It really is. We have two proprietary wind tunnels that are primarily used for calibrating anemometers, with two more in the works. They are also used by OEMs in the development of their flow and wind direction sensors. Then we have a climatic and icing wind tunnel that is used for testing anemometers and measurement devices that will be used in extreme environments, which is often the case with wind farms. One of the things we are testing for there is the effect ice has on the accuracy of measurements, and we also test the heating devices used to mitigate icing. Finally we have the large acoustically optimized wind tunnel, designed to test the aerodynamics of turbines, full-sized blade segments, and models of whole wind farms. This huge tunnel is often used for the aerodynamic and acoustic testing of new turbine designs and other equipment used in the wind industry. So we see ourselves as both an asset and a resource for OEMs and owner/operators around the world, and we have a growing list of satisfied clients to point to here in the United States as well. Whatever the challenge, we're definitely equipped to help identify a solution. ↵

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