

News release from Vestas Wind Systems A/S

Aarhus, 6 February

To maximise wind energy production in cold climates, Vestas introduces new anti-icing system and ice assessment tool

Today, at the cold climate conference WinterWind in Sweden, Vestas introduced an advanced anti-icing solution to boost the business case for wind power plants in cold climates by removing ice-built up on the blades that would otherwise reduce wind turbines' annual energy production (AEP).

Vestas Anti-Icing System™ is based on electro-thermal heating elements embedded in the laminate directly below the blade's surface. The control system includes different operational modes allowing the heating elements to separately create the optimal heating level, increasing effectiveness and minimising energy consumption. This results in fast and targeted anti-icing action tailored to the specific icing situation. Vestas Anti-Icing System™ is designed to operate both in rotation and standstill, thereby being applicable from low to high ice severity.

In most common icing conditions, Vestas Anti-Icing System™ ensures a minimum of 90 percent production retention, improving the customer's business case certainty by reducing the Lost Production Factor. The system complies with the latest warranty guidelines.

"Vestas Anti-Icing System™ significantly increases the potential for wind production in many cold climate locations where the risk of icing has constrained the otherwise excellent wind resources" says Brian Daugbjerg Nielsen, Senior Product Manager in Vestas Product Management, "Leveraging our technological leadership, the Anti-icing system will provide substantial value to customers who want to maximise the wind power potential in colder climates with icing risk".

Vestas estimates a potential market size up to 14.6 GW from 2018 to 2026, mainly in Sweden, Finland, Norway and Canada.

In addition to the Vestas Anti-Icing System™, Vestas introduces the siting tool Vestas Ice Assessment™, using metrological models and algorithms to ensure an industry-leading accurate and precise ice assessment down to turbine level. With the introduction of these two new in-house developed solutions, Vestas now offers the widest portfolio of cold climate solutions in the industry.

Building on 16 years of experience within cold climate and 4 GW of installed turbines in ice-prone sites (above IEA ice class II), the two new cold climate solutions are developed and optimised based on extensive performance data insights, gathered from thousands of turbines in cold climate sites.

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About Vestas

Vestas is the energy industry's global partner on sustainable energy solutions. We design, manufacture, install, and service wind turbines across the globe, and with 87 GW of wind turbines in 76 countries, we have installed more wind power than anyone else. Through our industry-leading smart data capabilities and unparalleled more than 73 GW of wind turbines under service, we use data to interpret, forecast, and exploit wind resources and deliver best-in-class wind power solutions.

Together with our customers, Vestas' more than 22,700 employees are bringing the world sustainable energy solutions to power a bright future.

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