

PRESS RELEASE

For immediate release

Leosphere receives validation of Wind Iris TC (Turbine Control) Lidar with respect to wind turbine type certification from DNV GL

Paris, France 25th June 2018. The Wind Iris TC Lidar has been validated by DNV GL – Energy Renewables Certification to be integrated as a component of today’s advanced wind turbines with respect to Type Certification.

Thanks to the extensive and trustworthy review of all necessary features including design for successful operations, advanced wind measurements capabilities as well as system reliability, lifetime and services, the Wind Iris TC has proved being completely mature and suitable technology to be integrated in an efficient manner into today’s leading-edge wind turbines meeting all the rigorous wind industry standards.

“Wind Iris TC has a high level of maturity and is well prepared for an integration into a wind turbine with respect to Type Certification”, said Steffen Haupt, Head of Department Loads, Site Conditions & Electrical Engineering. “A subsequent Type Certification process of the newly combined system will be initiated by the wind turbine manufacturer.”

Validating the Wind Iris Turbine Control Lidar enables the acceleration of the development and further commercialization of Lidar Assisted Control technology. This means the industry can rely on an approved standard product for future validations, enabling faster, cheaper and low risk Lidar Assisted Control development and secure Type Certification of new wind turbines incorporating the Wind Iris TC. “It has been both challenging and a pleasure to work with DNVGL”, said Matthieu Boquet, Product line Manager for the Wind Iris TC. “The validation of Lidar as a turbine component clearly marks a milestone for this technology and the beginning of real commercialization. It’s a great day for us.”

Lidar Assisted Turbine Control

Lidar assisted turbine control technology enables the turbine to see a few seconds into the future. The Lidar, combined with advanced data analysis, control algorithms and leveraging the accurate capture of multi-dimensional wind information, significantly reduces fatigue and peak loads.

The system uses four beams to capture all relevant events and provide the most representative wind information. By using ten simultaneous measurements at a frequency of 4Hz across the 200m range, the Wind Iris TC captures events several seconds before they reach the rotor plane and tracks them as they evolve, providing complete characterization of the wind field. Early perception of the inflow of wind information enables manufacturers/operators to significantly achieve typical loads reduction between 10-20%.

When installed as a part of a turbine construction, Lidar assisted turbine control technology can redefine wind turbine design limits by mitigating extreme events, increasing energy capture and reducing loads. For specific projects, turbines can be equipped with larger rotors enabling significant reduction of Cost-of-Energy and lighter towers for overall reduction of wind turbine cost improving power generation and project ROI.

After integration of the Wind Iris TC into a wind turbine the manufacturer evaluates if all interfaces between the Wind Iris TC and the wind turbine are designed appropriately to implement LAC as a feature into the wind turbine meeting the expected performance of the system as a whole. To achieve a Type Certification, the newly combined wind turbine system is assessed as a whole. This may result in further questions and comments for certification.

END

NOTE TO EDITORS:

About LEOSPHERE

LEOSPHERE, founded in 2004, is the world leader in ground-based and nacelle-mounted LIDAR (Light Detection and Ranging) for atmospheric observation. The company designs, develops, manufactures, sells and services remote-sensing instruments for precise accurate wind measurement and aerosol characterization. LEOSPHERE has deployed over a thousand LIDARs throughout the world.

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