

LIGHTNING RISK MITIGATION IN THE WIND INDUSTRY: **MÉTÉORAGE WILL SHOWCASE ITS SOLUTIONS DURING WINDEUROPE BILBAO 2022**

A German retrospective study highlights that 80% of the wind turbine insurance claims paid for damage compensation were caused by lightning.¹ Météorage, French operator of the European lightning network, proposes professional solutions adapted to wind farms managers to better deal with the risk of lightning in their activity. Their services can be found on stand 3-E43, at the WindEurope exhibition in Bilbao.

Due to their height, their geographically isolated location and the rotation of their blades, wind turbines are particularly vulnerable to lightning strikes. Every year, incidents due to lightning occur, sometimes with significant human consequences for the maintenance teams on site or production losses that can amount to several hundred thousand euros.

Pioneer in storm detection, Météorage scans the European sky permanently thanks to a network of sensors distributed homogeneously throughout Western Europe. Using a state-of-the-art technology, whose efficiency has been globally recognized during a comparative study validated by the WMO, Météorage detects 98% of the lightning activity in Western Europe².

With 35 years of expertise, the company supports its subscribers with the most advanced needs, for a better management of the risk related to thunderstorms on their sites, in real time as well as in past time. Thanks to its proven knowledge of storms, the company delivers solutions that are genuine decision-making tools, enabling wind farm managers to:



- **Evaluate the level of lightning risk of an area**, particularly during the project or park installation phases.
- **Provide real-time alarms in the event of a storm threatening one or more wind farms**, so that teams can be brought to safety in good time. To limit production downtime and thus optimize financial losses, the company has set up an end-of-alert system that allows the manager to resume his activity in complete safety. In accordance with the efficiency requirements issued by the international community on the Thunderstorms Warning Systems, the Météorage alarm service is **compliant with the IEC 61400-24 / IEC 62793 standards**.
- **Follow the storm activity in live** and thanks to the representation of the storm cells, to visualize the predictions at 1 hour as well as the associated dangerous phenomena, for a finer vision of the episode and a faster decision of action.
- **Check the situation after the occurrence of a thunderstorm** and to prove to the insurance companies the responsibility of lightning in case of damage or breakdown on a wind turbine.

Thanks to the use of the GLD360 network, the company is also in position to provide its services and extend its know-how to wind farm operators located all over the world. 100% digital, Météorage's solutions are designed to be used autonomously: no installation or maintenance is required to ensure their proper functioning.

Today more than 100 players in the wind energy sector throughout the world trust Meteorage.

To allow all professionals in the wind energy sector to learn more about the solutions available, Météorage experts, together with their Spanish partner Tesicnor, will be present on stand 3-E43 at the WindEurope exhibition in Bilbao.

ABOUT METEORAGE. Since 1987 Météorage, subsidiary of Météo-France, has been detecting thunderstorms. Operator of a network of sensors originally in France and now covering Western Europe, the company is a specialist in thunderstorm risk mitigation and develops advanced algorithms, such as that of thunderstorm cells. To date, 60% of CAC 40 companies trust Meteorage to regulate their risks. The operator works with local authorities and in all sectors of activity, energy, industry, media, tourism, transport, etc. Météorage also contributes to numerous research projects in collaboration with major names in the public and private sectors (CNRS, Orange, CNES, ABB, etc.), constantly seeking to innovate, as was the case in 2016 with the identification of severe episodes based on "lightning jump". The company was awarded for its safety contribution by AFNOR in 2019, in the category "protecting people and the environment."

¹ Heppel-Klapper, M. & Durszewski, M.: 1995 "Blitz und Überspannungsschutz von Windkraftanlagen" - Institut für solare Energieversorgungstechnik (ISST), BMBF - Gespräch Blitzschutz von Windkraftanlagen, Bonn, 19.01.1995.

² "LIGHTNING DETECTION SYSTEMS Report on the Performance Evaluation of the VLF/LF Lightning Sensors" Tokyo, Japan, 5 - 8 October 2015 - WORLD METEOROLOGICAL ORGANIZATION - JOINT MEETING OF CIMO EXPERT TEAM ON OPERATIONAL REMOTE SENSING TECHNOLOGIES (ET-ORST) (First Session) and CBS EXPERT TEAM ON SURFACE-BASED OBSERVATIONS (ET-SBO) (Second Session).