Lightning Threat Zone for Wind Energy

Product Spotlight

VAISALA

Localized, real-time awareness of thunderstorm and lightning risks

Thunderstorms are dangerous, difficult weather factors for wind energy stakeholders to manage. Crews have traditionally had to deal with thunderstorms reactively and imprecisely — putting lives, valuable assets, and operational continuity at risk.

Key benefits

Incremental forecasting capabilities on thunderstorm cells up to 60 minutes out in 10-minute increments.

Global coverage with 99.99%+ uptime, providing high-quality lightning data that does not depend on other weather inputs.

Additional lightning information layer that includes forecast polygons and velocity vector data for each identified storm so users can better predict their lightning risk.

Quality lightning data powered by superior detection networks that accurately identify the most lightning events in the world.

A single source for global coverage that captures lightning and storm data even for the most remote locations.

Simple API query that can easily integrate into third-party weather systems and platforms.

Why Vaisala?

We are innovators, scientists, and discoverers who are helping fundamentally change how the world is powered. Vaisala elevates wind and solar customers around the globe so they can meet the greatest energy challenges of our time. Our pioneering approach reflects our priorities of thoughtful evolution in a time of change and extending our legacy of leadership.

Vaisala is the only company to offer 360° of weather intelligence for smarter renewable energy, nearly anywhere on the planet. Every solution benefits from our 85+ years of experience, deployments in 170+ countries, and unrivaled thought leadership.

Our innovation story, like the renewable energy story, continues.

Lightning Threat Zone, part of our Xweather family of subscription based products, lets you observe, anticipate, and mitigate passing thunderstorms with precision. Available with Vaisala's Thunderstorm Manager, or via an API for direct integration into your systems, it analyzes data from Vaisala's world-class Global Lightning Dataset (GLD360) and National Lightning Detection Network (NLDN). The result is localized, timely, actionable insights when safety and operational continuity matter most.

Applications:

- Detailed thunderstorm tracking for threat assessment, improved forecasting, and reliable, confident operational decisions
- Localized warnings built into broader weather and forecasting practices to provide the most relevant information to the right people
- Minimizing costly downtime, maximizing safety, and protecting key wind energy assets