Thunderstorm Manager for Wind Energy
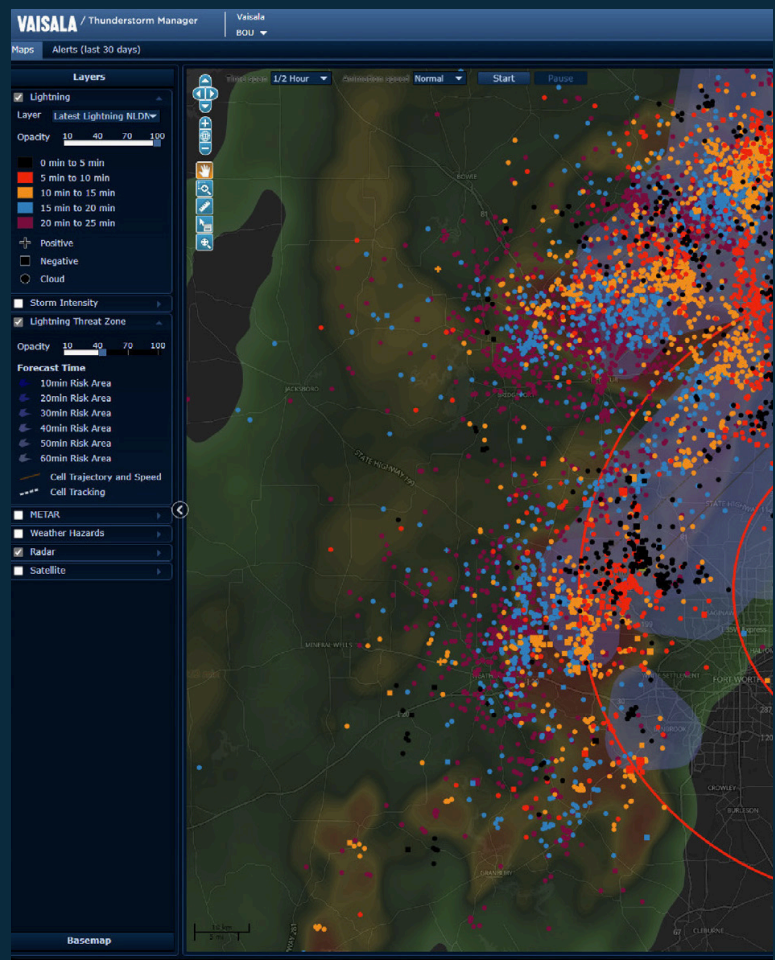
Product Spotlight

Modern software for real-time storm awareness and improved safety

Personnel safety and operational efficiency are critical priorities in onshore and offshore wind energy farms. With Vaisala Thunderstorm Manager, part of our Xweather suite of weather and environmental data services, operators can protect technicians, improve operational resilience, and manage risks from lightning, tropical cyclones and severe storms.

Key benefits

Versatile display options let you see what matters most. Map layers include lightning (cloud-to-ground and in-cloud with a color-coded time stamp), satellite infrared, radar, temperature, wind, tropical cyclones, meteorological service alerts and more.

Lightning Threat Zone shows you if storms are moving toward or away from your wind farm. It visualizes storm cell trajectories and risk areas in 10-minute intervals up to 60 minutes in advance.

Create per-site alerts to meet or exceed industry standards for safety and compliance.

Thunderstorm Manager supports three levels of alerts (information, warning and alarm), custom trigger distances, custom alert areas, and a choice of triggering criteria.

Connect Thunderstorm Manager to on-site systems

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.

Particularly during wind farm construction and operation, crews and equipment are exposed to significant storm risks. Thunderstorm Manager delivers an all-in-one solution for real-time storm monitoring and automated alerts for any location in the world, so you know exactly when to pause operations and when it is safe to resume.

Thunderstorm Manager draws data from Vaisala's Global Lightning Dataset (GLD360) and National Lightning Detection Network (NLDN) — the most trusted lightning detection networks in the world — for uncompromising performance. Cloud-based convenience and an intuitive, web-based interface let you monitor threats and alerts from any connected computer or mobile device.

Applications:

· Improve site safety with realtime storm tracking and protect construction and operations personnel with automated alerts; use the secure API to integrate alerts into your operational protocols
· Monitor storms and tropical cyclones to protect offshore assets and keep operations running; review the 30-day alert history to prioritize inspections and repairs
· Automatically warn construction crews and technicians with beacons and sirens to stop work and seek shelter, and send all-clear notifications when it is safe to resume work