



BROCHURE

# Weather Monitoring, Forecasting, and Alerting for Renewable Energy Generation



# Addressing the challenges of severe weather

Renewable energy is a huge piece of our global future when it comes to addressing climate change head-on and preserving quality-of-life for people everywhere. At the same time, our increasingly hot, dry, windy climate and volatile weather patterns are also creating new challenges when it comes to building and operating renewable energy farms.

Whether you're working in solar or wind-powered generation, it can feel like Mother Nature is doing everything she can to make clean energy progress challenging. That's why AEM is here to help.



## OUR UTILITY CUSTOMERS SAY:



These forecasts help us to manage costs, risks, supply chain and material planning, increase security for maintenance tasks, and plan better for utilization... We have also integrated a procedure for remote stop and restart of wind turbines before and after a severe weather event has happened. This has improved the performance of our wind farms while ensuring our assets' integrity.

— **Nekane Martinez Vadillo**

Product Manager,  
Weather & Energy Forecasting Systems  
Siemens Gamesa

## How does AEM support renewable energy?

We provide high-accuracy hyperlocal forecasting and rugged weather monitoring technologies to help renewable energy providers address the growing challenges posed by weather and climate. We connect you with better, more specific data so you can maximize operational efficiency while providing a high standard for safety.



### ENERGY FARM PLANNING

We help you optimize your solar or wind farm's generation capacity and stability by providing the weather sensors and software you need to fully understand your site before breaking ground.



### REAL-TIME WEATHER MONITORING

We help you maximize operational continuity and severe weather preparedness by bringing live weather data from your energy farm to a centralized command center for review and decision-making.



### EMPLOYEE SAFETY & ALERTING

We help you keep your field service workers safe by providing a variety of automated alarms and alerts that let them know when dangerous weather is approaching, occurring, and over.

# AEM's offerings for renewable energy

1

## REAL-TIME WEATHER MONITORING STATIONS

- Review live conditions and gather historical data
- Send data back to the command center via cellular



VANTAGE PRO2



UV SENSOR

2

## LONG-TERM WIND & SOLAR RADIATION MEASUREMENT

- Understand your farm's true potential & daily strain
- A foundation of data for study & continuous improvement



U[SONIC] WIND SENSOR



ICELOAD SENSOR

3

## LIGHTNING DETECTION AND ALERTING SOLUTIONS

- Comprehensive real-time lightning maps
- Sirens, horns, strobes, and automated alerts for worker safety



SFERIC MAPS



EARTH NETWORKS  
TOTAL LIGHTNING NETWORK®

4

## REAL-TIME REMOTE VISUALIZATION OF THE FIELD

- 360° point-tilt-zoom cameras with automated guard tours
- Automated review notifications for detected anomalies



SFERIC SIREN



PTZ CAMERA



## Let's start a conversation

At AEM, we appreciate that each energy company's needs are unique to their risk management and business cultures just as much as their service area's climate and geography. That's why our team of renewables solutions experts is here to help you craft an end-to-end weather alerting system that works for your team, your needs, and your budget.

To learn more about how we can help you maximize operational continuity and keep people safe in the face of growing weather risks, **be sure to contact AEM today** so we can start a conversation about solution alignment for your needs.



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