

Meteomatics Delivers NVIDIA-Powered, AI-Based Weather Forecasts to Energy Companies Within Minutes, Rather than Hours

New Technology Pairs Real-Time, Hyperlocal Weather Data with Generative AI to Power AI-Based Weather Forecasts Within 90 Meters

EXTON, PENNSYLVANIA, USA, March 19, 2024 /EINPresswire.com/ -- [Meteomatics](#), the weather intelligence and technology company that enables the world's leading companies to accurately forecast the weather's impact on business, today announced a collaboration with NVIDIA to expedite the delivery of real-time weather forecasts—within a 90-meter radius—to companies around the globe.

Meteomatics, in collaboration with NVIDIA, will conduct initial pilots with three energy companies, ENGIE, Louis Dreyfus Company and TotalEnergies, to test their ability to consistently deliver weather forecasting within minutes, rather than hours. Following the initial pilots, Meteomatics will open its AI-powered weather data delivery service to the wider business community, with an immediate focus on renewable energy forecasting, the related insurance business and trading.

Traditional energy sources are becoming increasingly reliant on renewable energy sources like solar, wind and hydropower to meet [growing energy demand](#) and support the global commitment to [net-zero emissions](#). Because renewable energy sources are dependent on daily weather conditions and seasonal variations, even a minor fluctuation can impact how much energy is produced. The ability to quickly and accurately predict these weather shifts is critical for energy companies to integrate renewable sources more efficiently and drive profitable trading.

Currently, Meteomatics can deliver hyperlocal weather forecasts hours before weather conditions unfold using its physics-based weather models. By leveraging NVIDIA's cloud APIs, Meteomatics will now be able to deliver AI-based weather forecasts in minutes. For energy companies, this will result in a competitive advantage, as they can anticipate weather shifts earlier and adjust trading appropriately.

NVIDIA generative AI technology can produce up to 2 km-scale weather forecasts informed by

Meteomatics' real-time weather data. The forecasts are leveraged by Meteomatics' downscaling pipelines, which today produce detailed landscape conditions within a 90-meter radius and are delivered through Meteomatics' Weather API. For example, the company's downscaling approach adjusts forecasts for the difference in temperatures between the peaks and valleys of mountains to improve accuracy. The resulting downscaled forecasts are delivered to companies through Meteomatics' Weather API, which allows users to easily consume the data and put it into action.

"Our work with NVIDIA will help energy companies maximize their renewable energy operations and increase their profitability with quick and accurate insight into weather fluctuations," said Martin Fengler, CEO and Founder, Meteomatics. "As we continue to expand these capabilities to the wider business community, we'll be simultaneously equipping companies with a full collection of weather forecasting sources."

The main advantage of AI-based weather forecasting is it shortens the time needed to run and calculate the model. Traditional models usually take several hours, while AI models usually just take minutes, or even seconds. With Meteomatics, AI models are refined based on 90m-downscaling to an output much closer to actual observation data from stations. This leads to a significant advantage for trading energy or commodities.

"Weather impacts every single business, and for energy companies it's one of the most challenging factors to using renewable energies at scale," said Dion Harris, Data Center Product GTM at NVIDIA. "Our work with Meteomatics will bring AI-powered weather forecasts to energy companies, and soon to other industries, more quickly and accurately."

Meteomatics powers high-quality forecasts for nearly 700 companies around the world, including CVS Health, Tesla, Swiss Re, Airbus and Toyota. The company's weather models are fueled by data collected by its Meteodrones—weather drones capable of flying up to 6 km (20,000 feet)—and 110 other data sources, including satellites, radars and weather stations.

About Meteomatics

Meteomatics is a weather intelligence and technology company that creates precision forecasts of the weather's impact on businesses anywhere in the world at any time. Nearly 700 companies, including Tesla, Swiss Re, Airbus, Toyota, Volkswagen and EDF Energy, rely on Meteomatics for weather data that can significantly impact everything from energy savings, logistics and process automation to risk management and product design. The company's robust approach to weather data collection, modeling, visualization and delivery rivals even the most sophisticated government and commercial services. Its autonomous Meteodrone paired with high-resolution weather models enables granular visibility (down to a single square km) into weather phenomena that are not regularly or accurately observed by traditional weather sensing technology. Meteomatics is headquartered in Switzerland, with local U.S. operations based in Pennsylvania.

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