

Circet Italia elevates solar operations with advanced weather monitoring

VAISALA

Case Study



The client:

Circet Italia S.p.a.

Vaisala solution:

Automatic Weather Station
AWS810 Solar Edition

*Trino solar park in Italy, Vercelli, Piedmont.
Image source: Enel Green Power*

Circet Italia is part of the Circet Group – a global telecommunications leader active in 14 countries with over 15,000 employees, and specializes in telecommunications systems and networks, renewable energy, and transportation. In the renewable energy sector, Circet Italia is recognized as one of Italy's top ten engineering, procurement and construction (EPC) companies.

Eurelettronica Icas, the longtime Vaisala Weather Partner in Italy, provided Circet the solution to ensure accurate weather monitoring at their customers' solar power plants across the country by supplying and installing Vaisala Automatic Weather Station AWS810 Solar Edition.

THE CHALLENGE:

Getting accurate weather insights to enhance operations

In the rapidly growing solar energy sector, accurate, reliable and easily deployable weather monitoring systems is crucial – particularly as projects scale in size and complexity. Accurate weather data is indispensable in optimizing performance and ensuring the reliability of solar energy systems, from initial site assessment through long-term operations.

Circet faced the challenge of finding a weather station that could meet their demanding customer specifications, provide high-quality data, and seamlessly integrate into existing operations. The right solution also had to withstand the harsh environmental conditions

"Our experience with AWS810 Solar Edition has been very positive. Its ease of deployment, robust performance, and comprehensive support make it an ideal choice for solar energy operators. For those seeking to enhance their solar operations, it stands out as one of the most reliable and high-quality weather monitoring solutions on the market."

*Stefano Rabottini
Project Manager, Circet Italia*

often encountered on solar energy farms while offering the flexibility to adapt to evolving needs.

THE APPROACH:

Exceptional weather data accuracy with future-proof technology

To address these challenges, Circet Italia worked with Eurettronica Icas to integrate the Vaisala Automatic Weather Station AWS810 *Solar Edition* at several of their solar energy projects.

AWS810 *Solar Edition* is a complete solution equipped with masts, mechanical interfaces and best-in-class instruments, including the Vaisala Weather Transmitter WXT530, pyranometers and panel temperature probes. These components ensure accurate and reliable weather data collection, critical for optimizing solar energy production.

Eurettronica Icas together with Vaisala provided exceptional support from the initial bidding stage, ensuring Circet had the guidance needed to select and implement the best solution for their needs. AWS810 *Solar Edition* offers an open and modular design, allowing for easy modifications and updates as operational needs change. The capability to interface with Vaisala's cloud solutions further enhances its adaptability.

THE RESULTS:

Improving output and grid interactions, and reducing weather risks

Integrating AWS810 *Solar Edition* into Circet customers' daily operations has provided numerous benefits. Accurate weather data is essential for calculating the Performance Ratio (PR), a key indicator of a solar plant's efficiency. AWS810 *Solar Edition* provides precise irradiance values so Circet can monitor, optimize and improve their solar energy output.

By supplying real-time irradiance data to Terna, Italy's main grid operator, Circet can efficiently manage grid interactions, including the ability to disconnect plants from the grid when necessary. Circet uses the weather data to plan cleaning and maintenance activities more effectively, ensuring that solar panels operate at peak efficiency. Detailed weather data also supports insurance claims, especially hail events, and helps mitigate financial risks associated with extreme weather.

Circet also benefits from the reliable local support of Eurettronica Icas, giving them the confidence to expand the install base of AWS810 *Solar Edition* weather stations. This expansion allows for shared spare components, easier deployment of software updates, and a streamlined approach to maintenance and operational efficiency.

Why Vaisala?

As the global leader in weather and environmental measurements, Vaisala empowers businesses and community leaders to build resilience to climate change and extreme weather events. Our nearly 90 years of expertise is grounded in science, innovation and our unwavering commitment to constantly evolving.

We boldly demonstrate that a culture of resilience and a connection to nature can create new ways of smarter, resilient living. We are champions for smarter, safer and more sustainable urban communities.

