

Great River Energy Partners with Prisma Photonics to Deploy Advanced Grid Monitoring Solution Across Minnesota

Prisma Photonics' State of the Art Technology Leverages Existing Fiber Optic Infrastructure to Enable Real-Time Grid Monitoring for Extreme Weather Threats like Icing and Wildfires

MAPLE GROVE, MINN. (January 14, 2025) – Great River Energy, the not-for-profit power cooperative serving 1.7 million people across Minnesota and Wisconsin, today announced a partnership with Prisma Photonics to deploy its PrismaPower™ monitoring technology across approximately 90 miles of transmission lines in northern Minnesota. The partnership will enable real-time monitoring and notification of threats to Great River Energy's power lines and to its member-owners and customers. These threats include wildfires, icing, wind and physical damage, like downed lines.

The multi-year project will implement PrismaCircuit™ and PrismaClimate™ solutions across five critical transmission lines connected to four substations through fiber optic lines, strengthening grid resilience ahead of Minnesota's challenging winter season. The monitored lines are in central and northern Minnesota.



"As we work to maintain reliable service for our member-owners throughout Minnesota's distinct seasons, we're leveraging innovative new technologies that maximize our existing infrastructure investments," said Great River Energy's Priti Patel, vice president and chief transmission officer. "This solution allows us to utilize our current fiber optic network in a new way to increase resilience in areas of northern and central Minnesota."

Unlike traditional monitoring solutions that require installing physical sensors on power lines, Prisma Photonics' technology transforms existing optical fiber infrastructure into an advanced sensing system. This approach enables seamless and rapid deployment without service interruption or the need for specialized installation crews. The technology covers every section of the monitored lines in all weather conditions.

"As the world grapples with increasing extreme weather events, innovative power utilities like Great River Energy are working to adapt by hardening and modernizing grid assets to ensure safe, continued service for customers," said Dr. Eran Inbar, CEO of Prisma Photonics.



“Our partnership with Great River Energy demonstrates how utilities can extract additional value from their existing infrastructure to enhance grid resilience while avoiding traditional sensor-based solutions' complexity and maintenance requirements.”

The technology delivers real-time alerts for various grid events, including electrical faults, physical disturbances and severe weather conditions, with precise location information down to the specific tower. This enables maintenance crews to respond more efficiently, reducing downtime and improving overall grid reliability.

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About Great River Energy:

Great River Energy is a not-for-profit wholesale electric power cooperative providing electricity to approximately 1.7 million people through its member-owner cooperatives and customers. Great River Energy serves two-thirds of Minnesota geographically and parts of Wisconsin.

About Prisma Photonics:

Prisma Photonics revolutionizes infrastructure monitoring by using optical fibers to monitor critical large-scale infrastructure like power grids and oil & gas pipelines for thousands of kilometers, eliminating the need for sensors. Combining Hyper-Scan Fiber-Sensing™ technology with machine learning allows utility operators to reach environmental and renewable energy goals while keeping operational excellence in their journey to net-zero emissions. Founded in 2017, with offices in the U.S., Europe, and Israel (HQ), Prisma Photonics is led by an expert team with a proven track record in building and scaling successful companies within the lasers and deep-tech sectors.

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