

UConn taps Gridmetrics data to boost community resilience in \$4.4M US DOE-funded PROACTIVE project

Part of the Department of Energy's RACER initiative, the PROACTIVE project aims to enhance power grid visibility, community resilience and storm preparedness in Connecticut

STORRS, Conn. — (March 20, 2024) — [Gridmetrics](#)® today announced its participation in PROACTIVE, a \$4.4 million community resilience project within the Eversource Energy Center at the University of Connecticut. Funded as part of the U.S. Department of Energy's \$33 million Renewables Advancing Community Energy Resilience (RACER) program, PROACTIVE represents the first effort leveraging Gridmetrics' proprietary data to inform community resilience preparation and response.

A subsidiary of [CableLabs](#), the world's leading research and development labs for the broadband industry, Gridmetrics uses existing broadband infrastructure to deliver actionable insights about the state of power in the last mile of the distribution grid. PENS, the Power Event Notification System, utilizes this unique dataset to provide real-time, hyperlocal power outage notifications down to the 1 square kilometer level. PROACTIVE will harness PENS data to develop and demonstrate a predictive community outage preparedness solution that leverages active last-mile visibility feedback to optimize restoration.

"Gridmetrics' Power Event Notification System offers additional granular insights our team needs to enhance the Outage Prediction Model, then autonomously match those events with optimized solar and energy storage deployments and operations for faster service restoration," said Junbo Zhao, associate director of Eversource Energy Center. Zhao is also an assistant professor in the Electrical and Computer Engineering department at the UConn College of Engineering.

"It is crucial that academia and industry work together in partnership toward sustainability," said Kazem Kazerounian, engineering dean at UConn. "A future of clean energy requires all of us to think strategically, partner effectively and work toward the big picture."

The PROACTIVE project will focus its initial efforts on the Hartford and West Hartford communities in Connecticut, which are serviced by Eversource Energy distribution feeders. In central Connecticut, where the threat of power outages poses imminent dangers to at-risk populations, this first-of-its-kind project empowers the city of Hartford decision-makers to closely monitor critical infrastructure, swiftly prioritize

and deploy resources to provide timely assistance to hospitals, nursing homes, oxygen-dependent residents and other power-vulnerable communities during crises.

UConn announced the grant in the fall of 2022. The university has prioritized research on projects that meet some of the biggest challenges that future generations face, including the impact and mitigation of climate change.

“In a state and region where weather is often unpredictable, the PROACTIVE project gives residents in Hartford and West Hartford critical information that can save lives,” said Pamir Alpay, vice president for research, innovation and entrepreneurship at UConn. “Power grid resilience is a research priority for UConn, and this endeavor reflects the progress being made by the university and our partners,” added Emmanouil Anagnostou, director of Eversource Energy Center and board of trustees distinguished professor of civil and environmental engineering.

Notable PROACTIVE project partners include the National Renewable Energy Laboratory (NREL) and Eversource Energy. Eversource Energy provides essential historical outage data and distribution system information used to build PROACTIVE’s initial predictive models, with Gridmetrics’ PENS data helping enhance the machine learning algorithms underpinning the models to increase insights into target areas.

“We’re committed at Eversource to providing our customers with safe and reliable service and enhancing the resilience of the grid,” said Jennifer Schilling, vice president of grid modernization at Eversource. “The energy transition can only be enabled with a modern and adaptable grid that can withstand climate-change driven extreme events, and we’re proud to work closely with the University of Connecticut and other stakeholders on this innovative project that will help accomplish those goals. This project builds upon years of collaboration with the University of Connecticut, focused – amongst other important initiatives – on the development of the Outage Prediction Model, which is integrated into our planning and restoration processes. The PROACTIVE project will use data-informed insights to enhance our capabilities to prepare for outages, helping to improve the restoration process for our customers with a focus on communities that may be vulnerable to extreme weather or other power disruptions.”

Throughout the project, Gridmetrics and the rest of the PROACTIVE team will closely collaborate with community stakeholders to ultimately transform traditional grid restoration processes into efficient, autonomous and resilient systems.

“Gridmetrics PENS will significantly enhance the PROACTIVE model forecasting accuracy for storm preparedness and response capabilities, moving from townships to the neighborhood level. We are excited to help positively impact power-vulnerable communities across Connecticut,” said Scott Caruso, president of Gridmetrics.

For more information about how Gridmetrics' PENS solution provides hyperlocal insights into the availability and quality of power from the electrical grid, please visit www.gridmetrics.io.

About Gridmetrics

Gridmetrics measures, monitors and tracks the availability and stability of the distribution portion of the power grid. By providing an out-of-band measurement of the quality and consistency of the power grid, Gridmetrics data can be leveraged for outage detection, power restoration, grid safety and voltage variability. Gridmetrics evolved from a project incubated at CableLabs®, the leading innovation and R&D lab for the cable industry.

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