reactive technologies

Data / Power: Driving the Energy Transition

Enabling a resilient, low-carbon power grid for the future, safer, faster

Reactive Technologies (RTL) is a global Grid-Enhancing Technologies (GETs) company at the forefront of addressing the challenges of the energy transition and load growth by measuring power grid inertia and system strength in real-time.

With our proven, first-of-its-kind GridVerix® platform, formerly known as GridMetrix®, we provide real-time, high-performance power network measurements and data-driven insights into grid stability and reliability. This enables grid operators and utilities worldwide to plan and operate with greater insight, precision, and resilience in a rapidly evolving energy landscape.

“Better critical data drives better decisions—and that’s how we future-proof the energy system to meet renewable integration challenges, building a resilient, low-carbon grid ready for tomorrow.”

Marc Borrett
Chief Executive Officer

Our story

Founded in 2010 by technology veterans Dr. Heikki Huomo, former Global VP of R&D at Nokia, and Marc Borrett, a seasoned entrepreneur who successfully licensed NFC (Near Field Communications) IP to 80% of Semiconductor companies worldwide, prior to a subsequent acquisition by Broadcom, Reactive Technologies brings together a mission-driven team of experts specializing in power systems, communications, digital signal processing, and data science to the challenges of the renewable energy transition.

With a strong foundation in technological innovation and a deep understanding of the challenges facing the energy industry, Reactive Technologies has evolved into a global technology company headquartered in London, UK. Our dedicated sales and project delivery teams work closely with customers worldwide, supported by commercial offices on the East and West Coasts of the USA, as well as in the UAE and Australia, and an advanced R&D center in Finland.

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Office locations supporting our customers

75+

Employees worldwide

250+

Granted patents across 34 countries

Our deep technology expertise and skill set enables us to deliver unique, impactful technologies that make the transition to a resilient, low-carbon power grid, safer, faster.

Our awards

We work alongside some of the world's most advanced grid operators, including New York Independent System Operator (NYISO) in the US, Australian Energy Market Operator (AEMO) in Australia, and National Energy System Operator (NESO) in Great Britain.

By providing high-performance measurement data - covering power grid inertia, system strength, oscillation events, and a wide range of stability and reliability issues, we enhance situational awareness, optimize resource planning, and unlock new grid capacity. These capabilities drive significant cost savings and enable utilities to integrate wind, solar and distributed energy resources (DERs), safer and faster.

We are honored to receive recognition from media and industry for our innovative contributions and impact.

Trusted by

NESO National Energy System Operator

NEW YORK STATE OF OPPORTUNITY. NYSERDA

New York ISO Independent System Operator

KAHRAMAA Qatar General Electricity & Water Corporation

نقل الكهرباء National Grid SA

TAQA Transmission

台灣電力公司 TAIWAN POWER COMPANY

AEMO AUSTRALIAN ENERGY MARKET OPERATOR

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Sustainable Innovation Award Winner SEAL 2026

Winner of the 2025 Renewable Energy Project of the Year

Winner of the 2025 Grid Edge Award

Clean Power Energy Transition Changemaker at COP28

Financial Times Energy Tech Champions 2023

Winner of the 2022 BNEF Pioneers by challenge

Grid Edge Measurement Device (XMU) - Grid IoT

Our Grid Edge Measurement devices (XMU) are at the core of what sets us apart. This distributed network of ultra high-definition grid IoT devices, combined with cloud-based digital signal processing, enhances your existing network assets by creating a high-precision measurement overlay. This approach provides a unique and proven method for monitoring the dynamic physics of the power grid.

Designed for fast deployment with a vendor-managed device approach, GridVerix® allows customers to start collecting actionable, real-time data from day one - minimizing upfront cost, simplifying operation, and accelerating return on investment.

How It Works

Key features

- High definition grid edge measurement (up to 48,000 measurements/second resolution)
- Vendor (Reactive) managed devices
- Robust cyber-secure cloud platform
- Seamless data integration with existing system

Benefits

- Well-informed data driven decisions
- Optimized operation cost
- Highest standard on data security
- Enhanced grid stability and reliability

eXtensible Measurement Unit (XMUs)

ISO27001 - certified Information Security Management System

Customer's control center

Highly accurate real-time data delivered to the control room

Introducing GridVerix®

GridVerix combines a distributed network of high-definition grid IoT devices with an advanced cloud-based data processing platform, forming a high-precision measurement overlay that enhances the evaluation of rea-time network operations.

Figure: Oscillation monitoring in GridVerix

For illustration purpose only

Key capabilities

Enhanced system strength monitoring
GridVerix® provides critical, real-time insights into system strength metrics, enabling grid operators to be aware of and manage the reliability of the grid.

Direct inertia measurement
GridVerix directly measures real-time inertia beyond what models alone can capture, revealing sizeable behind-the-meter contributions to avoid unnecessary curtailment and costly reinforcement.

Advanced oscillation monitoring
GridVerix extends oscillation observability beyond traditional monitoring coverage, capturing and characterizing dynamics from mHz to kHz to support localization and post-event analysis.

Benefits

Real-data-driven planning & operations
Align planning and operational decisions with real-time system measurements to improve situational awareness and day-to-day system performance.

Enabling the energy transition
Use real-world system measurements to validate, calibrate, and optimize dynamic grid models, improving accuracy and confidence in system analysis.

Unlock grid capacity
Identify and utilize existing system headroom more effectively, reducing unnecessary constraints and helping defer costly network reinforcement.

Asset Services

Optimizing your renewable asset planning and operation

The growing share of renewable generation is driving the development of markets for assets like synchronous condensers and grid-forming inverters, which add inertia and enhance grid stability.

As grid stability markets develop, expert knowledge is essential to assess potential revenue, optimize asset placement, and ensure compliance with grid standards, securing income from stability contracts.

We provide the tools and expertise to help organizations planning to build or operate power system assets understand current and future grid behavior. Our services enhance operational reliability, optimize performance, and protect the value of your investments with unparalleled grid insights.

Site pre-assessment

We analyze potential locations based on our unique power grid performance data to identify regional inertia needs and market opportunities, ensuring optimal selection for asset location pre-market tendering.

Performance monitoring

We deploy our Grid IoT devices ahead of asset procurement for continuous monitoring, providing data insights to support design, grid compliance assessment, performance and identify threats to good performance such as oscillations. Once commissioned, our system can provide ongoing performance monitoring for compliance purpose.

30%+

Extra grid capacity for renewables integration unlocked

£14.4M

Cost saving for customers per year on managing inertia

~18M

Tonnes of CO2 saved annually in GB alone

~5.5%

Of total GB CO2 emissions eliminated annually

"The positive experience of our collaboration has been transformative, showcasing the power of direct measurement innovation in advancing the energy transition. We take pride in pioneering this Net Zero enabling technology with Reactive, which now offers a replicable model that can materially contribute to clean energy systems worldwide."

Julian Leslie
Strategic Energy Planning Director and Chief Engineer at NESO

Award-winning deployment of the world's first inertia measurement technology in collaboration with NESO, Great Britain

Adopting innovative technology is essential to drive sustainable progress and support a resilient, low-carbon grid of the future.

Launched officially in 2021, National Energy System Operator (NESO) deployed RTL's GridVerix® inertia measurement service across Great Britain to achieve for the first time, a real-time power grid stability insight and support higher proportions of renewable energy safely running on GB's national power grid.

The implementation of RTL's GridVerix technology was proven to mitigate renewable curtailment, significantly cut greenhouse gas emissions, and strengthen grid stability. The results highlight a tremendous potential for global impact in reducing CO2 emissions across power grids.

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Get in touch

Discover our IP portfolio

www.reactive-technologies.com

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