NH Research Launches Next Generation Regenerative Grid Simulator for Testing High Power Grid-Tied Applications

New Regenerative Grid Simulator emulates real world conditions for testing electric vehicle charging and grid-tied systems.

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NH Research Inc. (NHR), a leading provider of power test solutions for the automotive, renewable energy, energy storage, and critical-power markets, has launched the 9510 Regenerative Grid Simulator.

[The 9510 Regenerative Grid Simulator](#) is the next generation AC test solution for testing and verification of high-power grid-tied applications in compliance with regulatory testing standards, worldwide. The built-in power amplifier mode for Power Hardware in the Loop (PHIL) applications provides further testing and simulation capability ideal for research labs. The new 9500 platform is the perfect complement to the industry leading NHR 9300 DC test platform to simplify total electrification testing.

Sustainability initiatives across the globe are accelerating the electrification of vehicles, charging infrastructure, new energy deployments, and grid modernization. Increasing demands on the grid and new opportunities for distributed energy resources such as solar, wind and energy storage, require modern test solutions to simulate the grid.

Figure 1- Regenerative Grid Simulator - 9510

"The 9510 provides modularity, flexibility and next generation performance to test a broad range of grid-tied products in a compact, easy to use platform. Its advanced hardware performance coupled with PHIL and AC loading functionality equips engineers and researchers with the tools needed to emulate real world conditions in one asset." said Brian Hsu, Product Manager at NH Research.

Select power levels ranging from 50kW, 75kW, or 100kW modules with a programmable frequency between 30Hz and 120Hz. Modular and scalable power is available in 100kW modules up to 1.2MW. The output can be AC, DC, or AC+DC and the AC can be single, split or 3-Phase.

Figure 2- NHR 9510 Provides the Industry's Widest True-Power Operating Envelope

The 9510 is the industry's most modular, flexible, highest performing, and compact regenerative grid simulator, power amplifier for PHIL applications with an optional 4-quadrant AC load capability. Ideal applications include testing EVs, micro-grid, PV inverters, V2G and energy storage applications.
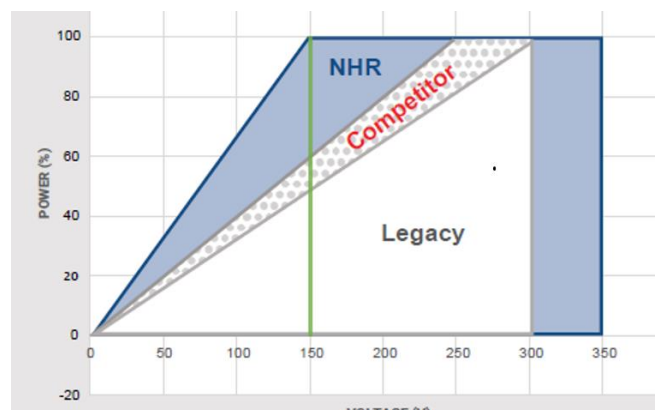
NHR's 9510 Regenerative Grid Simulator delivers the following key benefits:

- Scalable power available from 100kw modules up to 1.2MW for future increased power demands.

- Widest true power operating envelope covers the broadest selection of grid-tied products with a single product.

- Power Amplifier mode for PHIL with low latency at 50μs enables emulation of real-world conditions

- Highest accuracy current measurement increases performance and optimizes testing.

- Built-in galvanic isolation eliminates the need for an external transformer and simplifies test set-up.

- Highest power density with small footprint provides significant energy, cost, and space savings.

- Optional 4 Quadrant AC Load capability provides flexibility to source and load with a single device.

For more information, visit: www.nhresearch.com.

About NH Research
NH Research, Inc. (NHR) enables electrification by accelerating innovation, validation, and functional test of today's technologies. Backed by over 50 years of experience in power conversion and electrification test systems we provide world class test instruments and systems. Our solutions provide the performance, simplicity, and safety that engineers and researchers desire.