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Pacific Power Source Launches SmartTS PV Inverter Test System for Automated IEEE 1547.1 and Grid Compliance Testing

Pacific Power Source today announced the launch of its **SmartTS PV Inverter Test System**, a high-performance, turnkey solution designed to dramatically simplify and accelerate **PV inverter grid compliance testing** and **IEEE 1547.1 / UL 1741 SB / EN50549 testing** for solar inverters and distributed energy resources (DERs).

The Smart-PV Inverter Test System is the first of its kind, integrated IEEE 1547.1 test system. The Smart-PV combines industry-leading products into a single solution for grid code testing. Integrated AC grid simulator, DC source / solar panel simulator, power analyzer with built-in compliance software from QualityLogic delivers faster, easier IEEE 1547.1, UL1741 SB, and EN50549 testing.

Developed in collaboration with QualityLogic and Tektronix Elektro-Automatik (EA), this system-level solution delivers a fully integrated platform engineered by Pacific Power Source to streamline compliance testing using best-in-class technologies across power, measurement, and automation.

Pacific Power Source is a leading provider of regenerative AC power sources, grid simulators, and loads, enabling the advanced testing of next generation of **distributed energy resource, PV inverter and grid-connected systems**.

As grid standards such as IEEE 1547.1-2020 and UL 1741 SB become more demanding, inverter manufacturers and test labs face increasing pressure to validate complex grid support functions under real-world conditions—without delaying time to market. SmartTS-PV addresses these challenges with a fully integrated platform combining advanced grid simulation and automated **IEEE 1547.1 compliance testing**.

“SmartTS-PV combines high-performance grid simulation with automated IEEE 1547.1 testing in one integrated platform, delivering more out-of-the-box value. This allows our customers to perform accurate, repeatable PV inverter testing and achieve compliance faster with less complexity.” – **Herman vanEijkelenburg, Product Director at Pacific Power Source**.

“IEEE 1547.1 and UL 1741 SB compliance testing has been one of the most time-intensive barriers to DER certification. QualityLogic's test automation reduces what traditionally takes weeks of manual NRTL testing to approximately 32 hours of actual test time, with automatic pass/fail analysis against IEEE 1547 accuracy requirements. Combining that software with Pacific Power Source's grid simulation hardware in one integrated platform removes the integration burden from inverter manufacturers and test labs and gets them to certification faster.” – **Steve Kang, General Manager, Smart Energy at QualityLogic**

The SmartTS PV Inverter Test System provides a complete, fully integrated solution for **PV inverter compliance testing**, from grid simulation to grid compliance validation. The all-in-1 test system includes:

- High-performance AC grid simulator
- DC power supply and load for PV and energy storage testing
- Integrated measurement and data acquisition systems
- Seamless integration with QualityLogic IEEE 1547.1 automatic pass/fail test software

Where Integration Drives Better Test Results

SmartTS-PV ensures that grid simulation, DC power, measurement systems, and communications operate as a **synchronized test environment**.

For **IEEE 1547.1 testing**, this coordination is critical—grid events, inverter responses, measurement capture, and protocol commands must align precisely. SmartTS PV Inverter Test System eliminates timing gaps and manual errors, delivering consistent, repeatable, and audit-ready test results.

Automated IEEE 1547.1 Testing Reduces Time to Certification Using QualityLogic's Test Tool

Testing can now be completed in approximately 32 hours of actual test time versus IREC's 8-12 week estimate for manual NRTL testing, significantly accelerating certification timelines.

Applications include:

- PV inverter manufacturers (string, central, hybrid)
- Energy storage system (ESS) developers
- Test labs and certification bodies
- Utilities and grid operators
- Research institutions and microgrid developers
- Grid-edge and smart inverter R&D teams
- Grid-support function testing

Key Benefits of the SmartTS PV Inverter Test System

- **Accelerated PV Inverter Testing**
Reduce compliance timelines with automated IEEE 1547.1 testing
- **Best-in-Class Grid Simulation**
High-performance AC source for realistic grid condition replication
- **Turnkey IEEE 1547.1 Test System**
Ready to use, out-of-the-box solution. Pre-integrated hardware and software for faster deployment.
- **High-Fidelity, Synchronized Testing**
Align grid events, DUT response, and measurement data
- **Integrated Measurement and Analysis**
Capture and validate inverter performance in one system
- **Automated Pass/Fail Compliance Testing**
Integrated QualityLogic IEEE 1547.1 / UL1741 SB / EN5049 software instantly determines results based on standards
- **Reduced Lab Complexity & Safety**
Replace multi-instrument setups with a single platform with safety fully integrated
- **Faster Time to Market**
Minimize delays and accelerate product certification

The SmartTS™ PV Inverter Test System is available now. Learn more:
<https://pacificpower.com/products/smartts-pv-inverter-test-system/>

About Pacific Power Source

Founded in 1971, Pacific Power Source (PPS) is an industry leading manufacturer of AC and DC power test solutions. Our reputation as a market and technology leader stems from our best-in-class products, commitment to R&D investments, and exceptional worldwide customer support.

Learn more at [Pacificpower.com](https://pacificpower.com).