UL offers ground-breaking IEEE2030.5 verification testing

Enabling smarter, safer grid interconnection

UL is committed to being a world leader in the testing of interconnected systems and products for the electric utility grid. Utilities' and consumers' familiarity with the UL brand helps manufacturers achieve higher levels of acceptance and faster time to market.

As electric utilities continue to modernize their grids, the UL service portfolio expands to meet the ever-changing needs for safety, performance and interoperability verification. Working together with QualityLogic, a leading developer of test tools for the smart grid industry, UL has introduced smart grid conformance testing to the IEEE 2030.5 Standard.

What is the Smart Energy Profile standard?

IEEE 2030.5, delivers essential guidelines that help ensure device interoperability in preparation for the smart grid. It is designed to work with any underlying communication protocol supporting TCP/IP – e.g. ZigBee, Wi-Fi, Bluetooth or HomePlug. As an application layer protocol, it formalizes the requirements for many aspects of the smart energy ecosystem, including device communication, connectivity and information sharing requirements.

IEEE 2030.5 is the leading candidate to become the interface standard between utilities and smart inverters that integrate renewable energy, electric vehicles and other distributed energy resources into grid operations. It also serves to harmonize energy management communications within residential buildings as well as between these buildings and utilities.

UL services – supporting speed to market

By independently verifying a product's interoperability with utility requirements for smart grid products, UL can help greatly reduce product integration costs and facilitate adoption of the technology.

UL offers:

- Verification testing to IEEE 2030.5 specifications
- Pre-verification testing to help manufacturers prepare for the verification test
- Post-verification testing to help manufacturers troubleshoot any non-compliance after the verification test

The test suite consists of 31 tests for the five core function sets (TLS, CERT, DNS, DCAP, TM) required of all tested products. Another 65 tests are included for eight optional function sets, such as demand response and metering. The combination of the core and specific optional function sets is required to deploy specific products, such as smart thermostats, in-home displays and load controllers.

Why UL?

UL drives global research and standards to continually advance and meet ever-evolving product safety, performance and interoperability needs. We partner with businesses, manufacturers, trade associations and international regulatory authorities to bring solutions to a more complex global supply chain.

- Knowledge & Experience

    Our global network of expert engineers help you understand the various requirements for your specific market application.

- Speed & Efficiency

    Our cost-effective systems and state-of-the-art facilities cut through the red tape and help accelerate your time to market.

- Single Source Services

    UL meets all of your compliance needs and, by bundling safety, performance and interoperability services, also helps save you valuable time and money.

For more information, please visit www.ul.com/contactus

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