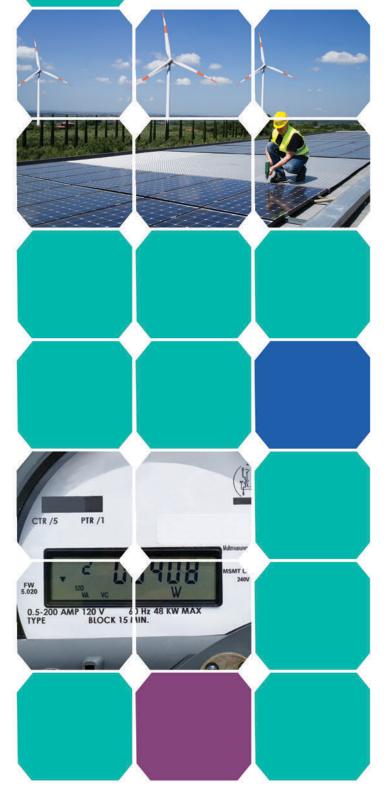# IEEE 2030.5 TEST TOOLS

OUR COMPREHENSIVE SUITE OF IEEE 2030.5 TEST TOOLS

OVERVIEW

In the Smart Energy market, early products set expectations – positive or negative. That's why it's critical to be sure your products comply with relevant standards, work within smart grid systems, and inter-operate with other products. QualityLogic's interoperability experts have the expertise to help you understand, create, validate and certify inter-operable Smart Energy products. QualityLogic has developed the industry's first test tools and testing services to ensure the interoperability of IEEE 2030.5 products and conformance to the specification.

IEEE 2030.5 TEST TOOLS

The QualityLogic IEEE 2030.5 Test System includes four test suites – Ad Hoc Testers for IEEE 2030.5 clients and servers and Functional Test Suites (FTS) for IEEE 2030.5 clients and servers.

Ad Hoc Testers

IEEE 2030.5 Ad Hoc Testers are actual conformant implementations of IEEE 2030.5 Client and Server, and they provide real-world IEEE 2030.5 event simulations and thorough analysis of IEEE 2030.5 messages. QualityLogic's IEEE 2030.5 Ad Hoc Testers allow you to set up complex scenarios for IEEE 2030.5 clients and servers and ensure conformance to the IEEE 2030.5 Application Protocol Specification.

The two testers, IEEE 2030.5 Client Ad Hoc Tester and the IEEE 2030.5 Server Ad Hoc Tester, each support all commonly implemented elements of the Application Protocol Specification. The tools provide you with the ability to simulate "golden reference" implementations of IEEE 2030.5 compliant products and conduct interoperability testing.

IEEE 2030.5 TEST TOOLS

The Ad Hoc testers are valuable for exploring use case scenarios with real devices from other vendors or simulating devices or head-end servers that would be communicated within real-world installations.

Functional Test Suites

The IEEE 2030.5 Functional Test Suites (FTS) are a quick, convenient way to test IEEE 2030.5 device functional conformance against a formal industry certification test specification. The Functional Test Suites implement the Server tests and Client tests covering the core Function Sets and 10 optional Function Sets specified by a specific test specification. The test suites are designed to be both pre-certification tests for vendors and for certification testing by Nationally Recognized Test Labs.

Currently, QualityLogic FTS implement the conformance tests defined by the Consortium for SEP2 Interoperability (CSEP) and the SunSpec IEEE 2030.5 DER Test Specification.

DEMAND RESPONSE AND PRICING FTS

The IEEE 2030.5 conformance test program defined by the Consortium for SEP 2 Interoperability (CSEP) is focused on direct load control, price communication, messages to energy control systems and their owners, messaging, security, discovery, and more.

QualityLogic's IEEE 2030.5 FTS Version 2 was approved by CSEP as the first official certification test harness for IEEE 2030.5. The Conformance Test Program is used by UL and TTA to conduct conformance certification testing for demand response applications. products.

DER AD HOC AND FTS VERSIONS

Our IEEE 2030.5 certification and interoperability test tools have added support to SunSpec's IEEE 2030.5 DER requirements. The following additional support is available now:

• Conformance tests for Distributed Energy Resources – e.g., Solar, Storage and EVs – and EV charge scheduling based on the most recent IEEE 2030.5 standard.

• Additional support in the Ad Hoc Testers for CA Rule 21 DER Integration and Interoperability Testing. These testers are being used for simulating either head-end or clients in smart inverter and demand response research activities as well as to trouble-shoot interoperability issues in pilots and demonstrations using IEEE 2030.5.

• Support for testing the IEEE 2030.5 Common California Rule 21 Implementation Guide for Smart Inverters, also known as CSIP. The tools are designed to support a CA Rule 21 specific certification program.

RELATED IEEE 2030.5 TEST SERVICES

• Conformance test program:
The Conformance Test Program is used by UL and TTA to conduct conformance certification testing.

• Test planning, development and execution:
We can offer valuable services that save time and money while ensuring the commercial quality of products.

• Custom test tool development:
QualityLogic starts with its current knowledge and test tool technology to quickly develop such a tool.