# QualityLogic

# Smart Energy System Services for Utilities & Standards Organizations

The Smart Energy community faces daunting challenges in evolving the grid to accommodate the rapidly changing systems environment. Part of the solution is specifying standards-based products to increase the potential vendor population, reduce system integration costs, increase system reliability and resiliency, and reduce time to deployment. In-the-field interoperability requires understanding how best to use and specify standards across a variety of applications.

The industry has made great strides in establishing standards to promote product interoperability. But the selection of technology standards is just the starting point. Challenges you'll face include:

- Assessing interoperability of products based on a standard

- Understanding how best to specify and benefit from a selected standard

- Training your team how to adopt and deploy selected standards

- How to leverage an industry eco-system based on implementing a particular interface or communications standard

QualityLogic is the industry leader in smart energy standards development and interoperability testing solutions, offering unparalleled communications, software and domain expertise.

We support you with our deep expertise to assist you in defining, procuring, developing, certifying and implementing interoperable smart energy products, devices, software and systems.

## System Interoperability Workshops

- Understand and implement new communication protocols, such as OpenADR, IEEE 2030.5, IEC 61850 and more

- Develop and execute test and certification procedures

## Testing for Smart Energy Systems

- Test planning, test tool development, test execution, analysis and reporting

## Test Tool Development

- Creation of custom test tools and platforms to accelerate testing and deployment

## Standards, Technologies and Tools

Leverage our expertise in smart grid communications standards:

- Open ADR
- IEEE 2030.5 (SEP2)
- IEC 61850
- SunSpec

- MultiSpeak
- IEC 15118
- Green Button
- OCPP, and more

## Application Domains

- Demand Response/Load Management
- DER Management
- Substation Automation
- Transactive Energy

## Tools

- OpenADR Certification Test Tool
- Cloud Test System for OpenADR VENs
- IEC 61850 Client Conformance Verifier,
  IEC 61850 Virtual Server
- IEEE 2030.5 Ad Hoc Testers,
  IEEE 2030.5 Functional Test Suites,
  IEEE 2030.5 Conformance Test Program
- Simulated DRMS and DERMS
  Head-ends for R&D

## Smart Energy System Services Leadership

*Member and Standards Contributor to:*

- OpenADR Alliance
- Consortium for SEP 2 Interoperability
  (IEEE 2030.5)
- GridWise Architecture Council,
  Transactive Energy Framework
- UL Advanced Inverter Testing
  and Certification Program
  (UL 1741 SA)
- IEEE Committee DER Interconnection
  Standard (IEEE P1547.1)
- EPRI/California Energy Commission Smart
  inverter Project
- Founded and chaired
  Smart Grid Northwest

## *Contributions to the Industry*

- **OpenADR Alliance**
  - A and B profile definition schema and
    specification editor
  - Wrote OpenADR 2.0 A, B Test Specs
  - Edited "OpenADR DR Program Guide"
  - Developed OpenADR 2.0 A and B Test
    Harnesses
  - Chair, Marketing Working Group
  - OpenADR Implementation Workshops

- **Consortium for SEP 2 Interoperability**
  - Contributor to CSEP PICS, Test Spec
  - Completed CSEP Test Harness
    Qualification Program
  - Implemented IEEE 2030.5 Accelerator
    Programs for Interoperability
  - Developed Conformance Test Program

- **EPRI/California Energy Commission
  Smart inverter Project**
  - CEC IEEE 2030.5 Open Source
    Client Project
  - EPRI CEC Smart Inverter
    Communications
    Demonstration Project

- **Industry Events**
  - Initiated 1st and 2nd Annual
    IEEE 2030.5 Symposiums
  - Founder of the International
    Transactive Energy Conference
  - Industry papers and articles –
    see www.qualitylogic.com

## For More Information

Visit www.QualityLogic.com or call +1 208-424-1905

**Quality**Logic