

# Smart Energy Technology Training



## Learn Smart Energy Standards

QualityLogic offers training courses to help your engineering and test teams climb steep learning curves quickly, so you can implement new technologies faster. Courses for **OpenADR 2** and **IEEE 2030.5** give your team:

- A conceptual understanding of the standard
- A technical walkthrough
- Training on QualityLogic test tools
- Conformance and interoperability testing insights

Classes are geared for vendors developing products using these emerging standards; vendors, system integrators or aggregators planning to acquire and use compliant products; and utilities, ISOs/RTOs and regulators acquiring or specifying products.

## OpenADR 2 Training

OpenADR training is available for developers or implementers, and as a combined class for both.

### OpenADR 2 Developer Workshop

This two-day workshop starts with a backgrounder on the origins of OpenADR, followed by a high level discussion of all the key aspects of the OpenADR standard, including supported transports and security mechanisms. The class then transitions into a detailed technical discussion of each of the core services provided by OpenADR for A and B profiles.

The workshop includes sessions on the certification test process, the OpenADR Test Harness, demos of live OpenADR implementations, and discussions of how OpenADR is applied to various DR Programs. The workshops typically have a high degree of class participation, providing insights beyond a single student's perspective.

### Workshop Outline

Session 1 – Big Picture

Session 2 – Certification Process

Session 3 – The Event Object

Session 4 – “a” Profile

Session 5 – The Test Harness

Session 6 – “b” Profile

Session 7 – “b” Live Implementation

### For Implementers

The one-day Implementers Workshop focuses on using OpenADR 2. The workshop covers:

- The origins of OpenADR and high level overview of its features and functions
- A detailed look at each OpenADR supported service, including registration, events, reporting, opt, and oadrPoll.
- Demand Response program design from an OpenADR perspective using the DR program templates and deployment scenarios from the OpenADR Alliance DR Program Guide.

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You will leave the class with a solid conceptual understanding of how OpenADR works, a detailed understanding of aspects of OpenADR required to implement a DR Program, and OpenADR best practices.

### About the Instructor

Workshops are led by Jim Zuber, QualityLogic's Chief Test Architect and cofounder, and architect of several QualityLogic testing products. Jim led the development of the official certification test harness for OpenADR 2, authored the OpenADR Test Specification and PICS, and was a major contributor to the profile specification itself.



### IEEE 2030.5 (SEP 2) Training

This two-day workshop gives engineering teams a solid understanding of IEEE 2030.5 concepts, interoperability requirements, and how to start building an IEEE 2030.5-conformant product that is interoperable with other IEEE 2030.5 products. Utility participants will get an in-depth understanding of IEEE 2030.5 technology and how to evaluate, specify, use and acquire IEEE 2030.5 technology for their programs.

### Workshop Overview

The Workshop is designed so senior managers can attend the early sessions for an overview of IEEE 2030.5 technology. They may then choose to stay for more details or leave the workshop.

The workshop starts with a high-level discussion of the IEEE 2030.5 standard, followed by a description of the core technology, including support and common resources and function sets.

The workshop finishes with sessions on test tools, testing, discovery, security, and an overview of the new Conformance Testing Program conducted by UL and TTA (Korea).

Session 1 – IEEE 2030.5 Background

Session 2 – Function Sets

Session 3 – Support and Common Resources

Session 4 – Smart Energy Function Sets

Session 5 – IEEE 2030.5 Common Practices

Session 6 – QualityLogic Tools

Session 7 – Test Scenarios and Execution

Session 8 – Conformance Test Program

### About the Instructor



The workshop is led by Steve Kang, QualityLogic Sr. Vice President of Engineering. Kang has spearheaded efforts on a variety of Smart Grid

initiatives, including IEEE 2030.5, OpenADR, Transactive Control, and IEC 61850. Kang holds an MS in Computer Science from USC and an MBA from UCLA Anderson School.

### Flexible to Meet Your Needs

Workshops can be conducted on-site or near-site for members of your organization. The private format enables an open dialog about company issues and allows your team to derive maximum value from the expert instruction and resources in a confidential setting.

Periodic public workshops are also offered. Contact us to schedule a workshop for your organization or to find out about upcoming public workshops.

## For More Information

Visit [www.QualityLogic.com](http://www.QualityLogic.com) or call +1 208-424-1905

