

DER Workshop

IEEE 2030.5 / CA Rule 21

The California Public Utilities Commission has mandated the certification of IEEE 2030.5 implementations, effective June 22, 2020. Jump start your certification efforts with our multi-day private training class and learn from one of the leading experts of IEEE 2030.5, CSIP and SunSpec CSIP Certification Test Procedures. We've been teaching the IEEE 2030.5 class for over 10 years and have trained thousands around the world on IEEE 2030.5/CSIP.

WORKSHOP AT A GLANCE

Implementing IEEE 2030.5 isn't simple. Our analysis shows that 18 (out of 30) IEEE 2030.5 Function Sets will need to be implemented to satisfy the Common Smart Inverter Profile (CSIP) for CA Rule 21. This workshop will help you get over the hurdles that IEEE 2030.5 implementation presents and provide you with solid and practical technical understanding of IEEE 2030.5 and CSIP.

ON-SITE OR ONLINE WORKSHOPS DESIGNED FOR

- Vendors developing IEEE 2030.5 servers, inverters, energy management systems and aggregator clients to meet CA Rule 21 requirements
- Vendors/system integrators/aggregators planning to acquire and use IEEE 2030.5 compliant products for DER communications
- End-user utilities, ISOs/RTOs and regulators specifying IEEE 2030.5 products
- Test labs planning to certify IEEE 2030.5 products for the SunSpec CSIP Certification Program and vendors

"Steve did an amazing job presenting this in a professional manner while keeping it light hearted and encouraging. We had a lot of questions that probably seemed like simple issues to him, but he took the time to explain in detail every solution.. (And time to verify we understood!)."

- David Koll, Sr Project Engineer, UL

WORKSHOP DETAILS

SESSION 1: BACKGROUND

- Smart grid landscape
- 2030.5 purpose
- CSIP's guide to Rule 21

SESSION 2: IEEE 2030.5 INTRODUCTION

- Open standards
- Discovery process
- Function sets / categories
- Servers and clients
- Security

SESSION 3: FUNCTION SETS / CATEGORIES

- Support resources
- Common resources
- Smart energy function sets

SESSION 4: SUPPORT AND COMMON RESOURCES

- IEEE 2030.5 conventions
- Individual and list based resources
- Basic resources (design, end device, time)

SESSION 5: SMART ENERGY FUNCTION SETS

- DER and DERP
- Metering and mirrored meter
- Pricing and all other Smart Energy Functions
- Events and randomization

SESSION 6: RULE 21 / CSIP OVERVIEW

- Core functionality
- DER functions
- Usage scenarios

SESSION 7: CSIP FUNDAMENTALS

- DER client types
- Topology based grouping
- Required grid support functions

SESSION 8: CSIP & IEEE 2030.5

- IEEE 2030.5 subset for CSIP
- Server and clients comparison
- Walk through a typical sequence

SESSION 9: CSIP UTILITY SERVER

- Registration of inverters
- Creation of 2030.5 resources
- Grouping of inverters

SESSION 10: AGGREGATOR OPERATIONS

- Aggregator responsibilities
- Typical commissioning process
- Subscription process

SESSION 11: DER EVENT SCENARIOS

- Simple Event Scenario
- Multiple Events Scenario
- Conflicting Events Scenario
- Rules of 2030.5 Event Handling

SESSION 12: METER DATA, STATUS, AND ALARMS

- Metered data from DERs
- Status information from DERs
- Alarms from DERs
- Error handling

SESSION 13: IEEE 2030.5 ADOPTION AND STANDARD

- Global interest in 2030.5
- Additional use of 2030.5
- CSIP Australia Standard

SESSION 14: SAE J3072 PROFILE AND EV STANDARDS

- Overview of VVG Standards
- Vehicle to Grid (V2G) and IEEE 1547
- IEEE 2030.5 Profile of SAE J3072

SESSION 15: IEEE 1547.1 INTEROPERABILITY USING 2030.5

- What is IEEE 1547.1 certification?
- Relationship to other test standards
- IEEE 1547.1 interoperability testing

SESSION 16: CONFORMANCE AND CERTIFICATION

- CSIP Certification Overview
- SunSpec CSIP Test Procedures
- SunSpec certification program
- QualityLogic's IEEE 2030.5/CSIP Test Tool

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