



# IEEE Synchrophasor Certification Program

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# Benefits of Implementing a Conformity Assessment Program

- ▶ Benefits of conformance testing leading to certification before deployment/implementation
  - Resolves interpretation differences
  - Early identification of non-conformances
  - Exact functionality of the protocol is identified
  - Multi-vendor solutions will have interoperability issues – helps addressing those
  - New offerings will have bugs – helps catching those
  - Most manufacturers have missing pieces – helps identifying those
- ▶ Reduces the vendor's cost/need for re-tests for different end-users
- ▶ Establishes a baseline for performance expectations
- ▶ Establishing a baseline for future improvement and enhancements
- ▶ Eases interoperability
- ▶ Transparency based on common implementation

# Perspective of Key Stakeholders

- ▶ Utilities/end-users, manufactures and service providers ALL benefit from an industry supported conformity program
- ▶ Levels the playing field
  - End users/utilities know what to expect
  - Manufactures know what is expected of them
- ▶ Requiring a Certified Product from a vendor means
  - Vendor makes the investment as a qualification cost
  - Early discovery of problems avoids dealing with unexpected behaviors during installation and over the project cycle
  - Vendor and end-user saves dollars and time on operation and maintenance
- ▶ In the absence of an industry level Conformance Assessment program, an end-user has to establish its own internal (validation/verification) program
  - Example, PG&E Proof-of-Concept (POC) Facility for Synchrophasor systems
  - Significant cost

# Test Suite Specification (TSS)

- ▶ IEEE Synchrophasor Measurement Test Suite Specification (TSS) now available
  - Developed by IEEE Synchrophasor Conformity Assessment Steering Committee (SCASC)
  - Unambiguous, systematic way of testing PMUs according to IEEE C37.118.1a-2014
  - Available at IEEE Xplore - [ieeexplore.ieee.org](http://ieeexplore.ieee.org)



# IEEE Synchrophasor Certification Program

**NOW  
AVAILABLE!**

## Certification Resources

- › IEEE Synchrophasor Measurement Test Suite Specification (TSS) available now via IEEE Xplore - [ieeexplore.ieee.org](http://ieeexplore.ieee.org)
- › Contact Consumers Energy Laboratory Services, the IEEE approved Testing Laboratory, at [www.LaboratoryServices.com](http://www.LaboratoryServices.com)

## Benefits of Certification

### Manufacturer

- › Demonstrate compliance to IEEE C37.118.1
- › Utilize **IEEE certification logo**
- › List your products on **IEEE certified products registry**

### Utility

- › Minimize deployment time and costs
- › Deploy with confidence - **Use IEEE certified PMUs**

**APPLY  
NOW!**

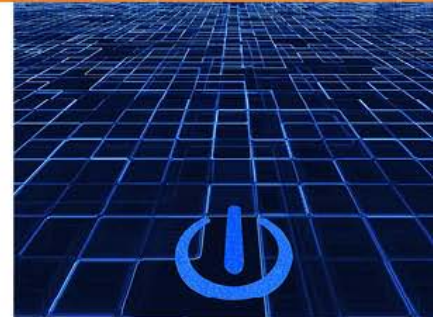


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**IEEE**<sup>TM</sup>

**Certified**

C37.118.1a-2014  
Synchrophasors



To learn more about the Synchrophasor Certification Program, visit [standards.ieee.org/icap](http://standards.ieee.org/icap)

# Synchrophasor Certification Process

- Step 1 – E-mail ICAP to apply for certification  
– [icap-team@ieee.org](mailto:icap-team@ieee.org)
- Step 2 – Contact IEEE approved test laboratory to request quote and schedule testing  
– Consumers Energy Laboratory Service –  
[www.laboratoryservices.com](http://www.laboratoryservices.com)
- Step 3 – IEEE reviews test results and approves
- Step 4 – Receive IEEE Certification upon successful completion of certification requirements

# IEEE-SA Certification Programs

- ▶ IEEE 1547 Conformity Assessment
  - IEEE 1547 is a key component of IEEE SA's plan for ICAP
  - Steering Committee formed
    - Expert input to test plans/suites, laboratory identification, and market analysis
- ▶ IEEE C37.118.2 PMU Communication Protocol
  - Extension to SCASC
  - Steering Committee forming
- ▶ IEEE Nuclear Power Engineering Committee
  - Certification of Class 1E devices
  - Steering Committee formed
- ▶ IEEE Surge Protective Devices Committee
  - Evaluating certification for high/low voltage SPDs
- ▶ IEEE C37.240 – Cybersecurity for substation automation
  - Stakeholder engagement in progress
  - Steering committee forming

For more information:  
*[standards.ieee.org/icap](https://standards.ieee.org/icap)*