

# IEEE Synchrophasor Conformity Certification Program

- Ravi Subramaniam, IEEE-SA
- Bob Sawyer, Consumers Energy Laboratory Services

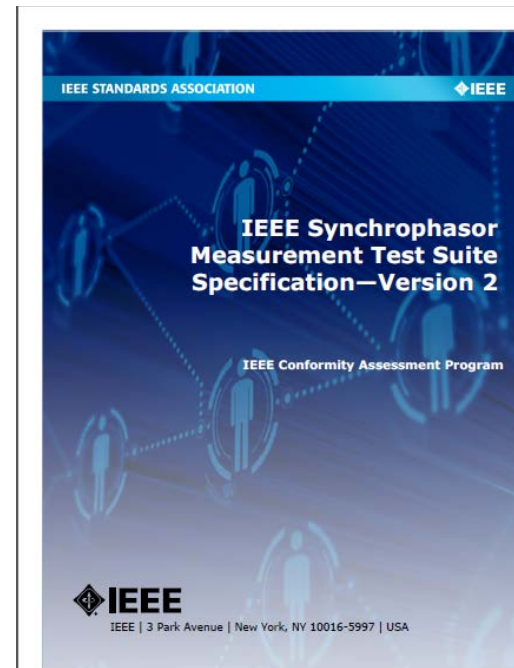
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# Introduction

- The certification program is developed to ensure PMUs are tested for compliance to the following standards:
  - IEEE Std. C37.118.1-2011 “Synchrophasor measurement”
    - Amended by IEEE C37.118.1a
- PMUs are to be **certified**
  - Utilities and end-users to require certified devices – high level of assurance the PMUs will work in a larger system
  - Provide manufacturers the opportunity to demonstrate continued compliance to the standard
- NIST has developed mobile calibration procedure for PMU test systems

# Test Suite Specification

- ▶ IEEE Synchrophasor Measurement Test Suite Specification (TSS) available now
  - Developed by IEEE Synchrophasor Conformity Assessment Steering Committee (SCASC)
  - Unambiguous, systematic way of testing PMUs according to IEEE C37.118.1a-2014
  - Version 2 published on September 2015
    - Modified due to findings during pilot tests
  - Available on IEEE Xplore and Techstreet
    - Search for “[Synchrophasor TSS](#)”



# SCASC Members

First Name	Last Name	Company
David	Bertagnolli	ISO-NE
Bill	Dickerson	Arbiter
Dan	Dwyer	SEL
Allen	Goldstein	NIST
James	Hackett	Mehta Tech
Yi	Hu	Quanta Technology
Geoff	Ives	Fluke Calibration
Anthony	Johnson	SCE
Kenneth	Martin	Electric Power Group
R. Jay	Murphy	Macrodyne USA
Dean	Ouellette	RTDS
Mahendra	Patel	EPRI
Gert	Rietveld	VSL
Satish	Samineni	SEL
Robert	Sawyer	Consumer's Energy
Jun	Verzosa	Doble
Qiang (Frankie)	Zhang	ISO-NE

# Test Lab Status

- Consumers Energy Laboratory officially authorized
  - Lab is located in Jackson, MI
  - Audit completed in Q1, 2015
  - Pilot test program started in Q1 2015
  - Budgetary or formal quotes for testing can be provided
  - Currently scheduling testing – [www.laboratoryservices.com](http://www.laboratoryservices.com)

# Marketing Initiatives

- Presentations done to multiple utilities
  - CTEEP (Brazil)
  - Transpower (New Zealand)
  - Landsnet (Iceland)
  - ELES (Slovenia), PowerGrid (India)
  - SwissGrid
  
- Expecting announcements of first few certified PMUs by end of 2015

# Benefits

## Manufacturers

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

## Utilities

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



# Other Programs under Development

- **IEEE 1588 Timing and Synchronization**
  - IEEE C37.238 Power Profile - 2nd Level
  - IEC 61850-90-3 – Basic
  - Test Plan draft has been created by University of New Hampshire under NIST grant
  - Steering Committee to review and approve test plan forming
- **IEEE 1547 Conformity Assessment Program**
  - To demonstrate that installations conform to IEEE 1547.1 standard
  - Steering Committee formed
  - East-West Coast Pilot projects being planned
- **IEEE Nuclear Power Certification Program**
  - Certification of Class 1E devices
  - Steering Committee formed
  - Pilot Testing being planned for 2016



# Thank You

- For more information or to apply for certification go to [standards.ieee.org/icap](http://standards.ieee.org/icap)