

IEEE SA STANDARDS BOARD NEW STANDARDS COMMITTEE (NesCom)

MEETING MINUTES

09 December 2024

Hybrid: Bridgewater, NJ (USA) and Teleconference

8:30 a.m. – 12:00 p.m. ET (UTC-5)

**Attendees**

**Members Present:**

Lei Wang, Chair  
Guido Hiertz, Vice Chair  
Kit August  
Sara Biyabani  
Xiaofeng (Alfred) Chen  
Yuan Chi  
Stephen Dukes  
Doug Edwards  
Darren Galpin  
Hao Hu  
Johnny Lin  
Daleep Mohla  
Jon Rosdahl  
Daidi Zhong

**Members Absent:**

Ramy Fathy  
Howard Li

**IEEE Staff:**

Christy Bahn  
Adrien Bastos  
Teresa Belmont, Administrator  
Hermann Brand  
Kim Breitfelder  
Matt Ceglia  
Sri Chandrasekaran  
Ravindra Desai  
Karen Evangelista  
Josh Gay  
Dalisa Gonzales  
Jodi Haasz  
Matthew Herdlein  
Yvette Ho Sang  
Usha Jagannathan  
Patrycja Jarosz  
Anja Kaspersen  
Soo Kim

Michael Kipness  
Vanessa Lalitte  
Jiajia Liu  
Greg Marchini  
Sandra Maru  
Karen McCabe  
Suzanne Merten  
Munir Mohammed  
Erin Morales  
Karen Mulberry  
Christian Orlando  
Shana Pepin  
Dave Ringle  
Pat Roder  
Anasthasie Sainvilus-Cantrell  
Jennifer Santulli  
Rosalinda Saravia  
Rudi Schubert  
Tom Thompson  
Michelle Turner  
Malia Zaman  
Tony Zertuche  
Meng Zhao

**Guests:**

Hassan Abouseada  
Avinash Agarwal  
Neha Agarwal  
Abira Altvater  
Edward Au  
Dennis Brophy  
Philip Crothers  
Aparna Dey  
Azza Eltraify  
James Gilb  
Latonia Gordon  
Gary Hoffman  
Ron Hotchkiss  
Tyler Jaynes  
Aleksandra Jeremic  
Jason Kahn  
Yousef Kimiagar  
Thomas Koshy  
David Law  
Joseph Levy  
Ming Li  
Xiaohui Liu  
Haiying Lu  
Kevin Lu  
Meng Lu  
Maike Luiken

Hiroshi Mano  
Yukimasa Nagai  
Paul Nikolich  
Lydia Ouedraogo  
Glenn Parsons  
Alexandrus Psyrri  
Annette Reilly  
Robby Robson  
Dan Sabin  
Mark Siira  
Robby Simpson  
Dorothy Stanley  
Gary Stuebing  
Claire Topp, IEEE Outside Legal Counsel  
Chenhui Wang  
Keith Waters  
Constance Weise  
Philip Winston  
Don Wright

## **1. CALL TO ORDER**

Chair Lei Wang called the meeting to order at 8:30 a.m. ET (UTC-5). There was a round of introductions.

It was noted that the meeting was quorate.

## **2. REVIEW OF AGENDA**

Chair Wang reviewed the agenda.

**There was a motion to approve the agenda, including the consent agenda. In the absence of objection or abstention, the motion was approved.**

### **2.1 Consent Agenda**

#### **2.1.1 Administratively Withdrawn PARs**

Note: The approval of this list of expired PARs to be administratively withdrawn was included in the approval of the agenda and consent agenda. The following PARs have been administratively withdrawn:

##### **P2413.1 (BOG/CAG)**

Standard for a Reference Architecture for Smart City (RASC)

##### **P802.1CQ (C/LAN/MAN)**

Standard for Local and Metropolitan Area Networks: Multicast and Local Address Assignment

##### **P1484.1 (C/LT)**

Guide for Conceptual Model for Learning Technology Systems (CM4LTS)

##### **P1394 (C/MSD)**

Standard for a High-Performance Serial Bus

##### **P7131 (C/SABSC)**

Standard for Quantum Computing Performance Metrics & Performance Benchmarking

**P1931.1 (COM/MobiNet-SC)**

Standard for an Architectural Framework for Real-time Onsite Operations Facilitation (ROOF) for the Internet of Things

**P1951.1 (COM/NetSoft-SC)**

Standard for Smart City Component Systems Discovery and Semantic Exchange of Objectives

**P2953 (CTS/SDSC)**

Standard for Technical Requirements for Industrial Smart Terminal Devices

**P11073-10426 (EMB/11073)**

Health Informatics -- Device Interoperability -- Part 10426: Personal Health Device Communication -- Device Specialization - Home Healthcare Environment Ventilator

**P2864 (EMB/Std Com)**

Guide for a Software Change Control System for Three-Dimensional (3D) Bioprinting of Tissue-Engineered Medical Products (TEMPs)

**P2673 (EMB/Std Com)**

Standard for Patient Digital Biomedical Data Files with 3D Topological Mapping of Macroanatomy and Microanatomy for Use in Big Data and Augmented Intelligence Systems

**P2727 (EMB/Std Com)**

Standard for General Vocabulary for Conformity Assessment of Medical Devices with Measuring Function

**P2727.1 (EMB/Std Com)**

Standard for Conformity Assessment Testing of Cardiac Defibrillators for Legal Metrology Purposes

**P2792 (EMB/Std Com)**

Therapeutic Electrical Stimulation Waveforms

**P2650 (EMB/Std Com)**

Standard For Enabling Mobile Device Platforms To Be Used As Pre-Screening Audiometric Systems

**P3007.2 (IAS/ICPS)**

Recommended Practice for the Maintenance of Industrial and Commercial Power Systems

**P21451-002 (IES/IES)**

Recommended Practice for Low-Power Smart Transducers Applications

**P1588f (IM/ST)**

Standard for a Precision Clock Synchronization Protocol for Networked Measurement and Control Systems  
Amendment: Enhancements for latency and/or asymmetry calibration

**P21451-1-5 (IM/ST)**

Standard for a Smart Transducer Interface for Sensors, Actuators, and Devices - Simple Network Management Protocol (SNMP) for Networked Device Communication

**P1451.5 (IM/ST)**

Standard for a Smart Transducer Interface for Sensors and Actuator - Wireless Communication Protocols and Transducer Electronic Data Sheet (TEDS) Formats

**P1095 (PE/EDPG)**

Guide for the Installation of Vertical Generators and Generator/Motors for Hydroelectric Applications

**P807 (PE/EDPG)**

Recommended Practice for Unique Identification in Hydroelectric Facilities

**P666 (PE/EDPG)**

Design Guide for Electric Power Service Systems for Generating Stations

**P2800.1 (PE/EDPG)**

Guide for Test and Verification Procedures for Inverter-Based Resources Interconnecting with Associated Transmission Electric Power Systems

**P97 (PE/EM)**

Diagnostic Test Methods for Testing the Insulation of AC Electric Machinery Using Direct Voltage

**P510 (PE/PSIM)**

Guide for Electrical Safety in High-Voltage Testing

**PC37.101 (PE/PSRCC)**

Guide for Generator Ground Protection

**PC62.38 (PE/SPDLV)**

Test Methods and Preferred Values for Hybrid Integrated Circuit Components Containing Gas Discharge Tube and Metal Oxide Varistor Technologies

**P2656 (PE/SUB)**

Guide for Functional Specification of Voltage-Sourced Converter for HVDC Stations

**P1243 (PE/T&D)**

Guide for Improving the Lightning Performance of Transmission Lines

**PC135.62 (PE/T&D)**

Standard for Zinc-Coated Forged Anchor Shackles

**P2520.4.1 (SEN/SC-SC)**

Standard for Performance of Machine Olfaction Devices and Systems for Chemical Manufacture

**P2520.3.1 (SEN/SC-SC)**

Standard for Machine Olfaction Devices and Systems Used for General Indoor Odor Monitoring

**P2520.2.2 (SEN/SC-SC)**

Standard for Landfill Odor Monitoring Devices and Systems

**P2520.2.1 (SEN/SC-SC)**

Standard for Machine Olfaction Devices and Systems Used for General Outdoor Odor Monitoring

**P2030.1.2 (VT/ITS)**

Standard Technical Specifications for Ultra-High-Power Electric Vehicle Chargers

### **2.1.2 Standards Committee Transfer**

Note: The approval of this Standards Committee change request was included in the approval of the agenda and consent agenda and the following thirteen PARs and eleven standards have been moved from IEEE Computer Society/Standards Activities Board Standards Committee (C/SABSC) to IEEE Computer Society/Digital Content Technology Standards Committee (C/DCTSC)

#### **Standards**

2888.1-2023

IEEE Standard for Specification of Sensor Interface for Cyber and Physical Worlds

2888.2-2023

IEEE Standard for Actuator Interface for Cyber and Physical Worlds

2888.4-2023

IEEE Standard for Architecture for Virtual Reality Disaster Response Training System with Six Degrees of Freedom (6 DoF)

2888.5-2024

IEEE Standard for Virtual Training System Evaluation Methods

3079-2020

IEEE Standard for Head-Mounted Display (HMD)-Based Virtual Reality (VR) Sickness Reduction Technology

3079.3-2023

IEEE Standard for a Framework for Evaluating the Quality of Digital Humans

3333.1.1-2024

IEEE Standard for the Quality of Experience (QoE) and Visual Comfort Assessments of Three-Dimensional (3D) Contents Based on Psychophysical Studies

3333.1.2-2024

IEEE Standard for the Perceptual Quality Assessment of Three Dimensional (3D), Ultra-High Definition (UHD) and High Dynamic Range (HDR) Contents

3333.1.3-2022

IEEE Standard for the Deep Learning-Based Assessment of Visual Experience Based on Human Factors

3333.1.4-2022

IEEE Recommended Practice for the Quality Assessment of Light Field Imaging

3333.2.1-2015

IEEE Recommended Practice for Three-Dimensional (3D) Medical Modeling

#### **PARs**

P2888.1a

IEEE Standard for Specification of Sensor Interface for Cyber and Physical Worlds Amendment: Binary Representation of Data Formats for Interfacing Sensors and their Capabilities

P2888.2a

IEEE Standard for Actuator Interface for Cyber and Physical Worlds Amendment: Binary representation of data formats, application programming interfaces and definition of additional actuators

P2888.3

Standard on Orchestration of Digital Synchronization between Cyber and Physical World

P2888.5a

IEEE Standard for Virtual Training System Evaluation Methods Amendment: Physiological evaluation method for virtual training systems

P2888.6

Standard for Holographic Visualization for Interfacing Cyber and Physical Worlds

P2888.7

Standard for Architecture of a Digital Twin System for Carbon Emission Management

P3079.1

Motion to Photon (MTP) Latency in Virtual Environments

P3079.2

Standard for Mixed Reality (MR) Framework for Motion Training

P3079.2.1

Standard for a Basic Framework for Motion Training Systems

P3079.2.2

Standard for UI (User Interface)/UX (User Experience) Framework for Motion Training

P3079.3.1

Standard for Service Application Programming Interfaces (APIs) for Digital Human Authoring and Visualization

P3079.3.2

Standard for a Framework for Privacy Protection through Identifiability Management Arising from Avatar Interaction

P3079.4

Standard for the Visual Quality Assessment of Auto-Stereoscopic Displays

### **3. APPROVAL OF MINUTES FROM THE 30 October 2024 MEETING**

There was a motion to approve the [30 October 2024 meeting minutes](#). In the absence of objection or abstention, the motion was approved.

### **4. PARS FOR DISCUSSION**

Unless indicated otherwise, the motions were approved unanimously.

#### **4.1 Withdrawal Requests**

There was a bucket motion to approve P1913, P2418.3, P1450.6, P1687.1, and PC62.55 based on the fact that preliminary votes have no objections to recommending approval and there are no unresolved NesCom member comments. In the absence of objection or abstention, the motion was approved.

### **IEEE Communications Society/Virtualized and Software Defined Networks, and Services Standards Committee P1913**

YANG Model for Software-Defined Quantum Communication

**Recommendation:** Approve PAR withdrawal.

## IEEE Computer Society/Standards Activities Board Standards Committee

### P2418.3

Standard for the Framework of Distributed Ledger Technology (DLT) Use in Agriculture

**Recommendation:** Approve PAR withdrawal.

## IEEE Computer Society/Test Technology

### P1450.6

Standard Test Interface Language (STIL) for Digital Test Vector Data-Core Test Language (CTL)

**Recommendation:** Approve PAR withdrawal.

### P1687.1

Standard for the Application of Interfaces and Controllers to Access 1687 JTAG Networks Embedded Within Semiconductor Devices

**Recommendation:** Approve PAR withdrawal.

## IEEE Power and Energy Society/Surge Protective Devices/Low Voltage

### PC62.55

Guide for Surge Protection of DC Power Feeds to Remote Radio Heads

**Recommendation:** Approve PAR withdrawal.

## 4.2 Modified PARs

There was a bucket motion to approve P2975.1, P2825, and P3308 based on the fact that preliminary votes have no objections to recommending approval and there are no unresolved NesCom member comments. In the absence of objection or abstention, the motion was approved.

## IEEE Computer Society/Smart Manufacturing Standards Committee

### P2975.1

Standard for Industrial Artificial Intelligence Data Attributes

**Recommendation:** Approve modified PAR.

## IEEE Power and Energy Society/Substations Committee

### P2825

Guide for Static Synchronous Series Compensator General Requirements and Test Methods

**Recommendation:** Approve modified PAR.

## IEEE SA Board of Governors/Entity Collaborative Activities Governance Board

### P3308

Moving Picture, Audio and Data Coding by Artificial Intelligence—Object and Scene Description v1.0

**Recommendation:** Approve modified PAR. (Recuse: Dukes)

## 4.3 Extension Requests

There was a bucket motion to approve P1431, P1720, P1925.1, P1926.1, P1927.1, P1916.1, P1950.1, P2784, P2961, P3220.01, P3222.01, P3223.01, P3230.03, P3232.01, P3270.01, P3270.02, P2416, P2881, P2957, P1708, P2731, P3006.1, P62.2, P1719, P63197, P1187, P1188, P2962, P495, P1142, P1186, P1300, P1511, P1511.1, P317, P833, P487a, P1711.1, P2658, P2030.12, PC37.1.2, PC37.90, PC37.300, P2418.5, P525, P979, P998, P1818, PC62.220, PC37.10, PC37.100.1, PC57.13.9, PC57.16, PC57.93a, PC57.98, PC57.162, PC57.166, P18, P751, P824, P1409, P1410, P2856, P2974, P2751, P2940, P2958, P2973, P62704-1, P62704-2a, P62704-3, P63184, PC95.1-2345, and P1 based on the fact that preliminary votes have no objections to recommending approval and there are no unresolved NesCom member comments. In the absence of objection, the motion was approved.



**IEEE Aerospace and Electronic Systems Society/Gyro Accelerometer Panel**

**P1431**

Standard for Specifying and Testing Coriolis Vibratory Gyros

**Recommendation:** Approve request for an extension until 31 December 2026.

**IEEE Antennas and Propagation Society/Antennas and Propagation Standards Committee**

**P1720**

Recommended Practice for Near Field Antenna Measurements

**Recommendation:** Approve request for an extension until 31 December 2026.

**IEEE Communications Society/Green ICT Standards Committee**

**P1925.1**

Standard for Energy Efficient Dynamic Line Rate Transmission System

**Recommendation:** Approve request for an extension until 31 December 2025.

**P1926.1**

Standard for a Functional Architecture of Distributed Energy Efficient Big Data Processing

**Recommendation:** Approve request for an extension until 31 December 2025.

**P1927.1**

Standard for Services Provided by the Energy-efficient Orchestration and Management of Virtualized Distributed Data Centers Interconnected by a Virtualized Network

**Recommendation:** Approve request for an extension until 31 December 2025.

**P1928.1**

Standard for a Mechanism for Energy Efficient Virtual Machine Placement

**Recommendation:** Approve request for an extension until 31 December 2025.

**There was a motion to approve the recommendation of P1928.1. In the absence of any objection or abstention, the motion was approved.**

**P1929.1**

An Architectural Framework for Energy Efficient Content Distribution

**Recommendation:** Approve request for an extension until 31 December 2025.

**There was a motion to approve the recommendation of P1929.1. In the absence of any objection or abstention, the motion was approved.**

**IEEE Communications Society/Virtualized and Software Defined Networks, and Services Standards Committee**

**P1916.1**

Standard for Software Defined Networking and Network Function Virtualization Performance

**Recommendation:** Approve request for an extension until 31 December 2025.

**P1950.1**

Standard for Communications Architectural Functional Framework for Smart Cities

**Recommendation:** Approve request for an extension until 31 December 2026.

**P2784**

Guide for the Technology and Process Framework for Planning a Smart City

**Recommendation:** Approve request for an extension until 31 December 2026.

## IEEE Computer Society/Artificial Intelligence Standards Committee

### P2961

Guide for an Architectural Framework and Application for Collaborative Edge Computing

**Recommendation:** Approve request for an extension until 31 December 2026.

## IEEE Computer Society/Blockchain and Distributed Ledgers

### P3220.01

Standard for Consensus Framework for Blockchain System

**Recommendation:** Approve request for an extension until 31 December 2025.

### P3222.01

Standard for Blockchain-based Digital Identity System Framework

**Recommendation:** Approve request for an extension until 31 December 2026.

### P3223.01

Standard for Blockchain-based Electronic Evidence Interface Specification

**Recommendation:** Approve request for an extension until 31 December 2025.

### P3230.03

Standard for Blockchain Service Capability Evaluation

**Recommendation:** Approve request for an extension until 31 December 2025.

### P3232.01

Standard for Blockchain System Governance Specification

**Recommendation:** Approve request for an extension until 31 December 2026.

### P3270.01

Standard for Blockchain-based Digital Asset Exchange Model

**Recommendation:** Approve request for an extension until 31 December 2026.

### P3270.02

Guide for the Application of Non-Fungible Token (NFT) Based Digital Asset

**Recommendation:** Approve request for an extension until 31 December 2027.

## IEEE Computer Society/Design Automation

### P2416

Standard for Power Modeling to Enable System-Level Analysis

**Recommendation:** Approve request for an extension until 31 December 2025.

## IEEE Computer Society/Learning Technology

### P2881

Standard for Learning Metadata Terms

**Recommendation:** Approve request for an extension until 31 December 2025.

## IEEE Computer Society/Online Gaming Standards Committee

### P2946

Guide for Electronic Sports (Esports) Integrity

**Recommendation:** Approve request for an extension until 31 December 2026. (Abstain: 1)

**There was a motion to approve the recommendation of P2496. In the absence of any objection, the motion was approved. (Abstain: 1)**

#### **P2947**

Guide for Broadcasting Electronic Sports (Esports) Events

**Recommendation:** Approve request for an extension until 31 December 2026.

**There was a motion to approve the recommendation of P2947. In the absence of any objection or abstention, the motion was approved.**

#### **IEEE Computer Society/Simulation Interoperability Std Organization/Std Activity Committee**

##### **P1516**

Standard for Modeling and Simulation (M&S) High Level Architecture (HLA)-- Framework and Rules

**Recommendation:** Conditional approval of request for an extension until December 2025, subject to the SASB not approving the December 2024 RevCom submittal of P1516. (Vote: 11=Yes, 2=No [Mohla])

##### **P1516.1**

Standard for Modeling and Simulation (M&S) High Level Architecture (HLA)-- Federate Interface Specification

**Recommendation:** Conditional approval of request for an extension until December 2025, subject to the SASB not approving the December 2024 RevCom submittal of P1516.1. (Vote: 11=Yes, 2=No [Mohla])

##### **P1516.2**

Standard for Modeling and Simulation (M&S) High Level Architecture (HLA)-- Object Model Template (OMT) Specification

**Recommendation:** Conditional approval of request for an extension until December 2025, subject to the SASB not approving the December 2024 RevCom submittal of P1516.2. (Vote: 11=Yes, 2=No [Mohla])

**There was a motion to conditionally approve the recommendations of P1516, 1516.1, and 1516.2 subject to the SASB not approving their submittals to RevCom. (Vote: 11=Yes; 2=No [Mohla]). [The condition was met.]**

#### **IEEE Computer Society/Software & Systems Engineering Standards Committee**

##### **P7003**

Algorithmic Bias Considerations

**Recommendation:** Approve request for an extension until 31 December 2025.

**There was a motion to approve the recommendation of P7003. In the absence of any objection or abstention, the motion was approved.**

#### **IEEE Computer Society/Standards Activities Board Standards Committee**

##### **P2957**

Standard for a Reference Architecture for Big Data Governance and Metadata Management

**Recommendation:** Approve request for an extension until 31 December 2026. (Recuse: Rosdahl)

#### **IEEE Electromagnetic Compatibility Society/Standards Development Committee**

##### **P1128**

Recommended Practice for Radio-Frequency (RF) Absorber Evaluation in the Range of 30 MHz to 40 GHz

**Recommendation:** Approve request for an extension until 31 December 2025. (Abstain: Rosdahl)

**There was a motion to approve the recommendation of P1128. In the absence of any objection, the motion was approved. (Abstain: Rosdahl)**

**IEEE Engineering in Medicine and Biology Society/Standards Committee**

**P1708**

Standard for Wearable Cuffless Blood Pressure Measuring Devices

**Recommendation:** Approve request for an extension until 31 December 2025.

**P2731**

Standard for a Unified Terminology for Brain-Computer Interfaces

**Recommendation:** Approve request for an extension until 31 December 2026.

**IEEE Industry Applications Society/Industrial & Commercial Power Systems Standards Development Committee**

**P3006.1**

Recommended Practice for Reliability Planning and Design of Industrial and Commercial Power Systems

**Recommendation:** Approve request for an extension until 31 December 2025.

**IEEE Industry Applications Society/Petroleum & Chemical Industry**

**P80005-3**

Utility Connections in Port - Part 3: Low Voltage Shore Connection (LVSC) Systems - General Requirements

**Recommendation:** Approve request for an extension until 31 December 2025. (Abstain: 1)

**There was a motion to approve the recommendation of P80005-3. In the absence of any objection, the motion was approved. (Abstain:1)**

**IEEE Power and Energy Society/Electric Machinery**

**P62.2**

Guide for Diagnostic Field Testing of Electric Power Apparatus - Electrical Machinery

**Recommendation:** Approve request for an extension until 31 December 2025.

**P1553**

Standard for Voltage Endurance Testing of Form-Wound Coils and Bars for Hydrogenerators

**Recommendation:** Approve request for an extension until 31 December 2025.

**There was a motion to approve the recommendation of P1553. In the absence of any objection or abstention, the motion was approved.**

**P1719**

Guide for Evaluating Stator Cores of AC Electric Machines Rated 1 MVA and Higher

**Recommendation:** Approve request for an extension until 31 December 2025.

**IEEE Power and Energy Society/Energy Development & Power Generation**

**P63197**

Standard Terms and Definitions for Turbine Governing Systems

**Recommendation:** Approve request for an extension until 31 December 2026.

**IEEE Power and Energy Society/Energy Storage & Stationary Battery Committee**

**P1187**

Recommended Practice for Installation Design and Installation of Valve-Regulated Lead-Acid Batteries for Stationary Applications

**Recommendation:** Approve request for an extension until 31 December 2026.

#### **P1188**

Recommended Practice for Maintenance, Testing, and Replacement of Valve-Regulated Lead-Acid (VRLA) Batteries for Stationary Applications

**Recommendation:** Approve request for an extension until 31 December 2025.

#### **P2962**

Recommended Practice for the Installation, Operation, Maintenance, Testing, and Replacement of Li-ion Batteries in Stationary Applications

**Recommendation:** Approve request for an extension until 31 December 2025.

#### **IEEE Power and Energy Society/Insulated Conductors**

##### **P495**

Standard for Testing Faulted Circuit Indicators

**Recommendation:** Approve request for an extension until 31 December 2025.

#### **P1142**

Guide for the Selection, Testing, Application and Installation of 300 V to 500 kV Cables Having Radial-Moisture Barriers and/or Longitudinal Water Blocking

**Recommendation:** Approve request for an extension until 31 December 2025.

#### **P1186**

Recommended Practice for Applicability of Methods for the Evaluation of Low-Voltage and Medium-Voltage Installed Cable Systems in Nuclear Facilities

**Recommendation:** Approve request for an extension until 31 December 2025.

#### **P1300**

Guide for Cable Connections for Gas-Insulated Substations

**Recommendation:** Approve request for an extension until 31 December 2025.

#### **P1511**

Guide for Investigating and Analyzing Power Cable, Joint, and Termination Failures on Systems Rated 2.5 kV Through 46 kV

**Recommendation:** Approve request for an extension until 31 December 2025.

##### **P1511.1**

Guide for Investigating and Analyzing Shielded Power Cable Failures on Systems Rated 2.5 kV Through 46 kV

**Recommendation:** Approve request for an extension until 31 December 2025.

#### **IEEE Power and Energy Society/Nuclear Power Engineering Committee**

##### **P317**

Standard for Electric Penetration Assemblies in Containment Structures for Nuclear Power Generating Stations

**Recommendation:** Approve request for an extension until 31 December 2025.

#### **P833**

Recommended Practice for the Protection of Electric Equipment in Nuclear Power Generating Stations from Water Hazards

**Recommendation:** Approve request for an extension until 31 December 2025.

## IEEE Power and Energy Society/Power System Communications and Cybersecurity

### P487a

Standard for the Electrical Protection of Communications Facilities Serving Electric Supply Locations -- General Considerations Amendment: New Annex J- Guidance for Determining the Ground Potential Rise and Induced Voltages for the Design of Communications Installations at Electric Supply Locations

**Recommendation:** Approve request for an extension until 31 December 2026.

### P1711.1

Standard for a Cryptographic Protocol for Cyber Security of Substation Serial Links: Substation Serial Protection Protocol

**Recommendation:** Approve request for an extension until 31 December 2025.

### P2658

Guide for Cybersecurity Testing in Electric Power Systems

**Recommendation:** Approve request for an extension until 31 December 2026.

## IEEE Power and Energy Society/Power System Relaying and Control

### P2030.12

Guide for the Design of Microgrid Protection Systems

**Recommendation:** Approve request for an extension until 31 December 2025.

### PC37.1.2

Guide for Databases Used in Utility Automation Systems

**Recommendation:** Approve request for an extension until 31 December 2025.

### PC37.90

Standard for Relays, Relay Systems, and Control Devices used for Protection and Control of Electric Power Apparatus – General Requirements and Tests

**Recommendation:** Approve request for an extension until 31 December 2026.

### PC37.251

Standard for Common Protection and Control Settings or Configuration Data Format (COMSET)

**Recommendation:** Approve request for an extension until 31 December 2025.

**There was a motion to approve the recommendation of PC37.251. In the absence of any objection or abstention, the motion was approved.**

### PC37.300

Guide for Centralized Protection and Control (CPC) Systems within a Substation

**Recommendation:** Approve request for an extension until 31 December 2025.

## IEEE Power and Energy Society/Smart Buildings, Loads and Customer Systems

### P2418.5

Guide for Blockchain in Power and Energy Systems

**Recommendation:** Approve request for an extension until 31 December 2025.

## IEEE Power and Energy Society/Substations Committee

### P81

Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Grounding System

**Recommendation:** Approve request for an extension until 31 December 2025.

**There was a motion to approve the recommendation of P81. In the absence of any objection or abstention, the motion was approved.**

#### **P525**

Guide for the Design and Installation of Cable Systems in Substations

**Recommendation:** Approve request for an extension until 31 December 2025.

#### **P979**

Guide for Substation Fire Protection

**Recommendation:** Approve request for an extension until 31 December 2025.

#### **P998**

Guide for Direct Lightning Stroke Shielding of Substations

**Recommendation:** Approve request for an extension until 31 December 2025.

#### **P1534**

Recommended Practice for Specifying Thyristor-Controlled Series Capacitors

**Recommendation:** Approve request for an extension until 31 December 2025.

**There was a motion to approve the recommendation of P1534. In the absence of any objection or abstention, the motion was approved.**

#### **P1818**

Recommended Practice for the Design of Low-Voltage Auxiliary Systems for Electric Power Substations

**Recommendation:** Approve request for an extension until 31 December 2025.

### **IEEE Power and Energy Society/Surge Protective Devices Committee**

#### **P2770**

60099-11 Surge Arresters - Part 11: Metal-Oxide Line Surge Arresters to Protect Power Line Insulation

**Recommendation:** Approve request for an extension until 31 December 2027.

**There was a motion to approve the recommendation of P2770. In the absence of any objection or abstention, the motion was approved.**

#### **PC62.21**

Guide for the Application of Surge Voltage Protective Equipment on AC Rotating Machinery 1000 Volts and Greater

**Recommendation:** Approve request for an extension until 31 December 2025. (Vote: 9=Yes; 2 =No (Rosdahl))

**There was a motion to approve the recommendation of P62.21. The motion was approved. (Vote: 9=Yes; 2=No (Rosdahl)).**

### **IEEE Power and Energy Society/Surge Protective Devices/Low Voltage**

#### **PC62.220**

Guide for the Application of Surge Protective Devices for the Smart Grid

**Recommendation:** Approve request for an extension until 31 December 2026.

### **IEEE Power and Energy Society/Switchgear**

#### **PC37.10**

Recommended Practice for Investigation, Analysis, and Reporting of Failures of AC High-Voltage Circuit Breakers and Circuit Switchers with Rated Maximum Voltage Above 1000 V

**Recommendation:** Approve request for an extension until 31 December 2025. (Abstain: Edwards)

#### **PC37.41**

Standard for Design Tests and Specifications for High-Voltage (> 1000 V) Fuses and Accessories

**Recommendation:** Approve request for an extension until 31 December 2025. (Abstain: Edwards)

**There was a motion to approve the recommendation of P37.41. In the absence of any objection, the motion was approved. (Abstain: Edwards)**

#### **PC37.100.1**

Standard of Common Requirements for High Voltage Power Switchgear Rated Above 1000 V

**Recommendation:** Approve request for an extension until 31 December 2026. (Abstain: Edwards)

### **IEEE Power and Energy Society/Transformers**

#### **PC57.13.9**

Standard for Power-Line Carrier Coupling Capacitors and Coupling Capacitor Voltage Transformers

**Recommendation:** Approve request for an extension until 31 December 2025.

#### **PC57.16**

Standard for Requirements, Terminology, and Test Code for Dry-Type Air-Core Series-Connected Reactors

**Recommendation:** Approve request for an extension until 31 December 2025.

#### **PC57.93a**

IEEE Approved Draft Guide for Installation and Maintenance of Liquid-Immersed Power Transformers

Amendment: Cold Start of Power Transformers filled with Natural Ester Fluids

**Recommendation:** Approve request for an extension until 31 December 2025.

#### **PC57.98**

Guide for Transformer Impulse Tests

**Recommendation:** Approve request for an extension until 31 December 2026.

#### **PC57.162**

Guide for the Interpretation of Moisture Related Parameters in Liquid Immersed Transformers and Reactors

**Recommendation:** Approve request for an extension until 31 December 2025.

#### **PC57.166**

Guide for Acceptance and Maintenance of Insulating Liquids in Transformers and Related Equipment

**Recommendation:** Approve request for an extension until 31 December 2026.

### **IEEE Power and Energy Society/Transmission and Distribution**

#### **P18**

Standard for Shunt Power Capacitors

**Recommendation:** Approve request for an extension until 31 December 2025.

#### **P751**

Guide for Wood Structures Used for Overhead Electric Transmission Lines

**Recommendation:** Approve request for an extension until 31 December 2026.

#### **P824**

Standard for Series Capacitor Banks in Power Systems

**Recommendation:** Approve request for an extension until 31 December 2025.

#### **P1409**

Guide for Technology Methods for Power Quality Improvement in Electric Power Systems

**Recommendation:** Approve request for an extension until 31 December 2026.



#### P1410

Guide for Improving the Lightning Performance of Electric Power Overhead Distribution Lines

**Recommendation:** Approve request for an extension until 31 December 2025.

#### P2856

Guide for the Definition of Resiliency and Measuring the Resiliency of the Electrical Distribution System

**Recommendation:** Approve request for an extension until 31 December 2026.

#### P2974

Guide for System Commissioning of Medium and Low (750 V to  $\pm 50$  kV) Voltage Direct Current Distribution Network

**Recommendation:** Approve request for an extension until 31 December 2025.

#### IEEE Robotics and Automation Society/Standing Committee for Standards

##### P2751

3D Map Data Representation for Robotics and Automation

**Recommendation:** Approve request for an extension until 31 December 2025.

#### P2940

Standard for Measuring Robot Agility

**Recommendation:** Approve request for an extension until 31 December 2026.

#### IEEE SA Board of Governors/Entity Collaborative Activities Governance Board

##### P2958

Standard for a Decentralized Identity and Access Management Framework for Internet of Things

**Recommendation:** Approve request for an extension until 31 December 2026.

#### P2973

Guide for Field Calibration System for Current Carrying Capacity of Overhead Transmission Lines

**Recommendation:** Approve request for an extension until 31 December 2026.

#### IEEE SA Board of Governors/International Committee on Electromagnetic Safety

##### P62704-1

Standard for Determining the Peak Spatial Average Specific Absorption Rate (SAR) in the Human Body from Wireless Communications Devices, 30 MHz to 6 GHz. Part 1: General Requirements for Using the Finite Difference Time Domain (FDTD) Method for SAR Calculations

**Recommendation:** Approve request for an extension until 31 December 2025.

##### P62704-2a

Standard for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Body from Wireless Communications Devices, 30 MHz to 6 GHz -- Part 2: Specific Requirements for Finite Difference Time Domain (FDTD) Modelling of Exposure from Vehicle Mounted Antennas Amendment 1

**Recommendation:** Approve request for an extension until 31 December 2025.

##### P62704-3

Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Body from Wireless Communications Devices, 30 MHz - 6 GHz Part 3: Specific Requirements for Using the Finite Difference Time Domain (FDTD) Method for SAR Calculations of Mobile Phones

**Recommendation:** Approve request for an extension until 31 December 2026.

#### P63184

Assessment Methods of the Human Exposure to Electric and Magnetic Fields from Wireless Power Transfer Systems - Models, Instrumentation, Measurement and Numerical Methods and Procedures (Frequency range of 1 kHz to 30 MHz)

**Recommendation:** Approve request for an extension until 31 December 2025.

#### PC95.1-2345

Standard for Military Workplaces -- Force Health Protection Regarding Personnel Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz to 300 GHz

**Recommendation:** Approve request for an extension until 31 December 2026.

#### IEEE SA Board of Governors/Strategic and Emerging Standards Committee

##### P1

Recommended Practice - General Principles for Temperature Limits in the Rating of Electrical Equipment and for the Evaluation of Electrical Insulation

**Recommendation:** Approve request for an extension until 31 December 2026

#### 4.4 New PARs

There was a bucket motion to approve P1961, P1901.3.1, P1936.15, P1936.18, P3507, P3511, P3540, P3549, P3240.06, P3537, P802.11bq, P2675.1, P3552, P3831, P3832, P2089.3, P3539, P3553, P4007, P3548, P3542, P3543, P3544, P1591.1-2023/Cor 1, P3545, and P3547 based on the fact that preliminary votes have no objections to recommending approval and there are no unresolved NesCom member comments. The motion was approved.

#### IEEE Communications Society/Edge, Fog, Cloud Communications with IOT and Big Data Standards Committee

##### P1961

Recommended Practice for Framework of Integrated Energy Data Collection and Perception

**Recommendation:** Approve new PAR until December 2028.

#### IEEE Communications Society/Power Line Communications

##### P1901.3.1

Standard Test Procedures for IEEE Std 1901.3 Standard for Medium Frequency (less than 12 MHz) Power Line Communications with a Hybrid Power Line Communications/Radio Frequency Physical Layer

**Recommendation:** Approve new PAR until December 2028.

##### P1957

Standard for a Satellite-based Emergency Communication System Supporting Electric Power Generation and the Power Grid

**Recommendation:** Conditional approval of a new PAR until December 2028, subject to a Working Group Chair accepting the role within the myProject system. (Vote: 8=Yes, 3=Abstain). [Note: The condition has been met.]

**There was a motion to defer P1957 because the working group chair information was missing within myProject. The motion failed. (Vote: 6=Yes; 6=No; 0=Abstain)**

**There was a motion to conditionally approve the recommendation of P1957 based upon a Working Group chair accepting the role within myProject. The motion was approved. (Vote: 8=Yes; 0=No; 3=Abstain) [Note: The condition has been met.]**

#### IEEE Communications Society/Unmanned Aerial Vehicles Communications Standards Committee

##### P1936.15

Standard for a Transmission Protocol for Equipment Status and Control Data for Remote Sensing Networks that Use Unmanned Aerial Systems

**Recommendation:** Approve new PAR until December 2028

#### **P1936.18**

Standard for Unmanned Aerial System-Based Multi-Sensor Data Fusion for Power Line Anomaly Detection Applications

**Recommendation:** Approve new PAR until December 2028

#### **IEEE Computer Society/Artificial Intelligence Standards Committee**

##### **P3507**

Standard for Multimodal Large Language Models Platform for Automotive Services

**Recommendation:** Approve new PAR until December 2028.

##### **P3511**

Standard for Risk Management Guidelines for Generative Artificial Intelligence Systems

**Recommendation:** Approve new PAR until December 2028.

##### **P3540**

Standard for Technical Requirements of Artificial Intelligence Personal Computer

**Recommendation:** Approve new PAR until December 2028.

##### **P3549**

Standard for Inference Optimization Systems of Large Language Models

**Recommendation:** Approve new PAR until December 2028.

#### **IEEE Computer Society/Blockchain and Distributed Ledgers**

##### **P3240.06**

Standard for Blockchain-based Hourly Time-matching Green Power Trading

**Recommendation:** Approve new PAR until December 2028.

#### **IEEE Computer Society/Design Automation**

##### **P3537**

Standard for 3Dblox--Chiplet Connectivity and Physical Properties Description Language

**Recommendation:** Approve new PAR until December 2028.

#### **IEEE Computer Society/LAN/MAN Standards Committee**

##### **P802.11bq**

IEEE Standard for Information Technology--Telecommunications and Information Exchange between Systems - Local and Metropolitan Area Networks--Specific Requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications Amendment: Enhancements for Integrated Millimeter Wave Wireless LAN

**Recommendation:** Approve new PAR until December 2028.

#### **IEEE Computer Society/Software & Systems Engineering Standards Committee**

##### **P2675.1**

Standard for System Reliability Engineering—Building Automation to Support Continuous Operations

**Recommendation:** Approve new PAR until December 2028.

#### **IEEE Computer Society/Standards Activities Board Standards Committee**

##### **P3552**

Guide for Enterprise Data Assets Assessment Model

**Recommendation:** Approve new PAR until December 2028.

#### IEEE Consumer Technology Society/Digital Finance and Economy Standards Committee

##### P3831

Standard for Reference Architecture and Technical Requirements for Electricity Data Asset Management Platform

**Recommendation:** Approve new PAR until December 2028.

##### P3832

Standard for General Requirements for Distributed Banking Financial Core Business Systems

**Recommendation:** Approve new PAR until December 2028.

#### IEEE Consumer Technology Society/Emerging Technology Standards Committee

##### P2089.3

Standard for Online Parental Consent

**Recommendation:** Approve new PAR until December 2028.

##### P3539

Standard for General Requirements for Refueling Robot Systems

**Recommendation:** Approve new PAR until December 2028.

#### IEEE Engineering in Medicine and Biology Society/Standards Committee

##### P3553

Standard for Unique Electronic Health Record Identification System

**Recommendation:** Approve new PAR until December 2028.

#### IEEE Geoscience and Remote Sensing Society/Standards Committee

##### P4007

Standard for Uplift Monitoring of Public Structures in Permafrost Regions Using Synthetic Aperture Radar

**Recommendation:** Approve new PAR until December 2028.

#### IEEE Industry Applications Society/Industrial & Commercial Power Systems Standards Development Committee

##### P3548

Recommended Practice for the Structural Design of Distribution Grid in Photovoltaic-Energy Storage-DC-Flexible Integrated Buildings

**Recommendation:** Approve new PAR until December 2028.

#### IEEE Industry Applications Society/Industrial Power Conversion Systems Department

##### P3542

Standard for Efficiency Classification of 15 kW-500 kW Fully Integrated Motor Drives when Fed from Three Phase Supplies Up to 500 VAC

**Recommendation:** Approve new PAR until December 2028.

##### P3543

Standard for Power Quality Requirements for 15 kW-500 kW Fully Integrated Motor Drives when Fed from Three Phase Supplies Up to 500 VAC

**Recommendation:** Approve new PAR until December 2028.

##### P3544

Standard for Data Exchange Requirements for Power Factor Correction in Distributed Variable Frequency Motors Drives

**Recommendation:** Approve new PAR until December 2028.

## IEEE Intelligent Transportation Systems Society/Standards Committee

### P3538

Guide for Metadata on Road Accidents in Low and Middle Income Countries and Regions

**Recommendation:** Approve new PAR until December 2028. (Vote: 5=Yes; 3=No (Mohla); 1=Abstain)

**There was a motion to approve the recommendation of P3538. The motion was approved. (Vote: 5=Yes; 3=No (Mohla); 1=Abstain)**

## IEEE Power and Energy Society/Power System Communications and Cybersecurity

### P1591.1-2023/Cor 1

IEEE Standard for Testing and Performance of Hardware for Optical Ground Wire (OPGW) - Corrigendum 1

**Recommendation:** Approve new PAR until December 2028.

## IEEE Power and Energy Society/Substations Committee

### P3546

Guide for Arc Flash Safety Program for Substations and Underground and Overhead Lines

**Recommendation:** Approve new PAR until December 2028.

**There was a motion to approve the recommendation of P3546. In the absence of any objection or abstention, the motion was approved.**

## IEEE Vehicular Technology Society/High Speed Train and Maglev Standards Committee

### P3545

Guide for Digital Twin Modeling and Analysis of 27.5 kV High Voltage Systems of High-Speed Trains

**Recommendation:** Approve new PAR until December 2028.

### P3547

Recommended Practice for Using Commercial-Off-The-Shelf Electronic System and Software for Rail Safety Related Application

**Recommendation:** Approve new PAR until December 2028.

## 4.5 PARs for the Revision of Standards

There was a bucket motion to approve P1801, P15289, P24765, P26512, P125, PC62.41.1, PC62.45, P316, PC37.09, P951, and P1653.6 based on the fact that preliminary votes have no objections to recommending approval and there are no unresolved NesCom member comments. In the absence of objection or abstention, the motion was approved.

## IEEE Computer Society/Design Automation

### P1801

Standard for Design and Verification of Low Power, Energy Aware Electronic Systems

**Recommendation:** Approve PAR for the revision of a standard until December 2028.

## IEEE Computer Society/Software & Systems Engineering Standards Committee

### P15289

Systems and software engineering—Content of life-cycle information items (documentation)

**Recommendation:** Approve PAR for the revision of a standard until December 2028.

### P24765

Systems and software engineering--Vocabulary

**Recommendation:** Approve PAR for the revision of a standard until December 2028.

#### **P26512**

Systems and software engineering - Requirements for acquirers and suppliers of information for users

**Recommendation:** Approve PAR for the revision of a standard until December 2028.

#### **IEEE Power and Energy Society/Energy Development & Power Generation**

##### **P125**

Recommended Practice for the Specification of Hydraulic Turbine Governing Systems

**Recommendation:** Approve PAR for the revision of a standard until December 2028.

#### **IEEE Power and Energy Society/Surge Protective Devices/Low Voltage**

##### **PC62.36**

Standard Test Methods for Surge Protectors and Protective Circuits Used in Information and Communications Technology Circuits and Smart Grid Data Circuits

**Recommendation:** Approve PAR for the revision of a standard until December 2028.

**There was a motion to approve the recommendation of PC62.36. In the absence of any objection or abstention, the motion was approved.**

##### **PC62.41.1**

Guide for the Surge Environment in Low-Voltage (1000 V and less) AC Power Circuits

**Recommendation:** Approve PAR for the revision of a standard until December 2028.

##### **PC62.45**

Recommended Practice for Surge Testing of Equipment Connected to Low-Voltage (1000 V and less) AC Power Circuits

**Recommendation:** Approve PAR for the revision of a standard until December 2028.

#### **IEEE Power and Energy Society/Switchgear**

##### **P316**

Standard Requirements for Direct Current Instrument Shunts

**Recommendation:** Approve PAR for the revision of a standard until December 2028. (Abstain: Edwards)

##### **PC37.09**

Standard for Test Procedures for AC High-Voltage Circuit Breakers with Rated Maximum Voltage Above 1000 V

**Recommendation:** Approve PAR for the revision of a standard until December 2028. (Abstain: Edwards)

#### **IEEE Power and Energy Society/Transmission and Distribution**

##### **P951**

Guide for the Assembly and Erection of Metal Transmission Structures

**Recommendation:** Approve PAR for the revision of a standard until December 2028.

#### **IEEE SA Board of Governors/Entity Collaborative Activities Governance Board**

##### **P2857**

Standard for Wireless Smart Utility Network Field Area Network

**Recommendation:** Approve PAR for the revision of a standard until December 2028. (1=Abstain (Biyabani))

**There was a motion to defer P2857. The motion failed.**

**There was a motion to approve the recommendation of P2857. In the absence of any objection, the motion was approved. (1=Abstain (Biyabani))**

## IEEE Vehicular Technology Society/Traction Power Systems Standards Committee

### P1653.6

Recommended Practice for Grounding of DC Equipment Enclosures in Traction Power Distribution Facilities

**Recommendation:** Approve PAR for the revision of a standard until December 2028.

#### 5. Old Business

There was no old business.

#### 6. New Business

There was no new business.

#### 7. Next Meeting

The next meeting will be a teleconference meeting. It was originally scheduled for 29 January with submittal information sent by 22 January. However, the NesCom has been moved to **Thursday, 30 January 2025** to avoid the RevCom meeting and Chinese New Year. NesCom members should submit new topic ideas for the January meeting no later than 23 January 2025 along with any supporting documentation to the NesCom Administrator.

#### 8. Adjournment

The meeting was adjourned at 11:48 a.m. ET (UTC-5).