



IEEE / PES / TRANSFORMERS COMMITTEE

Standards Report

To: Members of Transformers Committee

September 28, 2017

From: Jim Graham, Standards Coordinator

Executive Summary

This report covers Transformers Committee Standards activity from March 24, 2017 through September 28, 2017. During this time no new Standards, six Revisions, and no Corrigenda were approved by the Standards Board. In this same period, the Standards Board approved no PARs for new standards; four PARs for Revisions; two PAR modifications; no PARs for Corrigenda, and four PAR extensions.

Sixteen (16) standards will expire in 2018, including one standard (C57.136) which does not have an active PAR. Eight (8) standards will expire in 2019.

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I. Standards approved since Mar 24, 2017

Approved New Transformer Standards *None*

Approved Revisions to Transformer Standards *(All expire 31 Dec 2026)*

- PC57.12.20** Standard for Overhead-Type Distribution Transformers 500 kVA and Smaller: High Voltage, 34 500 V and Below; Low Voltage, 7970/13 800Y V and Below
- PC57.12.36** Standard Requirements for Liquid-Immersed Distribution Substation Transformers
- PC57.12.40** Standard for Network, Three-Phase Transformers, 2500 kVA and Smaller; High Voltage, 34 500 GrdY/19 920 and Below; Low Voltage, 600 V and Below; Subway and Vault Types (Liquid Immersed)
- PC57.12.58** Guide for Conducting a Transient Voltage Analysis of a Dry-Type Transformer Coil
- PC57.140** Guide for Evaluation and reconditioning of Liquid Immersed Power Transformers
- P60076-57-129** Standard for General Requirements and Test Code for Oil-Immersed HVDC Converter Transformers

Approved Standards Corrigenda *None*

II. PARs approved since Mar 24, 2017

Approved PARs for New Projects *None*

Approved PARs for Revision of Standards *(All Expire December 2021)*

- PC57.12.38** Standard for Pad-Mounted-Type, Self-Cooled, Single-Phase Distribution Transformers 250 kVA and Smaller: High Voltage, 34 500 GrdY/19 920 V and Below; Low Voltage, 480/240 V and Below
- PC57.91** Guide for Loading Mineral-Oil-Immersed Transformers and Step-Voltage Regulators
- PC57.123** Guide for Transformer Loss Measurement
- PC57.124** Recommended Practice for the Detection of Partial Discharge and the Measurement of Apparent Charge in Dry-Type Transformers

Approved PAR Modifications *(PAR Modifications do not change the Expiration Date)*

- PC57.12.51** Guide for Mechanical Interchangeability of Ventilated Dry Type Transformers
- PC57.160** Guide for the Electrical Measurement of Partial Discharges in High Voltage Bushings and Instrument Transformers

Approved PARs for Corrigenda *None*

Approved PAR Extensions *(All expire as noted)*

- PC57.13.8** Standard Requirements for Station Service Voltage Transformers (**December 2019**)
- PC57.19.04** Standard Performance Characteristics and Dimensions for High Current Power Transformer Bushings with Rated Continuous Current in Excess of 5000 A in Bus Enclosures (**December 2018**)
- PC57.160** Guide for the Electrical Measurement of Partial Discharges in High Voltage Bushings and Instrument Transformers (**December 2019**)
- PC57.161** Guide for Dielectric Frequency Response Test (**December 2018**)

III. 2017 IEEE Standards Board Meeting Schedule

The Standards Board has three *physical* board meetings per year and three teleconference meetings. The IEEE 2018 Standards Association meetings schedule is appended to this report.

Deadlines for 2018 Standards Board Submissions:

Standards Board Meeting	Submission Deadline
January 2018 (teleconference)	20 December, 2017
March 2018	26 January, 2018
April 2018 (teleconference)	16 March, 2018
June 2018	04 May, 2018
September 2018 (teleconference)	27 July, 2018
December 2018	15 October, 2018

Please Note: Anything that expires at the end of 2018 must be submitted to Standards Board (PARs to NESCOM, standards to REVCOM) by **15 October, 2018**

IV. Transformers Committee Ballot Status

(as of Sep 28, 2017)

PAR Number	Project Type	PAR Expiration	Invitation Close Date	Ballot Close Date	Status
Bushings					
PC57.19.01	Revision	12/31/2017	2/25/2017	4/2/2017	Sponsor Ballot: Ballot
Dielectric Test					
PC57.161	New	12/31/2017	12/4/2016	2/9/2017	Sponsor Ballot: Comment Resolution
Distribution Transformers					
PC57.12.39	New	12/31/2017	4/13/2016	7/14/2016	Sponsor Ballot: Comment Resolution

PAR Number	Project Type	PAR Expiration	Invitation Close Date	Ballot Close Date	Status
Distribution Transformers					
PC57.15	Revision	12/31/2018	2/17/2016	10/23/2016	Sponsor Ballot: Comment Resolution
Insulating Fluids					
PC57.147	Revision	12/31/2018	2/27/2016	3/31/2016	Sponsor Ballot: Comment Resolution
PC57.119	Revision	12/31/2018	12/18/2014	3/15/2017	Sponsor Ballot: Comment Resolution
Instrument Transformers					
PC57.13.7	New	12/31/2017	10/13/2016	12/28/2016	Sponsor Ballot: Comment Resolution
Insulating Fluids					
PC57.158	New	12/31/2018	5/18/2016	10/27/2016	Sponsor Ballot: Comment Resolution
Power Transformers					
PC57.12.10	Revision	12/31/2019	12/28/2016	3/15/2017	Sponsor Ballot: Comment Resolution

V. Transformer Committee Active PAR Status

(as of Sep 28, 2017)

PAR Number	WG Chair	Project Type	Title	Approval Date	PAR Expiration	Status
Bushings						
PC57.19.01	Shibao Zhang	Revision	Standard Performance Characteristics and Dimensions for Outdoor Apparatus Bushings	8-Dec-2010	12/31/2017	RevCom Agenda 05-Dec-2017
PC57.19.02	James Smith	New	Standard for the Design and Performance Requirements of Bushings Applied to Liquid Immersed Distribution Transformers	5-Feb-2016	12/31/2020	WG Draft Development
PC57.19.04	Scott Digby	New	Standard Performance Characteristics and Dimensions for High Current Power Transformer Bushings with Rated Continuous Current in Excess of 5000 A in Bus Enclosures	16-Jun-11	12/31/2017	Sponsor Ballot: Comment Resolution
Dielectric Test						
PC57.113	Ali Naderiamn	Revision	Recommended Practice for Partial Discharge Measurement in Liquid-Filled Power Transformers and Shunt Reactors	Pending		NesCom Agenda 05-Dec-2017
PC57.127	Detlev Gross	Revision	Guide for the Detection, Location and Interpretation of Sources of Acoustic Emissions from Electrical Discharges in Power Transformers and Power Reactors	16-Feb-15	12/31/2019	WG Draft Development
PC57.160	Thang Hochanh	New	Guide for the Electrical Measurement of Partial Discharges in High Voltage Bushings and Instrument Transformers	15-Jun-17	12/31/2019	WG Draft Development
PC57.161	Ali Naderian Jahromi	New	Guide for Dielectric Frequency Response Test	23-Aug-13	12/31/2017	Sponsor Ballot: Comment Resolution
Distribution Transformers						
PC57.12.20	Alan Traut	Revision	Standard for Overhead-Type Distribution Transformers 500 kVA and Smaller: High Voltage, 34 500 V and Below; Low Voltage, 7970/13 800Y V and Below	8-Jun-2012	12/31/2017	RevCom Agenda 06-Sep-2017
PC57.12.32	Daniel Mulkey	Revision	Standard for Submersible Equipment - Enclosure Integrity	11-Jun-15	12/31/2019	WG Draft Development
PC57.12.34	Ronald Stahara	Revision	Standard Requirements for Pad-Mounted, Compartmental-Type, Self-Cooled, Three-Phase Distribution Transformers, 10 MVA and Smaller; High-Voltage, 34.5 kV Nominal System Voltage and Below; Low-Voltage, 15 kV Nominal System Voltage and Below	22-Sep-16	12/31/2020	WG Draft Development

PAR Number	WG Chair	Project Type	Title	Approval Date	PAR Expiration	Status
Distribution Transformers						
PC57.12.38	Ali Ghafourian	Revision	Standard for Pad-Mounted-Type, Self-Cooled, Single-Phase Distribution Transformers 250 kVA and Smaller: High Voltage, 34 500 GrdY/19 920 V and Below; Low Voltage, 480/240 V and Below	28 Sep-17	12/31/2017	WG Draft Development
PC57.12.39	Carlos Gaytan	New	Standard Requirements for Distribution Transformer Tank Pressure Coordination	5-Feb-2016	12/31/2017	RevCom Agenda 05-Dec-2017
PC57.15	Craig Colopy	Revision	Standard Requirements, Terminology, and Test Code for Step-Voltage Regulators	5-Feb-2016	12/31/2018	Sponsor Ballot: Ballot
Dry Type Transformers						
PC57.12.01	Robert Ballard	Revision	Standard for General Requirements for Dry-Type Distribution and Power Transformers	12-May-16	12/31/2020	WG Draft Development
PC57.124	Tom Prevost	Revision	Recommended Practice for the Detection of Partial Discharge and the Measurement of Apparent Charge in Dry-Type Transformers	15-Jun-17	12/31/2021	WG Draft Development
PC57.12.51	Sanjib Som	Revision	Standard for Ventilated Dry-Type Power Transformers, 501 kVA and Larger, Three-Phase, with High-Voltage 601 V to 34 500 V; Low-Voltage 208Y/120 V to 4160 V- General Requirements	21-Aug-14	12/31/2018	WG Draft Development
PC57.12.60	Roger Wicks	Revision	Standard Test Procedure for Thermal Evaluation of Insulation Systems for Dry-Type Power and Distribution Transformers	11-Jun-15	12/31/2019	WG Draft Development
PC57.12.91	Derek Foster	Revision	Standard Test Code for Dry-Type Distribution and Power Transformers	3-Mar-2016	12/31/2020	WG Draft Development
PC57.16	J.Arturo DelRio	Revision	Standard for Requirements, Terminology, and Test Code for Dry-Type Air-Core Series-Connected Reactors	5-Feb-2016	12/31/2020	WG Draft Development
HVDC Converter Transformers & Smoothing Reactors						
P1277	Klaus Pointner	Revision	Standard General Requirements and Test Code for Dry-Type and Oil-Immersed Smoothing Reactors and for Dry-Type Converter Reactors for DC Power Transmission	17-Feb-17	12/31/2021	WG Draft Development
P60076-57-129	Ulf Radbrandt	Revision	Converter Transformers for HVDC Applications	10-Dec-14	12/31/2018	RevCom Agenda 06-Sep-2017

PAR Number	WG Chair	Project Type	Title	Approval Date	PAR Expiration	Status
Insulating Fluids						
PC57.104	Claude Beauchemin	Revision	Guide for the Interpretation of Gases Generated in Oil-Immersed Transformers	5-Feb-2010	12/31/2017	WG Draft Development
PC57.147	Charles Mc Shane	Revision	Guide for Acceptance and Maintenance of Natural Ester Insulating Liquid in Transformers	5-Feb-2016	12/31/2018	Sponsor Ballot: Comment Resolution
Insulation Life						
P1276	Roger Wicks	Revision	Guide for the Application of High-Temperature Insulation Materials in Liquid-Immersed Distribution, Power and Regulating Transformers	27-Mar-14	12/31/2018	WG Draft Development
PC57.119	Gael Kennedy	Revision	Recommended Practice for Performing Temperature Rise Tests on Oil-Immersed Power Transformers at Loads Beyond Nameplate Ratings	27-Oct-14	12/31/2018	Sponsor Ballot: Comment Resolution
PC57.162	Tom Prevost	New	Guide for the Interpretation of Moisture Related Parameters in Dry, Gas Insulated and Liquid Immersed Transformers and Reactors	23-Aug-13	12/31/2017	WG Draft Development
PC57.165	Phillip McClure	New	Guide for Temperature Measurements for Liquid Immersed Transformers and Reactors	17-Feb-17	12/31/2021	WG Draft Development
PC57.91	David Wallach	Revision	Guide for Loading Mineral-Oil-Immersed Transformers and Step-Voltage Regulators	28-Sep-2017	12/31/2021	WG Draft Development
Instrument Transformers						
PC57.13.2	Thomas Sizemore	Revision	Standard for Conformance Test Procedure for Instrument Transformers	Pending		NesCom Agenda 05-Dec-2017
PC57.13.5	Pierre Riffon	Revision	Standard of Performance and Test Requirements for Instrument Transformers of a Nominal System Voltage of 115 kV and Above	3-Mar-2016	12/31/2020	WG Draft Development
PC57.13.7	Henry Alton	New	Standard for Current Transformers with a Maximum mA Secondary Current of 250 mA	30-Sep-10	12/31/2017	Sponsor Ballot: Comment Resolution
PC57.13.8	David Wallace	New	Standard Requirements for Station Service Voltage Transformers	11-Dec-13	12/31/2019	WG Draft Development
PC57.13.9	Zoltan Roman	New	Standard for Power-Line Carrier Coupling Capacitors and Coupling Capacitor Voltage Transformers	23-Mar-17	12/31/2021	WG Draft Development

PAR Number	WG Chair	Project Type	Title	Approval Date	PAR Expiration	Status
Performance Characteristics						
P60076-16	Phil Hopkinson	New	Power Transformers - Part 16: Transformers for Wind Turbine Application	10-Dec-14	12/31/2018	Sponsor Ballot: Comment Resolution
PC57.105	Roger Verdolin	Revision	Guide for Application of Transformer Connections in Three-Phase Electrical Systems	26-Mar-15	12/31/2019	WG Draft Development
PC57.109	Vinay Mehrotra	Revision	Guide for Liquid-Immersed Transformers Through-Fault-Current Duration	26-Mar-15	12/31/2019	Sponsor Ballot: Comment Resolution
PC57.110	Richard Marek	Revision	Recommended Practice for Establishing Liquid-Immersed and Dry-Type Power and Distribution Transformer Capability When Supplying Nonsinusoidal Load Currents	12-Jun-14	12/31/2018	Sponsor Ballot: Ballot
PC57.123	Ed TeNyenhuis	Revision	Guide for Transformer Loss Measurement	15-Jun-17	12/31/2021	WG Draft Development
PC57.142	James McBride	Revision	Guide to Describe the Occurrence and Mitigation of Switching Transients Induced by Transformers, Switching Device, and System Interaction	23-Mar-17	12/31/2021	WG Draft Development
PC57.158	Enrique Betancourt	New	Guide for the Application of Tertiary and Stabilizing Windings in Power Transformers	15-May-12	12/31/2018	Sponsor Ballot: Comment Resolution
PC57.164	Sanjay Patel	New	Guide for Establishing Short Circuit Withstand Capabilities of Liquid Immersed Power Transformers, Regulators, and Reactors	30-Jun-16	12/31/2020	WG Draft Development
PC57.18.10	Sheldon Kenned	Revision	Standard Practices and Requirements for Semiconductor Power Rectifier Transformers	30-Jun-16	12/31/2020	WG Draft Development
PC57.21	Sanjib Som	Revision	Standard Requirements, Terminology, and Test Code for Shunt Reactors Rated Over 500 kVA	21-Aug-14	12/31/2018	WG Draft Development
PC57.32a	Sheldon Kennedy	Amendment	Standard for Requirements, Terminology, and Test Procedures for Neutral Grounding Devices Amendment: Neutral Grounding Resistor Section	17-Feb-17	12/31/2021	WG Draft Development

PAR Number	WG Chair	Project Type	Title	Approval Date	PAR Expiration	Status
Power Transformers						
P60214-1-57-131	Craig Colopy	New	Standard Requirements for Tap Changers	7-Dec-2016	12/31/2020	WG Draft Development
P60214-2	Craig Colopy	New	Tap-Changers - Part 2: Application Guide	12-Jun-14	12/31/2018	Sponsor Ballot: Comment Resolution
PC57.12.10	Gary Hoffman	Revision	Standard Requirements for Liquid-Immersed Power Transformers	26-Mar-15	12/31/2019	RevCom Agenda 05-Dec-2017
PC57.143	P Michael Spurlock	Revision	Guide for Application of Monitoring Equipment to Liquid-Immersed Transformers and Components	17-Feb-17	12/31/2021	WG Draft Development
PC57.148	Joe Watson	Revision	Standard for Control Cabinets for Power Transformers	30-Jun-16	12/31/2020	WG Draft Development
PC57.150	Gregory Anderson	Revision	Guide for the Transportation of Transformers and Reactors Rated 10,000 kVA or Higher	23-Mar-17	12/31/2021	WG Draft Development
PC57.93	Michael Lau	Revision	Guide for Installation and Maintenance of Liquid-Immersed Power Transformers	29-Mar-12	12/31/2018	WG Draft Development
Standards						
PC57.12.70-2011/Cor 1	Stephen Shull	Corrigendum	Standard Terminal Markings and Connections for Distribution and Power Transformers - Corrigendum 1: Correction of Annex A	5-Feb-2016	12/31/2019	WG Draft Development
PC57.12.80	C. Clair Claiborne	Revision	Standard Terminology for Power and Distribution Transformers	23-Mar-17	12/31/2021	WG Draft Development
PC57.12.00	Steve Snyder	Revision	Standard for General Requirements for Liquid-Immersed Distribution, Power, and Regulating Transformers	17-Feb-17	12/31/2021	WG Draft Development
Subsurface Transformers & Network Protectors						
PC57.12.23	Alan Traut	Revision	Standard for Submersible Single-Phase Transformers: 250 kVA and Smaller; High Voltage 34 500GrdY/19 920V and Below; Low Voltage 600 V and Below	21-Aug-14	12/31/2018	WG Draft Development
PC57.12.44	William Wimmer	Revision	Standard Requirements for Secondary Network Protectors	26-Mar-15	12/31/2019	WG Draft Development

VI. Transformers Standards Status

(as of Sep 28, 2017)

Standard Number	Title	Year	SASB Expiration	Notes
Bushings SC Chair: Peter Zhao email: peter.zhao@HydroOne.com phone: (417) 345-5926				
C57.19.00	IEEE Standard General Requirements and Test Procedure for Power Apparatus Bushings	2004	12/31/2020	
C57.19.01	IEEE Standard Performance Characteristics and Dimensions for Outdoor Apparatus Bushings	2000	12/31/2018	Yes, PAR at revCom
65700-19-03	IEC/IEEE International Standard -- Bushings for DC application	2014	12/31/2024	
C57.19.100	IEEE Guide for Application of Power Apparatus Bushings	2012	12/31/2022	
Dielectric Test SC Chair: Ajith Varghese email: ajith.varghese@spx.com phone: (262) 442-7197				
C57.113	IEEE Recommended Practice for Partial Discharge Measurement in Liquid-Filled Power Transformers and Shunt Reactors	2010	12/31/2020	
C57.127	IEEE Guide for the Detection and Location of Acoustic Emissions from Partial Discharges in Oil-Immersed Power Transformers and Reactors	2007	12/31/2018	Yes, PAR expires in 2019
C57.138	IEEE Recommended Practice for Routine Impulse Tests for Distribution Transformers	2016	12/31/2026	
C57.98	IEEE Guide for Transformer Impulse Tests	2011	12/31/2021	

Standard Number	Title	Year	SASB Expiration	Notes
Distribution Transformers	SC Chair: Steve Shull email: sshull@empiredistrict.com phone: (417) 625-611			
C57.12.37	IEEE Standard for the Electronic Reporting of Distribution Transformer Test Data	2015	12/31/2025	
C57.12.20	IEEE Standard for Overhead-Type Distribution Transformers 500 kVA and Smaller: High Voltage, 34 500 V and Below; Low Voltage, 7970/13 800Y V and Below	2011	12/31/2021	
C57.12.28	IEEE Standard for Pad-Mounted Equipment--Enclosure Integrity	2014	12/31/2024	
C57.12.29	IEEE Standard for Pad-Mounted Equipment--Enclosure Integrity for Coastal Environments	2014	12/31/2024	
C57.12.30	IEEE Standard for Pole-Mounted Equipment--Enclosure Integrity for Coastal Environments	2010	12/31/2020	
C57.12.31	IEEE Standard for Pole-Mounted Equipment--Enclosure Integrity	2010	12/31/2020	
C57.12.31-2010/Cor 1	IEEE Standard for Pole-Mounted Equipment--Enclosure Integrity - Corrigendum 1: Correction to the SCAB Corrosion Test in 4.5.6	2014	12/31/2024	
C57.12.32	IEEE Standard for Submersible Equipment - Enclosure Integrity	2002	12/31/2018	Yes PAR expires in 2019
C57.12.34	IEEE Standard Requirements for Pad-Mounted, Compartmental-Type, Self-Cooled, Three-Phase Distribution Transformers, 10 MVA and Smaller; High-Voltage, 34.5 kV Nominal System Voltage and Below; Low-Voltage, 15 kV Nominal System Voltage and Below	2015	12/31/2025	
C57.12.35	IEEE Standard Bar Coding for Distribution Transformers and Step-Voltage Regulators	2013	12/31/2023	
C57.12.36	IEEE Standard Requirements for Liquid-Immersed Distribution Substation Transformers	2017	12/31/2027	
C57.12.38	IEEE Standard for Pad-Mounted-Type, Self-Cooled, Single-Phase Distribution Transformers 250 kVA and Smaller: High Voltage, 34 500 GrdY/19 920 V and Below; Low Voltage, 480/240 V and Below	2014	12/31/2024	

Standard Number	Title	Year	SASB Expiration	Notes
Distribution Transformers	SC Chair: Steve Shull email: sshull@empiredistrict.com phone: (417) 625-611			
C57.12.38-2014/Cor 1	IEEE Standard for Pad-Mounted-Type, Self-Cooled, Single-Phase Distribution Transformers 250 kVA and Smaller: High Voltage, 34 500 GrdY/19 920 V and Below; Low Voltage, 480/240 V and Below - Corrigendum 1: Figure 1A	2016	12/31/2026	
C57.15	IEEE Standard Requirements, Terminology, and Test Code for Step-Voltage Regulators	2009	12/31/2019	
Dry Type Transformers	SC Chair: C.W. Johnson email: charles.w.johnson@us.abb.com phone: (276) 688-1512			
259	IEEE Standard Test Procedure for Evaluation of Systems of Insulation for Dry-Type Specialty and General-Purpose Transformers	1999	12/31/2020	
C57.12.52	IEEE Standard for Sealed Dry-Type Power Transformers, 501 kVA and Higher, Three-Phase, with High-Voltage 601 to 34500 Volts, Low-Voltage 208Y/120 to 4160 Volts--General Requirements	2012	12/31/2022	
C57.12.01	IEEE Standard for General Requirements for Dry-Type Distribution and Power Transformers	2015	12/31/2025	
C57.12.51	IEEE Standard for Ventilated Dry- Type Power Transformers, 501 kVA and Larger, Three-Phase, with High- Voltage 601 V to 34 500 V; Low- Voltage 208Y/120 V to 4160 V- General Requirements	2008	12/31/2018	Yes PAR expires in 2018
C57.12.58	IEEE Approved Draft Guide for Conducting a Transient Voltage Analysis of a Dry-Type Transformer Coil	2017	12/31/2027	
C57.12.59	IEEE Guide for Dry-Type Transformer Through-Fault Current Duration	2015	12/31/2025	
C57.12.60	IEEE Standard Test Procedure for Thermal Evaluation of Insulation Systems for Dry-Type Power and Distribution Transformers, Including Open-Wound, Solid-Cast, and Resin-Encapsulated Transformers	2009	12/31/2019	
C57.12.60-2009/Cor 1	IEEE Standard Test Procedure for Thermal Evaluation of Insulation Systems for Dry-Type Power and Distribution Transformers, Including Open-Wound, Solid-Cast, and Resin-Encapsulated Transformers	2013	12/31/2023	

Standard Number	Title	Year	SASB Expiration	Notes
Dry Type Transformers				
	SC Chair: C.W. Johnson email: charles.w.johnson@us.abb.com phone: (276) 688-1512			
C57.12.91	IEEE Standard Test Code for Dry-Type Distribution and Power Transformers	2011	12/31/2021	
C57.124	IEEE Recommended Practice for the Detection of Partial Discharge and the Measurement of Apparent Charge in Dry-Type Transformers	1991	12/31/2019	
C57.134	IEEE Guide for Determination of Hottest-Spot Temperature in Dry-Type Transformers	2013	12/31/2023	
C57.16	IEEE Standard for Requirements, Terminology, and Test Code for Dry-Type Air-Core Series-Connected Reactors	2011	12/31/2021	
C57.94	IEEE Recommended Practice for Installation, Application, Operation, and Maintenance of Dry-Type Distribution and Power Transformers	2015	12/31/2025	
C57.96	IEEE Guide for Loading Dry-Type Distribution and Power Transformers	2013	12/31/2023	
HVDC Converter Transformers & Smoothing Reactors				
	SC Chair: Mike Sharp email: mikes@ca.trenchgroup.com phone: 416-298-8108			
1277	IEEE Standard General Requirements and Test Code for Dry-Type and Oil-Immersed Smoothing Reactors for DC Power Transmission	2010	12/31/2020	
C57.129	Standard for General Requirements and Test Code for Oil-Immersed HVDC Converter Transformers	2007	12/31/2018	Yes PAR expires in 2019
638	IEEE Standard for Qualification of Class 1E Transformers for Nuclear Power Generating Stations	2013	12/31/2023	

Standard Number	Title	Year	SASB Expiration	Notes
Insulating Fluids				
	SC Chair: Dave Wallach email: david.wallach@duke-energy.com phone: (980) 373-4167			
C57.637	IEEE Guide for the Reclamation of Mineral Insulating Oil and Criteria for Its Use	2015	12/31/2025	
C57.104	IEEE Guide for the Interpretation of Gases Generated in Oil-Immersed Transformers	2008	12/31/2018	Yes PAR expires in 2017, PAR needs an extension
C57.106	IEEE Guide for Acceptance and Maintenance of Insulating Mineral Oil in Electrical Equipment	2015	12/31/2025	
C57.111	IEEE Guide for Acceptance of Silicone Insulating Fluid and Its Maintenance in Transformers	1989	12/31/2019	
C57.121	IEEE Guide for Acceptance and Maintenance of Less-Flammable Hydrocarbon Fluid in Transformers	1998	12/31/2019	
C57.130	IEEE Guide for the Use of Dissolved Gas Analysis Applied to Factory Temperature Rise Tests for the Evaluation of Mineral Oil-Immersed Transformers and Reactors	2015	12/31/2025	
C57.139	IEEE Guide for Dissolved Gas Analysis in Transformer Load Tap Changers	2015	12/31/2025	
C57.146	IEEE Guide for Interpretation of Gases Generated in Silicone-Immersed Transformers	2005	12/31/2021	
C57.147	IEEE Guide for Acceptance and Maintenance of Natural Ester Fluids in Transformers	2008	12/31/2018	Yes, PAR expires in 2018. draft is in Comment resoluon stg
C57.155	IEEE Guide for Interpretation of Gases Generated in Natural Ester and Synthetic Ester-Immersed Transformers	2014	12/31/2024	

Standard Number	Title	Year	SASB Expiration	Notes
Insulation Life				
SC Chair: Sheldon Kennedy email: skennedy@niagaratransformer.com phone: (716) 896-6500				
1276	IEEE Guide for the Application of High-Temperature Insulation Materials in Liquid-Immersed Power Transformers	1997	12/31/2018	Yes, PAR expires in 2018
1538	IEEE Guide for Determination of Maximum Winding Temperature Rise in Liquid-Filled Transformers	2000	12/31/2021	
1538a	IEEE Guide for Determination of Maximum Winding-Temperature Rise in Liquid Immersed Transformers -- Amendment 1	2015	12/31/2025	
C57.100	IEEE Standard Test Procedure for Thermal Evaluation of Insulation Systems for Liquid-Immersed Distribution and Power Transformers	2011	12/31/2021	
C57.119	IEEE Recommended Practice for Performing Temperature Rise Tests on Oil-Immersed Power Transformers at Loads Beyond Nameplate Ratings	2001	12/31/2018	Yes, PAR expires in 2018, draft is in commenr resolution stg
C57.154	IEEE Standard for the Design, Testing, and Application of Liquid-Immersed Distribution, Power, and Regulating Transformers Using High-Temperature Insulation Systems and Operating at Elevated Temperatures	2012	12/31/2022	
C57.91	IEEE Guide for Loading Mineral-Oil-Immersed Transformers and Step-Voltage Regulators	2011	12/31/2021	
Instrument Transformers				
SC Chair: Ross McTaggart email: rossdm@ca.trenchgroup.com phone: (416) 751-8570				
C57.13	IEEE Standard Requirements for Instrument Transformers	2016	12/31/2026	
C57.13.2	IEEE Standard for Conformance Test Procedure for Instrument Transformers	2005	12/31/2020	
C57.13.5	IEEE Standard of Performance and Test Requirements for Instrument Transformers of a Nominal System Voltage of 115 kV and Above	2009	12/31/2019	
C57.13.6	IEEE Standard for High Accuracy Instrument Transformers	2005	12/31/2020	

Standard Number	Title	Year	SASB Expiration	Notes
Performance Characteristics	SC Chair: Ed Tenyenhuis email: ed.g.tenyenhuis@ca.abb.com phone: (519) 837-4691			
C57.105	IEEE Guide for Application of Transformer Connections in Three-Phase Distribution Systems	1978	12/31/2018	PAR expires in 2019
C57.109	IEEE Guide for Liquid-Immersed Transformers Through-Fault-Current Duration	1993	12/31/2018	PAR expires in 2019, Draft is in comment resolution .
C57.110	IEEE Recommended Practice for Establishing Liquid-Filled and Dry-Type Power and Distribution Transformer Capability When Supplying Nonsinusoidal Load Currents	2008	12/31/2018	Yes, PAR expires in 2018, draft in Sponsor ballot.
C57.120	IEEE Approved Draft Guide for Loss Evaluation of Distribution and Power Transformers and Reactors	2017	12/31/2027	
C57.123	IEEE Guide for Transformer Loss Measurement	2010	12/31/2020	
C57.136	IEEE Guide for Sound Level Abatement and Determination for Liquid-Immersed Power Transformers and Shunt Reactors Rated Over 500 kVA	2000	12/31/2018	No Active PAR
C57.142	IEEE Guide to Describe the Occurrence and Mitigation of Switching Transients Induced by Transformers, Switching Device, and System Interaction	2010	12/31/2020	
C57.149	IEEE Guide for the Application and Interpretation of Frequency Response Analysis for Oil-Immersed Transformers	2012	12/31/2022	
C57.159	IEEE Guide on Transformers for Application in Distributed Photovoltaic (DPV) Power Generation Systems	2016	12/31/2026	
C57.18.10	IEEE Standard Practices and Requirements for Semiconductor Power Rectifier Transformers	1998	12/31/2019	
C57.18.10a	IEEE Standard for Practices and Requirements for Semiconductor Power Rectifier Transformers Amendment 1: Added Technical and Editorial Corrections	2008	12/31/2018	Active PAR, expires in 2020
C57.21	IEEE Standard Requirements, Terminology, and Test Code for Shunt Reactors Rated Over 500 kVA	2008	12/31/2018	Active PAR, expires in 2018
C57.32	IEEE Standard for Requirements, Terminology, and Test Procedures for Neutral Grounding Devices	2015	12/31/2025	

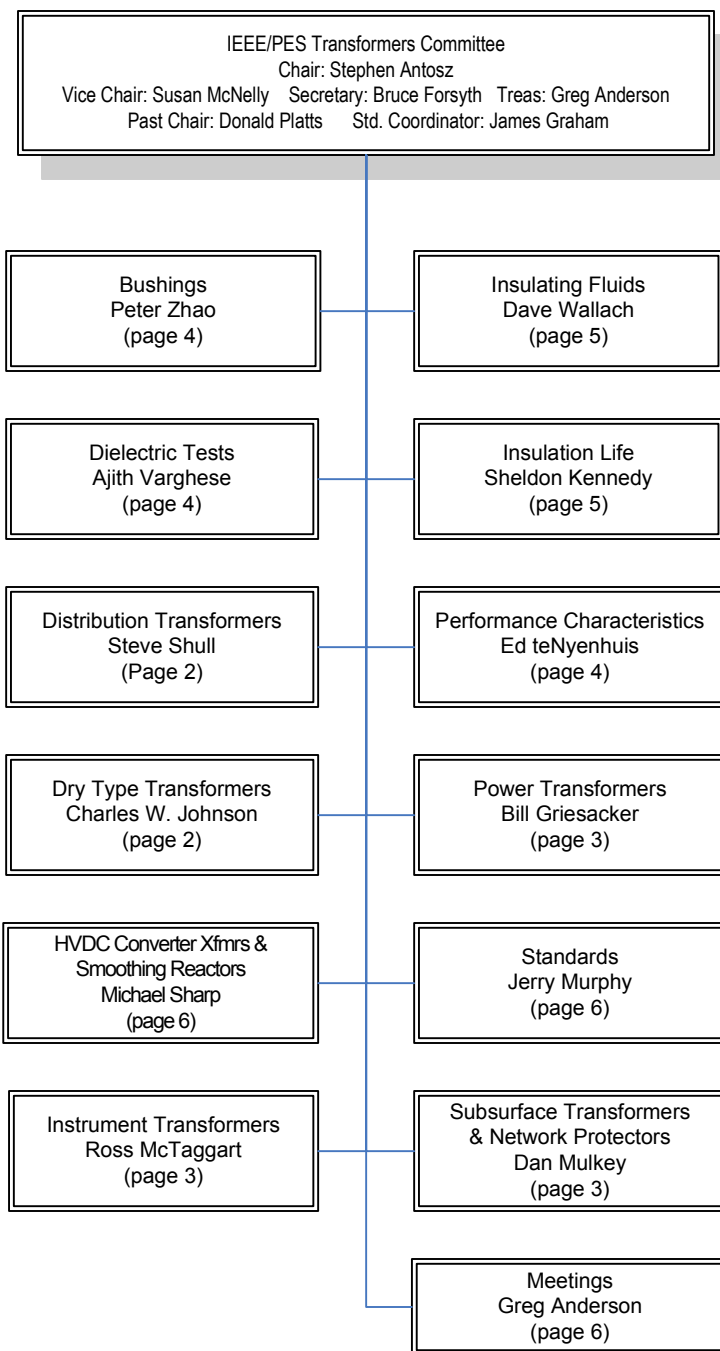
Standard Number	Title	Year	SASB Expiration	Notes
Power Transformers	SC Chair: Bill Griesacker email: bgriesacker@doyle.com phone: (617) 393-3074			
638	IEEE Standard for Qualification of Class 1E Transformers for Nuclear Power Generating Stations	2013	12/31/2023	
C57.131	IEEE Standard Requirements for Tap Changers	2012	12/31/2022	
C57.116	IEEE Guide for Transformers Directly Connected to Generators	2014	12/31/2024	
C57.12.10	IEEE Standard Requirements for Liquid-Immersed Power Transformers	2010	12/31/2020	
C57.12.10-2010/Cor 1	IEEE Standard Requirements for Liquid-Immersed Power Transformers-- Corrigendum 1: Correction of 5.1.9--Sudden Pressure Relay	2012	12/31/2022	
C57.12.10-2010/Cor 2	IEEE Standard Requirements for Liquid-Immersed Power Transformers -- Corrigendum 2: Correction of A.3.2.13 Autotransformer LTC application considerations	2013	12/31/2023	
C57.125	IEEE Guide for Failure Investigation, Documentation, Analysis, and Reporting for Power Transformers and Shunt Reactors	2015	12/31/2025	
60076-57-1202	IEC/IEEE International Standard Power transformers --Part 57-1202: Liquid immersed phase-shifting transformers	2016	12/31/2026	
C57.135	IEEE Guide for the Application, Specification, and Testing of Phase- Shifting Transformers	2011	12/31/2021	
C57.140	IEEE Approved Draft Guide for Evaluation and Reconditioning of Liquid Immersed Power Transformers	2017	12/31/2027	
C57.143	IEEE Guide for Application for Monitoring Equipment to Liquid-Immersed Transformers and Components	2012	12/31/2022	
C57.148	IEEE Standard for Control Cabinets for Power Transformers	2011	12/31/2021	
C57.150	IEEE Guide for the Transportation of Transformers and Reactors Rated 10 000 kVA or Higher	2012	12/31/2022	
C57.153	IEEE Guide for Paralleling Regulating Transformers	2015	12/31/2025	

Standard Number	Title	Year	SASB Expiration	Notes
Power Transformers	SC Chair: Bill Griesacker email: bgriesacker@doble.com phone: (617) 393-3074			
C57.156	IEEE Guide for Tank Rupture Mitigation of Liquid-Immersed Power Transformers and Reactors	2016	12/31/2026	
C57.157	IEEE Guide for Conducting Functional Life Tests on Switch Contacts Used in Insulating Liquid-Immersed Transformers	2015	12/31/2025	
C57.17	IEEE Standard Requirements for Arc Furnace Transformers	2012	12/31/2022	
C57.93	IEEE Guide for Installation and Maintenance of Liquid-Immersed Power Transformers	2007	12/31/2018	Active PAR expires in 2018
Standards	SC Chair: Jerry Murphy email: jerry.murphy@ieee.org phone: (407) 824-4194			
C57.12.00	IEEE Standard for General Requirements for Liquid-Immersed Distribution, Power, and Regulating Transformers	2015	12/31/2025	
C57.12.90	IEEE Standard Test Code for Liquid-Immersed Distribution, Power, and Regulating Transformers	2015	12/31/2025	
C57.12.90-2015/Cor 1	IEEE Standard Test Code for Liquid-Immersed Distribution, Power, and Regulating Transformers Corrigendum 1:Editorial and Technical Corrections	2017	12/31/2027	
C57.12.70	IEEE Standard for Standard Terminal Markings and Connections for Distribution and Power Transformers	2011	12/31/2021	
C57.12.80	IEEE Standard Terminology for Power and Distribution Transformers	2010	12/31/2020	
C57.144	IEEE Guide for Metric Conversion of Transformer Standards	2004	12/31/2020	
C57.152	IEEE Guide for Diagnostic Field Testing of Fluid-Filled Power Transformers, Regulators, and Reactors	2013	12/31/2023	
C57.163	IEEE Guide for Establishing Power Transformer Capability while under Geomagnetic Disturbances	2015	12/31/2025	
C57.163-2015/Cor 1	IEEE Guide for Establishing Power Transformer Capability while under Geomagnetic Disturbances - Corrigendum 1	2016	12/31/2026	

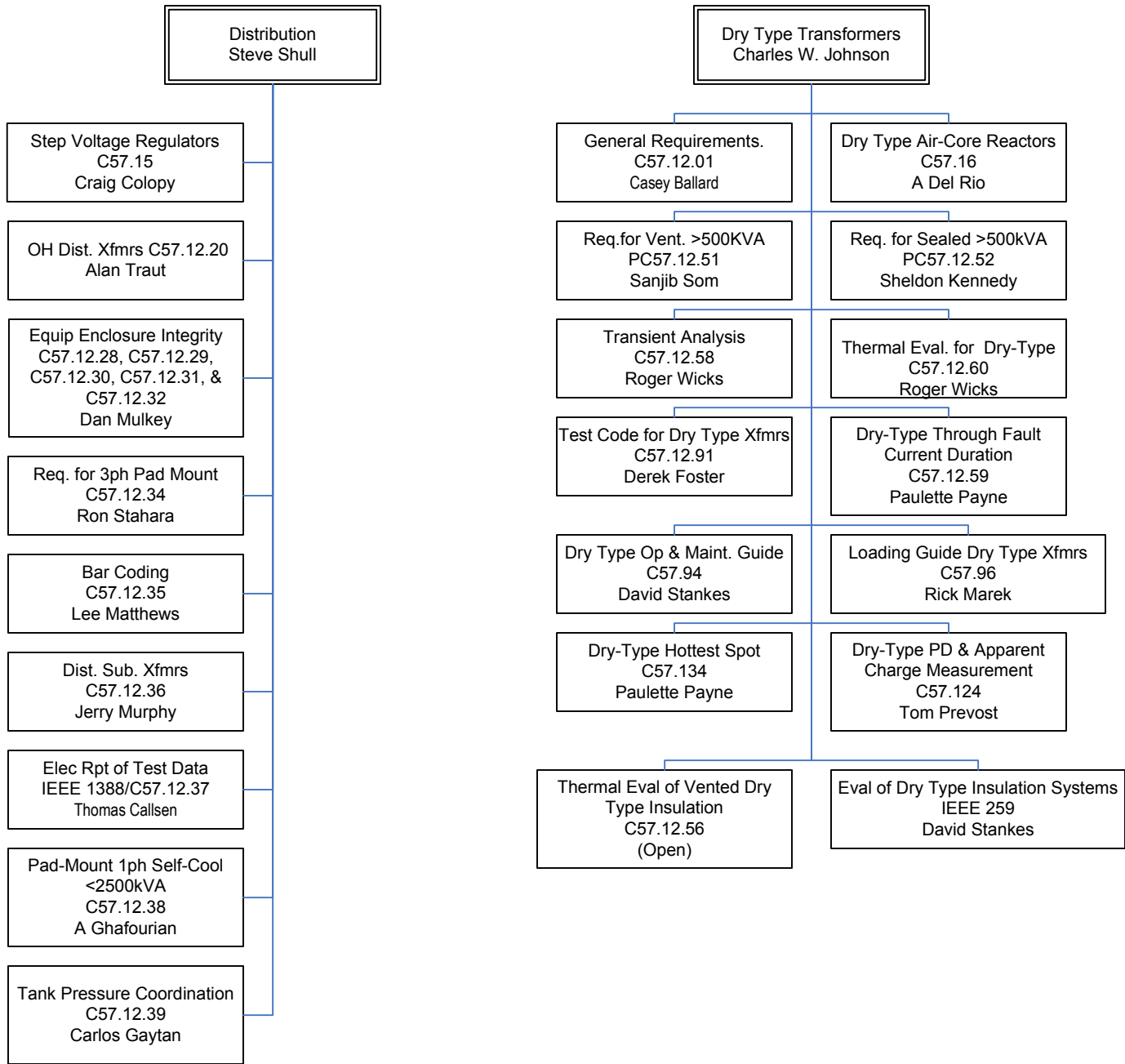
Subsurface Transformers & Network Protectors		SC Chair: Dan Mulkey email: dhmuhlkey@ieee.org phone: (707) 776-7346		
C57.12.23	IEEE Standard for Submersible Single-Phase Transformers: 167 kVA and Smaller; High Voltage 25 000 V and Below; Low Voltage 600 V and Below	2009	12/31/2019	
C57.12.24	IEEE Standard for Submersible, Three-Phase Transformers, 3750 kVA and Smaller: High Voltage, 34 500 GrdY/19 920 Volts and Below; Low Voltage, 600 Volts and Below	2016	12/31/2026	
C57.12.40	IEEE Standard for Network, Three-Phase Transformers, 2500 kVA and Smaller; High Voltage, 34 500 V and Below; Low Voltage, 600 V and Below; Subway and Vault Types (Liquid Immersed)	2017	12/31/2027	
C57.12.44	IEEE Standard Requirements for Secondary Network Protectors	2014	12/31/2024	

Appendix A

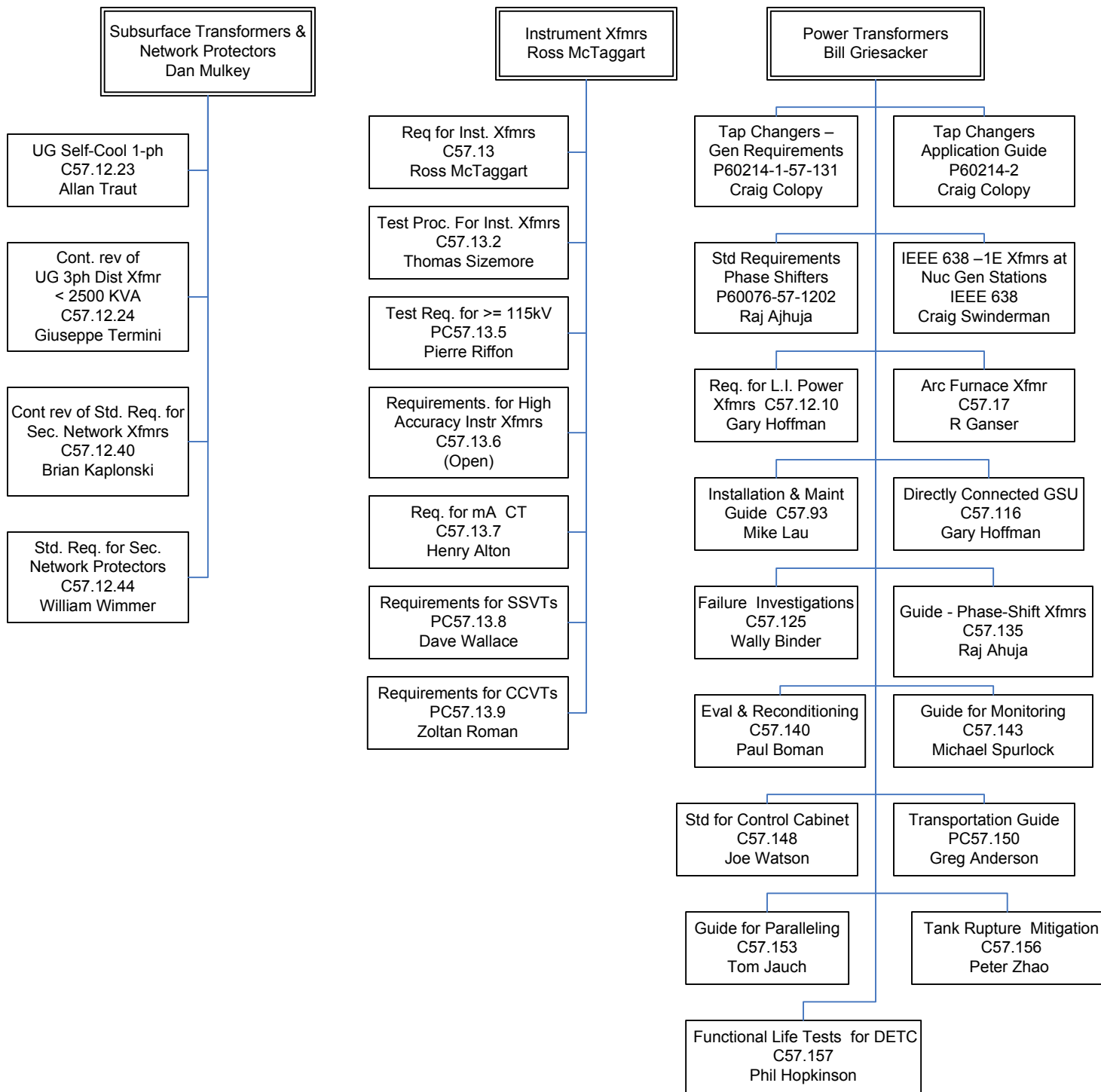
Transformers Committee Organization Chart



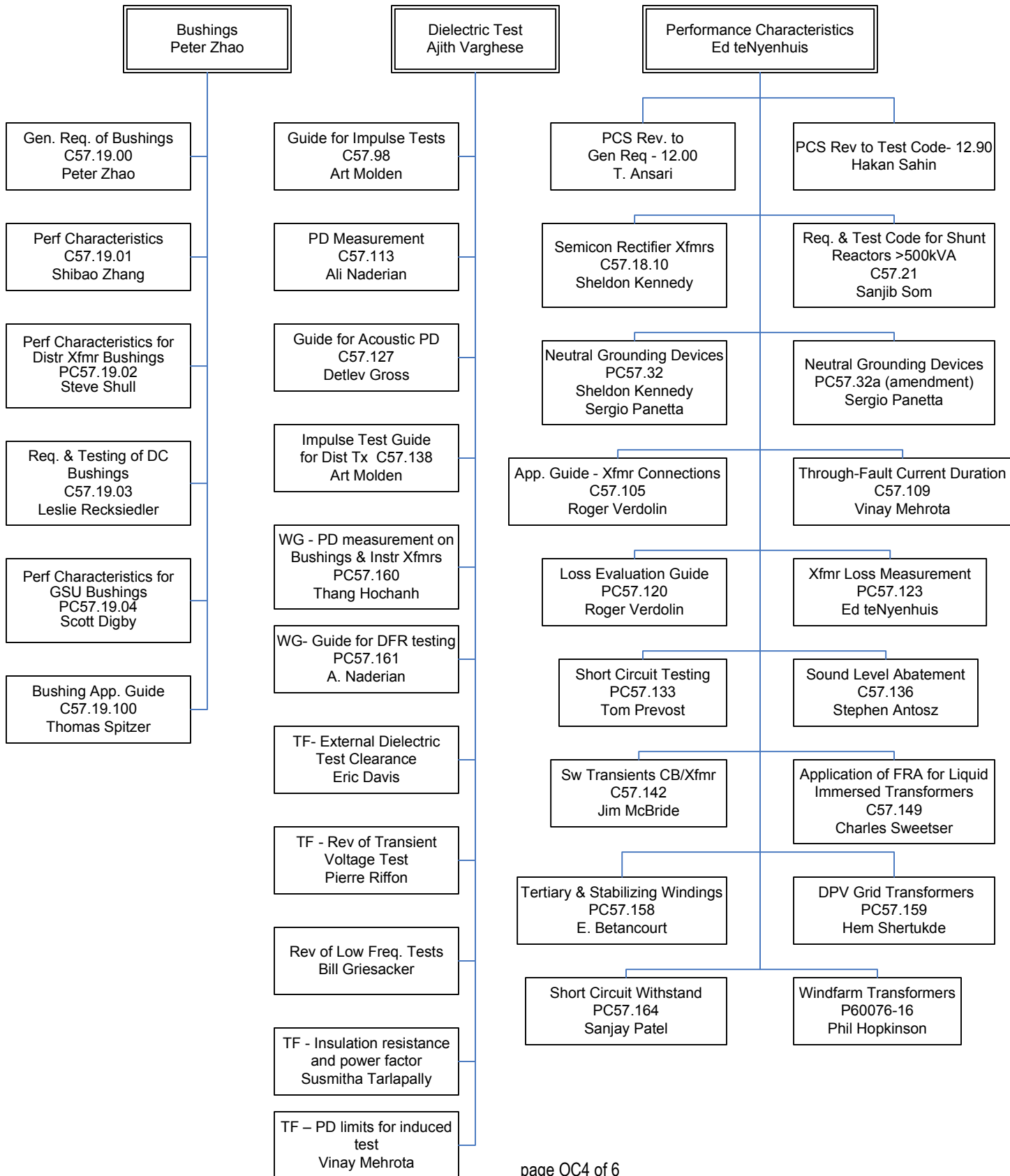
IEEE/PES Transformers Committee
 Chair: Stephen Antosz
 Vice Chair: Susan McNelly Secretary: Bruce Forsyth Treas: Greg Anderson
 Past Chair: Donald Platts Std. Coordinator: James Graham



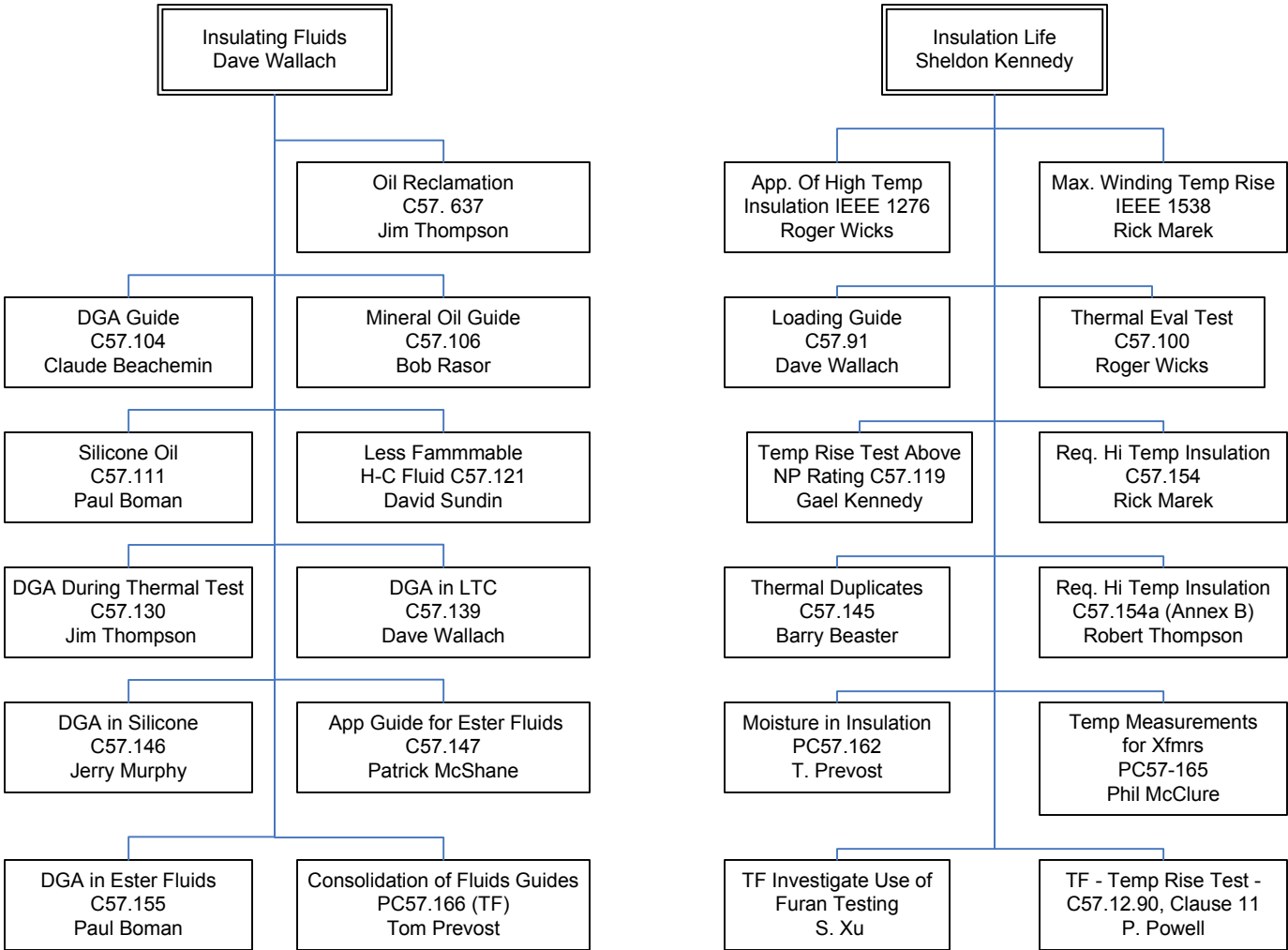
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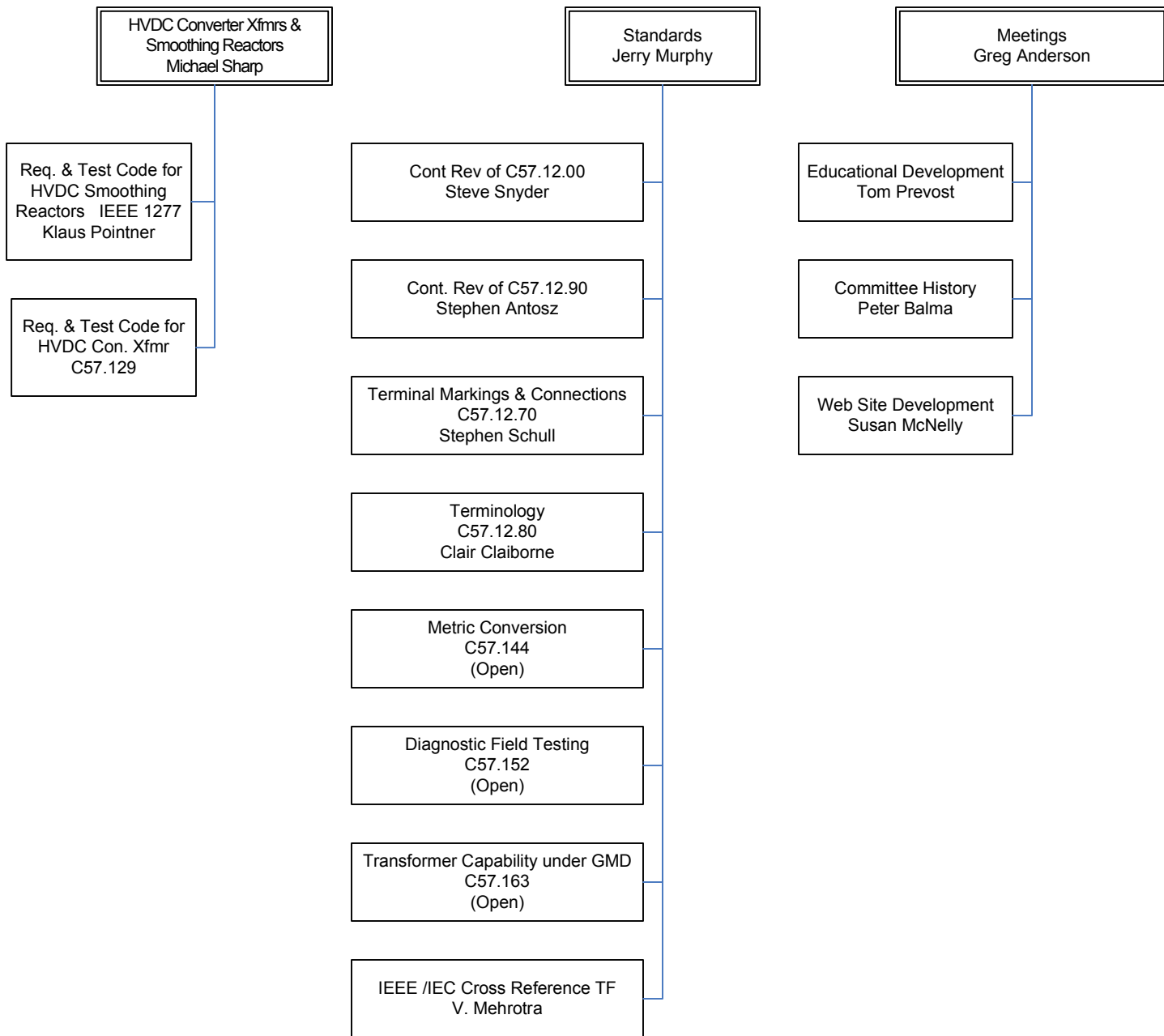
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Appendix B

IEEE Standards Association Meeting Schedule

IEEE Standards Association Governance Meetings Schedule

2018

JANUARY	JULY	January	February	March
30: NesCom/RevCom teleconferences		S M T W TH F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	S M T W TH F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	S M T W TH F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
FEBRUARY	AUGUST			
07-08: BOG meeting, Johannesburg, South Africa (outreach events on 5 th , 6 th , and 9 th)				
14-19: IEEE BOD series, Lake Buena Vista, Florida, USA	SEPTEMBER			
MARCH	06: NesCom/RevCom teleconferences	April	May	June
06-08: SASB series, Tokyo, Japan (outreach events on 5 th and 9 th)	10-13: CAG meeting/outreach, Atlanta, Georgia, USA	S M T W TH F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	S M T W TH F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	S M T W TH F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
APRIL	27: SASB teleconference			
16-19: CAG meeting/outreach, Shenzhen, PRC	OCTOBER			
26: NesCom/RevCom teleconferences				
MAY	NOVEMBER	July	August	September
16-17: BOG meeting, Vienna, Austria (outreach events on 14 th , 15 th , and 18 th)	14-19: IEEE BOD series, Vancouver, British Columbia, Canada	S M T W TH F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	S M T W TH F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	S M T W TH F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
JUNE	28-29: CAG meeting, Piscataway, New Jersey, USA			
12-14: SASB series, The Hague, Netherlands (outreach events on 11 th and 15 th)	30: BOG meeting, Piscataway, New Jersey, USA			
20-25: IEEE BOD series, New Brunswick, New Jersey, USA	DECEMBER	October	November	December
	01: BOG meeting, Piscataway, New Jersey, USA	S M T W TH F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	S M T W TH F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	S M T W TH F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
	02: SA Awards Ceremony, Somerset, New Jersey, USA			
	03-05: SASB series, Piscataway, New Jersey, USA			

NesCom/RevCom Submittal

Deadlines:

- 20 December 2017
- 26 January 2018
- 16 March 2018
- 04 May 2018
- 27 July 2018
- 15 October 2018