**DATE:** March 16, 2003

**TO:** Members of IEEE Transformers Committee

FROM: Tom Prevost, Standards Subcommittee Chair

**SUBJECT:** Standards Activities since the October, 2002 Meeting

#### TRANSFORMERS STANDARDS AND COORDINATION ACTIVITIES

The transformers standards status is given with two attachments:

(Secretary's Note: Attachment 2, Coordination Activities, has been discontinued, as there are only a small number of such activities.)

Attachment 1 is a list of all the C57 standards, including ANSI C57 standards, sorted by Subcommittee names. It contains a listing of the projects for which a Subcommittee is responsible, and coordination activities with other PES Committees. The standards that are not assigned yet, or do not belong to the Transformers committee, are listed under the Standards Subcommittee. For the publication of the Transformers Committee minutes, this attachment will be sorted by Subcommittee names, and each section will accompany the corresponding Subcommittee report.

# DOCUMENTS SUBMITTED TO THE STANDARDS BOARD

IEEE-SA Standards Board New Standards Committee (NesCom) Recommendations

23 October 2002 NEW PARS

PC57.146 (PE/TR) Guide for Interpretation of Gasses Generated in Silicone-Immersed Transformers

**Recommendation:** Approve new PAR as modified until December 2006.

REVISED PARS

<u>PC57.13.5</u> (PE/TR) Trial-Use Standard of Performance and Test Requirements of Instrument Transformers of a Nominal Voltage of 115 kV and Above

**Recommendation:** Approve revised PAR until December 2003.

FOR REVISIONS OF STANDARDS 10 December 2002 TARGET EXTENSION REQUESTS

<u>PC57.12.25</u> (PE/TR) Standard for Pad-Mounted, Compartmental-Type, Self-Cooled, Single-Phase Distribution Transformers with Separable Insulated High-Voltage Connectors; High Voltage, 34500 GrdY/19920 Volts and Below, Low Voltage, 240/120 Volts; 167 kVA and Smaller - Requirements

**Recommendation:** Defer until March 2002 pending the receipt of the appropriate request for an extension.

PC57.13 (PE/TR) Standard Requirements for Instrument Transformers

**Recommendation:** Defer until March 2002 pending the receipt of the appropriate request for an extension.

PC57.19.00 (PE/TR) Standard General Requirements and Test Procedure for Power Apparatus Bushings

**Recommendation:** Defer until March 2002 pending the receipt of the appropriate request for an extension.

PC57.104 (PE/TR) Guide for the Interpretation of Gases Generated in Oil-Immersed Transformers

**Recommendation:** Approve target extension request until December 2004. Last extension request.

PC57.133 (PE/TR) Guide for Short Circuit Testing of Distribution and Power Transformers

**Recommendation:** Defer until March 2002 pending the receipt of the appropriate request for an extension.

#### PARS TO BE ADMINISTRATIVELY WITHDRAWN

<u>PC57.113</u> (PE/TR) Recommended Practice for Partial Discharge Measurement in Liquid-Filled Power Transformers and Shunt Reactors

**Recommendation:** Approve administrative withdrawal.

PC62.91 (PE/SPD) Standard Requirements, Terminology, and Test Procedure for Neutral Grounding Devices

**Recommendation:** Approve administrative withdrawal.

#### WITHDRAWN PARS

PC57.139 (PE/TR) Guide for Dissolved Gas Analysis in Transformer Load Tap Changers

**Recommendation:** Approve request for withdrawal.

## **NEW PARS**

PC57.139 (PE/TR) Guide for Dissolved Gas Analysis in Transformer Load Tap Changers

**Recommendation:** Approve new PAR until December 2006.

#### REVISED PARS

## PARS FOR REVISIONS OF STANDARDS

<u>PC57.32</u> (PE/TR) Standard Requirements, Terminology and Test Procedures for Neutral Grounding Devices *Recommendation:* Approve PAR for the revision of a standard until December 2006. Joe would like a pointer back to the old number - IEEE Std 32. Check with staff.

PC57.106 (PE/TR) Guide for Acceptance and Maintenance of Insulating Oil in Equipment

**Recommendation:** Approve PAR for the revision of a standard until December 2006.

## CHANGE IN PROJECT SPONSORSHIP

<u>PC62.91</u> Standard Requirements, Terminology, and Test Procedure for Neutral Grounding Devices

**Recommendation:** Approve transfer of sponsorship from Power Engineering/Surge Protective Devices Committee to Power Engineering/Transformers Committee.

IEEE-SA STANDARDS BOARD REVIEW COMMITTEE (RevCom)
RECOMMENDATIONS
10 December 2002

**NEW** 

PC57.91-1995/Cor 1/D2.0 (PE/TR) Corrigenda for C57.91-1995, Guide for Loading Mineral-Oil-Immersed Transformers

Recommendation: APPROVE

#### REAFFIRMATION

637-1985 (R1992) (PE/TR) IEEE Guide for the Reclamation of Insulating Oil and Criteria for Its Use

Recommendation: APPROVE

C57.19.03-1996 (PE/TR) IEEE Standard Requirements, Terminology, and Test Code for Bushings for DC Applications

Recommendation: APPROVE

C57.91-1995 (PE/TR) IEEE Guide for Loading Mineral-Oil-Immersed Transformers

<u>Recommendation</u>: Disapprove, but instead grant a 2-year extension to allow time for the Sponsor to submit a PAR for revision or to reaffirm the base document plus the corrigenda

C57.113-1991 (PE/TR) IEEE Guide for Partial Discharge Measurement in Liquid-Filled Power Transformers and Shunt Reactors

Recommendation: APPROVE

#### 5-YEAR REVIEW OF STANDARDS

**32-1972 (R1997)** (PE/SPD) IEEE Standard Requirements, Terminology, and Test Procedures for Neutral Grounding Devices

Currently, the revision project is in the process of being transferred to PE/TR from PE/SPD. PE/TR has submitted a PAR for revision, with the new project number being PC57.32. However, PE/TR will complete a reaffirmation prior to the revision.

Recommendation: Extend until December 2003.

**1276-1997** IEEE Guide for the Application of High-Temperature Insulation Materials in Liquid-Immersed Power Transformers

Sponsor states that a reaffirmation ballot is in progress.

Recommendation: Extend until December 2003.

C57.12.35-1996 IEEE Standard for Bar Coding for Distribution Transformers

Sponsor states that a reaffirmation ballot is in progress.

Recommendation: Extend until December 2003.

C57.13-1993 IEEE Standard Requirements for Instrument Transformers

Sponsor will submit a PAR extension request to NesCom for revision project PC57.13.

Recommendation: Extend until the expiration of the PAR for PC57.13. [NesCom deferred to March 2003]

C57.19.00-1991 (R1997) IEEE Standard General Requirements and Test Procedure for Outdoor Power Apparatus Bushings

Sponsor has submitted a PAR extension request to NesCom for revision project PC57.19.00.

Recommendation: Extend until the expiration of the PAR for PC57.19.00. [NesCom deferred to March 2003]

C57.19.100-1995 IEEE Guide for Application of Power Apparatus Bushings

Sponsor states that a reaffirmation ballot is in progress.

Recommendation: Extend until December 2003.

C57.21-1990 (R1995) IEEE Standard Requirements, Terminology, and Test Code for Shunt Reactors Rated Over 500 kVA

Sponsor states that a reaffirmation ballot is in progress.

Recommendation: Extend until December 2003.

C57.104-1991 IEEE Guide for the Interpretation of Gases Generated in Oil-Immersed Transformers

Sponsor has submitted a PAR extension request to NesCom for revision project PC57.104.

Recommendation: Extend until the expiration of the PAR for PC57.104. [December 2004]

C57.111-1989 (R1995) IEEE Guide for Acceptance of Silicone Insulating Fluid and Its Maintenance in Transformers

2-year extension sought by Sponsor. Sponsor states that a reaffirmation ballot will be initiated.

Recommendation: Extend until December 2004.

C57.131-1995 IEEE Standard Requirements for Load Tap Changers

Sponsor states that a reaffirmation ballot is in progress.

Recommendation: Extend until December 2003.

## Projects reaching end of life:

This letter is to advise you that the projects listed below will expire at the end of 2003 and action will be required.

- PC57.12.01 Standard General Requirements for Dry-Type Distribution and Power Transformers Including Those with Solid Cast and/or Resin Encapsulated Windings
- PC57.130 Trial-Use Guide for the Use of Dissolved Gas Analysis During Factory Temeprature Rise Tests for the Evaluation of Oil-Immersed Transformers and Reactors

- PC57.140 Life Extension of Power Transformers
- PC57.141 Guide for the Application of Load Tap Changers

If the projects will not be submitted to RevCom in time for the December 2003 meeting, you have the following options:

- 1. Request an extension for the projects. The Target Extension Request Form can be found at <a href="http://standards.ieee.org/guides/par/extension.rtf">http://standards.ieee.org/guides/par/extension.rtf</a>. Please note that this extension request can now be from one to four years.
- 2. Request withdrawal of the projects.

Please advise me in writing of the action that should be taken. This information will be placed on the agenda of the next scheduled NesCom meeting (based upon the date I receive the request), and NesCom will make its recommendation based upon the information provided.

If there is no response to this letter by 21 October 2003, the projects will be recommended for administrative withdrawal at the 10 December 2003 IEEE-SA Standards Board meeting.

## Standards due for 5 Year Review

PE/TR has some standards that are due for their 5-year review by the end of 2003. {Standards have a five-year lifespan.} An action is required of the Sponsor. Available choices:

- a) reaffirm
- b) revise
- c) extend
- d) withdraw

I MUST RECEIVE A RESPONSE BY THE 21 OCTOBER 2003 SUBMITTAL DEADLINE (FOR THE DECEMBER 2003 STANDARDS BOARD MEETING SERIES). IF NO RESPONSE IS RECEIVED, THE STANDARDS IN QUESTION WILL BE PLACED ON THE AGENDA FOR ADMINISTRATIVE WITHDRAWAL.

If the Sponsor chooses to revise or reaffirm and the action cannot be completed by the submittal deadline, please send me an email requesting an extension of the life of the current standard and notification of the actions that are being taken. {Please let me know approximately when the reaffirmation will be submitted; or when the PAR for revision will be submitted to NesCom and the estimated completion date for the revision project.}

If there is no further interest in a standard and the Sponsor wishes it to be withdrawn, you do not need to ballot. It will be administratively withdrawn in December 2003. {Please note that standards that are administratively withdrawn can no longer be reinstated via reaffirmation. The only method for reinstating an administratively withdrawn standard is to initiate a revision process, starting with a PAR.}

The standards in question are:

32-1972 (R1997) IEEE Standard Requirements, Terminology, and Test Procedures for Neutral Grounding Devices

1276-1997 IEEE Guide for the Application of High-Temperature Insulation Materials in Liquid-Immersed Power Transformers

C57.12.01-1998 IEEE Standard General Requirements for Dry-Type Distribution and Power Transformers Including Those with Solid Cast and/or Resin Encapsulated Windings

[Note: The PAR for revision project PC57.12.01 is due to expire this year. Please contact the NesCom Administrator, Jodi Haasz {j.haasz@ieee.org} for actions on PARs.]

C57.12.35-1996 IEEE Standard for Bar Coding for Distribution Transformers

C57.12.56-1986 (R1998) IEEE Standard Test Procedure for Thermal Evaluation of Insulation Systems for Ventilated Dry-Type Power and Distribution Transformers

C57.12.60-1998 IEEE Guide for Test Procedures for Thermal Evaluation of Insulation Systems for Solid Cast and Resin-Encapsulated Power and Distribution Transformers

C57.13-1993 IEEE Standard Requirements for Instrument Transformers [Note: The PAR for revision project PC57.13 is due to be withdrawn at the March 2003 NesCom meeting.]

C57.18.10-1998 IEEE Standard Practices and Requirements for Semiconductor Power Rectifier Transformers

C57.19.00-1991 (R1997) IEEE Standard General Requirements and Test Procedure for Outdoor Power Apparatus Bushings [Note: A PAR extension request is on the March 2003 NesCom agenda.]

C57.19.100-1995 IEEE Guide for Application of Power Apparatus Bushings

C57.21-1990 (R1995) IEEE Standard Requirements, Terminology and Test Code for Shunt Reactors Rated Over 500 kVA

C57.110-1998 IEEE Recommended Practice for Establishing Transformer Capability When Supplying Nonsinusoidal Load Currents

C57.117-1986 (R1998) IEEE Guide for Reporting Failure Data for Power Transformers and Shunt Reactors on Electric Utility Power Systems

C57.121-1998 IEEE Guide for Acceptance and Maintenance of Less-Flammable Hydrocarbon Fluid in Transformers

C57.125-1991 (R1998) IEEE Guide for Failure Investigation, Documentation, and Analysis for Power Transformers and Shunt Reactors

C57.131-1995 IEEE Standard Requirements for Load Tap Changers

# C57.138-1998 IEEE Recommended Practice for Routine Impulse Test for Distribution Transformers

# Ballot Status:

Std. C57.12.58	Reaff	PE/TR	20-Jan-2002	8-Feb-2002	47	97%	3%	0%	Electronic
C57.106/D7 Rev	Recirc	PE/TR	17-Jan-2002	13-Feb-2002	136	95%	4%	1%	Paper
PC57.12.23/D4	Rev	PE/TR	21-Jan-2002	19-Feb-2002	70	100%	0%	4%	Electronic
Std.C57.124	Reaff	PE/TR	22-Jan-2002	20-Feb-2002	58	97%	2%	2%	Electronic
Std.C57.131	Reaff	PE/TR	23-Jan-2002	21-Feb-2002	90	95%	4%	4%	Electronic
PC57.12.01/D3	Rev	PE/TR	24-Jan-2002	22-Feb-2002	80	96%	4%	1%	Electronic
C57.12.80/D4 Rev.	Recirc	PE/TR	8-Feb-2002	1-Mar-2002	155	90%	3%	3%	Paper
Std.C57.12.35	Reaff	PE/TR	28-Jan-2002	4-Mar-2002	77	95%	5%	0%	Paper
C57.21	Reaff	PE/TR	7-Feb-2002	25-Mar-2002	78	91%	6%	3%	Paper
PC57.12.34/D8 Rev	Rev	PE/TR	1-Apr-2002	13-May-2002	90	68%	32 %	3%	Electronic
PC57.12.31/D1.4	New	PE/TR	10-Apr- 2002	22-May-2002	53	82%	18 %	3%	Electronic
PC57.12.32/D4.3	New	PE/TR	12-Apr- 2002	24-May-2002	62	100%	0%	4%	Electronic
PC57.104/D10	Rev	PE/TR	12-Apr- 2002	24-May-2002	129	87%	13 %	6%	Electronic
Std. C57.19.03	Reaff	PE/TR	11-Jun-2002	22-Jul-2002	53	97%	3%	5%	Electronic
PC57.13.5/D14.04	New	PE/TR	12-Jun-2002	24-Jul-2002	59	90%	10 %	3%	Electronic
Std. 637	Reaff	PE/TR	14-Jun-2002	26-Jul-2002	77	95%	5%	4%	Electronic
PC57.12.90/D2	Rev	PE/TR	17-Jun-2002	30-Jul-2002	139	93%	7%	4%	Electronic
PC57.12.00/D2	Rev	PE/TR	17-Jun-2002	1-Aug-2002	160	86%	14 %	7%	Electronic
Std. 1276	Reaff	PE/TR	6-Sep-2002	5-Oct-2002	98	98%	2%	3%	Electronic
Std. C57.113	Reaff	PE/TR	6-Sep-2002	5-Oct-2002	102	97%	3%	3%	Electronic
PC57.13.5/D15	Recirc	PE/TR	1-Oct-2002	12-Nov-2002	59	96%	4%	1%	Electronic
PC57.19.00/D6	Rev	PE/TR	15-Oct-2002	13-Nov-2002	89	95%	5%	2%	Electronic
C57.145/D6	New	PE/TR	8-Nov-2002	7-Dec-2002	118	79%	21 %	4%	Electronic
PC57.12.34/D9	Recirc	PE/TR	7-Feb-2003	9-Mar-2003	90				Electronic

# 2003 Invitation to Ballot

Std.62 REAFF	PE/PSIM	Wallace B Binder	02/05/2003	03/07/2003	625	Electronic Invitation
Std.C57.110 REAFF	PE/TR	Richard P Marek	01/23/2003	02/22/2003	844	Electronic Invitation

Std.C57.12.35						
REAFF	PE/TR	George E Henry	11/26/2001	01/07/2002	552	Paper Invitation
PC57.12.34 REV	PE/TR	Stephen Shull	02/08/2002	03/10/2002	539	Electronic Invitation
PC57.12.32	PE/TR	Robert C Olen	02/08/2002	03/14/2002	539	Electronic Invitation
PC57.12.31	PE/TR	Robert C Olen	02/08/2002	03/14/2002	539	Electronic Invitation
PC57.104 REV	PE/TR	Frank W Heinrichs	02/11/2002	03/12/2002	539	Electronic Invitation
PC57.13.5	PE/TR	Joseph Ma	04/15/2002	05/15/2002	550	Electronic Invitation
Std.C57.19.03 REAFF	PE/TR	Fred E Elliott	04/24/2002	05/23/2002	553	Electronic Invitation
PC57.12.00 REV	PE/TR	Subhash C Tuli	04/26/2002	05/26/2002	553	Electronic Invitation
PC57.12.90 REV	PE/TR	Subhash C Tuli	04/26/2002	05/27/2002	553	Electronic Invitation
Std.637 REAFF	PE/TR	James A Thompson	05/01/2002	05/31/2002	552	Electronic Invitation
Std.C57.113 REAFF	PE/TR	Mark D Perkins	07/30/2002	08/29/2002	579	Electronic Invitation
Std.1276 REAFF	PE/TR	Michael A Franchek	07/31/2002	08/30/2002	580	Electronic Invitation
PC57.19.00 REV	PE/TR	Keith Ellis	07/31/2002	08/30/2002	580	Electronic Invitation
PC57.145	PE/TR	Barry L Beaster	09/09/2002	10/09/2002	577	Electronic Invitation

# NEXT STANDARDS BOARD MEETINGS AND SUBMITTAL DEADLINES

# Meeting date Deadline for Submittal of PAR (1) or Draft Standard (2)

March 18, 2003February 7, 2003June 10, 2003May 2, 2003Sept. 11, 2003Aug. 1, 2003Dec. 8, 2003Oct. 21, 2003

- (1) A PAR must be sent to the Standards Subcommittee Chair before the stated deadline.
- (2) Standards must be submitted directly to the IEEE Standards Department by the Working Group Chair before the stated deadline to be considered at the next Standards board Meeting.

## Note:

The PAR form has been revised. To locate the current PAR form please go to <a href="http://standards.ieee.org/guides/par/index.html">http://standards.ieee.org/guides/par/index.html</a>. Also, a new Target Extension Request form is to be used for all extension requests for PARs and is located at <a href="http://standards.ieee.org/guides/par/extension.html">http://standards.ieee.org/guides/par/extension.html</a>.