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28 February 2007

Michael Wactor
Powell Electrical Systems, Inc.
8550 Mosley Drive
Houston, TX 77075
mwactor@powl.com

Re: PC37.59 - Standard Requirements for Conversion of Power Switchgear Equipment

Dear Michael:

I am pleased to inform you that on 27 February 2007 the IEEE-SA Standards Board approved the above referenced project until 31 December 2008. A copy of the file can be found on our website at <http://standards.ieee.org/board/nes/projects/C37-59.pdf>.

Now that your project has been approved, please forward a roster of participants involved in the development of this project. This request is in accordance with the IEEE-SA Operations Manual, Clause 5.1.2i under Duties of the Sponsor which states:

"Submit annually to the IEEE Standards Department an electronic roster of individuals participating on standards projects"

For your convenience, an Excel spreadsheet for your use has been posted on our website at <http://standards.ieee.org/guides/par/roster.xls>. Please forward this list to me via e-mail at s.hampton@ieee.org no later than 28 May 2007.

Please visit our website, IEEE Standards Development Online (<http://standards.ieee.org/resources/development/index.html>), for tools, forms and training to assist you in the standards development process. Also, we strongly recommend that a copy of your draft be sent to this office for review prior to the final vote by the working group to allow for a quick review by editorial staff before sponsor balloting begins.

If you should have any further questions, please contact me at +1 732 562 6003 or by email at s.hampton@ieee.org.

Sincerely,

Sherry Hampton
Administrator, Governance
Standards Activities
Phone +1 732 562 6003
FAX +1 732 875 0695
Email: s.hampton@ieee.org

CC: tburse@powl.com, stds-pes-scc@ieee.org, pete.dwyer@ieee.org BCC: s.hampton@ieee.org, t.lee@ieee.org

PAR Request Date: 22 January 2007**PAR Approval Date:** 27 February 2007**PAR Signature Page on File:** Yes**Type of PAR:** Modification to Approved PAR**Status:** Modification to a Previously Approved PAR for the Revision of a Standard - PC37.59, 23 September 2004**Root Project:** IEEE Std C37.59-2002**1.1 Project No.:** **C37.59****1.2 Type of Document:** Standard**1.3 Life Cycle:** Full-Use**1.4 Is this document in ballot now?** No**2.1 Title**

Standard Requirements for Conversion of Power Switchgear Equipment

3.1 Working Group Name [Administrative Subcommittee - C37.59](#)**Working Group Chair**[Dwyer, Peter W](#)

Phone: 610-296-1273

Email: pete.dwyer@ieee.org

Working Group Vice Chair**3.2 Sponsor**[IEEE Power Engineering Society Switchgear \(PE/SWG\)](#)**Sponsor Chair**[Burse, Ted](#)

Phone: 713-948-4599

Email: tburse@powl.com

Name of Standards Liaison Representative (if applicable)[Wactor, Michael](#)

Phone: 713-948-4918

Email: mwactor@powl.com

3.3 Joint Sponsor**4.1 Type of Ballot:** Individual**4.2 Expected Date of Submission for Initial Sponsor Ballot:** March 2007**4.3 Projected Completion Date for Submittal to RevCom:** November 2008**5.1 Approximate number of people expected to work on this project:** 20

5.2 Scope: This standard covers power switchgear equipment that is converted from a qualified design. It provides direction and guidance in those conversions and specifies required design verification in accordance with applicable American National Standards Institute (ANSI), National Electrical Manufacturers Association (NEMA), Underwriters Laboratories Inc. (UL) or IEEE standards. This standard also recognizes that production/field testing does not provide design verification. This can only be accomplished by means of design testing and technical evaluation.

Old Scope: Existing Scope: This standard covers power switchgear equipment that is converted from a qualified design. It provides direction and guidance in those conversions and specifies required design verification in accordance with applicable American National Standards Institute (ANSI), National Electrical Manufacturers Association (NEMA), Underwriters Laboratories Inc. (UL) or IEEE standards. This standard also recognizes that production/field testing does not provide design verification. This can only be accomplished by means of design testing and technical evaluation. As part of this revision, the title of clause 1 will be changed to "scope" and clause 1.1 (presently titles "scope") will be retitled as "background". The text of the standard will undergo substantial revisions throughout.

5.3 Is the completion of this document contingent upon the completion of another document? No

5.4 Purpose: The existing 2002 and proposed documents do not have a "purpose" clause. Conversions of existing installed switchgear is a relatively young technology, and as such, is rapidly evolving. As such, new types of conversions are being created, and these need to be addressed in this standard. In addition, experience is growing with existing types of conversions, suggesting areas in the existing document that should be expanded to give a fuller treatment of the issues and the design and verification activities needed. Issues have been raised by users, converters, producers, and third-party agencies. A few of these are: testing of trip device modifications to LVPCBs (low voltage power circuit breakers); molded-case CB adaptations to LVPCB switchgear; effect on dielectric performance of sensors added in high voltage compartments; conversion of non-arc-resistant equipment to obtain arc-resistant performance; effect of substitution of a circuit breaker without high current instantaneous release in a product originally supplied with such a release; and many others.

Old Purpose: Conversions of existing installed switchgear is a relatively young technology, and as such, is rapidly evolving. As such, new types of conversions are being created, and these need to be addressed in this standard. In addition, experience is growing with existing types of conversions, suggesting areas in the existing document that should be expanded to give a fuller treatment of the issues and the design and verification activities needed. Issues have been raised by users, converters, producers, and third-party agencies. A few of these are: testing of trip device modifications to LVPCBs (low voltage power circuit breakers); molded-case CB adaptations to LVPCB switchgear; effect on dielectric performance of sensors added in high voltage compartments; conversion of non-arc-resistant equipment to obtain arc-resistant performance; effect of substitution of a circuit breaker without high current instantaneous release in a product originally supplied with such a release; and many others.

5.5 Need for the Project: The field of conversions of power switchgear is evolving, creating the need to keep this document current with the state-of-the-art. The original document was issued in 1991, with revisions in 1996 and 2002. This illustrates the pace of change in technology of conversions. This standard needs continual attention to provide users, converters, and third-party agencies technically current information in the selection, application, design verification, and use of converted power switchgear equipment.

5.6 Stakeholders for the Standard: The stakeholders for this project are users of power distribution switchgear, manufacturers, test laboratories, third-party certification organizations, and consulting engineering firms.

6.1.a. Has the IEEE-SA policy on intellectual property been presented to those responsible for preparing/submitting this PAR prior to the PAR submittal to the IEEE-SA Standards Board? Yes **Presented Date:** 2006-10-03

If no, please explain:

6.1.b. Is the Sponsor aware of any copyright permissions needed for this project? No

If yes, please explain:

6.1.c. Is the Sponsor aware of possible registration activity related to this project? No

If yes, please explain:

7.1 Are there other standards or projects with a similar scope? No

If yes, please explain:

Sponsor Organization:

Project/Standard Number:

Project/Standard Date: 0000-00-00

Project/Standard Title:

7.2 Is there potential for this standard (in part or in whole) to be adopted by another national, regional, or international organization? ? Do not know at this time

Technical Committee Name and Number:

Contact person:

Contact person Phone Number:

Contact person Email Address:

7.3 Will this project result in any health, safety, security, or environmental guidance that affects or applies to human health or safety? No

7.4 Additional Explanatory Notes:

5.2 As part of this revision, the title of clause 1, titled as "Overview" in the 2002 edition, will be changed to "scope" and clause 1.1 (presently titles "scope" in the 2002 edition) will be retitled as "background". The text of the standard will undergo substantial revisions throughout.

5.4 Revised to indicate that the 2002 edition, and this revision, do not have a "purpose" clause.

8.1 Sponsor Information:

Is the Scope of this project within the approved scope/definition of the Sponsor's Charter? Yes

If no, please explain:

[Email This Letter](#)

24 September 2004

M. Dean Sigmon
ABB Inc.
2300 Mechanicsville Road
Florence, SC 29501-0524
michael.d.sigmon@us.abb.com

Re: PC37.59 - Standard Requirements for Conversion of Power Switchgear Equipment

Dear M. Dean:

I am pleased to inform you that on 23 September 2004 the IEEE-SA Standards Board approved the above referenced project until 31 December 2008. A copy of the file can be found on our website at <http://standards.ieee.org/board/nes/projects/C37-59.pdf>.

Now that your project has been approved, please forward a roster of participants involved in the development of this project. This request is in accordance with the IEEE-SA Operations Manual, Clause 5.1.2i under Duties of the Sponsor which states:

"Submit annually to the IEEE Standards Department an electronic roster of individuals participating on standards projects"

For your convenience, an Excel spreadsheet for your use has been posted on our website at <http://standards.ieee.org/guides/par/roster.xls>. Please forward this list to me via e-mail at j.haasz@ieee.org no later than 21 December 2004.

Please visit our website, IEEE Standards Development Online (<http://standards.ieee.org/resources/development/index.html>), for tools, forms and training to assist you in the standards development process. Also, we strongly recommend that a copy of your draft be sent to this office for review prior to the final vote by the working group to allow for a quick review by editorial staff before sponsor balloting begins.

If you should have any further questions, please contact me at 732-562-6367 or by email at j.haasz@ieee.org.

Sincerely,

Jodi Haasz
Program Manager
International Stds Programs and Governance
Standards Activities
Phone +1 732 562 6367
FAX +1 208 460 5300
Email: j.haasz@ieee.org

cc: pete.dwyer@ieee.org, amonroe@uscopower.com, stds-pes-scc@ieee.org

PAR FORM

PAR Status: Revision PAR
PAR Approval Date: 2004-09-23
PAR Signature Page on File: Yes

1. Assigned Project Number: C37.59

2. Sponsor Date of Request: 2004-07-09

3. Type of Document: Standard for

4. Title of Document:

Draft: Standard Requirements for Conversion of Power Switchgear Equipment

5. Life Cycle: Full-Use

6. Type of Project:

6a. Is this an update to an existing PAR? No

6b. The Project is a: Revision of Std C37.59-2002

7. Working Group Information:

Name of Working Group: Revision of C37.59 Conversion of Power Switchgear

Approximate Number of Expected Working Group Members:20

8. Contact information for Working Group Chair:

Name of Working Group Chair: Peter W Dwyer

Telephone: 610-296-1273 **FAX:** 610-644-6210

Email: pete.dwyer@ieee.org

9. Contact information for Co-Chair/Official Reporter, Project Editor or Document Custodian if different from the Working Group Chair:

Name of Co-Chair/Official Reporter, Project Editor or Document Custodian:

Telephone: FAX:

Email:

10. Contact information for Sponsoring Society or Standards Coordinating Committee:

Name of Sponsoring Society and Committee: Power Engineering Society Switchgear

Name of Sponsoring Committee Chair: Alec C Monroe

Telephone: 205-592-7241 **FAX:** 205-592-9485

Email: amonroe@uscopower.com

Name of Liaison Rep. (if different from the Sponsor Chair): M. Dean Sigmon

Telephone: 843-413-4707 **FAX:** 843-413-4850

Email: michael.d.sigmon@us.abb.com

Name of Co-Sponsoring Society and Committee:

Name of Co-Sponsoring Committee Chair:

Telephone: FAX:

Email:

Name of Liaison Rep. (if different from the Sponsor Chair):

Telephone: FAX:

Email:

11. The Type of ballot is: Individual Sponsor Ballot

Expected Date of Submission for Initial Sponsor Ballot: 2005-02-28

12. Fill in Projected Completion Date for Submittal to RevCom: 2005-09-15

Explanation for Modified PAR that completion date is being extended past the original four-year life of the PAR:

13. Scope of Proposed Project:

Existing Scope: This standard covers power switchgear equipment that is converted from a qualified design. It provides direction and guidance in those conversions and specifies required design verification in accordance with applicable American National Standards Institute (ANSI), National Electrical Manufacturers Association (NEMA), Underwriters Laboratories Inc. (UL) or IEEE standards. This standard also recognizes that production/field testing does not provide design verification. This can only be accomplished by means of design testing and technical evaluation.

As part of this revision, the title of clause 1 will be changed to "scope" and clause 1.1 (presently titled "scope") will be retitled as "background". The text of the standard will undergo substantial revisions throughout.

Is the completion of this document contingent upon the completion of another document? No

14. Purpose of Proposed Project:

Conversions of existing installed switchgear is a relatively young technology, and as such, is rapidly evolving. As such, new types of conversions are being created, and these need to be addressed in this standard. In addition, experience is growing with existing types of conversions, suggesting areas in the existing document that should be expanded to give a fuller treatment of the issues and the design and verification activities needed. Issues have been raised by users, converters, producers, and third-party agencies. A few of these are: testing of trip device modifications to LVPCBs (low voltage power circuit breakers); molded-case CB adaptations to LVPCB switchgear; effect on dielectric performance of sensors added in high voltage compartments; conversion of non-arc-resistant equipment to obtain arc-resistant performance; effect of substitution of a circuit breaker without high current instantaneous release in a product originally supplied with such a release; and many others.

14a. Reason for the standardization project:

The field of conversions of power switchgear is evolving, creating the need to keep this document current with the state-of-the-art. The original document was issued in 1991, with revisions in 1996 and 2002. This illustrates the pace of change in technology of conversions. This standard needs continual attention to provide users, converters, and third-party agencies technically current information in the selection, application, design verification, and use of converted power switchgear equipment.

The stakeholders for this project are users of power distribution switchgear, manufacturers, test laboratories, third-party certification organizations, and consulting engineering firms.

15. Intellectual Property:

Has the sponsor reviewed the IEEE patent policy with the working group? No

Is the sponsor aware of copyrights relevant to this project? No

Is the sponsor aware of trademarks relevant to this project? No

Is the sponsor aware of possible registration of objects or numbers due to this project? No

16. Are there other documents or projects with a similar scope? No

Similar Scope Project Information:

17. Is there potential for this document (in part or in whole) to be adopted by another national, regional or international organization? Do not know at this time

If yes, please answer the following questions:

Which International Organization/Committee?

**International Contact
Information?**

18. If the project will result in any health, safety, or environmental guidance that affects or applies to human health or safety, please explain in five sentences or less.

19. Additional Explanatory Notes: (Item Number and Explanation)

(Item 15) The IEEE-SA patent policy slides will be reviewed with the working group at each meeting.