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06/07/2007 10:30 PM

To bill.chiu@ieee.org

cc donald.fallon@ieee.org, stds-pes-scc@ieee.org,  
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bcc

Subject Conditional Approval of Project-P638

07 June 2007

Bill Chiu  
Southern California Edison  
2224 Walnut Grove Avenue  
Rosemead, CA 91770 USA  
bill.chiu@ieee.org

Re: P638 - Standard for Qualification of Class 1E Transformers for Nuclear Power Generating Stations

Dear Bill:

On 07 June 2007 the IEEE-SA Standards Board conditionally approved the above referenced project until 31 December 2011 pending the revision of Item 7.3.

A copy of the file can be found on our website at  
<http://standards.ieee.org/board/nes/projects/638.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](mailto:s.hampton@ieee.org) no later than 05 September 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](mailto:s.hampton@ieee.org).

Sincerely,

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**PAR Request Date:** 12 March 2007

**PAR Approval Date:** 07 June 2007

**PAR Signature Page on File:** Yes

**Type of PAR:** Revision to IEEE Standard

**Status:** Revision to an Existing IEEE Std 638-1992

**Root Project:**

**1.1 Project No.:** 638

**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 for Qualification of Class 1E Transformers for Nuclear Power Generating Stations

**3.1 Working Group Name** [Qualification of Class 1E Transformers for Nuclear Power Generating Stations, Revision to IEEE 638 Working Group](#)

**Working Group Chair**

[Swinderman, Craig A](#)

Email: craig.swinderman@meppi.com

**Working Group Vice Chair**

**3.2 Sponsor**

[IEEE Power Engineering Society Transformers \(PE/TR\)](#)

**Sponsor Chair**

[Fallon, Don J](#)

Phone: 973-430-8191

Email: donald.fallon@ieee.org

**Name of Standards Liaison Representative (if applicable)**

[Chiu, Bill](#)

Phone: 323-720-5275

Email: bill.chiu@ieee.org

**3.3 Joint Sponsor**

**4.1 Type of Ballot:** Individual

**4.2 Expected Date of Submission for Initial Sponsor Ballot:** February 2010

**4.3 Projected Completion Date for Submittal to RevCom:** October 2010

**5.1 Approximate number of people expected to work on this project:** 12

**5.2 Scope:** This standard provides requirements to demonstrate the adequacy of new Class 1E transformers, located in a mild environment of a nuclear power generating station as defined in IEEE Std 323-1983, to perform their required safety functions under postulated service conditions. This standard applies to single and three phase transformers rated 601 V to 15 000 V for the highest voltage winding and up to 2500 kVA (self-cooled rating).

**Old Scope:** This standard provides requirements to demonstrate the adequacy of new Class 1E transformers, located in a mild environment of a nuclear power generating station as defined in IEEE Std 323-1983 [16]1, to perform their required safety functions under postulated service conditions. This standard applies to single and three phase transformers rated 601 V to 15 000 V for the highest voltage winding and up to 2500 kVA (self-cooled rating).

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

**5.4 Purpose:** The purpose of this standard is to provide specific qualification procedures for Class 1E transformers to demonstrate their capability to meet the requirements of IEEE Std 323-1983. The transformer must perform its intended function under all specified service conditions.

**Old Purpose:** The purpose of this standard is to provide specific qualification procedures for Class 1E transformers to demonstrate their capability to meet the requirements of IEEE Std 323-1983 [16]. The transformer must perform its intended function under all specified service conditions.

**5.5 Need for the Project:** There is a need to provide and maintain current requirements for the testing and qualifying of Class 1E transformers, including the case for transformers subject to large nonlinear loads. The existing standard does not address the case of transformers subject to large nonlinear loads. In addition, the existing standard has several figures, references and examples in the document that are now out of date and are in need of updating in accordance with the latest industry standards.

**5.6 Stakeholders for the Standard:** Class 1E transformer end-users at nuclear power stations, nuclear power plant engineering, design and construction firms, transformer manufacturers.

**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:** 2007-03-08

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?** Yes

**If yes, please explain:**

IEEE 323-2003. This standard applies to all types of Class 1E equipment. Standard 638 is specific to transformers for Class 1E application, and gives guidance on how to qualify the thermal life of the transformer, and provides Transformer Insulation Thermal Aging Techniques.

**Sponsor Organization:** IEEE

**Project/Standard Number:** 323

**Project/Standard Date:** 2004-01-23

**Project/Standard Title:** IEEE Standard for Qualifying Class 1E Equipment for Nuclear Power Generating Stations.

**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:**

**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: