

[Email This Letter](#)

06 December 2006

Jeffrey G Gilbert  
PPL Electric Utilities Corp  
2 N 9th Street, GENN 4  
Allentown, PA 18101-1179  
jggilbert@pplweb.com

Re: PC37.116 - Guide for Protective Relay Application to Transmission-Line Series Capacitor Banks

Dear Jeffrey:

I am pleased to report that on 06 December 2006 the IEEE-SA Standards Board approved the extension request of the above-referenced project until 31 December 2007.

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,

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

CC: pbwinsto@southernco.com, stds-pes-scc@ieee.org

# IEEE-SA Standards Board Extension Request

## Revised 14 September 2006

1. Date of Request: 2006-10-15
2. Assigned Project Number: PC37.116
3. Project Title: Guide For the Protective Relay Application of Transmission Line Series Capacitor Banks
  - a. Name of Working Group (WG): Guide For Series Capacitors Working Group
  - b. Name of Working Group Chair: Frank P.Plumptre
  - c. Name of Sponsoring Society and Committee: Power Engineering Society (PES)/Power System Relay Committee (PSRC)
  - d. Name of Sponsoring Committee Chair: Phil Winston, PE/PSRC Chair; Jeff Gilbert
4. Contact Information (Contact should be the person who will answer any questions concerning this extension request):
  - a. Name: Standards Coordinator
  - b. Telephone: 604 528 2758
  - c. FAX: 604 528 3149
  - d. EMAIL: f.plumptre@ieee.org
5. The current PAR is valid through 2006-12-31 (enter the expiration date of the PAR). This PAR Extension is being requested for: Select Number of Years

**NOTE: The average extension request is for one or two years. NesCom will consider requests for extensions of three or four years on an exceptional basis. Such requests must be supported with sufficient detail on planned actions and activity dates to provide reasonable confidence that the project can be completed within the extended time.**

6. Statement of why an extension is required. This should include a description of what the working group has accomplished and what remains to be accomplished, along with the reasons why the work was unable to be completed in the allotted time frame. To allow Standards Board time to review the recently submitted reballotted document to 'My Ballot' on October 13, 2006

### 7. History

- a. What date was the PAR first approved? 1999-12-07
- b. What date did you begin writing the first draft? 2000-01-01
- c. How many people are actively working on the project? 8
- d. How many times a year does the working group meet:
  1. In person? 3
  2. Via teleconference? 0
- e. How many times a year is a draft circulated to the working group via electronic means? 3

### 8. Document Progress

- a. What percentage of the Draft is stable? 100%
- b. How many significant work revisions has the Draft been through? 9

## 9. Project Plan

**(Item #9a is only for projects that have been balloted. If your draft has not yet gone to ballot, please go to Item #9b)**

- a. Balloting History - Provide history of all IEEE Sponsor ballots under this project::

1<sup>st</sup> Ballot Close date (or scheduled close): 2005-11-11

1<sup>st</sup> Ballot Draft Number: 9.2

1<sup>st</sup> Ballot results (% affirmative, %negative, %abstain): 63/76 = 83%; 4/76 = 5.3%;

9/76=11.7% (negative ballots w/o comments not included)

2<sup>nd</sup> Ballot Close date (or scheduled close): 2006-08-13

2<sup>nd</sup> Ballot Draft Number: 9.4

2<sup>nd</sup> Ballot results (% affirmative, %negative, %abstain): 64/79 = 81%, 6/79 = 7.6%, 9/79= 11.4% Note: negative ballots w/o comments not included

(Add additional entries for ballots as needed):

When do you estimate that the final IEEE Sponsor ballot will be completed?

When do you expect to submit the proposed standard to RevCom? 2006-10-13

- b. For projects that have not yet begun Sponsor ballot, please answer the following:**

When will IEEE sponsor balloting begin?

When do you estimate that the final IEEE Sponsor ballot will be completed?

When do you expect to submit the proposed standard to RevCom?

## 10. Future Adoptions

- If this is a new document, will it be adopted (in part or in whole) by another national, regional or international organization? Choose One If yes, which organization?
- If this is a revision of an existing document, has this document been adopted by the IEC, ISO, ETSI, SCC, etc? Choose One If yes, which organization?

## 11. Additional Extensions

a. Is this the first request for an extension? Choose One (If yes, please do not go any further. You have completed the form.)

b. If not, when was the previous extension approved? 2005-12-07

After completion of this form, please e-mail this to the NesCom Administrator at nescom-admin@ieee.org. Confirmation of submittal will be sent on receipt of this request.

[Email This Letter](#)

09 December 2005

Jeffrey G Gilbert  
PPL Electric Utilities Corp  
2 N 9th Street, GENN 4  
Allentown, PA 18101-1179  
jggilbert@pplweb.com

Re: PC37.116 - Guide for Protective Relay Application to Transmission-Line Series Capacitor Banks

Dear Jeffrey:

I am pleased to report that on 07 December 2005 the IEEE-SA Standards Board approved the extension request of the above-referenced project until 31 December 2006.

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

Sincerely,

Jodi Haasz  
Program Manager  
International Stds Programs and Governance  
Standards Activities  
Phone +1 732 562 6367  
FAX +1 732 875 0695  
Email: [j.haasz@ieee.org](mailto:j.haasz@ieee.org)

CC: [pbwinsto@southernco.com](mailto:pbwinsto@southernco.com), [f.plumptre@ieee.org](mailto:f.plumptre@ieee.org), [stds-pes-scc@ieee.org](mailto:stds-pes-scc@ieee.org)

# IEEE-SA Standards Board Extension Request

## Revised 23 June 2004

1. Date of Request: 16-Sep-05
2. Assigned Project Number: PC37.116
3. Project Title: Guide For Protective Relay Application of Transmission Line Series Capacitors
  - a. Name of Working Group (WG): Guide For Series Capacitor Protection Work Group
  - b. Name of Working Group Chair: Frank P Plumptre
  - c. Name of Sponsoring Society and Committee: Power Engineering society (PES)/Power System Relay Committee (PSRC)
  - d. Name of Sponsoring Committee Chair: Phil Winston, PE/PSRC Chair; Jeff Gilbert Standards Coordinator (PSRC)
4. Contact Information (Contact should be the person who will answer any questions concerning this extension request):
  - a. Name: Frank Plumptre
  - b. Telephone: 604 528 2758
  - c. FAX: 604 528 3149
  - d. EMAIL: f.plumptre@ieee.org
5. Statement of why an extension is required. This should include a description of what the working group has accomplished and what remains to be accomplished, along with the reasons why the work was unable to be completed in the allotted timeframe A extension is required to resolve any negative ballots to the proposed document. A balloting pool is being formed. The present PAR will expire December 2005, giving insufficient time to process any negative ballots.
6. History
  - a. What date was the PAR first approved? 7-Dec-99
  - b. What date did you begin writing the first draft? 1-Jan-00
  - c. How many people are actively working on the project? 8
  - d. How many times a year does the working group meet:
    1. In person? 3
    2. Via teleconference? 0
  - e. How many times a year is a draft circulated to the working group via electronic means? approximately 3 X year
7. Document Progress
  - a. What percentage of the Draft is stable? 100%
  - b. How many significant work revisions has the Draft been through? 9
8. Project Plan

**(Item #8a is only for projects that have been balloted. If your draft has not yet gone to ballot, please go to Item #8b)**

a. Balloting History - Provide history of all IEEE Sponsor ballots under this project::

1<sup>st</sup> Ballot Close date (or scheduled close):

1<sup>st</sup> Ballot Draft Number:

1<sup>st</sup> Ballot results (% affirmative, %negative, %abstain):

2<sup>nd</sup> Ballot Close date (or scheduled close):

2<sup>nd</sup> Ballot Draft Number:

2<sup>nd</sup> Ballot results (% affirmative, %negative, %abstain):

(Add additional entries for ballots as needed):

When do you estimate that the final IEEE Sponsor ballot will be completed?

When do you expect to submit the proposed standard to RevCom?

**b. For projects that have not yet begun Sponsor ballot, please answer the following:**

When will IEEE sponsor balloting begin? 1-Nov-05

When do you estimate that the final IEEE Sponsor ballot will be completed? 1-Jan-06

When do you expect to submit the proposed standard to RevCom? 1-Apr-06

9. Future Adoptions

- If this is a new document, will it be adopted (in part or in whole) by another national, regional or international organization? Do Not Know If yes, which organization?
- If this is a revision of an existing document, has this document been adopted by the IEC, ISO, ETSI, SCC, etc? Choose One If yes, which organization?

10. Additional Extensions

a. Is this the first request for an extension? No (If yes, please do not go any further. You have completed the form.)

b. If not, when was the previous extension approved? 11-Sep-03

After completion of this form, please e-mail this to the NesCom Administrator at nescom-admin@ieee.org. Confirmation of submittal will be sent on receipt of this request.

[Email This Letter](#)

12 September 2003

Mohindar Sachdev  
University of Saskatchewan  
243 Willoughby Cres.  
Saskatoon, SK, S7H 4W6  
CANADA  
[m.s.sachdev@ieee.org](mailto:m.s.sachdev@ieee.org)

Re: PC37.116 - Guide for Protective Relay Application to Transmission-Line Series Capacitor Banks

Dear Mohindar:

I am pleased to report that on 11 September 2003 the IEEE-SA Standards Board approved the extension request of the above-referenced project until 31 December 2005.

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

cc: [f.plumtre@ieee.org](mailto:f.plumtre@ieee.org), [rick.taylor@sgswitter.com](mailto:rick.taylor@sgswitter.com), [stds-pes-scc@ieee.org](mailto:stds-pes-scc@ieee.org)

# IEEE-SA Standards Board Extension Request

Revised 6 December 2000

1. Date of Request: May 15, 2003
2. PAR Number: PC37.116
3. Project Title: Guide For Protective Relay Application of Transmission-Line Series Capacitors
  - a. Name of Working Group (WG): Series Capacitor Protection Work Group
  - b. Name of Working Group Chair: Frank Plumtre
  - c. Name of Sponsoring Society and Committee:  
Power Engineering Society (PES) / Power System Relay Committee (PSRC)
  - d. Name of Sponsoring Committee Chair:  
          R.P. Taylor, Chair PE/PSR; M.S. Sachdev, Standards Coordinator PE/PSR
4. Contact Information (Contact should be the person who will answer any questions concerning this extension request):
  - a. Name: Frank Plumtre
  - b. Telephone: 604-528-2758
  - c. FAX: 604-528-3149
  - d. EMAIL: f.plumtre@ieee.org
5. Statement of why an extension is required. If this is a request for an additional extension, please state why you believe that this extension request will be your final request, and the reason for this additional extension.  
Contributions have been made by utilities and manufacturers located in the U.S., Canada, Sweden, and Finland. Discussions and consensus have taken longer due to the locations of the contributors and the consequences of tightened travel budgets. The Working Group has also had one change in chairmanship. The Working Group has also taking steps to coordinate the preparation of the guide with a Working Group of the Transmission and Distribution Committee to provide a more complete Guide.
6. History
  - a. When was the PAR first approved? 7 December 1999
  - b. When did you begin writing the first draft? May 2000
  - c. How many people are actively working on the project? 8
  - d. How many times a year does the working group meet in person? 3
  - e. How frequently is a draft version circulated to the working group via electronic means?  
Approximately every 4 months
7. Document Progress
  - a. How much of the Draft is stable? 26 out of 32 major subsections have been written.
  - b. How many significant working revisions has the Draft been through? 5
  - c. Briefly describe what the development group has already accomplished, and what remains to be done: The Working Group initially developed an outline of the subsections, made writing assignments, and received written contributions. Twenty-six out of thirty-two major subsections have been completed. The Working Group will conduct its internal technical review of the material and then complete an editorial review. The Final Draft will then be balloted through the Standards Association balloting process.
8. Project Plan
  - a. When ~~did~~ will IEEE sponsor balloting begin? May 2004
  - b. When do you estimate that the final IEEE Sponsor ballot will be completed? December 2004
  - c. When do you expect to submit the proposed standard to RevCom? February 2005
  - d. Do you see value in help or mentoring from the Standards Board staff to meet your projected schedule? If so, what kind of help would be useful?

We have received guidance from the PSRC Coordinator of the Standards Board, Mohindar Sachdev, and do not anticipate needing additional help from the Standards Board staff.

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9. Additional Extensions

- a. Is this the first request for an extension? [ Yes ] (If yes, please do not go any further. You have completed the form.)
- b. If not, when was the previous extension approved? \_\_\_\_\_
- c. How much additional time is needed to complete the project? \_\_\_\_\_

After completion of this form, please e-mail this to the [NesCom Administrator](#). Confirmation of submittal will be sent on receipt of this request.

From: miriam.sanders@pulsartech.com  
X-Lotus-FromDomain: PULSARNOTES  
To: j.haasz@ieee.org  
Date: Tue, 26 Oct 1999 10:14:40 -0400  
Subject: Re: PC37.116 Guide for Protective Relay Application to  
Transmission-Line Series Capacitor Banks

----- Forwarded by Miriam Sanders/PulsarNotes on 10/26/99  
10:14 AM -----

Miriam Sanders  
08/10/99 08:00 AM

To: j.haasz@ieee.org  
cc:  
Subject: Re: PC37.116 Guide for Protective Relay Application to  
Transmission-Line Series Capacitor Banks (Document link not  
converted)

Jodi - I know this is a little late for the deadline so if it isn't on the  
agenda I know why. None of the other PES committees wanted coordination  
with this project. If there is something else I need to do, let me know.

Best regards,  
Miriam Sanders  
Power Systems Relaying Committee  
954-344-9822 phone  
954-340-6676 fax

IEEE-SA Standards Board Project Authorization Request (PAR) (1999-Rev 1)

1. Sponsor Date of Request [ 8/10/99 ]
2. Assigned Project Number [ PC37.116 ]
3. PAR Approval DATE [7 December 1999] {IEEE Staff to fill in box}  
{Copyright release must be received with appropriate signatures  
by postal mail or FAX (1-732-562-1571)}  
[X] PAR Signature Page Received {IEEE Staff to check Box}
4. Project Title and Working Group/Sponsor for this Project

Document type : {Place an X in only one option below}  
[ ] Standard for {Document stressing the verb "SHALL"}  
[ ] Recommended Practice for {Document stressing the verb "SHOULD"}  
[X] Guide for {Documents in which good practices are suggested}

TITLE: [Guide For Protective Relay Application To Transmission-Line Series Capacitor Banks]

Name of Working Group(WG) : [K13 ]

Name of Official Reporter (usually the WG Chair) who MUST be an SA member as

well as an IEEE/Affiliate Member: [ Ahmed Elneweih ]

Title in WG: [ Chair ] IEEE/SA/Affiliate Member #

[02521151 ]{Required}

Company: [ BC Hydro ] Telephone: [604-528-2853 ]

Address: [6911 Southpoint Drive (A01) ] FAX:

[ 604-528-3149 ]

City/State/Zip: [Burnaby/BC/V3N 4X8 ] EMAIL: [

ahmed.elneweih@bchydro.bc.ca ]

Name of WG Chair (if different than Reporter): [ ]

IEEE/Affiliate Memb # [ ]{Required}

Company: [ ] Telephone: [ ]

Address: [ ] FAX: [ ]

City/State/Zip: [ ] EMAIL: [ ]

Name of Sponsoring Society and Committee: [ Power Engineering Society/Power System Relaying Committee]

Name of Sponsoring Committee Chair: [A. G. Phadke [MP Sanders, designee]]

Company: [Virginia Polytechnic Inst. & State Univ., The Bradley Department of Elec. Eng.]

Telephone: [540-231-7029]

Address: [ 426 Whittemore Hall] FAX:

[540-231-4303]

City/State/Zip: [Blacksburg, VA 24061-0111 ] EMAIL:

[aphadke@vt.edu ]

5. Describe this Project by answering each of five questions below:

5a. Update an existing PAR? {Yes/No} [ No ]

If YES: Indicated PAR number/approval date [ ]

If YES: Attach cover letter indicating changes/rationale for changes.

If YES: Is this project in ballot now? [ ] {Yes/No}

5b. Choose one from the following:

b1 -[ X ] New Standard

b2 -[ ] Revision of existing standard {number and year} [ ]

b3 -[ ] Amendment (Supplement) to existing standard {number and year} [ ]

b4 -[ ] Corrigenda to existing standard {number and year} [ ]

5c. Choose one from the following:

c1 -[ X ] Full Use (5-year life cycle)

c2 -[ ] Trial Use (2-year cycle)

5d. Choose one from the following:

d1 -[X ] Individual Sponsor Ballot Process

d2 -[ ] Entity (not Individual) Sponsor Ballot Process

5e. Fill in Target Completion Date to IEEE RevCom [ 05/2003 ]

6. Scope of Proposed Project

{what is being done, including technical boundaries on the work}

[To provide a guide for the application of protective relays on transmission-line series capacitor banks. The guide will provide alternative approaches to the design, testing, and maintenance of protective relays based on the latest knowledge and the application experience of the industry. The guide will also cover issues related to the reliability of the protective relay system. ] {This should be brief (less than 5 lines recommended)}

7. Purpose of Proposed Project:

{why it is being done, including intended users, and benefits to users}

[There are a variety of factors to be considered in the application of protective relays to series capacitor banks which are presently not documented in any standard or guide. Applications of series capacitors are sufficiently diverse that protective relay engineers need some guidance on the considerations to be used. As the addition of series capacitor banks is on the rise, there is a need for such a guide to be introduced.] {This should be brief (less than 5 lines recommended)}

8. Intellectual Property {Answer each of the questions below}

8a. Are you aware of any patents relevant to this project?

[ No ] {Yes, with detailed explanation below/ No}

[ ] {Explanation}

8b. Are you aware of any copyrights relevant to this project?

[ Yes ] {Yes, with detailed explanation below/ No}

[ A special publication by the IEEE Power Engineering Society titled ?Series Capacitor Bank Protection?, IEEE Catalog Number 98TP126-0]

{Explanation}

8c. Are you aware of any trademarks relevant to this project?

[No ] {Yes, with explanation below/ No}

[ ] {Explanation}

8d. Are you aware of any registration of objects or numbers relevant to this project?

[No ] {Yes, with explanation below/ No}

9. Are you aware of other standards or projects with a similar scope?

[ No ] {Yes, with explanation below/ No}

[ ] {Explanation}

10. International Harmonization

Is this standard planned for adoption by another international organization?

[?? ] {Yes/No/?? if you don't know at this time}

If Yes: Which International Organization [ ]

If Yes: Include coordination in question 13 below

If No: Explanation [ ]

11. Is this project intended to focus on health, safety or environmental issues?

[ No ] {Yes/No/?? if you don't know at this time}

If Yes: Explanation? [ ]

12. Proposed Coordination/Recommended Method of Coordination

12a. Mandatory Coordination

SCC 10 (IEEE Dictionary) by DR

IEEE Staff Editorial Review by DR

SCC 14 (Quantities, Units and Letter symbols) by DR

12b. Coordination requested by Sponsor and Method:

[ IEEE TD Committee, Capacitor Subcommittee] by [DR] {circulation of DRafts/Llaison memb/COmmon memb}

[PE/SUB] by [DR] {circulation of DRafts/Llaison memb/COmmon memb}

[ ] by [ ] {circulation of DRafts/Llaison memb/COmmon memb}

[ ] by [ ] {circulation of DRafts/Llaison memb/COmmon memb}

{Choose DR or LI or CO for each coordination request}


12c. Coordination Requested by Others:

[ ] {added by staff}

Additional Explanation Notes: {Item Number and Explanation}

[ ] {If necessary, these can be continued on additional pages}

To: miriam.sanders@pulsartech.com  
From: Jodi Haasz <j.haasz@ieee.org>  
Subject: [PC37](#).116 Guide for Protective Relay Application to Transmission-Line Series Capacitor Banks  
Cc: ahmed.elneweihi@bchydro.bc.ca  
Bcc:

X-Attachments:  C37-116.pdf

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7 December 1999

Ms. [Miriam](#) Sanders  
Pulsar Technologies, [Inc.](#)  
4050 NW 121 Avenue  
Coral Springs, FL 33065

Re: [PC37](#).116 Guide for Protective Relay Application to Transmission-Line Series Capacitor Banks

Dear Ms. Sanders:

I am pleased to inform you that on 7 December 1999 the [IEEE-SA](#) Standards Board approved the above referenced project via the continuous processing pilot program. A copy of the file is attached in [.pdf](#) format.

At the bottom of this e-mail, please find [URLs](#) which you may find useful in the development of your proposed standard and in submitting your final draft for approval. Written responses from all committees/organizations listed on the PAR as proposed coordination must be included with the final draft when it is submitted.

If coordination is effected by common membership, i.e., a person on the standard's developing committee who is also a member of the committee/organization specified on the PAR for coordination, there must be a document included with the final draft from that coordinating body which states that person is authorized to represent it. We strongly recommend that a copy of your draft be sent to this office for review prior to the final voting by the working group to allow for a quick review by the editorial staff before sponsor balloting.

If you should have any further questions or would like to receive this information in paper, please contact me at 732-562-6367 or by email at [j.haasz@ieee.org](mailto:j.haasz@ieee.org)

Sincerely,

[Jodi Haasz](#)  
Administrator, Standards Process Support  
[NesCom](#) Administrator

cc: A. [Elneweihi](#)

PS - The information in the .pdf file is viewable in Adobe Reader, version 3.0 or higher. If you do not have this software, please go to <http://www.adobe.com/prodindex/acrobat/readstep.html#reader> to download the free version.

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#### Standards Process-at-a-Glance

<http://standards.ieee.org/resources/glance.html> - A quick-reference site useful to any standards developer.

#### IEEE Standards Style Manual

<http://standards.ieee.org/guides/style/index.html> - Guidelines that establish style and format requirements for the preparation of proposed IEEE standards.

#### IEEE Standards Companion

<http://standards.ieee.org/guides/companion/index.html> - An overall view of the standards process; what to do, what to avoid, lessons learned, and sample forms.

#### Implement Plan for Metric Policy 9.20

<http://standards.ieee.org/announcements/metric.html> - Information on when, why and how the plan will be implemented and what exceptions exist.

#### Leading a Standards Development Group

<http://standards.ieee.org/faqs/ltpres.html#q1> - A free training session offered by staff to make the most of the standards process. After attending, you will have a great understanding of:

- the need for due process and consensus
- how to submit PARs and Drafts
- the "legal" aspects (copyrights, trademarks, patents)
- how staff can help you

#### Standards Coordinating Committee 10

<http://standards.ieee.org/faqs/SCC10.html> - An explanation of the importance of coordinating with the IEEE Dictionary (SCC10) as is mandated on the PAR form.

#### Balloting Information

[http://standards.ieee.org/resources/glance\\_at\\_balloting.html](http://standards.ieee.org/resources/glance_at_balloting.html)