

PAR for a New IEEE Standard

Section 1

1.1 Assigned Project Number: **300X.X**

If left blank, a project number will be assigned by the NesCom Administrator when your PAR is received. Please contact the NesCom Administrator for any questions about a specific project number.

1.2 Type of Document: **Standard, Recommended Practice, or Guide**

Standards, Guides and Recommended Practices are generically referred to as IEEE Standards.

Recommended Practice

Standards are documents with mandatory requirements. Standards are generally characterized by the use of the verb "shall."

Recommended Practices are documents in which procedures and positions preferred by the IEEE are presented. Recommended practices are generally characterized by the use of the very "should."

Guides are documents in which alternative approaches to good practice are suggested, but no clear-cut recommendations are made. Guides are generally categorized by the use of the verb "may."

1.3 Life Cycle: **Full Use or Trial Use**

A standard can be designated full-use or trial-use.

A standard can be designated as **trial-use** when a draft satisfies the criteria of the standards-developing group (i.e., subcommittee or working group), but needs input from a very broad constituency. This is a preferred alternative to the widespread distribution of unapproved drafts. Such a draft requires a letter ballot of the sponsor and approval by the IEEE-SA Standards Board as a trial-use standard.

Trial-use standards are effective for no more than two years from the date of publication. If no comments are received during the trial period, the standard is subject to adoption as a full-use standard upon receipt of written recommendation from the sponsor and approval by the IEEE-SA Standards Board.

Start with Trial-Use

Section 2

2.1 Project Title: Recommended Practice for Design, Construction & Operation of Campus Power Systems

The title shall not contain the acronym "IEEE." This is added to the title when the standard publishes. All other acronyms shall be spelled out in the title. Typically titles begin with "Standard for....", "Guide for...." or "Recommended Practice for...." If a general term is used to represent ranges (e.g. high, medium, low) within the title, scope or purpose, numerically define such ranges where they first appear (title, scope or purpose as applicable).

Section 3

3.1 Working Group: (auto-filled)

Education & Healthcare Facilities Subcommittee and others

3.2 Sponsoring Society and Committee: (auto-filled)

[A listing of Sponsor P&Ps and Sponsor Scopes is available at <https://development.standards.ieee.org/pub/view-sponsor-pnps>]

Power Systems Engineering Committee or the Technical Books Coordinating Committee

3.3 Joint Sponsor: (chosen from drop down menu)

If you are not adding a joint sponsor to this project, you may leave this field blank.

TBD

Section 4

4.1 Sponsor Balloting Information: *Individual or Entity*

Is the balloting group for this standard expected to be composed of **individuals** or **Entities** (persons representing corporations/government bodies, institutions or SDO's)? See Section 5.4.1 in the IEEE Standards Board Operations Manual for further explanation.

Both individuals and entities

4.2 Expected Date of Submission of Draft to the IEEE-SA for Initial Sponsor Ballot

Month: May **Year: 2017**

Additional communication and input from other organizations or other IEEE Standards Sponsors should be encouraged through participation in the working group or the invitation pool prior to Sponsor Ballot.

4.3 Projected Completion Date for Submittal to RevCom

Month: TBD **Year: TBD**

Enter the date the draft standard is planned to be submitted to RevCom for processing (not to exceed four years from the date of PAR submission). **It is suggested to allow at least six months after Initial Sponsor Ballot for the ballot process.** Cutoff dates for submitting draft standards to RevCom are generally in February, May, August, and October. Check the appropriate calendars for the specific dates as the draft matures. Use a best guess estimate for the PAR.

Section 5

5.1 Approximate number of people expected to be actively involved in the development of this project: **10-100**

This includes Working Group members, additional non-voting participants, etc.

5.2 Scope of the proposed standard:

The Scope should appear as it will in the draft standard. The Scope stated on the PAR shall be written in present tense, in complete sentences, and with proper grammar as it is intended to appear in the published standard. All acronyms shall

be spelled out at first use. The title and (if appropriate) date of any document referenced in the Scope shall be listed in the Additional Explanatory Notes field at the end of this PAR form.

For multi-building campus power systems, with and without district energy, which will reference safety concepts from the National Electrical Code, the National Electrical Safety Code, other relevant IEEE documents but will explore other areas not covered in other standards suites (such as the first and running cost of an entire campus power system)

5.3 Is the completion of this standard contingent upon the completion of another standard? Yes or No

If yes, explain:

Your explanation should include how the standard is dependent upon the completion of another standard. Also, if applicable, explain why a PAR request is being submitted if the standard currently under development is not yet complete. The title and number of the standard which this project is contingent upon shall be included in the explanation.

5.4 Will this document contain a Purpose clause? Yes or No

If yes, enter the purpose of the proposed standard:

To be a 'space' where the minimum safety requirements of the NEC and NESC are met, but also recommend design, construction, operation and maintenance practices that support economic objectives of multi-building campuses on the load side of the service point.

A purpose statement is encourage but not mandatory. If the document will not include a purpose statement choose "No" and leave the purpose field blank. The purpose stated on the PAR shall be written in present tense, in complete sentences, and with proper grammar as it is intended to appear in the published standard. The title and (if appropriate) date of any document referenced in the Purpose shall be listed in the Additional Explanatory Notes field at the end of the PAR form.

5.5 Need for the project:

At \$300 billion annually the education industry is the largest non-residential building construction market in the US with an spend on electro-technology on the order of \$60 billion annually.

Electrical power designers, operation and maintenance staff of multi-building campus power systems on the load side of the service point need a document/space where new concepts can be vetted; to provide lessons learned from case studies. For example:

Reduce flash hazard on medium voltage distribution systems with resistance grounding

Aluminum wiring that reduces the cost of new standby feeders or emergency power systems by 2/3rds

Load shedding regimes at district energy systems. With aluminum wiring it may be possible to design feeders that pick up load classes.

Fair evaluation of district energy reliability with SAIDI/CAIDI/SAIFI indices, for example.

We have been collecting these ideas for about 2 years now in this document:

<https://docs.google.com/document/d/1RsLDe4DAd6AUrQclf-lnQbB2qfXUrfLpOsGI5YHc5Zc/edit>

The need for the project details the specific problem that the standard will resolve and the benefit that users will gain by the publication of the standard. The need statement should be brief, no longer than a few sentences.

Many campus power systems are evaluated by non-electrical professionals (i.e energy and sustainability professionals) by comparing their performance with IEEE reliability criteria. This document/space will be a landing page for standard-of-care and best practice conversations.

The leadership of the US education industry is finding inspiration in the sale of the Ohio State University power system -- generation plant, distribution network, building substations -- to a private entity. The price tag is about \$250 million. If more universities with large power systems attempt to do this IEEE Education & Healthcare Facilities Committee would like a basis for contributing to the discussion. Having a central, living

document will support the claim that IEEE member engineers should be involved in this discussion.

5.6 Stakeholders for the standard:

The stakeholders (e.g., telecom, medical, environmental) for the standard consist of any parties that have an interest in or may be impacted by the development of the standard.

The \$300 billion education industry which has most of the campus power systems. Government complexes such as Center for Disease Control. military installations and national laboratories domiciled at research universities.

Section 6

6.1 Intellectual Property:

A. Is the Sponsor aware of any copyright permissions needed for this project? *Yes or No*

If yes, please explain below:

If the proposed standard uses copyrighted material, copyright releases must be obtained by the working group and shall be included in the final package submitted to the IEEE-SA Standards Board. Additionally, remember that during development of your approved project, the proper IEEE copyright notices must be maintained on all drafts.

B. Is the Sponsor aware of possible registration activity related to this project? *Yes or No ?*

If YES, please explain below:

The IEEE Registration Authority Committee (RAC) is a mandatory coordination body. A YES answer to this question provides early notification that RAC mandatory coordination will occur during Sponsor ballot. Working groups are welcome to engage the RAC if appropriate earlier in the project.

If the proposed standard requires (or is expected to require) the unique identification of objects or numbers for use in industry, the project has registration activity. This does not cover things like code points defined within the standard.

A YES answer with brief explanation is appropriate if:

1. The proposed standard creates a new registry.

2. The proposed standard includes new use of an existing registry (whether IEEE RA or other registry authority). An existing IEEE registry example would be use of an Organizationally Unique Identifier (OUI). An explanation of a new registration activity should be supplied on the PAR. Please visit the IEEE Registration Authority website (<http://standards.ieee.org/develop/regauth/>) for additional information regarding existing registries.

3. When RAC review of previously reviewed text is appropriate to assure terminology and descriptions of usage are current.

A NO answer is appropriate:

1. When the project has no registration activity.

2. When a project modifying an existing standard with registration activity will not be adding new text nor modifying existing registration activity text previously reviewed by the IEEE Registration Authority (e.g., corrigendum on non-registry content). Please briefly explain why RAC review is not required.

Please note that the RAC may request mandatory coordination on any project, independent of the answer to this question.

Section 7

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

Identify any standard(s) or project(s) of similar scope(s), both within or outside of the IEEE, and explain the need for an additional standard in this area.

Sponsor Organization:

Industrial Applications Society

Project/Standard Number: 3000X.X

Project/Standard Date: Power Systems Engineering

Project/Standard Title:

Information from 7.2 – 7.4 is captured for potential follow up and coordination but will not appear on the final PAR view.

7.2 Joint Development - Is it the intent to develop this document jointly with another organization? Yes or No

Maybe with the Power Engineering Society, the Education & Healthcare Facilities Subcommittee

If this document will be developed jointly with another organization, your IEEE-SA Staff Liaison must be made aware of this prior to final approval of the document by the IEEE-SA Standards Board [RevCom].

If yes, please indicate the organization, technical committee name/number and contact person within external organization

Organization: University of Michigan
Technical Committee Name:
Technical Committee Number:
Contact Name: Mike Anthony | Jim Harvey
Phone: 734-936-1110 | 734-647-3319
Email: maanthon@umich.edu | jrharvey@med.umich.edu

7.3 International Standards Activities

A. Adoptions - Is there potential for this standard to be adopted by another organization?: *Yes or No*

If this document is to be adopted by another organization, the document must be adopted intact (whole and unmodified) and the requested contact persons entered on the submittal form. For information about adoptions, contact your IEEE-SA Staff Liaison.

If yes, please indicate the organization, technical committee name/number and contact person within external organization

Organization: *TBD*
Technical Committee Name:
Technical Committee Number:
Contact Name:
Phone:
Email:

B. Harmonization - Are you aware of another organization that may be interested in portions of this document in their standardization development efforts?

If yes, please indicate the organization, technical committee name/number and contact person within external organization

Organization: *NFPA/IEEE/IEC - TBD*
Technical Committee Name:
Technical Committee Number:
Contact Name:
Phone:

Email:

7.4 Does the sponsor foresee a longer term need for testing and/or certification services to assure conformity to the standard? *Yes or No*
Additionally, is it anticipated that testing methodologies will be specified in the standard to assure consistency in evaluating conformance to the criteria specified in the standard? *Yes or No*

Section 8

8.1 Additional Explanatory Notes:

Include the Item # in front of each explanation to distinguish which PAR field it is referring to.

If there is any further information that may assist NesCom in recommending approval for this project, include this information here. The title of any documents referenced in the PAR should be listed here.

While we still have work to do getting a straw-man draft together, we must be aware that other ANSI-accredited standards developers, many of them competitors (such as ASHRAE, IES, ASHE, etc.) will want to claim this space. It is our conviction that IEEE IAS engineering expertise on the load side of the service point, should be the leading voice in what is likely to be an expanding and fast-moving discussion.

8.2 IEEE Code of Ethics

The PAR will not be accepted if the box below is not checked.

**I acknowledge that I have read and I understand the [IEEE Code of Ethics](#)
I agree to conduct myself in a manner that adheres to the IEEE Code of Ethics when engaged in official IEEE business. **OK/maa****

V2 Draft Prepared by Mike Anthony | October 1, 2016

<http://maanthony.workfolio.com/>