IEEE SCC21 1547™ Series Standards Development
P1547.X Working Group Meeting
Date–Date, 200X; City, State

P1547.X Standard Title,
Scope and Purpose

Chairperson:
Vice Chair:
Secretary:
1547 Series of Meetings: Date–Date, 200X
Typical Draft Timeline: see each work group agenda for details

Mon: Arrive
Tues–Fri: Register 8–8:30 a.m. (check with each WG chair for final)

- **Date, 200X** Tuesday
  8 a.m.–5 p.m.   P1547.X
  8 a.m.–5 p.m.   P1547.XX

- **Date, 200X** Wednesday
  8 a.m.–3 p.m.   P1547.X
  8 a.m.–3 p.m.   P1547.XX

- **Date, 200X** Thursday
  8 a.m.–5 p.m.   P1547.Y
  8 a.m.–5 p.m.   P1547.YY

- **Date, 200X** Friday
  8 a.m.–3 p.m.   P1547.Y
  8 a.m.–3 p.m.   P1547.YY
General Agenda: P1547.X Date–Date, 200X

- Welcome and Introductions: sign the attendee list - correct and/or add your contact information.

- Approval of past minutes, and this meeting’s agenda (see accompanying detailed agenda)

- IEEE Standards Development

- P1547.X Discussion and Breakouts

- Next Actions; Adjourn
Highlights of the *IEEE-SA Standards Board Bylaws* on Patents in Standards

- Participants have a duty to tell the IEEE if they know (based on personal awareness) of potentially Essential Patent Claims they or their employer own.
- Participants are encouraged to tell the IEEE if they know of potentially Essential Patent Claims owned by others.
  - This encouragement is particularly strong as the third party may not be a participant in the standards process.
- **Working Group** required to request assurance.
- Early assurance is encouraged.
- **Terms of assurance** shall be either:
  - Reasonable and nondiscriminatory, with or without monetary compensation; or,
  - A statement of non-assertion of patent rights.
- **Assurances**
  - Shall be provided on the IEEE-SA Standards Board approved LOA form.
  - May optionally include not-to-exceed rates, terms, and conditions.
  - Shall not be circumvented through sale or transfer of patents.
  - Shall be brought to the attention of any future assignees or transferees.
  - Shall apply to Affiliates unless explicitly excluded.
  - Are irrevocable once submitted and accepted.
  - Shall be supplemented if Submitter becomes aware of other potential Essential Patent Claims.
- A “Blanket Letter of Assurance” may be provided at the option of the patent holder.
- A patent holder has no duty to perform a patent search.
IEEE-SA Standards Board Bylaws on Patents in Standards

6.2 Policy

IEEE standards may be drafted in terms that include the use of Essential Patent Claims. If the IEEE receives notice that a [Proposed] IEEE Standard may require the use of a potential Essential Patent Claim, the IEEE shall request licensing assurance, on the IEEE Standards Board approved Letter of Assurance form, from the patent holder or patent applicant. The IEEE shall request this assurance without coercion.

The Submitter of the Letter of Assurance may, after Reasonable and Good Faith Inquiry, indicate it is not aware of any Patent Claims that the Submitter may own, control, or have the ability to license that might be or become Essential Patent Claims. If the patent holder or patent applicant provides an assurance, it should do so as soon as reasonably feasible in the standards development process. This assurance shall be provided prior to the Standards Board’s approval of the standard. This assurance shall be provided prior to a reaffirmation if the IEEE receives notice of a potential Essential Patent Claim after the standard’s approval or a prior reaffirmation. An asserted potential Essential Patent Claim for which an assurance cannot be obtained (e.g., a Letter of Assurance is not provided or the Letter of Assurance indicates that assurance is not being provided) shall be referred to the Patent Committee.

A Letter of Assurance shall be either:

a) A general disclaimer to the effect that the Submitter without conditions will not enforce any present or future Essential Patent Claims against any person or entity making, using, selling, offering to sell, importing, distributing, or implementing a compliant implementation of the standard; or

b) A statement that a license for a compliant implementation of the standard will be made available to an unrestricted number of applicants on a worldwide basis without compensation or under reasonable rates, with reasonable terms and conditions that are demonstrably free of any unfair discrimination. At its sole option, the Submitter may provide with its assurance any of the following: (i) a not-to-exceed license fee or rate commitment, (ii) a sample license agreement, or (iii) one or more material licensing terms.
Copies of an Accepted LOA may be provided to the working group, but shall not be discussed, at any standards working group meeting.

The Submitter and all Affiliates (other than those Affiliates excluded in a Letter of Assurance) shall not assign or otherwise transfer any rights in any Essential Patent Claims that are the subject of such Letter of Assurance that they hold, control, or have the ability to license with the intent of circumventing or negating any of the representations and commitments made in such Letter of Assurance.

The Submitter of a Letter of Assurance shall agree (a) to provide notice of a Letter of Assurance either through a Statement of Encumbrance or by binding any assignee or transferee to the terms of such Letter of Assurance; and (b) to require its assignee or transferee to (i) agree to similarly provide such notice and (ii) to bind its assignees or transferees to agree to provide such notice as described in (a) and (b).

This assurance shall apply to the Submitter and its Affiliates except those Affiliates the Submitter specifically excludes on the relevant Letter of Assurance.

If, after providing a Letter of Assurance to the IEEE, the Submitter becomes aware of additional Patent Claim(s) not already covered by an existing Letter of Assurance that are owned, controlled, or licensable by the Submitter that may be or become Essential Patent Claim(s) for the same IEEE Standard but are not the subject of an existing Letter of Assurance, then such Submitter shall submit a Letter of Assurance stating its position regarding enforcement or licensing of such Patent Claims. For the purposes of this commitment, the Submitter is deemed to be aware if any of the following individuals who are from, employed by, or otherwise represent the Submitter have personal knowledge of additional potential Essential Patent Claims, owned or controlled by the Submitter, related to a [Proposed] IEEE Standard and not already the subject of a previously submitted Letter of Assurance: (a) past or present participants in the development of the [Proposed] IEEE Standard, or (b) the individual executing the previously submitted Letter of Assurance.
IEEE-SA Standards Board Bylaws on Patents in Standards

The assurance is irrevocable once submitted and accepted and shall apply, at a minimum, from the date of the standard's approval to the date of the standard's withdrawal.

The IEEE is not responsible for identifying Essential Patent Claims for which a license may be required, for conducting inquiries into the legal validity or scope of those Patent Claims, or for determining whether any licensing terms or conditions are reasonable or non-discriminatory.

Nothing in this policy shall be interpreted as giving rise to a duty to conduct a patent search. No license is implied by the submission of a Letter of Assurance.

In order for IEEE’s patent policy to function efficiently, individuals participating in the standards development process: (a) shall inform the IEEE (or cause the IEEE to be informed) of the holder of any potential Essential Patent Claims of which they are personally aware and that are not already the subject of an existing Letter of Assurance, owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents; and (b) should inform the IEEE (or cause the IEEE to be informed) of any other holders of such potential Essential Patent Claims that are not already the subject of an existing Letter of Assurance.
Other Guidelines for IEEE WG Meetings

- All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.
- Don’t discuss the interpretation, validity, or essentiality of patents/patent claims.
- Don’t discuss specific license rates, terms, or conditions.
  - Relative costs, including licensing costs of essential patent claims, of different technical approaches may be discussed in standards development meetings.
    - Technical considerations remain primary focus
- Don’t discuss fixing product prices, allocation of customers, or dividing sales markets.
- Don’t discuss the status or substance of ongoing or threatened litigation.
- Don’t be silent if inappropriate topics are discussed… do formally object.

If you have questions, contact the IEEE-SA Standards Board Patent Committee Administrator at patcom@ieee.org or visit http://standards.ieee.org/board/pat/index.html

See IEEE-SA Standards Board Operations Manual, clause 5.3.10 and “Promoting Competition and Innovation: What You Need to Know about the IEEE Standards Association’s Antitrust and Competition Policy” for more details.

This slide set is available at http://standards.ieee.org/board/pat/pat-slideset.ppt
IEEE 1547 Series Web Site

1547 series public Web site
http://grouper.ieee.org/groups/scc21/dr_shared/

- Archives
  - Meeting information
  - Registration Information – First time attendees, please return a completed registration form to David Glickson and Tom Basso, the SCC21 secretary, at least two weeks before the meeting. Ongoing attendees, please RSVP and provide any changes to your contact information.
- Agenda – for most recent meeting
- Minutes
1547 Series Web Site Work Group Areas

- P1547.X Work Group Areas (password protected)
  - Contacts – WG member information (standards development use only).
  - Special Topics – background information for the Work Group
- StdDrafts – Drafts under development
- Listserv – listserv archived e-mails
ListServ is for IEEE standards development use only. IEEE code of ethics identified in information file sent to each subscriber.

To: stds-p1547-x@ieee.listserv.org
From: you@yourISP.com
Only subscribers can send to the list. Exchanges between individuals and among your self-established small groups are encouraged.

ListServ e-mails are immediately sent to all subscribers.
   Reply to all – sent to all
   Reply to sender – only sent to sender
E-mail to listserv is auto-archived at
   P1547.x Work Group Area (password protected)
   at ListServ
Archived e-mails can be viewed under
   Subject Thread or Date Thread.
IEEE Standards Classification

**Standard**: documents with mandatory requirements *(shall)*

**Recommended Practice**: documents in which procedures and positions preferred by the IEEE are presented *(should)*

**Guide**: documents in which alternative approaches to good practice are suggested but no clear-cut recommendations are made *(may)*
IEEE SCC21 1547 Series of Interconnection Standards


- P1547.6 Draft Recommended Practice for Interconnecting Distributed Resources with Electric Power Systems
- P1547.3 Draft Guide for Monitoring, Information Exchange and Control of DR Interconnected with EPS
- P1547.2 Draft Application Guide for IEEE 1547 Standard for Interconnecting Distributed Resources with Electric Power Systems
- P1547.5 Draft Technical Guidelines for Interconnection of Electric Power Sources Greater Than 10 MVA to the Power Transmission Grid
- P1547.4 Draft Guide for Design, Operation, and Integration of Distributed Resource Island Systems with Electric Power Systems
- Guide for Impacts
- DP Specifications & Performance (includes modeling)

(publication year in parentheses; P1547.X are under development; other topics are under consideration by SCC21 work group members)
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<thead>
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| IEEE Std 1547™ (2003) Standard for Interconnecting Distributed Resources with Electric Power Systems | • This Standard establishes criteria and requirements for interconnection of distributed resources (DR) with electric power systems (EPS).  
• This document provides a uniform standard for interconnection of distributed resources with electric power systems. It provides requirements relevant to the performance, operation, testing, safety considerations, and maintenance of the interconnection.                                                                                               |
| IEEE Std 1547.1 (2005) Standard for Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems | • This Standard specifies the type, production, and commissioning tests that shall be performed to demonstrate that interconnection functions and equipment of a distributed resource (DR) conform to IEEE Std 1547.  
• Interconnection equipment that connects distributed resources (DR) to an electric power system (EPS) must meet the requirements specified in IEEE Standard 1547. Standardized test procedures are necessary to establish and verify compliance with those requirements. These test procedures must provide both repeatable results, independent of test location, and flexibility to accommodate a variety of DR technologies. |
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<th>Current SCC21 Interconnection Projects</th>
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| P1547.2 ™ Draft Application Guide for IEEE Standard 1547 for Interconnecting Distributed Resources with Electric Power Systems | • This Guide provides technical background and application details to support the understanding of IEEE 1547 Standard for Interconnecting Distributed Resources with Electric Power Systems.  
• This document facilitates the use of IEEE 1547 by characterizing the various forms of distributed resource technologies and the associated interconnection issues. Additionally, the background and rationale of the technical requirements are discussed in terms of the operation of the distributed resource interconnection with the electric power system. Presented in the document are technical descriptions and schematics, applications guidance and interconnection examples to enhance the use of IEEE 1547. |
| P1547.3 ™ Draft Guide for Monitoring, Information Exchange and Control of Distributed Resources Interconnected with Electric Power Systems | • This document provides guidelines for monitoring, information exchange, and control for distributed resources (DR) interconnected with electric power systems (EPS).  
• This document facilitates the interoperability of one or more distributed resources interconnected with electric power systems. It describes functionality, parameters and methodologies for monitoring, information exchange and control for the interconnected distributed resources with, or associated with, electric power systems. Distributed resources include systems in the areas of fuel cells, photovoltaics, wind turbines, microturbines, other distributed generators, and, distributed energy storage systems. |
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| P1547.4™ Draft Guide for Design, Operation, and Integration of Distributed Resource Island Systems with Electric Power Systems | • This document provides alternative approaches and good practices for the design, operation, and integration of distributed resource (DR) island systems with electric power systems (EPS). This includes the ability to separate from and reconnect to part of the area EPS while providing power to the islanded local EPSs. This guide includes the distributed resources, interconnection systems, and participating electric power systems.  
• This guide is intended to be used by EPS designers, operators, system integrators, and equipment manufacturers. The document is intended to provide an introduction, overview and address engineering concerns of DR island systems. It is relevant to the design, operation, and integration of DR island systems. Implementation of this guide will expand the benefits of using DR by targeting improved electric power system reliability and build upon the interconnection requirements of IEEE 1547. |
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| P1547.5 Draft Technical Guidelines for Interconnection of Electric Power Sources Greater Than 10 MVA to the Power Transmission Grid | • This document provides guidelines regarding the technical requirements, including design, construction, commissioning acceptance testing and maintenance /performance requirements, for interconnecting dispatchable electric power sources with a capacity of more than 10 MVA to a bulk power transmission grid.  
  • The purpose of this project is to provide technical information and guidance to all parties involved in the interconnection of dispatchable electric power sources to a transmission grid about the various considerations needed to be evaluated for establishing acceptable parameters such that the interconnection is technically correct.                                                                                                                                       |
| P1547.6 Draft Recommended Practice for Interconnecting Distributed Resources With Electric Power Systems Distribution Secondary Networks | • This standard builds upon IEEE Standard 1547 for the interconnection of distributed resources (DR) to distribution secondary network systems. This standard establishes recommended criteria, requirements and tests, and provides guidance for interconnection of distribution secondary network system types of area electric power systems (Area EPS) with distributed resources (DR) providing electric power generation in local electric power systems (Local EPS).  
  • This standard focuses on the technical issues associated with the interconnection of Area EPS distribution secondary networks with a Local EPS having DR generation. The standard provides recommendations relevant to the performance, operation, testing, safety considerations, and maintenance of the interconnection. In this standard consideration is given to the needs of the Local EPS to be able to provide enhanced service to the DR owner loads as well as to other loads served by the network. Equally, the standard addresses the technical concerns and issues of the Area EPS. Further, this standard identifies communication and control recommendations and provides guidance on considerations that will have to be addressed for such DR interconnections. |

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Next Actions

- Summary list of action items (due date and volunteer lead)
- Timeline for P1547.x development
- Next meeting (tentative dates and location)
- Other actions: