

P1547.6 Meeting Minutes
IEEE Std P1547.6 Draft Recommended Practice for Interconnecting Distributed Resources with Electric Power Systems Distribution Secondary Networks
Feb. 4–6, 2008, Georgia Power Company Conference Center, Atlanta, Georgia

Feb. 4, 2008

The meeting participants (**Attachment 1 – Attendees**) were welcomed by Joe Koepfinger, chairman, and John Bzura, vice chairman. The working group (WG) officers thanked Travis Johnson (Georgia Power Co.) for Georgia Power hosting the meeting facilities. Travis Johnson provided a safety review. Participants then introduced themselves and identified their affiliations.

The P1547.6 agenda (**Attachment 2 – Agenda**) was discussed. The IEEE standards development meeting introductory slides, which included the P1547.6 scope and purpose and the IEEE Standards Board bylaws on patents and inappropriate topics, were presented. An opportunity was provided for WG members to identify or disclose patents that they believe may be essential for the use of the standard. None was identified by the participants. The WG then approved the minutes of the previous meeting.

John Bzura gave an overview of P1547.6 Draft 1.1-R1, which includes his proposed revisions for discussion and review by the WG. [WG members see P1547.6 Draft 1.1-R1 dated Jan 2008 (i) changes tracked ([MS Word 2.6 MB](#)) or (ii) changes accepted ([MS Word 2.1 MB](#)) in the WG password-protected StdDrafts area.] He focused on Clause 6, Annex A, Clause 7, and Clause 8.

James M. Bing, of New Energy Options, gave a presentation and requested that P1547.6 WG members provide him feedback. The presentation is “Network Protector Enabled Generation (NPEG) Performance Specification.” [WG members see Meeting Minutes February 2008 Annex A – Bing Presentation ([PDF 397 KB](#)) in the WG password-protected Special Topics area.]

Larry Gelbien gave a presentation, “Network Concerns,” that covered Clause 6. [WG members see Meeting Minutes February 2008 Annex B – Gelbien Presentation ([MS Word 55 KB](#)) in the WG password-protected Special Topics area.]

The WG also previewed the comments e-mailed by Dave Smith. [WG members see Meeting Minutes February 2008 Annex C – Smith Notes ([MS Word 2.7 MB](#)) in the WG password-protected Special Topics area.]

After lunch, the WG broke into two breakout groups to review and establish proposed revisions. The groups were:

- Group 1. Clauses 5, 7, and 8 and the Smith notes, led by John Bzura
- Group 2. Clause 6, led by Moh Vaziri.

The WG reconvened in the late afternoon to close the day, and each breakout group summarized its progress.

Feb. 5, 2008

Tuesday started with a safety review by Travis Johnson to the full WG. The WG then divided into the two breakout groups. Group 1 (clauses 5, 7, and 8 and the Smith notes) was led by John Bzura. Group 2 was led by Joe Koepfinger so Moh Vaziri could have input to the discussion based on facilitation under Roberts Rules of Order. The Group 2 meeting concentrated on the text John Bzura moved to P1547.6 Draft 1.1-R1 Annex A, where that text was designated Clause 8 numbering.

At the end of the second day, the entire WG assembled for a summary review of the day's activities and decided the next day would continue with the breakouts.

Feb. 6, 2008

Wednesday started with a safety review by Travis Johnson to the full WG. The WG then divided into breakout groups for most of the remainder of the meeting. In the afternoon, the entire WG met, and a summary review was provided by each breakout leader.

Group 2, led by Moh Vaziri and Joe Koepfinger, provided the following "Concerns Criteria" that they used to establish their proposed draft text focusing on spot networks and general concerns.

Group 2 Breakout "Concerns Criteria."

All discussion is about spot networks and not area networks.

1. A network protector should not separate two rotating systems.
2. Low level time delay is an acceptable option.
3. Network protectors (shall not) cycle.
4. Load profile of the building is needed to determine the allowable amount of DR as a percentage of the total building load.
5. Primary faults on the area EPS must be detected by the DG and the DG must trip.
6. Preferred method of interconnection (drawing) is needed. This should include both, a) breaker failure scheme and b) backup protection.
7. Commissioning the DR or aggregate DR.
8. Define operating and maintenance instructions, including lockout and tag out.
9. Impact of DR short circuit contribution to other customers. This includes a consideration for the level of FR (PPE) required.
10. What is the acceptable number of cycling operations of NPs? (Chris).

Group 2 decided that it was going to separate the discussion of the material in the breakout session to limit it to spot networks. After this work was completed, consideration would be given to addressing the issues with grid networks. The major issues identified in the Group 2 discussions were:

- Network protector pumping
- Impact upon management of utility assets by DR (Most network operators have a program of removing/replacing network transformers if the transformer is not continuously carrying sufficient load to keep its protector closed a majority of the time)

- For secondary grid networks, considerable concern was raised regarding the possibility of the dynamics of the DR in the redistribution of the loading of the grid cables without a means of monitoring these flows.

Closing Remarks

The next P1547.6 WG meeting is tentatively planned for the first full week of August 2008 in a location to be determined and co-located with P1547.4 DR island systems.

[Secretary's post-meeting note: After the meeting, Portland General Electric volunteered meeting facilities in Portland OR.]

The resulting draft documents from each of the two breakout groups (i.e., individual breakout group-proposed revisions of P1547.6 Draft 1.1-R1) are on the P1547.6 WG member password-protected area. See Special Topics – Meeting Minutes Annexes February 2008 (Atlanta, Georgia):

- Annex D – Breakout Group 1 (Led by Bzura) Proposed Draft ([MS Word 2.2 MB](#))
- Annex E1 – Breakout Group 2 (Led by Vaziri/Koepfinger) Proposed Draft ([MS Word 641 KB](#))
- Annex E2 – Breakout Group 2 (Led by Vaziri/Koepfinger) Proposed Draft with Notes ([MS Word 2.2 MB](#)).

The breakout groups' proposed draft text needs to be combined to establish one proposed draft to be designated "P1547.6 Draft 2" for full P1547.6 WG consideration. Group 1's proposed changes, including its proposals with respect to Smith's notes, were entered into one draft document (Minutes Annex D). In Group 2, as decisions were made, Tim Wall entered the changes into the P1547.6 draft document (Minutes Annex E1). When there was discussion about an item that did not get Group 2 consensus, this was noted in another file (Minutes Annex E2). Our thanks to Tim Wall for recording the Group 2 Minutes Annex E1 and E2 files.

In summary, at the February meeting, the two breakout groups individually met, held discussions, and produced the above referenced material (Minutes Annex D, Minutes Annex E1, and Minutes Annex E2). It is still just text, to be discussed further and assembled as Draft 2 for subsequent P1547.6 consideration.

Respectfully submitted,
Tom Basso, P1547.6 secretary, and Mike Coddington

ATTACHMENT 1 – Attendees P1547.6 WG Meeting, Feb. 4–6, 2008, Atlanta, Georgia

David	Bassett	PPL Electric Utilities
Tom	Basso	National Renewable Energy Laboratory
David	Beach	Portland General Electric
James	Bing	New Energy Options
John	Bzura	National Grid
Michael	Coddington	National Renewable Energy Laboratory
Paul	Collins	Pepco
James	Daley	Asco Power Technologies
Andy	Garsils	Long Island Power Authority
Lawrence	Gelbien	NSTAR
Tom	Gordon	Siemens Power Generation
Keith	Harley	Georgia Power Company
Christopher	Hart	United Illuminating
Peter	Hoffman	Progress Energy
Gerald	Johnson	Basler Electric
Travis	Johnson	Georgia Power Company
Joe	Koepfinger	Koepfinger Consulting
Scott	Malinowski	UTC Power
Robert	Pellegrini	United Illuminating
Janos	Rajda	SatCon Power Systems
Charles	Rogers	Consumers Energy
Dan	Sammon	ConEdison
Sylvester	Toe	Georgia Power Company
Mohammad	Vaziri	Pacific Gas and Electric
Tim	Wall	Alabama Power Company

ATTACHMENT 2 – Agenda

Draft Agenda – Updated Jan. 11, 2008
IEEE 1547 Series Meeting: Feb. 4–8, 2008 (Atlanta, Georgia)
(Thomas_Basso@nrel.gov 11/23/07)

Each P1547.X Chair should provide more detailed agenda and meeting materials.
P1547.X meetings: 8am Check-in/Registration; 10am refreshments; Noon - lunch on your own;
3pm refreshments.

Feb 4 Monday

8:30 am – 5pm **P1547.6** (DR on secondary networks)

Feb 5 Tuesday

8:00 am – 5pm **P1547.6** (DR on secondary networks)

Feb 6 Wednesday

8:00 am – 3pm **P1547.6** (DR on secondary networks)

Feb 7 Thursday

8:00 am - 5pm **P1547.4** (DR Islanding Systems)

Feb 8 Friday

8:00 am - 3pm **P1547.4** (DR Islanding Systems)

P1547.6 Recommended Practice for Interconnecting Distributed Resources With Electric Power Systems Distribution Secondary Networks –

Joe Koepfinger, Chair; John Bzura, Vice Chair; Tom Basso, Secretary.

Feb 4, 8:30am – 5pm; Feb 5, 8:00am – 5pm; and Feb 6, 8am – 3pm.

Monday	8:30 AM to 5:30 PM	Meeting of P1547.6 as a whole (one room)
Tuesday	8:00 AM to 12:00 PM	breakout meetings (two rooms)
Tuesday	1:00 PM to 3:00 PM	breakout meetings – (two rooms)
Tuesday	3:15 PM to 5:00 PM	Meeting of P1547.6 as a whole (one room)
Wednesday	8:00 AM to 12:00 PM	breakout meetings – (two rooms)
Wednesday	1:00 PM to 3:00 PM	Wrap up meeting of P1547.6 as (one room)
