

IEEE P1564 Voltage Sag Indices Task Force Meeting



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IEEE P1564 Task Force Meeting

Agenda

- Task Force Overview
- Draft Status
- Review Document



IEEE P1564 Task Force Overview

Status

- Title
 - IEEE Guide for Voltage Sag Indices
- Scope
 - This guide identifies appropriate voltage sag indices and characteristics as well as the methods for calculating them. Methods are provided for quantifying the severity of individual events (single-event characteristics), for quantifying the performance at a specific location (single-site indices), and for quantifying the performance of the whole system (system indices). Multiple methods are presented for each. The methods are appropriate for use in transmission, distribution, and utilization electric power systems.
- Purpose
 - This document identifies and defines different characteristics and indices. It does not recommend the use of a specific set of indices, but instead recommends the method for calculating specific indices when such an index is used. The large variation in customers sensitive to voltage sags and power providers supplying them makes it impossible to prescribe a specific set of indices. Instead this document aims at assisting in the choice of index and ensuring reproducibility of the results after a certain index has been chosen. The user of this document may decide to calculate the value for just one index or for a number of different indices, depending on the application.
- PAR Status
 - In February 2007 the IEEE-SA Standards Board approved the project until December 31, 2011.



Project Status

- Task force chair completed IEEE P1564 D14 in July 2011
 - IEEE P1564 D13 reviewed by three task force members from January to March 2011
 - Ballot pool opened in January 2011.
 - Charts converted to grayscale for D14
 - Bibliography brought into conformance for D14 and relinked to clauses in main document.
 - Inconsistencies in reference to IEEE 1366 and to 1159 found during review of D13 and addressed in D14



Major Change in IEEE P1564 D14

- IEEE Definitions of a Sustained Interruption
 - IEEE Std 1159-2005 (Maintained by the IEEE PQ Subcommittee)
 - A type of long-duration root-mean-square (rms) voltage variation where the complete loss of voltage (<0.1 pu) on one of more phase conductors is for a time greater than 1 min
 - IEEE Std 1366 (Maintained by the IEEE Distribution Subcommittee)
 - Any interruption not classified as a part of a momentary event. That is, any interruption that lasts more than 5 minutes
- IEEE P1564 D13
 - Used five minutes as the upper limit of voltage sag indices and referenced IEEE
 Std 1366 for its justification
- IEEE P1564 D14
 - Uses one minute as the upper limit of the duration of a voltage sag and references
 IEEE Std 1159 as its justification



Suggested Discussion Topic for Next Revision of IEEE 1159

• IEEE Std 1159

Category	Duration	Voltage Magnitude
Short Duration Variations		
Instantaneous		
Sag	0.5 to 30 cycles	0.1 to 0.9 pu
Swell	0.5 to 30 cycles	1.1 to 1.8 pu
Momentary		
Interruption	0.5 cycles to 3 s	< 0.1 pu
Sag	30 cycles to 3 s	0.1 to 0.9 pu
Swell	30 cycles to 3 s	1.1 to 1.8 pu
Temporary		
Interruption	3 s to 1 min	< 0.1 pu
Sag	3 s to 1 min	0.1 to 0.9 pu
Swell	3 s to 1 min	1.1 to 1.8 pu
Long Duration Variations		
Sustained Interruption	> 1 min	0.0 pu
Undervoltage	> 1 min	0.8 to 0.9 pu
Overvoltage	> 1 min	1.1 to 1.2 pu

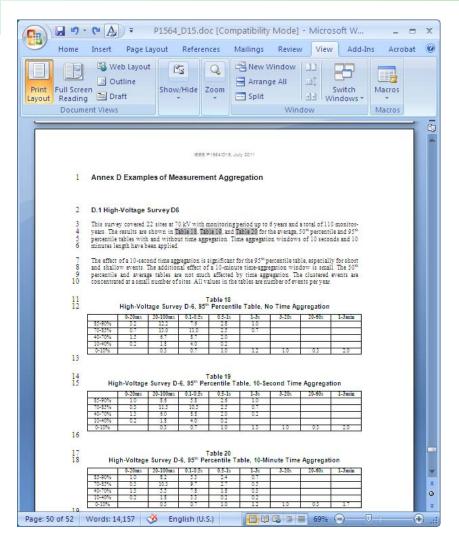
• IEEE Std 1366

Momentary Interruption (MAIFI):<5 min

Sustained Interruption (SAIFI, SAIDI): >5 min

Should IEEE 1159 be aligned better with IEEE 1366?

Final Editing Task



- The final review showed that the data in Annex D5 has no reference.
- An inquiry to Math Bollen has been submitted.



IEEE P1564 Action Items

Schedule

- IEEE P1564 D14 will be submitted for Mandatory Editorial Coordination with IEEE Standards during the week of August 2
- After IEEE Standards completed edit, the task force chair will submit the resulting IEEE P1564 D15 for ballot.
- Extend the ballot invitation to current task force members as a minimum.
- Begin the ballot and ask for 1-yr extension for PAR.
- The task force chair will ask IEEE Standards if we need to complete any administrative actions with the PAR since it is set to expire on December 31, 2011.