# 2017 joint technical committee meeting Minutes of Power Qaulity Subcommittee – Harmonics WG (519.1)

## Meeting Location and Time

New Orleans, Louisiana  
Monday, 2017 January 9, 15:00 to 16:00  
Marriott New Orleans, Galerie 2

## MEEting Minutes

### Attendees

1. Jerry Batson 28. Jeff Wischkaemper
2. Rich Bingham 29. Stephan Wood
3. Jeff Brogdon 30. Nick Zagrodnik
4. John Buffington 31. Francisc Zavoda
5. Gary Chang 32. Dave Zech
6. Larry Conrad
7. David Gilmer
8. Joseph Grappe
9. Mark Halpin
10. Bill Howe
11. Trey Howse
12. Steven Johnston
13. Kevin Kettredge
14. Addis Kifle
15. Theo Laughner
16. Kang Lee
17. Reginaldo Maniego
18. Dave Mueller
19. Tom Nelson
20. Gary Nuzzi
21. Ron Rumrill
22. Daniel Sabin
23. Ken Sedziol
24. Harish Sharma
25. Wayne Stec
26. Steve Tatum
27. Tim Unruh

The meeting was called to order by Mark Halpin at 15:00. Minutes were recorded by Nick Zagrodnik.

### Old Business

### New Business

Active PAR for 519.1 document

Discussed the need for volunteers to work on document sections

* Scope
* Point of Common coupling
* Measurement
* Statistical Limits
  + 99th or 95th percentile?
  + Have examples of how statistics are applied with example data
* Interharmonics

Purpose of 519.1 PAR is to support what’s in 519-2014

Rich Bingham e-mailed last draft 519.1 (D12) to Nick Zagrodnik. Mark Halpin e-mailed 519.1 panel presentations to Nick Zagrodnik. 519.1 (D12) and 519.1 panel presentations to be sent out to 519.1 WG members along with meeting minutes.

Current 519.1 PAR should be written with 519 – 2014 in mind (current). However, it may mention topics not in 519-2014. Consensus was that the topics of 2nd order harmonic limit relaxation, monitoring above the 50th order harmonic and misapplication of limits on equipment need to be investigated and discussed further before making a decision to include in the next revision of 519.

Further discussed the need to adjust even order harmonics. Ken Sedziol and David Zech volunteered to write section on this topic and provide examples of PQ data on arc furnace load as it relates to this topic.

Further discussed how 519 has been inappropriately used by some in industry to establish limits on individual equipment. Dave Mueller volunteered to write a section on this topic to be reviewed by Ken Sedziol.

Further discussed the measurement aspects and need for monitoring harmonics above the 50th order. Rich Bingham volunteered to write a section on measuring harmonics above the 50th order, but requested assistance in helping to determine the need for this measurement.

519.1 Active PAR volunteer contribution to be done by mid-summer 2017.

Meeting adjourned at 15:51

### Summary of Volunteers for Future Activities:

519.1 Sections to be written by May 15, reviewed by June 1 and resubmitted by June 15th

1. Scope – Mark Halpin (write), Rich Bingham (review)
2. Point of common coupling – Mark Halpin (write), Rich Bingham (review)
3. Measurement – Rich Bingham (write), Dave Mueller (review)
4. Statistical Limits – Theo Laughner (write), Dave Zech (provide data and review)
5. 2nd order harmonic limit relaxation – Ken Sedziol and Dave Zech (write)
6. Misapplication of harmonic limits to equipment – Dave Mueller (write), Ken Sedziol (review)
7. Interharmonics – Harish Sharma (write), Mark Halpin (review)