

**IEEE PES Substations Committee  
Gas-Insulated Substations Committee – K0  
Chair – George Becker, EPRI  
Vice Chair – Pat Fitzgerald, CGIT Systems  
Secretary – Scott Scharf, TVA**

**Meeting Minutes  
January 11, 2016 (8 – 10am)  
JTCM - Memphis, TN**

***Attendees***

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Jeffrey Britton	Anthony Ho	Behzad Sharifi
Eldridge Byron	Hermann Koch	Devki Sharma
Ravi Dhara	Jorge Marquez-Sanchez	Michael Skidmore
Steve Emling	Dave Mitchell	Dave Solhtalab
Arnaud Ficheux	William Munn	Xi Zhu
Pat Fitzgerald	Michael Novev	
David Giegel	Sean Parsi	
Peter Grossmann	Scott Scharf	

***Introduction***

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- Pat Fitzgerald welcomed everyone to Memphis, explained he would run the K0 meeting in absence of George Becker
- Introduction of attendees

***Business***

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- Approval of meeting minutes from Minneapolis. Dave Mitchell made a motion, Hermann Koch second.
- Review of WG slides, Patent Slides
  - K1 – Standard for High Voltage GIS Rated Above 52kV (C37.122)  
*Chair – John Brunke*
    - Work expected to begin this year in 2016
    - John wasn't present, but will be in Atlanta in May 2016 to start revision.
  - K2 – GIS Tutorials and Panel Sessions  
*Chair – Hermann Koch*
    - The next tutorial will be at the T&D Expo in Dallas, TX - May 2016.
    - Complete revision of the tutorial is under way. Work on this will be completed during the JTCM at Tuesday's meeting.

- K3 – Guide for Application of GIS 1kV to 52kV (C37.122.2)  
*Chair – George Becker*
  - No plans for work on this document any time soon, approved by Standards Board in 2011.
  
- K4 – Guide for SF6 Gas Handling for High Voltage Equipment (C37.122.3)  
*Chair – Lukas Rothlisberger*
  - No plans for work on this document any time soon, approved by Standards Board in 2011.
  
- K5 – Guide for Application of GIL rated above 72.5kV (C37.122.4)  
*Chair – Pat Fitzgerald*
  - The 1-year PAR extension is set to expire in December 2016.
  - Document is complete and has been sent to REVCOM for publishing.
  
- K6 – Users Group Meetings  
*Chair – Dave Mitchell*
  - Plans are still in place for holding a “User’s Forum” at the 2016 Substations Meeting in Atlanta.
  - Dave Mitchell to propose a preliminary agenda and scope for upcoming meeting in Atlanta.
  
- K7 – Standard for Bushings for High-Voltage Circuit Breakers and GIS (C37.017)  
*Chair – Devki Sharma*
  - No plans for work on this document any time soon.
  
- K8 – Guide for Moisture Measurement & Control in SF6 GIS (C37.122.5)  
*Chair – Dave Giegel*
  - No plans for work on this document any time soon.
  
- K9 – Recommended Practice for GIS Interface (C37.122.6)  
*Chair – Arnaud Ficheux*
  - No plans for work on this document any time soon.
  
- K10 – GIS Handbook  
*Chair – Hermann Koch*
  - Next revision work to GIS Handbook set to begin after the T&D Expo in Dallas, TX at 2016 Substations Meeting in Atlanta.
  
- K11 – Guide for GIS (C37.122.1)  
*Chair – Dave Solhtalab*
  - No plans for work on this document any time soon.

- K12 – Guide for Specification of High Voltage GIS above 52kV (C37.123)  
*Chair - George Becker*
  - The balloting is closed. PAR extension is set to expire in December 2016.
  - Document has been sent to REVCOM.
  
- \*\*K13 – Proposed Standard for GIS 1kV – 52kV (C37.122.xx)  
*Chair – Allan Jacobs*
  - Eldridge Byron is Chair for Switchgear Committee WG and has provided meeting minutes from the Switchgear Committee meetings.
  
- \*\*K14 – Proposed Guide for Condition Assessment of GIS (C37.122.xx)  
*Chair – Pat Fitzgerald*
  - In beginning stages.
  - Pat Fitzgerald to hold session on Wednesday to get things kicked off.
  
- \*\*K15 – Proposed Recommended Practice for Field Testing of GIS (C37.122.xx)  
*Chair – Dave Giegel*
  - Dave mentioned making it a guide.
  - Lot of progress has been made to work towards defined scope and purpose.
  
- \*\*K16 – Proposed Advanced Current & Voltage Sensors in GIS  
*Chair – Peter Grossman*
  - Joint session today with I11 working group, presentation will be given.
  
- \*\*K17 – Proposed Physical Security Advantages of GIS Equipment  
*Chair – Peter Grossman*
  - Peter indicated needed to make contact with E0 group to discuss moving forward.
  
- \*\*K18 – Proposed Guide or Standard for Mobile Gas-Insulated Substations  
*Chair – Scott Scharf*
  - Continual work towards coming up with a defined scope and purpose.

### ***Future Meetings***

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IEEE T&D Conference - Dallas, TX (May 2-5, 2016)

PES Substations Committee Meeting - Atlanta, GA (May 22-26, 2016)

Liaison with Switchgear Committee Meeting - Pittsburg, PA (October 2016)

# Adjournment

Meeting Time – Approx. 17 minutes

## Attachment A

Key for Attachment A:

IEEE Status	
	Approved
	Ongoing
	Comment Resolution
	New Work

Document	Title	Working Group	Working Group Chair/Vice Chair/Sec'y	PAR Status	IEEE Status	Activity
C37.122	IEEE Standard for High Voltage Gas-Insulated Substations Rated Above 52kV	K1	CH-John Brunke VC-Ryan Stone	Completed	Approved 2010 Expires 2020	The standard revision is complete. Begin work on revision for 2020.
Tutorial	GIS/GL/SF <sub>6</sub> Tutorials and Panel Sessions	K2	CH-Hermann Koch	No PAR	Ongoing	A GIS/GL tutorial was done at the IEEE T&D Expo in April 2014 and it was well attended, the tutorial was sold out. Major revisions in progress for IEEE T&D Expo in April 2016 in Dallas.
C37.122.2	IEEE Guide for the Application of Gas-Insulated Substations 1kV to 52kV	K3	CH-George Becker VC-Peter Blohm (ret) Sec-Pat Fitzgerald	Completed	Approved 2011 Expires 2021	The new guide is complete.
C37.122.3	IEEE Guide for Sulphur Hexafluoride (SF <sub>6</sub> ) Gas Handling for High-Voltage (over 1000 Vac) Equipment	K4	CH-Lukas Rothlisberger VC-Dave Giegel	Completed	Approved 2011 Expires 2021	The guide revision is complete. Proposed Chair change to Lukas Rothlisberger and Vice Chair to Dave Giegel. Examine changes in IEC 62271-4.
C37.122.4	Guide for the Application for Gas-Insulated Transmission Lines (GIL), Rated 72.5kV and Above	K5	CH-Patrick Fitzgerald	Open - PAR approved to End 2015	Balloting	Recirculation #3 - Submitted to REVCOM final. March 2, 2016 RevCom meeting.
GIS/GL Users Group	GIS/GL Users Group Meetings	K6	CH-Dave Mitchell VC-Venkatesh Minisandram	No PAR	Ongoing	The GIS Users' Group meeting occurred in Portland, OR and was well attended. Users group meeting occurred Subcom 2015 in Minneapolis well attended. Tentative plans for Subcom 2016 in Atlanta.
C37.017	IEEE Standard for Bushings for High-Voltage [over 1000V (ac)] Circuit Breakers and Gas-Insulated Switchgear	K7	CH-Devki Sharma	Completed	Approved 2010 Expires 2020	The standard is complete.
C37.122.5	Guide for Moisture Measurement and Control in SF <sub>6</sub> Gas-Insulated Equipment	K8	CH-Dave Giegel VC-Brian Withers	Completed	Approved December 2013 Expires 2023	The standard is complete.
C37.122.6	Recommended Practice for the Interface of New Gas-Insulated Equipment in Existing Gas-Insulated Substations	K9	CH-Arnaud Ficheux VC-Peter Grossmann Sec-Pat Fitzgerald	Completed	Approved 2013 Expires 2023	The standard is complete.
GIS/GL Handbook	GIS Handbook 2nd Ed.	K10	CH-Hermann Koch	No PAR	Published	K10 the GIS/GL Handbook Published during August 2014. Planning and work in progress on 2nd Edition.
C37.122.1	IEEE Guide for Gas-Insulated Substations	K11	CH-Dave Solhtalab VC-Godwin Dhuru Sec-Pat Fitzgerald	Open - PAR approved to End 2014	Approved 2014 Expires 2024	The guide is completed
C37.123	Guide for Specifications for High Voltage Gas-Insulated Substations Rated Above 52 kV	K12	CH-George Becker VC-Devki Sharma Sec-Pat Fitzgerald	PAR extension to December 2016	Balloting	Recirculation #3 - Submitted to REVCOM final. March 2, 2016 RevCom meeting. PAR extension to December 2016 approved.
C37.122.XX	Standard for Metal Enclosed Switchgear Rated 1 kV to 52 kV Incorporating Gas Insulating Systems	K13	CH-Eldridge Byron VC-George Becker	PAR submitted by SWG Committee	Joint Standard-Substations and Switchgear	Switchgear Committee WG has developed scope and draft document of C37.20.9. The C37.20.9 draft sufficiently addresses GIS 1kV to 52kV in conjunction with C37.122.2, K0 will jointly work with Switchgear Committee to develop C37.20.9.
C37.122.XX	Guide for Condition Assessment of Gas-Insulated Substations	K14	CH-Pat Fitzgerald VC-Dave Solhtalab Sec-Scott Scharf	No PAR	New	Scope development ongoing. <b>Working group chair please add update.</b>
C37.122.XX	Recommended Practice for Field Testing of Gas-Insulated Substations	K15	CH-Dave Giegel VC-Steve Emiling Sec-William Munn	No PAR	New	Scope development ongoing. <b>Working group chair please add update.</b>
Panel Session	Advanced Current and Voltage Sensors in Gas-Insulated Substations	K16	CH-Peter Grossman VC-Arnaud Ficheux	TBD	New	Scope development ongoing. <b>Working group chair please add update.</b>
Panel Session	Physical Security of GIS Equipment	K17	CH-Peter Grossman VC-Dave Solhtalab	TBD	New	Scope development ongoing. <b>Working group chair please add update.</b>
C37.122.XX	Mobile Gas-Insulated Substations	K18	CH-Scott Scharf VC-Dave Mitchell Sec-Dave Solhtalab	No PAR	New	Scope development ongoing. Scope and Purpose have been defined. Key parts of document areas have been assigned. Atlanta meeting will firm up all key parts to submit for PAR and hopefully start on draft document