

PROPOSAL FOR THE CREATION OF A NEW JOINT WORKING GROUP

JWG N° B1/B3.33	Name of Convenor : Pierre MIREBEAU (France) E-mail address: pierre.mirebeau@nexans.com
Technical Issues : 9	Strategic Directions : 1
Title of the Group: Feasibility of a common, dry type interface between GIS and power cables of 52kV and above	
<p>Scope, deliverables and proposed time schedule of the Group :</p> <p>Background :</p> <p>The interface between cable terminations and GIS is ruled by existing IEC standards. The WG is to, using a step-by-step approach, examine and evaluate the technical issues of a common, dry type interface for GIS and Power cables of 52 kV and above.</p> <p>Scope :</p> <p>The scope shall be limited to GIS connections for extruded cable systems for AC of 52 kV and above. The JWG shall:</p> <ul style="list-style-type: none"> • Examine the conditions around the switchgear and the installations issues, including supporting system (also called site issues) • Consider the impact of large cross sections • Consider safety during works • Consider the testing procedures for GIS/ Terminations and cables at factory and on site (overlapping or missing items). • Propose measures to reduce the potential consequences of the GIS insulation failure. • Propose measures to reduce the potential consequences of the cable termination insulation failure • Review the existing standards ruling the qualifications and extension of qualification procedures applicable to GIS terminations. • Define the relevant qualification procedures needed if any. • Identify the limit of suppliers' responsibility to be considered • Estimate the overall technical and practical feasibility of the common design definition and qualification, insulator manufacturers' qualification and the cable manufacturers' qualification and the cost involved. • Once the feasibility window has been determined, survey the market (manufacturers and end users) • Recommend or not to go to a second step with the launching of a new WG B1.XX to go in detail in the design of the standard components (shape, dimensions, properties ...) • Develop recommendations to IEC SC 17C for requirements to be covered by the standard • The full report shall be made available for final review at the B1 and B3 annual meetings in 2013. <p>Deliverables :</p> <ul style="list-style-type: none"> • An intermediate report which shall be issued in 2011 well before the 2012 annual meetings of B1 and B3 respectively. • An Executive Summary article for Electra • A full report to be published as a Technical Brochure • A Tutorial 	

WG members from: B1: FR, DE, IT, NL, CH, UK, USA, SP B3: US, CH, DE, FR	
Time Schedule : start : September 2011	Final report : 2013
Comments from Chairmen of SCs concerned :	
Approval by Technical Committee Chairman : Date :	

Table 1: Technical Issues of the TC project "Network of the Future" (cf. Electra 256 June 2011)

1	Active Distribution Networks resulting in bidirectional flows within distribution level and to the upstream network.
2	The application of advanced metering and resulting massive need for exchange of information.
3	The growth in the application of HVDC and power electronics at all voltage levels and its impact on power quality, system control, and system security, and standardisation.
4	The need for the development and massive installation of energy storage systems, and the impact this can have on the power system development and operation.
5	New concepts for system operation and control to take account of active customer interactions and different generation types.
6	New concepts for protection to respond to the developing grid and different characteristics of generation.
7	New concepts in planning to take into account increasing environmental constraints, and new technology solutions for active and reactive power flow control.
8	New tools for system technical performance assessment, because of new Customer, Generator and Network characteristics.
9	Increase of right of way capacity and use of overhead, underground and subsea infrastructure, and its consequence on the technical performance and reliability of the network.
10	An increasing need for keeping Stakeholders aware of the technical and commercial consequences and keeping them engaged during the development of the network of the future.

Table 2: Strategic directions of the TC (cf. Electra 249 April 2010)

1	The electrical power system of the future
2	Making the best use of the existing system
3	Focus on the environment and sustainability
4	Interactive communication with the public and with political decision maker