


CIGRE Study Committee A1

PROPOSAL FOR THE CREATION OF A NEW WORKING GROUP (1)

WG* N° A1. 44	Name of Convenor : Dave Tarrant (ZA) E-mail address: david.tarrant@eskom.co.za
Technical Issues # (2): XXXX	Strategic Directions #(3): 2
The WG applies to distribution networks (4) : No	
Title of the Group: Guideline on Testing of Turbo and Hydrogenerators	
<p>Scope, deliverables and proposed time schedule of the Group :</p> <p>Background :</p> <p>Study Committee A1 - Electric Machines has published Technical Brochure 386 'Generator Maintenance, Inspection and Test Programs' to provide recommendations regarding maintenance, inspection and testing of turbogenerators in power plants.</p> <p>However, it was felt the necessity of having a new document in order to provide guidance to plant personnel on test procedures and practices to ensure equipment integrity, including hydrogenerators, as well as, an overall guidance regarding safety precautions, industry references, acceptable ranges of results, and, where appropriate, actions should the results be outside acceptable ranges.</p> <p>The current document assumes a working knowledge of general test procedures and practices in both turbo and hydrogenerators.</p> <p>Scope :</p> <p>The proposed Guideline will focus on hydrogen and water cooled turbo-generators > 250 MVA and hydro generators > 30 MVA.</p> <p>Deliverables : Technical Brochure with summary in Electra</p> <p>Main Tasks and Time Schedule: Start: : December 2013 Final report: September 2015</p> <ul style="list-style-type: none"> • TOR approved – December 2013 • Form WG – January 2014 • Draft outline (possible table of contents) of Guide – 30 March 2014 • Preliminary sections distributed to SC-A1 members – 31 July 2014 • Discussion and further schedule – SC Meeting in Paris - August 2014 • Draft of guide - March 2015 • Comments by members and experts – June 2015 • Final version of document – August 2015 • Document approval (Technical Guideline and summary for Electra) – Meeting September 2015 	
Comments from Chairmen of SC concerned :	
<p>Approval by Technical Committee Chairman :</p> <p>Date : 20/12/2013</p> 	

- (1) Joint Working Group (JWG) - (2) See attached table 1 – (3) See attached table 2
 (4) Delete as appropriate

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	Preparation of material readable for non technical audience