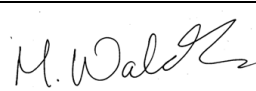


**CIGRE Study Committee B1**

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

<b>WG B1.42</b>	<b>Name of Convenor :</b> Gunnar Evenset (NORWAY) <b>E-mail address:</b> Gunnar.Evenset@Nexans.com	
<b>Technical Issues # (2): 3</b>		<b>Strategic Directions # (3): 1</b>
<b>The WG applies to distribution networks (4): No</b>		
<b>Title of the Group:</b> Testing of Transition Joints Between HVDC Cables with Lapped and Extruded Insulation up to 500 kV		
<b>Scope, deliverables and proposed time schedule of the Group :</b>		
<b>Background :</b>		
<p>Although the extruded HVDC cable technology is developing very fast, lapped HVDC cables will still be on the market for many years. There are projects that consider mass-impregnated cables for the submarine part of the route and extruded cables for the land part of the route. There is a need to define test specifications for how to qualify transition joints between these two technologies.</p>		
<b>Scope :</b>		
<ol style="list-style-type: none"> <li>1. Review relevant test recommendations for testing of HVDC cables</li> <li>2. Review relevant test recommendations for testing of transition joints for AC cables</li> <li>3. Prepare a Technical Brochure on testing of transition joints between lapped and extruded HVDC cables</li> <li>4. Prepare report for Electra</li> <li>5. Prepare a tutorial</li> </ol>		
<b>Deliverables :</b> Technical brochure with summary in Electra and tutorial		
<b>Time Schedule :</b> start : March 2013		<b>Final report :</b> 2014
<b>Comments from Chairmen of SCs concerned :</b>		
<b>Approval by Technical Committee Chairman :</b>		
<b>Date :</b> 28/02/2013		

(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)**

<b>1</b>	Active Distribution Networks resulting in bidirectional flows within distribution level and to the upstream network.
<b>2</b>	The application of advanced metering and resulting massive need for exchange of information.
<b>3</b>	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.
<b>4</b>	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.
<b>5</b>	New concepts for system operation and control to take account of active customer interactions and different generation types.
<b>6</b>	New concepts for protection to respond to the developing grid and different characteristics of generation.
<b>7</b>	New concepts in planning to take into account increasing environmental constraints, and new technology solutions for active and reactive power flow control.
<b>8</b>	New tools for system technical performance assessment, because of new Customer, Generator and Network characteristics.
<b>9</b>	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.
<b>10</b>	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)**

<b>1</b>	The electrical power system of the future
<b>2</b>	Making the best use of the existing system
<b>3</b>	Focus on the environment and sustainability
<b>4</b>	Preparation of material readable for non technical audience