


**PROPOSAL FOR THE CREATION OF A NEW WORKING GROUP<sup>1</sup>**

<b>WG N° B1.71</b>	<b>Name of Convenor:</b> Julio Lopes (BRAZIL) <b>E-mail address:</b> julio.lopes@inovatec-br.com	
<b>Strategic Directions #<sup>2</sup>:</b> 2,3		<b>Technical Issues #<sup>3</sup>:</b> 7
<b>The WG applies to distribution networks<sup>4</sup>:</b> Yes		
<b>Potential Benefit of WG work #<sup>6</sup>:</b> 1,3,5,6		
<b>Title of the Group:</b> Guidelines for Safety Risk Management in Cable Systems		
<b>Scope, deliverables and proposed time schedule of the Group:</b>		
<b>Background:</b>		
<p>Safety issues can be identified and inventoried all along the Life Cycle of land and submarine cable systems. Several TB published by SC B1 have sections dedicated to Safety Issues. They cover some peculiar aspects of Safety such as Construction, Laying and Installation Techniques for Extruded and Self Contained Fluid Filled Cable Systems (TB 194), Third-Party Damage to Underground and Submarine Cables (TB 398), Cable Systems in Multi-Purpose or Shared Structures (TB 403), risk of explosion of XLPE cables accessories (TB 560), Implementation of Long AC HV and EHV Cable Systems (TB 680), Fire Issues for Insulated Cables Installed in Air (TB 720), Work under Induced Voltages and Induced Currents (WG B1.44 in progress), SVL and Bonding Systems (WG B1.50 in progress), Fault Location on Land and Submarine Links (AC &amp; DC) (WG B1.52 in progress) and Maintenance of HV Cable Systems (WG B1.60 in progress). To-date, there is no SC B1 document covering all Safety issues and providing guidelines to assess and mitigate risks.</p>		
<b>Scope:</b>		
<p>The proposed scope of Work for the one-year WG includes:</p> <ol style="list-style-type: none"> <li>1. Inventory existing work in documents published by SC B1 (TB, Electra, Special Reports, etc.)</li> <li>2. Check in other SCs literature if recent work has been published to address these issues (for example TB 734 from SC B3) and what relevance they have for SC B1 Insulated Cables.</li> <li>3. Detect and understand risk for safety in cable systems, including the consequences and potential impact of any potential risk on human safety.</li> <li>4. Identify potential gaps</li> <li>5. Publish a report to recommend further steps.</li> </ol>		
<b>Deliverables:</b>		
<p>SC B1 will decide upon recommendation of the WG which type of documents (TB, Reference paper, ...) will have to be published.</p> <p><input checked="" type="checkbox"/> Technical Brochure and Executive summary in Electra</p> <p><input checked="" type="checkbox"/> Electra report</p> <p><input checked="" type="checkbox"/> Tutorial<sup>5</sup></p>		
<b>Time Schedule:</b> start: April 2019		<b>Final Report:</b> August 2020
<b>Approval by Technical Committee Chairman:</b>		
<b>Date:</b> December 18 <sup>th</sup> , 2018		

Notes: <sup>1</sup> or Joint Working Group (JWG), <sup>2</sup> See attached Table 2, <sup>3</sup>See attached Table 1, <sup>4</sup>Delete as appropriate, <sup>5</sup> Presentation of the work done by the WG, <sup>6</sup> See attached table 3

**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
<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 (ref. 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

**Table 3: Potential benefit of work**

<b>1</b>	Commercial, business or economic benefit for industry or the community can be identified as a direct result of this work
<b>2</b>	Existing or future high interest in the work from a wide range of stakeholders
<b>3</b>	Work is likely to contribute to new or revised industry standards or with other long term interest for the Electric Power Industry
<b>4</b>	State-of-the-art or innovative solutions or new technical direction
<b>5</b>	Guide or survey related to existing techniques. Or an update on past work or previous Technical Brochures
<b>6</b>	Work likely to have a safety or environmental benefit