

PROPOSAL FOR THE CREATION OF A NEW WORKING GROUP¹

WG N° B1.60	Name of Convenor: Bart Mampaey (BELGIUM) E-mail address: Bart.Mampaey@elia.be	
Strategic Directions #²: 1, 2 and 3		Technical Issues #³: 8, 9 and 10
The WG applies to distribution networks⁴: Yes		
Potential Benefit of WG work #⁶: 5		
Title of the Group: Maintenance of HV Cable Systems		
Scope, deliverables and proposed time schedule of the Group: Background: <p>During the 71th CIGRE SC B1 meeting held in Kristiansand (Norway) on August 31 September 2-4, 2015 it was decided to set up a TF on the topic: "To update TB 279 Maintenance for HV cables and Accessories, with the request to advise if it is feasible or not to set up a WG on the subject.</p> <p>The TF concludes that there is a clear need for a WG to update TB 279, actively dealing with the following items :</p> <ul style="list-style-type: none"> • To collect feedback from utilities on the present situation and future needs by circulating a questionnaire to utilities • To make the present TB 279 more complete by including AC submarine cables and DC cables • To describe modern methods for condition based maintenance and to pay attention to new developments • To focus on practical cases of maintenance • To consider the position of Fluid Filled (FF) cables and their increasing need for maintenance • To include aspects of maintenance cost <p>Scope:</p> <ol style="list-style-type: none"> 1. To review: <ul style="list-style-type: none"> • Existing maintenance practice of utilities, by circulating a questionnaire; • Customer needs at present and for the future; • The position of FF cable systems 2. To analyse: <ul style="list-style-type: none"> • Modern methods • New developments • Cost /benefit maintenance cases 3. To propose: <ul style="list-style-type: none"> • Maintenance for HV AC and HV DC cables, for extruded and lapped insulation and for both land and submarine applications, and this for cable systems with voltages above 36kV (Um). • New methods/developments for condition based maintenance • Increased attention to practical maintenance cases • Introduction of costs related maintenance actions <p>The WG will consider HV AC and DC cables, with extruded and with lapped insulation, for</p>		

land and for submarine applications including their accessories

Deliverables:

- Technical Brochure and Executive summary in Electra
- Electra report
- Tutorial⁵

Time Schedule: start: February 2017

Final Report: December 2019

Approval by Technical Committee Chairman:

Date: 09/02/2017

A handwritten signature in black ink, appearing to read "M. Wald".

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

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
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 (ref. 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

Table 3: Potential benefit of work

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