

## CIGRE Study Committee C3

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

WG* N° C3.14	Name of Convenor : Vincent Du Four (BELGIUM) E-mail address: vincent.dufour@elia.be		
Technical Issues # (2): 7		Strategic Directions # (3): 3	
The WG applies to distribution networks (4): Yes			

Title of the Group: : Impact of Environmental liability on transmission and distribution activities

#### Scope, deliverables and proposed time schedule of the Group :

#### Background :

Environmental liability has the objective to prevent and remedy environmental damage (species, habitats, water and land). It holds operators, whose activities have caused environmental damage, financially liable for remedying this damage and holds those whose activities are an imminent threat of environmental damage liable to take preventive actions.

The legal context is evolving and is getting increasingly strict, e.g. with the European Directive (2004/35/CE) or the CERLA in the USA. As grids, both on- & offshore, are expanding, liability of environmental damage is also emerging for electricity transmission & distribution activities. Minor environmental accidents like oil spills, SF6 leakage can occur and require both preventive and remedial measures. When a major incident occurs (transformer fire, leakage of oil filled cables, burn trough of GIS...), even with standard preventive measures in place, the environmental damage can be significant and the negative publicity as well.

Moreover, environmental liability, depending on the legal context, applies not only to the operators whose activities have caused the damage. In the case of property transfer (e.g. for grid development) of potentially contaminated sites it is possible that the current operator/ owner has to investigate and remediate the site, even if there is no causal link with his activities. This kind of liability regime can initiate a long process of soil surveys, risk assessment, remedy studies and finally cleaning-up and monitoring. Such process can generate excessive costs and if multiple sites are involved, e.g.in case of a due diligence, it can have significant impact on the balance of the T&D utility.

#### Scope :

The aim of the WG is to create a reference document to enable T&D utilities to understand the possible impact (practical and financial) of environmental liability and to have a view on best practices regarding prevention, investigation and remediation of environmental damage.

The WG will develop this document by proceeding the next steps:

- 1. Collecting and analysing the different legislations in force at regional, national and supra national level.
- 2. Identify the legal regimes that are most critical and evaluate their possible impact for T&D activities
- 3. Collecting experiences and best practices of dealing (investigate, remediate...) with environmental pollution; i.e. land and water contamination.
- 4. List available methodologies & strategies for investigation of environmental pollution; i.e. land and water contamination.
- 5. List solutions for the remediation of contaminated sites, including the financial impact



6.	Compare the financial impacts of the main methodologies & strategies for investigation and remediation			
7.	Provide some case studies to demonstrate the most relevant experiences and practices.			
Deliverables : Technical brochure with summary in Electra				
Time	Schedule : start : Jun	e 2014 Final report : 2017		
•	Call for members:	June 2014, SC C3 regular meeting, Nara, Japan		
•	Launch of WG:	August 2014		
•	Interim Report:	September 2015		
•	Final Report:	December 2016		
•	Technical Brochure:	September 2017		
•	Disbanding:	September 2017		
Comr	Comments from Chairmen of SCs concerned :			
Approval by Technical Committee Chairman :				
Date	: 24/04/2014	M. Waldes		

(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