

**CIGRE Study Committee C3**

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

<b>WG N° C3.09 A</b>	<b>Name of Convenor: Aleš Kregar (SI)</b>	
<b>Strategic Directions #<sup>2</sup>: 2, 3, 4</b>		<b>Technical Issues #<sup>3</sup>: 7, 10</b>
<b>The WG applies to distribution networks<sup>4</sup>: Yes</b>		
<b>Potential Benefit of WG work #<sup>6</sup>: 2, 3, 6</b>		
<b>Title of the Group: SUSTAINABLE CORRIDOR MANAGEMENT</b>		
<p><b>Scope, deliverables and proposed time schedule of the Group:</b></p> <p><b>Background:</b></p> <p>ToR for the WG C3.09 CORRIDOR MANAGEMENT was approved in February 2008. The convenor was Stephen Martin (AU) who coordinated activities of 23 members, all of which were from different countries, until the end of 2013, when contact with him was lost. WG members collected a significant amount of information, wrote 30 case studies from 15 countries and prepared a draft for a technical brochure, which covered the following topics: development approvals for networks; land use and landscapes; community and social related issues; corridor management; environmental offsets; climate change adaptation and whole of life costs. The document presented a very wide range of general information and case studies gave detailed accounts on specific topics.</p> <p>Activities of the WG stopped in 2013 and no meetings were held thereafter. Subsequently, other WGs started working on some topics generally addressed by WG C3.09, such as: Environmental issues of HV transmission lines for rural and urban areas, Impact of Environmental liability on transmission and distribution activities, Best environmental and socio-economic practices for improving public acceptance of high voltage substations, Interactions between Electrical Infrastructure and Wildlife, Eco-friendly approaches in Transmission and Distribution and Responsible management of the Electric and Magnetic Field Issue.</p> <p>Existing and new members of the WG from transmission and distribution will be invited to participate in the work of the restarted WG that will focus on narrower issues of relations with landowners and their representatives and of developing and maintaining habitats in the corridor of overhead lines and underground cables. We expect also some input from SCs B1 and B2, arranged via the ambassadors.</p> <p>Siting of new energy infrastructure is time consuming because it involves coordination of many stakeholders. One group of very influential stakeholders are individual landowners and their representing organisations. In some cases, they can block the new infrastructure project or even block substitution of existing one with a new one. Good and honest relations with landowners are necessary when constructing and later maintaining electric energy infrastructure. The less energy infrastructure restricts activities of the landowners, the less they oppose its construction and maintenance. In case of restrictions, landowners must be compensated adequately.</p> <p>In general, new energy infrastructure has negative impacts on habitats in their corridor, especially on forests. Impacts can be mitigated in different ways and in exceptional cases new valuable habitats can be established in their corridors. Impacts of infrastructure in their</p>		

whole of life impacts can be drastically reduced with appropriate vegetation management. In addition, proper vegetation management can increase safety and reliability of the energy system and reduce network maintenance costs.

We expect that experience with landowners and maintenance of habitats in the corridor highly vary from country to country. Awareness of trends, exchange of knowledge and best practices among operators of transmission and distribution network could be beneficial to themselves as well as other stakeholders.

The renewed WG shall proceed with the following steps:

- Collection of legislation, standards, guidelines, compensation criteria and practical experience in the field of relations with landowners and their representatives,
- Collection of legislation, standards, guidelines, criteria and practical experience in the field of developing habitats in the corridor, use of mitigation measures to reduce impacts of infrastructure on habitats, maintaining habitats and corridor management,
- Analysis, synthesis and benchmarking of collected information/data,
- Identification of critical issues,
- Summary of best practice case studies and preparing conclusions.

### Scope:

The scope of restarted WG applies to both overhead lines and underground cables, associated with both transmission and distribution networks. The aim of the WG is to collect information and compare regulation, procedures, methods and best practises from different countries that apply to relations with landowners and environmental aspects of corridor management. This covers:

1. Definition of the corridor (corridor width, tower area, grounding, regulatory background, standards, restrictions, electrical clearances),
2. Regulation and guidelines of right-of-way, or easement,
3. Relations to landowners and their representatives (communication),
4. Access to the corridor,
5. Compensations to the landowners and their representative organisations,
6. Characteristics of the corridor (housing area, agricultural land, forest),
7. Regulation concerning corridor development (development approvals (SEA, EIA), vegetation, habitats, weeds, mitigation measures, related costs),
8. Regulation concerning corridor maintenance (supervision, cutting trees, tree trimming and pruning, outsourcing),
9. Analyses, synthesis and benchmarking of experience from different countries,
10. Conclusions,
11. Case studies (including updated completed case studies).

### Deliverables:

- Technical Brochure and Executive summary in Electra
- Electra report
- Tutorial<sup>5</sup>

**Time Schedule:** restart: August 2018

**Final Report:** August 2021

**Approval by Technical Committee Chairman:**

**Date:** 18/04/2018



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