

CIGRE Study Committee B2
PROPOSAL FOR THE CREATION OF A NEW WORKING GROUP

WG N° B2.73	Name of Convenor: Peter DULHUNTY (AU)	
Technical Issues #²: 5, 7, 8, 10		Strategic Directions #³: 2, 3
The WG applies to distribution networks⁴: Yes		
Potential Benefit of WG work #⁵: 1, 2, 6		
Title of the Group: Guide for Prevention of Vegetation Fires Caused by Overhead Line Systems		
Scope, deliverables and proposed time schedule of the WG		
Background		
<p>Vegetation fires are a regular occurrence in many locations globally and often threaten life and property. These fires originate from natural, deliberate and accidental causes. A percentage of the accidental fire starts are associated with overhead distribution and transmission lines (e.g. contact of conductors with vegetation)</p> <p>Utilities review the fire starts within their jurisdiction associated with electrical assets and safety systems, developing in the process their own risk assessments and action plans.</p>		
Scope		
<p>The aim of this Working Group is to produce a Technical Brochure that will contain guidelines for preventing vegetation fire starts from overhead line assets.</p> <p>The Working Group will conduct literature search and review of current utility practices focusing on:</p> <ul style="list-style-type: none"> • Identification of fire causes, classifications and frequencies, percentage of fire starts that are due to electrical assets • Fire detection and reporting methods, • Effectiveness of various fire prevention methods such as vegetation management, inter-phase spacers, fault detection, automatic closures, infrastructure inspection, and replacement procedures. • Regulatory requirements (reporting, consequences = e.g. penalties) <p>This proposal is seen as an aside to Working Group B2.45 <i>Vegetation fire characteristics and potential impacts on OHL performance</i>. WG B2.45 covered the impacts of vegetation fires on overhead lines infrastructure (power supply interruptions, damages/loss of infrastructure, etc.), their TB is expected early 2019.</p> <p>WG B1.51 issued TB 720 <i>Fire issues for insulated cables in the air</i> and TB537 of WG A2.33 <i>Guide for transformer fire safety practices</i>, which will also be considered by the proposed WG.</p>		

The work will be coordinated with the following current Working Groups:

A3.39 Application and field experience with Metal Oxide Surge Arresters

B2.71 Interphase spacer recommendations

B3.53 Fire risk management in substations

C2.24 Mitigating the risk of fires near overhead lines for system operations

C3.16 Interaction of wildlife with OHTLs.

Deliverables

Technical Brochure and Executive Summary in Electra

Electra Report

Tutorial⁶

Webinar⁶

Time Schedule: start: March 2019

Final Report: June 2022

Approval by Technical Council Chairman:

Date: January 28th, 2019



Notes: ¹ Working Group (WG) or Joint WG (JWG), ² See attached Table 1, ³ See attached Table 2, ⁴ Delete as appropriate, ⁵ See attached Table 3,

⁶ Presentation of the work done by the WG

Table 1: Technical Issues for creation of a new WG

1	Active Distribution Networks resulting in bidirectional power and data flows within distribution levels up to higher voltage networks
2	Digitalization of the Electric Power Units (EPU): Real-time data acquisition includes advanced metering, processing large data sets (Big Data), emerging technologies such as Internet of Things (IoT), 3D, virtual and augmented reality, secure and efficient telecommunication network
3	The growth of direct current (DC) and power electronics (PE) at all voltage levels and its impact on power quality, system control, system operation, system security, and standardisation
4	The need for the development and significant installation of energy storage systems, and electric transportation, considering the impact they can have on the power system development, operation and performance
5	New concepts for system operation, control and planning to take account of active customer interactions, and different generation types, and new technology solutions for active and reactive power flow control
6	New concepts for protection to respond to the developing grid and different generation characteristics
7	New concepts in all aspects of power systems to take into account increasing environmental constraints and to address relevant sustainable development goals.
8	New tools for system technical performance assessment, because of new Customer, Generator and Network characteristics
9	Increase of right of way capacity through the use of overhead, underground and submarine infrastructure, and its consequence on the technical performance and reliability of the network
10	An increasing need for keeping Stakeholders and Regulators aware of the technical and commercial consequences and keeping them engaged during the development of their future network

Table 2: Strategic directions of the Technical Council

1	The electrical power system of the future: respond to speed of changes in the industry
2	Making the best use of the existing systems
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, social and economic benefits 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 directions
5	Guide or survey related to existing techniques; or an update on past work or previous Technical Brochures
6	Work likely to contribute to improved safety.
7	Work addressing environmental requirements and sustainable development goals.