

**CIGRE Study Committee B2**

**PROPOSAL FOR THE CREATION OF A NEW WORKING GROUP**

<b>WG N° B2.73</b>	<b>Name of Convenor:</b> Peter DULHUNTY (AU) <b>E-mail address:</b> peter@dulhunty.com	
<b>Technical Issues #<sup>2</sup>:</b> 5, 7, 8, 10		<b>Strategic Directions #<sup>3</sup>:</b> 2, 3
<b>The WG applies to distribution networks<sup>4</sup>:</b> Yes		
<b>Potential Benefit of WG work #<sup>5</sup>:</b> 1, 2, 6		
<b>Title of the Group:</b> Guide for Prevention of Vegetation Fires Caused by Overhead Line Systems		
<b>Scope, deliverables and proposed time schedule of the WG</b>  <b>Background</b> <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> <b>Scope</b> <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"> <li>• Identification of fire causes, classifications and frequencies, percentage of fire starts that are due to electrical assets</li> <li>• Fire detection and reporting methods,</li> <li>• Effectiveness of various fire prevention methods such as vegetation management, inter-phase spacers, fault detection, automatic closures, infrastructure inspection, and replacement procedures.</li> <li>• Regulatory requirements (reporting, consequences = e.g. penalties)</li> </ul> <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

Tutorial<sup>6</sup>

Webinar<sup>6</sup>

**Time Schedule:** start: March 2019

**Final Report:** June 2022

**Approval by Technical Council Chairman:**

**Date:** January 28th, 2019



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

<sup>6</sup> Presentation of the work done by the WG

**Table 1: Technical Issues for creation of a new WG**

<b>1</b>	Active Distribution Networks resulting in bidirectional power and data flows within distribution levels up to higher voltage networks
<b>2</b>	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
<b>3</b>	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
<b>4</b>	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
<b>5</b>	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
<b>6</b>	New concepts for protection to respond to the developing grid and different generation characteristics
<b>7</b>	New concepts in all aspects of power systems to take into account increasing environmental constraints and to address relevant sustainable development goals.
<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 through the use of overhead, underground and submarine infrastructure, and its consequence on the technical performance and reliability of the network
<b>10</b>	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**

<b>1</b>	The electrical power system of the future: respond to speed of changes in the industry
<b>2</b>	Making the best use of the existing systems
<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, social and economic benefits 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 directions
<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 contribute to improved safety.
<b>7</b>	Work addressing environmental requirements and sustainable development goals.