

**CIGRE Study Committee A1**

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

<b>WG 1<sup>o</sup> N° A1.70</b>	<b>Name of Convenor:</b> Monique Krieg-Wezelenburg (NL) <b>E-mail address:</b> <a href="mailto:m.g.krieg@eic-highenergy.com">m.g.krieg@eic-highenergy.com</a>
<b>Strategic Directions #<sup>2</sup>:</b> 2	<b>Sustainable Development Goal #<sup>3</sup>:</b> 7, 9
<b>The WG applies to distribution networks:</b> <input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No	
<b>Potential Benefit of WG work #<sup>4</sup>:</b> 5	
<b>Title of the Group:</b> Dielectric Dissipation Factor Measurements on Stator Windings	
<b>Scope, deliverables and proposed time schedule of the WG:</b> <b>Background:</b> <p>Dielectric dissipation factor measurements are used, at least in certain parts of the world, to assess the condition of stator windings. Updated publicly available information concerning this topic is scarce. The purpose of the working group is to investigate whether this method adds additional value in the process of assessing the condition of stator windings. Such an investigation would complement the work that is already performed and published by means of TB 769 - Dielectric dissipation factor measurements on new stator bars and coils.</p>	
<b>Scope:</b> <p>In particular, the working group will develop a questionnaire and perform a survey to investigate the following:</p> <ul style="list-style-type: none"> <li>• Where are these measurements used?</li> <li>• What practises are used (at what voltages/measurement equipment?)</li> <li>• What is the repetition rate of measurement?</li> <li>• What results are found in time?</li> <li>• Which criteria are used?</li> <li>• Is trending in time used?</li> <li>• What is impact of measurements? Are there consequences or actions taken?</li> </ul> <p>To be able to assess influence factors like insulation system, rated voltage, rated power, rated speed, rated frequency, construction, stress grading, ICP, manufacturer and manufacturer location, this kind of information will also be collected where available.</p> <p>The achieved information will be analysed and a report prepared not only in relation to the above mentioned aspects but also the spread in DDF measurement results of stator windings, the development in time will be assessed and criteria reviewed.</p>	
<b>Deliverables:</b> <input checked="" type="checkbox"/> Technical Brochure and Executive Summary in Electra <input checked="" type="checkbox"/> Electra Report <input type="checkbox"/> Future Connections <input type="checkbox"/> CSE <input checked="" type="checkbox"/> Tutorial <input checked="" type="checkbox"/> Webinar	

**Time Schedule:** start: June 2020

**Final Report:** August 2023

- TOR submitted for approval – June 2020
- Forming of team – July 2020
- WG meeting and presentation of status in Paris – August 2020
- Draft questionnaire – Dec 2020
- Comments on draft questionnaire by members and experts March 2021
- Distribution final questionnaire – April 2021
- Collection of information – July 2021
- WG meeting and presentation of status in Japan Session – September 2021
- Analysis of collected information – December 2021
- Draft report 1 – June 2022
- WG meeting and presentation of status in Paris Session – August 2022
- Comments by members and experts – October 2022
- Final report – July 2023
- Tutorial – August 2023
- Webinar – December 2023

**Approval by Technical Council Chairman:**

**Date:** May 25<sup>th</sup>, 2020



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 and CIGRE reference Paper: Sustainability – at the heart of CIGRE's work. <sup>4</sup> See attached Table 3

**Table 1: Strategic directions of the Technical Council**

1	The electrical power system of the future reinforcing the End-to-End nature of CIGRE: respond to speed of changes in the industry by preparing and disseminating state-of-the-art technological advances
2	Making the best use of the existing systems
3	Focus on the environment and sustainability (in case the WG shows a direct contribution to at least one SDG)
4	Preparation of material readable for non-technical audience

**Table 2: Environmental requirements and sustainable development goals**

	CIGRE selected the 7 SDGs that are the most relevant to CIGRE. In case the WG work refers to other SDGs or do not address any specific SDG, it will be quoted 0.
0	Other SDGs or not applied
7	<b>SDG 7: Affordable and clean energy</b> Increase share of renewable energy; e.g. expand infrastructure for supplying sustainable energy services; ensure universal access to affordable, reliable, and modern energy services; energy efficiency; facilitate access to clean energy research and technology
9	<b>SDG 9: Industry, innovation and infrastructure</b> Facilitate sustainable infrastructure development; facilitate technological and technical support
11	<b>SDG 11: Sustainable cities and communities</b> Increase attention on sustainable and resilient buildings utilizing local (raw) materials, power for electric vehicles, strengthening long-line transmission and distribution systems to import necessary power to cities, developing micro-grids to reinforce the sustainable nature of cities; protect and safeguard the world's cultural and natural heritage; reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and waste management
12	<b>SDG 12: Responsible consumption and production</b> E.g. Promote public procurement practices that are sustainable; address reducing use of SF6 and promote alternatives, encourage companies to adopt sustainable practices and to integrate sustainability information into their reporting cycle, address inefficient fossil-fuel subsidies that encourage wasteful consumption
13	<b>SDG 13: Climate action</b> E.g. Increase share of renewable or other CO <sub>2</sub> -free energy; energy efficiency; expand infrastructure for supplying sustainable energy; strengthen resilience and adaptive capacity to climate-related hazards and natural disasters; integrate climate change measures into national policies, strategies and planning; improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning
14	<b>SDG 14: Life below water</b> E.g. Effects of offshore windfarms; effects of submarine cables on sea-life
15	<b>SDG 15: Life on land</b> E.g. Attention for vegetation management; bird collisions; integration of substations and lines into the landscape

**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.