

# CIGRÉ International Council on Large Electric Systems

Liaison Report on SCA2  
Transformers for  
IEEE Transformers  
Committee- Spring 2024  
Meeting

- March 11, 2024



# CIGRÉ Study Committees

SC A1: Rotating Electrical Machines

## **SC A2: Transformers**

SC A3: High Voltage Equipment

SC B1: Insulated Cables

SC B2: Overhead Lines

SC B3: Substations

SC B4: HVDC and Power Electronics

SC B5: Protection and Automation

SC C1: System Development and Economics

SC C2: System Operation and Control

SC C3: System Environmental Performance

SC C4: System Technical Performance

SC C5: Electricity Markets and Regulation

SC C6: Distribution Systems and Dispersed Generation

SC D1: Materials and Emerging Test Techniques

SC D2: Information Systems and Telecommunication

# SC A2 Recent Publications

- **Brochures 900-904: High-Frequency Transformer and Reactor Models for Network Studies**
  - From Working Group A2/C4.52
  - Brochures published Q2 2023
  - TB 900: Part A White-box models
  - TB 901: Part B, Black-box models
  - TB 902: Part C, Grey-box models
  - TB 903: Part D, Model interfacing and specifications
  - TB 904: Part E, Measurements and transformer design details

# SC A2 WG Activities

No.	Working Group	Topic	Status
1	A2.54	Audible Sound Requirements	Active
2	A2.56	Transformer Efficiency	Active
3	A2.57	Effects of DC Bias	Active
4	A2.58	Site Installation and Pre-commissioning of Power Transformers and Shunt Reactors	Active
5	A2.60	Dynamic Thermal Performance of Power Transformers	Active
6	A2.62	Analysis of AC Transformer Reliability	Active
7	A2.63	Transformer Impulse Testing	Active
8	A2.64	Condition of Cellulose Insulation in Oil Immersed Transformers After Factory Acceptance Tests	Active
9	A2/D2.65	Transformer Digital Twin- concept and future perspectives	Active
10	A2/D1.66	Breathing systems of liquid filled transformers and reactors	Active
11	A2.67	Guideline for Online Dissolved Gas Analysis Monitoring	Active

# SC A2 WG Activities

No.	Working Group	Topic	Status
12	A2.68	Failure Survey of Lower Voltage Generator Step Up Transformers installed in Wind farms and Photovoltaic Parks	Active
13	A2.69	Guide for Transformer Maintenance	Active
14	A2.70	Life Cycle Assessment (LCA) of Transformers	Active
15	A2/D1.71	Modern Insulating Liquids Qualification for OLTC, Bushings and other accessories.	Active
16	A2/D1.72	Retrofill of mineral oil in transformers - Motivations, Considerations and Guidance	Starting
17	D1/A2.77	Improved understanding of dynamic behavior of winding insulating materials in liquid insulated power transformers	Active
18	D1/A2.79	Improved understanding of dynamic behavior of winding insulating materials in liquid insulated power transformers	Starting
19	D1/A2.80	Functional properties of non-metallic solid materials for liquid filled transformers and reactors and their compatibility with insulating liquids	Starting

# Upcoming New Working Groups

1. **B3/A2/A3/C3/D1.66 Guidelines for Life Cycle Assessment in Substations considering the carbon footprint evaluation** This WG aims to evaluate current substation decarbonization practices and establish a simplified carbon footprint assessment methodology applicable to the full life cycle of all types of existing substations and new greenfield substation solutions, taking into account all substation components (incl. transformers). Target completion Q2 2026.

If interested in contributing, please contact your appropriate CIGRÉ National Committee Representative.

# TF and AG activities

- Task Force (TF): Power Transformer Tank Specification for Passive Protection Against Internal Arc
- Task Force (TF): Power Transformers Sound Levels on Site

# Upcoming Events

- **CIGRÉ Paris Session 2024**
  - Paris, France, August 25-30, 2024
  - Palais des Congrès
  - Paper authors to receive final notifications by May 6, 2024
- **CIGRÉ USNC Grid of the Future**
  - Raleigh, NC, Nov. 11-14, 2024
  - Hosted by Quanta Technology
  - Sheraton Raleigh Hotel
  - Paper manuscripts submitted for review by Aug. 5, 2024
  - Additional details at [www.cigre-usnc.org](http://www.cigre-usnc.org)
- **CIGRÉ Symposium**
  - Spring 2025
  - Date and location to be announced soon
- **CIGRÉ A2/D1 Study Committee Colloquium**
  - Seoul, S. Korea, Oct. 19-24, 2025
  - COEX Intercontinental Hotel
  - Additional details to follow



# IEEE Liaison Report

THANK YOU!

