



# Fellesmøte for Den norske komite for CIGRE

Onsdag 09.04.2025 - kl 09.30 – 15.00

Rapport fra SC A1

Ella Brodtkorb



# *Rapport om status for SC XX*



- Endret navn fra Rotating electrical machines til Power Generation and Electromechanical Energy Conversion
- Ny leder valgt ved sesjonen i Paris: Howard Sedding
- 2 Technical Brochures utgitt siden forrige fellesmøte
  - Survey on industry practices and effects associated with the cutting out of stator coils in hydrogenerators (2023)
  - DDF measurements in Stator Windings – Part 1 Survey answers (2023)
- 23 Aktive arbeidsgrupper

## *Videre planer*

- Canada Symposium uke 40 2025 + studiekomiteemøte

*Grid Enhancement, Strategic Planning, Technological Innovation and Climatic Adaptation for Resilient Future Energy Systems*

### **PARTICIPATING CIGRE STUDY COMMITTEES (SC)**

**SC A1** Power Generation & Electromechanical Energy Conversion

**SC A2** Power Transformers & Reactors

**SC A3** Transmission & Distribution Equipment

**SC B2** Overhead Lines (co-lead)

**SC B3** Substations & Electrical Installations

**SC B4** DC Systems & Power Electronics (co-lead)

**SC C1** Power System Development & Economics

**SC C3** Power System Sustainability & Environmental Performance

**SC C5** Electricity Markets & Regulation

**SC C6** Active Distribution Systems & Distributed Energy Resources

The **6<sup>th</sup> International Colloquium on EHV and UHV AC&DC**  
in association with IEC will also be part of the symposium.

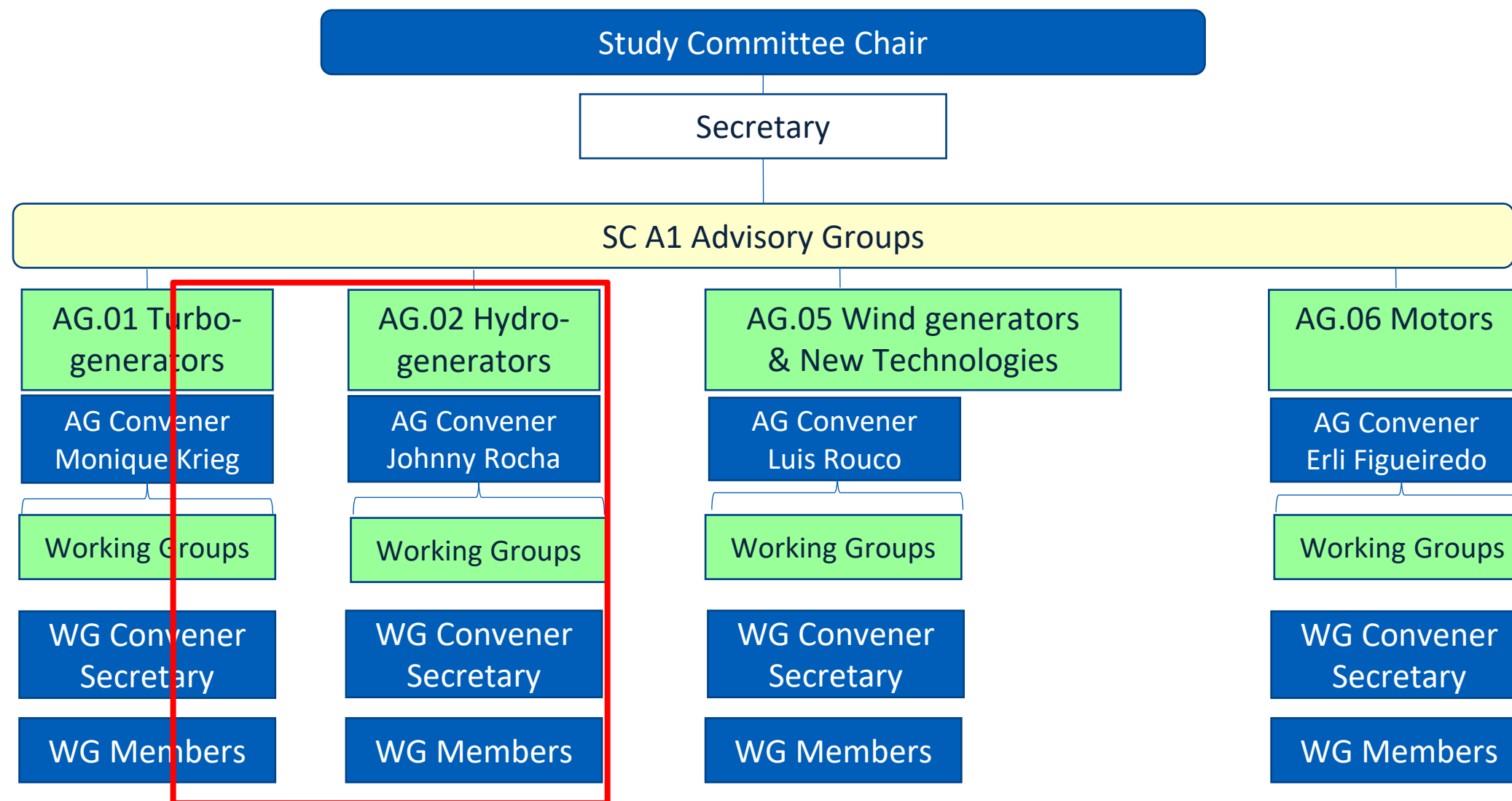
- Kroatia kollokvium uke 42

## *Arbeidets nytteverdi for CIGRE*

- Verdien av Norges bidrag i SC A1:
  - God oppslutning ved besvarelse av spørreundersøkelser, betydelig antall installerte vannkraftgeneratorer
  - Bidrag til evaluering av synopsier/paper til sesjon
  - Beskjeden deltagelse i arbeidsgrupper
- Verdien for Norge ved deltagelse i SCA1
  - Informasjon under Generatorforum
  - Tilgang til dokumentasjon

Internasjonal faglig utveksling setter «sannheter» i perspektiv

# Hva er spesielt viktig for Norge?



## Relevante arbeidsgrupper

WG Nr.	ADVISORY GROUP	WG TITLE	CONVENOR	STATUS
A1.42	AG-02	Influence of key requirements to optimize the value of hydro generators	Eduardo Guerra	TB prepared. To be reviewed under the 6-week rule.
A1.43	AG-02	State of the art of rotor temperature measurement	Stjepan Tvoric	The work is complete and reviewed, however it is proposed to close this WG and initiate a new WG based on this work but encompassing a broader scope of temperature measurement methods.
A1.45	AG-06	Guide for Determining the Health Index of Large Electric Motors	Dr Zhang Pinjia	TB draft completed. To be reviewed under the 6-week rule. Some concerns regarding the evaluation and weighting expressed during the WG meeting on 29/08/2024.
A1-C4.52	AG-05	Wind generators and frequency-active power control of power systems	Nick Miller	TB in preparation. Scheduled completion by Paris Session 2026.
A1.53	AG-06	Guide on Design Requirements of Motors for Variable Speed Drive Application	AK Gupta	Needs revision following 6-week rule feedback. Work to be reallocated as Mr. Gupta has retired.
A1.55	AG-02	Survey on Split Core Stators	Sun Yutian	Draft report available. Will be revised and issued as a WG Report due to much of the technical content referring to a limited number of manufacturers.
A1.56	AG-02	Survey on Lap and Wave Winding and their Consequences on Maintenance and Performance	Richard Perers	TB prepared. To be reviewed under the 6-week rule.

## *Relevante arbeidsgrupper*

A1.58	AG-06	Selection of Copper Versus Aluminium Rotors for Induction Motors	Fredemar Rüncos	TB prepared. To be reviewed under the 6-week rule.
A1.60	AG-02	Guide on economic evaluation for refurbishment or replacement decisions on hydro generators	Mark Bruintjies	Questionnaire responses are being analysed.
A1.61	AG-06	Survey of Partial Discharge Monitoring in Large Motors	André Tomaz de Carvalho	TB being finalised.
A1.62	AG-02	Thrust Bearings for Hydropower - A Survey of Known Problems and Root Causes	Daniel Langmayr	Limited responses were received from the questionnaire making it difficult to compile a globally representative report. The SC will review how to conclude this working group.
A1.63	AG-01	Turbo Generator Stator Winding Bushings and Lead Connections – Field Experience, Failures and Design Improvements	Jabulani Bembe	Draft TB in preparation.
A1.64	AG-06	Guide for Evaluating the Repair / Replacement of Standard Efficiency Motors	Erli Ferreira Figueiredo	TB in preparation.
A1.67	AG-02	State of the Art in methods, experience and limits in end winding corona testing for Hydro Generators	Fernando de Souza Brasil	New convenor assigned – WG being reconvened.
A1.69	AG-02	Hydro-Generator Excitation Current Anomalies	J. Johnny Rocha E.	Team assembled.

## Relevante arbeidsgrupper

A1.70	AG-01	Dielectric Dissipation Factor Measurements on Stator Windings	Monique Krieg-Wezelenburg	To be issued in several parts due to volume of content. > TB 918 "DDF Measurements on Stator Windings – Part 1 Survey Answers" issued. > Part 2 in progress - Analysis of DDF results completed
A1.71	AG-02	Survey on damper-winding Concepts and its operational experience on hydro generators and motor-generators	Thomas Hildinger	Questionnaire is being prepared.
A1.72	AG-02	Survey on multi-turn coils with dedicated turn insulation versus coils without dedicated turn insulation	Yoon Duk Seol	Questionnaire is being prepared.
A1.73	AG-02	Customer Requirements for Qualification of Form Wound Stator Insulation Systems for Hydro Generators	Dr. Marcelo Jacob da Silva	Questionnaire distributed on 13th March 2024. Responses being analysed.
A1.74	AG-06	Evaluating quality of electric motors (previously WG A1.68)	Kondra Nagesh	Questionnaire being prepared - Progress stalled. Need to review and agree how to proceed.
A1.75	AG-01	Large air-cooled turbo-generator – state of the art, limits and perspectives for Small Modular Reactors	Vincent Fernagut	Questionnaire distributed on 9th August 2024. Gathering responses.
A1.76	AG-01	Study on Eco-Design, Circular economy and impacts on generator production process	Raúl Morales Garcia	Questionnaire in preparation.
A1.77	AG-06	Survey on Insulation Reliability of Induction and Synchronous Motors	Fernando Spezia	Work proceeding - Questionnaire being finalised.



***Takk for oppmerksomheten!***

