

# DEN NORSKE KOMITE FOR CIGRE

## THE NORWEGIAN NATIONAL COMMITTEE OF CIGRE

Norske CIGRE-medlemmer, norske SC-medlemmer,  
forfattere av norske rapporter, forskere og studenter

Oslo, 22.04.2024

### Invitasjon til CIGRE møte i Trondheim 15/5-2024

Norges engasjement i CIGRE internasjonalt er økende. Til hovedsesjonen i 2024 bidrar Norge med 20 rapporter og disse blir presentert på et møte i Trondheim den 15. mai i år, dels som foredrag og dels som posters. Tidligere har det vært lukkede arrangementer for presentasjon av disse rapportene, men i år åpner vi opp for alle interesserte: forfattere, studiekomiteemedlemmer, CIGRE medlemmer og studenter.

Vi har et ønske om å bli mere aktive på et nasjonalt plan, og har derfor invitert noen foredragsholdere for å øke aktiviteten nasjonalt mot nettselskap, industri og studenter. Til dette arrangementet har vi invitert fire foredragsholdere for mere generelt å sette fokus på teknologiutvikling og -behov.

Programmet finner dere på side to i denne invitasjonen. På side tre og fire har vi lagt ved en oversikt over de rapportene som er produsert av norske hovedforfattere og oversikt over norske representanter CIGREs studiekomiteer.

Påmelding innen 4. mai: <https://forms.office.com/e/XUbN348QBQ>.

Det blir servert en enkel lunsj til de som har meldt seg på.

Sted: NTNU-Trondheim, F6 <https://link.mazemap.com/Mepjsftt>

Best regards

**Rannveig S. J. Løken**

Chair CIGRE Norwegian Committee

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## Program 15.05.2024

<b>Klokken</b>	<b>Varighet</b>	<b>Tema</b>	<b>Foredragsholder</b>
09:00	00:20	Registrering	
09:20	00:25	Åpning – CIGRE i Norge og verden	<b>Rannveig Løken, CIGRE og Statnett</b>
09:45	00:25	Elkraftsystemet – utfordringer og forskning	<b>Michael Belsnes, SINTEF</b>
10:10	00:15	Pause	
10:25	00:15	On-site GIC withstand experiment on a 1000 MVA 3-limb autotransformer and a 300 MVA 5-limb transformer. Part 1: Design, Modelling, Instrumentation, DAQ and Testing.	<b>Roald Kleivi, Statnett</b>
10:40	00:15	Towards innovative solutions to connect HVDC cables with less potential environmental impact	<b>Espen Doedens, Nexans</b>
10:55	00:15	High temperature low sag conductors in high ice load regions	<b>Bjarni Helgi Thorsteinsson, Statnett</b>
11:10	00:15	Experience with commissioning of a 132 kV SF6-free digital substation	<b>Karl Eide Pollestad, Bane NOR</b>
11:25	01:00	Lunsj	
12:25	00:15	A comparative analysis of implicit demand side response among Norwegian electricity consumers during the 2022/23 energy crisis	<b>Matthias Hofmann, Statnett/NTNU</b>
12:40	00:15	Wide Area Monitoring and Protection – Application Developments and IT infrastructure	<b>Kjetil Uhlen NTNU</b>
12:55	00:15	Connection products in electricity grids	<b>Eivind Gramme, Lede</b>
13:10	00:15	Flexibility for increased electrification and utilization of the distribution grid	<b>Gerd Kjølle, SINTEF Energi</b>
13:25	00:15	Pause	
13:40	01:00	Postere med de øvrige 12 rapportene	
14:40	00:15	Pause	
14:55	00:10	Next Generation Network	
15:05	00:25	Teknologibehov hos energiverk	<b>Tormod Kleppa, Hafslund E-CO</b>
15:30	00:25	CIGRE – Nytteverdi for industrien	<b>Geir Clasen, Nexans</b>
15:55	00:05	Avslutning	<b>Rannveig Løken, CIGRE Norge</b>
16:00		Slutt	

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## Norske rapporter til Paris Sesjonen 2024

SC	PS	Tittel	Hovedforfatter
A2	PS1	On-site GIC withstand experiment on a 1000 MVA 3-limb autotransformer and a 300 MVA 5-limb transformer. Part 1: Design, Modelling, Instrumentation, DAQ and Testing.	Ronald Kleivi, Statnett
A2	PS2	Detecting degraded bushings with DFR – A case study	Lars Andreas Eriksson, Hitachi Energy
A2	PS2	Monitoring Clamping Pressure in 40 MVA Power Transformer: A Study of Short and Long-Term Trends	Inge Madshaven, SINTEF Energi
B1	PS1	Thermal assessment of the transition joint between insulating and semiconductive protective PE sheath	Abbas Lotfi, Nexans
B1	PS1	420 kV Underground Cable System in Environment with High Electrical Resistivity of Soil. Use of an Earth Continuity Conductor in Combination with Cross-Bonding and Consequences on Insulation Coordination	Jerome Matallane, Nexans
B1	PS2	Evaluation of Thermal Network Modelling and Finite Element Analysis for Ampacity Rating Calculation of Wind Farm Export Cable	Camilla Espedal, SINTEF Energy
B1	PS3	Towards innovative solutions to connect HVDC cables with less potential environmental impact	Espen Doedens, Nexans
B2	PS1	High temperature low sag conductors in high ice load regions	Viven Naidoo, Efla
B2	PS1	Predicting Capacity Gains from Dynamic Line Rating prior to Sensor Deployment	Tobias Brekke, Statnett
B3	PS2	Experience with commissioning of a 132 kV SF6-free digital substation	Karl Eide Pollestad, Bane NOR
B4	PS1	Measures to secure the lifetime of an LCC based HVDC link with a potentially aged cable	Magne Meisingset, Statnett
B5	PS1	LPIT operational experiences and challenges in a Norwegian digital substation	Karl Eide Pollestad, Bane NOR
C1	PS2	A comparative analysis of implicit demand side response among Norwegian electricity consumers during the 2022/23 energy crisis	Matthias Hofmann, Statnett/NTNU
C1	PS2	Flexibility from electric vehicles - residential charging coincidence factors in Norway	Aurora Opstad, Statnett
C2	PS2	Wide Area Monitoring and Protection - Application Developments and IT infrastructure	Kjetil Uhlen, NTNU
C3	PS1	Highlighting forgotten emissions: Calculate and mitigate carbon loss from infrastructure construction on peatland	Ellen Torsæter, Statnett
C5	PS2	Connection products in electricity grids	Eivind Gramme, Lede

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C6	PS1	Evaluation of battery energy storage systems (BESS) in the Norwegian power grid to cope with increased vehicle electrification	Heidi Nygård, NMBU
C6	PS1	Flexibility for increased electrification and utilization of the distribution grid	Gerd Kjølle, SINTEF Energi
C6	PS1	Rethinking Distribution Grid Operational Planning with Flexibility Resources	Merkebu Z. Degefa, SINTEF Energi / Universitetet i Stavanger

### Studiekomiteene (SC) og norske representanter:

- A1 Rotating electrical machines – Ella Beate Brodtkorp
- A2 Power transformers and reactors – Hans Kristian Høidalen, NTNU
- A3 Transmission and distribution equipment – Nina Støa Aanensen, SINTEF Energi
- B1 Insulated cables – Carl Erik Hillesund, Statnett
- B2 Overhead lines – Peder Andreas Hagen, Statnett
- B3 Substations and electrical installations – Karl Eide Pollestad, Bane NOR
- B4 DC systems and power electronics – Sigmund Bødal, Equinor
- B5 Power systems protection and substation automation – Tore Geir Soltvedt, Statnett
- B5 Protection and automation – Joar Hylland Mikkelsen, Hitachi Energy
- C1 Power system development and economics – Finn Ytterli, Hydro Energi
- C2 Power system operation and control – Gerhard Doorman, Statnett
- C3 Power system environmental performance – Tanja Midtsian, NVE
- C4 Power system technical performance – Bjørn Gustavsen, SINTEF Energi
- C5 Electricity markets and regulation – Birger Mo, SINTEF Energi
- C6 Active distribution systems and distributed energy resources – Merkebu Z. Degefa, SINTEF Energi
- D1 Materials and emerging techniques – Frank Mauseth, NTNU
- D2 Information system and telecommunication – Lars Konrad Silseth, Statnett