



Call for Papers

“Addressing the Challenges and Opportunities of an Accelerated Energy Transition”

The **2024 XIXth Annual CIGRE Canada Conference on Power Systems** will bring together the key players in the electric power systems sector: business leaders, system operators, manufacturers, engineers, policy makers, regulators and academics. The conference is a unique forum to share exciting new research, to raise issues and awareness, to discuss future directions, and to network with leading professionals.

Four electrifying panel sessions

- CEO Panel Session and their perspectives on Electrification
- Business Panel Session
- Next Generation Network Panel Session
- Women In Energy Panel Session

Topics of special interest

Integrating renewables and inverter-based technology

- Application of grid forming technology
- Grid codes and conformity assessments
- Addressing challenges with large scale inverter-based resource (IBR) integration
- Grid modernization and expansion strategies including non-wire and smart-wire technologies
- Novel strategies for streamlining procurement including supply chain, design and permitting

Changes in system operation and control

- Analysis and operation of systems with high IBR
- New flexibility and ancillary services
- Applications and experience with phasor measurement units
- Managing low inertia power systems
- Managing decentralized energy systems
- Integrating ambient adjusted and dynamic line ratings

Preparing for deep decarbonization

- Impacts of transitioning from gas to electric
- Hydrogen and renewable gas, energy storage, small modular nuclear
- Working with stakeholders (industry, government, indigenous communities)

Resilience and reliability in changing energy systems

- Use of resilience measures: risk assessment, prevention, mitigation, adaptation, re-start measures
- Role of new technology in improving resilience
- Forecasting extreme weather events
- Successful system-wide implementations

Flexibility management in distribution networks

- Distributed energy resource (DER) integration and impacts on the grid
- Integration of electronic loads such as electric vehicles (EV)
- Smart grid and advanced grid management concepts
- DER/EV/electric heating forecasting and management of uncertainty

The future of equipment design and asset management

- Anomaly detection, system optimization, condition monitoring
- Maximizing the useful life of an asset
- Failure probability and aging models
- Use of artificial intelligence, deep learning, advanced analytics, digital twins and big data

Organizing Committee

Jay Grewal, President & CEO, Manitoba Hydro
General Chair

Angela Driver, Manitoba Hydro
Organizing Committee Chair

Murray Kroeker, BC Hydro
Past 2023 Conference Chair

David Jacobson, Manitoba Hydro
Technical Committee Chair

Chen Wang, Manitoba Hydro
Technical Committee Co-Chair (workshops)

Namal Fernando, Manitoba Hydro
Technical Tours Coordinator

Aimee Intac-Leung, Manitoba Hydro
CIGRE Canada Women in Energy

Aine NurAizza Nuruddin, Hatch Ltd
CIGRE Canada Next Generation Network

Kurtis Martin Sturmey, Metsco
CIGRE Canada Next Generation Network

Michael Kobzar, CIGRE Canada

Mohamed Rashwan, CIGRE Canada

Phil Zinck, CIGRE Canada

Kristin Macaraeg, Manitoba Hydro
Administration Support

Susana van der Veen
CIGRE Canada Coordinator

David Flandin, PRO4EVENTS CANADA
Event Coordinator

Important Dates

April 15, 2024
Deadline for submission of abstracts (via website)

May 20, 2024
Notification of acceptance
Registration Opens

June 30, 2024
Deadline for submission of final papers

September 30, 2024
Deadline for submission of final presentations

Papers are invited on all topics of interest falling within the conference theme and especially papers with the following focus:

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| A1 Rotating Electrical Machines | B2 Overhead Lines | C1 Power System Development & Economics | C5 Electricity Markets & Regulation |
| A2 Power Transformers & Reactors | B3 Substations & Electrical Installations | C2 Power System Operation & Control | C6 Active Distribution Systems & Distributed Energy Resources |
| A3 Transmission & Distribution Equipment | B4 DC Systems & Power Electronics | C3 Power System Environmental Performance | D1 Materials & Emerging Test Techniques |
| B1 Insulated Cables | B5 Protection and Automation | C4 Power System Technical Performance | D2 Information Systems & Telecommunication |

Submissions

Starting **February 1st, 2024**, authors should submit a one-page abstract through the online system at <https://cfa.cigreconference.ca>. The submitted abstracts will go through a peer review process. Upon abstract acceptance, a 6 to 8 page paper in CIGRE format must be submitted for the final contribution.

Accepted final contributions will be included in the conference proceedings and papers will be published in the online CIGRE library (www.e-cigre.org), provided the contributions are fully registered by at least one author and presented in person at the conference. See the web site www.cigre.ca for the submission instructions.

 **Best Student Paper Award**

 **NGN Best Paper Award**
(young professional up to 35 years old)

 **Best Paper Overall Award**