



# Call for Papers

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

The **2024 XIX<sup>th</sup> 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:**

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

### Submissions

Starting **February 1<sup>st</sup>, 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](http://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](http://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**