



# Call for Papers

## “Evolution of the Power System to Accelerate Electrification”

The **2023 XVIII<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.

### Topics of special interest

#### Transformation and impact of accelerated electrification on the T&D system

- Use of smart sensors
- Use of real time rating tools
- Retrofit critical lines with “smart” wires
- Use of distributed sensing tools along T-assets
- Thermal performance of cable systems
- Impact on loading pattern changes to transformer assets
- Application of rapid monitoring tools

#### Challenges to meet these rapid electrification needs

- Lack of visibility into user’s EV adoption
- Impact of voltage and load conditions of existing pole-top transformers and other equipment infrastructure
- Future Challenges with “Big data how are utilities coping”
- Incorporating bi-directional power flow
- Climate change impacts on the power system

#### Dynamics of distributed generation resources

- Distributed generation
- Power quality impact on the grid
- Role of battery/fuel cells, wind, solar, hydrogen
- Operation/protection of renewable energy systems, such as hybrid battery and solar systems (microgrid), involve very smart/sophisticated control systems

#### Business impacts from accelerated electrification

- How can Asset owners cost out the charging stations?
- Is there a need to develop governing regulations?
- Increased reliability expectations
- Energy as an essential service demands high system resilience
- Impact of rising power supply equipment cost and supply chain issues
- Emerging technology for future grid

### Topics

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

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

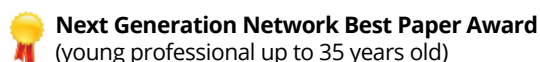
### Four electrifying panel sessions

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

### Submissions

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.



For more information, please contact the Technical Committee Chair: [sudhakar.cherukupalli@bchydro.com](mailto:sudhakar.cherukupalli@bchydro.com)

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#### Important Dates

**April 17, 2023** **NEW FINAL DEADLINE**  
Deadline for submission of abstracts (via website)

**April 21, 2023**  
Notification of acceptance  
Registration Opens

**June 30, 2023**  
Deadline for submission of final papers

