CIGRE NEWSLETTER

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PRESIDENT'S CORNER

BY: CHRIS ROOT
CIGRE USNC President

Welcome to 2025 and the environment of rapid change in the energy industry. Technological and infrastructure improvements are needed, and it is an exciting time to be in the electricity sector. While potential electricity tariffs on Canadian imports, to DOE project funding uncertainties are in the news, we are focused on the technology ahead with our technical foundation of knowledge sharing. In 2025, the United States National Committee (USNC) of CIGRE will bring to the table many exciting CIGRE Technical Brochure entries that is the power of CIGRE. The technological issues and infrastructure investment associated with a changing grid are still with us and study and solutions continue to be needed.

The USNC has a full schedule of events and opportunities for 2025. We continue to offer free webinars through the Next Generation Network (NGN) and Women in Energy (WiE). Later in this newsletter, they will be listed. We are also collecting papers for the Grid of the Future™ (GOTF™) Symposium, hosted by POWER Engineers, which will be held November 10-13 in Denver, CO. This year, we are collecting abstracts for papers for the Paris Session in August of 2026. John McDonald, VP of Technical Activities, describes the process on **page 4**.

PRESIDENT'S CORNER

Each year, the USNC gives out several awards. They can be found on the **Awards and Distinctions** page of the USNC website. If you know someone who you think is qualified for an award, you can send your nomination to **Beth LaRose**.

The USNC will host its **Annual Luncheon & Member Meeting** in conjunction with the IEEE PES General Meeting in Austin, Texas on Tuesday, July 29, from 12-2pm. You do not have to be registered for the IEEE PES General Meeting to attend our all-members luncheon meeting. However, you do need to register to attend the luncheon meeting.

REGISTER TODAY!

There will also be an Executive Committee Meeting immediately following the Luncheon from 2-4pm with an outside speaker.

Check out our new **Collective Member Benefits Booklet**, highlighting the many benefits of Collective Membership in CIGRE. The booklet can also be found on the **CIGRE USNC website** under the "About" tab on the "**Collective (Corporate) Members**" page. To access the booklet, click the "Collective Member Benefits Booklet" button. We welcome the following new Collective Members to the US National Committee: *AECOM* and *LCRA Transmission Services Corporation*.

A list of the latest CIGRE Technical Brochures are listed on **page 15** of this Newsletter.

As always, if you are interested in volunteering or becoming an officer, please contact the VP of Nominations, **Damir Novosel**. Our officer positions can be found on our website.

I hope to see you either at the Annual Luncheon & Meeting in July or at GOTF™ in the Fall. Hopefully some of the rapid changing road maps for the future will settle down. In the meantime, we all need to keep our power system operating efficiently and reliably.

Chris Root
CIGRE USNC President

CIGRE FINANCIAL REPORT

BY: MICHAEL HEYECK
CIGRE VP Finance & Treasurer

CIGRE Financials Sound

With a record 2024 Paris Session, CIGRE cash reserves at the end of 2024 have reached 6M euros. The year 2025 without a Paris Session will bring that to about 5M euros, which is useful in case we have to endure another lost Paris Session as we did in 2020. We recovered nicely.

CIGRE Membership Changes

We have approved the extension of free student membership for the calendar year after graduation if on January 1st of the membership year the members are under 35 years of age or younger. We also extended young professional membership (50% of full fee) for a maximum of three years instead of two years (if on January 1st of the membership year the members are under 35 years of age or younger) The international NGN proposed these changes and the leadership and governing bodies agreed in support of NGN and bridging the student to the paid professional stage.

CIGRE Exciting News Ahead

With the leadership group of Konstantin Papailiou as President, Rannveig Loken as VP Technical, myself as VP Finance, and Philippe Adam as Secretary General, there will be exciting news ahead for CIGRE. We are at the early stages of development of a CIGRE Fund (name to be determined) in alignment with CIGRE's vision and mission. We have sound cash reserves for risk mitigation, and we will not just sit and look at bank accounts. We intend to further CIGRE's mission across the globe with our Fund, attracting proposals and donors, with the full support of the Steering Committee and the Administrative Council. Stay tuned for developments ahead!

BY: JOHN MCDONALD
CIGRE USNC VP Technical Activities

2025 Highlights To Date

1. 2026 Paris Session - Synopses Due July 7, 2025

- Synopses (abstracts) due to **John McDonald** by July 7, 2025. Note that this deadline is (for the first time) a global deadline for all National Committees from the CIGRE Central Office.
- Content must be closely aligned with one Study Committee Preferential Subject in the **2026 Call For Papers**
- Must be at least 500 words and no more than two pages long
- Must comply with **CIGRE template** for required formatting
- Avoid commercialism
- Carefully review the **2026 CIGRE Paris Session Instructions for Synopsis**
- The primary author must be a CIGRE member (Individual or Collective)
- Be of the highest technical standard, not published elsewhere, and contribute to technical progress
- For complete details, see CIGRE USNC email to USNC members dated February 18, 2025

2. 2025 GOTF™ Symposium - Full Papers Due August 25, 2025

- No abstract step – full papers only
- Full papers due to **GOTF@tamu.edu** by August 25, 2025
- Suggested technical topics for papers in **Call For Papers**
- Must be no more than 12 pages long
- Must comply with **CIGRE USNC template** for required formatting
- Avoid commercialism
- Be of the highest technical standard and contribute to technical progress
- For complete details, see CIGRE USNC email to all USNC members dated February 19, 2025

3. 8 new CIGRE WGs so far in 2025 (see list below) => Many US Subject Matter Experts Nominated

CIGRE WGs (2025 to date):

- TOR-WG B3.69: Process Requirements for Commissioning and Inspection of Air Insulated Substations (AIS) and Gas Insulated Substations (GIS)
- TOR-JWG A3/D2.52: Application of Digital Twin in Switchgear
- TOR-WG B5.87: Digital Transformation of Protection, Automation and Control Systems Expanding the Application of IEC 61850
- TOR-WG C5.41: Regulation and Market Design to Foster Decarbonization through Industry Electrification
- TOR-WG B5.88: Implementation Guide for Fully Digital IEC 61850-based Protection, Automation and Control Systems
- TOR-WG D2.63: Inter-Control Center Communications Protocol (ICCP) Security and Resilience for Grid Reliability
- TOR-WG D2.62: Efficient Spectrum Allocation and Utilisation for Electric Power Industry Private Communication Networks
- TOR-JWG A2/C4/D1.77: Design of Transformers for Very Fast Transient Overvoltages

CIGRE Publications:

- Reference Papers
- ELECTRA (bimonthly digital magazine)
- CIGRE Science & Engineering Journal (CSE) (published three times per year)
- Green Books (listed below)
- Papers and Proceedings
- Technical Brochures (most recent listed on **page 15**.)
- eCIGRE (home to CIGRE's resource of 12,000+ technical publications)

CIGRE Green Books:

- SC A2 Transformer and Reactor Procurement
- SC A3 Switching Equipment
- SC B1 Accessories for HV and EHV Extruded Cables – Volume 1: Components
- SC B1 Accessories for HV and EHV Extruded Cables – Volume 2: Land and Submarine AC/DC Applications
- SC B2 Overhead Lines
- SC B2 Compact Overhead Line Design
- SC B2 Techniques for Protecting Overhead Lines in Winter Conditions
- SC B2 Modelling of Vibrations of Overhead Lines Conductors
- SC B3 Substations
- SC B4 Flexible AC Transmission Systems
- SC B5 IEC 61850 Principles and Applications to Electric Power Systems
- SC C1 Power System Assets – Investment, Management, Methods and Practices
- SC C4 Power System Dynamic Modelling and Analysis in Evolving Networks
- SC D2 Utility Communication Networks and Services
- All SCs Electricity Supply Systems of the Future
- All SCs Handbook of Power Systems

Green Books are CIGRE's flagship reference publications. CIGRE members receive a 40% discount.

NEXT GENERATION NETWORK (NGN) CORNER

BY: LOGAN ROLLES
CIGRE USNC Next Generation Network Chair

2025 is off to an exciting and busy start for the USNC NGN Exec Team!

This year's board is full of passionate & dedicated young professionals, and we have some exciting things planned! Before we get into the details, I wanted to shout out our team. A huge thanks to Jodie Lupton, Maigha, Genesis Alvarez, Nick Skoff, Zejia Jing, Michael Hanestad, Purandhya Vij, and Secilia Ho for all of your efforts in making CIGRE and the NGN successful!

Now, for some updates:

The annual NGN Paper Competition is officially underway, with the synopsis judging in mid-May! For those of you who aren't familiar, this competition starts with young professionals and students submitting a synopses. Of these, CIGRE judges select 10 to be drafted into full papers, and the top 5 papers present during the annual Grid of the Future™ Symposium. The winner of the competition is awarded with registration to CIGRE Paris (or GOTF™), a $3,000 travel stipend for the conference, and (most importantly), a sick plaque! 😊 Every year I am more impressed at the papers and presentations, and this has easily become one of my favorite parts of GOTF™.

Our NGN Webinars team continues to host engaging, relevant, and exciting webinars! From hot topics like "Journey Towards a Greener Future: My Experience and Contributions in Developing SF6 Alternatives " to a joint webinar co-hosted with Women in Energy titled ""Enhancing Grid Reliability and Resilience through Advanced Technologies", keep an eye on your email or our LinkedIn page to be sure you're notified of our upcoming presentations! We also are always looking for passionate presenters who'd like to host a Webinar. Please reach out to me if this is something you'd like to learn more about!

Our team is actively working to kick-off the 2025 mentorship season! Based on feedback from past participants, we are looking into the feasibility of group-based, study committee-centric mentorship. Be on the look out for an email in the coming month or so inviting you to an informational session on how to join as a mentor or mentee!

Next Generation Network

On a closing/personal note, when I moved into the chair role, I took the time to write down some goals for the USNC NGN team:

1. Increase NGN technical involvement through study committee/working group representation
2. Increase CIGRE presence on college campuses
3. Increase coordination with IEEE PES/YP
4. Revamp mentorship program with technical mentorship "groups"/mentorship within Study Committees

We've made great progress in the short time our new board has been together, from adding additional positions for IEEE and Membership to creating an "Intro to CIGRE" slide set that will be used to host info sessions for colleges or organizations to highlight the benefits of CIGRE. If you have any feedback on ways the NGN could better serve members throughout CIGRE, don't hesitate to reach out. I would love to brainstorm with you!

I can't wait to see where the rest of the year takes us – and our team couldn't do it without the support of the larger CIGRE member group like yourself.

WOMEN IN ENERGY (WIE) CORNER

BY: KATE GRAVES
CIGRE USNC Women in Energy Committee Member

At CIGRE US Women in Energy (WiE), we are proud to support and empower women, who are shaping the future of energy.

During the 2024 Grid of the Future™ Symposium in Raleigh, we were pleased to spearhead multiple events.

On Veteran's Day, we hosted local Girl Scouts from the North Carolina Coast Pines chapter for an *Empowering Girls in STEM* event, led by Kate Graves, then Vice Chair of CIGRE WiE GOTF™ Events. Our current Chair, Katherine Inge, shared her inspiring journey – from her time as a Girl Scout, through her experience at the US Naval Academy, to her current role as an engineer. Afterward, we played renewable energy trivia and built functioning wind turbines using straws, string, cups, rubber bands, and paper. The entire WiE team present at the conference engaged with the girls and their parents and a great time was had by all. *Note: due to concerns over minors' privacy, no images from the event will be shared.*

On Tuesday morning, we welcomed Majida Malki, PE, PMP, Senior Director of the Protection Settings Business Area at Quanta Technology, as our featured speaker at the CIGRE WiE Breakfast sponsored by Mitsubishi Electric Power Products, Inc. Majida shared her riveting professional journey, offering insights and inspiration to all in attendance.

WOMEN IN ENERGY (WIE) CORNER

On Wednesday afternoon, our then WiE Chair, Jessica Lau, moderated an engaging panel discussion on Interconnection and the Evolving Grid with panelists Maigha from Exelon, Regina-GuoFang Gao from Hitachi Energy, Myra Sinnott from Silicon Ranch, and Preety Mathema from 1898 & Co. The session sparked lively dialogue about the challenges and opportunities in today's evolving energy landscape.

While many of our events take place in person, throughout the year we also offer virtual activities, including webinars and networking opportunities. To help us better serve our community, we invite you to share your thoughts in our short survey (linked below) about the framework for future virtual events. The survey will remain open until April 2, 2025.

WOMEN IN ENERGY MEMBER SURVEY

WOMEN IN ENERGY (WIE) CORNER

Lastly, we are pleased to announce the 2025 CIGRE US WiE dedicated team.

Committee Positions:

- Katherine Inge, Chair (MPR Associates)
- Mallory Mannoni, Vice Chair (1898 & Co)
- Kate Graves, Vice Chair of Communications and Marketing (Quanta Technology)
- Maigha, Vice Chair of Mentoring and Professional Development (Exelon)
- Shandi Ezraseneh, Vice Chair of Grid of the Future™ Events (Con Edison)
- Jessica Lau, Vice Chair of Leadership Programs (Artful Pathways)
- Aimee Intac-Leung, Vice Chair of International Partnership (Invenergy)

Supporting Members:

- Li Chen (Quanta Technology)
- Beth Larose (GE Vernova)
- Kristi Wray (G&E Electric)

If you are interested in joining our group or learning about CIGRE WiE, please contact Katherine Inge and Mallory Mannoni or visit the CIGRE Women in Energy webpage for more information.

2025: A PIVOTAL YEAR FOR GLOBAL POWER SYSTEMS

BY: MANDY OLSON
Editorial Chair, CIGRE's ELECTRA Maga

Looking to 2025: A Pivotal Year

The year 2025 represents an inflection point in power systems. Mounting pressures on global energy systems–ranging from extreme weather events that threaten grid resilience, to the rapid rise of distributed energy resources (DERs)–continue to shape the sector's transformation. Over the next year, we are excited to share how industry leaders and innovators around the world are navigating these shifts, offering invaluable perspectives on challenges and breakthroughs alike while keeping you all updated on the latest events and news across CIGRE.

Topics You Can Count On

1. Integration of Renewables and Decarbonization

With ambitious carbon reduction targets on the horizon, T&D systems must adapt to unprecedented levels of variable renewable energy. Authors will delve into new strategies for grid operators who are evolving their networks to integrate large-scale solar, wind, and other renewable sources. We hope to spotlight leading approaches to balancing intermittent power generation, managing surplus electricity, and maintaining system stability in increasingly complex grids.

2. Energy Storage and Grid Flexibility

Energy storage has emerged as a vital element in stabilizing the grid. Our contributors take a closer look at large-scale demonstration projects and cutting-edge technologies, including flow batteries and hydrogen-based systems. These solutions enhance grid flexibility, enabling power providers to meet peak demand while reducing reliance on fossil-fuel backups.

3. Digitalization and Data Management

The T&D sector is experiencing a digital revolution, driven by advances in control systems, AI-driven predictive maintenance, and powerful data analytics. We hope to showcase expert insights into how "big data" is enabling utilities to operate with greater efficiency, accuracy, and resilience, along with best practices for safeguarding critical infrastructure from cyber threats.

4. Strengthening Communications Across the Grid

Underpinning all modern grid initiatives–from smart substations to automated distribution networks –is a robust communication infrastructure. High-speed, reliable data exchange is the critical "nerve center" of the power system. This magazine will explore advancements in technologies such as 5G, fiber optics, and wireless mesh networks that facilitate real-time grid monitoring, faster fault isolation, and sophisticated command-and-control strategies. Experts discuss how improved communications pave the way for integrated microgrids, peer-to-peer energy transactions, and coordinated DER management.

5. Distribution System Modernization

As utilities face growing pressure to optimize operations at the grid edge, distribution networks are undergoing a rapid modernization process. Articles in this publication will spotlight innovations in advanced distribution management systems (ADMS), fault location, isolation, and service restoration (FLISR), and the integration of multi-directional power flows. Readers will learn about new architectures that make distribution networks more adaptable, efficient, and ready to incorporate EV charging infrastructure and behind-the-meter renewables.

6. E-Mobility and Electrification

With electric vehicle (EV) adoption surging, the T&D landscape is adjusting to new load patterns and the associated challenges. Contributors examine grid infrastructure upgrades, demand response programs, and the development of extensive charging networks. From vehicle-to-grid (V2G) projects to commercial EV fleets, the focus is on creating a flexible, dynamic, and sustainable ecosystem.

7. HVDC, UHV and Cross-Border Interconnections

High Voltage Direct Current (HVDC) systems and UHV interconnections across borders enable bulk power transfers over long distances with minimal losses. We hope to explore how these projects can untie regional markets, improve energy security, and maximize the adoption of renewable power. Case studies can reveal the collaborative efforts among nations to establish a more interconnected, robust, and greener grid.

— Harnessing the Value of a Global Resource

CIGRE's greatest strength lies in its international community–one that transcends geographic and technical boundaries to drive innovation in the power sector. By uniting researchers, engineers, academics, and policymakers, CIGRE fosters:

- **Knowledge Exchange:** Through our working groups and technical committees, new ideas, methodologies, and research findings flow between experts across continents.
- **Collaborative Innovation:** Joint pilot programs among connected members and live demonstrations push the envelope in areas like renewable integration, distribution system modernization, and grid-wide communications.
- **Capacity Building:** A comprehensive slate of workshops and training sessions–both virtual and in-person–enables professionals to stay abreast of emerging technologies and best practices.

Looking Ahead

As we stand at the crossroads in 2025, it is clear that the future of our sector hinges on collaborative partnerships that unite us in tackling climate change and ensuring reliable power for everyone.

On behalf of the entire editorial team, I invite you to dive into our rich content, share your own insights, and stay connected with the broader CIGRE community. Together, we can address the challenges of 2025 and beyond–harnessing the collective power of our shared knowledge to build a more sustainable and interconnected energy future.

ELECTRA
CIGRE's Digital Magazine

READ MORE

ELECTRA N°338 February 2025

Featured in this edition:

GLOBAL CONNECTIONS

- Bridging the Workforce Gap: Empowering Women to Engineer the Power Evolution
- How Can Governance and Management Structures be Applied to Transform an Electricity Grid for a Decarbonised Future?
- The European Electricity Market - Its Malfunctions and Their Consequences

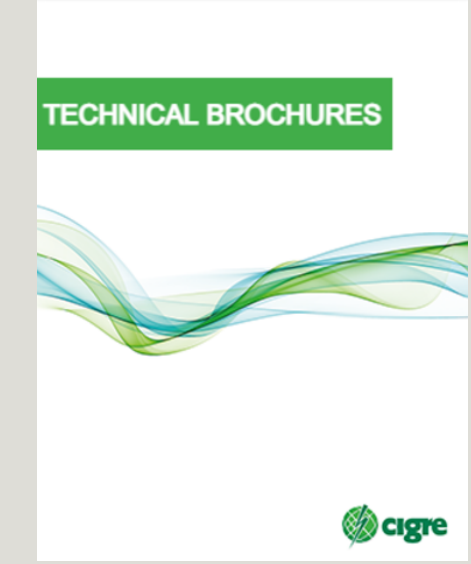
TECHNOLOGY E2E

- Direct Air Carbon Capture and Storage: Introduction and Implications for Power Grids
- Optimized Asset Management Solutions - Managing Power Facilities for Large-Scale Industrials
- Beyond Dashboards - The Era of Digital Twins in Power Systems

PUBLICATIONS

The latest Technical Brochures are now available on eCIGRE:

- **TB 959:** Behaviour of Cable Systems under Large Disturbances
- **TB 958:** Guidelines for use of Real-code in EMT Models for HVDC, FACTs and Inverter Based Generators in Power Systems Analysis
- **TB 957:** Recommendations for Dielectric Testing of HVDC Gas-insulated Cable Connection Assemblies
- **TB 956:** Protocol for Reporting the Operational Performance of HVDC Systems
- **TB 955:** Lightning Transient Sensing, Monitoring and Application in Electric Power Systems
- **TB 954:** Electric Vehicles as Distributed Energy Resource (DER) Systems
- **TB 953:** Tools for Lifecycle Management of T&D Switchgear Based on Data from Condition Monitoring
- **TB 952:** Evaluation of Dynamic Hydrophobicity of Polymeric Insulation Materials Under AC Voltage Stress



There are over 940 technical brochures available on e-cigre.org at no charge for CIGRE members. Nearly 40 are added every year.

READ ON eCIGRE

TIME TO RENEW 2025 CIGRE MEMBERSHIP!

CLICK HERE TO RENEW AND PAY YOUR DUES

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WELCOME TO CIGRE!

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