



The National HVDC Centre colleagues with Scottish Wildlife Trust representatives at Cumbernauld Glen Nature Reserve.

Welcome to our autumn edition of the HVDC Centre newsletter, featuring CMS Replica training, industry collaboration through CIGRE, the conclusion of HVDC-WISE, our CIGRE Paris contributions, team volunteering, an international summer-school visit, our summer placement programme and introductions to our newest colleagues.

- Asif Khan

CMS HVDC Replica Supports Wider Industry Training



The HVDC Centre recently supported a number of sessions led by **Andrew Lamb** and **Kyle Stevenson** from the **SSEN Transmission Control Room** for colleagues across SSEN Transmission and NESO. Using the CMS HVDC Replica hosted at the HVDC Centre, participants gained practical experience of operational sequences, control mode changes, and real-world HVDC operating scenarios.

The sessions received very positive feedback, with attendees praising the team's expertise, professionalism, and the practical insights gained through hands-on interaction with the replica environment. They also provided an opportunity to strengthen understanding of HVDC operations and encourage knowledge sharing across organisations.

- Shangen Tian

Flexible Research Grant 2026: Recommendations Made to Proceed

Following the launch of the [Flexible Research Grant Call \(2026\)](#) in **March** and a subsequent webinar, we received over **20 applications** from research institutions and organisations across the UK and overseas. The applications addressed all six research questions, each focused on helping to de-risk HVDC deployment. **Five proposals** were shortlisted with interviews in September 2026. Now **three proposals** from **KU Leuven**, **Polimi**, and **RWTH Aachen** are recommended to proceed to procurement stage and expected to begin by the end of the year.

- Dong Chen

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CIGRE UK NGN Visits The National HVDC Centre



The National HVDC Centre recently welcomed members of the CIGRE UK Next Generation Network (NGN) as part of a collaborative visit with the Power Networks Demonstration Centre (PNDC) in Glasgow.

The event brought together early-career professionals, researchers and industry representatives, providing an excellent opportunity to strengthen links between industry, academia and professional networks. Participants gained insights into the capabilities of both facilities, ongoing innovation projects, and the critical role of HVDC technologies in supporting the future electricity system.

Guided tours of the facilities offered a first-hand look at advanced simulation, testing and research environments, while fostering technical discussion, networking and knowledge exchange. The visit highlighted the value of continued collaboration between universities, industry partners and organisations such as CIGRE in developing the next generation of power system engineers.

- Asif Khan

The National HVDC Centre Team Volunteering Day: Pitching in for Nature at Cumbernauld Glen



Colleagues from The National HVDC Centre swapped simulation tools for spades and brushes during a team volunteering day supporting practical conservation work close to the Centre.

On Thursday 23 July 2026, 13 colleagues from the Centre joined **James Robinson** and **Rachel Akerman** from the **Scottish Wildlife Trust** for a volunteering day at **Cumbernauld Glen Nature Reserve**.

The team spent the day removing soil and vegetation from sections of the footpath. By clearing the path surface and cutting back growth along its edges, volunteers helped improve accessibility and protect the route for visitors.

The activity formed part of the Cumbernauld Living Landscape: Nurturing Natural Connections project, which aims to enhance local greenspaces, support biodiversity and strengthen connections between people and nature.

The day gave colleagues the opportunity to work together in a different setting while supporting an environmental project close to the Centre. Alongside the practical improvement to the footpath, the activity encouraged wellbeing, strengthened team connections and created a shared sense of purpose outside colleagues' usual roles.

The volunteering day was also supported by a £250 donation from the SSE volunteering team to the Scottish Wildlife Trust. This extended the contribution beyond the practical work completed on the day.

- Arpan Jana

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Supporting the Next Generation of Engineers

This summer, the National HVDC Centre welcomed **Tomas Goda**, an engineering student at **Lancaster University**, for a **12-week summer placement**. During his time with the team, Tomas gained hands-on experience with **real-time simulation** and **industrial communications** while contributing to a range of other engineering activities at The Centre.

One of Tomas's main projects involved developing a communications interface between an HVDC control system and a **Real Time Digital Simulator (RTDS)** using **GOOSE** messaging. He worked with specialist simulation equipment, industrial control systems and communications networks, helping to establish and test a dedicated communications testing network for the project.

The National HVDC Centre is proud to support the development of future engineers through summer placements such as this. These placements provide students with valuable hands-on experience, allowing them to work alongside experienced engineers on real projects that support the future electricity network.

We would like to thank Tomas for his contribution over the summer and wish him every success in his future studies and career. Students interested in placement, graduate or other early-career opportunities with SSEN Transmission can find out more through the SSEN Transmission Early Careers Programmes page.

- Fabian Moore

The National HVDC Centre at CIGRE Paris 2026

The National HVDC Centre joined around **26 colleagues from SSEN Transmission at the CIGRE Paris 2026 Session (pictured)**, contributing to a strong technical and industry presence throughout the week.

At the heart of the Centre's contribution were **two papers** addressing key aspects of future multi-terminal HVDC networks. The **HansaLink paper** examined a three-terminal rigid-bipole MPI connecting the UK and Germany while integrating approximately 2 GW of offshore wind. The **Network DC** paper presented a performance study and specification framework for DCCBs in multi-terminal HVDC networks.



Ben Marshall also presented during the workshop **"The evolution of HVDC protection: demonstrating maturity and harmonising for multi-vendor competitive solutions"**. His presentation complemented the Centre's Network DC contribution and the wider workshop discussions on developing mature, harmonised protection approaches for future multi-vendor HVDC systems. The workshop formed part of a wider CIGRE programme that included dedicated sessions on HVDC protection and bipolar multi-terminal HVDC systems.

Collectively, these contributions reflected the industry's increasing focus on moving beyond individual point-to-point links towards interconnected, multi-terminal and multi-vendor HVDC networks. Discussions considered the challenges across the full system lifecycle, from standardisation, specification and interoperability to operation, control, protection and coordinated DC fault management.

Alongside the technical programme, **SSEN Transmission** hosted an exhibition stand that provided a valuable platform for engagement with suppliers and other industry partners. These discussions helped strengthen relationships, explore emerging technologies and supply-chain capabilities, and support the delivery of SSEN Transmission's pathway to 2030.

- Mohammed Elgenedy

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The National HVDC Centre Visit by the International Summer School on IBR- Dominated Power Systems

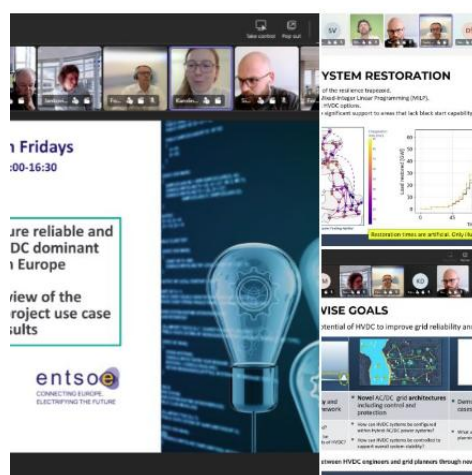


The National HVDC Centre recently welcomed participants from the **3rd International Summer School on IBR-Dominated Power Systems**, hosted by the **University of Strathclyde** and co-organised in partnership with **Imperial College London** and **Tsinghua University**. The summer school brought together PhD students, researchers and industry professionals from around the world to explore the opportunities and challenges associated with the transition towards inverter-based resource (IBR)-dominated power systems. Covering topics such as system modelling and control, stability analysis, protection, resilience, AI applications, distribution networks, and economic optimisation, the programme provided participants with a comprehensive understanding of the technical and operational considerations required to support the future low-carbon power system.

As part of the programme, participants visited **the National HVDC Centre**, where they gained insight into the Centre's role in supporting the secure integration of HVDC and power-electronics-based technologies into the GB transmission network. The visit included demonstrations highlighting the importance of **HVDC replicas** for system integration, interoperability testing, and the validation of control and protection schemes before deployment on live projects. The session provided attendees with a practical perspective on how advanced real-time simulation and replica-based testing are helping to de-risk the operation of increasingly complex, multi-vendor power systems and support Great Britain's transition to a net-zero electricity network.

- Alkistis Kontou

HVDC-WISE Reaches its Conclusion



September 2026 marks the conclusion of the four-year HVDC-WISE research project, a major European collaboration exploring how HVDC technologies can support the development of reliable and resilient hybrid AC/DC transmission systems. The project has brought together transmission system operators, manufacturers, research institutes and universities to investigate the role of HVDC in enabling the energy transition and large-scale integration of renewable generation.

As the project draws to a close, partners are publishing a series of final outputs and recommendations. Key deliverables include a summary of findings from three large-scale use cases examining the benefits and risks of HVDC-based solutions in real grid applications.

Recommendations also cover information exchange standards and planning methodologies, an online training course for transmission planners, a future technology roadmap, and guidance on codes and regulatory frameworks. The project has also produced tools, models and specifications to support future planning and operation of hybrid AC/DC networks.

To share the project's findings with the wider industry, HVDC-WISE will host a public webinar on 28 September 2026. The webinar will discuss the lessons, insights and recommendations emerging from the project, including the importance of coordinated AC/DC planning, model standardisation, data accessibility, and the role of planning practices, procurement processes, and grid codes in supporting resilient future power systems. [\[linkedin.com\]](#)

Further information, project publications, and downloadable resources are available on the HVDC-WISE website: [HVDC-WISE project website](#) and [HVDC-WISE resources](#).

- Colin Foote

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Welcome

We are delighted to welcome new members to the HVDC Centre team:

Md Habibur Rahman



Habib joined the National HVDC Centre as a Senior Power System Engineer in July 2026. He brings over 12 years of international experience in power system planning, HVDC modelling and control, and renewable energy integration. His expertise has been developed through leading research, innovation, and industry projects across the UK, Europe, China, and the Middle East, working closely with transmission owners, system operators, manufacturers, research institutions, and other industry stakeholders. Prior to joining the Centre, Habib served as a Senior Power System Engineer at ENOWA.NEOM in KSA, where he led major grid planning and development initiatives, including HVDC projects, grid code development, and the design of a 100% renewable grid of the future.

Alkistis Kontou



Alkistis joined The National HVDC Centre as a Senior Engineer in 2026. She is responsible for HVDC simulation studies and the validation of HVDC and power electronic systems using offline and real-time simulation, with a focus on power system stability, converter interactions, and cybersecurity. Prior to joining the HVDC Centre, she spent seven years as a researcher at National Technical University of Athens (NTUA), where she led control hardware-in-the-loop (CHIL) and power hardware-in-the-loop (PHIL) experimental validation activities at the Electric Energy Systems Laboratory. Her research interests are mainly focused on cyber-security of power systems, power converter control, converter-driven stability, grid-forming converters, microgrids, and advanced real-time simulation and laboratory validation methods.

Pratik Rao



Pratik Rao joined The National HVDC Centre as a Power System Engineer in August 2026. He has over nine years of industrial experience in power system engineering, spanning HVDC control and protection, EMT studies, renewable energy integration, and AC substation design. Prior to joining the Centre, Pratik worked with GE Vernova, where he led control and protection studies for LCC HVDC projects. He holds an M.Tech in Electrical Engineering and is pursuing doctoral research focused on HVDC systems.

Mark Houlton



Mark joined the HVDC Centre in May 2026 as an Assistant Power System Engineer, he was previously a graduate in SSE Renewables where he undertook electrical design of offshore windfarms and worked with the commissioning team on Dogger Bank C. He holds an MSc in Future Power Networks from Imperial College London and is looking forward to supporting the Large Electricity Network Simulator (LENS) project and Hardware in Loop (HIL) testing activities.

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