Newsletter

Issue 43: Winter 2026 Edition

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The National HVDC Centre

Welcome to our winter edition of the HVDC Centre newsletter, where we announce our HVDC Operators' Forum for 2026 and share new replica documentation, a 'Best Innovation' award for the Aquila project, a CPD event, an update on the BLADE project, a presentation from the CIGRE UK Annual Conference, and welcome a new engineer to our team.

Simon Marshall

2026 HVDC Operators' Forum

Following on from last year's successful event we are planning our annual HVDC Operators' Forum.

This event brings together industry leaders, engineers, policy makers, and academics to explore the latest advancements, operational experiences, and best practice approaches in HVDC technology. Through a series of technical presentations, panel discussions and networking opportunities, attendees will gain valuable insights into the challenges and solutions shaping the future of HVDC deployment.

The event is intended for TOs, manufacturers and anyone involved in the specification, delivery or operation of HVDC projects.

Space at the event is limited by our capacity, and priority will be given to people working on HVDC projects connecting to the GB network – limited to 2 attendees from any organisation.

Location: The National HVDC Centre, Cumbernauld

Date: Wednesday-Thursday 10-11 June 2026

Time: All day

Format: In-person

Register: *Registration for 2026 HVDC Operators' Forum – Fill in form*

Don't miss this opportunity to deepen your understanding of HVDC best practice and help shape the future of power transmission. Register your interest now and be part of the conversation driving innovation in the electricity sector. The registration closing date is 20 March 2026.

Full details of the event will be posted here: Upcoming Events – The National HVDC Centre.

Linda Rowan

The National HVDC Centre

UPCOMING TRAINING: Introduction to HVDC and Project De-Risking. Tuesday 24 February. Register at: https://forms.office.com/e/0vSfy5Y4fv

Aquila Wins Prestigious Scottish Green Energy Award

On 4 December 2025, the Aquila (Lite) project won the award of ***'Best Innovation-New Technology Product'*** in the Scottish Green Energy Awards 2025, which are among the UK's most prestigious renewable energy awards, attended by over 1,600 industry leaders.

This accolade celebrates our pioneering work in delivering vendor-agnostic HVDC control solutions.

Dong Chen

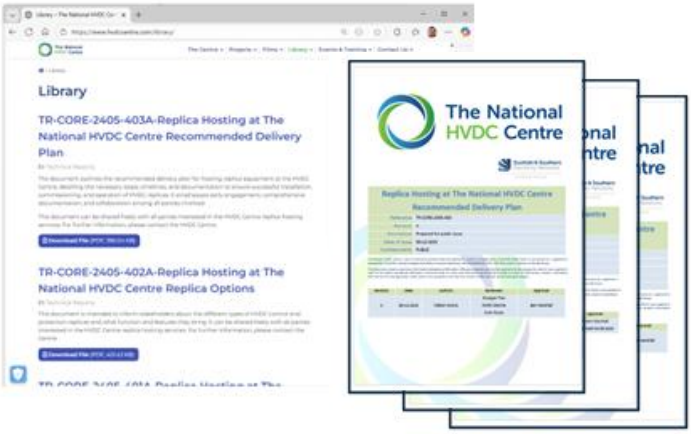
Hot Off the Press: New Replica Hosting Guidance

We are developing a suite of documents to support the specification and deployment of replica equipment hosted at the HVDC Centre.

Where possible, these documents will be published and shared with our customers and stakeholders to support their projects.

We're pleased to announce that three new documents are now available to everyone on our website:

- **TR-CORE-2405-401 – Facilities Description:** An overview of the HVDC Centre site and the facilities available for replica hosting.
- **TR-CORE-2405-402 – Replica Options:** A guide for stakeholders outlining the different types of HVDC control and protection replicas, along with the functions and features they provide.
- **TR-CORE2405-403 – Recommended Delivery Plan:** A step-by-step delivery plan for new replica equipment.



You can find them, along with other useful resources, in our online library:

Library – The National HVDC Centre

If you have any questions or suggestions relating to these documents, please let us know.

Fabian Moore

Senior Engineer CPD Workshop Showcases Collaboration

On 10 December 2025, The National HVDC Centre hosted a Senior Engineer Continuing Professional Development (CPD) Workshop, bringing together engineers from four SSEN Transmission teams - System Performance, the Transmission Control Centre (TCC), Investment Planning and the HVDC Centre.

The workshop demonstrates SSEN Transmission's commitment to strengthening inter-departmental communication and supporting the development of senior technical staff.

Teams shared recent achievements and challenges, creating a shared understanding of priorities across the business.

Participants engaged in technical learning, expert talks, and a collaborative engineering challenge designed to encourage cross-team problem-solving. The event fostered stronger working relationships between teams while helping engineers broaden their knowledge of HVDC technologies, system planning, and operational considerations.

The National HVDC Centre is proud to continue supporting initiatives that enhance technical capability and promote collaboration across the wider transmission community.

Asif Khan

The National HVDC Centre

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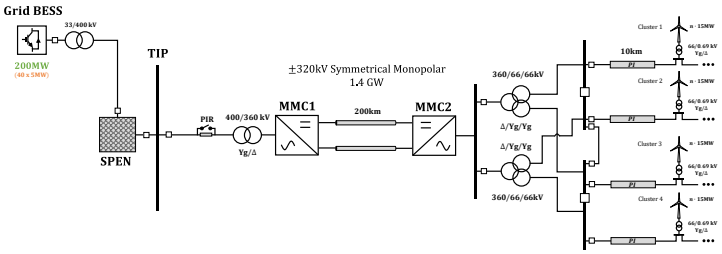
BLADE Project Update

During the past quarter, The National HVDC Centre (NHVDCC) has made significant progress as a technical work package lead within the SIF BLADE project, which is advancing innovative restoration services from offshore wind farms (OWFs) and low-carbon technologies.

As Stage 1 of the Beta phase concludes, we have conducted comprehensive electrical studies using PSCAD to assess the risks, requirements, and opportunities for HVDC-connected OWFs in restoration scenarios.

Analysis focused on the feasibility of energising HVDC-OWFs with onshore grid-forming (GFM) battery energy storage systems (BESS), evaluating control strategies and sensitivities under weak black start conditions.



The research identified stability and dynamic performance as key constraints but demonstrated that advanced control strategies and optimisation enable a range of restoration support solutions, with contribution from very early stages in the restoration process.

While the Beta Stage 1 findings confirm the technical and commercial feasibility of restoration using AC and DC-connected OWFs in coordination with BESS, Stage 2 will dive into detailed specification for low-carbon restoration providers within system reenergisation plans for both the SPEN and SSEN transmission regions.

The National HVDC Centre is expected to host lab-based restoration demonstrations in Stage 2, utilising its advanced real-time simulation facilities and incorporating vendor models.

Adam Scott

CIGRE UK Annual Technical Conference

Shangen Tian represented The National HVDC Centre at the CIGRE UK Annual Technical Conference in Birmingham on 20 November 2025, delivering a presentation on Advanced Modelling and Simulation Tools.

The conference brought together experts from across the power systems community to share knowledge and discuss key industry challenges.

The presentation showcased the Centre's advanced simulation capabilities, including real-time and offline modelling, and their role in supporting complex projects, multi-vendor interoperability, and the transition to a more resilient, Net-Zero-ready power network.

More details and presentation slides are available at: https://cigre.org.uk/uk-news/cigre-uk-technical-conference-2025/

Shangen Tian

Welcome

We warmly welcome **Suvikrant Singh Pathania** who is on the HVDC graduate programme at SSEN Transmission, in the Shetland 2 converters team. He holds a Master of Engineering in Mechanical Engineering with a Year in Computer Science from the University of Birmingham.

Suvikrant has joined the HVDC Centre on placement, where he is undertaking a study to understand the conversion of PowerFactory RMS models to RSCAD EMT. This work will support the HVDC Centre in gaining insight into RMS-to-EMT model conversion, including the key challenges involved.