

Site Selected

We have selected the site for The National HVDC Centre, located in Cumbernauld, central Scotland; and we have designed the building (see images on the right), which we are consulting on with our stakeholders. Please visit our website to view and comment on the plans.

Web Site Launched

We have launched our new website, hvdccentre.com, please visit it and tell us what you think. We are committed to keeping our Website up-to-date with the latest news and useful resources.

Ofgem Approval

Whilst the project successfully received NIC funding in 2013, we required additional final approval from Ofgem, and on 30th March 2015 Ofgem published their decision. They agreed that we met the additional conditions and so provided final approval to establish The National HVDC Centre.

Design Workshop

Our big event in April, is the Design Review Workshop on 23rd April, where our stakeholders have the opportunity to review the design of all of the key components of 'The National HVDC Centre', including:

- The building design (incl physical security);
- The design of the IT infrastructure (incl IT security);
- The staffing of the Centre;
- The operation of the Centre; and
- Communication Strategy.

This is the first Newsletter for The National HVDC Centre, which aims to keep stakeholders informed of our progress and developments.

In this edition, we highlight the latest news, share our vision for the Centre, describe the core technology and introduce the team.



3D visualisation of the planned building for The National HVDC Centre.



Delivering a State-of-the Art Facility

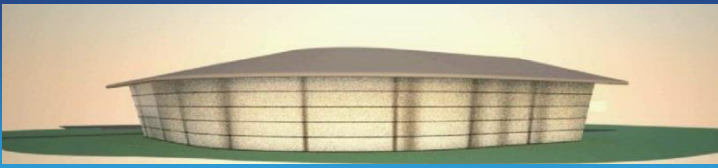
In March 2017 we will formally open The National HVDC Centre. It will be a state-of-the-art training and simulation facility, specialising in HVDC transmission. At its heart will be the Real Time Digital Simulator and Replica HVDC Controls, but it also has a large 22-seat auditorium, flexible meeting rooms and hot-desk office. These facilities will enable a wide range of training & knowledge sharing events, dissemination of study results, flexible working for our stakeholders, academic collaboration and much more; enabling the Centre to become a hub for HVDC knowledge exchange.

To facilitate this ambition, we also plan to launch the 'HVDC Operators Forum', where

organisations operating HVDC schemes share knowledge and experience, whilst learning from the work undertaken at The National HVDC Centre. This Forum will be both an annual event held at the Centre, and also on-line forums for knowledge exchange.

Therefore, combining one of the largest RTDS® systems, with vendor-supplied multi-terminal replica controls, together with a state-of-the-art facility, whilst facilitating knowledge exchange; The National HVDC Centre aims to be a collaborative facility, renowned for supporting HVDC transmission solutions in Great Britain.

Simon Marshall



Our Technology

At the heart of The National HVDC Centre is state-of-the-art technology, focused around:

- A Large RTDS[®] Simulator; and
- Multi-Terminal HVDC Replica Controls.

Real-Time Simulator

Our Real-Time Simulator, supplied by RTDS[®] Technologies (rtds.com), is a specialised multi-processor computer, optimised for power systems simulation through dedicated parallel processing architecture.

Our RTDS[®] system will comprise of 9 racks and 15 MMC support units; each rack will have 5 PB5 processor cards, and each of these cards is capable of simulating up to 2 subsystems with 30 x 3 phase buses, making it one of the most powerful real-time simulators in Europe.

HVDC Replica Controls

Our first set of HVDC replica controls will be supplied from the Caithness-Moray HVDC scheme, and will include the replica controls for the expected extension to Shetland. So we will have the full multi-terminal control system.

This will enable us to support the scheme's commissioning and integration within the AC transmission network, and study (and de-risk) its extension to multi-terminal operation. Along with providing hand-on experience for operational engineers.

Colin Cameron

Our Team



Simon Marshall



Norman MacLeod



Yash Audichya



Colin Cameron

Simon is managing the delivery of the MTTE project to create The National HVDC Centre. Having previously overseen SHE Transmission's NIA innovation portfolio, Simon developed the NIC bid for the MTTE project and, following the success of the bid, is now delivering the project.

"I enjoy the challenge of taking this project from its inception through to the delivery of a world-class HVDC centre."

Norman works for the consultancy firm Parsons Brinckerhoff, where he is the Technical Director for HVDC. Norman is acting as a Technical Advisor to The National HVDC Centre helping to define the functional requirements of the centre and its operational procedures. He will also support the academic research work which will emanate from the centre.

"As the UK installs multiple HVDC schemes, the Centre will become an essential facility for studying and mitigating potential adverse system interactions."

Yash is the HVDC Planning and Design Manager for Scottish Hydro Electric Transmission. He was previously a Principal Consultant for Petrofac and System Design and Engineering Manager for ABB HVDC Global Services, and is now the Technical Lead for The National HVDC Centre.

"My main areas of interest are: HVDC Grids, Power Oscillation Damping, Sub-synchronous torsional interaction, and interactions between HVDC & FACTS devices."

Colin is an ICT engineer who is responsible for the delivery of IT infrastructure of The National HVDC Centre. Prior to working on The National HVDC Centre, Colin worked for SSE IT for 5 years where he had responsibility looking after SSE's Renewables Centre of Excellence in Glasgow.

"I enjoy the technical challenge of designing the IT architecture of The National HVDC Centre ensuring that it can meet the current and future requirements of the centre."

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