



## A new focus

2019 is an important year for the HVDC Centre; following the successful commissioning of the Caithness-Moray project (which we have been supporting over the last 2 years) our focus is now on supporting other HVDC schemes that are planned to connect to the GB network over the coming years, along with the real-time demonstrations of meshed grid protection for the PROMOTiON project.

So our challenge this year is to leverage our experience and learnings from the CM project to de-risk the deployment of other HVDC schemes on the GB Network.

## Expanding our team

We are delighted to welcome Habib and Bharath to our simulation team.

**Md Habibur Rahman** brings over four years' research experience on Multi-terminal HVDC systems; focused on fault management, system topology, and control and protection schemes, having started his career with the Department of Electronic and Electrical Engineering at the University of Strathclyde.

**Bharath Ponnalagan** brings a manufacturer's perspective, having been a lead engineer with GE and a team manager with ABB; he has expertise on the practical design of control and protection for HVDC projects.



## ACDC 2019

In February, the Centre participated in another successful ACDC conference (hosted by the IET in Coventry), at the conference we:

- Presented a technical paper, on installation of Replicas;
- Delivered a tutorial in collaboration with RTDS® Technologies on the practical uses of real time simulation;
- Introduced open-assess converter models (developed in collaboration with the University of Strathclyde); and
- Hosted a stand in the exhibition.

The event was well organised and very useful, with many interesting and innovative papers presented, along with the opportunity to network with a cross-section of those at the leading edge of HVDC developments.



*Daniel Adeuyi*

To find our more, please contact us to discuss or to arrange a visit:

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## RTDS® Real-Time simulation training courses

The Centre has started to run a series of RTDS® training courses, the first of which was a 3-day course held in January, which introduced attendees to the RTDS® hardware and RSCAD software to enable them to perform real-time network simulation studies.



Here is some of the feedback from the attendees from UPC, Barcelona:

- *“Very clear course with cutting-edge equipment. Highly recommended even if you have previous experience in RTDS®.”*
- *“Really interesting course to start using RTDS® equipment. Complete explanations about how the hardware and software works starting with simple models and finishing with real converter replicas.”*
- *“Very interesting and dynamic course. All the essentials to work with RTDS®. The National HVDC Centre was a very good host too!”*

We are running this course again from 30<sup>th</sup> April to 2<sup>nd</sup> May and then again towards the end of the year, please get in touch if you would like to attend, [info@hvdccentre.com](mailto:info@hvdccentre.com).

*Ian Cowan*

## HVDC Centre funds three research projects

The HVDC Centre has completed a two-staged evaluation process for selecting research projects from universities and research institutions, to support its objective of de-risking the deployment of HVDC schemes in GB.

The call for research proposals attracted 18 projects from 12 different institutions, with 7 full proposals invited from 4 institutions in the second round, out of which 3 proposals were selected for funding by the HVDC Centre with a total budget of £283k and kick-off expected in early April.

EPRI, University of Strathclyde and Cardiff University researchers will engage with HVDC staff to deliver these projects:

- Coordination of AC network protection settings during grid energization from HVDC schemes (EPRI);
- Stability assessment and mitigation of converter interactions in HVDC schemes (Strathclyde); and
- Improving Grid Code Compliance of existing and upcoming HVDC Schemes in GB (Cardiff).

Projects are expected to kick-off in early April 2019 and will last between 8 – 12 months. A summary of the selected proposals is available at [www.hvdccentre.com/projects2019](http://www.hvdccentre.com/projects2019).

*Daniel Adeuyi*



EPRI  
ELECTRIC POWER  
RESEARCH INSTITUTE



University of  
Strathclyde



CARDIFF  
UNIVERSITY  
PRIFYSGOL  
CAERDYDD



## Blackhillock site visit

Many thanks to Cameron McHardy from the Caithness-Moray project team, for showing us round the Blackhillock converter station; the largest substation in the UK and the second largest in northern Europe, covering an area the size of 24 football pitches.

Habib, Daniel and myself were hugely impressed with the scale of the site, it was great to see the valve halls, and the real control system (for which we have the replicas at the HVDC Centre).

*Simon Marshall*

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