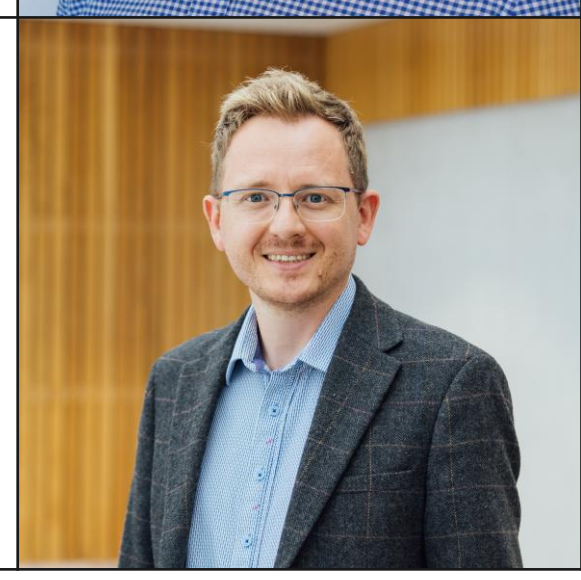
Energy Innovation Forum - Glasgow - September 17th 2025

DISTRIBUTION COHORT

08:30-09:30	Doors Open / Registration & tea and coffee		
09:30-09:45	**Welcome & Opening Plenary** Speaker: Dan Clarke (ENA)		
	Session 1 - "Distribution, resilience, stability, LV network"	*Speaker*	*Speaker Bio*
09:45-10:05	**Delta Detect – SP Electricity North West** DeltaDetect aims to revolutionise fault detection and localisation in high voltage underground networks by adapting low voltage monitoring technology to create a cost-effective and scalable solution.		**Michael Keddy** is an Innovation Delivery Engineer with SP Electricity North West and project manager of the DeltaDetect project.
10:05-10:25	**Phased Switch System – NGED** The £3.1 million SIF Beta-funded Phase Switch System (PSS) project tackles phase load imbalances in the electricity distribution network—an issue that's becoming more common as customers adopt low carbon technologies like heat pumps and electric vehicles. By automatically reducing phase imbalance, the PSS increases the network's capacity, enabling more low carbon technologies to connect without the immediate need for costly reinforcement. This helps National Grid Electricity Distribution deploy its low voltage (LV) reinforcement resources more efficiently, especially as demand on the network grows. The presentation will focus on the work undertaken to date on developing the PSS product, and plan for the network trials		**Geoff Down** has been with National Grid since 2012, working on innovation, change and transformation activities for more than decade across the NG Group, including 5 years as Innovation Manager for NESO. Geoff's specialism is providing strategic delivery insight into exploring the unknown whether that's approaches, tools or techniques. In the Future Capabilities team, Geoff is setting the design and strategic principles for our future capability roadmaps, understanding our needs in the short, medium and long term. Geoff also looks after the load related and asset management innovation programmes.
10:25-10:45	**Delta Detect and Phased Switch System Questions & Answers**		
10:45-11:00	Comfort Break – tea and coffee		
	Session 2 - "Distribution, resilience, stability, LV network"	*Speaker*	*Speaker Bio*
11:00-11:20	**LVPQ – SSEN-D** I will be presenting the latest updates on the Low Voltage Power Quality (LVPQ) NIA. I will be exploring the reasons behind this innovation, the work we have completed to date, the data we have collected and what work is due to be completed.		**Phil Clarke** has been part of SSEN for 12 years and has had several roles within the business. Working as a subject matter expert for Low Voltage Automation and a Low Voltage Solutions Manager, Phil has had a wide experience utilising solutions to improve the resilience of SSEN's low voltage underground network and in locating transient Low Voltage faults. Now working in Future Networks as an Innovation Project Manager, Phil is working on further improvements on the Low Voltage Network and is currently focusing on the Low Voltage Power Quality NIA.
11:20-11:40	**D-Suite – SPEN** Compared with conventional solutions, D-Suite will better address both thermal and voltage issues that we increasingly experience in LV networks. D-Suite technologies will not only increase the renewable connectivity, but also contribute to loss reduction due to the optimised voltage profile and local power balancing.		**Andrew Moon** is a Chartered Engineer that has worked for and on behalf of SP Energy Networks (part of the Iberdrola Group) for 9 years and was the lead Angle-DC project manager, a European Flagship innovation project which has converted an existing double AC distribution circuit, from the island of Anglesey to the Welsh mainland in the UK, to operate as a DC circuit; a first of its kind internationally. Andrew has a Power Electronic and heat decarbonisation focus, specialising in raising the TRL of novel power electronic applications and their control systems for distribution networks. Andrew is also part of a CIGRE Medium Voltage DC working group for the application of MVDC technology to distribution networks. Andrew also contributed to the ENA engineering report 137 on testing methodologies for power electronic devices. Andrew is co-author of numerous technical papers presented in international conferences and peer-reviewed journals. Before this, Andrew has delivered Low Carbon Network Fund Projects in the demand side management EV space. At present, he is the Strategy and Stakeholder Innovation Manager, for the Future Networks Team in the SP Energy Networks Process and Technology department. In this role, Andrew is responsible for delivering SP Energy Networks Innovation projects and developing innovation strategies for the distribution and transmission networks and developing innovation projects for the Network Innovation Allowance (NIA) and Strategic Innovation Fund (SIF).
11:40-12:00	**LVPQ and D-Suite Questions & Answers**		
12:00-12:50	Lunch		
	Tours		
12:50-13:30	Coach Travel Clayton Hotel to Cumbernauld		
13:30-14:30	Distribution Group A PNDC Tour	Distribution Group B HVDC Tour	Distribution Group A Leader Dan Clarke – ENA Distribution Group B Leader Vivian Ng – ENA
14:30-15:30	Distribution Group A HVDC Tour	Distribution Group B PNDC Tour	
15:30-15:45	Comfort Break – tea and coffee		
15:45-16:25	Coach travel Cumbernauld to Clayton hotel		
16:25	Event End		

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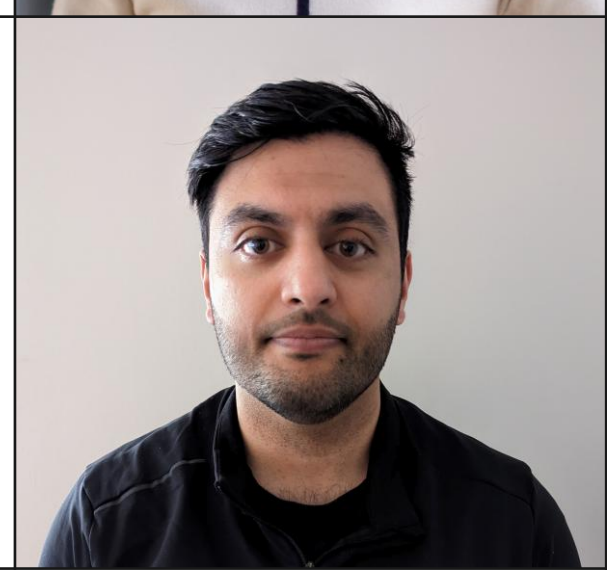
TRANSMISSION COHORT

08:30-09:30	Doors Open / Registration & tea and coffee		
09:30-09:45	**Welcome & Opening Plenary** Speaker: Dan Clarke (ENA)		
	Tours		
09:45-10:25	Coach Travel Clayton Hotel to Cumbernauld		
10:25-11:25	Transmission Group A PNDC Tour	Transmission Group B HVDC Tour	Transmission Group A Leader Ollie Pulling - ENA Transmission Group B Leader Esmond Bowerman - ENA
11:25-12:25	Transmission Group A HVDC Tour	Transmission Group B PNDC Tour	
12:25-12:40	Comfort Break – tea and coffee		
12:40-13:20	Coach travel Cumbernauld to Clayton hotel		
13:20-14:10	Lunch		

	Session 3 - "Transmission, network of the future"	*Speaker*	*Speaker Bio*
14:10-14:30	**VoltXpanse – NGET** The project explores the feasibility of deploying the overhead line ultra high voltage (UHV) transmission technologies within the GB network to deliver the bulk capacity needed for future energy demands while minimising environmental impacts. The project focuses on identifying strategic UHV solutions, understanding their effects on system stability, assessing compact tower designs, investigating underground and routing alternatives, and recommending optimal strategies for efficient, economic, and sustainable deployment.		**Dr. Xiaolin Ding** is a Chartered Engineer of the Institution of Engineering and Technology (IET) with extensive experience in power systems and innovation. She joined National Grid Electricity Transmission in 2006 after completing her PhD in Electrical Engineering from Queen's University Belfast. Xiaolin specialises in network modelling, power system analysis, and network planning. For the past six years, she has worked as the Innovation Lead for power systems, actively collaborating with industry and academic experts to drive innovative solutions and technological advancements that promote resilient and sustainable power systems for the future.
14:30-14:50	**Network-DC Circuit Breakers – SSEN-T** Network-DC is investigating the use of DCCB, an innovative technology untested in the UK and European markets. DCCBs will allow us to bring multiple wind farms into a DC system, containing the impact of any single failure safely and securely. This Project brings together international partners to accelerate the readiness of DCCBs for installation into the design of the UK HVDC Network and outlines a clear pathway for the installation of the UK's first DCCB.		**Adnan Mahmood** is an Innovation Delivery Project Manager at SSEN Transmission, where he leads the Network DC project. Since joining SSEN Transmission in 2023, he has managed several projects funded through Ofgem's Strategic Innovation Fund, helping to drive innovation across the GB electricity network. Before this, Adnan built his project management expertise in the aerospace sector.
14:50-15:10	**VoltXpanse and Network DC Circuit Breakers Questions & Answers**		
15:10-15:25	Comfort Break – tea and coffee		

	Session 4 - "Transmission, network of the future"	*Speaker*	*Speaker Bio*
15:25-15:45	**HVDC-Lifecycle Assessment – NGET** High Voltage Direct Current (HVDC) transmission systems are generally considered to have lower emissions compared to traditional AC transmission systems. However, HVDC systems do require additional equipment such as converters and transformers, which may produce some emissions during their manufacturing and operation. Accurately quantifying and understanding the carbon footprint of HVDC is important from a project consenting perspective to ensure that the transition to net zero through the increased use of interconnector systems does not result in environmental harm. This project focused on the asset life cycle assessment of HVDC and intended to identify opportunities to focus on and better understanding of the efforts needed to reduce emissions.		**Dr Muhammad Shaban** is Lead Innovation Engineer in National Grid Electricity Transmission. Muhammad is a Chartered Electrical Engineer registered with IET. He is part of several WGs like CIGRE substation LCA, low carbon technology accelerator, and delivery leadership group.
15:45-16:05	**Predict4Resiliance – SPEN & SIA Partners** Weather plays a huge role in how the network behaves and severe weather can, in rare events, have an impact on the electricity network causing a significant inconvenience to individuals and businesses who are increasingly dependable on their electricity supply. Predict4Resilience (P4R) will provide accurate fault insights and forecasts for its users during adverse weather events. It is one of the first projects in Great Britain to utilise probabilistic fault prediction and related decision support, transforming human centric decision making and leading to an improved response to faults on the HV network. P4R will provide Control Room operatives short term predictions regarding the expected level of faults in each district across the license area up to 7 days in advance. This will allow distribution network operators (DNOs) to better prepare for a storm and restore power supply sooner than is currently possible and minimise disruption for customers. This proactive response will enable power supply to be restored more quickly than currently possible, reducing customer minutes lost and generating considerable direct benefits to consumers, network operators and the environment.		**Dr. Parham Momeni** is a distinguished Chartered IMECHE Innovation Lead Engineer, currently leading the Digital and Data initiatives within the SPEN Innovation team. With a PhD in Mechanical Engineering from the University of Manchester, Dr. Momeni brings a wealth of expertise to his role, focusing on digital-related projects that drive innovation and efficiency. Dr. Momeni's professional journey is marked by his proficiency in developing physical models for complex engineering problems, enhancing processes through digital engineering and cloud integration, and managing projects with a keen eye for detail. His expertise in cloud computing further underscores his ability to leverage technology for transformative solutions. A passionate advocate for research and development, Dr. Momeni is dedicated to exploring novel ideas and establishing a strong R&D presence. His work aims to advance new designs and improve existing engineering products and processes through simulation, fundamental engineering analysis, and data-driven insights.
16:05-16:25	**HVDC-Lifecycle Assessment and Predict4Resiliance Questions & Answers**		
16:25	Event End		