



Scottish & Southern
Electricity Networks

TRANSMISSION

www.ssen-transmission.co.uk

On the journey to a Network for Net Zero

December 2022

About SSEN Transmission

SSEN Transmission, part of the SSE Group, is responsible for the electricity transmission network in the north of Scotland. As the Transmission Owner (TO) we maintain and invest in the high voltage 132kV, 220kV, 275kV and 400kV electricity transmission network in the north of Scotland and the Scottish Islands.

The network consists of underground and subsea cables, overhead lines on wooden poles or steel towers, and electricity substations. It extends over a quarter of the UK's land mass, crossing some of its most challenging terrain and powering communities by providing a safe and reliable supply of electricity. They do this by taking the electricity from generators and transporting it at high voltages over long distances through our transmission network for onwards distribution to homes and businesses in villages, towns, and cities.

Scotland's transmission network has a strategic role to play in supporting delivery of the UK's net zero target. We are already a mass exporter of renewable energy, with around two thirds of power generated in our network area exported south.

By 2050, the north of Scotland will need 40GW of low carbon energy capacity to support net zero delivery. For context, the SSEN Transmission network currently has close to 7GW of renewable generation connected in the north of Scotland.

SSEN Transmission is committed to inclusive stakeholder engagement and conduct this at an 'Advanced' level as assessed by AccountAbility, the international consulting and standards firm.

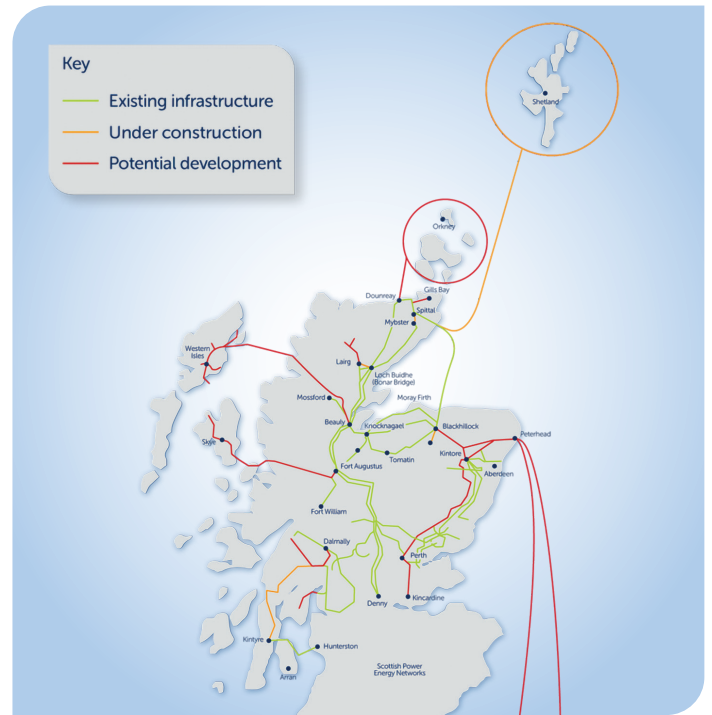
Find out more at: www.ssen-transmission.co.uk

SSEN Transmission is regulated by Ofgem. In April 2021 a new 5-year regulatory period began (RIIO -T2). SSEN Transmission made a number of performance commitments through this next 5 year period, including a focus on delivering a network for net zero; facilitating Scotland and the UK's transition to a green, low carbon economy. A continued focus on stakeholder engagement and incorporating stakeholder feedback into decision making is another key focus for RIIO-T2

About the Network for Net Zero Stakeholder Group

As part of the Enhanced Engagement process for RIIO-T2, throughout the development of the RIIO-T2 Business Plan, an independent User Group worked alongside SSEN Transmission. This group was established to understand the processes and methods used by SSEN Transmission to fulfil the regulatory objectives of RIIO-T2 and assess the degree to which the Business Plan was co-created and supported by stakeholders. The User Group provided scrutiny of the information used to make Business Plan decisions and offer challenge to the business through the development of the Business Plan. The User Group reported their findings, independently, to Ofgem when the Business Plan was completed.

On completion of the RIIO-T2 Business Planning process, Ofgem set out its intention to consider whether there was an enduring role for User Groups to monitor deliver of the Business Plans. Notwithstanding the decision on an enduring independent scrutiny role, SSEN Transmission decided to set up an independent group, the Network for Net Zero Stakeholder Group, to focus on scrutinising, challenging, and advising on



the delivery of RIIO-T2, with a particular focus on Net Zero and stakeholder engagement commitments. This Group was established in August 2020.

In establishing this group, the business wanted members with the expertise to represent stakeholders, expertise to support the Net Zero energy transition challenges and/or knowledge of the regulatory processes to provide a level of continuity from the development of the RIIO-T2 business plan.

The Network for Net Zero Group has six members *

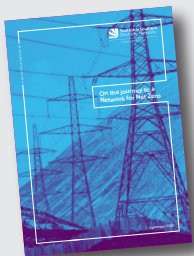
- Tracey Matthews (Chair)
- Claire Mack
- Maxine Frerk
- Doug McAdam
- Julian Lesley
- Geoff Aitkenhead

*Group biographies can be found on page 9

Purpose of this report

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The purpose of this report is to:

- Provide a summary to SSEN Transmission Executive Committee and business leaders of the delivery topics considered, and the advice given. The objective being to support the Board and Executive team's work in ensuring scrutiny and delivery accountability
- Be transparent about the work of the Network for Net Zero Stakeholder Group for the benefit of customers and stakeholders

Chair's Foreword



Tracey Barlow
Network for Net Zero
Stakeholder Group Chair

Our focus this past year has been two-fold; understanding progress with delivering RIIO-T2 Business Plan commitments and the impact of the 'Pathway to 2030' on SSEN Transmission's network planning and future delivery programme.

The scale of network investment required to deliver the 'Pathway to 2030' is extensive. In preparing the RIIO-T2 Business Plan, SSEN Transmission modelled a number of Net Zero transition scenarios and this work has been very valuable in supporting this 'Pathway to 2030' plan. We have confidence that the proposed programme, albeit challenging in terms of investment and resource requirements, can be achieved with the active participation of customers and regulatory bodies. The engagement programme is extensive and SSEN Transmission are committed to effective engagement. We shall continue to encourage and monitor this active engagement.

The extent of the network investment programme means SSEN Transmission teams will be a constant neighbour in many north of Scotland areas. We are working with the business to understand how legacy opportunities can be achieved in these areas and, primarily, legacies that support developing skills within the local workforce and bringing opportunities for business growth within communities. Our site visits to Alyth and Tealing substations were really good examples of the mutual benefits from positive and sympathetic engagement with local communities. We must acknowledge the economic and energy challenges facing everyone, alongside the post-covid recovery business challenges. We were pleased to see the work being done to stimulate a collaborative and inclusive work environment in the refurbished office space at Perth as well as the extensive organisational change programme that is underway to develop ways of working that encourage a diverse workforce with an emphasis on personal development. As a growth business, SSEN Transmission has an important role to play in providing high quality job opportunities that support local people and economies.

The SSEN Transmission teams have continued to provide the group with timely, high quality information and remain very responsive to our insights, advice and challenges. I believe we add value to the business' risk and assurance assessments of decisions, work programmes and outcomes and, of course, we will continue to test the effectiveness of stakeholder engagement. Finally, I want to say a heartfelt 'thank you' to Jenna Black as she prepares to take a break from us to dedicate her time to her growing family. Jenna has looked after the group for six years. She is amazing and a great example of the people development commitment being demonstrated in SSEN Transmission.

Foreword from the Managing Director of SSEN Transmission



Rob McDonald
Managing Director,
SSEN Transmission

Our journey to deliver a network for net zero has taken a major step forward following the publication of National Grid ESO's of 'Pathway to 2030', paving the way for £7bn+ investment in our north of Scotland transmission network.

The 'Pathway to 2030' includes a refresh of January's Networks Options Assessment and sets out the blueprint for the electricity transmission network infrastructure required to enable the forecast growth in renewable electricity across Great Britain, as well as delivering the UK and Scottish Governments 2030 offshore wind targets of 50GW and 11GW. You can read the full publication [here](#).

For the north of Scotland, this confirms the need for over £7bn of investment in onshore electricity transmission infrastructure. This major investment will not only provide huge economic opportunities for communities across the north of Scotland, it presents vast opportunities for our people in terms of career development and progression as we continue to grow as a business. We've already established a dedicated team focusing on our 2030 growth strategy, who are in the process of reviewing what adjustments are required to our ways of working to make sure we're on track to deliver this fantastic growth opportunity. We now look forward to working constructively with the UK and Scottish Governments, Ofgem, our supply chain, the wider energy industry, and our stakeholders, to deliver the timely, coordinated, and efficient investment in grid infrastructure that is key to deliver 2030 targets and a pathway to net zero.

The members of this group are extremely talented and experienced people and I am delighted to have them on board as we work together on the next stage of our journey to a network for net zero.

How the Group works

SSEN Transmission’s RIIO-T2 Business Plan has been co-created to meet the expectations and needs of energy consumers, customers, and stakeholders in the north of Scotland and across GB. The focus of the plan reflects the ambition of stakeholders: to tackle the climate emergency, to ensure a reliable and available transmission network, to improve resilience and security of supply, to act sustainably and earn the trust of stakeholders. And to do this cost effectively.

The purpose of the group is threefold:



To hold SSEN Transmission to account on delivering the commitments made in the RIIO-T2 Business Plan settlement; in particular, performance against targets and outputs.



To provide independent scrutiny, challenge and advice on key decisions beyond the ‘certain view’ business plan scenario.



To discuss any other matters that the Network for Net Zero Stakeholder Group identify, in agreement with the business, including preparation for RIIO-T3.

In planning the agendas, topics for future discussion are identified at each meeting. Agenda items are built into a meeting schedule for the year ensuring that the most salient issues are discussed. Each agenda is set by the Chair alongside the Secretariat.

In April 2021, we entered our new five year price control period known as RIIO-T2, having actively consulted with our stakeholders on the development our Business Plan for the RIIO-T2 period.

The Business Plan, titled ‘A Network for Net Zero’, covers the period from April 2021 to March 2026 and follows substantial consultation with national and local stakeholders, as well as SSEN Transmission’s independent expert RIIO-T2 User Group. It aims to support both the UK and Scottish Governments’ net zero emissions targets and meet the needs and expectations expressed by stakeholders through five clear, ambitious goals:



Transport the renewable electricity that powers 10 million homes

Our RIIO-T2 Certain View will deliver an electricity network with the capacity and flexibility to accommodate 10 GW renewable generation in the north of Scotland by 2026



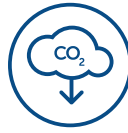
Aim for 100% transmission network reliability for homes and businesses

By investing in new technology and ways of working, when cost effective for customers to do so, we will strive for 100% transmission network reliability for homes and businesses by 2026



Every connection delivered on time

By 2026 we will provide every network connection, tailored to meet our customers’ needs, on time, on budget and to our customers’ satisfaction



One third reduction in our greenhouse gas emissions

Reduce the controllable greenhouse gas emissions from our own operations by 33% by 2026, consistent with a net zero emissions pathway



£100 million in efficiency savings from innovation

Our RIIO-T2 Certain View includes £100 million of cost savings through productivity and increased innovation, and we aim to go further to save more

Group Involvement

In December 2021, we welcomed Chair of the SSE plc Board, Sir John Manzoni, to discuss SSEN Transmission's ambitious and holistic sustainability strategy - a key area that will play an important part in our journey to deliver a network for net zero.

The business provided the group with an update on activities in line with net zero, including updates to Future Energy Scenarios, assessment of contributions of GB decarbonisation, advocacy on transmission charging and offshore wind, and actions to reduce

carbon emissions. Previously, the Group have had presentations on horizon-scanning and best practice of sustainability challenges and developments undertaken by consultancy 3Keel, to identify strengths and gaps and inform a review of the sustainability strategy. In this session the business sought views from the group on what additional research and engagement should be undertaken to ensure that the strategy review is well informed, and stakeholder led.

In March 2022, the Group joined SSEN Transmission teams on a tour of some of their key projects that will play an important role in the journey to deliver a network for net zero.

The first visit was to Alyth substation, one of two reactive compensation substations being constructed as part of the R110-T2 investment programme. The Group enjoyed a presentation on the project's progress so far before joining the team for a visit around the site to see the works first-hand. Project teams also shared insights into key initiatives being progressed at this site such as the benefits of using pre-cast concrete foundations and cable troughs and highlighted the ongoing successes of effective engagement with the local communities.

The second visit was to Tealing Substation where SSEN Transmission is upgrading the existing 275kV East Coast transmission network to enable new generation capacity to link to Great Britain's transmission system.

The business is developing a significant number of projects on the East Coast of Scotland to strengthen the network serving the region and allow developers of onshore and offshore renewable electricity to connect. One of these developers being Seagreen Wind Energy Limited (SWEL).

The Chair of the Network for Net Zero Stakeholder Group added, "The extent of the network programme was clearly evident when we visited Alyth and Tealing substations. Alyth, a 'new build' site is being sympathetically constructed with considerations to minimise community and environment impacts during the construction phase as well as from the finished site. The Tealing site presents different challenges, being an extension of a current substation site. Close liaison between operational and construction teams and site management planning are constant factors. We were impressed with the people we met and management of both sites. Site visits are really useful; we can see the facilities being built, talk with site teams and understand the work being done with community groups and neighbours first-hand."

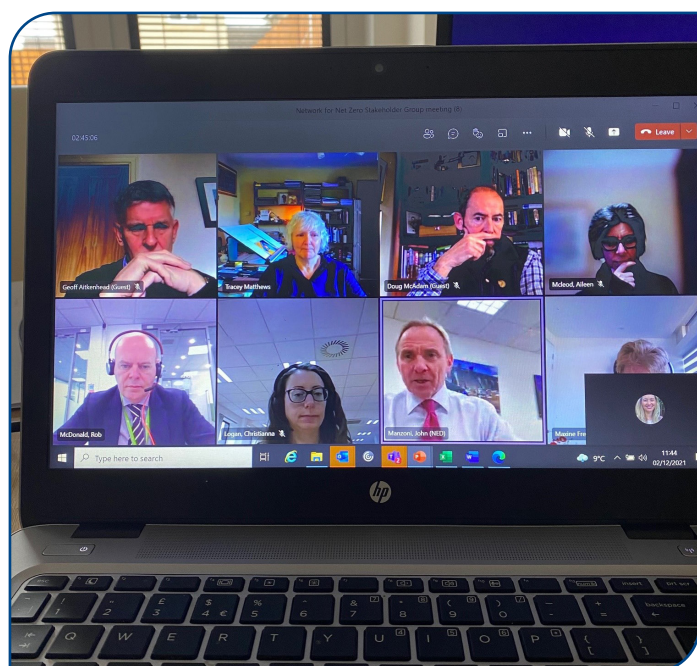


Figure 1: Alyth construction project site visit



Figure 2: Tealing substation site visit

Throughout the last year, the Group were kept updated with developments on major transmission projects such as Western Isles¹, Orkney², Shetland³ and Argyll⁴ and their associated Needs Cases. The Group advised on topics within the development of the business' strategic approach to Needs Cases (which are the submissions made to the regulator to justify the need to develop and build the projects), reviewed strategies and provided advice concerning evidencing stakeholder support in the development plans presented to Ofgem.

The Group recommend a strategic approach to engagement which begins with clarity of the engagement objectives; to consult, interact or educate and recognising the distinction between each of these reasons for engaging.



¹<https://www.ssen-transmission.co.uk/projects/project-map/western-isles/>

²<https://www.ssen-transmission.co.uk/projects/project-map/orkney/>

³<https://www.ssen-transmission.co.uk/projects/project-map/shetland/>

⁴<https://www.ssen-transmission.co.uk/projects/project-map/argyll-and-kintyre-275kv-strategy/>

Going forward

In the coming year, the Group will focus on the work SSEN Transmission is doing in the areas of:

- Investment proposals and outputs over and above the RIIO-T2 Business Plan Certain View including the Final Needs Case for the Argyll project
 - The Stakeholder Engagement undertaken to inform proposals and keep stakeholders informed of delivery plan progress
 - The range of scenarios the business has considered to anticipate future network requirements and their approach to managing uncertainty and associated risks. This should include testing the business plans against more extreme scenarios (both significantly lower or higher demand) to ensure the business plan remains robust in the face of unforeseen changes
 - What alternatives to the investment proposals the business has considered, including from parties offering alternative and non-network-based solutions
 - Any issues of particular relevance to a local region, including any significant investment choices in a local area, and scrutinising decisions made by the business when considering competing interests and perspectives.
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Panel Members



Tracey is an experienced Executive with a demonstrated history of working in the utilities industry. She is highly skilled in Business Planning, Operations Management, Business Transformation and Project Portfolio Management. Tracey was the independent Chair of the RIIO-T2 User Group and the Distribution RIIO-ED2 Customer Engagement Group, providing independent scrutiny of the value of enhanced stakeholder engagement in preparing business plans for the T2/ED2 price control period.

Tracey currently holds non-executive roles on the Board at the Office for Nuclear Regulation, Energy and Utility Skills Group and Transport for Greater Manchester.



Claire is currently CEO of Scottish Renewables, a member organisation dedicated to strengthening business relationships, and utilising Scotland's abundant natural resources to secure a future that will deliver on jobs, investment, energy security and climate change.

Claire has a wealth of experience in Stakeholder Management and Engagement, Business Strategy, Policy and Change Management. Claire was former Director of Policy and Place at Scottish Council for Development and Industry (SCDI), and Regulatory Affairs Manager at Ofcom, the communications regulator in the UK.



Maxine has a long background in regulation and consumer issues. She spent 15 years in Ofgem most recently as Senior Partner Networks responsible for all aspects of network regulation including RIIO ED1 and a member of Ofgem's executive board.

Earlier in her time at Ofgem she was Head of Consumer Insight and Policy and sat on the Government's Fuel Poverty Advisory Group. Since leaving Ofgem she has been working as a consultant and thought leader in the energy space. She chairs SGN's Customer Engagement Group and is an Associate with the environmental charity Sustainability First.



Doug has spent the last thirty years in private commercial businesses across the aviation, utilities/facilities management, and land management sectors, both internationally and in the UK. From 2006 to 2017 he was CEO of Scottish Land & Estates representing land owning and rural businesses across Scotland. Doug now owns and runs his own company operating in the consultancy, property, and tourism. Doug also currently sits on a number of public and private boards including Cairngorms National Park Authority, Wild Scotland and Countryside Learning Scotland and is also Chairman of Wild Deer Best Practice and the South Grampian Deer Management Group.



Head of Networks – National Grid Electricity System Operator

Julian is the Head of Networks and Chief Engineer at National Grid ESO. He is a chartered engineer with three decades of transmission system operation, planning and investment experience. Julian's role is to prepare Great Britain's electricity network for net zero operation, defining future network needs so that market and network owners can invest in the right technology solutions at the right time. He is also responsible for transmission system connections, ensuring that access – both connection and maintenance – is safe, secure and straightforward and keeps consumers' costs to a minimum.



Geoff was the Asset Management Director at Scottish Water for 14 years to July 2016. Since then, Geoff has maintained his involvement in the field of asset management, including investment delivery through non-exec roles with Scottish Water International and Southern Water.

Geoff was a well-respected member of the RIIO-T2 User Group and is now an active member on the SSEN Distribution Customer Engagement Group who provide independent scrutiny of the value of enhanced stakeholder engagement in preparing business plans for the ED2 price control period.



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