Scottish & Southern Electricity Networks

NPF4 Call for Ideas
30th April 2020

Scottish and Southern Electricity Networks (SSEN) response

About us

Scottish and Southern Electricity Networks (SSEN), operating under licence held by Scottish Hydro Electric Power Distribution plc, owns, operates and develops the electricity distribution network in the north of Scotland, powering over 750,000 homes and businesses. SSEN, under licence held by Scottish Hydro Electric Transmission plc, also owns, operates and develops the high voltage electricity transmission system in the north of Scotland and remote islands.

We power our communities by providing a safe and reliable supply of electricity. We do this by taking the electricity from generators and transporting it at high voltages over long distances through our transmission network for onwards distribution via our distribution networks to homes and businesses in villages, towns and cities.

As a regulated business, we are an active and responsible participant within the Scottish planning process; delivering much needed, critical national infrastructure (such as the Beauly-Denny transmission line and the subsea cable from Caithness to Moray, including associated onshore infrastructure) under the various obligations contained in our licences for the distribution and transmission of electricity. Our developments support and enable the transition to net zero and over the past seven years, our transmission business has invested around £3bn into infrastructure in the north of Scotland alone.

Executive Summary

SSEN welcomes the opportunity to share our views as the Scottish Government develops the detail of NPF4 and SPP. We believe that the Scottish Planning Framework is a cornerstone for socio-economic development and growth whilst acting as a vital facilitator in supporting the country's decarbonisation, innovation and biodiversity agenda.

To deliver these ambitions, it's important that the planning system continues to provide a supportive landscape for key infrastructure projects in Scotland, especially for development that supports community resilience, boosts the economy and facilitates the transition to net zero at a local, regional and national scale.

During this pivotal time, a responsive, flexible and coordinated consenting process will be crucial to reduce delays to project delivery and realise wider goals.

A summary of our key points can be found below:

- SSEN Transmission's strategic objective is to enable the transition to a low carbon economy. We do this by building the transmission infrastructure required to connect renewable electricity generation and transporting that clean electricity to where it is needed. We therefore have a critical role to play in enabling the delivery of Scotland's net zero ambitions as well as maintaining and improving network resilience. We therefore strongly advocate for all Transmission development to retain National Development Status, as it currently does in NPF3, given the critical role we play in supporting Scotland's net zero ambitions and the local and national resilience of the energy system.

- Reinforcements to the East Coast transmission network, links to Scotland's remote islands and upgrades to Argyll and Skye's existing transmission infrastructure will play a crucial role in the delivery of further renewable generation in these areas during the transition to net zero as well as delivering improved network resilience.

- We hope the regional priority areas, as outlined above, will be referenced within the next planning framework as being significant to Scotland's decarbonisation and economic ambitions, alongside wider recognition that any required upgrades to the transmission network as a whole will be nationally significant.

- Coordination between key agencies on planning, wider energy and social policy along with regulatory related issues is welcome to reduce barriers in project delivery during the development of NPF4 and once it is implemented. This will be particularly vital to realise the opportunities that could be delivered through future offshore wind leasing rounds, and proposed amends to the CfD process.

- We would welcome further flexibility in the planning system to reduce barriers for the delivery of vital and timely grid investment to support growth in electric vehicles, wider electrification on the network and greater deployment of low carbon technologies, including the decarbonisation of heat. Amends to permitted development exemption policy may be beneficial to support the pace and scale of investment that will be required.

- As a regulated business, our costs are ultimately recovered from electricity consumers across the north of Scotland and wider GB consumers and any increases to our operational costs, such as those associated with changes to planning policy, will ultimately be borne by energy consumers. Therefore, any changes in planning policy that lead to increased costs need to be proportionate, evidence based and clearly justified.

Our full response to each question can be found below.

1. What development will we need to address climate change?

To address climate change and respond to the climate crisis, all development in Scotland will need to continue to adapt to reduce emissions, encourage biodiversity and deliver sustainable investment in a net zero world. We believe we have a key arterial role to play in this process, as a developer of the critical national infrastructure required to deliver net zero and as a facilitator for further low carbon investment in Scotland.

Considerable progress has been made in the decarbonisation of the electricity sector over the past decade. While the industry (generation and networks) has made great progress in lowering emissions, more remains to be done by the electricity industry to address and tackle the climate emergency. The focus here will be primarily through the delivery of further low carbon electricity generation and supporting network infrastructure as Scotland shifts to lower carbon options for transport, heating and energy efficiency, taking a whole system approach to delivery.

Facilitating the delivery of EVs

For our Distribution business, a supportive and responsive planning framework will be vital to help deliver new connections and refurbishment of local networks to provide the physical infrastructure capable of supporting the transition to net zero, including electric vehicle infrastructure and the transition to the Distribution System Operator model (DSO). It is critical that the planning system is equipped to respond effectively to new developments in technology and consumer behaviour within the electricity system, avoiding delays and increased cost for required infrastructure investment.

The planning and consenting process for these types of development are largely governed by the following Acts and Regulations:

- The Electricity Act 1989,
- The Town and Country Planning (Scotland) Acts.
- The Town and Country Planning (General Permitted Development) (Scotland) Order 1992 and subsequent amendments.
- The Overhead Lines (Exemption) (Scotland) Regulations 2013; and
- the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017.
- Marine (Scotland) Act 2010
- Marine and Coastal access Act 2009

While jurisdiction in relation to matters within the Electricity Act is not devolved, falling within the UK Government's remit, we believe there is scope for the Scottish Government to actively keep under review the additional regulations outlined above to improve the consenting process and accommodate a greater volume of works with minimal, if any, planning or environmental impact.

While the exemption regulations allow certain categories of minor works to be undertaken without the need for section37 consent under the Electricity Act 1989, the introduction of greater flexibility in the consenting process and the exemption criteria could help to deliver a more positive and responsive planning framework during the transition to net zero thus enabling connection of a larger volume of new customers and delivering upgrades to our network more rapidly.

To facilitate a greater uptake in EVs and mitigate the impact on the existing distribution network, there will also be a requirement to substantially reinforce and increase network capacity via the installation of multiple or larger 11kV substations. Currently our local distribution substations fall within permitted development regulations, however it is likely that any required substation reinforcements to facilitate EVs will exceed the current 29 cubic metres permitted development limit, requiring full planning consent for each one.

We expect that upgrades will be required to a significant number of substations within our network area to meet increased demand. To deliver these electricity upgrades in a timely and cost effective manner it would be beneficial if current permitted development thresholds for electricity works in non-sensitive areas are reviewed as part of the NPF4 process with a view to extending the threshold development limit, to accelerate the pace and scale of higher

capacity substation sites required to meet increasing demand for public and domestic chargers and the electrification of heat.

Maximising Scotland's renewable energy potential

The north of Scotland and its islands have a significant renewable energy resource which should continue to be maximised to help deliver further modernisation and transformation in the decarbonisation of the electricity sector. SSEN Transmission currently has over 6GW of renewable generation connected to our network, and we expect this figure to increase to at least 10GW by 2026 based on current known factors (the *Certain View*, as outlined in our RIIO-T2 business plan, *A Network for Net Zero*), including confirmation of future offshore wind leasing rounds by Crown Estate Scotland and feedback from our generation customers.

However, to reach net zero targets, it is estimated that **13.6GW – 15.7GW** of renewable generation will be required by March 2026 to lead us on the pathway to addressing the climate emergency.

With proposals to include onshore wind in the 2021 CfD auction, alongside proposed changes to the CfD pot structure, and with the development of future leasing rounds for offshore wind in Scottish waters, the policy landscape for further renewable energy generation in Scotland is looking extremely positive. However, realisation of the required capacity of low carbon infrastructure, along with the network investments required to facilitate the delivery of clean electricity, will be dependent on a robust, timely and supportive planning framework that can provide clarity on processes and timescales.

Coordination between all agencies will be critical throughout this process to align on direction, timescales and goals, taking a whole system approach to the opportunities presented – specifically with input from Marine Scotland, Crown Estate Scotland, the Scottish Government's consents team, Ofgem, BEIS and local authorities.

We believe it is vital that all transmission infrastructure continues to be classed as nationally significant development, retaining National Development status as it currently does in NPF3. This will help to ensure that further investment in the electricity network can take place without unexpected consenting delays and hurdles, reducing any negative impact on Scotland's climate change targets and associated economic ambitions. Please see a separate NPF4 National Development submission form which accompanies our response to the Call for Views for further information.

Reducing the carbon footprint of our developments and operations

In addition, SSEN Transmission is committed to doing what we can to reduce the environmental impact of our own developments during construction and operation whilst ensuring that any investment in our network is delivered as economically as possible for GB bill payers. While our own greenhouse gas emissions are relatively small as part of the GB total, we recognise that there are still cost-effective steps that we can take to reduce our business' carbon footprint.

Our RIIO-T2 business plan sets a science-based commitment to deliver a one third reduction in our greenhouse gas emissions, which is consistent with a 1.5-degree pathway and critical

to achieve net zero targets. One of the key ways in which we aim to achieve this goal is to clean up the gases we use to operate our critical transmission infrastructure:

> **Case Study - The first UK transmission owner to energise SF_6 free technology**
> For decades, SF_6 gas has been used extensively across the electrical industry as an insulating gas for switchgear in substations, with the electricity transmission industry responsible for 80% of the world's usage. SF_6 gas was chosen for its excellent insulating properties making it possible to reduce equipment size and improve reliability and safety.
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> However, SF_6 is a greenhouse gas that is 23,500 times more harmful to the earth's atmosphere than CO2 which if released, stays in the atmosphere for over 3,000 years. Its lifecycle management requires careful handling, particularly when decommissioning aging substations. Whilst leaks are relatively rare, when they do occur the environmental impact is substantial.
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> The SF_6 gas free circuit breakers installed at SSEN Transmission's substation in Dunbeath are the first of their kind in the UK. The technology has been developed by Siemens, using a combination of vacuum and clean air technology to provide the same level of performance and reliability, without the need for SF_6 gas and with no Global Warming Potential (GWP).
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> As part of SSEN Transmission's commitment to reduce its greenhouse gases, it is working with suppliers to install SF6 alternatives across its network, as well as working with the Energy Networks Association to support industry wide adoption of these technologies.

This commitment is being delivered in addition to wider biodiversity commitments that aim to not only restore, but also improve the environments in which we operate. Further information on our biodiversity and environmental objectives, including examples, can be found in our answer to question 4.

2. How can planning best support our quality of life, health and wellbeing in the future?
Through our Transmission businesses Sustainability Strategy, we aim to deliver our strategic objective to enable the transition to a net zero economy whilst also providing additional benefit to the communities in which we operate, and in our delivery of sustainability goals we aim to be an industry leader in our field. This means being a trusted partner of customers and communities, realising long term benefit for society, the economy and the environment. Informed by the view of our stakeholders, we have identified six sustainability focus areas in which we hope to deliver our sustainability ambitions:

- **Connecting for society:** Promoting affordability through collaboration and whole system solutions
- **Supporting thriving communities:** Maximising the local social and economic benefit of our investments
- **Growing careers**: Adding value through good jobs and training
- **Promoting natural environment:** Delivering a net positive environmental impact

- **Optimising resources:** Managing resource use to minimise waste
- **Mitigating climate change:** Managing emissions towards a science-based target

We aim to serve our communities by providing and improving security of supply to the most rural and remote parts of Scotland. We recognise that in rural communities, connectivity and resilience is of paramount importance to ensuring positive outcomes for quality of life, health and wellbeing. We also recognise that there is a high economic and social cost for households and businesses if their supply of electricity is interrupted. To respond to this, our business plan aims to deliver 100% reliability for homes and businesses in rural Scotland.

A supportive planning and wider policy framework will be required to support the delivery of the above objectives as we invest in our network and deliver wider sustainability objectives.

3. What does planning need to do to enable development & investment in our economy to benefit everyone?

We support Scottish Government ambitions to be a world leader in climate change policy and innovation, whilst ensuring that sustainable growth in the Scottish economy continues to rise. A supportive planning framework that works collaboratively with all parties, provides certainty and delivers timely decision making will be the keystone for creating further economic growth and opportunity during the transition to net zero. Planning policy alignment with wider Scottish Government ambitions for the updated Climate Change Plan and working closely with all key agencies in the delivery of infrastructure investment should assist with positive delivery of economic ambitions for Scotland.

Further investment in the transmission network will play a vital role in the delivery of Scotland's net zero ambitions creating opportunities for growth in the economy for our local supply chains, directly and indirectly. This creates benefits for local communities not just via increased network resilience but also creates benefit by investing in and working with rural economies, all while contributing to national level climate change targets and economic outcomes.

Case Study – Caithness-Moray project

Energised in December 2018, Caithness-Moray is the largest single investment ever undertaken by the SSE Group and represents the most significant investment in the north of Scotland electricity transmission system since the 1950s.

The link uses HVDC (High Voltage Direct Current) technology to transmit power through a 113km subsea cable beneath the Moray Firth seabed between new converter stations at Spittal in Caithness and Blackhillock in Moray. Constructed over a period of four years, the project also involved work at eight electricity substation sites and has also required two overhead electricity line reinforcement projects.

Completed on time and within the allowance approved by Ofgem, the Caithness-Moray link provides 1,200MW of capacity to transmit power from the increasing sources of renewable energy from across the far north of Scotland, including the Beatrice offshore wind farm in the Moray Firth.

SSEN Transmission estimates that the project delivered £265.5m of value to the Scottish economy, including 4,975 Scottish job years. The project also delivered the largest Living Wage contract ever seen in the UK at the time, worth £460million via contractor ABB Ltd.

Further information on Caithness-Moray's economic contribution can be found here: https://sse.com/media/421062/Caithness-Moray-Delivering-economic-and-social-benefits.pdf.

4. How can planning improve, protect and strengthen the special character of our places?

SSEN is supportive of measures within the planning process that improves, protects and strengthens the special character of our places in Scotland. As a Transmission Owner, we have been recognised by Ofgem, biodiversity organisations and planning industry bodies as leaders in our field in our approach to environmental improvements during the construction and operation of our projects.

In July 2019, our Transmission business became the first GB network licensee to consult on an approach to implementing biodiversity net gain in the development and construction of our projects. Promoting our natural environment encompasses many areas including (but not limited to) biodiversity, natural processes, landscape change and visual amenity.

Case Study – VISTA Cairngorms National Park project

SSEN Transmission's VISTA project aims to reassess historic electricity infrastructure within, and in some instances in close proximity to, National Parks and National Scenic Areas (NSAs), and to conserve and enhance the natural beauty, wildlife and cultural heritage of these important Scottish landscapes.

Our VISTA project for the Cairngorms National Park received funding from Ofgem in May 2019 and will remove two sections of overhead line, near the villages of Boat of Garten and Nethy Bridge, and 46 transmission towers from the Cairngorms landscape, replacing both circuits with underground cabling.

The two overhead lines that are currently in the process of being removed are located in areas of the Cairngorms that attract some of the largest numbers of visitors to the National Park. Once removed, the visual amenity within the Cairngorms will be further enhanced, building on the removal of over 300 towers, covering a distance of over 90km, as part of the Beauly Denny project.

SSEN Transmission is also progressing several other engineering and landscaping proposals across its network region as part of its VISTA (Visual Impact of Scottish Transmission Assets) project. This includes schemes in Loch Lomond and the Trossachs National Park, and Loch Tummel and Loch Rannoch National Scenic Areas.

Further information on SSEN Transmission's VISTA project can be found here: https://www.ssen-transmission.co.uk/sustainability-and-environment/vista/.

Protecting and enhancing biodiversity is an essential element of a truly sustainable society and our ambition is to ensure that our activities not only maintain the existing balance that exists, but help to enhance the biodiversity in our area, targeting a net gain. In our RIIO-T2 business plan, we commit to having biodiversity no net loss outcomes, including no net loss of all woodland cover. We also aim to drive environmental stewardship best practice in the industry as part of our wider sustainability ambitions.

For new infrastructure projects, we propose to:

- Ensure natural environment considerations are included in decision making at each stage of a project's development;
- Utilise the mitigation hierarchy to avoid impacts by consideration of biodiversity in project design;
- Positively contribute to the UN and Scottish Government Biodiversity strategies by achieving an overall 'No Net Loss' on new infrastructure projects gaining consent in 2020 onwards and achieving Net Gain on projects gaining consent in 2025 onwards;
- Work with our supply chain to gain the maximum benefit during asset replacement and upgrades.

For upgrade, maintenance and operational activities, we propose to:

- Collaborate with partners to realise opportunities for improving the biodiversity on and around our existing sites;
- Enhance biodiversity through a comprehensive review of management activities.

As a responsible developer and as part of our wider sustainability ambitions, we endeavour to ensure that our developments have a minimal impact on the local communities and environments in which we operate and provide additional benefits where possible. We are proud to play our part in facilitating the delivery of SG's target of 100,000 hectares of woodland to help meet carbon emissions targets, helping to plan for zero waste, and helping to implement the Scottish Biodiversity Strategy.

Case Study – Thurso South substation biodiversity project

The construction of the new 275/132/33 kV Thurso South substation formed a key part of SSEN Transmission's flagship Caithness-Moray project, which was energised and commissioned in December 2018. Consent for the Thurso South substation was granted in 2013 by Highland Council and construction completed in late 2017.

During project development and consultation with key stakeholders, it was recognised that enhancements to the consented landscape plan could present an opportunity to further support local biodiversity.

As well as improving local habitats and increasing the local population of Great Yellow Bumblebee, the project delivered the following key outcomes:

- The project has helped drive forward our internal objective of working towards and measuring *biodiversity net gain assessments* for all our projects.

- The project also complimented the wider work of the Highland and Caithness Biodiversity Action Plans and supports the aims of the Scottish Government's Pollinator Strategy for Scotland.
- The project won two awards in the 2018 BIG Biodiversity awards, winning both *Pollinator of the Year* and *Project of the Year*.
- The project contributed towards the success of SSEN Transmission's regulatory rating in the 2018 Environmental Discretionary Reward (EDR), resulting in 'leadership' status being awarded by Ofgem for our environmental work to support the transition to a low carbon economy.

For further information on the Thurso South substation project please visit: https://www.ssen-transmission.co.uk/projects/thurso-south-substation/.

Environmental mitigation measures continue to play a key role in the development process for both our Transmission and Distribution projects. Working closely and collaboratively with statutory consultees such as SEPA and SNH, we aim to address and mitigate any potential environmental development barriers so that the delivery of our infrastructure continues to support Scotland's economic and climate change targets, whilst also leaving a positive environmental legacy locally. It's important that these pragmatic discussions continue with statutory consultees and decision makers as the new planning framework and SPP is developed and implemented to avoid any unintended consequences for economic development and net zero ambitions.

5. What infrastructure do we need to plan and build to realise our long-term aspirations?

SSEN Transmission's network has a key role to play in the transition to net zero, not only as a facilitator for the delivery of renewable electricity, but also in providing resilience to rural communities and the wider GB network. We strongly advocate that all transmission infrastructure continues to retain National Development Status as is currently supported in NPF3.

Within our investment plans key areas of focus include, but is not limited to, upgrades to the East Coast transmission system, remote island connections for Orkney, Shetland and the Western Isles and reinforcements to the Isle of Skye and the Argyll region. Further information on these projects can be found within our Business Plan on pages 42-47 and in our separate submission to the National Development call for projects invitation.

For our Distribution business, a flexible and supportive planning process that simplifies the delivery of local decarbonisation goals, such as EV infrastructure and the electrification of heat, is required and will be critical to support the transition to net zero in Scotland. Reviewing and amending current policy and exemption regulations for permitted development at substations would be welcome to reduce barriers to timely delivery of supporting infrastructure.

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