Scottish & Southern Electricity Networks

Scottish Hydro Electric Transmission plc

2018 Annual report of the Managing Director of Transmission

This report and statement have been prepared by the Managing Director of Transmission for the directors of Scottish Hydro Electric Transmission plc (SHE Transmission) in accordance with the provisions of paragraph 4(b) of Special Condition 2I, Independence of and appointment of managing director of the Transmission Business, of SHE Transmission's licence.

SHE Transmission is a wholly-owned subsidiary of SSE plc (SSE). SHE Transmission is managed and operated as part of Scottish and Southern Electricity Networks (SSEN) in accordance with the direction issued by the Gas and Electricity Markets Authority (the Authority) under paragraph 9 of Special Condition 2I of SHE Transmission's licence.

This report and statement have been made as soon as practicable after the end of the calendar year 2018. The timing of the report is subject to close of the 2018-19 financial year, and the subsequent completion of scheduled assurance and governance.

Report for the year ending 31 December 2018

As the Managing Director of Transmission, I am responsible for the conduct of the transmission business and any external transmission activities.

The 2018 calendar year was a successful year for SHE Transmission with the following key outcomes of note:

- Continued achievement of our strong track record for capital delivery, on time and under regulatory allowance, in particular the energisation of the £1 billion Caithness Moray Strategic Wider Works (SWW) project in December 2018.
- Strongly contributing to the decarbonisation of the GB energy sector, through timely provision of connection assets for 1,126 MW renewable generation and progress with the implementation of our ambitious Sustainability Strategy.
- Further strengthening of our operational capability with our field and network control operations ensuring no Energy Not Supplied (ENS) events.

In making this report for the year 2018, I consider below these and other factors that are of material impact to the conduct of the transmission business.

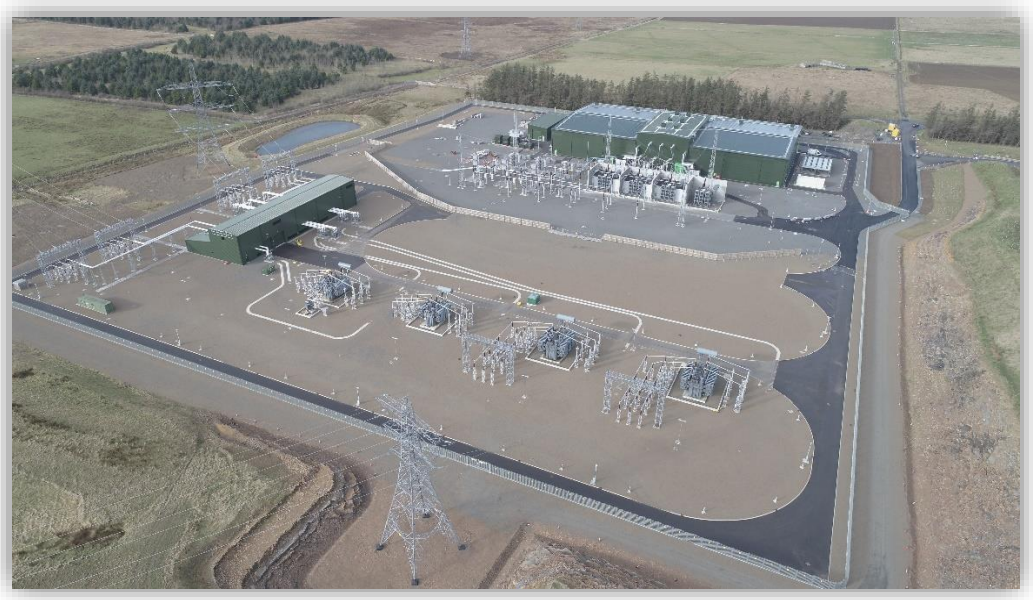
1. Capital Delivery

The SHE Transmission capital programme remains of critical importance to the success of the transmission business. SHE Transmission's strategic objective is to facilitate the transition to the low carbon economy and our principal means of achieving this is through the connection of renewable generation.

We have, and continued during 2018, an exceptional record for capital delivery on time and within regulatory allowances. This has been achieved through innovation, commitment and a close working relationship with stakeholders and customers.

Caithness Moray SWW project

The Caithness Moray SWW project remained a significant focus for the transmission business during 2018. This project is both the largest single capital investment we have ever undertaken and the biggest single investment in the north of Scotland electricity transmission system since the 1950s. Its energisation is critical to releasing the renewable energy potential of the far north of Scotland including the islands.



Caithness Moray SWW project: Spittal AC substation (foreground) and converter station (background)

The AC elements of the Caithness Moray SWW project, comprising eight substations and two overhead lines, were completed during 2017 and 2018. The HVDC element, comprising subsea and land cables and two convertor stations, was successfully commissioned and handed over to the Electricity System Operator (ESO) in December 2018. Post-commissioning works are scheduled for early 2019.

Significant business focus was engaged during 2018 to prepare for the operation of the Caithness Moray assets. Employees undertook training at ABB's facility in Sweden as well as on-site familiarisation at our new convertor stations. An initial three-year Long Term Service Agreement has been put in place with ABB.

Fort Augustus to Fort William 132kV reinforcement

This is a complex project requiring strengthening and reconductoring of 156 towers following the route of the Great Glen in particularly challenging terrain. 11,607 customers' supplies rely on the continued operation of the asset during the works which has required a highly complex and extensive Emergency Return to Service Plan to be in operation. The project is driven by the requirement to accommodate increased capacity for renewable generation in both the Fort William & Kinlochleven areas while also securing additional demand associated with the expansion of the Liberty SIMEC Aluminium smelter.

Work underway on the Fort Augustus to Fort William 132kV line

Construction work commenced during 2017 and has continued through 2018. The west side of this overhead line (FFW) was successfully reconductored during 2018 ahead of schedule, using innovative working techniques and further deployment of the new high temperature Aluminium Composite Cored Conductor (ACCC) Monte Carlo increasing its capacity from 89MVA to 199MVA. The east side of the overhead line (FFE) is on schedule to be completed in 2019.

Renewable Generation Connections

The electricity transmission infrastructure to connect 1,126 MW of new renewable generation was energised during the 2018 calendar year. Major connections of note are:

Beatrice Offshore Wind Farm (588 MW) connecting to Blackhillock substation

Beatrice Offshore Wind Farm connection to Blackhillock 400kV Substation

Dorenell Wind Farm (220 MW) connecting to Blackhillock substation via composite poles, the first time this innovative technology has been used on the GB transmission system

Dorenell Wind Farm connection: Pole erection with Erickson S64-F Aircrane

Stronelairg windfarm (227.8 MW) via 132/33kV indoor substation at Stronelairg, 10km 132kV underground cable between Stronelairg and Melgarve substations. Construction work to establish a firm connection is on programme for delivery by 31 October 2019, in line with the customer's requirements.

Stronelairg Indoor 132/33kV AIS Substation (energised 24 March 2018) adjacent to the 227.8 MW Stronelairg Windfarm

Scottish & Southern Electricity Networks

Future Network Planning

Network Options Assessment

The 2018/19 Network Options Assessment (NOA) Report was published by the ESO in January 2019. This included three "proceed" recommendations for north of Scotland boundary reinforcement (consistent with the 2017/18 NOA):

- Capacity increase on the existing East Coast onshore 275kV system by 2023.
- Incremental upgrade of the existing East Coast network from Blackhillock to Kincardine to operate at 400kV by 2026.
- For all three TOs to proceed with the East Coast Subsea HVDC Links.

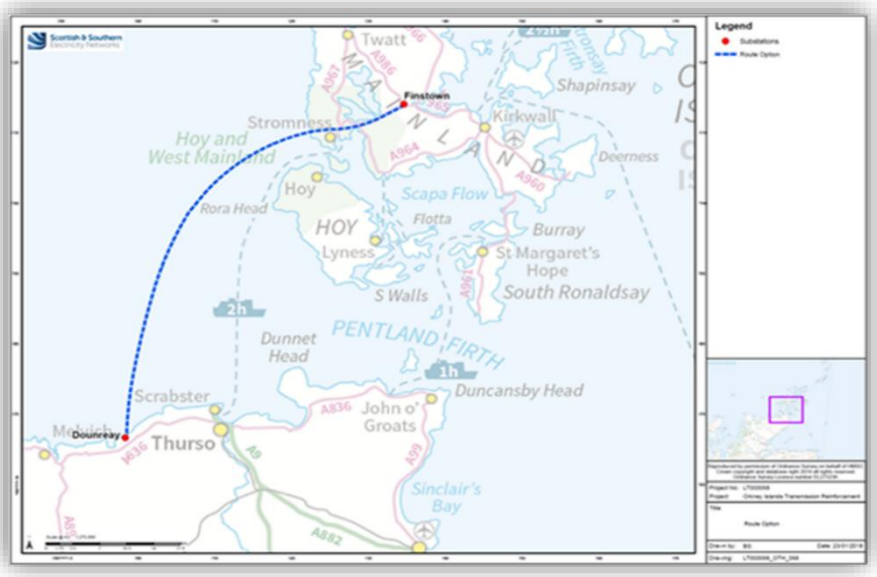
Islands Projects – SWW Needs Cases

During 2018, SHE Transmission submitted SWW Needs Cases for the three Scottish Island projects.

The **Orkney Island** transmission reinforcement has been developed to satisfy the need to connect renewable generation on Orkney. The proposed project is to install 220kV transmission cable between Orkney and the Scottish mainland. The Needs Case that was made in March 2018 provided the technical and economic justification for the investment. Ofgem published its "minded to approve" position for consultation in December 2018.

The **Western Isles** project is also based on the need of renewable generation schemes to export to the GB market. In August 2018, SHE Transmission submitted a Needs Case proposing a 600 MW HVDC link from Beauly on the Scottish mainland to Arnish on the Isle of Lewis. Ofgem published its consultation on our proposals in spring 2019.

The **Shetland** project would connect the Shetland islands to the GB electricity system for the first time, and allow the connection of new renewable generation. Our Needs Case for a 600MW HVDC link between Noss Head near Wick on the Scottish mainland and Kergord on the Shetland Isles was submitted to Ofgem in October 2018. Ofgem is currently consulting on a "minded to approve" position. The HVDC Switching Station allows the Shetland Link to form a multi-terminal system with the existing Caithness Moray link, the first of its kind in Europe.



Route of the proposed Orkney SWW project

2. Network Operations

The reliability of the north of Scotland transmission network continues to be good. In 2018, faults were markedly below the five-year average and no Energy Not Supplied events occurred.

A business focus on outage management is resulting in year-on-year improvement in planning and delivery, despite almost 1,000 outages taken on the network for projects, maintenance and system control.

A significant fault occurred in November 2018 near Fort Augustus when a major landslip resulted in an estimated 9,000 tonnes of rock breaking free from the hillside and felling both a 132kV tower and an adjacent low voltage distribution line. The 132kV line was the single grid connection for Skye and the Western Isles. Around 23,000 customers lost power and a joint restoration effort was undertaken by SHE Transmission and Scottish Hydro Electric Power Distribution (SHEPD), along with other emergency services, to restore power within hours.

The Quioch landslip, near Fort Augustus, November 2018

Asset Management

We continue to work collaboratively with National Grid Electricity Transmission, Scottish Power Transmission and Ofgem to finalise the Network Output Measures Common Network Asset Methodology. This includes a risk-based approach based on Condition Based Reliability Monitoring (CBRM) and key measures for asset health and criticality. It is intended that this methodology will be fully implemented in summer 2019.

As we continue to focus on people skills and capabilities within the transmission business, during 2018 the Asset Management function has been enhanced with the addition of professional asset managers, engineers and analysts, as well as a new Asset Information function which specialises in data management.

The Asset Management team have worked closely with Operations teams on the development and introduction of improved asset data systems such as Maximo, GIS and LiDAR. Work has also recently started on a replacement Electronic Document Management System (EDM) where schematic and as built drawings are stored.

3. Customer Service

In our annual customer satisfaction survey conducted in late 2018, customers rated their satisfaction with SHE Transmission's performance as 8 on a scale of 0-10.

During 2018, we undertook wide ranging consultation on our customers' and stakeholders' expectations, including significant stakeholder events in March and November. This work will contribute to a revised approach to customer and stakeholder engagement that we will implement during 2019.

Generation Connections

SHE Transmission received 76 generation connection applications and provided all with connection offers within 60 days of receiving a full application. This was an increase of 19% compared to the number of applications received in 2017.

In 2018, 60% of offers made were for onshore wind projects. Three offers were made for offshore wind projects totalling 2,988 MW as modifications to existing connection agreements. No new offshore wind offers were made in 2018. Ten offers were made for battery storage projects totalling 204 MW.

4. Looking Forward to RIIO-T2

The 2018 calendar year has been a significant period for the development of our Business Plan for RIIO-T2. Notable areas of work include: review of our transmission business strategic objective, our North of Scotland Future Energy Scenarios, and wide ranging consultation with stakeholders on connections, innovation, stakeholder engagement, project development and network operations.

Adopting the Enhanced Engagement model, in summer 2018 we established a User Group constituted to provide ongoing stakeholder scrutiny and input to the development of our Business Plan. The User Group complements our existing Stakeholder Advisory Panel who have particularly influenced our thinking on customer service and vulnerable customers.

In late 2018 we began the collation of our work to date, which was published in February 2019 as an Emerging Thinking consultation document.

Scottish & Southern Electricity Networks

5. Staff and Resources

Adequate staff and resources were available to the transmission business during the year ending 31 December 2018. During the last calendar year, staff numbers increased by 2.1 full time equivalent ("FTE"), taking the headcount to 453 FTE staff directly employed by SHE Transmission at 31 December 2018.

In addition to transmission staff, services are provided by Scottish Hydro Electric Power Distribution plc ("SHEPD") along with corporate services from SSE Services plc. As part of the SSEPD management structure and SSE Services plc corporate structure, the resources available to the transmission business include the use of premises and staff and these are subject to the conditions under paragraph 9 of Special Condition 2I of SHE Transmission's licence. Use of premises and staff is subject to service level agreements and annual audits on cross subsidy are undertaken and submitted to Ofgem. All staff employed by SSE are notified of SHE Transmission's obligations under Special Condition 2B of SHE Transmission's licence.

6. Finance

SHE Transmission's financial year for both statutory and regulatory reporting is 1 April to 31 March. Hence, this report covers a part of financial year 2017-18 and a part of financial year 2018-19. In respect of financial year 2017-18, the regulatory accounts were approved by the directors on 18 July 2018. Regulatory and Statutory accounts for the financial year 2018-19 are currently under preparation and will be available for approval in July 2019. In relation to our obligations under Licence, we are required to comply with several conditions relating to Availability of Resources and Indebtedness which covers both Credit Rating requirements and Cross Default Obligations. As part of our ongoing financial management of SHE Transmission, these commitments are monitored throughout the year. This underpins our Regulatory and Statutory requirements as specified under the Companies Act 2006.

In our Statutory Financial Statements, we provide a Statement of Viability which is a requirement under the Corporate Governance Code for Listed companies (for which SSE plc, the ultimate controller of SHE Transmission is). As part of that statement we consider our obligations under licence, our investment priorities, and our financeability. These statements

therefore form part of our audited Statutory Financial Statements and for a period greater than one year (i.e. three years).

7. Arrangements for the year ending 31 December 2019

It is my opinion that adequate arrangements have been made for the year ending 2019 for the efficient and effective management and operation of the transmission business in accordance with SHE Transmission's duty under section 9(2)(a) of the Electricity Act 1989 and the transmission licence. These arrangements allow SHE Transmission to maintain full managerial and operational independence of the transmission business from SHE Transmission's affiliates and related undertakings (subject to the direction issued by the Authority under paragraph 9 of Special Condition 2I of SHE Transmission's licence).

In respect of financial year 2018-19, on 18 July 2018 the directors approved a Certificate of Availability of Resources that confirmed their reasonable expectation that SHE Transmission would have sufficient financial resources and financial facilities for the subsequent 12 months. This covers the period to 31 March 2019. The Availability of Resources statement for 2019-20, covering the period up to 31 March 2020, is in the process of being updated and this will be available for approval and will be submitted to Ofgem in July 2019 in accordance with the licence.

Adequate staff and resources will be available to the transmission business for the planned programme of works. Toward the end of the 2018 calendar year a full bottom up review of resources was undertaken and this identified that an overall headcount of 494 FTE is required, an increase of 41 FTE on the headcount at the end of 2018. Recruitment toward this increased headcount will continue throughout 2019. Furthermore, should Ofgem approve proposed SWW investment(s), additional staff will be required to support growth, recruited mainly across the engineering and project delivery teams.

SHE Transmission is adequately funded at 31 December 2018 having diverse sources of funding comprising External Loans with EIB at £750 million along with £1,063.1 million Internal Loan Stock all repayable on 2021 and beyond. SHE Transmission also has £192 million of net inter-company balances payable/repayable on demand. Cash and Bank balances (restricted) amounted to £12 million.

At 31 December 2018, SHE Transmission had access to the Group's £1.3 billion committed Revolving Credit Facility maturing in July 2022 and a £200 million Bilateral committed facility from Bank of China maturing November 2022. This is in line with our review under our Statement of Viability as audited for the year end 31 March 2018.

Therefore, in my opinion, the available staff, resources and finance are adequate for the year ahead based on the information above.

Rob McDonald

Managing Director of Transmission

May 2019