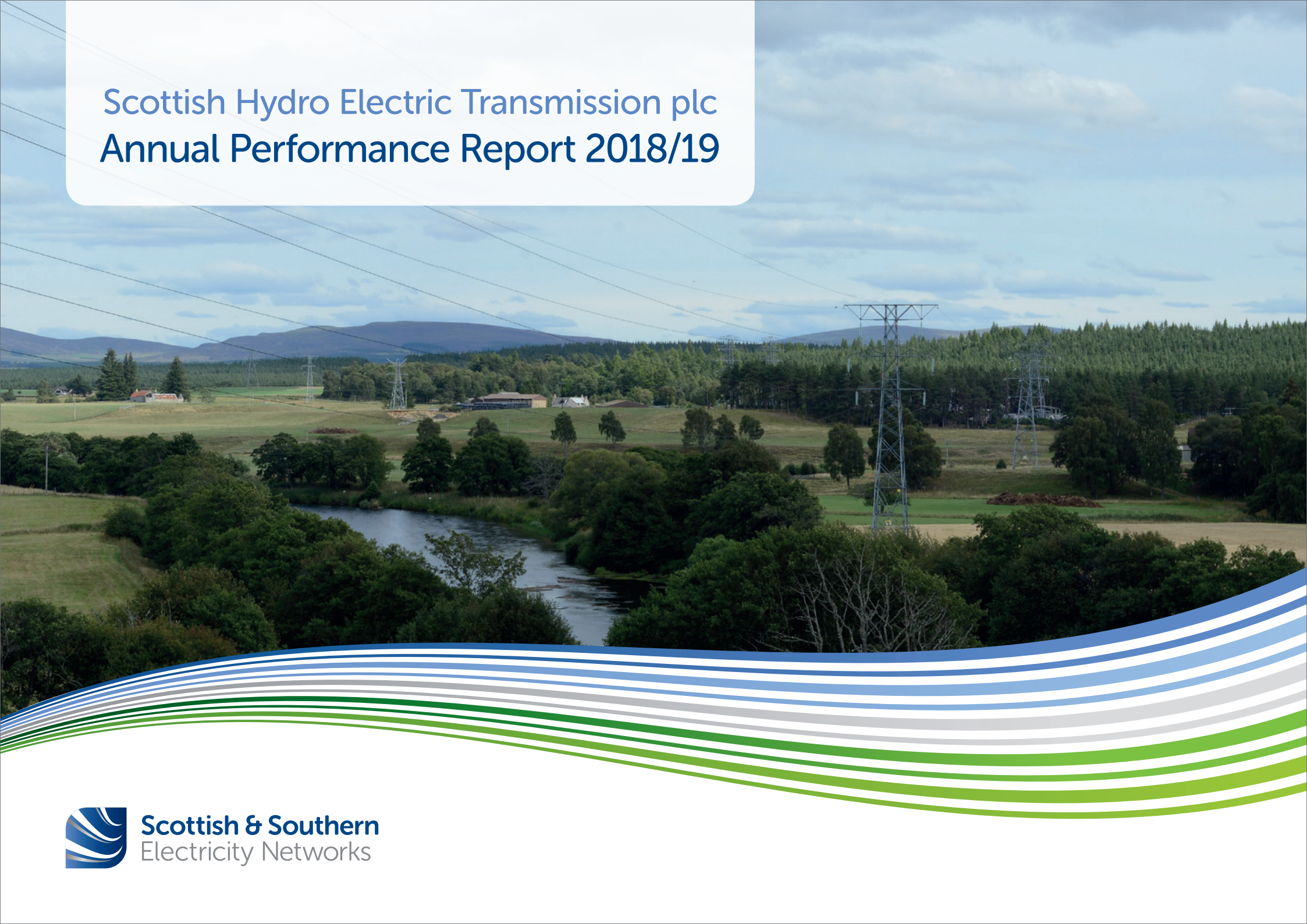


Scottish Hydro Electric Transmission plc Annual Performance Report 2018/19



Scottish & Southern
Electricity Networks

About us

We are Scottish Hydro Electric Transmission (SHE Transmission), part of the SSE Group, responsible for the electricity transmission network in the north of Scotland.

We operate under the name of Scottish and Southern Electricity Networks, together with our sister companies, Scottish Hydro Electric Power Distribution (SHEPD) and Southern Electric Power Distribution (SEPD), who operate the lower voltage distribution networks in the north of Scotland and central southern England.

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. Our network consists of underground

and subsea cables, overhead lines on wooden poles and steel towers, and electricity substations, extending over a quarter of the UK's land mass crossing some of its most challenging terrain.

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 onward distribution to homes and businesses in villages, towns and cities.



2018/19 was a record year for connections of renewable electricity to our network with a further **1GW** being energised



Our network now supports over 6GW of clean, renewable electricity, enough energy to power **5 million homes and businesses** across GB



Overall Reliability of Supply for the SHE Transmission System during 2018/19 was: **99.999837%**

Key

- Existing infrastructure
- Under construction
- Potential development





Rob McDonald
Managing Director

Contents

1. About us	
2. Welcome	
3. Performance for Society	
- Safety	04
- Development to Facilitate Generation	05
- Environment & Sustainability	06
- Innovation	07
4. Service Performance	
- Customer & Stakeholder	08
- Network Investment	09
- Operations & Asset Management	11
5. Financial Performance	
- Performance during the year	12
- Forecasts for RIIO-T1	13
- Load related – Strategic Wider Works	14
- Incentive Performance	15
6. Looking ahead	
- RIIO-T2	16

Welcome

The north of Scotland transmission system continues to make a significant contribution to the transition to a low carbon economy and the recently adopted UK and Scottish Government targets for net zero emissions.

2018/19 was another record year for the connection of renewable electricity in the north of Scotland, with over 1GW of new renewable electricity generation connected. Our network now supports over 6GW of clean, renewable electricity, almost double that installed at the beginning of the RIIO-T1 period and enough to power 5 million homes and businesses across GB.

This growth in renewable energy has been enabled by timely investment in grid capacity. 2018/19 witnessed the successful completion and energisation of our flagship Caithness-Moray HVDC project, delivered on time and within our regulatory allowance. The project has unlocked the potential for up to 1,200MW of renewable electricity from the north of Scotland and islands.

We continue to work closely with stakeholders on developing the grid in a sustainable and cost effective way. In 2018, we submitted Needs Cases for links to the three main Scottish islands groups – Orkney, Western Isles and Shetland – and await decisions from Ofgem. Our project teams are working with communities and stakeholders on the east coast, where we have proposals to increase the capacity of existing grid infrastructure, without the requirement for new overhead lines by, instead, utilising existing infrastructure.

It is important that we deliver critical infrastructure investment without compromising the safe working environment for our colleagues and the public. 2018/19 saw our best safety performance on record, with a total recordable incident rate of just 0.23 per 100,000 hours worked, which is greatly encouraging. However, we cannot be complacent and our safety licence – ‘if it’s not safe we don’t do it’ – is now firmly embedded throughout our business and supply chain. We believe that all employees and contractors should return home safely after a hard day’s work.

Just as important is the continuous supply of electricity to homes and businesses across the north of Scotland. Our network reliability remains impressively over 99.99%. There were two events resulting in a loss of supply last year, in both instances supply was restored within 20 minutes.

In summary, it’s been another exciting and successful year for SHE Transmission. This is testament to the engagement and support of communities and stakeholders across the north of Scotland and GB and, of course, the hard work of colleagues in our business and supply chain.

Rob McDonald, Managing Director



Safety

In 2017, SSE launched its 50by20 safety initiative with the purpose of introducing ambitious new targets which change thinking and behaviour on safety.

The initiative includes an objective to reduce in the combined employee and contractor Total Recordable Injury Rate (TRIR) by 50% by 2020; ensuring that SSE focusses on not having any life changing injuries, and encouraging everyone at SSE to be committed to looking after their own health and wellbeing.

2018/19 has seen our Total Recordable Incident Rate (TRIR) continue a positive downward trend in line with our strategy for transforming our safety performance. Our TRIR for 2018/19 has dropped from 0.45 to 0.23.

This improvement is a result of engaging with and empowering our workforce to work safely and use their license "if it's not safe, we don't do it!" The work carried out in this area demonstrates the progress we have made over the last year with our employees and Contract Partners,

and is reflected in the positive statistics at the year end. We will continue to build on the good foundations we have put in place to influence the reduction of incidents over the coming twelve months.

We engage with our Contract Partners in the Contractor Safety Forums we have established. These cover the three main areas of our work, i.e. Cables, Overhead Lines and Substations. The forums enable all of our Contract Partners to work with us in an open forum to explore and determine how we can best deliver safe outcomes for our combined workforce.

Now in the second year of our three-year enduring Influencing Behaviours programme, a third of our employees and selected Contract Partners attended half day sessions with Karrdale, our partner in the programme delivery.

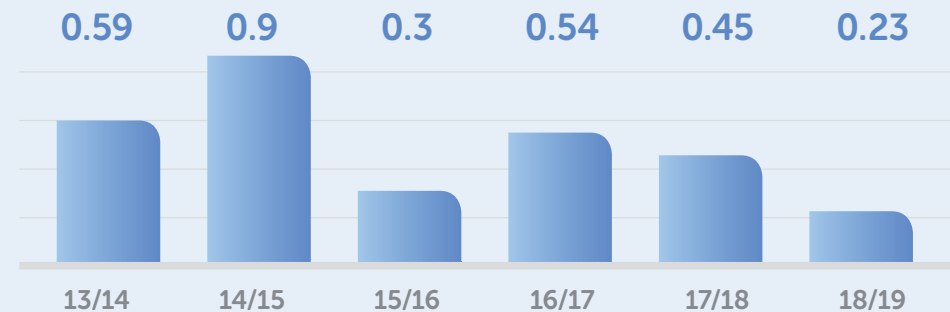


Our TRIR for 2018/19 has dropped
from 0.45 to 0.23



Total Recordable Incident Rate Target = 0.22

Total number of recordable incidents for staff & contractors per 100,000 hours worked



"If it's not safe,
we don't do it"



99.64%

of employees and contractors
went home safe during 2018/19



Caithness-Moray – Spital Site

Development to Facilitate Generation

We submitted Strategic Wider Works (SWW)* Needs Cases to Ofgem for the Western Isles and Shetland link connections during 2018, and we are engaging with Ofgem on these and the Orkney Island SWW Needs Case which we submitted in 2017/18 financial year. We await Ofgem's final determination on all three Island projects.

During 2018, we continued to develop our east and north east network reinforcement plans, following investment recommendations from the Network Options Assessment (NOA) reports published by National Grid ESO in January 2018 and 2019. These works include reinforcement of the existing onshore transmission system, as well as the construction of a new offshore High Voltage Direct Current (HVDC) link from Peterhead to England. These reinforcements will facilitate efficient bulk renewable power transfers from the north of Scotland to the south. During this period, we continued to engage with our stakeholders on our development plans.

Completion of the Caithness-Moray HVDC link in the third quarter of 2018 has facilitated a more efficient operation of the northern part of our network, as well as unlocking capacity to connect more renewables, including the planned island links to Orkney and Shetland.

In addition to these large reinforcements, we have continued to develop transmission solutions to connect mainly renewable generation in all parts of our network. In 2018, we progressed development works for over 2GW of generation capacity.

*For further information on Ofgem's Strategic Wider Works price control mechanism please visit: www.ofgem.gov.uk/electricity/transmission-networks/critical-investments/strategic-wider-works



Environment & Sustainability

Our Sustainability Strategy has been recognised by Ofgem as sector-leading ambition.

During 2018/19, we set out our detailed Plan to achieve these goals, including a commitment to set a Science Based Target for our own emissions. For the fifth year in succession, we have not been subject to an environmental enforcement action or warning.

For further details please see our annual sustainability report:

www.ssen-transmission.co.uk/sustainability-and-environment/sustainability-strategy

Environmental Discretionary Reward Target = Leadership

Assessed by an expert Ofgem panel, we will receive the score for 2018/19 in October.



SF₆ Leakage (Kg)

Target for 2018/19 = <377.51kg

This measures the sulphur hexafluoride (SF₆) leakage from our switchgear. The target increases as the number of assets using SF₆ on our network increases.



Business Carbon Footprint (tCO₂e)*

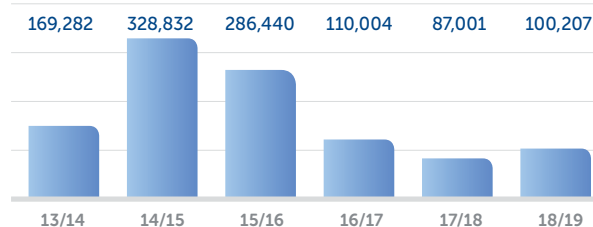
This measures the carbon footprint of the business in delivering our activities.



*Tonnes of carbon dioxide equivalent.

Transmission Electrical Losses (tCO₂e)*

The electrical losses from our system are measured as the difference between the energy entering our system and the energy received by customers.



*Tonnes of carbon dioxide equivalent.

Environmental Awards



Green Apple Environmental Awards

Best Environmental Practice: Great Yellow Bumblebee biodiversity project at Thurso Substation



BIG Biodiversity Challenge Awards

Overall winner: Thurso Substation

VISTA projects

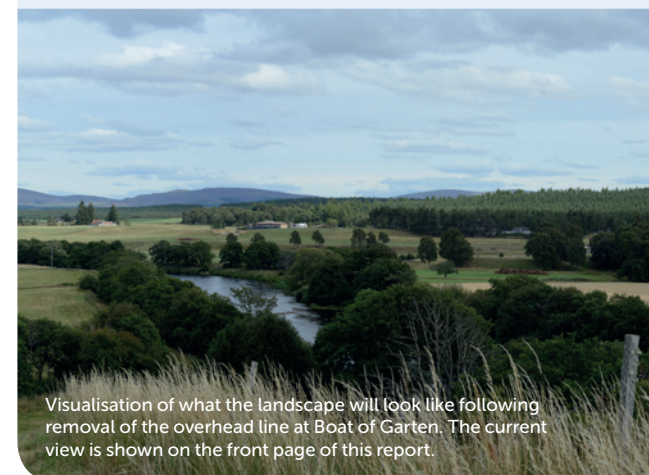
Projects specifically focused on improving the Visual Impact of Scottish Transmission Assets (VISTA).

Following extensive stakeholder engagement, we submitted two VISTA scheme proposals to Ofgem under the RIIO-T1 price control mechanism during 2018/19.

We have subsequently welcomed Ofgem's decision in May 2019 to approve the first of these schemes, opening funding to remove 12km of overhead transmission lines from the Cairngorms National Park.

For further information on SSEN Transmission's VISTA schemes, please visit:

www.ssen-transmission.co.uk/sustainability-and-environment/vista



Visualisation of what the landscape will look like following removal of the overhead line at Boat of Garten. The current view is shown on the front page of this report.



Innovation

We see innovation as a way of identifying and proving new ways of working for the long-term benefit of our stakeholders and ourselves. In seeking to support the transition to a low carbon economy, we have developed a broad portfolio of projects using various funding sources.

Through the RIIO-T1 Innovation Frameworks we have used the Networks Innovation Competition and the Networks Innovation Allowance funding streams to test and deliver innovation.

Network Innovation Competition	Network Innovation Allowance
2 projects ongoing in 2018/19	9 projects ongoing in 2018/19
National HVDC Centre Project £1,764,980 spend	5 new projects started 3 projects closed
NeSTS Project £799,519 spend	£751,011 spend

The National HVDC Centre

The Multi-Terminal Test Environment (MTTE) for HVDC Project established 'The National HVDC Centre', which formally opened on 26 April 2017.

The Centre works with Transmission Owners, System Operators, Offshore Transmission Operators, Interconnector projects and Manufacturers to de-risk projects and ensure the integrity and security of the grid network.

In the last year the centre successfully supported the delivery and commissioning of the Caithness-

Moray HVDC link, making use of the project replicas and the facility's real-time



simulation capabilities. In parallel to this, we have progressed our input to the European Commission's PROMOTioN project, led innovation projects developing a greater understanding of HVDC, and run specialised training courses. The results of our work can be found on our newly redesigned Centre website at www.hvdccentre.com, under 'Knowledge Sharing'.

Fort William to Fort Augustus Reinforcement

Through an NIA funded project we gained an understanding of a new Aluminium Composite Core Conductor (ACCC) technology.

During 2018/19 we have subsequently implemented the conductor on one of the two Fort William to Fort Augustus circuits using Business as Usual funding. This has delivered a 110MVA capacity increase, over both circuits, using existing overhead line structures instead of building a new tower line.

This new technology is forecast to deliver £7.5m of project cost savings by the end of the RIIO-T1 price control when compared with the cost of our traditional approach.

NeSTS

The New Suite of Transmission Structures (NeSTS) project is developing new pylons to reduce the visual and construction impacts of overhead lines, while also reducing whole life asset costs via reduced land, construction, maintenance and outage requirements.



Stakeholder inputs have driven the design process, and following a parallel design exercise to compare the new pylons with conventional lattice steel towers, Ofgem approved the construction of a trial NeSTS overhead line.

SHE Transmission plc's trial line is scheduled for construction in 2020, subject to approvals and the progress of the connecting wind farm project.

For further details, please visit:
<http://www.nestspjct.co.uk/>



Customer & Stakeholder

2018/19 has been a transitional year for our engagement activities. We have reviewed our engagement practices, processes and procedures, and developed a new engagement strategy that puts tailored, purposeful and continuous engagement at its centre.

We also established the role of Director of Customers and Stakeholders to enhance the customer and stakeholder focus on our Transmission Executive Committee. This new Director is supported by a growing team of engagement practitioners experienced in customer service, community liaison and stakeholder management.

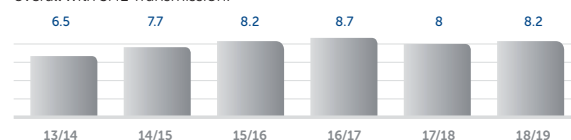
During the year, we carried out a huge amount of engagement on infrastructure projects across our network. While undertaking these activities, we worked to embed and strengthen engagement best practice within the business, ahead of rolling out our new engagement strategy in 2019/20.

We have also spent a great deal of time listening and reflecting on our customers' and stakeholders' priorities and ambitions for the future, so we can include them appropriately in our RIIO-T2 business plans.

Stakeholder satisfaction – Survey

Target = 7.4

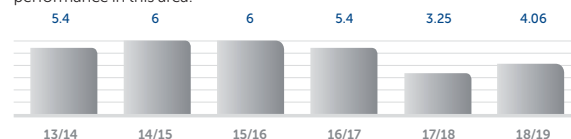
This is the output of a survey conducted by an external research company with the score solely attributable to responses to the question "How satisfied are you overall with SHE Transmission?"



Stakeholder satisfaction – Panel

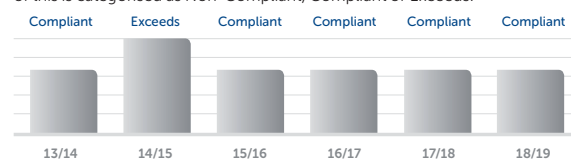
Target = 5.0

An independent panel assesses our stakeholder engagement activities. An improvement plan has been developed to significantly improve our performance in this area.



Stakeholder Engagement External Assurance

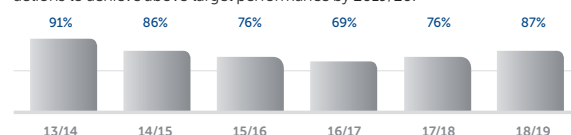
An external assurance team assesses the extent to which we have implemented our stakeholder engagement strategy and plan. The outcome of this is categorised as Non-Compliant, Compliant or Exceeds.



Stakeholder satisfaction – KPI

Target = 89%

Our performance here is measured against 19 measures and aggregated to derive a percentage performance score. We have implemented improvement actions to achieve above target performance by 2019/20.



Last year we committed to an improvement plan that was designed to deliver target-exceeding performance from 2019/20 onwards. During 2018/19, we made significant progress against this plan delivering:



1.

A new engagement strategy that sets out our ambition for engagement, why we engage, how we engage, plus a series of objectives that will guide us in delivering and embedding our engagement strategy.*



2.

A review and consultation on our KPIs designed to make them more meaningful and useful for stakeholders, in response to their feedback. Changes proposed include new targets on carbon emissions and annual review of some targets to keep them relevant.



3.

A refresh of our stakeholder contact lists to ensure that our satisfaction survey was reaching a broader and more representative group of stakeholders.

This resulted in an improvement across all three scored elements of Stakeholder Engagement Performance. We also maintained our compliance with the assurance element of the stakeholder satisfaction output incentive.



*www.ssen-transmission.co.uk/information-centre/



Network Investment

Our strategic objective for the RIIO-T1 period is to enable the transition to a low carbon economy. To achieve this, we've been busy investing in and building the transmission network to connect renewable energy in the north of Scotland.

Connection Projects

These are comprised of works to facilitate sole use connections for a single connected generator, shared use works for multiple generators, or strategic wider works (SWW) projects that provide greater network capacity and resilience to support the continued growth in generation connected to our network.

**81**

offers to connect to the transmission network were made to our customers during 18/19*

**276MW**

of new onshore generation connected through the sole use volume driver mechanism

**12**

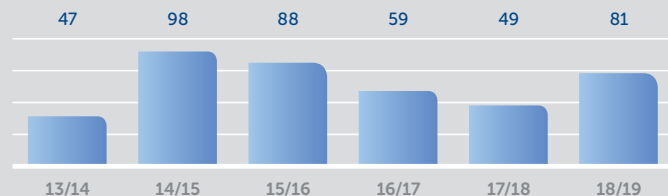
connections projects delivered during 2018/19

**800MW**

of offshore generation connected

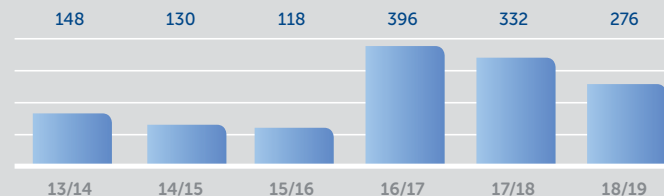
Timely Connections

Our target is for all offers for connections to the transmission network to be made to customers within the time periods set out in the industry code.



Generation MW Connected in the year

This measures the new onshore generation connected through the sole use volume driver mechanism.



*All were within the time periods set out in the industry code, which met our own target.



Award winning projects

Network Magazine Awards

Engineering Project of the Year 2018:
Caithness-Moray

Royal Institute of Chartered Surveys (RICS) Awards

Scotland Project of the Year 2018:
Caithness-Moray

Other nominations

Network Magazine Awards

Dornell Wind Farm connection

Utility Week Star Awards

Stronelairg Wind Farm connection



Non Load Projects

Our Network Maintenance Projects result from asset risk and system needs, such as resilience, black start, system access and system operability requirements.

During 2018/19 we delivered 14 Asset projects in the north of Scotland, and have a further five projects under construction at the end of the year. These have contributed towards a year-on-year improvement in our Reliability of supply metrics, which have increased 0.000282% during the year.

Overall Reliability of Supply for the SHE Transmission System during 2018/19 was:

99.999837%



When we consider the need for capital investment in new assets (i.e. growth drivers), we also consider the local asset drivers. We can commonly realise significant savings by undertaking growth and asset driven capital investments at the same time.

Fort Augustus to Fort William 132kV reinforcement

This was a complex project requiring strengthening and reconductoring of 156 towers following the route of the Great Glen in particularly challenging terrain.



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

11,607 of our customers' supplies relied on the continued operation of the asset during the works, which necessitated a highly complex and extensive Emergency Return to Service Plan to be in operation. The project was driven by the requirement to accommodate increased capacity for renewable generation in both the Fort William and Kinlochleven areas, while also securing additional demand associated with the expansion of the Liberty SIMEC Aluminium smelter.

Load Projects

Our upgrade or reinforcement projects are driven by changes in connected generation and/or demand, including consequential changes in network operating characteristics.



9 Major Growth projects (+3) under construction

Caithness-Moray SWW project

The Caithness-Moray SWW project remained a significant focus for us 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.

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 converter stations, was successfully commissioned and handed over to the Electricity System Operator (ESO) in December 2018.





Operations & Asset Management

Operations

The Operations function performed strongly throughout the last year, outperforming on the Energy Not Supplied incentive (shown) and the SF₆ leakage environmental target.



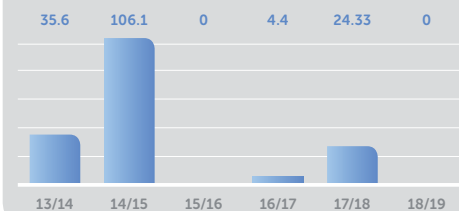
The team responded well to difficult situations, including a landslide in the west highlands which brought down an 132kV tower that directly affected the security of the electricity supply to Skye and the Western Isles, as well as responding to various wildfires and flood events.

The introduction of technology has helped the team to continue to improve, including on-line monitoring equipment which can help detect the distance to network faults, lightning detectors, expanded use of drones to assess network condition, and radar technology to take 3D pictures of the overhead network to help detect tree encroachment, ground clearance issues and potential fault situations before they become a problem.

Energy not supplied

Target = <120MWh

The energy not supplied to customers due to incidents on the transmission system. During the year there was only one event resulting in the loss of supply



Asset Management

The SHE Transmission Asset Management team is at the core of our network management and has seen the recruitment of various subject matter experts to improve our understanding and stewardship of the system. They have taken the lead in several key aspects of our business including:



Submission of the revised Network Output Measures methodology, subsequently published by Ofgem in 2018. This methodology influences our asset replacement and intervention plans (delivery outputs shown in table to left) and was developed in collaboration with the other UK Transmission Owners. It will be used as a key part of the RIIO-T1 business plan close-out process.



Technical support for the phased implementation of the new Transmission asset data and workflow management tool (Maximo), ensuring that our asset data and information is accurate.



Consultation with stakeholders to help refine our asset replacement plans and business justifications, ensuring our RIIO-T2 business plan meets the requirements of our customers.

We will continue to develop and refine this capability through on-going investment in staff capability and knowledge. In addition, we participate in international transmission benchmarking exercises that enable us to enhance systems and processes and to continue to provide asset management decision making to meet the needs of customers and stakeholders.

Asset additions planned on the network during the RIIO-T1 period (2013-2021) compared to the original RIIO-T1 business plan. See table on right.

Asset Additions	Business Plan	Latest Forecast	Difference
275 kV System			
Circuit Breaker	1	3	2
Transformers	0	1	1
OHL Fittings	0	52	52
132 kV System			
Circuit Breaker	28	20	-8
Transformer	16	15	-1
Reactor	0	10	10
Underground Cable	14.8	16.6	1.8
OHL Conductor	927.2	590	-337.2
OHL Fittings	0	912	912
OHL Tower	0	235	235



Performance during the year

The majority of our total expenditure (TOTEX) in 2018/19 remained focused on the delivery of large capital projects. These large capital projects being to facilitate increased generation and associated connections to our network (Load Related), or to renew our existing network (Non-Load Related).

The table below shows our expenditure forecast for 2018/19, that we made in March 2018, and our actual expenditure for 2018/19. We believe that comparing actual expenditure to forecast expenditure is a better indicator of performance than comparing it to allowances for the same period. This is because our baseline allowances were established in 2012 based on our projected programme of works at that time. This programme of works has, and will, continue to change for a variety of reasons, meaning that a comparison of actual expenditure to baseline allowances for an individual financial year is not a like-for-like comparison.



Return on Regulatory Equity (RoRE)

8.9% 8 year weighted average operational RoRE*

*excluding Transmission Investment for Renewable Generation (TIRG) return and debt and tax performance.

Regulated Asset Value (RAV) at end of year

2012/13 = £1.1bn
2018/19 = £3.3bn
2020/21 = £3.6bn



The RAV is a useful indicator of the growth in the size of our network over the price control period and we are forecasting that by March 2021 it will reach £3.6bn.

Category	Forecast for 2018/19 (£m)	Actual Expenditure (£m)	Delta (£m)
Load Related – Strategic Wider Works (SWW)	108.7	90.9	-17.8
Load Related – Other	177.3	158.6	-18.7
Non-Load Related	72.5	53.6	-18.9
Operating Costs	38.1	39.1	1
Non-Operating Costs	5.3	3.1	-2.2
Total Expenditure (TOTEX)	£401.9	£345.3	-£56.6

Load Related – SWW:

Actual expenditure in this category was £17.8m lower than our forecast. This was mainly due to the re-profiling of expenditure across the financial years 2018/19 and 2019/20 on the Caithness-Moray scheme. This scheme was successfully energised and handed over to the System Operator during December 2018, on time and under budget. The reduced expenditure during the year was due to continued efficiencies in the delivery of this scheme and re-profiling of expenditure into 2019/20 to allow completion of some post-energisation works on the scheme.

Load Related – Other:

A similar story exists in this category with actual expenditure being £18.7m lower than our forecast made at the end of the preceding financial year. The reason for this is primarily due to re-profiling of expenditure across several schemes during the period to reflect the latest construction programmes. The main schemes contributing to the lower forecast were the Stronelairg, Fort Augustus to Fort William and Beaulay to Keith OHL schemes. All three schemes are progressing well and are on schedule to be complete in line with required timescales.

Non-Load Related:

Re-profiling of the expenditure for the Stornoway transformer upgrade and lower-than-forecasted expenditure on our Non-Load programme has led to our actual expenditure being £18.9m lower than forecast.

Operating Costs:

The expenditure for Operating Costs was broadly in line with last year's forecast.

Non-Operating Costs:

Lower than forecast Non-Operating Costs as a result of underspend within a number of IT projects.



Forecast for RIIO-T1

Category	2017/18			2018/19		
	Forecast (£m)	Expenditure (£m)	Delta (£m)	Allowances (£m)	Expenditure (£m)	Delta (£m)
Load Related – Strategic Wider Works (SWW)	1,655.9	1,481.4	-174.5	1,975.3	1,798.2	-177.1
Load Related – Other	1,595	1,296.5	-298.5	1,531.2	1,283.8	-247.5
Non-Load Related	336.2	438.6	102.4	339.2	429.5	90.3
Operating Costs	254.5	253.3	-1.2	254.4	257	2.7
Non-Operating Costs	9.7	29.3	19.6	9.7	24.4	14.7
Total Expenditure (TOTEX) as per RRP	£3,851.4	£3,499.0	-£352.3	£4,109.8	£3,792.9	-£316.9
Enduring Value Adjustments*						£145.7
Total Expenditure (TOTEX) as per RFPR						-£171.2

As with our actual expenditure for 2018/19, our current TOTEX forecast for the 8-year RIIO-T1 period is centred on the delivery of large capital projects, with 93% of our forecast TOTEX expected to be spent in the Load and Non-Load related categories.

We are forecasting that our TOTEX in RIIO-T1 will be £316.9m less than Allowances. This equates to a forecast underspend of approximately 8%. There are many factors that influence our forecast, including our best view on the progression of new connections to our network, the likelihood of major islands schemes progressing to construction and our ability to continue to deliver efficiencies in our large capital project portfolio.

The table above provides our best view at the end of 2018/19 of allowances and expenditure for the RIIO-T1 period and it sets this against our corresponding best view from the end of 2017/18. The following narrative provides explanation of the differences between our current best view on allowances and expenditure. Furthermore, where there has been material change in this best view we set out the reasons for such change.

*Enduring Value Adjustments include assumed close out adjustments to the total TOTEX position to account for true up mechanisms anticipated at the end of RIIO-T1.



Load Related – SWW:

We continue to forecast a significant underspend in this category due mainly to the efficiencies that we have created through our SWW projects. Such efficiencies have been realised as a direct result of how we have:

- managed projects to eliminate risks and to mitigate the impacts of realised risks
- built productive relationships with our supply chain
- continued to build and improve our project delivery capability.

We have successfully delivered three SWW projects (total expenditure >£1.3bn) on time and under budget during the RIIO-T1 period – Beaulieu Mossford OHL scheme, Kintyre to Hunterston Subsea Link and Caithness-Moray HVDC Link.

There has been a significant increase in our expected allowances and expenditure from 2017/18 to 2018/19. This is wholly attributable to the introduction of approx. £320m of forecast allowances and expenditure related to the Shetland and Western Isles links. The inclusion of both these schemes has been the most significant change in our best view across our portfolio compared to last year's position. We submitted a project Needs Case to Ofgem for both schemes, along with a project cost submission for the Orkney Island subsea link during 2018/19.

Load Related – Other:

This expenditure category has the most uncertainty due to its dependency on the progression of new generation which is heavily influenced by UK Government policy. The volume driver mechanism within the RIIO-T1 price control was developed in response to this uncertainty. The volume driver mechanism sets baseline targets for sole-use and shared-use infrastructure and provides the opportunity for further allowances, should either baseline be exceeded. We are forecasting exceeding both the sole-use and shared-use baseline outputs as shown in the table below:

Category	Target	Forecast Out-turn	Delta
Sole-Use Infrastructure	1,168MW	1,549MW	381MW
Shared-Use Infrastructure	1,006MVA	4,166MVA	3,160MVA

Our forecast delivery in the shared-use category has changed marginally in the financial year down from 4,179MVA to 4,166MVA, whilst our forecast in the sole-use category has changed marginally down from 1,572MW to 1,549MW. These changes have led to an overall reduction in cost and allowance forecast for the period and have been driven by the reduction in capacity for a few schemes. The net effect of these changes and additional forecast costs means that we are now forecasting expenditure being circa £247.5m lower than allowances. This forecast is lower when compared to last year and can be explained by reduced allowances as outlined in the capacity outputs highlighted above along with additional costs associated with the development of schemes that will be delivered in RIIO-T2. We do however expect that our allowances will be corrected as part of the works to close our RIIO-T1 and this is likely to result in a significant reduction in overall allowances in this category.

Non-Load Related:

Our current best view of expenditure is that we will overspend against allowances by 27%. The forecast overspend is a consequence of delivering additional scope that wasn't included in the baseline business plan. The reason for the difference being that the condition of some of our assets is significantly worse than our original assessments made before the start of RIIO-T1. For example, we are currently forecasting to replace 235 no. 132kV towers that weren't in our RIIO-T1 business plan. This alone introduces significant additional expenditure whilst not attracting any increased allowances.

Operating Costs:

Our forecast expenditure in this category is broadly in line with our allowances.

Non-Operating Costs:

During 2017/18 we introduced a new Work Asset Management (WAM) system called Maximo. The introduction of this system was not foreseen at the time of our RIIO-T1 business plan and not reflected in our allowances. A large part of the forecast overspend against allowances in this category is directly related to this investment in Maximo and other systems such as a replacement for our existing Geographic Information System (GIS).



Incentive Performance

Primary Output		RIIO-T1 Target	2018/19 Actual	Max Reward £m	Max Penalty £m	Reward/Penalty in 2018/19 ⁽¹⁾	Comments
Energy not supplied (ENS)		<120MWh	0.0MWh	1.2	-10.21	£1.19m	The output has met its target in all years of RIIO-T1
Stakeholder Satisfaction Output	KPI	89%	87%	3.4	-3.4	£1m ⁽²⁾	Our performance for both the survey and KPIs improved in 2018/19
	Assurance	Compliant	Compliant				
	Survey	7.4/10	8.2				
Stakeholder Engagement Reward		5/10	4.06	1.7	N/A	£0.02m	Our performance improved in 2018/19 and an improvement plan is in place
Timely connections		Connection offers within 60 days	81 Connections made within timescale	N/A	-1.7	£0.00m	This output has met its target in all years of RIIO-T1
Sulphur hexafluoride (SF ₆) leakage, ⁽³⁾ kg		<377.51kg	372.44kg	0.28	This is dependent on leakage	£0.01m	This output has met its target in 2017/18 and 2018/19
Environmental Discretionary Award (EDR)		Leadership	TBC	£4m annual pot available across all operators	N/A	TBC	Confirmed in October 2019

¹ Earned in year in nominal price and has two-year lag.

² Incentive/Penalty is calculated based on Stakeholder Satisfaction Survey, KPI and external assurance.

³ <377.51kg is target for 2018/19. The target for SF₆ leakage increases as the number of our network using SF₆ increases.

Looking ahead – RIIO-T2

2018/19 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 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.

Following the development of our RIIO-T2 business plan with stakeholders throughout 2018, we submitted our first draft to Ofgem in July this year. Our draft Business Plan for 2021-2026, 'A Network for Net Zero', sets out a pathway for the north of

Scotland to play a key role in keeping global temperature increases below 1.5 degrees. This is in line with leading climate change science, required to prevent the worst effects of global warming. Following consultation with our stakeholders we have set five ambitious goals that we will deliver.

We are currently refining our final business plan based on feedback from our RIIO-T2 user group, the Ofgem challenge group and our wider stakeholder and businesses. This follows a period of consultation throughout the summer of 2019, including discussions with stakeholders, an online consultation and regional roadshows.

For further information please see:

-  Emerging thinking paper: www.ssen-transmission.co.uk/media/3219/she-transmission-riio_t2-emerging-thinking-paper.pdf
-  "A network for Net Zero" RIIO-T2 Draft Business Plan: www.ssen-transmission.co.uk/media/3454/draft-business-plan_amended-28619.pdf
-  You can get involved at: www.ssen-transmission.co.uk/riio-t2-plan

Five years. Five clear goals



Transport the renewable electricity that powers **10 million homes**

Build electricity network flexibility and infrastructure that can accommodate 10GW renewable generation in the north of Scotland by 2026.



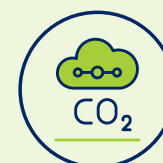
100% network reliability for homes and businesses

Make cost-effective investment in new technology to achieve 100% transmission system reliability for homes and businesses by 2026.



Every connection delivered on time

Provide every network connection, tailored to meet our customers' needs, on time and on budget.



One third reduction in our greenhouse gas emissions

Reduce the Scope 1 and 2 greenhouse gas emissions from our operations by 33% by 2026, consistent with 1.5 degree climate science pathway.



£100 million in efficiency savings from innovation

Through targeted new technology and ways of working, achieve £100 million customer benefits by 2026.

Delivered for around £7 a year

