Scottish & Southern Electricity Networks

TRANSMISSION

Sustainability Report

2021/22

www.ssen-transmission.co.uk

About us

We are SSEN Transmission (the trading name for Scottish Hydro Electric Transmission), and are part of the SSE plc Group.

We are responsible for the electricity transmission network in the north of Scotland maintaining and investing in the high voltage 132kV, 220kV, 275kV and 400kV electricity transmission network.

Our 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 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 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're already a mass exporter of renewable energy, with around two thirds of power generated in our networks area exported south.

By 2050, the north of Scotland will need 40GW of low carbon energy capacity to support net zero delivery. For context, we currently have close to 8GW of renewable generation connected in the north of Scotland.

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

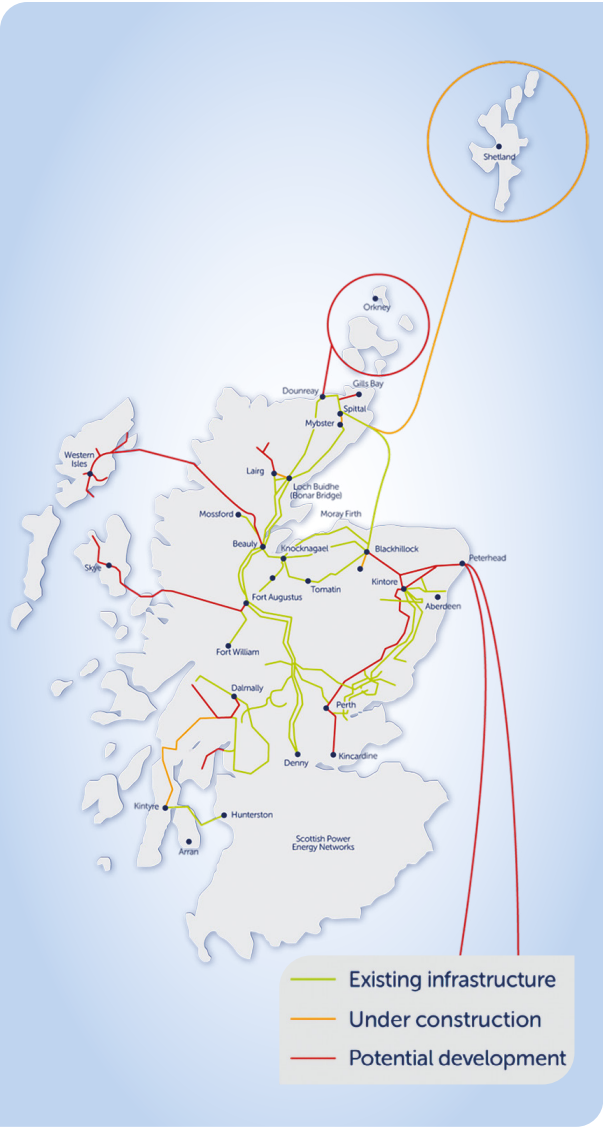
Find out more: www.ssen-transmission.co.uk

Five Years, Five Clear Goals

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 of our Business Plan for the RIIO-T2 period.

This 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
- Aim for 100% transmission network reliability for homes and businesses
- Every connection delivered on time
- One third reduction in our greenhouse gas emissions
- £100 million in efficiency savings from innovation

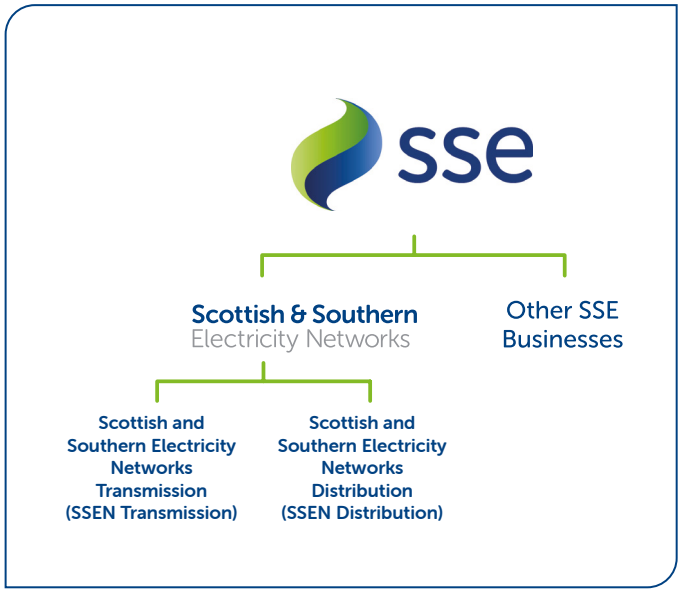


SSE Group

SSEN Transmission is part of the SSE Group, a leading generator of renewable electricity and one of the largest electricity network companies in the UK. SSE is UK listed, employing 10,000 talented and skilled people and is real Living Wage and Fair Tax Mark accredited.

SSE's vision is to be a leading energy company in a net zero world.

To achieve this, SSE's strategy is to create value for shareholders and society from developing, building, operating and investing in the electricity infrastructure and businesses needed in the transition to net zero. Sustainability is one of SSE's core values, defined as 'we do things responsibly to add long-term value'. SSE Group is committed to being operationally net zero by 2050 and has set four 2030 business goals aligned with the UN's Sustainable Development Goals (SDGs).



Cut carbon intensity by 80%	Increase renewable energy output fivefold	Enable low-carbon generation and demand	Champion a fair and just energy transition
Reduce Scope 1 carbon intensity by 80% by 2030, compared to 2017/18 levels, to 61gCO_2e/kWh.	Build a renewable energy portfolio that generates at least 50TWh of renewable electricity a year by 2030.	Enable at least 20GW of renewable generation and facilitate around 2 million EVs and 1 million heat pumps on SSEN's electricity networks by 2030.	Be a global leader for the just transition to net zero, with a guarantee of fair work and commitment to paying fair tax and sharing economic value.

Welcome

Welcome to our Annual Sustainability Report. Our business has a critical role in tackling climate change and the just transition to a sustainable economy. I am pleased to report that during 2021/22 we made a significant contribution to the effort to reduce greenhouse gas emissions and have taken actions that are demonstrably improving the environment and local biodiversity.

This report for 2021/22 is the first under our RIIO-T2 Business Plan "A Network for Net Zero". We prepared our Plan with our stakeholders to build upon the sustainability focus that had seen us awarded Leadership status in environmental actions by our industry regulator Ofgem from 2017-21.

Our sustainability ambitions are both bold and expansive.

The electricity sector has a critical role in decarbonising our economy. Our analysis shows that the north of Scotland, with its vast renewable resources, could contribute up to 10% of the full GB decarbonisation effort to achieve net zero by 2050. We have ambitious goals to build the infrastructure necessary to connect and transport that clean, green energy – and do this while reducing our own business emissions.

We have shown leadership in the development and implementation of biodiversity 'net gain' approaches in Scotland, and have ambitions to expand this philosophy to woodland cover and into the marine environment. This reflects our commitment to local communities and shared economic value. Our sustainability targets seek to invest in local supply chains, develop the circular economy and do this in enduring partnerships with local stakeholders.

At the end of this first year, I am delighted to report that we are on track – and in some important areas exceeding – our ambition.

The scale of the growth in transmission infrastructure required to achieve net zero has become clearer over the past year, notably with the announcement of the offshore wind "ScotWind" leasing. Given this, it is welcome to report an acceleration in our targets to reduce the environmental impacts associated with constructing new infrastructure.

To give just three examples. Our Alyth substation currently under construction is already demonstrating local biodiversity and ecological improvements – as well as hosting a growing family of ospreys. Further north in Kintore, working in partnership with technology provider GE, we are building a world-first 400kV substation without environmentally damaging SF_6 gas. In Argyll, we are collaborating with the Argyll Coast and Countryside Trust to plant native broadleaf trees – both expanding Scotland's rainforest and generating local sustainable jobs.

Despite being a growing business, we remain focused on an absolute reduction in our own emissions – for 2021/22 we achieved an 11% reduction (from 2018 levels) well on the way to our 33% reduction target by 2026. Our commitment to sustainability was recognised by our peers when we were honoured to receive the Utility Week Net Zero Award.

These achievements are testament to the passion for sustainability shown by my colleagues, our local community and supply chain partners, and wider society.

Together we are building a network for net zero.

Rob McDonald
Managing Director

2021/2022 Highlights

Showing Leadership

Won the Utility Week Net Zero award for our drive to deliver a net zero future.

With our specialist supplier partners, we have co-created a new strategy and specifications for avoiding the use of sulphur hexafluoride (SF_6) gas on our network.

SSE Group, and therefore SSEN Transmission, continue to be accredited to the Fair Tax Mark.

Published report: Getting to Net Zero The critical contribution from electricity generated in the north of Scotland, showing that the north of Scotland can contribute 10% of total action needed to achieve UK net zero.

Taking Action

We have reduced our scope 1 & 2 emissions by 11% from 2018/19 and are on track to achieving our Goal of one third reduction by 2026.

We launched our new Inclusion & Diversity forum Harne-SSE to help make Transmission the most inclusive environment for all its staff.

We launched a new supply chain reporting system to help us measure the impacts of our projects and work with our supply chain to improve sustainability performance.

Increased renewable capacity by 1GW - and are on track to meet our Goal to transport enough renewable energy through our network to power 10 million homes.

Working Together

We established a partnership with community group Argyll and the Isles Coast and Countryside Trust –to help support out commitments to compensatory planting while investing within our local community in Argyll and the Isles.

In 2021/22 27% of our approved suppliers were in the north of Scotland – ahead of our target to have 25%.

We were honoured to support COP26 as Principal Partner.

We are real Living Wage accredited, and this year was our first year of achieving Living Hours accreditation.

2021/2022 Highlights

Showing Leadership
SF_6 -Free Siemens Clean Air Power Voltage Transformers

In May 2021 SSEN Transmission marked yet another significant milestone on the journey to net zero emissions as it announced the energisation of the Glen Kyllachy wind farm transmission connection, near Tomatin in the Scottish Highlands. The new substation will not only facilitate the connection of new renewable energy to the grid, it will also be home to the first SF_6 -free Siemens Clean Air Power Voltage Transformers on the GB Transmission network, helping to support the transition to net zero emissions and the fight against climate change by removing SF_6 gas.

Taking Action:
Significant Impact on Biodiversity at Alyth Substation Development

The new substation development in Alyth is forecasted to deliver a significant positive impact on biodiversity - forecasted to be an increase of 50%. With thousands of trees being planted to help with screening the project as well as to enhance biodiversity, the team is also pleased to report that initial wildflower grass seeding is providing valuable habitat for local wildlife, including many farmland species of birds such as goldfinch, bullfinch, yellowhammer and linnet. The resident Ospreys in the far corner of the development are also thriving this year with three chicks hatched and a live camera feed installed to allow viewers to follow their progress.

Working Together:
COP26 Partnership

As a proud principal partner of COP26 through SSE Group's endorsement, we were delighted to contribute meaningfully to the climate debate through our own collaborative COP26 fringe events. These events explored the Social Capital of Biodiversity Net Gain and Networking for a Net Zero Future. We also took part in the COP26 Green Zone at SSE's exhibition space, alongside SSEN Distribution. Telling the story of the green energy journey, we jointly explained our role in connecting clean, green power generation in the north of Scotland and delivering it to homes and businesses all across GB.

Our Approach

Overview of our approach to sustainability including:

- Sustainability Strategy and SDGs
- Sustainability Action Plan
- Materiality Review
- External Drivers & Emerging Trends
- Sustainability Governance
- Sustainable Supply Chain

Our Sustainability Approach

Sustainability ambitions

To enable a smart, sustainable energy future.

Sustainability strategy

Our Strategy sets out six ambitions to enable a smart, sustainable energy future. These ambitions focus on the areas most material to our business and our stakeholders. These areas have been mapped to the SDGs to provide a clear line of sight from our strategic objectives to international action on sustainability.

The Strategy was updated in 2019 on as part of our RIIO-T2 planning.

Supporting international goals

We align to the United Nations Sustainable Development Goals (SDGs) and we recognise the importance of this framework, as it represents a consensus on the priorities of achieving global sustainability. This aligns to the SSE group approach and we have set our goals against the most material UN SDGs areas to help inform our approach to sustainability and how we do business. From our materiality assessment we identified 9 UN SDGs that are most material for our business, these are given in order of materiality, with our top level ambition:

Connecting low carbon generation and working towards our 1.5°C Science Based Target

Connecting low carbon generation to power 10million homes

Developing the network for net zero

High quality jobs and supporting a just transition

Embedding circularity in our resource use

Achieving a biodiversity net gain

Supporting our communities

Reducing our gender pay gap

Marine enhancement

Our strategy aligns to these SDGs, and takes inspiration from the goals and sub goals to help us focus on the key areas where we can take decisive action.

Our Sustainability Approach

Our sustainability action plan

To help us achieve our sustainability goals we developed a detailed Sustainability Action Plan (SAP) as part of our RIIO-T2 Business Plan.

Within our SAP we build on the 6 key areas from our strategy. We've identified key outcomes for each area, along with short, medium and long term steps to help us get there.

We committed to focus on new areas of sustainability, increase our measurements and reporting of our impacts and take clear action to deliver against our stretching sustainability outcomes.

We have made a strong start against our plan, built upon our success in RIIO-T1.

For areas that we haven't reported on in the past we have prioritised setting up new systems and processes to ensure we are able to use high quality data to manage these impacts.

We include a report on our 2021/22 performance across all 6 areas of our SAP within this Sustainability report, as summarised in the table to the right.

	Target	Metric	RIIO-T1 performance	RIIO-T2 target	2021\2022 performance	Page reference
Connecting for society	GB homes powered by renewable energy transported through our network	number (m)	5.3	10.0	G	Pg 18
Tackling climate change	Reduction in scope 1 and 2 emissions (in line with our SBT)	% GHG volume	n/a baseline	-33%	G	Pg 20
Promoting a natural environment	Projects gaining consent after 1 April 2020 with biodiversity 'No Net Loss' outcomes	Percentage of investments	n/a	100%	G	Pg 28
	Investments proposals to improve visual amenity	Number of proposals	3	5	G	
Optimising Resources	Waste sent to landfill across all waste streams	Percentage	23%	0%	A	Pg 33
	Recycling, recovery and re-use of waste	Percentage	76%	>70%	A	
Supporting communities	Employees trained in community vulnerability	Percentage	0%	>95%	A	Pg 36
	Approved supplier located in the north of Scotland	Percentage	27%	>25%	G	
Growing Careers	Employees trained in inclusion and diversity	Percentage	0%	>95%	G	Pg 38
	Pipeline intake is local diversity representative	tbc	tbc	tbc		

Materiality Review

As part of setting our Sustainability Strategy and Action plan we carried out extensive stakeholder feedback to inform our approach and help us understand the materiality of our impacts. From this review we identified 6 key areas of focus, as outlined in our current strategy, where we committed to clear actions, with ambitious targets.

We recognise that materiality changes over time, and sustainability expectations on organisations are growing, therefore in 2021/22 we undertook a full review of material impacts to ensure we continue to focus on the right areas on behalf of our stakeholders.

To gain a fresh perspective we worked with 3keel, a leading sustainability consultancy, to review our approach and help inform our strategy and identify key themes and areas of focus. We carried out this assessment looking at materiality today and out to 2030 so we could identify areas that are increasing in priority to ensure we are taking action, at pace.

From this assessment we have confirmed that our most material areas continue to be:

1. Climate change.
2. Biodiversity.
3. Sustainable supply chains.
4. Embodied carbon.
5. Community engagement.
6. Sustainable local jobs.
7. Transitioning to a circular economy.

Using this updated materiality assessment we reviewed our past plans and strategy and are in the process of developing an updated Sustainability Strategy that will provide a longer term view of our ambition for our stakeholders and communities.

To ensure we maintain our focus in the right areas we will do a review of our materiality annually with stakeholders and change our approach as needed to continue to show leadership and deliver against our goals.

1. Identify impacts

We identified issues based on our previous assessments, industry best practice and ESG trends.

2. Stakeholder review

Ask for feedback from Stakeholders and experts, through bespoke engagement and our annual engagement plans.

3. Prioritisation

Using feedback from our stakeholders, we have identified, and refined, a list of priorities based upon their impact to our business.

4. Updating our approach

Updating our strategies and priorities based on the outcomes.

External Drivers and Emerging Trends

We have seen unprecedented change across society in recent years. From the Covid-19 pandemic fundamentally changing how we live and work, to the current cost of living crisis and global instability. To ensure we deliver the network for net zero in an equitable and sustainable way it is ever more important to ensure a secure and affordable supply of low carbon energy for GB.

As we deliver our RIIO-T2 business plan we are looking ahead to how we grow our network to enable the new low carbon generation needed. The British Energy Security Strategy included the UK Government's headline ambition to see 95% of GB's electricity as low carbon by 2030. As part of this they also recommend Ofgem expedites its approvals process to build networks in anticipation of major new sources of generation and demand.

Additionally we have seen the unprecedented success of the ScotWind leasing round, in January 2022, with a potential 25GW of offshore wind being leased, a significant increase on the expected 10GW. This was followed by the Pathway to 2030 publication, including the Holistic Network Design (HND) that states the need for over £7bn of investment in onshore electricity transmission infrastructure in the north of Scotland.

To support these new developments we have been accelerating our plans for our network to ensure we can meet this emboldened call to action and be an enabler for the clean, green energy producers in the north of Scotland.

Cost of Living

Inflation hit a 40 year high this year, driven by the cost of energy and exacerbated by the war in Ukraine. There is significant hardship being faced by families in the short term and the inequalities that result from reducing economic activity. It is clear, however, that its response must be to continue with its investment plans in the net zero transition, growing its workforce and the supply chain, helping to reduce reliance on volatile global gas prices, and invest in a way that maximises local social value too.

Climate Science

The publication of the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment reports in 2021 revealed increasingly urgent tones on the immediacy of the climate challenge. These reports concluded that it is unequivocal that human behaviour has warmed the planet and that climate change is a threat to the health of the planet and its people. Adaption to this changing climate is fragmented and there is a clear message on the need to phase out fossil fuels.

Is Scotland Climate Ready?

The Climate Change Committee's (CCC) independent assessment of the Scottish Government's progress in building climate resilience, Is Scotland Climate Ready? 2022 Progress Report to the Scottish Parliament, was published in March 2022. The CCC found that Scotland's action to adapt to critical impacts such as wetter winters and rising sea levels has stalled, posing risks to people, infrastructure and business. Significant concerns are also raised in the report regarding the resilience of Scotland's electricity networks, referencing recent storm impact and just transition considerations due to rural and island communities facing significantly greater impact by climate change related power loss compared to other areas.

Nature Positive & Risk Reporting

COP15 has called on business to increase action on biodiversity, with a target for business included in the recommendation for the first time – this target, target 15 – says "all businesses assess and report on their dependencies and impacts on biodiversity, … progressively reduce negative impacts, by at least half and increase positive impacts". We have also seen the Taskforce on Nature-related Financial Disclosures' (TNFD) first version of its nature-related risk management and disclosure framework. The TNFD seeks to create a risk management and disclosure framework for organisations to report and act on evolving nature-related risks, ensuring nature is factored into financial and business decisions.

Just Transition

In September 2021, the Scottish Government responded to the Just Transition Commission's recommendation report. The response outlines the Scottish Government's commitment to a just transition, including skills and training, job security, building infrastructure to decarbonise and ensuing equity in the costs of the transition.

Sustainability Governance

The structures governing sustainability within SSE Group and SSEN Transmission are designed to deliver clear lines of accountability throughout the organisation and ensure the alignment of strategic objectives with social and environmental value.

As part of the SSE plc Group, we comply with the UK Corporate Governance Code† . This ensures we have a clear purpose, values and strategy, and the internal controls and practices to generate value for shareholders and contribute to wider society. Our governance structure is shown in the organisational chart to the right.

Sustainability performance is overseen by both the Transmission Executive Committee and the Sustainability Sub Committee of the board of directors.

Independent oversight and challenge to this report and our performance against our sustainability action plan has come from our Network for Net Zero Stakeholder Group.

In 2021/22 we extended our sustainability governance by establishing the Planet Steering Group and People Committee to provide clear senior leadership accountability for environmental and social sustainability. These feed up, as required, to the Transmission Executive Committee.

† The UK Corporate Governance Code, published by the Financial Reporting Council, sets out the standards for successful and sustainable corporate governance. Available at: www.frc.org.uk/directors/corporate-governance-and-stewardship/uk-corporate-governance-code

SSE plc

UK listed energy company. 100% owner SSEPD plc.

Scottish and Southern Energy Power Distribution (SSEPD) plc

Holding company for SHE Transmission plc. Wholly owned subsidary of SSE plc.

Scottish Hydro Electric (SHE) Transmission plc

Holder of electricity transmission licence for the north of Scotland. Wholly owned subsidary of SSEPD plc.

Sustainability Sub Committee

Responsible for the implementation of SSEN Transmission's sustainability policies and practice.

Transmission Executive Committee

Responsible for the implementation of SSEN Transmission's sustainability policies and practice.

Planet Steering Group

Oversees SSEN Transmission's environmental sustainability strategy, performance and action.

People Committee

Oversees SSEN Transmission's delivery against it's people strategy.

Sustainable Supply Chain

There is a need to invest over £7bn into the transmision network in the north of scotland over the remainder of this decade to enable the forecasted growth in renewable electricty*. With such significant investment opportunity, and need, to collaborate with the supply chain to embed sustainability is greater than ever before:

- As part of our Science Based Target for greenhouse gas emissions, we have set a scope 3 engagement target aiming to have two thirds of our suppliers by spend set a Science Based Target themselves by 2025.
- The inclusion of carbon projections in contract tenders for key framework contracts.
- Hold regular contractor and supplier engagement forums to collaborate, share knowledge and support our supplier to set Science Based Targets.
- Grid/Super Grid Transformer procurement with whole lifetime costs consideration - Develop the whole life cycle losses estimation methodology for other key components such as conductors and embed it into the procurement tendering system.
- Implement reporting on expenditure with local supply chains.

One of the most significant impacts we have on the areas we operate in is the local economic benefits created through development projects and the use of local suppliers. In 2021/22 we exceeded our target of 25% of approved suppliers being in the north of Scotland achieving 27%.

Progress towards supply chain SBT	% Suppliers by spend
Total % with or committed to SBT	80%
% With set target	36%
% Committed to set a target	44%

In 2021/22 we have made good progress across all areas. With 80% of our supply chain already having a Science Based Target, or having committed to set one we are making excellent progress against our commitment of 67% of suppliers having an SBT by 2025.

Throughout 2021/22 we have had regular supplier meetings focused on sustainability collaboration and engagement with our Tier 1 contractors and we are working on a methodology to include carbon in our contracts and procurement decisions.

In April 2022 we launched our new project sustainability governance model and supplier reporting tools (see next page) to further embed sustainability within our value chain and delivery teams.

*Based on The 'Pathway to 2030' by the Electricity System Operator
https://www.nationalgrideso.com/future-energy/the-pathway-2030-holistic-network-design

Sustainable Supply Chain

Embedding sustainability in large capital projects

In early 2021/22, Deloitte undertook an independent review of SSE's Large Capital Project (LCP) governance framework and made a recommendation that sustainability should be formally embedded throughout the process to align with the company's business goals and material UN SDGs.

We consequently undertook a refresh of the sustainability requirements in our LCP governance framework to meet four key objectives:

1. Ensure SSE is delivering LCPs in a sustainable way;
2. Encourage and increase sustainability throughout the LCP value chain;
3. Increase awareness of and reduce sustainability risks that could cause issues for the project, wider society, or the environment; and
4. Increase innovation and maximise the opportunity to deliver a positive impact on wider society and the environment, going above and beyond regulatory requirements.

The newly updated LCP governance framework requires LCP project teams to embed sustainability throughout the project process, ensuring sustainability risks are mitigated and sustainability opportunities are maximised across 10 sustainability criteria aligned to the UN SDGs. This covers key topics from whole life carbon, climate adaptation, circular economy and biodiversity to modern slavery and human rights, and maximising local content.

From 1 April 2022, a Sustainability Assessment and Action Plan (SAAP) is required for new in development projects. Guidance, training, and additional resources for project teams support the roll-out of this new approach, in addition to partnering with external experts at the Supply Chain Sustainability School.

Sustainability data capture tool

Recognising the need for improved sustainability data capture from our suppliers, we developed and trialled our new supply chain reporting tool in 2021/22. We trialled it on the Shetland HVDC project, working with the 3 main contractors and using the feedback to improve the system, with the tool launching fully in April 22, with all projects over £500k now required to report.

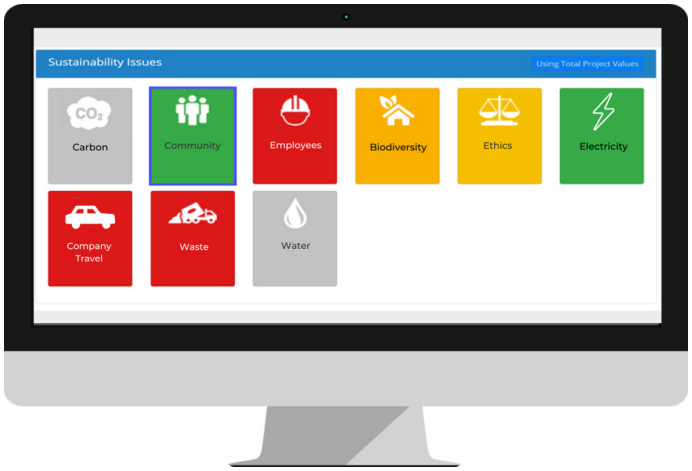
The cloud-based Sustainability Data Capture Tool (SDCT)

is specifically designed to manage and visualise supply chain sustainability performance and will be used to measure sustainability progress against RIIO-T2 projects.

SSEN Transmission aim to use this data to develop baselines, set targets, and implement data-based decision making to drive further sustainability and meet business goals.

SSEN Transmission has, following a successful pilot, embedded its new supply chain reporting tool across all active Large Capital Projects. The cloud-based SDCT, specifically designed to manage and visualise supply chain sustainability performance at a project level, will be used to measure sustainability progress and provide the data required for the Ofgem RIIO-T2 reporting requirements.

The requirement to use this portal is embedded within our contracts in the Sustainable Procurement Works Information. Due to the early stage of the adoption of the SDCT, full reporting information is not available at this time but will increase as data becomes available from the supply chain.



Performance

Performance updates on the 6 areas of our Sustainability Action Plan:

- Connecting for Society
- Tackling Climate Change
- Promoting Natural Environment
- Optimising Resources
- Supporting Communities
- Growing Careers

2021/22 Performance

Our industry regulator Ofgem requires us to report on our environmental performance during 2021/22 in the form of the table below and on the next page. We take a holistic approach to sustainability, encompassing societal and environmental impacts, so you can find more information on our full six ambitions in the following pages.

Impact and KPI	Unit	Performance		Comment
Contribution to energy system decarbonisation				
Annual addition of low carbon and renewable energy capacity connected to the network	MW	1GW		For more information see page 18.
Annual investment in ongoing innovation activities that are primarily supporting decarbonisation and/or protecting the environment	£k	60.06k		The funding was for the LT331 North of Beauly DLR and the first part of the discovery stages of our 3 Strategic Innovation Fund projects: SIF - Nimbus- exploring the use of weather and climate data to help predict the impact of climate change on transmission assets. SIF - Incentive - investigating new solutions to address the issue of increased intermittent offshore wind capacity connecting to the grid. SIF - Network DC - looking at enabling installation of the offshore wind capacity required. for net zero LT331 - To install a Dynamic Line Rating (DLR) system on the existing 275kV double circuit OHL from Beauly to Loch Buidhe
Climate Change Impacts				
Licensee's long-term greenhouse gas reduction target, aligned with a science based methodology, and where possible validated externally such as with the SBTi or equivalent	% reduction	-33%		Our Reduction target for end of RIIO-T2 from a 2018/19 baseline, aligned with our SBT of a 46% reduction by 2030.
Annual business carbon footprint excluding losses/shrinkage in comparison to its end of RIIO-2 target	%	-11%		From a 2018/19 baseline.
Annual change in Insulation and Interruption Gas emissions	%	-6%		For more information see page 24.
Resource use & waste				
Annual total waste (office, network depots, construction)	Tonnes	79.7		This waste data refers to shared office locations with two network depots in scope. We are presently improving our waste management data to capture all network depots and project construction waste.
Fate of waste: reduced, prepared for re-use, recycled, other recovery, to landfill	%	Landfill	1%	We are unable to provide re-use figures for our waste; this will be available later in the RIIO-T2 period. Other recovery refers to waste components (flu tubes and non hazardous) which were treated and issued to a WEEE recycler.
		Energy from waste	33%	
		Recycled	63%	
		Other recovery	3%	

Environmental KPIs

Impact and KPI	Unit	Performance	Comment
Sustainable procurement			
Proportion of suppliers meeting the licensee's environmental supplier code or equivalent	%	100%	From July 2022 all new suppliers are required to sign up to these codes as part of our updated Supplier Onboarding Procedure.
Local environment			
Annual investment in schemes to enhance/restore local environmental quality	£m	1.2	From Mauld and the ACT compensatory planting schemes.
Land area being treated in schemes to enhance/restore local environmental quality	Hectares	104	From Mauld and ACT compensatory planting schemes.
Net change in biodiversity units from network development projects granted planning consent in the year that impact the local environment	% change	104%	The following 6 schemes were in scope: Abernethy grid, Kinardochy substation, Kintore substation, Limekilns, Lochay substation, Peterhead converter station.
Number of reportable environmental incidents	Number	13	No action taken by regulator.

Connecting for Society

	Outcome	Status	
Connecting for society	Transport enough renewable energy through our network to power 10 million homes.	G	We have increased the renewable capacity connected by 1 GW in 2021/22

In 2021/22 99 connection applications were accepted for new renewable and low carbon energy projects to the transmission network. All offers were made within the regulatory timescales required for issuing a connection offer.

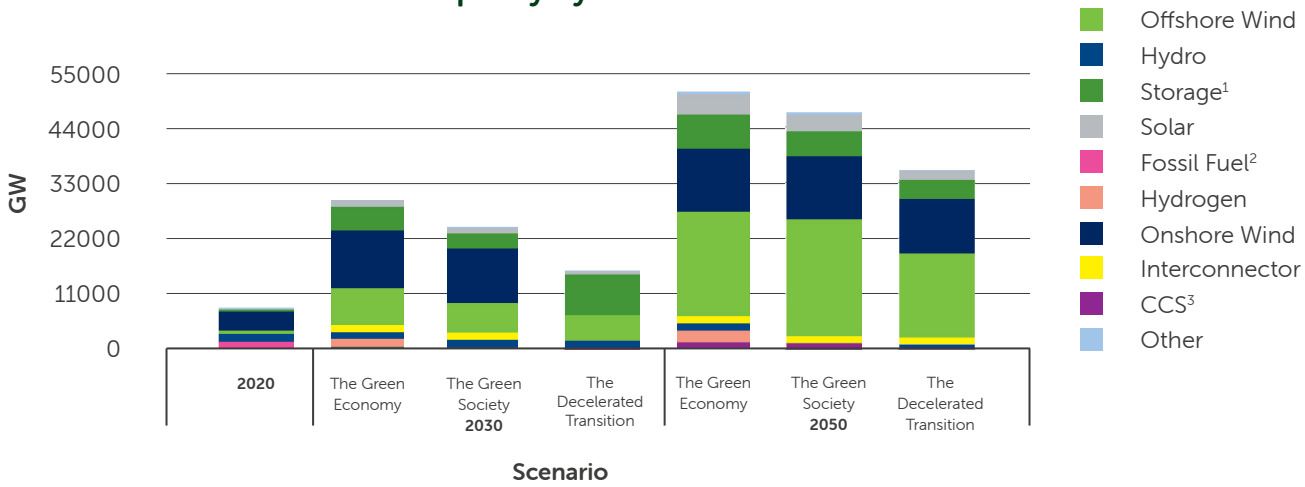
	Unit	2021/22
New Low carbon generation connections	GW	1.1
Low carbon share of generation	%	84%
Number of connection offers made	Number	161*
Connection offers accepted	Number	99
Quality of connections ODI score	Score 1-10	8.1
Quality of connection ODI Target		7.7

* all offers issued within regulated licensed timescale of 2 months + 14 days
The accepted connection offer data is inclusive of initial applications and modification applications received in financial years 2020/21 and 2021/22

Scenarios for a Pathway to Net Zero Carbon Emissions

We have developed Net Zero scenarios for our Network area and published an updated North of Scotland Future Energy Scenarios report. These updated scenarios extend to 2050 to allow us to model how changes in the energy landscape could impact the transmission network in the longer term. Our two net zero scenarios, The Green Economy and The Green Society, are designed to contribute towards achieving both the Scottish and UK Government's net zero targets. While the final scenario, the Decelerated Transition does not achieve the net zero by 2050.

Annual Installed Generation Capacity by Scenario



All 3 scenarios show the significant increase in generation capacity over the coming decades. With 2 scenarios showing 100% of generation connected to the transmission network coming from renewables post 2030. All scenarios show significant growth in capacity connected to our transmission network out to 2050.

In November 2021 we published the report 'Getting to Net Zero: The critical contribution from electricity generated in the north of Scotland', highlighting the significant contribution SSEN Transmission will make to UK and Scottish Government net zero targets, up to 10% of the country's total emissions abatement required for net zero to come from the north of Scotland's electricity sector.

In Focus - Offshore Wind

Scotwind – Offshore Wind to Deliver for Net Zero

In January 2022, Crown Estate Scotland announced 17 offshore wind projects were awarded option agreements for seabed through the ScotWind leasing round. These projects, collectively have a generating capacity of nearly 25GW.

As these projects are built over the next decade, the new, clean energy from Scotwind projects will make a big contribution to both Scottish and UK Government's Net Zero targets.

These projects should also support development and use of Scottish supply chain's, with a potential average of £1.5bn investing in Scotland per project.

We are working to accelerate delivery of the infrastructure needed to enable the connection of these projects to the transmission network as part of the Pathway to 2030.

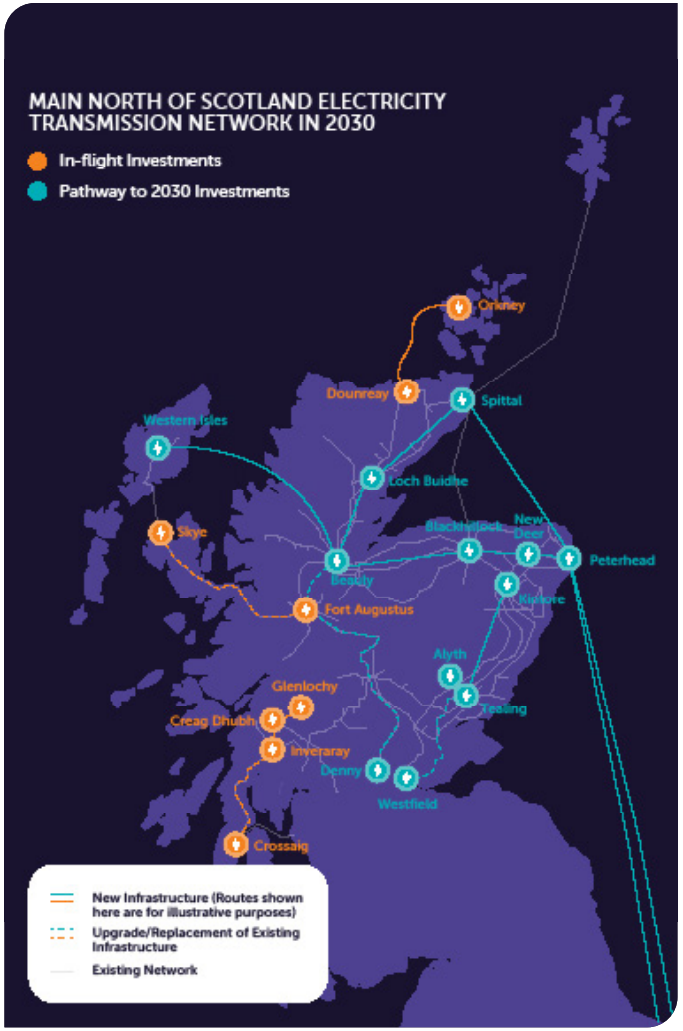
https://www.crownestatescotland.com/news/scotwind-developers-set-out-multi-billion-pound-supply-chain-commitments

The 'Pathway to 2030' sets the blueprint for the electricity transmission network infrastructure required to enable the forecast growth in renewable electricity across Great Britain. This includes delivering the UK and Scottish Government's 2030 offshore wind targets of 50GW and 11GW respectively, making tangible progress towards net zero commitments. It is made up of, the Holistic Network Design (HND) and the Network Options Assessment (NOA) report:

The HND sets out the strategic network infrastructure to deliver 2030 offshore wind targets, while ensuring an appropriate balance between environmental, social and economic costs. It's been developed in collaboration by SSEN Transmission, the other Transmission Operators and the Electricity System Operator (ESO).

The Networks Options Assessment (NOA) report, by the ESO, sets out the transmission network reinforcements which should receive investment.

For the north of Scotland, this confirms the need for over £7bn of investment in onshore electricity transmission infrastructure, significant reinforcements are required to deliver 2030 targets, several of which will require accelerated delivery to meet 2030 connection dates.



Tackling Climate Change

Climate change performance at a glance

	Target	Status	
Science Based Targets	33% reduction Scope 1 &2 by 2025/26 from an 2018/19 baseline	G	4% reduction from last year, 11% reduction from baseline
	Reduce Scope 3 transmission losses emissions intensity 50% by 2029/30 from an 2018/19 baseline	G	40% reduction achieved in 2021/22 from baseline
	Full reporting of scope 3	G	Gap analysis completed and plan established to close gaps and improve reporting.
Losses	Implement Losses strategy	G	Short term actions complete. Whole life cycle losses and carbon costs included in procurement
SF_6	Insulation and Interruption Gases (IIG) leakage rate of 0.15% of installed volumes by 2025/26.	G	Achieved a leak rate of 0.19% in 2021/22, a 19% reduction from 2020/21
Embodied carbon	PAS 2080 certification	A	Reporting system has been launched and we are collaborating with TOs to define common methodology.
Climate resilience	Update our flood risk assessments in line with best practice.	G	Flood defence projects in planning to begin in 2022/23.

Science Based Target

SSEN Transmission was the UK's first electricity networks company to have their GHG emissions reduction target externally validated by the Science Based Targets Initiative (SBTi) in line with a 1.5°C global warming pathway.

We continued our commitment to taking action on climate change by signing the Business Ambition for 1.5 Degrees Campaign early last year that showed our ambition to achieve a net zero value chain by 2050.

Climate Leadership

SSE were awarded an 'A' grade by CDP in 2021, improving on the 'A-' received in 2020. The CDP's A-List, recognises the world's leading companies based on their level of transparency and performance on climate change. SSE is one of around 200 companies worldwide which achieved an 'A' grade, placing the company in the top 2% of all scored companies.

SSEN Transmission was recognised for its approach to net zero, winning the Utility Week Net Zero Award in March 2022. This recognises SSEN Transmission's drive to deliver a net zero future, being at the forefront of the UK's efforts to tackle the climate emergency by harnessing the north of Scotland's vast renewables resources and connecting and transporting that power to demand centres across Scotland and beyond.

Tackling Climate Change

Reducing our greenhouse gas emissions

Our Science Based Target (SBT) requires action across scope 1, 2 and 3. Each commitment that makes up our SBT is outlined in the table below.

SBT Commitment	Progress
Reduce absolute scope 1 & 2 GHG emissions 46% by 2029/30 from a 2018/19 base year (33% by end of 2025/26)	11% reduction
A commitment to reduce scope 3 transmission losses emissions intensity 50% by 2030 from a 2018/19 baseline	40% reduction
Reduce indirect emissions so that two thirds (67%) of our suppliers by spend will have a SBTs	80% of suppliers by spend set or committed to set SBTs

This year we have been making progress against our targets; continuing our work on energy efficiency at substations, using alternative insulating gases on our network and developing plans for conversion of our fleet to EVs over the next few years. From this we have achieved a 11% reduction from 2018/19, with a 4% reduction from the previous year.

In this section we'll provide updates on our action and performance across our key areas of emissions:

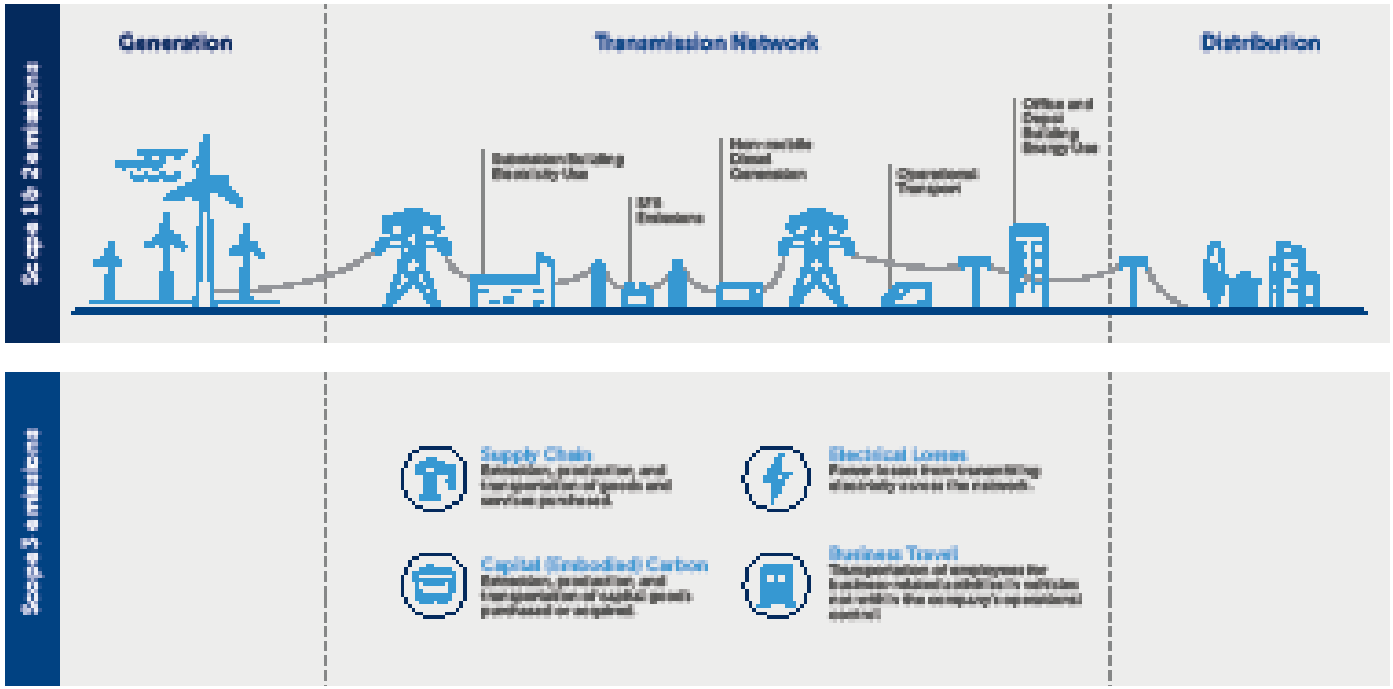
- Substation Energy Use
- Operational Transport
- Insulation & Interruption Gases (IIGs)
- Electricity Transmission Losses
- Embodied Carbon

Sources of Carbon Emissions from the SSEN Transmission Network

Scope 1: direct greenhouse gas emissions occurring from sources owned or controlled by the company e.g. our operational transport, on-site generators and SF_6 fugitive emissions;

Scope 2: indirect greenhouse gas emissions from the generation of purchased electricity consumed by the company; and

Scope 3: all indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions e.g. business travel, grid electrical losses, capital carbon and supply chain emissions. (see page 43 for full scope 3 mapping)

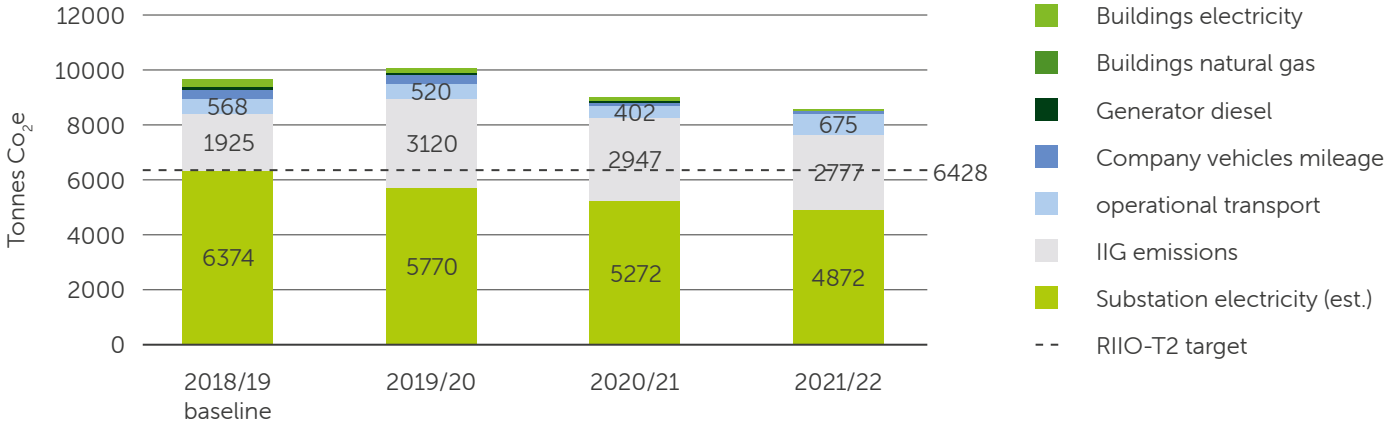


Tackling Climate Change

Reducing our greenhouse gas emissions

Emissions in tCO_{2e}	Specific area	Emissions scope	2018/19 SBT baseline	2019/20	2020/21	2021/22
Building energy use	Buildings electricity	2	266	148	69	49
	Buildings natural gas	1	14	13	7	5
	Substation electricity (est.)[B]	2	6,374	5,770	5,272	4,872
Operational transport	Operational transport	1	568	520	402	675
	Company vehicles mileage	1	347	337	116	144
Fugitive emissions	IIG emissions	1	1,925	3,120	2,947	2,777
Fuel combustion	Generator diesel	1	100	69	20	0.1
Total scope 1			**2,954**	**4,058**	**3,492**	**3,601[A]**
Total scope 2 (market based)			**6,640**	**5,918**	**5,342**	**4,921[A]**
Total scope 1 & 2			**9,594**	**9,977**	**8,834**	**8,522[A]**

SSEN Transmission scope 1 & 2 emissions from 2018/19 baseline into RIIO-T2 period



[A] This data was subject to external independent assurance in 2022. For the limited assurance opinion and reporting criteria please see our website - www.ssen-transmission.co.uk/sustainability-and-environment/sustainability-strategy

[B] Substation electricity emissions for prior years have been re-stated using an updated estimation methodology based on new energy monitoring data. See the reporting criteria for details.

Tackling Climate Change

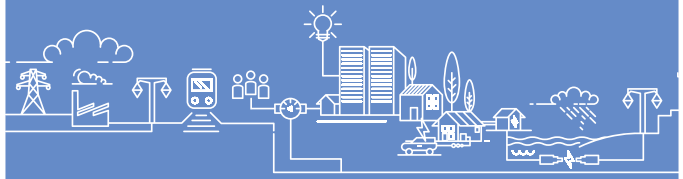
Substation electricity use and operational transport

Substation electricity use forms the largest portion of our annual business carbon footprint, at 57% of our total scope 1 and 2 emissions. Substation electricity use relates to the electricity consumed by the equipment and building services within our sites.

SSEN Transmission currently has 262 operational vehicles and as part of SSE Group we have committed to the Climate Group EV100 initiative which requires 100% of vehicles up to 3.5 tonnes and 50% of vehicles up to 7.5 tonnes to be electric by 2030, with an aim for 50% of the operational fleet to be electric by the 2026.

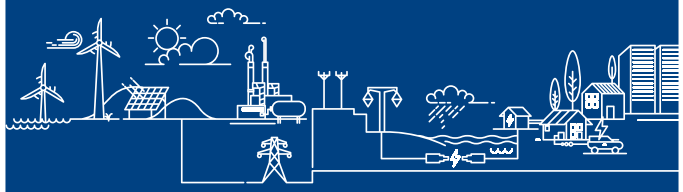
In order to reduce emissions across our substations and operational fleet, a £16.9 million programme of work has been drawn up. This includes:

- The installation of energy-efficiency measures in up to 83 substations, including ensuring spaces have adequate heating controls and draught-proofing, increasing comfort while reducing energy consumption.
- The installation of photovoltaic solar panels across 44 locations, for a total of 2MWp of capacity, allowing substations to run from their own renewable electricity sources and reducing reliance on the power grid.
- The installation of 22kW electric vehicle chargers at 32 substations and a further 98 remote charging points at SSE sites.



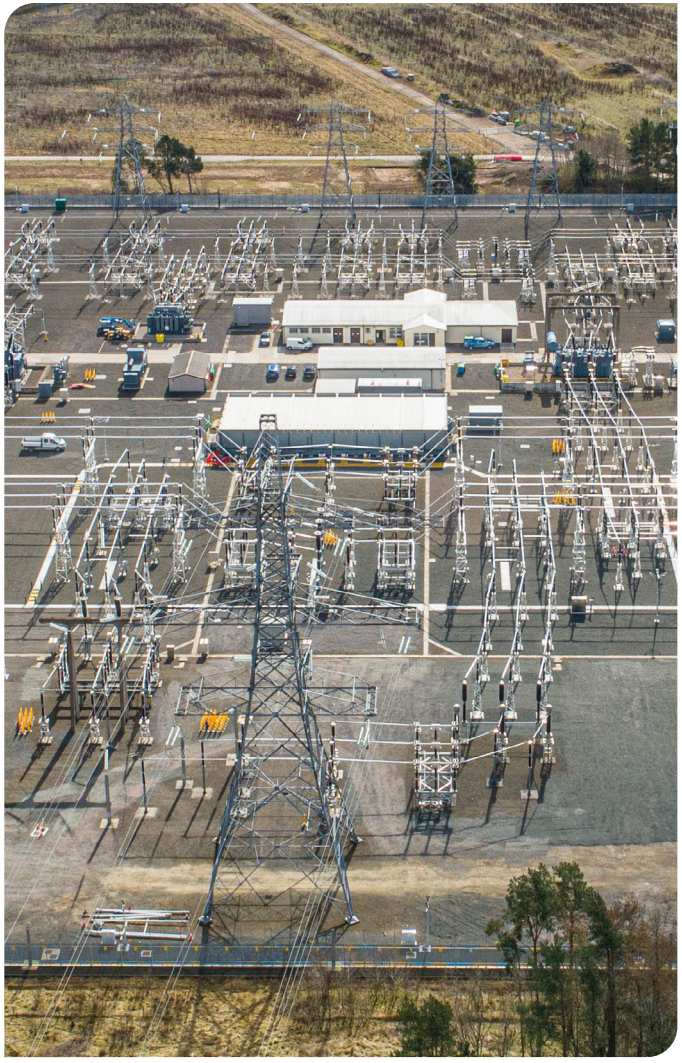
Operational transport emissions per operational vehicle

3.13 tCO_{2e}/Vehicle
12% decrease from 18/19



Substation electricity emissions per substation

47.5 tCO_{2e}/Substation
26% decrease from 18/19



Tackling Climate Change

Insulation and interruption gas emissions

Insulation and Interruption Gas (IIG) emissions forms the second largest component of our annual business carbon footprint, at 33% of our total scope 1 and 2 emissions. This is due to the fact that sulphur hexafluoride (SF_6), the most common IIG, is a potent greenhouse gas with a Global Warming Potential (GWP) 23,500 times more powerful than CO_2. Due to this we are committed to avoiding SF_6 wherever possible.

We have continued to excel in reducing IIG emissions during financial year 2021/22. For 2021/22 our leakage rate has been 0.19%, representing a 20% reduction from the previous year and our best leakage performance since 2017/18.

SSEN Transmission continues to lead in driving down IIG emissions. This is reflected in the lowest base leakage rate amongst Transmission Operators.

Emissions from IIGs in 2021/22 have reduced by 6% compared to last year, despite the overall holdings of SF_6 on our network increasing.

IIG Type		2018/19 SBT baseline	2019/20	2020/21	2021/22
Total IIG emissions	tCO_{2e}	1,925	3,120	2,947	2,777
SF_6	tCO_{2e}	1,925	3,120	2,947	2,777
C4-FN-based gases	tCO_{2e}	0	0	0	0
Vacuum/clean air	tCO_{2e}	0	0	0	0
Leakage rate*	%	0.21	0.32	0.24	0.19
Interventions per annum	Number	Not recorded in T1	Not recorded in T1	Not recorded in T1	27
Estimated impact of interventions	tCO_{2e} avoided or abated	Not estimated in T1	Not estimated in T1	Not estimated in T1	111 (tCO_{2e} avoided through SF_6 alternatives)588 (tCO_{2e} abated through leakage reduction)

* - Leakage rate is expressed relative to IIG mass holdings at the end of each financial year.

Advocating for change to reduce SF_6 dependency

We continue to promote SF_6 alternatives, nationally and internationally, through collaboration with other network owners, via the Energy Networks Association (ENA), switchgear suppliers, the British Electrical and Allied Manufacturers Association (BEAMA) and CIGRE, the global community committed to the collaborative development and sharing of power system expertise.

With these partners, we are engaging with the Health and Safety Executive (HSE) to extend the exemption for SF_6 filled apparatus currently contained with the Pressure System Safety Regulations 2000 (PSSR) to all apparatus, i.e. to include alternatives to SF_6. This exemption, which we believe is firmly valid on technical grounds, will remove a significant operational and maintenance barrier to introduction of alternative to SF_6 across the UK.

Changing policy

With our specialist supplier partners, we have co-created a new strategy and specifications for avoiding the use of sulphur hexafluoride (SF_6) gas on our network, with an aim to meet our goal of a one third reduction in our greenhouse gas emissions. This change means we will not use SF_6 where there is a technically viable alternative available.

Tackling Climate Change

Scope 3 Reporting Improvement Programme

Over the course of RIIO-T2 we intend to improve the scope, quality and accuracy of our Scope 3 emissions reporting. Our improvement programme is built on four principles outlined below:

Business Carbon Footprint - Scope 3 Emissions

Scope 3 emissions are the result of the activity of our value chain, and therefore are not in our direct control. However we can influence them, and as our scope 3 emissions were over 94% of our total greenhouse gas emissions in 2021/22, it is vital that we take action to reduce them wherever possible.

We haven't previously measured our full scope 3 emissions. To understand which emissions categories are relevant and material to SSEN Transmission, we carried out a screening exercise during 2021/22 in line with the GHG Protocol Technical Guidance for Calculating Scope 3 Emissions.

We identified 2 categories as highly material: capital goods and fuel and energy related activity. Purchased goods and services, business travel and employee commuting are also assessed as material.

Data availability and quality is a challenge therefore our key priority for the next few years is to improve this for our most material areas. For full details of our screening exercise, methodology, assumptions and data sources please see page 43.

Collaboration

- Scope 3 reporting is a challenge that cannot be solved by a single company. It requires collaboration with supply chain partners to develop the skills, processes and tools for assessing and quantifying the carbon impacts of different activities or products.
- We are actively involved in several industry working groups aimed at developing common approaches to scope 3 reporting across the electricity networks sector and the wider infrastructure sector. Over the course of RIIO-T2 we will play a leading role to develop consistent methodologies.

Target setting

- At present we have two targets covering scope 3 emissions, one aimed at reducing the GHG intensity of electricity transmission losses and another covering supply chain spend.
- As our scope 3 reporting capabilities develop, our understanding of where we can make meaningful interventions will grow. In collaboration with supply chain partners we will look to develop specific targets to drive reductions in emissions from more scope 3 categories by the end of RIIO-T2.

Iterative data improvement

- Developing the skills, processes and tools to support scope 3 reporting is a long-term endeavour. We will therefore take a maturity model approach that improves data completeness, quality and accuracy in iterative steps. This is a necessary requirement given the complex, interconnected nature of scope 3 data and the number of stakeholders involved in producing it.
- At present, we only undertake external data assurance of one area of our scope 3 emissions – electricity transmission losses. Over the course of RIIO-T2, as our reporting capabilities develop, we will expand the scope of our external data assurance activities to include more of our scope 3 categories.

Materiality

- From our screening exercise, it is apparent that some scope 3 categories are more material than others. Therefore, we intend to focus on the categories over which we have the most influence and can have the most impact.
- Our largest impact area is capital goods (representing 75% of our total scope 3 emissions) and the bulk of our efforts during RIIO-T2 will be aimed at improving the data completeness, quality and accuracy of emissions data sourced from our supply chain partners.

Tackling Climate Change

Carbon in construction

We are taking a whole-life approach to the management of carbon in our infrastructure projects, including actions to report on and reduce capital carbon from the construction of new infrastructure.

This is a new area of focus for us. We are developing the skills, processes and tools for assessing the capital carbon in our transmission projects.

In collaboration with National Grid Electricity Transmission and Scottish Power Energy Networks, we have formed the UK ROCCIT (Reduction of Capital Carbon in Infrastructure: Transmission) group. The UK ROCCIT Group is focused on developing and implementing an industry-wide approach to measuring and reporting capital carbon in transmission assets. This has included producing a joint methodology, a Carbon AsseT (CAT) database and a product carbon calculator tool which are hosted on our partner page for the Supply Chain Sustainability School.

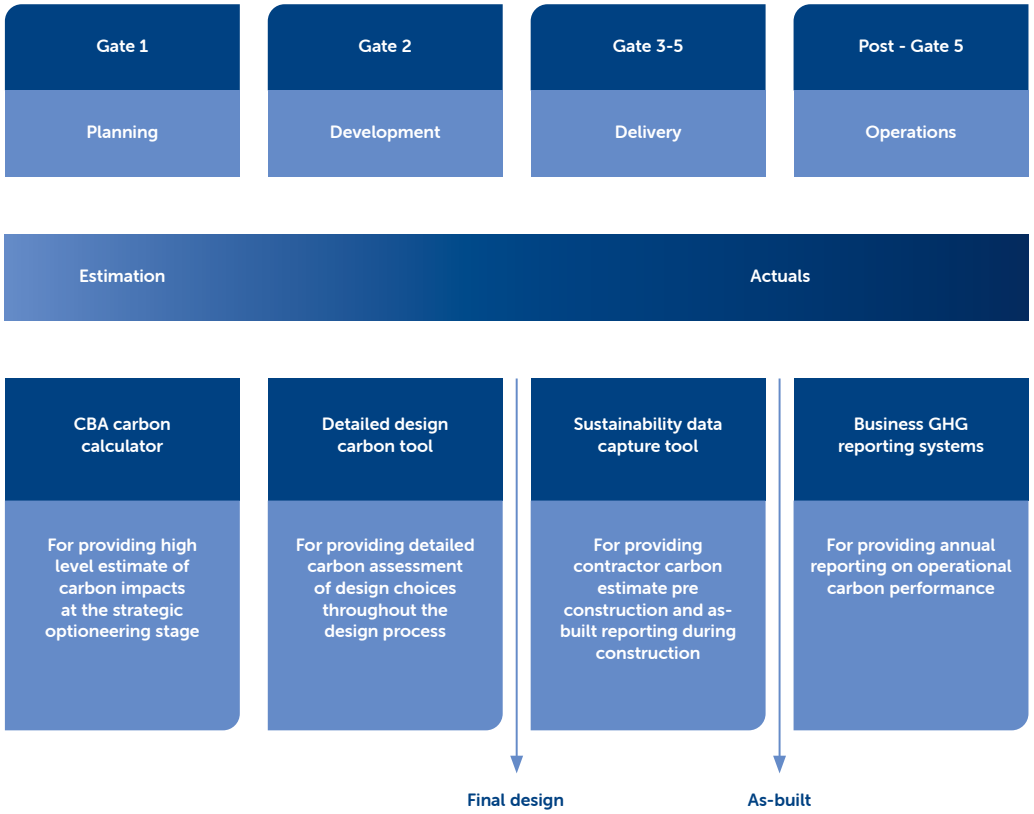
We have developed a basis for common reporting of capital carbon data for our suppliers across the transmission sector. We are also collaborating with representative bodies for equipment manufacturers, to further standardise the tool, and with the Distribution Network Operators to align this approach across all electricity network companies.

We have also implemented requirements for capital carbon reporting within our RIIO-T2 framework contracts and established a tool to enable suppliers to report capital carbon on our projects.

Capital carbon – describes the CO_2 emissions generated from the construction of a building or infrastructure asset (including the materials used to build it), as opposed to the greenhouse gas emissions generated during its in-use operation.

* As a subset of capital carbon, embodied carbon also overlaps with the scope 3 reporting category of 'capital goods' and therefore the steps taken to develop our embodied carbon reporting capabilities will also improve our ability to report against this category.

Development of our project carbon management architecture is a long-term process which will improve over the course of RIIO-T2 and beyond. By the end of RIIO-T2 we will have a system that is fully aligned with PAS 2080 and capable of capturing whole-life carbon impacts of all of our large capital projects.



Tackling Climate Change

Transmission Losses

Emissions from electricity transmission losses are a function of power flows across the UK electricity network, therefore are affected largely by the energy market and the operation of the system. As transmission losses are not in our direct control, we class them as a Scope 3 emission. We have an indirect role to play in reducing the GHG intensity of transmission losses by facilitating the connection of renewable generation on to our network.

For 2021/22, the GHG intensity of our transmission network, and therefore of our losses, was 0.074 $kgCO_2e/kWh$, representing a 40% reduction against our 2018/19 baseline of 0.124 $kgCO_2e/kWh$ and significant progress against our target to achieve a 50% reduction in GHG intensity by 2029/30. This is driven by an increase in generation from renewable energy sources connected to our network.

Due to the slight reduction in losses on the network in addition to this significant downward trend in the GHG intensity of our transmission network during this reporting period, we have achieved a clear decrease in transmission losses emissions. Emissions in 2021/22 were 30,837 tCO_2e, a 21% decrease compared to the previous year and a 28% decrease compared with the baseline year.

Our losses strategy

As flows on the network increase and we see more embedded generation, over the decade, we expect losses to increase.

However, the reduction in GHG intensity of generation, due to the increase in renewables, will counterbalance this expected increase in losses and reduce the per unit GHG emissions associated with these losses.

We are actively taking several measures to counteract this expected upwards trend in the network losses, in line with our RIIO-2 Transmission Losses Strategy. These include:

- Taking into consideration the whole life cost, including losses and their associated carbon cost, in our investment decisions.
- Including losses in our conductor selection criteria during the upgrade and construction of overhead lines on our network.
- Investigating the use of new low-loss conductor technologies.
- Implementing Dynamic Reactive Compensation (DRC) providing reactive power locally at the substations - reducing the flows though the conductors, resulting in decreased overhead line losses.
- Working to improve our modelling, analysis, and monitoring tools to gain detailed insight into the disposition of losses on our network.

Within 2021/22 we are not proposing any changes to our current Losses Strategy published in October 2016.

	Unit	2018/19 SBT baseline	2019/20	2020/21	2021/22
Annual losses[B]	TWh	0.347	0.413	0.448	0.416
Share of total electricity	%	2.0%	2.0%	2.5%	2.3%
GHG emissions from Transmission Losses	tCO_2e	43,070	36,323	39,144	30,837[A]
Transmission network GHG emissions intensity[C]	$kgCO_2e/kWh$	0.124	0.088	0.087	0.074[A]

A - This data was subject to external inependent assurance in 2022. For the limited assurance opinion and reporting criteria please see our website: https://www.ssen-transmission.co.uk/sustainability-and-environment/sustainability-strategy/

B – The figures presented here have had substation electricity consumption subtracted to avoid double-counting. See the reporting criteria for details
C – The Transmission Network GHG emissions intensity figure is a more intuitive and meaningful replacement of our previously reported "Transmission Losses Intensity" figure. See the reporting criteria for details

Promoting a Natural Environment

Performance at a glance

	Target	Status	
Biodiversity net gain	No net loss from 2021/22	G	Already achieved this on all projects
	Net gain from 2025/26	G	Already achieved a net gain of 104% across the portfolio
Natural capital	Develop Natural Capital Approach by 2025	G	We have trialled several tools to help inform our approach
Woodland & forestry	'No Net Loss' of all woodland cover from 2021	G	All projects have plans in place to deliver the required planting to mitigate for losses
VISTA	Undertake proposals for at least 5 visual amenity projects during RIIO-T2.	G	We have started to identify new proposal projects for T2

Natural Capital can be defined as the world's stocks of natural assets which include geology, soil, air, water and all living things. Natural Capital assets can provide us with services or products – known as ecosystem services, for example flood defence or carbon sequestration.

We are committed to developing a common approach to natural capital reporting methodology across the sector. In 2021/22 we have been working with the other Transmission Operators, and wider stakeholders, to develop a Natural Capital Valuation tool that assesses the most material ecosystem services.

We have trialled three different toolkits on one of our substation sites and an overhead line; and are now taking forward one common system. This will enable us to begin natural capital assessments across our portfolio later in the RIIO-T2 period.

The UN backed Diverse Values and Valuation of Nature report, published in July 2022, found that global economic and political decisions do not adequately reflect how changes in the natural world affect people's quality of life, or the many non-market values that nature provides, such as climate regulation and cultural identity. "The values that we ascribe to nature are vital parts of our cultures, identities, economies, and ways of life, all of which should be reflected in policy decisions surrounding our natural world"

By pursuing a natural capital approach we hope to be able to better embed nature in our decision making as a business.

Promoting a Natural Environment

Biodiversity

We have implemented an externally recognised, sector-leading biodiversity strategy, which ensures we leave the environments in which we work the same, if not in an even better place, than when we found it – leaving a positive environmental legacy at all of our sites.

Take a look at our video showing more about how we are working to protect the precious environments in which we work. Using this approach, we have embedded no net loss principles in biodiversity in all projects consented from the start of RIIO-T2. All eligible projects met the no net loss target and 4 out of 6 projects this year exceeded this by designing in net gains in biodiversity.

Abernethy Net Gain

We are extending Abernethy substation to support 4 new grid connections. We carried out an assessment using our biodiversity toolkit, to inform our landscape and habitat plans and ensure we achieve our target of No Net Loss in biodiversity.

The extension is on arable land, with relatively low biodiversity. To enhance the biodiversity around the site, areas of retained habitat will be re-seeded with a species-rich seed mix of wildflowers such as Yellow Rattle and Common Knapweed. This will provide important foraging for insects which will help pollinate crops and other habitats in the surrounding landscape. Other areas will be planted with mixed woodland that, in addition to providing biodiversity benefits, also help screen the site. We have focused on retaining high-quality habitats and are increasing the length of the existing hedgerows with new planting.

In total the designed in biodiversity is 38% greater than the baseline. The required maintenance and monitoring are set out in the Landscape and Habitat Management Plan to ensure delivery of the biodiversity gains into the future.

Project name	Baseline biodiversity units	Designed in biodiversity units	Overall gain
Abernethy grid	13	18.02	38.6%
Kinardochy substation	409.77	450.8	10.0%
Kintore substation	106.67	106.71	0.0%
Limekilns	431.25	431.37	0.0%
Lochay substation	2.56	2.81	9.8%
Peterhead converter station	87.68	105.8	21.8%

Engaging stakeholders & developing a marine biodiversity approach

We are taking an equally proactive approach to marine biodiversity. In 2021/22 we engaged with stakeholders such as Crown Estate Scotland and Marine Scotland to understand the opportunities and challenges regarding marine habitat enhancement and presented at the European Subsea Cables Association Plenary in November 2021 focusing on biodiversity in the marine environment.

We are collaborating with not-for-profit organisations working on community-led marine enhancement projects within our operational area. A feasibility study is underway to identify potential habitat enhancement areas. The results of this study will help inform our approach to marine enhancement whilst delivering community benefits.

Promoting a Natural Environment

In Focus - Local Environment Enhancement

Over the past year we have supported over 109 hectares of broadleaved woodland creation of which 80 hectares have already been planted in 2022 with the rest planned for the next planting season in Autumn 2023.

In total over £1.5m has been committed to these local environmental improvements

Scheme name	Location	Description	Environmental benefit	Timescales
Mauld	Eskadale, Highlands	Supporting 70ha of new native broadleaved planting to replaced felled conifers from 5 projects across the Highlands.	Biodiversity Climate	Planting commenced spring 2022
ACT planting	Kilmory , Argyll and Bute	Supporting 30ha of new native broadleaf tree planting by local community group Argyll Coast and Countryside Trust (ACT) to replace felled conifers from Inverary Crossaig OHL.	Biodiversity Climate Community Benefit	Planting commenced spring 2022
Dun Coillich	Kinardochy, Perth and Kinross	Suporting 9ha of new native broadleaved woodland planting by Highland Perthshire Communities Land Trust at their site at Dun Coillich to replace felled conifers for Kinardochy substation.	Biodiversity Climate Community Benefit	Planting to commence autumn 2023
Alyth Osprey	Alyth, Perth and Kinross	Installtion of a live camera feed to monitor the Osprey nest at Alyth substation. Chicks successfully hatched again in 2022.	Biodiversity Community Benefit Education	Camera live spring 2022
Creag Rhiabach nest boxes	Creag Rhiabach, Highlands	Over thirty nest boxes made from spare timber for Kestrels, Tawny Owls and Barn Owls. Boxes donated to Highland Raptor Group who installed them across the Highlands and are providing ongoing monitoring. Successful fledging has already been observed.	Community Benefit Biodiversity Education	Boxes installed 2022
Alyth substation	Alyth, Perth and Kinross	Two bat boxes and 9 red squirrel feeders installed at the substation. Red squirrels observed regularly at the feeders.	Biodiversity	Boxes installed 2022

Promoting a Natural Environment

Woodland and forestry

As we operate in the north of Scotland we have a lot of assets in heavily forested areas. This means, at times, we have to remove woodland cover allow us build and maintain our network.

To mitigate this we have committed to achieve no net loss in woodland cover for new projects consented from 2021.

Focusing on all woodland types, we have developed a woodland strategy and implementation plan for new projects that promotes minimising loss, prioritises replanting and, where there is still a net loss, working with partners to support tree planting projects.

By doing this we will make an active contribution to the Scottish Government's vision for sustainable forest management.

Tree planting with ACT

SSEN Transmission and leading community and conservation organisation, Argyll and the Isles Coast and Countryside Trust (ACT), have joined forces to help deliver SSEN Transmission's tree planting commitments and in doing so, help support ACTs objective to enhance and expand Argyll's rainforest. The collaboration supports ACT to achieve its charitable objectives, which are about people in nature, and range from biodiversity improvements, to health and wellbeing programmes, outdoor learning and climate change awareness workshops.

The agreement that was developed is set out in such a way as to not only achieve the required planting but also provide an innovative approach to supporting the local community to deliver the environmental improvements they want and need.

This collaboration between SSEN Transmission and ACT has been a very significant one for both parties – we have been able to create new native woodland sites which is an important part of Argyll's Rainforest Strategy.

VISTA

We have continued our work from RIIO-T1 on our VISTA projects, to mitigate the impact of existing electricity infrastructure on the visual amenity of designated landscapes. To date, we have completed two projects within the Cairngorms National Park, resulting in the removal of over 12km of overhead lines around Nethy Bridge and Boat of Garten. Three projects are under construction within Loch Lomond and the Trossachs National Park, at Glen Sloy, Glen Falloch, and Killin, which together will remove a further 16km of overhead lines.

Nethy Bridge – Complete

Removal of 132kV overhead line infrastructure by installing underground cables between the substation east of Boat of Garten to the edge of the forestry near Castle Roy (removal of 8.3km OHL).

Cairngorms National Park

Boat of Garten – Complete

Removal of 132kV overhead line infrastructure by installing underground cables between Docharn and the substation east of Boat of Garten (removal of 4km OHL).

Cairngorms National Park

Loch Tummel – Complete

Painting of the 132kV towers visible form the Queens View and implementation of a native woodland planting scheme to blend the towers into the landscape.

Loch Tummel NSA

Sloy – In construction

Removal of 132kV overhead line infrastructure by installing underground cables on various circuits in proximity to Sloy switching stations (removal of 2.8km OHL).

Loch Lomond and Trossachs National Park

Glen Falloch - In construction

Removal of 132kV overhead line infrastructure by installing underground cables between Inverarnan substation and Crianlarich (removal of 4.5km OHL).

Loch Lomond and Trossachs National Park

Killin - In construction

Removal of 132kV overhead line infrastructure by installing underground cables to the north of the village of Killin (removal of 7.8km OHL).

Loch Lomond and Trossachs National Park

	Unit	2021/22
Removal of overhead lines	km	7.3
Non-technical mitigation projects started in year	number	1
Non-technical mitigation projects	£m	0.168

Optimising Resources

Performance at a glance

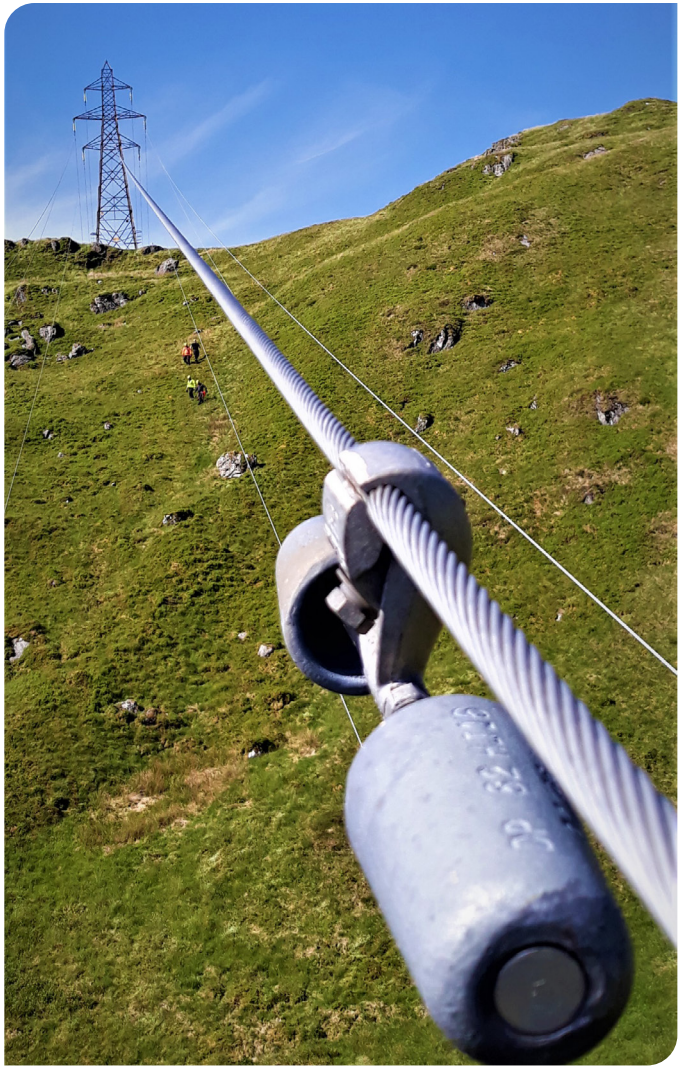
	Outcome	Status	
Waste	Achieve zero waste to landfill (excluding compliance waste) by the end of the RIIO-T2 period	A	Due to COVID-19 delays, in April 2022 we launched the Sustainability Data Capture Tool for our supply chain partners to report on environmental data at a project level. This will enable us to show progress against our waste targets and will steer us to establish and implement best practice waste reporting for all waste streams.
	Achieve a recycling, recovery and re-use rate of >70% across our waste streams by the end of the RIIO-T2 period	A	
	Establish and implement best practice waste reporting for all waste streams by 1 April 2021	A	

The Ellen Macarthur Foundation defines a circular economy as "A systems solution framework that tackles global challenges like climate change, biodiversity loss, waste, and pollution. It is based on three principles, driven by design: eliminate waste and pollution, circulate products and materials (at their highest value), and regenerate nature."

The circular economy is based on restorative and regenerative principles, and goes hand-in-hand with sustainable business models that seek to deliver economic, environment and social value.

Adopting circular economy principals requires having a detailed understanding of our current and future resource use, and incorporating reuse, recycling and repair into all of our business processes. We are in the early stages of our business journey and made good progress during 2021/22 in particular in the critical area of gathering data on our resource use and waste management.

In 2021, we created an internal Circular Economy, Resources and Waste Working Group to proactively support and track the delivery of our Optimising Resources targets and help us advance our transition to a circular economy. In June 2022, we completed an external assessment to understand the circularity performance of our entire operations. We are reviewing the detail of this assessment to identify targeted actions that will accelerate our transition to a more circular approach.



Optimising Resources

In Focus - Waste Data

Throughout 2021/22, we have focused on improving our waste data. Good data is essential to taking targeted action to manage waste.

We refined our reporting methodology to assess operational waste data and introduced mandatory waste reporting from April 2022 for our supply chain partners which is collected via our Sustainability Data Capture Tool.

Our improved waste management data will drive our performance measures to achieve our RIIO-T2 targets of achieving zero waste to landfill across all of our waste streams, and to achieve a recycling, recovery and re-use rate of >70% across our waste streams by the end of the price control.

Our largest waste type from offices and operational sites, is mixed municipal waste. The majority of this was sent for energy from waste.

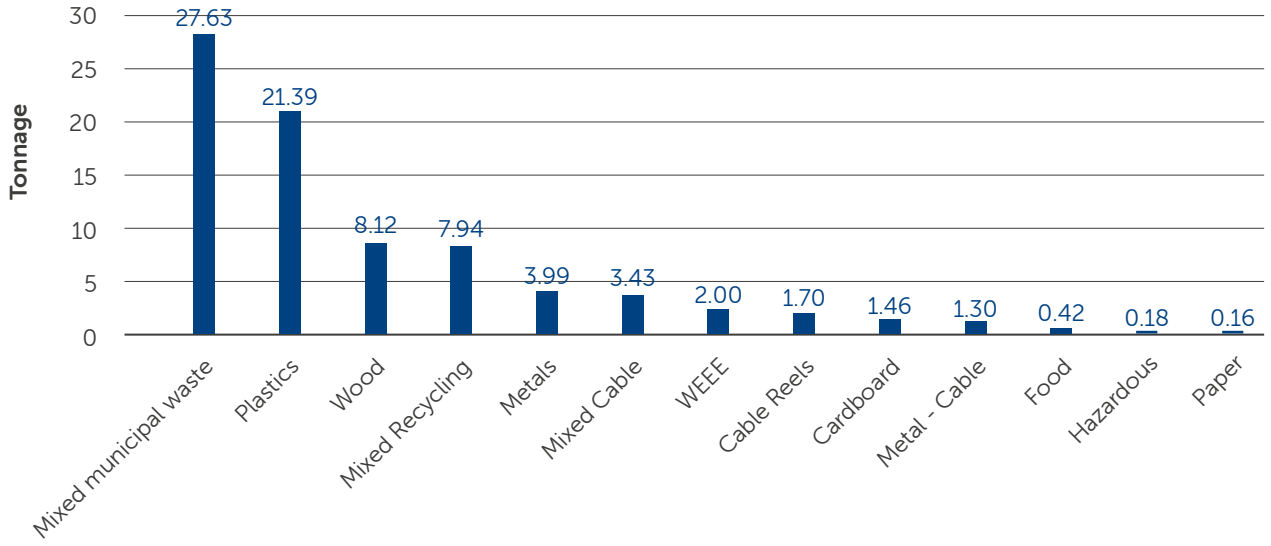
Whilst this has a 27%* lower carbon impact in comparison to landfilling, we are exploring options to reduce the voume of waste through circular strategies.

We are working to improve our reporting across all areas of waste generation so that we can report more fully in future on our total waste and resource impacts, including from our operational sites and construction projects.

*www.zerowastescotland.org.uk/content/climate-change-impact-burning-municipal-waste-scotland

Office and operational waste performance 2021/2022

	Tonnage	%
Anaerobic digestion/composted	0	0%
Energy from waste	26.6	33%
Landfill	1.03	1%
Other recovery	2.18	3%
Recycled	49.91	63%
Total waste	**79.72**	**100%**



Our key material consumption for office and operational waste performance 2021/2022

In Focus - Acting on a Circular Economy

Waste prevention

VISTA Project: Killin Undergrounding

Across all our projects, we actively support and engage with our local communities. In the small village of Killin, our Visual Impact of Scottish Transmission Assets (VISTA) project team prevented 20 tonnes of waste in March 2021 by reusing tar planings within the local community.

This activity was undertaken under a Paragraph 13 waste exemption – Manufacture of specified products from specified wastes which permitted the material to be re-used locally by the Killin Golf Course to resurface their car park. This promoted both positive economic and environmental impacts.

Waste prevention

Materials Continuous Improvement Project

We established a 'Go Zero' programme to embed efficient ways of working across our business. Our strategic stores have enhanced recycling measures by introducing dedicated receptacles for cardboard, e-waste, hard plastics, metal, wood, oil (including rags), paint, batteries and paper.

Framework contracts are now also in place for special waste such as fluorescent tubes that have been removed as part of upgrades to low energy lighting within SSEN Transmission facilities. To further embed improvements on the retention and re-use of materials, a continuous improvement project has also been established to review the end-to-end process. Presently there is no methodology in the asset lifecycle to share/sell assets if they are surplus to requirements.

Resource efficiency

Strategic Spares Management

We aim to extract the maximum value from our assets and have developed procedures to support this.

Our Carradale Substation project successfully removed four gas transformers and one has reused on our Fort Augustus project. The remaining three units are stored at our bunded facility at Tealing. Various piece part spares have been also been re-used due to operational faults on the network, these include; earthing transformer bushings and circuit switcher contacts. The procedure also reviews the proposed designs of each project and advises on the spares requirements, to ensure efficency and prevent oversupply or expiry of assets.

Resource efficiency

ARRC SIF Project

In 2021, we partnered with SP Energy Networks on a Strategic Innovation Funded project referred to as 'Asset Reuse and Recovery Collaboration (ARRC)'. We embraced this project as a significant opportunity to encourage and support circularity along the value chain which resonates with the IPCC's call for 'coordinated action throughout value chains to promote all [climate] mitigation options, including demand management, energy and materials efficiency, circular material flows, as well as abatement technologies and transformational changes in production processes.'

The learning from this project will be invaluable as we explore ways develop our circular economy approach, we are exploring ways to take forward the learnings to develop our circular economy approach.

Supporting Communities

Performance at a glance

	Target	Status	
Vulnerable consumers	Achieve >95% of our employees trained in supporting vulnerable consumers by the end of 2022.	A	We will begin rolling out training later this year.
	Develop and implement partnerships with third parties that can utilise our existing engagement activities to support vulnerable consumers within our communities.	G	We are working collaboratively with Energy Innovation Centre and National Grid Electricity Transmission, through the Transmission consumer vulnerable consumer groups, to identify projects to support vulnerable consumers.
	Implement best practice in accessible communications and media by the end of 2023.	G	We are launching our new user-friendly website in late 2022 and in addition to providing clearer and more accessible website content, we will continue to offer the Recite Me accessibility and language tool, which we promoted to stakeholders through our website and social media channels as part of Global Accessibility Awareness Day 2022.
Community engagement	Maintain employee volunteering in the community through the 'Be the Difference' programme during the price control.		Our 'Be the Difference' volunteering activities were suspended in 2020 in response to COVID restrictions. Following this pause in service, we are taking the opportunity to review the full process with plans to refresh our approach in 2023. SSE did support a number of volunteering activities as part of our principle partnership with COP26, in Glasgow in 2021.
Local supply chain	Maintain >25% of approved suppliers located in the north of Scotland.	G	We achieved 27% local suppliers in 2021/22.

Our AA1000 Stakeholder Engagement Standard score as of June 2022 is 82% with a top-tier rating of "Advanced" in the AccountAbility Stakeholder Engagement Maturity Ladder.

Community engagement and support

In 2021/22 we carried out over 150 community engagement sessions reaching 1000's of stakeholders in our area.

We continued to work with our 11 Community Liaison Groups, representing communities in 7 regions we work in.

We contributed £280k to the resilient community fund which supported 14 projects across the north of Scotland in 2021.

UK Contribution
£943m
2020/21: £651m

Of Which
596m
was Contributed to Scottish GDP
2020/21: £370m

UK Jobs Supported
5,740
2020/21: 4,300

Of Which **1,840** were in Scotland
2020/21: 1,210

5
Additional Jobs Supported Across the UK for Every One Person Directly Employed

We have assessed our gross value add (GVA) to the UK and Scottish economies and jobs we have supported both directly and indirectly in 2021/22.

Supporting Communities

In Focus – Working in Partnership

Supply chain sustainability school
SSE is a proud partner of the Supply Chain Sustainability School, a collaboration between companies who have a mutual interest in building sustainability expertise and practices within their organisations and throughout their supply chain.

Argyll and the Isles Coast & Countryside Trust (ACT)
ACT is a community-led organisation and registered charity, established in 2014. Their mission is to sustainably maintain, enhance and promote the coast and countryside of Argyll and the Isles. We have partnered with ACT to deliver our compensatory tree planting relating to its Inveraray-Crossaig transmission project.

Barnardo's
Barnardo's Works provides unemployed young people (age 16-24) with a unique blend of personal support and accredited training, matched with quality work experience placements and the opportunity to access independent employment. By offering work experience placements within Transmission we aim to focus on social mobility, inclusion & diversity, future workforce planning, developing managers and demonstrating CSR & adding social value.

Sustainability first
Principles project
We have been working with the independent charity and think tank Sustainability First to support their principles projects, to help develop, test and embed an enduring set of sustainability principles for economic decision makers in essential services – with a main focus on government and regulators.

(UK reduction of capital carbon in infrastructure: transmission)
With the other Transmission Operators we are working to develop a consistent approach and common methodologies to managing capital carbon emissions and to collaboratively work with our supply chain in a consistent way to create an industry wide approach to managing capital carbon emissions.

Major Infrastructure – Resources Optimisation Group (MI-ROG) and Scottish Infrastructure Circular Economy Forum (SICEF)
We have partnered with both MI-ROG and SICEF, convened by AECOM, to advance the transition to a circular economy. As the policy and regulatory environment rapidly evolves, we are committed to actively engaging, inspiring and educating other partners to ensure circularity is embedded in the wider transition towards net zero.

Growing Careers

Performance at a glance

	Outcome	Status	
A happy, healthy workforce	Continue to manage health and safety by caring for our people – if our employees face challenges with physical or mental health, we will be there to support their well being.	G	We developed a new safety strategy in 2021/22 to continue to ensure safety is our number 1 priority.
Right people, right skills	Maintain our five-year ahead resourcing plan, supporting by talent pipelines and succession plans that match our forecast business activities.	G	We have changed our job adverts to appeal to more diverse candidates. We have developed an early years strategy to target the early years population.
One inclusive & engaged team	Expand our inclusion and diversity programme, including >95% of employees having received training.	G	All employees are now required to undertake eLearning on inclusion & diversity.
	Develop a methodology for our pipeline intake to be local diversity representative and implement a target by 1 April 2021.	A	Delayed as we need to use the new census data for this work and it has been delayed in Scotland due to Covid.
Empowered inspiration leaders	Work with leaders at all levels to develop their leadership capabilities and encourage and support those who are seeking to move into leadership roles. We are committed to ensuring there are no gaps in leadership potential or practice.	G	We have embedded an Inclusive Leadership Development Programme for managers and talent programmes for our senior and emerging leaders.

A just transition to net zero

Over 2021/22, SSE Group continued to engage widely on its Just Transition Strategy and published a second just transition report focused on action to support the worker transition to net zero. Underpinning our just transition approach, SSE maintained its Fair Tax Mark and real Living Wage accreditations, and completed its first year with the Living Hours accreditation.

We are a Living Wage Employer

Living Hours
Providing security of hours alongside a real Living Wage

In Focus - Inclusion and Diversity

I&D Forum

In January 2022, Transmission's first Diversity & Inclusion Advocate was tasked with creating a space where staff could gather to look at initiatives to make Transmission a truly Inclusive environment.

The Harne-SSE forum was launched to support this ambition. Harne-SSE is made up of 16 individuals who were selected following a 6-week recruitment drive. These members come to us from across the Transmission business with an aligned goal to highlight key focus areas channelling concerns of their broader teams to develop solutions.

Diversity in Decision Making – The Shadow Board

The Shadow Board was created in 2019 in conjunction with the Transmission Executive Committee to ensure we have more diversity in our decision making, as well as providing excellent development experience for our people. The Shadow Board members come from across Transmission and provide invaluable input in key business decisions and welcomed challenge to the Transmission Executive Committee.

Given its success in previous years the Shadow Board was taken forward with a new cohort for 2021/22. Members sit on the board for 6-9 months with this rotational approach maximising the opportunity for our people, giving 12 colleagues exposure to the Board each term.

Median gender pay gap
22.2%
2020/21: 22.5%

Gender Pay Gap

We are working to close our gender pay gap, however it remains high. There are two core reasons for this:

1. Low representation of women in senior and higher paid technical positions

2. Fewer women than men applying for roles across all levels of the business

We are committed to creating an inclusive and diverse workforce and to support this we have continued to deliver Inclusive Hiring training for all managers. In the past year, this course had a 100% compliance rate from managers – demonstrating our commitment to promote inclusive hiring practices.

Supporting Information

- Environmental Management
- Data
- Scope 3 Mapping
- Full SAP Update Table

Environmental Management

Performance at a glance.

	Outcome	Status	
ISO14001	Maintain certification	G	Our EMS remains certified to ISO14001
Oil	Complete contaminated land remediation for all high-risk sites	G	Studies on sites completed
	Remove all equipment containing PCBs by 2025	G	Plans in place for all assets to be removed by end of 2025
Noise	Undertake noise assessments and, implement noise management plans by 2023/24	G	Currently recruiting staff to lead the delivery of the outcome

Environmental Management

To ensure effective environmental management, SSE operates an Environmental Management System (EMS) certified to ISO14001, including controls, processes and procedures, across all its business activities that interact with the environment. In the last 12 months, SSE was externally audited and has maintained ISO14001 accreditation.

Oil Management

The total volume of oil on our network is 4,816,545 litres for 2021/22. This includes all oil in our Cables, Grid & Super grid Transformers, and associated Reactor set classes. In this period we added 5,741 litres to our Transformer/Reactor asset classes due to losses. We have not recorded oil losses for our cable asset class. Our total oil loss rate is only 0.119% of our total oil volume installed per asset classes.

Environmental Incidents

Although we strive for world class environmental management, incidents do happen and when they do we respond quickly and responsibly to minimise any negative impacts on the environment.

In 2021/22 we had 13 incidents where we proactively notified SEPA. Of these 10 were pollution of silt into water ways, 2 were minor chemical spills into a water way. The other incident was a significant release of SF_6 gas due to a faulty seal.

No action was taken by the regulator, however we strive to learn from all incidents to continually improve our environmental management and minimise the risk of such incidents happening in future.

Oil		2021/22
Oil in service - cables, reactors, transformers	Litres	4,816,545
Cable oil top up	Litres	0
Transformer oil top up	Litres	5,741

Incident type		2021/22
Emission to water	Number	12
Emission to air	Number	1

Data

About this Report

The directors of SSEN Transmission are responsible for the preparation and presentation of this Sustainability Report.

SSEN Transmission takes an integrated approach to assurance, using internal audit and external assurance providers to ensure accurate and complete disclosures where appropriate. Where data has been externally and independently assured this has been noted in the relevant tables.

SSEN Transmission has objective reporting criteria for preparing and presenting the independently assured information disclosed in this report and the performance measures are in accordance with the reporting criteria.

Scope and boundaries of reporting

Our impacts go far beyond our direct footprint and we strive to measure and manage these impacts wherever possible. To do this we recognise that having high quality, robust data is vital; to allow us to set meaningful targets, measure performance and make data driven decisions.

While we have reported many areas of sustainability in this report previously, some areas of reporting are new for RIIO-T2 and will be developing over the period. Where relevant we will be working to broaden our scope and boundaries of reporting, such as scope 3 GHG emissions and waste.

Our ambition is to determine the most relevant and materially impactful scope for each area and to ensure we report 100% of the scope that is deemed material. We have plans in place to help improve our data reporting and will provide an update on this annually throughout our sustainability report.

Data Assurance

All data provided in this report has met our Data Assurance Governances Standard, in line with Ofgem's requirements. We have carried out additional assurance on this report, including Director-level review and sign off and carried out an internal audit.

One of our most material impacts are our Greenhouse gas emissions, therefore our scope 1&2 GHG emissions and transmission loss data was subject to external independent assurance. For the limited assurance opinion and reporting criteria please see our website - www.ssen-transmission.co.uk/sustainability-and-environment/sustainability-strategy.

Key data improvement actions

The key areas of focus for data improvement over the next reporting year are:

1. Through the launch of our new supply chain reporting tool we will collect project level data on waste, embodied carbon and other sustainability metrics our capital projects. This will enable us to increase the scope of our waste reporting and to begin capturing embodied carbon data.

2. Having completed a scope 3 screening exercise we have an action plan to improve/commence reporting across all material areas of scope 3 and will make progress against this plan in 22/23.

3. We are establishing a Natural Capital Tool that will allow us to report our natural capital accounts later in the RIIO-T2 period.

Scope 3 Screening Exercise

To understand which emissions categories are relevant and material to SSEN Transmission, we have carried out a screening exercise in line with the GHG Protocol Technical Guidance for Calculating Scope 3 Emissions. The Scope 3 screening results are broken down in detail in the screening table on pages 43-46 . Data availability for scope 3 is a challenge therefore our key priority over RIIO-T2 is to improve data quality of the most material categories of scope 3.

The table on the right provides our business carbon footprint for our Scope 3 emissions in the 2021/22 reporting year. Where values are listed as 'TBD' these reflect data gaps which we aim to close through our improvement programme (see page 25). The graph below shows the scale of scope 3 emissions compared to scope 1&2. Scope 3 has been increasing over the past few years due to increasing capital investment in the network.

Emissions in tCO_{2e}	Specific area	2021/22
Purchased goods and services	Office furniture and supplies	TBD
	IT hardware and software	TBD
	Consumable materials and spare parts	TBD
	Professional services	TBD
	Water consumption in buildings	0.1
Capital goods	Large capital projects	114,961
	Other capital projects	TBD
Fuel and energy related activity	Transmission and distribution losses for grid electricity	17
	Transmission losses from our network	30,837
	Upstream/well-to-tank emissions	7,300
Upstream transportation and distribution	-	N/A
Waste generated in operations	Standard commercial waste from non-operational buildings	TBD
	Wastewater from buildings	0.2
	Decommissioning and disposal of network assets	TBD
Business travel	Rail travel	6
	Air travel	126
	Ferry travel	2
	Travel in employee-owned private vehicles	159
Employee commuting	Commuting emissions	TBD
Leased assets	-	N/A
Total		153,410*

*total given for scope 3 categories we are able to report against for 2021/22

Scope 3 Screening

Category	Methodology and assumptions	Methodology and assumptions	Confidence in data	Materiality RAG rating	Improvement actions
Purchased goods and services	Purchased goods and services covers cradle-to-gate emissions from any goods or services purchased in the course of normal business operations. Examples include: Office furniture and supplies, IT hardware and software, consumable materials and spare parts, professional services (consultancy, insurance, legal) and water consumption in offices and other buildings. In year 1 of RIIO-T2 we have reported emissions from our water consumption from our non-operational buildings (offices, depots, and warehouses) as this is metered and accurate emissions factors are available. These buildings are shared other SSE business units and therefore the proportion of water consumption for a building attributable to SSEN Transmission is based on the percentage of the site's floor space occupied by SSEN Transmission staff.	Metered water consumption data from non-operational buildings (offices, depots, and warehouses) BEIS Greenhouse Gas Conversion Factors 2021 – Water supply	Low	Medium	Over the course of RIIO-T2 we will seek to improve our internal systems to gather accurate activity data and we will also seek to identify accurate emissions factors for the main categories of goods and services that we consume.
Capital goods	This category covers cradle-to-gate emissions from any capital goods purchased. For SSEN Transmission, this includes all of our network upgrades and expansion projects. GHG protocol guidance recognises that the distinction between purchased goods and services and capital goods can vary from one business to another. The priority is to avoid double-counting between the two categories. We currently use a spend-based method to report on emissions linked to capital goods. This involves sourcing capital expenditure data for our projects and multiplying it with the relevant greenhouse gas emissions intensity factor for the economy activity type (e.g. construction) from the ONS dataset.	Capital expenditure data for SSEN Transmission network upgrades and expansion projects ONS greenhouse gas emissions intensity by industry dataset – multiple factors depending on economic activity type	Low	High	Over the course of RIIO-T2 we will seek to develop and improve our capabilities to source more granular data on the carbon intensity of the assets and activities undertaken on our capital projects, enabling us to gradually move away from the current spend-based methodology.

Scope 3 Screening

Category	Methodology and assumptions	Data sources	Confidence in data	Materiality RAG rating	Improvement actions
Fuel and energy related activity	This category covers fuel- and energy-related emissions that are not included in Scope 1 or Scope 2. **Transmission & Distribution Losses (T&D)** This accounts for the electricity lost between the point of generation and the point at which we consume the electricity in one of our non-operational buildings (offices, depots and warehouses). This category is common to all users of grid electricity and should not be confused with "Transmission losses", which are unique to transmission network operators. **Transmission Losses** These are the emissions attributable to the energy lost through dissipation between the point at which electricity enters our transmission network and the point at which it leaves our network. The amount of electricity lost in this way is calculated annually by the electricity system operator. The carbon intensity of this electricity is calculated by SSEN Transmission based on the total generation on our network and the carbon intensity of each carbon-emitting generation source. Note that substation electricity use, is counted as a Scope 2 emission and is subtracted from the overall losses figure provided by the electricity system operator to avoid double-counting. **Well-to-Tank Emissions** This accounts for the extraction, production and transportation of the fuels (natural gas, petrol, diesel) consumed by SSEN Transmission. It also accounts for the extraction, production and transportation of fuels to produce the electricity and provide the transport used by SSEN Transmission. This category is linked to a range of other categories across our emissions inventory and changes are driven by multiple factors.	**T&D Losses** Metered electricity consumption data from non-operational buildings (offices, depots and warehouses). BEIS GHG Conversion Factors 2021 – T&D – UK electricity **Transmission Losses** ESO transmission losses value for SSEN Transmission network 2021/22. SSEN Transmission network carbon intensity value ($kgCO_{2e}$/kWh) – calculated from total generation on our network and its carbon intensity. BEIS GHG Conversion Factors 2021. **Well-to-tank Emissions** Fuel and electricity consumption data BEIS GHG Conversion Factors 2021 – multiple factors depending on fuel type	High	High	In our next reporting year, we will aim to expand our external data assurance process to include Transmission & Distribution Losses and Well-to-Tank Emissions.

Scope 3 Screening

Category	Methodology and assumptions	Methodology and assumptions	Confidence in data	Materiality RAG rating	Improvement Actions
Upstream transportation and distribution	Transportation and distribution of goods through third-party suppliers is not a major part of SSEN Transmission's operations. We mainly either transport goods ourselves, emissions from which are counted under Transport in Scope 1, or where third parties are involved, we would account for the emissions under the first two Scope 3 categories: Purchased goods and services and Capital goods.	N/A	N/A	N/A	N/A
Waste generated in operations	This section accounts for third-party disposal and treatment of waste and wastewater. For SSEN Transmission, this would include standard commercial waste from non-operational buildings (offices, warehouses, depots), wastewater from non-operational buildings and the decommissioning and disposal of obsolete network assets. For 2021/22, we have calculated emissions for wastewater treatment from all of SSEN Transmission's non-operational buildings (offices, depots, and warehouses). These buildings are generally shared with staff from other SSE business units. The proportion of wastewater for a building attributable to SSEN Transmission is based on the percentage of the site's floor space occupied by SSEN Transmission staff.	Metered water consumption data from SSEN Transmission's non-operational buildings (offices, depots, and warehouses) BEIS Greenhouse Gas Conversion Factors 2021 – Water treatment	Low	Low	Over the course of the RIIO-T2, we will develop systems to collect commercial waste data from our non-operational buildings. The decommissioning and disposal of obsolete network assets is typically carried out by contractors as part of our capital projects and therefore emissions would fall under capital goods.
Business travel	Business travel covers emissions from staff travel via vehicles over which SSEN Transmission does not have direct operational control. This includes private road vehicles (when used for business travel purposes) and travel via rail, air or ferry services. Note that this excludes mileage undertaken in company-owned or leased vehicles which is already counted under Scope 1 – Transport – Business mileage.	Employee mileage and travel claim data (with transport modes) BEIS Greenhouse Gas Conversion Factors 2021 – multiple factors depending on travel type	High	Medium	In our next reporting year, we will aim to expand our external data assurance process to include business travel.

Scope 3 Screening

Category	Methodology and assumptions	Methodology and assumptions	Confidence in data	Materiality RAG rating	Improvement Actions
Employee commuting	Employee commuting covers emissions from staff travel to and from their work locations. We have not reported on these emissions in year 1 of RIIO-T2.	TBD	Low	Medium	Over the course of the RIIO-T2, we will develop systems to collect the relevant activity data and seek to identify accurate emissions factors that would allow us to account for our employees' differing commuting profiles.
Leased assets	This category covers emissions from leased assets where these are not already covered under Scope 1 or Scope 2 categories. We use an operational control approach to GHG accounting therefore, all assets we operate, regardless of ownership, are part of scope 1 & 2 reporting.	N/A	N/A	N/A	N/A

SAP Summary Tables

Target	Benefit	Interim Milestones			RAG	Comment
		Short term	Medium term	Long term		
Connecting for Society GB homes powered by renewable energy transported through our network.	Decarbonisation of energy and contribution to the UK Net Zero target.	Publish an updated North of Scotland Future Energy Scenarios report.	On track for delivery of our Certain View investment programme.	Delivery of our Certain View investment programme.	G	Full benefits & actions in this area given in our Sustainability Action Plan page 22.
Tackling Climate Change Reduction in scope 1 and 2 GHG emissions in line with our SBT Insulation and Interruption Gases (IIG) leakage.	Reduction in GHG emissions.	Substation Energy efficiency programme developed. Complete technical scoping for the installation of EVs charging infrastructure across our network area. Action on SF_6 shown below.	Energy efficiency measures and EV charging infrastructure rolled out at half of defined substation sites. Action on SF_6 shown below.	Achieve 33% reduction in scope 1 & 2 emission.	G	Full benefits & actions in this area given in our Sustainability Action Plan pages 38-46.
	Reduction in GHG emissions.	Insulation and Interruption Gases (IIG) Strategy published, and policy updated to minimise SF_6 use. Report on tonnes of IIG on network.	Report progress against investment programme to install SF_6 alternatives.	Achieve target of 0.15% leakage of SF_6 by the end of RIIO-T2.	G	
Promoting the Natural Environment Projects gaining consent after 1 April 2020 with biodiversity 'No Net Loss' outcomes Investments proposals to improve visual amenity.	Protecting biodiversity	Embed Terrestrial BNG procedures into Business as usual and design no-net loss into future projects.	Design Net Gain into development projects due to be consented from 2025	Design Biodiversity Net Gain into project applications.	G	Full benefits & actions in this area given in our Sustainability Action Plan pages 53 & 58
	Reducing visual impact	Select new undergrounding projects under VISTA for delivery in RIIO-T2.	Detailed VISTA project design and Ofgem application for selected projects.	Develop and publish a methodology for assessing assets out with NP/NSA for potential consideration for VISTA in RIIO-T3.	G	

Optimising Resources* Zero Waste sent to landfill across all waste streams. Recycling, recovery and re-use of waste.	Minimisation of waste, resource efficiency & carbon reduction	Establish best practice reporting system.	Set baselines and improvement actions based on new reporting	External assurance of zero waste to landfill.	A	Full benefits & actions in this area given in our Sustainability Action Plan pages 66 & 69.
			Implement recycled content reporting across our supply chain.	Achieve a recycling rate at or above national targets – 70%.	A	
Supporting Communities Employees trained in community vulnerability Approved supplier located in the north of Scotland.	Supporting vulnerable consumers	Develop and implement a mandatory e-learning training programme on vulnerable consumers.	Business as usual	Business as usual	A	Full benefits & actions in this area given in our Sustainability Action Plan page 77 - 81
	Local economic benefit	Sustainable Procurement Policy included in key framework contracts.	Meet the Buyer events tailored to regional project activity on an annual basis.	Review local spend reporting during RIIO-T2 and determine the appropriateness of setting a minimum threshold for the share of local content	G	
Growing Careers Employees trained in inclusion and diversity Pipeline intake is local diversity representative.	Increased human capital and inclusion & diversity	Embed our Director accessibility initiative, through roadshows and 'meet and greet' sessions with the Managing Director for all new starts.	Deliver an inclusive behaviours programme, including inclusive meeting facilitation training and an online inclusion and diversity hub for all employees.	BAU	G	Full benefits & actions in this area given in our Sustainability Action Plan page 94
		Delayed due to the 2021 census being postponed in Scotland	Establish and adopt diversity targets for our new intake based on 2021 census demographics and an increased diversity self-reporting drive.	BAU		

Scottish & Southern Electricity Networks

TRANSMISSION

If you would like a printed copy of this document or require it in an adapted format, such as large print, please get in touch so that we can accommodate your preferences.

If you are unable to access our website or reach us via email and require information about Sustainability please call our Sustainability team on +44 (0) 7827 039 550 or write to:

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Fair Tax

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