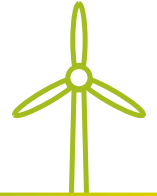spenergynetworks.co.uk

SP Energy Networks Sustainable Business Strategy

November 2021

SP ENERGY NETWORKS

Environment & Sustainability

Sustainable Society

Carbon & Energy Reduction

CO_2

Climate Change Resilience

Water Efficiency & Protection

Land & Biodiversity Improvement

Sustainable Resource Use

Contents

Foreword

As a leading electricity networks business, we play a critical role in meeting the UK's ambitious climate change targets and enabling the transition to a low carbon economy. While doing this, we must also reduce our own environmental impacts as a business. These goals are central to our ambition to build a more sustainable network, and now inform everything we do.

Since we launched this strategy in 2017, we have been heartened to see climate change, decarbonisation and environmental concerns take greater priority in the UK and globally. This positive shift has given greater prominence to the role of network operators, and this will only grow as the decarbonisation of energy, heat and transport, and wider sustainable development becomes mainstream. However, the challenges of tomorrow require us to plan solutions today – so we must act with urgency.

Our vision of sustainability is now central to all that we do – it guides our business plans, underpins our innovation approach and shapes our day-to-day service. Our stakeholders told us that it is not enough to simply deliver on the energy transition, we must demonstrate our vision to become a sustainability leader – and we agree.

A network provider needs to lead the way and continually look forward. The fact that our electricity system is still delivering in this radically different world is testament to the foresight of people from over 100 years ago. We must strive to have a positive impact that's just as long-lasting. To achieve this, we must innovate. We must look beyond the obvious, fund new ideas, and explore those with promise to provide a more sustainable network. Ultimately, the most important innovation may be one that people don't even notice. It is our responsibility to uncover those key difference-makers.

Created together: a strategy for a greener future

Everything we do begins with stakeholder engagement, and this strategy is no different. Members of our Sustainability Stakeholder Working Group, established in 2017, are helping us to set ambitious targets and adapt our processes to support the digitalisation, decarbonisation, decentralisation and democratisation of the UK's energy markets. This strategy outlines the resulting Vision, Drivers and Goals we have set in order to achieve that leadership position, facilitate the low carbon transition, and minimise our environmental impacts.

We are committed to engaging with communities to help deliver long-term sustainable benefits. Our strategy is continually evolving as we learn from these activities and adjust our plan to stay ahead of developments on a local and international level. The energy system transition will affect us all, and it's crucial that we continue to work together to deliver a **better future**, **quicker**.

Frank Mitchell,
SP Energy Networks, CEO

Graham Campbell, Director,
Processes & Technology,
Chair of SPEN Executive
Sustainability Steering Group

Jane McMillan,
Head of Sustainability,
Chair of SPEN Sustainability
Stakeholder Working Group

We want to hear from you.
To contribute to the annual review of our Sustainable Business Strategy, contact us by email or join our online community:

Sustainable@spenergynetworks.co.uk
https://spen-stakeholder-community.explainonline.co.uk/

Introduction

We have a responsibility to enable the UK economy's low carbon transformation and help mitigate the impacts of climate change. While doing this, we must also minimise the environmental impact of our business and network operations, making decisions that meet the needs of current and future network users.

The UK economy is decarbonising at pace, driven by ambitious national and international targets to keep global temperature rises well within a maximum of 2°C, and subsequent reports underlining the importance of sub-1.5°C increases. Our network licences play a critical role in enabling this rapid transition.

In our licence areas, 3.6 gigawatts (GW) of thermal generation plant has closed in recent years. At the same time, we have connected around 7GW of renewable generation – over half of which is connected to our distribution network. Renewables already connected to our networks exceed total demand of around 6.4GW, and contracted and proposed generation schemes will nearly double this figure in the coming years.

We link areas of outstanding renewable energy resource – in the Highlands and Borders of Scotland and in the North of Wales – with the corresponding centres of electricity demand in the Central Belt and Northern England. By proactively managing our network, we provide the capacity needed to enable the economic transfer of renewable energy from and through our licence areas.

But sustainability goes beyond climate change targets. Our networks cover a variety of landscapes, habitats and communities that we must serve and protect. Our activities require a large and diverse supply chain, and we need to work with these suppliers to manage the environmental impacts of the services and products they provide us. A group of our prominent stakeholders agree we should take the lead and respond to these challenges by placing sustainability at the core of what we do. By using innovation and investment built around our Sustainable Business Strategy, we can support the low carbon transition, reduce our own impacts and address biodiversity loss to build a nature-rich future.
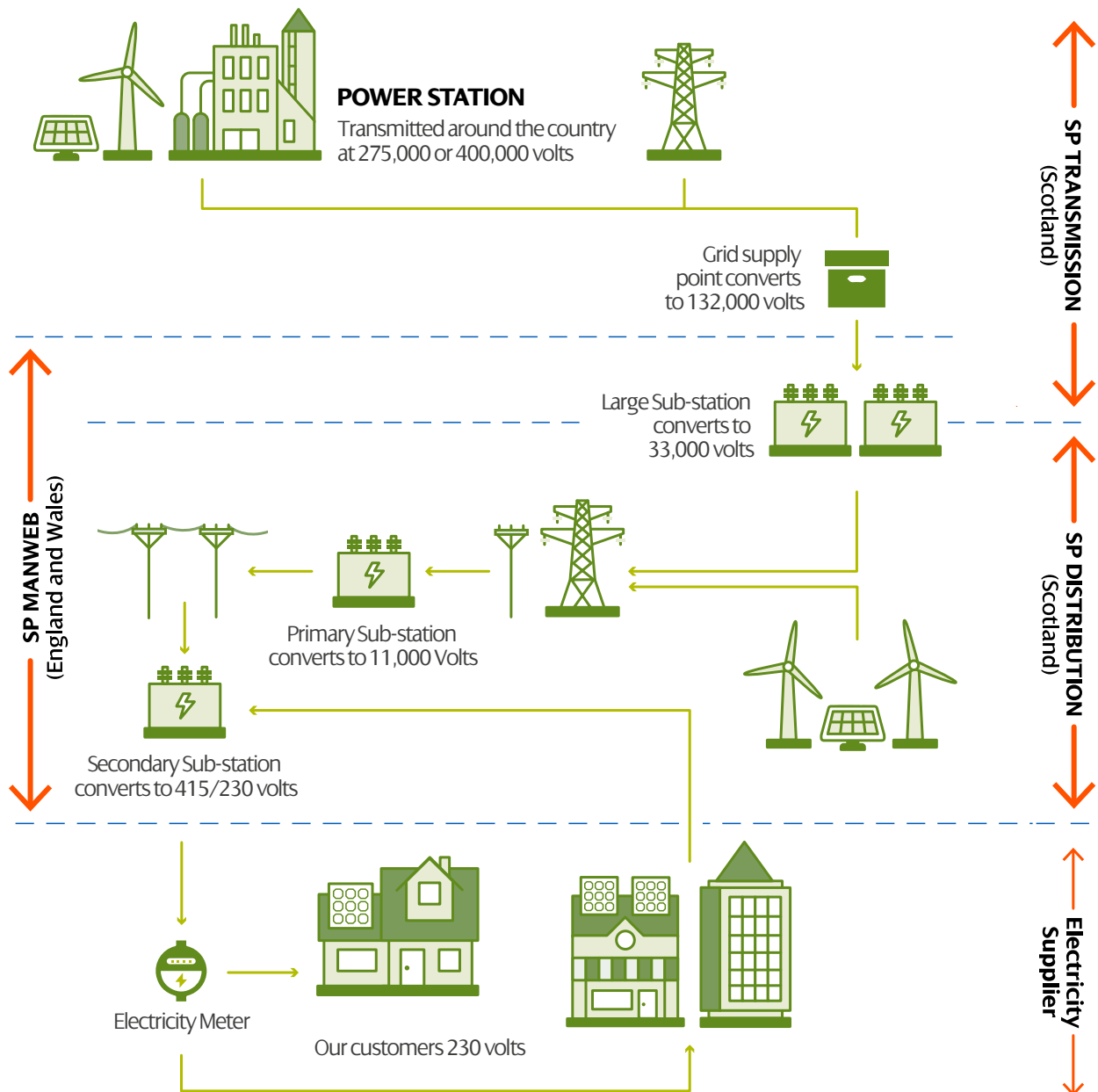
Our strategy takes into account our many roles. We distribute electricity to 3.5 million customers across our network, regardless of who they pay their bill to.

In our licence areas, we are the point of contact for all enquires relating to the electricity network. The safety and security of electricity supply is paramount to our operations. We employ approximately 3,000 people directly, and 2,500 contractors. We also support tens of thousands more jobs in our supply chain. We own three regulated electricity network businesses in the UK: SP Transmission plc (SPT), SP Distribution plc (SPD) and SP Manweb plc (SPM).

SP Transmission PLC (SPT)
SP Distribution PLC (SPD)
2 million customers

SP Manweb PLC (SPM)
1.5 million customers

POWER STATION
Transmitted around the country at 275,000 or 400,000 volts

Grid supply point converts to 132,000 volts

SP TRANSMISSION (Scotland)

Large Sub-station converts to 33,000 volts

Primary Sub-station converts to 11,000 Volts

Secondary Sub-station converts to 415/230 volts

SP MANWEB (England and Wales)

SP DISTRIBUTION (Scotland)

Electricity Meter

Our customers 230 volts

Electricity Supplier

Our transmission (SPT) and distribution (SPD) network in Scotland covers an area of almost 22,000km² in central and southern Scotland.[1]

Our distribution network in England and Wales (SPM) covers approximately 12,000km² in North Wales, Merseyside, Cheshire, and North Shropshire.[2]

As the licensed Transmission Owner (TO) in southern Scotland, we operate, maintain and invest in our network of 132 substations, 7,700 poles and steel towers, 4,000km overhead lines and 320km underground cables at high voltages.

Across both our Distribution Network Operator (DNO) Licence areas (SPM & SPD), our network comprises approximately 30,000 substations, 604,000 poles, 3,700 steel towers, 40,000km of overhead lines and 65,000km of underground cables which deliver electricity to meters in our licence areas.[3]

We are investing £1.375bn in our transmission network during the current RIIO-T2 price control period (2021-26) and £4.4bn in our distribution networks during RIIO-ED1 (2015-23). These investments will improve performance, ensure security of energy supply and facilitate the connection of low carbon technology.

SP Energy Networks is part of Iberdrola Group, a globally leading utility with a sustainable business model at the heart of its decision making processes. Our sustainability ambitions complement those of our parent company.

[1] https://www.spenergynetworks.co.uk/userfiles/file/201403_SPEN_SPDistribution%20PlanOnAPage.pdf

[2] https://www.spenergynetworks.co.uk/userfiles/file/201403_SPEN_SPManwebPlanOnAPage.pdf

[3] http://www.scottishpower.com/userfiles/file/SPEN-Infographic.pdf

Our Vision

Our vision is to be a sustainable networks business. We will embed the principles of sustainability in our decision-making by working with our stakeholders to:

Efficiently manage and develop our network in support of the low carbon transition; and,

Achieve neutral or positive environmental and social impacts.

We will be a leader in this area. Our actions to become a sustainable network operator will drive our supply chain and support our customers and communities to become more sustainable.

Climate change resilience
We will develop our network to mitigate impacts of climate change.

Carbon and energy reduction
We will be a carbon neutral company throughout our value and supply chains, and will actively support our customers and local communities towards achieving this goal.

Sustainable resource use
The principles of a circular economy and efficient use of resources will be embedded in our business. The materials required for network construction and operation will come from sustainable sources.

We will produce zero waste, with the components of all end-of-life assets being reused or recycled into new products.

Land and biodiversity improvement, water efficiency and protection
We will protect and continually enhance the biodiversity around our assets and support national and local strategies. Our decision-making

will incorporate the principles of Natural Capital Assessment to ensure that levels of natural assets are at least protected, and where possible, enhanced.

Sustainable society
We will have a net-positive impact on the environment and the communities in which we operate.

We will collaborate with national and local stakeholders to understand their needs and maximise the positive social and economic impacts of our operations on communities, including education, skills and employment.

Our 'sustainable business' model will be characterised by:

Consideration of environmental, social and economic costs and benefits in decision making;

Collaboration with stakeholders; and,

Transparency in decision-making processes and reporting of performance.

Opportunities and Challenges

We aim, via this Strategy, to stay ahead of international and national policies aimed at reducing environmental impact. In this section, we outline the opportunities and challenges posed by some of the key policy developments that have been published in the last 18 months, which we have taken into account in this revision of our Strategy. More information on the full range of policies that have influenced our Strategy in its initial development and its evolution since is provided in Appendix 1.

Recent legislative, regulatory and governmental changes

Government Net Zero Carbon targets – In June 2021, the UK set new targets as part of the Carbon Budget Order 2021, following recommendations for the Climate Change Committee in their December 2020 Sixth Carbon Budget. The new law targets a 78% reduction in carbon emissions by 2035 in comparison to 1990 levels, and a net zero target of 2050. For the first time, a share of emissions from international flights and shipping will also be accounted for in the UK Carbon Budget.

Opportunities: continue to develop our network, embrace innovative ways to manage demand and generation in real time, and utilise more of our assets' capacity to connect low carbon technologies as quickly as possible.

Challenges: to support an increase in the pace of UK decarbonisation with a just transition that enables everyone opportunities to benefit from Net Zero.

UK Net Zero Strategy – published October 2021, sets out policies and proposals for decarbonising all sectors of the UK economy to meet the net zero carbon target by 2050. There is recognition that electricity will be the primary source of energy, with an expectation that by 2035 the UK electricity system will be decarbonised, but there will be sectors where electrification is not viable e.g. aviation and shipping. Key is the proposed Electricity Network Strategy, to be jointly published by Ofgem and BEIS, which will set out how an agile, flexible onshore networks will be facilitated, that allows the rapid, transformational change required while responding to consumer and energy system needs.

Opportunities: further clarity on the future of the electricity system.

Challenges: the proposed introduction of competition in onshore network assets.

UK Environment Bill 2020 – Re-introduced to Parliament in October 2021 for a fourth reading, this bill sets out how the UK Government plans to protect and improve the natural environment in the UK. It is expected to be passed by the end of the year.

Opportunities: the Bill mandates the delivery of Biodiversity Net Gain, and will support us in tackling biodiversity loss and climate change in a coordinated way across England & Wales.

Challenges: we operate across England, Wales and Scotland, and an approach to biodiversity enhancement is still under development by Devolved administrations.

UK National Infrastructure Strategy – published in November 2020, sets out the UK Government's plans to invest significantly in the UK's national infrastructure and address long-term issues relating to infrastructure development whilst supporting economic recovery following the COVID19 pandemic and achieving net zero carbon emissions by 2050.

Opportunities: facilitation of our investment plans via the removal of institutional barriers.

Challenges: risks to our investment plans due to uncertain and/or changing policies and processes.

Scottish Government's Infrastructure Investment Plan – published in February 2021, sets out a long term vision of infrastructure in Scotland, which supports an inclusive, net zero carbon economy and implements the recommendations of the Infrastructure Commission for Scotland. A vision of future infrastructure is set out, underpinned by three themes: enabling net zero emissions and environmental sustainability; driving inclusive economic growth; and building resilient and sustainable places.

Opportunities: alignment of this Plan with our own carbon and sustainability commitments and goals.

Challenges: potential divergence of policy across devolved nations.

Scottish Government Programme for Government 2021-22: A Fairer, Greener Scotland – published September 2021, this document sets out the actions that the Scottish Government will take in the coming year and beyond, and focusses on the need for urgent, transformative action to tackle the global crises of climate change and ecological decline. Many policy developments that were scheduled to have taken place over the last 18 months have been delayed due to the COVID19 pandemic, see relevant sections below – these were expected to influence this 2021 Strategy review but will now be considered in 2022.

> **Opportunities:** the ongoing ability to influence policy developments from a leadership position, with 18 months additional experience of practical application.

> **Challenges:** delayed policy-making means that our progress in the meantime may not align with the eventual policy direction, as well as leaving less time to deliver improvements before target deadlines.

Ofgem RIIO-2 Price Controls – Our ambitious plans for environmental sustainability represent a significant step-change from RIIO-1 and we welcome the enhanced regulatory regime for RIIO2 (5 years from 2021 for Transmission and from 2023 for Distribution).

> **Opportunities:** to build on our RIIO-1 performance and quickly reduce, eliminate, reverse or manage a wider range of environmental impacts than ever before to achieve our goals.

> **Challenges:** to bring about this step change in environmental sustainability in a quick, well-coordinated way, while delivering business priorities and providing long-term value for consumers.

Ofgem Decarbonisation Action Plan – This February 2020 Plan lays out the urgent actions Ofgem will take to support the transition to Net Zero carbon, whilst protecting current and future consumers.

> **Opportunities:** more adaptable price controls, new uncertainty and innovation funds, anticipatory investment where justified and the creation of a more flexible, fit-for-purpose energy system, allows us to make long-term decisions for the good of current and future customers.

> **Challenges:** these changes can only happen with fast evolution of regulation and investment returns which are set to attract the capital needed into the UK.

Climate change and sustainable development

IPCC 6th Assessment Report - Climate Change 2021: The Physical Science Basis – provided the latest scientific conclusions on the current state of the climate, including how it is changing and the role of human influence, and the state of knowledge about possible climate futures and limiting human-induced climate change. The conclusions support our accelerated ambition to reach Net Zero Carbon emissions earlier and to drive actual reductions in carbon emissions as early as possible thus minimising cumulative emissions.

> **Opportunities:** accelerating and increasing the ambition level of our carbon targets is required to demonstrate the leadership to which we've committed and that our stakeholders expect. We will be future-proofing our business and many carbon reduction initiatives also result in reduced costs.

> **Challenges:** we have delivered the easier carbon reductions and must now face the harder challenges where ready solutions are not yet available and may incur additional cost.

COP26: the 26th Annual Conference of the Parties – (to the UN Climate Change discussions) takes place this year in Glasgow. The goals of this COP are:

- secure global net zero by mid-century and keep 1.5 degrees within reach
- adapt to protect communities and natural habitats
- mobilise finance
- work together to deliver.

> **Opportunities:** this event is a unique opportunity to demonstrate our leadership and to find collaborators and identify best practice to drive us further and faster towards our sustainability goals. It will also drive governments to accelerate their ambition and put in place the necessary legislative and regulatory mechanisms to support decarbonisation.

> **Challenges:** to identify the best opportunities to realise this opportunity, in the myriad of events. How big a problem would it be if governments don't commit to the required level of ambition?

UK Committee on Climate Change Progress Report to Parliament 2021 – The CCC's annual assessment of UK progress in reducing emissions found that whilst the Govn has made historic climate promises in the past year, for which it deserves credit, it has been too slow to follow these with delivery. Delays to a host of new climate strategies mean uncertainty and make it harder for the UK to get on track with emissions reductions.

Opportunities: demonstrating leadership by accelerating our carbon reduction targets in line with advancing science and stakeholder expectations, in advance of Govn strategies.

Challenges: delivery of our targets requires a supportive legislative and regulatory framework.

Scottish Government Climate Change Plan update – published in December 2020 and covering the period to 2032, reflects the increased ambition of the new targets set by the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019, i.e. Net Zero carbon emissions by 2045.

Opportunities: supports our accelerated carbon reduction targets.

Challenges: meeting devolved nations' expectations whilst operating in a UK energy market.

The second Scottish Climate Change Adaptation Programme (SCCAP) and its second annual progress report – the SCCAP was launched in September 2019 and outlines how Scotland is preparing for the impacts of climate change over the period to 2024, responding to risks set out in the UK Climate Change Risk Assessment 2017. The most recent annual SCCAP progress report was published in May 2021. Despite being impacted by the COVID-19 pandemic, the Scottish Ministers believe that good progress continues to be made.

Opportunities: we can increase the resilience of our network by embedding it into our maintenance, refurbishment and new build standards, and can use nature based solutions to deliver multiple benefits such as climate impact mitigation and biodiversity and natural capital enhancements.

Challenges: we do not have certainty as to the future climate related impacts on our network but yet need to protect our network in a timely and efficient way.

Decarbonisation of Energy

UK Government Energy White Paper 'Powering our Net Zero Future' – presented to Parliament in December 2020, this Paper seeks to build on the Prime Minister's Ten Point Plan to give a long-term strategic vision for the energy-related measures in that Plan, consistent with Net Zero carbon by 2050:

- transforms energy for a cleaner, greener future
- supports a green recovery from COVID-19
- creates a fair deal for consumers so that the cost of the transition to net zero carbon is fair and affordable.

Opportunities: explicit commitments from Government allow embedding of our share of delivery within our RIIO2 business plans.

Challenges: things are moving so fast that there is a risk that our regulated business plans are not flexible enough to adapt and allow us to maximise our contribution.

Scottish Government Energy Strategy: position statement – published March 2021, this document provides an overview of the Scottish Government's key priorities for the short to medium-term in ensuring a green economic recovery from COVID19 whilst remaining aligned with Scotland's net zero carbon ambitions. It summarises how recent policy publications such as the Hydrogen Policy Statement (Dec 2020), Local Energy Policy Statement (Jan 2021) and Offshore Wind Policy Statement (Oct 2020) collectively support the delivery of the Climate Change Plan Update (see above) along with the future findings from current or recent consultations including the draft Heat in Buildings Strategy, the Call for Evidence on the future development of the Low Carbon Infrastructure Transition Programme and Scottish skills requirements for energy efficiency.

Opportunities: continued alignment of our approach with the Scottish Government's three key principles (originally set out in the still current Scotland's Energy Strategy 2017): a whole-system view; an inclusive energy transition; and a smarter local energy model.

Challenges: to deliver an economically efficient transition with the speed required, in a fair and inclusive way.

Scottish Government Programme for Government 2021-22: A Fairer, Greener Scotland – delayed policy development to recommence during this parliamentary year, with a focus on budget increases for a variety of buildings energy efficiency schemes.

Decarbonisation of Transport

UK Transportation Decarbonisation Strategy (and subsequent UK Net Zero Strategy) – published in July 2021 (and October 2021), includes targets for zero emission vehicles, sdeadline of 2030 for an end to the sale of new petrol and diesel cars and vans and 2035 for new cars and vans to be fully zero emissions at the tailpipe, plans to publish an EV infrastructure strategy later this year and targets for public bus and rail transport systems.

Scottish Government Programme for Government 2021-22: A Fairer, Greener Scotland – delayed policy development to recommence during this parliamentary year, with a focus on bus and rail decarbonisation.

Decarbonisation of Transport Opportunities:
working with government, Ofgem, industry peers, the automotive industry, local councils and other stakeholder groups to understand emerging needs and adapt our network to enable ambition in a cost-effective way.

Decarbonisation of Transport Challenges:
uncertainty around uptake, charging behaviours and regulation will require constant effort to stay ahead of consumer needs.

Decarbonisation of Heat

UK Heat and Buildings Strategy – published October 2021, is the next stage of the UK Government's considerations of how to deliver a transition to high-efficiency low-carbon buildings. A clear push for increased energy efficiency measures and prioritisation of energy efficiency before low carbon heating systems, confirmation of previous proposals such as 2035 ban on sale of gas boilers and provision of additional funding for existing schemes, but no significant new policies or change in direction.

Scottish Government Programme for Government 2021-22: A Fairer, Greener Scotland – delayed policy development to recommence during this parliamentary year, with a focus on the development and laying in Parliament of a Heat Networks Delivery Plan.

Decarbonisation of Heat Opportunities:
introduction of policies that will serve as a market catalyst would be welcomed to drive the required degree of change.

Decarbonisation of Heat Challenges:
the co-ordination of network reinforcement (or alternatives) within a market-driven transition to decarbonised heat and transport.

Biodiversity

Natural England Biodiversity Metric 3.0 – released July 2021, this metric improves upon the 2.0 version for use in England as the industry standard biodiversity metric for use as required by the Environment Bill.

Scottish Government Programme for Government 2021-22: A Fairer, Greener Scotland – delayed policy development to recommence during this parliamentary year, with a focus on the publication of a new biodiversity strategy followed by an underpinning 5 year delivery plan, which will guide the use and management of land and the approach to protecting habitats and ecosystems including peatland and woodland.

Welsh Nature Recovery Action Plan – updated in October 2020, this document is the National Biodiversity Strategy and Action Plan for Wales and sets out the 2020/21 action plan.

Biodiversity Opportunities:
to ensure that we avoid, or if impact is unavoidable mitigate and ultimately enhance/restore biodiversity when we conduct work on our network.

Biodiversity Challenges:
as we have network in England, Scotland and Wales, we must align with and support delivery of different policies which will have an impact on efficiency of delivery.

Resources and Land Use

EU Circular Economy Package: UK Policy Statement – published July 2020, sets out the key changes made by the CEP and the approach of the UK to transposition of the 2020 CEP measures (this Statement taking the place of a consultation as key changes have been the subject of previous consultation). Refers to the devolved nations' existing domestic waste strategies: the Resources and Waste Strategy for England (part of the 25 Year Environment Plan), the Welsh Government's Beyond Recycling strategy and the Scottish Government's circular economy strategy, 'Making Things Last'.

Opportunities: to maximise the value from products and materials by keeping them in use for as long as possible.

Challenges: we need to influence our supply chain, access new resource streams and create new ways of working, which require a long-term view, a co-ordinated industry approach and an element of trial and error, whilst delivering change quickly.

Scottish Government Programme for Government 2021-22: A Fairer, Greener – delayed policy development to recommence during this parliamentary year, with a focus on bringing forward the delayed Scottish Government Circular Economy Bill.

Customer and Shareholder Value

Scottish Government Just Transition Commission: A National Mission for a fairer, greener Scotland – published March 2021, outlines the recommendations of the Just Transition Commission to inform the development of Government strategies to achieve net zero carbon emissions by describing everything that needs to be considered to fully realise the potential (and mitigate the potential injustice) associated with the Net Zero transition.

Opportunities: delivering ongoing alignment of our RIIO2 plan implementation by taking on board the considerations identified in this Mission.

Challenges: ensuring that our engagement and decision-making processes take account of the needs of the most vulnerable in society.

Our Strategy

Our Process

Everything we do begins with stakeholder engagement. That's why we consult with all of our stakeholders, internally and externally, to help shape our Sustainable Business Strategy. We have embedded this into our process, providing a platform for us to discuss important sustainability issues with stakeholders and deliver on what matters most to them.

We take a systematic approach to managing and reducing our environmental impacts by using a documented Environmental Management System (EMS). With our commitment to compliance with environmental legislation as a foundation, the environmental impacts of our activities are prioritised for improvement action through a risk assessment process. Our EMS has been externally certified to ISO14001:2015, the international standard for EMS, for over a decade and is fully embedded throughout our business processes.

The environmental impacts identified have informed our Sustainability Drivers, the development of our Sustainable Business Strategy and the identification of our Sustainability Goals and Objectives. These are reviewed annually and inform the environmental planning process, which identifies annual actions and targets.

We explain our process for strategy development and delivery fully in the following sections. In short, it includes:

Our Drivers — Our six sustainability drivers are designed to drive our activities towards achieving our vision of a sustainable networks business.

Our Goals — Where we hold good quality accurate data, we have identified quantified impact reduction goals (see Table 3).

Our Plan — A detailed breakdown of our planned activities for the year ahead, categorised first by strategic Drivers, then by delivery Objectives and Process Workstreams. Key Performance Indicators (KPI) are utilised where it is possible to measure and track data. The nature of sustainability means some areas are not quantifiable, so these are tracked with qualitative assessment.

Our Big Leaps — Implementing pilot projects to trial new and innovative approaches, processes or technologies. These pilots align with our existing SPEN Innovation Strategy and associated processes, with successful outcomes incorporated into existing business processes following approval by the Executive Sustainability Steering Group (ESSG).

Our Shared Journey — Strategic direction is agreed by the ESSG which is also responsible for implementation and annual review. Internal stakeholder engagement uses business-wide communication channels and invites sustainability ambassadors to lead initiatives. External stakeholder engagement follows our existing SPEN Stakeholder Engagement Strategy, with the key route being the Sustainability Stakeholder Working Group.

Our Drivers

To deliver our vision of a sustainable networks business, we're focusing on six key areas of activity that will deliver big sustainability benefits for all. We call these our Sustainability Drivers.

These Drivers help guide decisions on which activities and projects we take forward. They allow us to connect different activities across the business that contribute to the delivery of our Goals and Objectives, and they help facilitate communication of our activities (see Diagram 1).

Diagram 1. Sustainability Drivers

Sustainable society

Carbon and energy reduction

Climate change resilience

Sustainability Drivers

Sustainable resource use

Water efficiency and protection

Land and biodiversity improvements

We review our Drivers regularly, and this year, we have worked to map them against Ofgem priorities for delivering an environmentally sustainable network.

Table 1. Mapping Sustainability Drivers to impact area and Ofgem priorities

Driver	Impact area	Ofgem priorities for delivering an environmentally sustainable network
	Carbon footprint of network losses	Decarbonising the electricity networks – with a focus on business carbon footprint and embedded carbon in networks
	Reducing embodied carbon and scope 3 emissions	
	Business carbon footprint – sulphur hexafluoride (SF_6)	
	Business carbon footprint – other	
	Climate change adaptation	
	Supply chain sustainability	Supporting the transition to an environmentally sustainable low-carbon energy system
	Enhancing visual amenity	Reducing networks' other environmental impacts, such as pollution to local environment; resource waste; biodiversity loss; and other adverse local effects
	Land and biodiversity	
	Preventing pollution	
	Sustainable resource use	
	Waste reduction	

Commitment to the United Nations Sustainable Development Goals

These Drivers are designed to prioritise the key activities that our business must undertake in order to support the delivery of the United Nations Sustainable Development Goals (SDGs). We have carried out a detailed mapping exercise, down to individual SDG objective and indicator level. This has improved our understanding of the relationship between SDG indicators and our Sustainability Drivers – emphasising the need to fully align our activities with the SDGs, while retaining the specificity of our Drivers.

Our sustainability drivers and commitment to the United Nations Sustainable Development Goals (SDGs) complement the ambitions of our parent company, Iberdrola Group.

Our Group website gives details of Iberdrola's leading sustainability agenda and our Group strategy for contributing to the goals.

Table 2. SP Energy Networks contribution to the SDGs

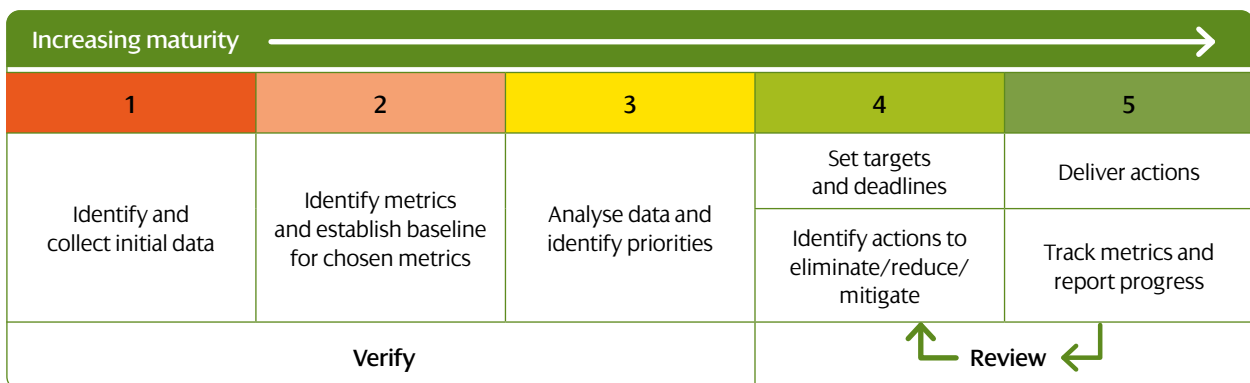| SDG	Goal Aims and Our Contribution	Sustainability Drivers
Main focus		
7 AFFORDABLE AND CLEAN ENERGY	**'Ensure access to affordable, reliable, sustainable and modern energy for all'** • Providing excellent network reliability and value for money • Connecting renewables to the network quickly and sustainably	
13 CLIMATE ACTION	**'Take urgent action to combat climate change and its impacts'** • Enabling decarbonisation of electricity, heat and transport through providing the required network capacity and connections • Reducing our Business Carbon Footprint • Ensuring the electricity network is resilient to the effects of climate change	
Direct Contribution		
6 CLEAN WATER AND SANITATION	**'Ensure availability and sustainable management of water and sanitation for all'** • Reducing the risk of water pollution from our operations • Reducing business water consumption	
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	**'Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation'** • Significant investment in innovation • Providing system solutions that enable the most efficient use of the network, reducing the need for costly upgrades	
15 LIFE ON LAND	**'Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss'** • Reducing the risk of biodiversity loss or land contamination from our operations • Understanding and protecting the ecological value of the environments in which we operate	
17 PARTNERSHIPS FOR THE GOALS	**'Strengthen the means of implementation and revitalize the global partnership for sustainable development'** • Inclusive, responsive stakeholder engagement, acting on the issues that are most material for stakeholders, and delivering meaningful impact • Working in partnership with stakeholders and organisations to co-create solutions for sustainability	
Indirect Contribution		
1 NO POVERTY	**'End poverty in all its forms everywhere'** • Providing value for money • Supporting customers in fuel poverty • Supporting vulnerable communities to adopt low carbon technologies	
3 GOOD HEALTH AND WELL-BEING	**'Ensure healthy lives and promote well-being for all at all ages'** • Enabling air quality improvement through the connection of low carbon technologies • Enabling access to green spaces and active travel through landscape and visual mitigation schemes	
4 QUALITY EDUCATION	**'Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all'** • Providing a wide range of training and development opportunities for staff • Providing educational opportunities in the communities in which we operate	
5 GENDER EQUALITY	**'Achieve gender equality and empower all women and girls'** • Driving down the gender pay gap • Empowering women through staff networks and gender neutral recruitment processes	

SDG	Goal Aims and Our Contribution	Sustainability Drivers
8 DECENT WORK AND ECONOMIC GROWTH	'Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all' • Providing network capacity and connections to accelerate growth in green industries	
10 REDUCED INEQUALITIES	'Reduce inequality within and among countries' • Targeting investment to where it's needed the most • Working to ensure a just transition into the low carbon transition	
11 SUSTAINABLE CITIES AND COMMUNITIES	'Make cities and human settlements inclusive, safe, resilient and sustainable' • World class safety performance • Working with communities to enhance resilience	
12 RESPONSIBLE CONSUMPTION AND PRODUCTION	'Ensure sustainable consumption and production patterns' • Minimising overall resource consumption • Increasing re-use and recycling	
16 PEACE, JUSTICE AND STRONG INSTITUTIONS	'Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels' • Transparency, inclusivity and accountability in our business processes and activities	

(Left vertical label: Indirect Contribution)

Our Goals

We set Goals across all of our key impact areas. These help us to develop and implement a mature approach, while minimising impacts year-on-year. As our approach in each area matures, we can deliver more effective outcomes based on data.

We categorise maturity into five main stages, assessing our impacts against these to guide the nature of our goals:

Diagram 2. Stages of sustainability maturity

Increasing maturity ⟶

1	2	3	4	5
Identify and collect initial data	Identify metrics and establish baseline for chosen metrics	Analyse data and identify priorities	Set targets and deadlines	Deliver actions
			Identify actions to eliminate/reduce/mitigate	Track metrics and report progress
Verify			⬆ **Review** ↩	

We use a matrix to map the maturity of our activities and delivery against all key environmental impacts:

Diagram 3. SP Energy Networks Sustainability Maturity Matrix 2021

Increasing maturity ⟶

Driver	Impact Area	Maturity level 1	2	3	4	5
		Identify and collect initial data	Identify metrics and establish baseline for chosen metrics	Analyse data and identify priorities	Set targets and deadlines / Identify actions to eliminate/ reduce/ mitigate	Deliver actions / Track metrics and report progress
		Verify			Review ↑ ↵	
CO₂	Scope 1 (operational transport, Sulphur Hexafluoride, other fuel consumption)				4	5
	Scope 2 (buildings energy use, network losses)				4	5
	Scope 3 (business travel, construction emissions, capital carbon – carbon emitted as a result of the manufacture and transportation of our assets to our sites)	1	2			
	Climate change adaptation				4	5
	Supply chain sustainability	1				
	Enhancing visual amenity					5
	Land and biodiversity	1				
	Preventing pollution					5
	Sustainable resource use	1				
	Waste reduction			3	4	5

Our current maturity levels clearly show the areas (above and beyond compliance) which have been a focus under the RIIO-1 regulatory framework, and those which have increased in priority more recently:

- Supply chain

- Embodied carbon

- Biodiversity net gain

- Sustainable resource use

Where maturity is such that we hold good quality accurate data, we originally identified quantified impact reduction goals for three timeframes: 2023, 2030 and 2050, aligned with our price control periods and international and national target deadlines. As shown in the graphs on the next page, we are well on our way to delivering our 2023 targets, in fact we have already reduced our business carbon footprint carbon emissions well below our 2023 carbon reduction target.

As a result of increasing stakeholder expectations and the step change in environmental sustainability required by the Ofgem's RIIO-2 price control requirements (driven by the Governments' recently published Net Zero carbon targets and covering the periods 2021-26 for Transmission and 2023-28 for Distribution) we have accelerated our targets, in particular those relating to carbon emissions. We are in the process of having our Science Based Targets for 2035 for Scopes 1, 2 and 3 externally validated, and have set targets to achieve Carbon Neutrality (Scopes 1 and 2 excluding losses) and Net Zero Carbon emissions for our Distribution businesses by 2023 and 2035 respectively. The successful implementation of this strategy will position us as a leader in sustainability in our sector.

Our strategy is to continually improve the breadth and quality of the data we hold, refining our key goals as new data streams become available to us, and accelerating ambition as understanding and expectations evolve.

Table 3. Summary of Key Goals

	Carbon and Energy Reduction	Sustainable Resource Use	Land and Biodiversity Improvement
2023	-15% carbon footprint*	Divert 95% of waste from landfill	
2026			No Net Loss on named RIIO-T2 Major Projects Schemes
2028			500 Biodiversity Units created across our ED2 work programme 10% Enhancement across 25 Hectares of our distribution network
2030	-80% carbon footprint*	100% waste recycled or re-used (excluding compliance waste)	
2035	Achieve Science-Based Targets and Net Zero Carbon		
2040		Zero Waste	

*targets from a 2013/14 baseline carbon footprint (scopes 1 and 2 plus business travel, excluding losses).

Summarised environmental data are presented in the following graphs, showing the baseline year (2013/14) and the trajectory to our targets. The graphs are updated on an annual basis and included within our sustainability reports.

SP Energy Networks Business Carbon Footprint CO_2 Reduction (Scope 1 and 2 excluding losses)
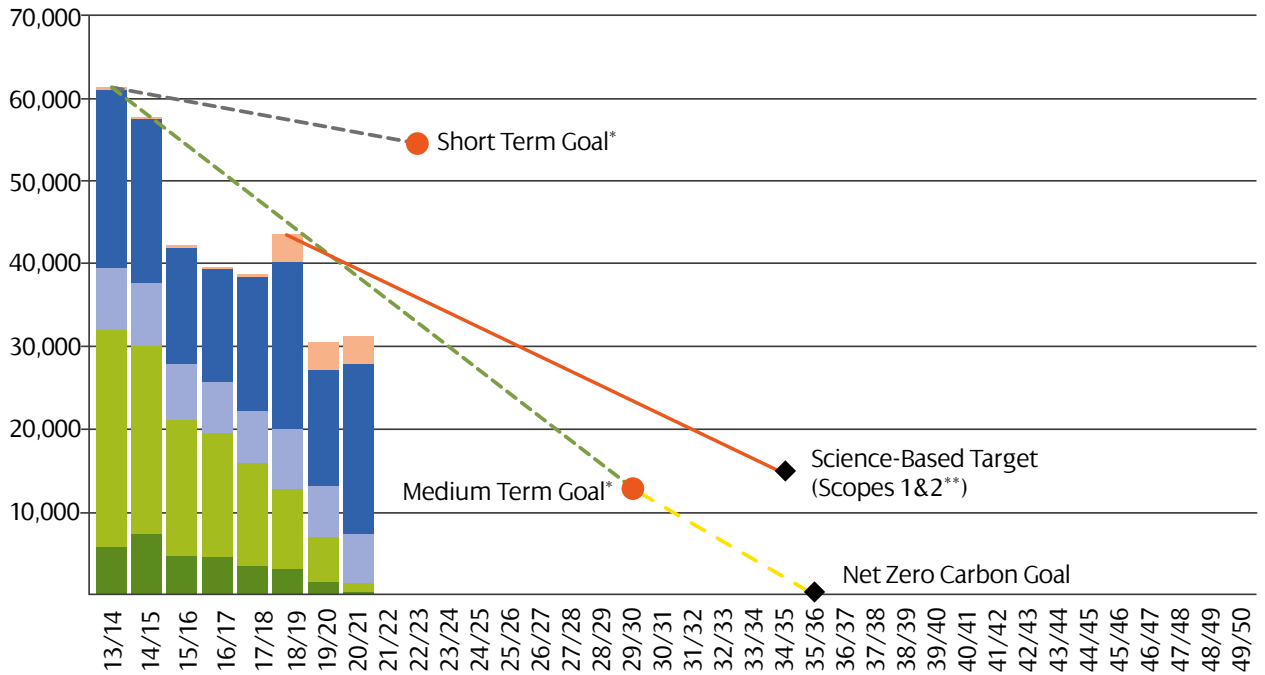
*excluding losses. **including losses.

Legend:
- Red Oil Total tCO_2e
- SF_6 Total tCO_2e
- Fleet Transport Total tCO_2e
- Sub Stations Total tCO_2e
- Depot Energy Use Total tCO_2e
- SBT Trajectory
- 2023 Goal Trajectory
- 2030 Goal Trajectory
- 2035 Net Zero Carbon Trajectory

SPEN Waste To Landfill

Legend:
- Annual % of waste sent to landfill
- Annual % of diverted from landfill
- Target trajectory
- 95% avoided landfill
- 100% avoided landfill
- Zero Waste
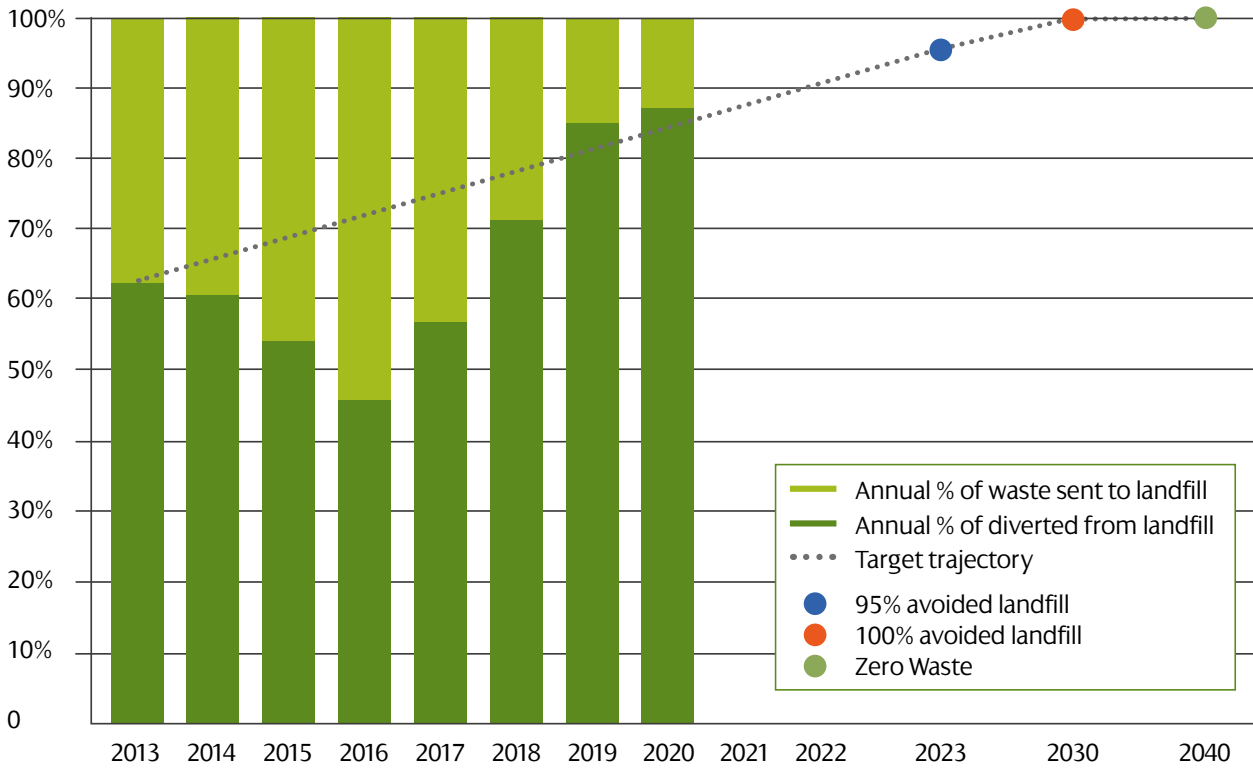
Our Plan

Our annual Sustainability Plan identifies, prioritises and tracks the objectives and actions related to each Driver in our strategy – providing the detail on how we will achieve these.

Each Objective is measured against high level Key Performance Indicators (KPIs) and specific actions detail how we will work to fulfil the Objectives.

We annually review existing environmental and sustainability data in order to:

Guide the Objectives, KPIs and Actions for the next 5 years;

Quantify our inputs and outputs in relation to material uses and emissions including waste, electricity, fuel and CO_2; and

Facilitate the setting of business-wide SMART targets for Objectives.

Table 4. Summary of Sustainability Plan – Objectives

Carbon and Energy Reduction

Deliver greenhouse gas emissions reductions in line with a 1.5 degree Science-Based Target trajectory to 2035.

- Continue to purchase 100% UK-based renewable energy backed by PowerPurchase Agreements for all our buildings.

- Electrify the operational vehicle fleet (excluding HGVs) by 2030 at the latest, seeking to accelerate to the end of the RIIO-T2 and RIIO-ED2 price control periods.

- Minimise the leakage of SF_6 gas from our network by reducing the leakage rate of new SF_6 equipment and addressing leaks urgently.

- Drive the development and adoption of SF_6-free technologies, collaborating with supply chain and industry peers, piloting new technologies where technically viable and adopting when market ready.

- Where a repair to a leaking transmission asset proves ineffective and the asset requires to be replaced, the SF_6 emissions from that asset will be offset until its replacement.

- Achieve carbon neutrality across Scopes 1 and 2 Distribution emissions (excluding losses) from the beginning of ED2 (April 2023).

- Reduce transmission network losses by around 14.5 GWh (circa 3% of 2018/19 losses) thereby limiting losses to a lower level than would otherwise be the case due to increasing renewable energy transfers.

- Reduce distribution network losses by around 36 GWh thereby limiting losses to a lower level than would otherwise be the case due to increasing renewable energy transfers.

- Align processes with PAS2080: Carbon Management in Infrastructure before RIIO3 business planning commences.

- Apply the Oxford Principles for Carbon Offsetting to ensure high probability of additionality and low probability of reversibility.

- Introduce a 'capital carbon' measurement tool for projects/works programmes, establish baselines and set reduction targets, by the middle of RIIO2 price controls.

- Identify, monitor and report metrics to track progress towards our Scope 3 SBT.

- Collaborate with other Distribution and Transmission Network Operators throughout RIIO2 to assess and manage capital carbon, drive efficiencies throughout our common supply chain and share best practice.

Achieve Net Zero greenhouse gas emissions across all scopes by 2035.

Implement RIIO2 buildings energy efficiency and renewables work programmes.

Climate Change Resilience

Increase the resilience of network to extreme weather events utilising nature-based solutions where practical.

Deliver our RIIO2 climate adaptation actions and strategies.

Table 4. Summary of Sustainability Plan – Objectives *continued*

Prevention of Pollution

Identify, risk assess and address high risk legacy land contamination by the end of RIIO2.

Eliminate Polychlorinated Biphenyls (PCBs) from our network in line with legislation and the statistical approach agreed with the environment agencies, by end 2025.

Reduce oil leakage from our network and reduce the total volume of oil in our network assets.

Retrofit oil containment measures to substation assets without such protection.

- Install oil containment bunds at 203 primary and grid transformers in ED2.
- Implement T2 oil risk mitigation programme of works.

Land and Biodiversity Improvement

Assess and minimise visual amenity and ecological impact when designing, constructing, managing and maintaining our network.

Implement management processes for invasive and non-native species on our land and along our network by 2023.

Deliver biodiversity and natural capital enhancement in the geographical areas covered by our network.

- Implement a methodology to measure biodiversity and embed consideration of biodiversity impacts in business decision-making by the middle of our RIIO2 price controls.
- Achieve no net loss in biodiversity across the T2 work programme.
- Deliver 500 biodiversity units across the ED2 work programme to move beyond mitigation to enhancement.
- Deliver 10% enhancement of biodiversity across 25 hectares of our land and along our distribution network during ED2.
- Incorporate natural capital assessment in our business decision making processes by the middle of our RIIO2 price controls.
- Deliver a net positive impact on natural capital values across our transmission network by 2026.

Sustainable Resource Use

Become a fully circular and 'zero waste' business by 2040.

- Divert 95% of waste from landfill by end 2023 and 100% by end 2030.
- Introduce life cycle assessment and circular economy principles to business processes by the middle of our RIIO2 price controls.
- Identify and implement resource use and waste metrics, quantify baselines and set improvement targets by the end of RIIO2.
- Identify priority resource input and waste streams and implement actions to reduce.

Table 4. Summary of Sustainability Plan – Objectives *continued*

Water Efficiency and Protection
Have zero water pollution incidents.

Require Pollution Prevention Plans on all transmission and 132kV projects from RIIO2 onwards.

Reduce water consumption by 10% by 2023.

Sustainable Society
Work with our supply chain to quantify and reduce our Scope 3 carbon emissions and other environmental impacts.

- Introduce environmental sustainability considerations in procurement processes in line with ISO20400 Sustainable Procurement Standard, including a carbon metric as a minimum by the middle of our RIIO2 price controls.

- Agree with our supply chain a suite of metrics to be used as Key Performance Indicators in our contracts.

- Enhance the environmental requirements in our contracts to be met by 80% by value of our supply chain by the end of our RIIO2 price controls.

- Collaborate with our supply chain at all stages to leverage their expertise.

- Remain a Partner in the Supply Chain Sustainability School and require contractors and suppliers to become members and undertake relevant environmental and sustainability training.

Use the UN Sustainable Development Goals to identify and fill gaps in strategies and plans.

Extend the scope of the Sustainable Business Strategy to incorporate social aspects, in line with a broader definition of sustainability, during its 2022 review.

The Sustainability Plan also describes our Process Workstreams, using a similar format containing Objectives, KPI Targets and Improvement Actions.

The delivery of all sustainability objectives is underpinned by these process workstreams:

Table 5. Summary of Sustainability Plan – Process Workstreams

IMS and Business Processes
Fully comply with all environmental legal obligations.

Maintain an EMS compliant with ISO14001.

Increase knowledge and commitment of staff, contractors and suppliers.

Improve the quality and completeness of environmental data collected and analysed at all stages of the asset lifecycle.

Stakeholder Engagement and Collaboration
Align with key stakeholders' views of a Sustainable Networks Business.

Address barriers and challenges to achieving sustainability goals via collaboration with key stakeholders.

Sustainable Business Model
Integrate environmental, social and economic issues in business decision-making.

Our Big Leaps

The timeline for delivery on our Goals and Objectives is ambitious and wide ranging. It's not always clear which actions will deliver the desired impact reductions, but we can test proposed initiatives through pilot projects before rolling them out across our business, reducing financial and other risks.

The continual improvement processes described on previous pages identify the big leaps that we need to take, for example, where we have new or less mature workstreams (like Supply Chain Sustainability) or where we must radically shift our approach to maintain maturity (as in the case of sulphur-hexafluoride reduction). Big leap projects will help us increase maturity in all key impact areas by 2026, which represents the end of RIIO-T2 and mid-way through RIIO-ED2 (the Transmission and Distribution price controls respectively).

Diagram 4. SP Energy Networks Sustainability Maturity Matrix 2026

Increasing maturity →

Driver	Impact Area	1 Identify and collect initial data	2 Identify metrics and establish baseline for chosen metrics	3 Analyse data and identify priorities	4 Set targets and deadlines / Identify actions to eliminate/ reduce/ mitigate	5 Deliver actions / Track metrics and report progress
			Verify		↑ Review ↵	
CO_2	Scope 1 (operational transport, Sulphur Hexafluoride, other fuel consumption)				4	5
	Scope 2 (buildings energy use, network losses)				4	5
	Scope 3 (business travel, construction emissions, capital carbon – carbon emitted as a result of the manufacture and transportation of our assets to our sites)			3	4	
	Climate change adaptation				4	5
	Supply chain sustainability			3	4	
	Enhancing visual amenity					5
	Land and biodiversity			3	4	
	Preventing pollution					5
	Sustainable resource use			3	4	
	Waste reduction			3	4	5

We will trial new and innovative approaches, processes and technologies so we can assess the associated benefits and understand any risks and costs.

These pilot studies will complement our wider innovation approach of 'Think Big, Start Small and Scale Fast' and the SPEN Innovation Strategy. Where pilot study boundaries are defined at a specific location, there is the opportunity for districts and depots within our organisation to develop an expert understanding of the issues covered and to share that knowledge with other districts. The pilot studies are approved by our Executive Sustainability Steering Group (ESSG) following submission of a business case and we report on progress quarterly.

The business case will:

Provide a rationale for the need to deploy the pilot study and why the location has been selected;

State clearly the measures of success;

Identify the risks and opportunities associated;

Set the pilot project duration and review checkpoints;

Confirm the initial data required and ongoing data monitoring;

List the staff resources required to conduct the study; and,

Set out financial costs where applicable.

Upon completion of a pilot study, we make a recommendation to the ESSG regarding roll-out.

Where the pilot has been successful, our outputs will include the provision of a proposal to the ESSG, recommending further testing or full roll-out across SPEN. Following ESSG approval, the project will be subject to the usual process for full approval and funding, through the Energy Networks Executive Team.

Our Shared Journey

The Executive Sustainability Steering Group was established to give board-level prominence to the Sustainability agenda within our business. Chaired by our Director of Processes and Technology and with board-level membership, the group demonstrates the value we place on sustainability.

The ESSG meets on a quarterly basis to discuss a broad range of sustainability issues including performance, reporting, stakeholder engagement and the evolution of this strategy.

The Sustainability Team is responsible for drafting, updating and monitoring progress of the Strategy and the Sustainability Plan before securing approval from the ESSG. This team sits within the Processes and Technology Directorate and provides specialist advice and support throughout SPEN to facilitate the achievement of our Sustainability Goals and Vision. The Sustainability governance structure is presented in Diagram 5 overleaf.

All our business teams undergo tailored environmental and sustainability-focused training to continually improve their understanding. Senior leaders, including our Executive Team, take focused courses on Leading with Sustainability. Our ongoing innovation culture change initiative, DRIVE, encourages staff to develop innovation and collaboration skills whilst developing solutions to a wide range of sustainability and business issues.

We use Directorate Scorecard metrics to make sure that all teams deliver the required sustainability and environmental outputs and track these throughout the year. Tailored team and personal objectives incentivise staff to identify and deliver environmental and sustainability improvements.

Frank Mitchell, CEO of SP Energy Networks and his executive team met with Steve Malkin, CEO of Planet First, to recognise SP Energy Network's commitment to business carbon footprint reduction. SPEN have now held the Planet Mark for 5 consecutive years, demonstrating external validation of our carbon footprint and its ongoing reduction.

Diagram 5. Sustainability Governance Structure
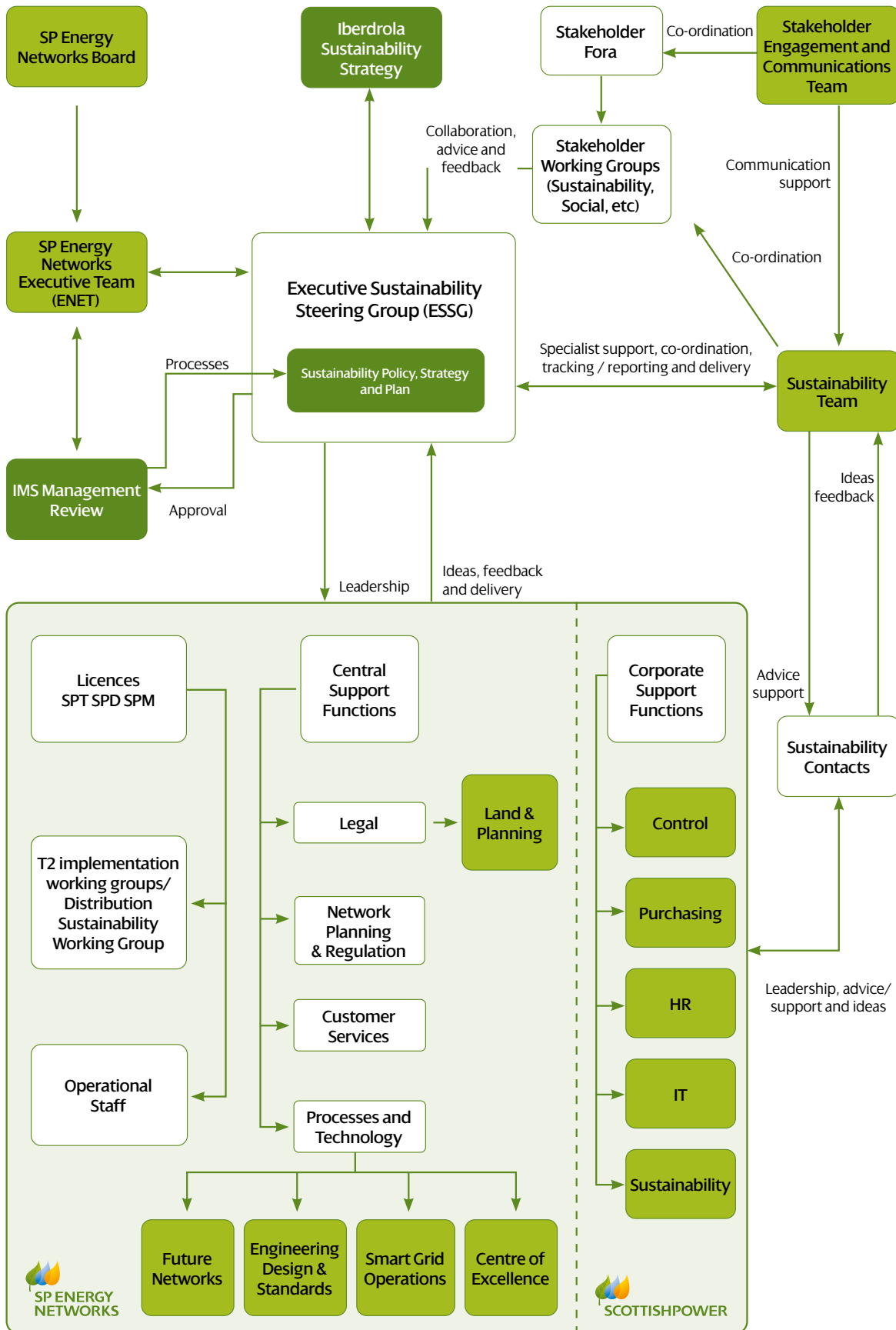
Internal Stakeholder Engagement

As shown in Diagram 5, the Sustainability Team consult on the Strategy, its Drivers and Objectives with staff from across the business, and there is discussion at Director level at the Executive Sustainability Steering Group. This helps determine the Improvement Actions required to deliver the Objectives for the period to 2026 and beyond.

External Stakeholder Engagement

Our external engagement on the Strategy is in line with the SPEN Stakeholder Engagement Strategy. Engagement is facilitated through the Sustainability Stakeholder Working Group, which includes representatives from organisations with strategic interests in sustainability in the licence areas where we operate. The organisations represented mostly have national or UK-wide reach, but may include regional bodies. Membership of the group will evolve as our Strategy continues to develop.

Invitations for the membership of the working group were issued initially to the following bodies:

Scottish Environment Protection Agency (SEPA)

Environment Agency (EA)

Natural Resources Wales (NRW)

Scottish Wildlife Trust (SWT)

Scottish Natural Heritage (SNH)

WWF

Environment Link

National and Devolved Governments

We manage Working Group participation in a variety of ways to fit stakeholder needs. Approaches include face-to-face group meetings, bilaterals on specific issues, focused workshops and use of our online community interface. We are currently working to increase our engagement with stakeholders from England and Wales, who were extensively represented on our RIIO2 engagement but who we need to find a way to engage with on a more regular basis. We have held workshops in Scotland and England to guide the development of this strategy, as part of our RIIO2 stakeholder engagement, and we also consult annually on our Transmission and Distribution reports.

Internal and External Reporting

We publish annual reports on the progress of our Transmission and Distribution businesses and make these available on our website and at public events. Our reports are transparent, and written in plain English with clear data presentation for non-technical readers. The data we publish is subject to strict governance processes to ensure its accuracy.
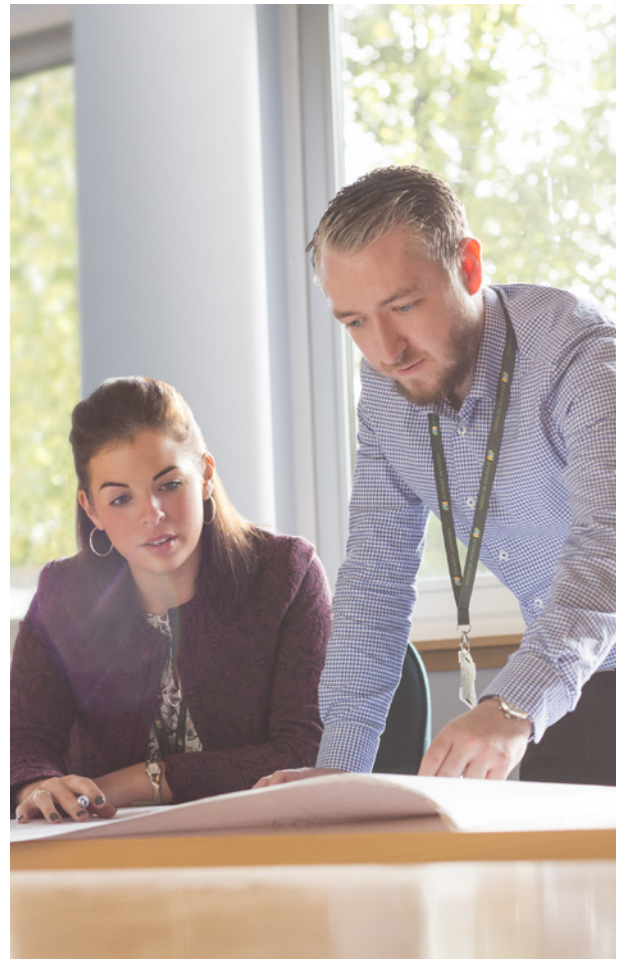
Our Approach

Our Electricity Network

Our network licences operate and maintain linear infrastructure which may be routed through, or adjacent to, woodland, farmland, peatland, parklands, watercourses, culturally or environmentally sensitive landscapes and structures. These range from near pristine to degraded habitats.

Our aim is to make connecting to the network as simple and worthwhile as possible. We need to connect customers to the electricity network whether they are in cities, towns, villages or individual rural properties. We recognise the need to minimise any negative effects these connections could have on the environment and communities. Connecting to the network is a positive step, and we want to make sure it feels that way for everyone.

Like the rest of the UK electricity network, much of our network comprises ageing infrastructure and assets.

The oldest parts have been operating for over 100 years. Back then, important factors such as health and safety, environmental considerations, social obligations, visual amenity and decentralised generation did not have the focus or priority they are given today.

Measuring impact in new ways

Through the planning, design, construction and remote management of new assets, together with retrofit and refurbishment of existing assets, we now consider the impact of the network in ways not thought possible in the past, allowing us to monitor effects in microseconds, rather than seconds and minutes. New data streams arising from the emerging 'prosumer', smart metering, network digitalisation and decentralisation, will continue to drive 'smart grid' capability in coming years.

During planning, construction, operation, maintenance and decommissioning activities, we meet the requirements of government policies and legislation and strive to better them by integrating fair and responsible environmental practices with socio-economic considerations.

We are a regulated part of the energy industry, but while external factors such as stakeholders' willingness to pay drive our business, other elements are within our control. One example of this is the renewal of our legacy assets as they reach end of life.

This requires a dual approach: finding a new purpose for these materials, thus eliminating our waste streams, and including lifecycle analysis from inception of our new components to end of life, to reduce their lifetime impacts.

Re-thinking the supply chain

Due to their complexity, many of our new operational assets are now assembled elsewhere and delivered as complete units for installation. This increases the significance of supply chain impacts, including the sourcing of raw materials, effective quality control of built components and the working conditions of those who manufacture and assemble our assets.

Monitoring, inspecting, servicing and decommissioning of these components also generates a footprint, so we aim to factor lifecycle environmental considerations into investment and procurement decisions, widening the definition of fit-for-purpose for our network. By measuring and recording lifecycle impacts, we will be able to identify improvement opportunities and deliver on our target to be a Sustainable Networks Business.

Collaboration and Innovation

Our employees and supply chain partners are experts on our network. We're confident that our path to sustainability can be led by their detailed knowledge of our assets and how to install, maintain and repair them.

By fostering collaboration between staff, our supply chain and other stakeholders, such as other network operators, we can address the priorities for change. We will use our status as a leader in the energy sector to influence practices across our industry and supply chain, encouraging innovative thinking and the investment needed to enable it.

Engagement with our employees, supply chain and the communities we serve is critical. They help facilitate our vision as a sustainable networks business of the future. Our increasingly knowledgeable and experienced stakeholder groups place us in a strong position to enhance our network for the benefit of everyone.

Our substations, underground cables, overhead lines and the wood poles or steel towers carrying these lines all have a direct relationship to the surrounding locale – and impact on its biodiversity and the livelihoods dependent on its ecosystems.

Working with stakeholders

Improving how we interact with these surroundings is of increasing importance. This starts with building relationships with our local stakeholders. That way we can develop a better understanding of their needs and those of the local environment, while increasing their awareness of our network and the steps we need to take to plan, maintain and repair our assets.

We recognise the unique potential of our overhead linear infrastructure and substation assets in supporting long-term UK biodiversity aims and envisage working with stakeholders to realise the associated benefits.

The behaviours of all parties involved in our electricity network, from suppliers and contractors to customers, are critical to achieving our vision. The criteria these stakeholders consider when making business and other decisions determine our level and speed of success.

New processes, techniques and technological innovation have the potential to improve our performance through:

Getting more from our existing assets

Reducing the resource requirements and environmental impacts of new assets

Reducing impacts associated with decommissioned assets, including waste

Increasing the security of supply

Improving the quality and efficiency of service, and

Reducing the risks posed to our employees, contractors, the general public and the local environment.

A more sustainable supply chain

Our strong relationship with our supply chain is critical to the successful and sustainable delivery of our plans. Our diverse suppliers provide a wide range of services throughout the whole lifecycle of assets, including design, manufacture and installation. Beyond safe, efficient and compliant works, we must collaborate to minimise environmental impacts, set enhanced environmental standards and drive industry-wide improvements, drawing on the huge breadth and depth of expertise and services within our supply chain.

A closer relationship with our suppliers will help us to better understand our use of resources. It will help us reduce our use of raw materials, improve our re-use and recycling rates over time and divert waste from landfill. By working in this way with all of our suppliers, we can build greater efficiency into our business processes and improve our decision-making.

Enablers

To achieve our vision of sustainability, we must harness a shared sense of purpose and responsibility across our industry. We must drive innovation and investment, prioritise effectively and implement robust measures for tracking progress. There are a number of external enablers that will help us do this.

RIIO Price Controls

RIIO-2 is the next price control for electricity operators, starting in 2021 for transmission operators and 2023 for distribution. This control is based on the RIIO model (Revenue = Incentives + Innovation + Outputs) and is designed to encourage network companies to:

- Put stakeholders at the heart of their decision-making process.

- Invest efficiently to ensure continued safe and reliable services.

- Innovate to reduce network costs for current and future consumers.

- Play a full role in delivering a low carbon economy and wider environmental objectives.

Our ability to deliver the sustainable networks of the future relies upon the capacity of the RIIO2 framework to support forward-looking investment and decision-making that results in long-term socio-economic and environmental benefits for all. Against a backdrop of significant political uncertainty, it is imperative that assurance is provided to network companies and their shareholders so that they can support the long-term growth of their communities and cities.

It is therefore encouraging that Ofgem is now placing increased focus on sustainable solutions. In the long term, more sustainable solutions will result in a net benefit for the consumer and will deliver significant wider positive impacts for society and the environment.

Open Networks Project

The Open Networks Project brings together nine of UK and Ireland's electricity network operators, academics, NGOs, government and the energy regulator Ofgem in a major initiative to transform the way energy networks operate and support the development of a smart grid.

The project aims to:

- improve the coordination of network operation between transmission and distribution operators

- improve the experience of customers connecting to, or interacting with, the energy network

- develop new ways of balancing energy flows on the distribution network

- reassess who pays what for network services.

Teams from across our transmission and distribution businesses are involved in the wide range of workstreams and consultations being carried out as part of the project.

Outcomes from this project will have a major influence on our ability to enable the exponential uptake of low carbon technologies and manage our network assets better in real time. These changes can potentially reduce impacts across all of our Sustainability Drivers.

Innovation Strategy

Sustainability cannot be achieved without innovation. We must find new solutions, and those themselves must be sustainable.

Our need to move towards more sustainable practices stimulates innovation by placing a high premium on fresh ideas – stimulating creativity in our business and encouraging us to consider our whole value chain when making decisions. Equally, the ability to innovate quickly and flexibly enables both the big leaps and incremental changes needed to realise our vision of a Sustainable Networks Business.

Our innovation strategies are presented in our RIIO2 Business Plans, for Transmission[1] and Distribution[2] and can be found on our website.

Seed funding

The Scottish Government's ambitious drive to a low carbon economy will ultimately require a transformation in all forms of transport and heating. This is dependent upon the key infrastructure that our energy network provides.

Stakeholders told us that there was a need for a fund to support communities in moving towards a green economy, while also preparing the energy network. In response, we pledged to voluntarily contribute up to £20m over a two-year period (2018-2020) to support initiatives that will enable communities and businesses to develop their ideas. Our commitment has funded ambitious projects that support Scotland's low carbon future, helping accelerate existing ideas and supporting projects that may not happen otherwise. This Green Economy Fund has now closed and most of the projects have concluded. Further information can be found in a dedicated area on our website[3].

To follow the Green Economy Fund, we have established a further Net Zero Fund of £5m as part of our T2 Business Plan, and have proposed a £30m Distribution business equivalent in our draft ED2 Business Plan.

There are some sustainability challenges that require us to work collaboratively with other organisations to find solutions. Our collaboration fund provides resources to allow us to progress projects with external organisations. The fund considers well-defined, collaborative projects that aim to deliver positive impacts against one or more of our Sustainability Drivers or objectives.

A common language

The United Nations Sustainable Development Goals provide a common vocabulary which countries and organisations can use to align their sustainability ambitions for maximum positive impact.

Understanding and aligning with the goals and aspirations of our key stakeholders is central to how we prioritise our activities. The release of national SDG implementation plans enables us to further prioritise activities based on the areas of greatest need. We have mapped our activities to the SDGs, at a high level (see Table 2 above) and are currently working on a project with an external expert to conduct more detailed mapping of several of our RIIO-ED2 Business Plan Annexes, including our Environmental Action Plan, and to inform the 2022 review of this Strategy.

Data and target setting

Effective target setting and data management is an essential enabler on the journey to becoming a sustainable networks business. Our Business Carbon Footprint data undergoes annual Planet Mark™ sustainability certification. This enables us to improve how we collect and manage data ensuring accurate data and ongoing carbon emissions reductions year on year.

We continue to work with suppliers and contractors to improve the collection and management of data on carbon and from waste and resource streams. This data lets us identify and overcome obstacles to achieving our targets for carbon and effective waste reduction, re-use and recycling as well as tracking progress to our targets.

We expect validation of our Science-Based Targets for all three Scopes, aligned to a trajectory limiting temperature rise to 1.5°C, by early 2022. These targets represent our fair share of carbon reductions, in line with those expected of our sector and aligned with the latest science on climate change. As part of our RIIO-ED2 business plan and as a result of increasing stakeholder expectations and the urgency of action to address climate change, we have accelerated our carbon reduction ambitions to achieve Carbon Neutrality for our Distribution Scopes 1&2 emissions (excluding losses) from the beginning of ED2 (2023) and have brought forward our Net Zero Carbon target date from 2050 to 2035 (to align with our SBT deadline).

---

[1] Transmission: Annex 6 at https://www.spenergynetworks.co.uk/pages/riio_t2_business_plan_annexes.aspx

[2] Distribution: Chapter 3 in https://www.spenergynetworks.co.uk/pages/our_riio_ed2_business_plan.aspx#tablist1-tab2

[3] https://www.spenergynetworks.co.uk/pages/green_economy_fund.aspx

Appendix 1: The Development of our Strategy

The foundations of our strategy

The ongoing development of our Sustainable Business Strategy considers our unique position as a UK networks business in the context of wider factors:

- External Policy Frameworks
- Stakeholder Engagement
- Company Policy
- Opportunities and Challenges

External Policy Framework

The UN Framework Convention on Climate Change Paris Conference of the Parties (COP21) agreed ambitious carbon reduction targets aimed at keeping global temperature increases well below 2°C compared to pre-industrial levels.

The subsequent Intergovernmental Panel on Climate Change Special Report highlighted that climate change mitigation efforts should seek to hold global temperatures to within 1.5 °C compared to pre-industrial levels.

Guided by the IPCC report and the Committee on Climate Change Net Zero report which followed, in the summer of 2019, UK and Devolved Parliaments went beyond the UK's existing commitment to an 80% reduction on 1990 emissions levels by legislating for net zero greenhouse gas emissions target dates of 2045 for Scotland, 2050 for UK and 95% by 2050 for Wales (against a 1990 baseline).

The Committee on Climate Change 2018 report to parliament highlighted that 75% of UK's 43% reduction in greenhouse gas emissions compared to 1990 levels have come from the power sector, while all other sectors had remained flat. In addition to enabling low carbon generation to connect and operate, our networks are key enablers in the decarbonisation of many of the other sectors, such as transport, heat, industry, buildings, waste and f-gases.

This requires SPEN to innovate and invest to continue supporting the low carbon transition, to minimise our own direct Business Carbon Footprint and facilitate carbon reductions throughout our supply chain. Our acceleration of our carbon targets, committing to Distribution Carbon Neutrality (Scopes 1&2 excluding losses) from 2023 and bringing forward our Net Zero Carbon target to 2035 to align with the deadline for our Science-Based Targets, demonstrates our leading role.

In the context of wider sustainability issues, this Strategy, in line with the Iberdrola Strategy, has been guided by the policy framework set out by the 17 United Nations Sustainable Development Goals, as described in Our Drivers.

Stakeholder Engagement

In 2016 the SPEN Sustainability Team organised two external stakeholder panels with a sustainability focus. These involved representatives from the Scottish Government, Local Authorities, academics, skills development agencies and NGOs. A number of detailed suggestions were made during the two facilitated discussion topics presented at the panels. In particular, there was agreement among stakeholders that SPEN should aim to be a leader in the area of sustainability.

In 2017, the draft Strategy document was presented to three stakeholder panels to provide SPEN with the opportunity to consult on the content and scope. Also in 2017, the Sustainability Stakeholder Working Group was formed, and has been instrumental in guiding the ongoing development of this Strategy.

Company Policy

Our Strategy aligns with the Sustainability Policy of our parent company, Iberdrola. Iberdrola holds a leadership position within the utilities industry, calling for tougher action on climate change issues from politicians, a greater penetration of renewables in the energy mix globally and setting ambitious targets to achieve Net Zero Carbon by 2050. In support of these aims, SPEN formed the Executive Sustainability Steering Group (ESSG), an executive level body, and set a business-wide carbon reduction goal during 2015: a 15% reduction in CO_2 emissions by 2023 (excluding losses) against a baseline year of 2013/14.

Stakeholders' recommendation that SPEN should become a leader in sustainability was discussed and agreed by the ESSG in March 2016. It was decided that SPEN should work in collaboration with external stakeholders to meet sustainable development aspirations. The ESSG continues to guide the ongoing delivery of this Strategy and the related Sustainability Plan.

Identifying and assessing opportunities and challenges

In everything we do, sustainability is a central component and always a key consideration when evaluating our options. As we develop our network in support of the low carbon transition, we must deliver neutral or positive environmental and social impacts in line with our vision statement. Various external factors impact on our ability to do this.

Our strategy aims to stay ahead of international and national policies aimed at reducing environmental impact. In this section, we outline the opportunities and challenges posed by some of these key developments.

Teams across our business work to influence, understand, and act on a wide range of policy changes each year. In addition to participation in a wide range of industry working groups and other stakeholder engagement, we are active in responding to consultations where proposed policy changes may affect our stakeholders or business. As each national or international policy update is developed, we seek to understand the opportunities and challenges that it holds for our business and stakeholders.

Despite the great number and range of policy changes proposed or published in the four years since we developed this strategy, the ambitious goals and objectives we set originally still deliver the scale of change necessary to stay at the forefront of sustainable business although in some cases we have chosen to accelerate our ambition to deliver faster, in line with stakeholder expectations and the urgency of action to address the climate and biodiversity emergencies.

Recent UK legislative, regulatory and governmental changes

Government Net Zero Targets – In June 2021, the UK set new targets as part of the Carbon Budget Order 2021, following recommendations for the Climate Change Committee in their December 2020 Sixth Carbon Budget. The new law targets a 78% reduction in carbon emissions by 2035 in comparison to 1990 levels, and a net zero target of 2050. For the first time, a share of emissions from international flights and shipping will also be accounted for in the UK Carbon Budget. Previously, guided by the Committee on Climate Change Net Zero report, in the summer of 2019, UK and Devolved Parliaments legislated for net zero greenhouse gas emissions target dates of 2045 for Scotland, 2050 for UK and 95% by 2050 for Wales (against a 1990 baseline). In response, we are framing our business plans around delivery of Net Zero greenhouse gas emissions, both by enabling societal decarbonisation and by reducing our own impact.

> **Opportunities:** develop our network within the whole energy system, embrace innovative ways to manage demand and generation in real time, and utilise more of our assets' capacity.

Challenges: support an increase in the pace of UK decarbonisation with a just transition that enables everyone to benefit from Net Zero, whilst reducing the carbon emissions associated with our network to Net Zero.

Environment Bill 2020 – Re-introduced to Parliament in October 2021 for a fourth reading, this bill sets out how the UK Government plans to protect and improve the natural environment in the UK. It is expected to be passed by the end of the year.

> **Opportunities:** the Bill mandates the delivery of Biodiversity Net Gain, and will support us in tackling biodiversity loss and climate change in a coordinated way across England & Wales.

> **Challenges:** we operate across England, Wales and Scotland, and an approach to biodiversity restoration is still under development by Devolved Administrations.

Ofgem RIIO-2 Price Controls – The next electricity price controls, (starting in 2021 for transmission and 2023 for distribution), will consolidate outputs into three main categories; improving the customer experience; supporting the energy system transition; and improving the network and its operation.

> **Opportunities:** to build on our RIIO-1 performance and quickly reduce, eliminate, reverse or manage a wider range of environmental impacts than ever before.

> **Challenges:** bring about this step change in environmental sustainability in a quick, well-coordinated way, while delivering business priorities and providing long-term value for consumers.

Ofgem Decarbonisation Action Plan – This February 2020 Plan lays out the urgent actions Ofgem will take to support GB transition to Net Zero, whilst protecting current and future consumers. This includes building more adaptability into price controls, setting up regulatory, uncertainty and innovation funds, creating a more flexible, fit-for-purpose energy system, enabling anticipatory investment where justified and taking account of lifetime costs and trade-offs between current and future customers in decision making.

We welcome this new approach from Ofgem as we know our communities care deeply about Net Zero. The energy networks sector has been fundamental to decarbonising the UK energy sector through connecting renewables. The next stage is to do the same in transport and heat to ensure net zero plans are achieved.

Opportunities: more adaptable price controls, new uncertainty and innovation funds, anticipatory investment where justified and the creation of a more flexible, fit-for-purpose energy system, allows us to make long-term decisions for the good of current and future customers.

Challenges: these changes can only happen with fast evolution of regulation and investment returns which are set to attract the capital needed into the UK.

Government Environmental Plans – Published in January 2018, '*A Green Future: Our 25 Year Plan to Improve the Environment*', sets out what the UK Government will do to improve the environment within a generation, leaving it in a better state than it was found. It covers a range of aims including supporting clean air and water, sustainable resource use, climate change mitigation and adaptation and supporting biodiversity and biosecurity. A 2018 Scottish Government consultation on Developing an Environment Strategy for Scotland sought input to the development of a strategy laying out a strategic approach on environmental policy to protect and enhance the environment, safeguard natural capital and continue Scotland's leading role in addressing environmental challenges. A 2018 Welsh Government consultation, 'Achieving our low-carbon pathway to 2030' also sought to understand the actions required to achieve Wales' ambitious low carbon targets. We look forward to the eventual plans that result from these consultations.

Opportunities: we can prioritise the environmental and sustainability actions we need to complete in the coming decades to reduce both our own impacts and those of wider society. This is crucial as we own assets with lifespans upwards of 40 years.

Challenges: the regulatory environment must evolve fast enough to fund and reward the activities required from energy networks companies to enable this transformation.

Industrial Strategy – The 2017 UK Industrial Strategy set out how the UK would build on its strengths as an enterprising, inventive, innovative and competitive economy. It laid out four Grand Challenges around artificial intelligence; maximising the advantages for UK industry from the global shift to clean growth; leading the future of mobility and using innovation to help support an ageing society.

Opportunities: we're in a great position to help solve a number of the Grand Challenges laid out in the Industrial Strategy, including the digitalisation of networks and energy markets, enabling mass rollout of electric vehicle charging infrastructure, and enabling society to benefit from swift decarbonisation.

Challenges: needs vary across geographies, technologies and communities. Regulation must allow flexibility to tailor and prioritise development of our network and services. RIIO-2 frameworks and settlements will be crucial to our ability to deliver the investments needed to enable the UK's energy transition.

Climate change and Sustainable Development
Intergovernmental Panel on Climate Change 6th Assessment Report – Climate Change 2021: The Physical Science Basis – provided the latest scientific conclusions on the current state of the climate, including how it is changing and the role of human influence, and the state of knowledge about possible climate futures and limiting human-induced climate change. Findings include:

- it is unequivocal that human influence has warmed the atmosphere, ocean and land and that widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred.

- the scale of recent changes across the climate system are unprecedented over many centuries to many thousands of years.

- global warming of 1.5°C and 2°C will be exceeded during the 21st century unless deep reductions in GHG emissions occur in the coming decades.

- changes in the climate system are directly related to increasing global warming, including increased frequency and intensity of hot extremes, marine heatwaves, heavy rainfall, droughts and proportion of intense tropical cyclones as well as reductions in Arctic sea ice, snow cover and permafrost.

- ocean and land carbon sinks are projected to be less effective under increasing CO_2 emissions.

- many changes due to past and future GHG emissions are irreversible for centuries to millennia.

- multiple climate conditions, such as average temperature or number of extreme events, are projected to change in all regions of the world.

- low likelihood outcomes e.g. ice sheet collapse or ocean circulation changes, cannot be ruled out.

- limiting human-induced global warming to a specific level requires limiting cumulative GHG emissions, achieving at least net zero CO_2 emissions along with strong reductions in other GHG emissions.

- low GHG emissions would lead within years to discernible effects on GHG concentrations and air quality resulting in discernible differences in temperature trends within 20 years.

These conclusions support our accelerated ambition to reach Net Zero Carbon emissions earlier and to drive actual reductions in carbon emissions as early as possible thus minimising cumulative emissions.

Opportunities: accelerating and increasing the ambition level of our carbon targets is required to demonstrate the leadership to which we've committed and that our stakeholders expect. We will be future-proofing our business and many carbon reduction initiatives also result in reduced costs.

Challenges: we have delivered the easier carbon reductions and must now face the harder challenges where ready solutions are not yet available and may incur additional cost.

COP26 – the 26th Annual Conference of the Parties (to the UN Climate Change discussions) takes place this year in Glasgow. The goals of this COP are:

- secure global net zero by mid-century and keep 1.5 degrees within reach
- adapt to protect communities and natural habitats
- mobilise finance
- work together to deliver.

Opportunities: this event is a unique opportunity to demonstrate our leadership and to find collaborators and identify best practice to drive us further and faster towards our sustainability goals. It will also drive governments to accelerate their ambition and put in place the necessary legislative and regulatory mechanisms to support decarbonisation.

Challenges: to identify the best opportunities to realise this opportunity, in the myriad of events. How big a problem would it be if governments don't commit to the required level of ambition?

Intergovernmental Panel on Climate Change Special Report 15 – The Special Report on Global Warming of 1.5°C was approved by the IPCC in October 2018 and was a key scientific input into the 2018 Katowice Climate Change Conference, when governments reviewed the Paris Agreement to tackle climate change.

This report states that global warming is likely to reach 1.5°C between 2030 and 2052 if it continues to increase at the current rate, that to keep increases to within 1.5°C will require urgent and significant action, and highlights the wide ranging benefits of limiting overall warming to within 1.5°C. Models indicate that to stay below or close to 1.5°C warming require anthropogenic CO_2 emissions reductions of 45% from 2010 levels by 2030 and net zero by around 2050.

Opportunities: this report legitimised our original CO_2 emissions reductions targets of 80% reduction by 2030 and carbon neutrality by 2050 based on 2013-14 levels, and underlines our mandate for completing the transformative actions necessary.

Challenges: this scale of transformation is only possible if it underpinned by supportive and timely legislation and regulation.

Committee on Climate Change 2021 Progress Report to Parliament – The CCC's annual assessment of UK progress in reducing emissions found that whilst the Govn has made historic climate promises in the past year, for which it deserves credit, it has been too slow to follow these with delivery. Delays to a host of new climate strategies mean uncertainty and make it harder for the UK to get on track with emissions reductions.

Opportunities: demonstrating leadership by accelerating our carbon reduction targets in line with advancing science and stakeholder expectations, in advance of Govn strategies.

Challenges: delivery of our targets requires a supportive legislative and regulatory framework.

Scottish Government Climate Change Plan Update – Published in December 2020 and covering the period to 2032, reflects the increased ambition of the new targets set by the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019, i.e. Net Zero carbon emissions by 2045.

Opportunities: supports our accelerated carbon reduction targets.

Challenges: meeting devolved nations' expectations whilst operating in a UK energy market.

Scottish Government Climate Change Plan – Released in February 2018, the Scottish Government published its climate change plan, outlining the path to a low carbon economy and a greener, fairer and healthier Scotland in 2032, while helping to deliver sustainable economic growth. In line with the 2017 Energy Strategy, its vision for the energy sector is that 50% of all Scotland's energy needs will come from renewables by 2030, while emissions from the electricity sector will fall by 28% by 2032.

Opportunities: supports the transformation of our network and the energy market, proposing increased reliance on electricity for heat and transport, the rollout of ultra-low emissions vehicles, integrated local energy systems, and introduction of more innovative smart energy systems.

Challenges: while delivering on these, we must also reduce our emissions from buildings by half and move to ultra-low emissions fleet vehicles.

UK Government National Adaptation Programme – The 2018 National Adaptation Programme (NAP) and the Third Strategy for Climate Adaptation Reporting 'sets out the action government is, and will be, taking to address the risks and opportunities posed by a changing climate'. The NAP highlights and prioritises six key areas of risk and opportunity - flooding and coastal change; high temperatures; water shortages; risks to natural capital; risks to food production and new and emerging pests and diseases affecting people,

plants and animals. With perhaps the exception of food production, all of these risks and opportunities have the potential for direct impact upon the services and network we provide.

Opportunities: we can make our network resilient to a wide range of potential climate change effects, enhance natural capital and manage emerging invasive species as we operate and maintain our network.

Challenges: uncertainty over when and where the effects of climate change will be felt means we need to be able to carry out the right adaptation activities in a timely and efficient way, within the bounds of our regulatory settlement.

The second Scottish Climate Change Adaptation Programme (SCCAP) and its second annual progress report – the SCCAP was launched in September 2019 and outlines how Scotland is preparing for the impacts of climate change over the period to 2024, responding to risks set out in the UK Climate Change Risk Assessment 2017. The most recent annual SCCAP progress report was published in May 2021. Despite being impacted by the COVID-19 pandemic, the Scottish Ministers believe that good progress continues to be made.

Opportunities: we can increase the resilience of our network by embedding considerations of resilience into our maintenance, refurbishment and new build standards, and can use nature based solutions to deliver multiple benefits such as climate impact mitigation and biodiversity and natural capital enhancements.

Challenges: we do not have certainty as to the future climate related impacts on our network but yet need to protect our network in a timely and efficient way.

United Nations 2030 Agenda for Sustainable Development – Adopted by UN member states in 2015, The 2030 Agenda is 'a shared blueprint for peace and prosperity for people and the planet, now and into the future'. The Agenda recognises the alleviation of Poverty as its central aim and is supported by the 17 Sustainable Development Goals (SDGs).

Opportunities: support 'to take the bold and transformative steps which are urgently needed to shift the world onto a sustainable and resilient path.'

Challenges: to balance the economic, social and environmental aspects of all we do to make sure that delivering against one Sustainable Development Goal (SDG) doesn't cause negative impacts against other SDGs.

Decarbonisation of Energy

UK Government Energy White Paper 'Powering our Net Zero Future' – presented to Parliament in December 2020, this Paper seeks to build on the Prime Minister's Ten Point Plan to give a long-term strategic vision for the energy-related measures in that Plan, consistent with Net Zero carbon by 2050:

- transforms energy for a cleaner, greener future
- supports a green recovery from COVID-19
- creates a fair deal for consumers so that the cost of the transition to net zero carbon is fair and affordable.

Opportunities: explicit commitments from Government allow embedding of our share of delivery within our RIIO2 business plans.

Challenges: things are moving so fast that there is a risk that our regulated business plans are not flexible enough to adapt and allow us to maximise our contribution.

Climate Change Committee Progress Report to Parliament 2019 – This report assessed progress in reducing the UK's emissions and found that 'the required rate of emissions reduction for Net Zero is 50% higher than under the UK's previous 2050 target and 30% higher than has been achieved on average since 1990.' The report recommended that Net Zero policy be embedded across government, which became a catalyst to the inclusion of enhanced Net Zero requirements within energy regulation.

The UK's greenhouse gas emissions have reduced by 40% compared to 1990 levels and 18% in the last five years, however, the UK is currently not on track to meet its legally binding fourth and fifth carbon budgets. Within a fairly sobering report, decarbonisation of the UK power sector is a rare good news story, making up close to 60% of emissions reductions since 2014, with other sectors remaining relatively flat in the same period. The reductions in the power sector have largely come from the closure of fossil fuel generation plants and increased uptake of renewables, which UK networks businesses are supporting and enabling. However, UK networks also have direct and indirect impacts in the majority of the other sectors covered by this report: F-gases, Waste, Transport, Industry and Buildings. F-gases such as Sulphur Hexafluoride pose both a uniquely acute challenge and opportunity to energy networks companies. Transmission assets traditionally use air or oil as an insulator for equipment, however Sulphur Hexafluoride (SF_6) gas is a safer and more cost-efficient electrical insulator, which also requires a smaller area of land, reducing the footprint required by as much as 85%. It is for these reasons that network companies currently install SF_6 insulated assets, primarily on transmission networks. However, SF_6 is a greenhouse gas 23,000 x more potent than carbon dioxide, and accidental leaks or leaks caused by maintenance activities, however small, therefore contribute significantly to overall greenhouse gas emissions.

Opportunities: we have the chance to make direct and indirect impacts in F-gases, waste, transport, industry and buildings. The largest portion of our controllable Business Carbon Footprint are F-gases such as Sulphur Hexafluoride (SF_6). We must use alternatives to SF_6 where possible and drive the development and adoption of SF_6-free technologies.

Challenges: alternatives to SF_6 need to be technically feasible, market-ready solutions. With these restrictions, we need to carry out these actions in a timely way to provide carbon reductions sooner, encourage our own and other sectors to switch to SF_6-free technologies, and reduce the business risk of future impacts of legislation banning SF_6.

UK Government Clean Growth Strategy – This 2017 strategy aims to support economic growth while reducing greenhouse gas emissions. It highlights the UK's strong economic growth and emissions reductions since 1990 – outstripping G7 averages – and emphasises that work to cut emissions must be done while ensuring our economy remains competitive.

Opportunities: energy networks have played a key part in emissions reductions and economic growth, and new options to enable further decarbonisation in energy, transport and heating gives us a chance to build on this.

Challenges: as we move closer to net zero emissions, it becomes more difficult to make meaningful changes. Making the right investments at the right time will be essential to the delivery of these aims.

Scottish Government Energy Strategy – Released in late 2017, Scotland's first Energy Strategy '*sets out the Scottish Government's vision for the future energy system in Scotland. It articulates six energy priorities for a whole-system approach that considers both the use and the supply of energy for heat, power and transport.*' Supporting Scotland's Climate Change Plan, this strategy highlights that Scotland should have the capacity, connections, flexibility and resilience necessary to maintain secure and reliable supplies of energy to all of our homes and businesses as our energy transition takes place. This vision represents a wide range of opportunities and challenges for our network.

Opportunities: the connection, adjustment or removal of generation sources connected to our network require us to find new solutions to managing voltage and inertia on our networks, and encourage us to find smart ways of delivering the network capacity required through improved commercial arrangements, more efficient use of existing assets and investment in network reinforcement.

Challenges: the decarbonisation of transport and heat will create additional demand for electricity and increase the need for us to stimulate flexibility markets.

**Welsh Government Consultation on Decarbonisation – ** in line with the Environment (Wales) Act, which sets a target of 80% net emissions reduction by 2050, this 2018 consultation sought to understand public opinion on a range of potential actions on the Welsh emissions sectors. It presented a series of potential actions across agriculture, land use & forestry, buildings, industry, public sector, transport and waste. We continue our work to enable the low carbon transition in Wales, from the introduction of Active Network Management in generation sites across North Wales, to our project to stimulate and enable the decarbonisation of transport in the area.

Decarbonisation of Transport

UK Government Road to Zero Strategy – Released in 2018, this strategy sets out the ambition for at least 50% of new car sales, and up to 40% of new vans, to be ultra-low emission by 2030. It commits to support the huge expansion of green infrastructure across the country to support cleaner air, a better environment and a clean economy. However, the cross-party report **Electric Vehicles: Driving the Transition** released in October 2018 criticises Road to Zero, favouring a more ambitious target of 100% of new cars and vans being zero emission by 2032. The report states '*Poor provision of charging infrastructure is one of the greatest barriers to growth of the UK EV market. The existing charging network is lacking in size and geographic coverage, with substantial disparities in the provision of public charge points across the country.*'

Opportunities: we can work with government, our regulator, industry peers, the automotive industry, local councils and other ultra-low emissions vehicle stakeholder groups to understand emerging needs for ultralow emissions vehicles and adapt our network to enable ambitions in a cost-effective way.

Challenges: given the uncertainty around uptake, charging behaviours and regulation, we will have to work hard to stay ahead of consumer needs.

Scottish Government Energy Strategy – Beyond its ambition to phase out the need for new petrol and diesel cars and vans by 2032, the 2017 Scottish Energy Strategy provides two possible visions of the ways in which we'll be using energy for transport by 2050. **Scenario 1 –** An Electric Future envisions 100% of cars and light goods vehicles powered by electricity by 2050, supported by 'smarter electricity networks and [are] more informed and flexible consumers meaning demand is managed smoothly'. This scenario includes high availability of diverse charging options,

and suggests use of electrolysed hydrogen and/or battery power to power goods vehicles and ferries. **Scenario 2 –** A Hydrogen Future envisions 100% of cars and light goods vehicles powered by hydrogen by 2050, with partial decarbonisation of larger road vehicles such as buses and HGVs and significant use of hydrogen powered rail freight options. In this vision, existing service stations would be converted to supply hydrogen, reducing the need for an extensive charging network, however, our network must support the creation of the power-to-hydrogen projects required for electrolysis. It's likely that the transport network of the future will utilise elements of both of these scenarios, so our role is to ensure that the network provides the capacity, flexibility and availability to support the transition as it evolves.

> **Opportunities:** with its ambition to phase out new petrol and diesel cars and vans by 2032, the strategy provides two visions of the future of energy for transport by 2050 – one envisions an electric future, and one a hydrogen future.

> **Challenges:** it's likely that the transport network of the future will utilise elements of both scenarios. Our challenge is to make sure the network provides the capacity, flexibility and availability to support the transition as it evolves.

Decarbonisation of Heat

BEIS/Ofgem call for evidence – 'A future framework for heat in buildings' and Committee on Climate Change report – UK Housing: fit for the Future – in 2018, 'A future framework for heat in buildings' asked how policy frameworks could enable the market to transition towards decarbonised heating options, including how policy makers might engage with market players, the feasibility of a firm end date for high carbon installations, and the potential for buildings to transition away from high carbon heating options. One significant concern is the question of how we can coordinate network reinforcement with the uptake of decarbonised heat and transport within a market driven transition.

The 2019 Committee on Climate Change report **UK housing: Fit for the future? Found that UK climate targets will not be met without** 'near-complete elimination of greenhouse gas emissions from UK buildings. It noted that home emissions reductions have stalled and home energy use increased between 2016 and 2018. It also notes that efforts to adapt housing stock to manage climate change impacts such as higher temperatures and water scarcity, are lagging far behind what is needed.

> **Opportunities:** the introduction of policies that will serve as a market catalyst would be welcomed in helping to deliver the desired volume of transitions.

> **Challenges:** delays to network reinforcement (or alternatives) might present a barrier to the transition to decarbonised heat and transport. How we coordinate network reinforcement with the uptake of decarbonised heat and transport within a market-driven transition will also be a challenge.

Decentralisation, Digitalisation and Democratisation

Ofgem/BEIS Upgrading our Energy System – Smart Systems and Flexibility Plan: Progress Update – Published in July 2017, Upgrading our energy system: smart systems and flexibility plan laid out how Government and Ofgem are working with industry *'to deliver a smarter, more flexible energy system by: removing barriers to smart technologies, including storage; enabling smart homes and businesses; and making markets work for flexibility.'* The 2018 update report highlights progress made against the 29 original actions and lays out a further nine commitments identified since the original plan was developed. The plan actions aim to support a number of the key elements of a smart, flexible energy system: encouraging the uptake of storage and small scale renewable generation; an emphasis on broadening the ability for all system users to provide demand side response (including domestic vehicle to grid options); increased competition in the balancing mechanism; rolling out smart meters and reducing the risks for consumers participating in the smart energy system. The plan also highlights actions to maintain health and safety, cyber security and effective stakeholder engagement through the transition. To date, the government, Ofgem and the industry have launched 11 consultations and calls for evidence; published 19 reports, guidance documents, pieces of legislation and regulation; launched 8 new innovation competitions committing around £400m funding for innovation in battery use, DSR, innovative domestic applications, vehicle-to-grid and new technologies and business models to value and trade flexibility in the electricity system; and established 5 working groups and committees in support of the smart systems and flexibility plan. The sheer scale of the change necessary for our business model, network, skills, and interaction with other system players to develop the smart system of the future is hard to overestimate. The electricity system (both market and networks) will be unrecognisable from its current form once all of the actions in this plan are embedded, as services are decentralised, networks and business models are digitalised and the energy market is democratised enabling all to benefit from buying and selling services.

Opportunities: For network operators, this transformation represents an unprecedented opportunity to shape the system for the benefit of society for generations to come.

Challenges: this huge change sits within a context of political uncertainty, increasing pressure to further reduce customer costs and already challenging business-as-usual investment programmes.

Open Networks Project – A key enabler of the smart systems and flexibility plan, this unprecedented cross-industry project will transform the way our energy networks work, underpinning the delivery of the smart grid. Recognised in the 2017 BEIS & Ofgem Smart Systems and Flexibility Plan as a 'key initiative' to enable decarbonisation, the project brings together Ofgem, 9 of UK and Ireland's electricity network operators, academics, NGOs and Government departments. The project aims to promote greater competition in energy markets, enable users to have greater control of their energy and ensure that energy networks are operated as efficiently and intelligently as possible. Central to this is an exploration of the options for smaller players to enter energy balancing markets, supported by increased network and commercial flexibility.

Opportunities: bring innovative solutions to maturity and bring about the policy changes that will make sure the new market model will serve society well.

Challenges: the need to understand and plan the right investments within our short-term business plans to be ready for the transition.

Biodiversity

UN Convention on Biological Diversity UN Convention on Biological Diversity / Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) Global Assessment Report on Biodiversity and Ecosystem Services – In March 2020, Governments and stakeholders started negotiations on a new global framework seeking to 'bend the curve on biodiversity loss by 2030, with the goal of building a future of life in harmony with nature by the year 2050'. With an international lack of progress against the last two major biodiversity agreements (2002 and 2010), pressure is mounting on governments and organisations to take credible, far-reaching action to limit the loss of biodiversity.

Opportunities: to make sure our networks and business practices proactively enhance biodiversity. For example, by using new technology and approaches to minimise our impact on habitats as we maintain the network, or by siting 'green' assets next to our linear and substation infrastructure.

Challenges: depends on the relevant legislation and regulatory allowances being available to allow us to invest now to deliver these far-reaching, long term benefits to biodiversity.

Mainstreaming international biodiversity goals for the private sector – by the Joint Nature Conservation Committee, this report aims to highlight the relevance of international biodiversity goals to the private sector and show the action that businesses can take to support and enhance biodiversity. The report covers the five internationally agreed biodiversity goals: mainstreaming biodiversity; reduce pressures on biodiversity; safeguard biodiversity; benefits for all; and enhance implementation.

Opportunities: with assets that stretch across a wide range of habitats, we have the responsibility to mainstream biodiversity in all that we do.

Challenges: maintain biodiversity and positive environmental impact as a high priority among our people and supply chain, despite competing priorities of time and cost.

Defra UK Biodiversity Indicators 2018 – produced by the Joint Nature Conservation Committee, this report sets out the UK's progress in line with the Convention on Biological Diversity Strategic Plan for Biodiversity, including the Aichi Biodiversity Targets agreed in 2010. As a devolved responsibility, England, Scotland Wales and Northern Ireland have each developed, or are developing biodiversity or environment strategies, supported by indicators to track their progress. The UK indicators are used specifically for international reporting and have been selected in consultation with the devolved administrations. The report is stark, outlining that relative abundance of priority species in the UK has decreased by close to 70% since 1970. It also highlights a 50% increase in the number of invasive non-native species established in or along 10% or more of the land area or coastline of Great Britain since 1960.

Opportunities: use our networks and business practices proactively to enhance biodiversity, rather than simply maintaining current biological diversity.

Challenges: depends on the extent to which our regulatory allowances will allow us to invest now to deliver these far-reaching, long term benefits.

DEFRA Biodiversity Metric 2.0 – this metric, which enables the measurement of biodiversity net gain in England and Wales, was published in July 2019 for beta testing.

Opportunities: This metric is a key component in delivering biodiversity net gain initiatives, as it enables us to measure levels of biodiversity at sites before and after we complete projects, and monitor progress over the years.

Challenges: For companies which operate in England, Wales and Scotland, such as SPEN, this represents a challenge as there is currently no corresponding metric for use on sites in Scotland and legislation is several years away. However, we are taking the opportunity to create a baseline of biodiversity across our sites and working with other network operators to define appropriate metrics, which will enable us to fully participate in the eventual development of Scottish legislation.

The Living Planet Report 2018 – This biennial report produced by WWF provides an in-depth analysis of the state of the earth's ecosystems services and lays out a 2020-2050 roadmap for halting the currently accelerating degradation of nature. Linking to the Aichi Protocol and UN Sustainable Development Goals, it encourages organisations and individuals to turn these broad goals into ambitious and specific targets, identify ways of measuring their progress and carry out specific actions to deliver the targets.

Opportunities: our Sustainable Business Strategy supports the delivery of ambitious land and biodiversity improvement objectives.

Challenges: our ability to act is wholly reliant upon relevant regulatory frameworks enabling us to deliver the pace of change required.

Resources

Planetary Boundaries – This concept identifies nine global processes that together regulate the land, ocean, atmospheric, and life conditions upon which all society depends. Current science shows that four out of nine of these planetary boundaries '*have now been crossed as a result of human activity: climate change, loss of biosphere integrity, land-system change, altered biogeochemical cycles (phosphorus and nitrogen)*'.

Opportunities: play our part in bringing planetary resources and processes back within safe boundaries. Using resources sustainably throughout our direct and supply chain activities will be key to this.

Challenges: minimising our use of virgin resources and maximising reuse must be data-driven and requires buy-in from all suppliers and a supportive procurement model.

Environment Bill 2020 – This bill (described above) seeks 'A new direction for resources and waste management', aiming to move the UK away from the historical 'take-make-use-discard' model towards a more circular model of resource use.

Opportunities: this Bill aims to move the UK towards a more circular model of resource use. It encourages aligned, industry-wide approaches to sustainable purchasing, ecodesign and resource-efficiency standards.

Challenges: to agree and implement these new ways of working in a way that supports our supply chain to offer new and innovative solutions.

Land Use: Policies for a Net Zero UK – This January 2020 report from the Committee on Climate Change addresses greenhouse gas impacts from land-based ecosystems, land use and sustainable land management. It highlights the relationships between people, land and climate in a warming world, lays out options for adaptation and mitigation response and describes the enablers and near-term actions required.

Opportunities: We have an opportunity to reduce land-take and maximise the ecological value of our landholdings and the environmentally or culturally sensitive landscapes within which we operate.

Challenges: our challenge is to ensure that all aspects of project concept, design, routing and delivery support this aim as we support societal decarbonisation.

Making Things Last: A Circular Economy Strategy for Scotland – Building on Scotland's progress in the zero waste and resource efficiency agendas, this 2016 strategy sets out priorities for moving to a more circular economy, 'where products and materials are kept in high value use for as long as possible.'

Opportunities: to keep products and materials in high value use for as long as possible.

Challenges: we need to influence all parts of our supply chain, create new ways of working and resource streams, which require a long-term view, a coordinated industry-wide approach and an element of trial and error. All of this is within the context of challenging efficiency targets and allowances set through regulatory price controls.

Customer and shareholder value

Energy Consumers' Missing Billions – This 2017 Citizen's Advice report highlighted concerns that UK operators were making more profit than expected and underlined the need for transparency and value for money for all UK consumers. The report recommended bill rebates for customers, shorter term forecasting and indexing of costs, tougher incentive mechanisms and the ability for consumer bodies to request a review of a price control if they believed that financial returns are excessive. A subsequent Citizen's Advice Report – **Things can only get beta: An opportunity to get financing costs right for consumers** – highlighted that regulators must enable necessary investment, but not '*overreward investors at the cost of consumers'*. In reality, the UK price is less than the average in Europe, and for network-related costs, 17% lower than at privatisation.

Opportunities: UK regulatory arrangements for energy networks are some of the most advanced in the world. Our base profitability levels are fixed by Ofgem after scrutiny from stakeholders via public consultation, a process that we strongly support.

Challenges: make sure stakeholders and customers understand that profits are typically realised over a long period of time, and that allowed returns need to recognise the risk that investors must accept in making long term investments, particularly during such a transformative time for energy networks.

Scottish Government: The Just Transition Commission – Launched in 2018, this taskforce will advise on how to *'maximise the opportunities of decarbonisation, in terms of fair work and tackling inequalities, while delivering a sustainable and inclusive labour market'*. The transition to a low carbon economy has significant potential to reduce inequality and improve the lives of all, but by nature, any transition of this kind risks early adopters reaping disproportionate rewards, while those without the means to adopt early or at all may end up subsidising early adopters. One example of this is where home owners install solar panels and become more electrically self-sufficient, needing little or no electricity from the grid on some days, but still benefitting from the reliability and availability of remaining connected to the grid. As the cost of maintaining the grid is included in this consumer's electricity bill, they pay far less (or potentially nothing) for the upkeep of the grid, meaning that others who unable to install solar panels may end up paying more to subsidise the grid costs of early adopters.

Opportunities: we must ensure that the network and energy market transformation develops in a way that supports equity and accessibility for all members of society – a truly democratised energy system.

Challenges: we must ensure that our engagement and decision-making processes proactively take account of the needs of the most vulnerable in society.

Ongoing Strategy development

This Sustainable Business Strategy is reviewed each year by key internal and external stakeholders, including the Sustainability Stakeholder Working Group, and signed off by the SPEN Executive Team and Executive Sustainability Steering Group.

In 2021, the following updates were made to align the Strategy with our RIIO-ED2 Business Plan, which was developed via extensive engagement with stakeholders:

- Opportunities and Challenges section updated with policy changes published in the last 18 months since the 2020 Strategy review. Previous content has been transferred into Appendix 1 to maintain a log of all impacting policies.

- Our Sustainability Maturity Matrices have been updated to show level of maturity now (2021) and in the future (five year horizon to 2026 – the end of T2 and the mid-point of ED2).

- Our Sustainability Goals table has been updated to include our new and updated RIIO2 targets.

- The Carbon Footprint and Waste graphs have been updated to reflect recent performance and revised targets as appropriate.

- The Sustainability Governance Structure has been updated to reflect changes in the SPEN organisational structure.

- Relevant text has been updated to refer to our Science-Based Targets (currently being validated) and our other new carbon targets.

- The ESSG and SSWG Terms of Reference (Appendices 2 and 3 respectively) have been updated to reflect changes in membership.

- Other minor text corrections and updates to reflect current situation.

Objectives

Our Objectives have been substantially reviewed to align with our RIIO2 Transmission and Distribution Business Plan environmental sustainability commitments, which were the subject of extensive stakeholder input and review.

2022 Strategy Review

We plan to conduct a substantial review of this Strategy during 2022 to expand coverage from the current focus on environmental sustainability to include broader sustainability issues. This exercise will seek to articulate the coverage of and links between SPENs multiple existing strategies covering social sustainability issues in particular, such as our Vulnerability and Community Energy strategies. Stakeholders will be engaged, via existing groups and channels and via bilaterals and workshops, and we encourage all stakeholders to get involved.

Appendix 2: ESSG Terms of Reference

Terms of Reference for the Executive Sustainability Steering Group

1. Aim of the Steering Group
These will be:

- To agree and implement the Sustainable Business Strategy and provide leadership and direction in Sustainability, Environmental Management and the Low Carbon Transition for all of SP Energy Networks' activities.

- To implement required changes to SP Energy Networks' strategies to ensure the company adopts a leadership position in the transition to a low carbon energy sector.

- To monitor and drive progress of the Sustainable Business Strategy and the Sustainable Business Plan, ensuring RIIO-1 and RIIO-2 Environmental Commitments are met, and exceeded where relevant.

- To periodically review and develop the Sustainable Business Strategy through ongoing stakeholder feedback, lessons learned through implementation and any direction from Ofgem e.g. via the Environmental Discretionary Reward or price control development.

- To agree and implement suitable Pilot Projects proposed by external and internal stakeholders to ensure the correct methods and strategies are deployed.

- To review and approve projects brought forward as part of the SI fund or the External Collaboration Fund that support successful deliver of the Sustainable Business Strategy.

2. Members and Chair
The Chair of the Steering Group is Graham Campbell as Director of Processes & Technology.
The Members are:

- Frank Mitchell – CEO of SP Energy Networks

- Scott Mathieson – Director of Network Planning and Regulation

- Pearse Murray – Director of Transmission

- Craig Arthur – Director of SP Distribution

- Liam O'Sullivan – Director of SP Manweb

- Guy Jefferson – Chief Operating Officer

- Kendal Morris – Director of Customer Service

- Linda Ward – Business Change Director

- Tracy Joyce – Head of Stakeholder Engagement and Communications

- Ross Baxter – Head of Land and Planning

- Jane McMillan – Head of Sustainability

- Amy Ritchie – Sustainability Policy Specialist (Secretary)

3. Frequency of meetings
Four meetings shall be held each calendar year at quarterly intervals. The Chair of the Steering Group may request an interim meeting if it is considered necessary. The Chair will nominate substitute chairs as and when required e.g. due to annual leave.

4. Responsibilities
The main responsibilities of the Steering Group are:

- To set high level strategic direction and act as highly visible champions for Sustainability.

- To agree the annual Sustainable Business Plan.

- To provide resources and support to deliver strategic aims and associated plans.

- To review the approach to facilitating the transition to a low carbon economy on an annual basis as a minimum.

- To regularly review progress of plans and KPIs against targets and deadlines.

- To review and approve pilot projects and approve implementation of resulting recommendations.

- To agree the key messages to be communicated to external stakeholders and to sign off the content of external reports and other communications.

- To review external stakeholder feedback and lessons learnt and to agree resulting changes to strategies, policies and procedures.

- To sign off the employee engagement strategy and to Champion Sustainability focussed behaviours within their respective Directorates.

- To provide updates to the SPEN Executive Team and Board on the progress of the Sustainable Business Strategy (including Sustainability risks and environmental performance).

5. Reporting procedures
The presentation slides and minutes from Steering Group meetings shall be circulated to all members of the Steering Group using a dedicated web server managed by the Sustainability Team.

6. Sub-groups
Sub-groups may be set up so that a small group of the Sustainability Steering Group members and their representatives can focus in detail on a particular issue or plan.

Sub-groups will present proposals/recommendations to the main Group for approval. All sub-group meetings shall be documented, with the Minutes being communicated to the main Group.

Appendix 3: SSWG Terms of Reference

Terms of Reference for the Sustainability Stakeholder Working Group

1. Aims of the SPEN Sustainability Stakeholder Working Group (the 'Working Group')

To guide SP Energy Networks' (SPEN) strategy to become a leading sustainable networks business and to support the low carbon transition.

To provide a platform for discussion on a range of sustainability issues, considering appropriate measures to address these issues and how potential objectives and actions are to be reflected in the SPEN Sustainability Policy, Strategy and Plan. This will include business updates from member organisations on their own progress on sustainability strategies.

To identify potential pilot projects applicable to the energy sector for presenting to the SPEN Executive Sustainability Steering Group (ESSG), with consideration for collaboration and the role of SPEN and other stakeholders in prospective pilot projects.

To participate in governance for External Collaboration Funding proposals identified by SPEN which seek to achieve the objectives set out in the SPEN Sustainability Policy, Strategy and Plan.

To discuss lessons learned from projects, with the aim of converting the successes of pilot projects into existing business processes.

To discuss how the regulation of transmission and distribution companies can be developed to ensure that these services are delivered sustainably and to feed recommendations/views into OFGEM and the RIIO process.

To discuss best practice in sustainability including the global energy industry, in related sectors (for example in other linear infrastructure networks) and leaders in sustainability demonstrated in unrelated industries. This will include discussion on the experience of members organisations, including communications, behaviour change, sustainability indicators, benchmarking, standards and reporting and other relevant topics.

To discuss sustainability reports drafted by SPEN for publication, including (but not limited to) the SPEN Sustainability Footprint, the SP Transmission Annual Sustainability Statement and the Environment and Innovation Report for Distribution licences (SP Manweb in North Wales & England / SP Distribution in South Scotland).

To provide a forum for communication with the wider Iberdrola Group businesses when discussions identify issues that sit across corporate boundaries.

2. Members and Chair

The Chair of the Working Group is Jane McMillan as Head of Sustainability in SPEN's Processes & Technology Directorate. The Secretary of the Working Group is Amy Ritchie as SPEN's Sustainability Policy Specialist in the same team.

The Member organisations are:

- SP Energy Networks
- ScottishPower
- Scottish Government
- Scottish Wildlife Trust
- Scottish Environment Protection Agency
- Nature Scot
- Keep Scotland Beautiful
- Climate Ready Clyde/SNIFFER
- Zero Waste Scotland
- 2050 Climate Group
- WWF (providing commitment to group remotely due to resource contraints)
- Sustainable Scotland Network

Membership of the Working Group shall be reviewed as the Strategy is implemented and lessons learned. Prospective membership can be proposed by Members and, subject to agreement by all Members, the Secretary shall invite new members to join and attend the next meeting. The membership of the Working Group shall be updated as members are identified.

3. Frequency of meetings

Meetings shall be held at approximately quarterly intervals, with additional meetings (in person or virtual) to be arranged if circumstances warrant.

Meetings have moved to a virtual basis as a result of the COVID-19 pandemic. This situation will be regularly reviewed at meetings and face to face meetings reinstated if agreed by the Group.

4. Responsibilities

The main responsibilities of the Members of the Working Group are to:

a) Play an active role in the Working Group by attending and participating in meetings;

b) Represent their organisation and its sustainability aims, providing a route to other departments;

c) Contribute to meetings with ideas, share learnings from relevant socio-economic and environmental initiatives and examples of best practice;

d) Enable collaboration between their organisation and other members of the Working Group, including the identification of- and participation in relevant potential pilot projects.

5. Reporting procedures

The minutes of meetings and actions log of the Working Group shall be circulated to all members of the Working Group for review and agreement.

All documentation circulated to the Working Group shall be held digitally on an SP Energy Networks portal/online community with access provided to Members to facilitate online discussions between regular meetings.

The Terms of Reference shall be annually reviewed and interim updates shall also occur as and when new members join.

SPEN shall consult on our proposals in line with its Stakeholder Engagement Strategy (see Diagram 6 Engagement Approach).

6. Sub-groups

Sub-groups shall be set up where it has been identified that it would be of benefit for a subset of representatives of the Working Group Member organisations to focus in detail on a particular issue or project.

Sub-groups shall present proposals or recommendations to the main Group for approval. All sub-group meetings shall be documented, with the minutes being communicated to the main Group via the same channels as above.

Diagram 6. SP Energy Networks Stakeholder Engagement Approach
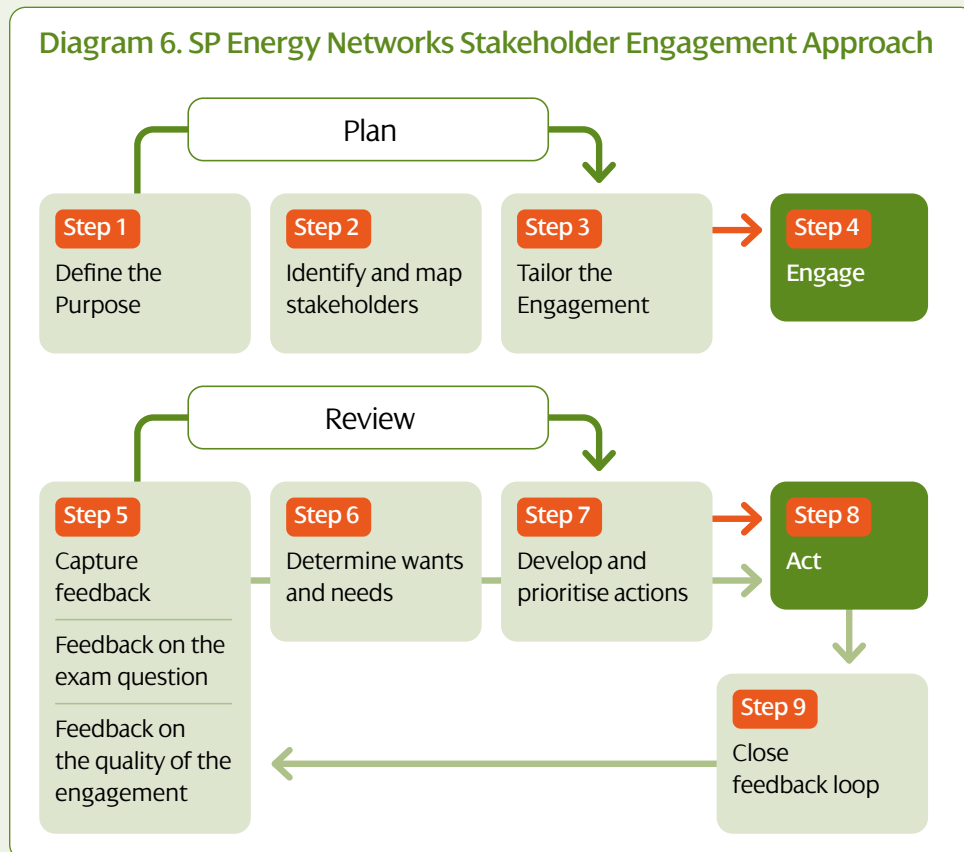
Appendix 4: Our Strategy for Whole System Planning and Collaboration

Mission

The electricity transmission network only forms one part of the overall energy system. To ensure we are facilitating a sustainable, Net Zero future, it's increasingly important to coordinate all the parties involved – going beyond just the customers connected to the electricity network. Our strategy for whole system collaboration puts us at the centre of creating an integrated energy system – one that provides value for money and flexibility for the future by keeping network users and consumers at the heart of our decisions.

Whole system planning is embedded in our business. We have always applied whole system planning across our three network licences to improve the service and reduce costs for consumers and network customers.

Vision

Our vision for whole system planning is underpinned by our broader vision for sustainability:

'Our vision is to be a sustainable networks business' – providing the services that national and global society require, prioritising activities within the contexts of global decarbonisation, environmental legislation and current and future whole system electricity needs.

'We will embed the principles of sustainability in our decision making,' – our governance, strategies, processes and staff responsibilities take account of whole electricity system, societal, sectoral, geographical and temporal needs.

'By working with our stakeholders' – engaging with a range of strategic stakeholders, customers, end consumers and industry peers to identify and co-develop the best long-term solutions.

'to:

- *'Efficiently manage and develop our network in support of the low carbon transition;'*
- *'Achieve neutral or positive environmental and social impacts.'*
  - Operate our network to deliver security, reliability and availability to provide whole-system commercial and technical stability to enable society to decarbonise with confidence.

- Apply innovative commercial and technical development of our network to yield additional whole-system network capacity and flexibility to enable society to decarbonise quickly and economically.
- Adopt efficient management and development of our network, taking the needs of the whole electricity system into account, ensuring that environmental and social impacts are optimised for the long term.

'We will be a leader in this area.' Our:

- pivotal role in ensuring UK security of supply and transferring large scale renewable energy from Scotland to England,
- world-class innovation and asset management credentials,
- industry leading work on enabling transmission connections, and
- ambitious sustainability targets

all place as us a leader in sustainable whole-system planning.

Whole System Trends

Over the next decade we expect to see major changes to the way the GB network operates, including the following whole system developments:

- Continued decarbonisation of electricity generation with further volumes of renewable generation connecting, most notably large volumes of offshore wind – we are accelerating the delivery of connections such as the 450MW Neart Na Gaoithe offshore wind farm.
- The continued reduction in synchronous generation in Scotland with the closure of the large gas and nuclear power stations, which will change the dynamics of the system in Scotland – we are coordinating with the ESO and other parties that may provide services to support this.
- A move to electrifying transport and heat, increasing customers' dependency on electricity as an energy source – we are responding through coordinated planning with various bodies such as Transport Scotland.

- A move to a more decentralised system, where more electrical energy is generated locally by smaller renewable generators, such as Local Energy Scotland.

- Increasing flexibility with evolving energy markets and new business models where electricity is a more readily traded commodity at a local level as well as nationally – stimulating these markets through projects such as Fusion, which aims to enable Distribution Network Operators and all market actors to unlock the value of local network flexibility in a competitive and transparent manner.

- Demand and storage will provide services to new network operators as the DSO (Distribution System Operator) model is established – We are developing demand and generation forecasting tools to influence how we design and operate the smart, flexible network of the future.

Our whole system planning efforts therefore take these significant challenges into account:

- Keeping the network secure and stable under increased intermittent generation,

- Ensuring that when necessary, the network can be repaired quickly and with minimal disruption,

- Making the best use of existing and new energy resources across the whole energy system in the event of widescale system recovery efforts,

- Supporting the decarbonisation, decentralisation and digitalisation of the energy system, and

- Shaping legislation and regulation to enable the long-term stability and reliability of the network.
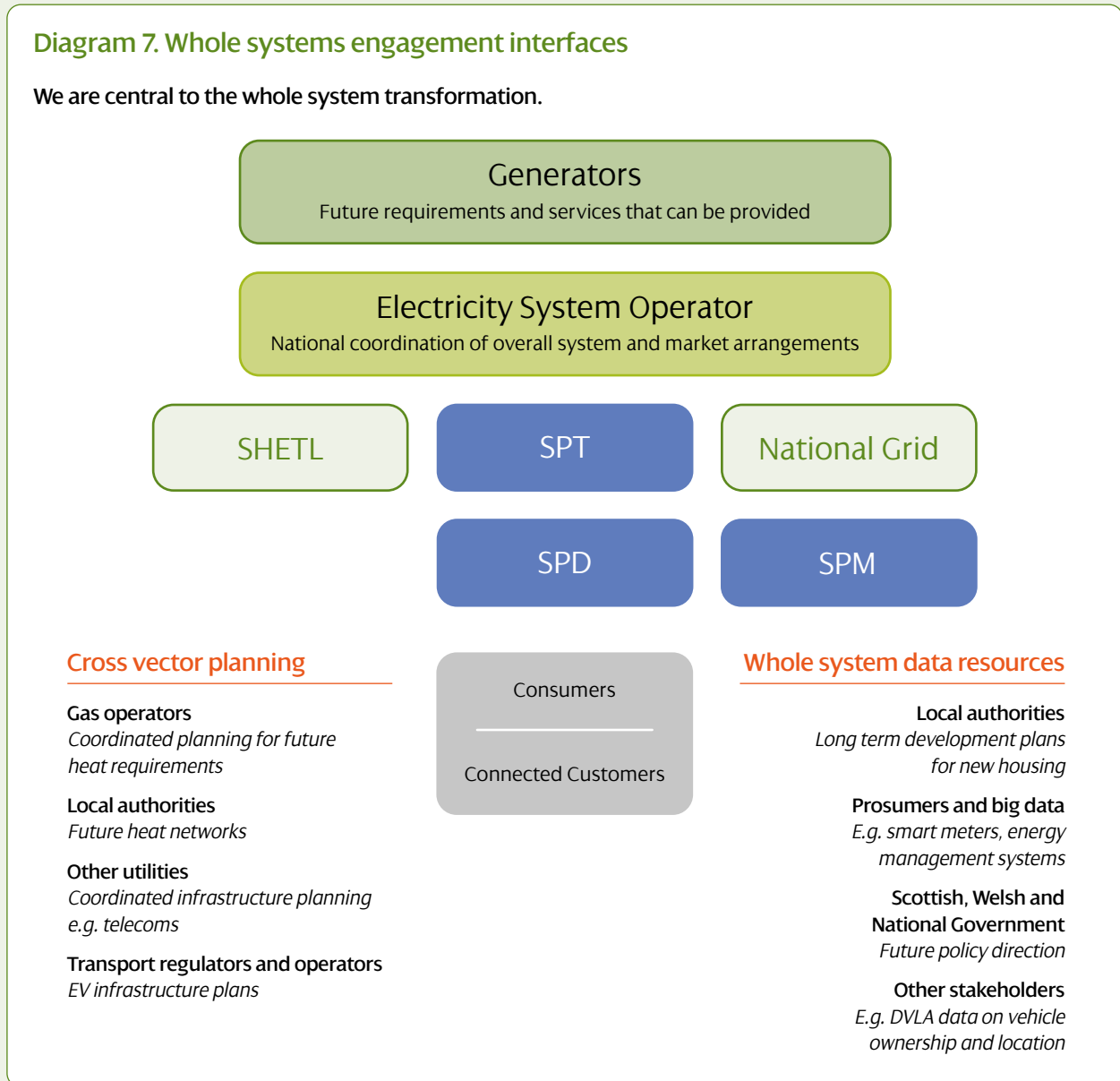
Approach

Our contribution to planning for future network capacity takes account of whole system developments and challenges for the transition to a low carbon future. This significant contribution provides reliable indications of possible or likely deficiencies in future network capacity and is used to coordinate timely and effective whole system developments. This contribution is reviewed at least annually, or more frequently if required.

Our approach includes:

- Alignment with the future plans of generators, the gas network, the transport sector and a diverse range of other stakeholders who represent the wider energy system.

- Proactive development of our DSO capabilities and the related markets.

- Enabling the increased role of flexible demand in minimising future network reinforcement requirements.

- Coordinated planning and management across our networks via our integrated transmission and distribution control room.

Stakeholder Engagement

All of these activities are underpinned by significant engagement with all relevant market participants as illustrated below:

Diagram 7. Whole systems engagement interfaces

We are central to the whole system transformation.

Generators
Future requirements and services that can be provided

Electricity System Operator
National coordination of overall system and market arrangements

SHETL　　**SPT**　　**National Grid**

SPD　　**SPM**

Cross vector planning

Gas operators
Coordinated planning for future heat requirements

Local authorities
Future heat networks

Other utilities
Coordinated infrastructure planning e.g. telecoms

Transport regulators and operators
EV infrastructure plans

Consumers
_____
Connected Customers

Whole system data resources

Local authorities
Long term development plans for new housing

Prosumers and big data
E.g. smart meters, energy management systems

Scottish, Welsh and National Government
Future policy direction

Other stakeholders
E.g. DVLA data on vehicle ownership and location

Given the strategic nature of whole system planning, we engage via bilateral meetings and stakeholder panels with local authorities as well as national and UK Government. We also attend relevant industry events, such as the All Energy conference.

In addition to ongoing engagement between all three of our networks, our senior managers and business area leads speak directly with those parties impacted by our plans and with relevant industry representatives from other sectors such as heat and transport.

We particularly engage to establish where we can coordinate our plans with other TOs, National Grid ESO, generators and current and future customers connected to our network.

Use of Scenarios

As we build our plans, we consider future and existing requirements to ensure that our plans are appropriate for the longer term needs of network users and represent good value for consumers. This includes analysing and responding to governmental strategies, such as the Scottish Government's Network Vision for Scotland, which we use as references on the wider changes that are required.

We use the national energy scenarios produced by the Electricity System Operator and personalise these for our networks to underpin our future plans, considering the changes that will take place in relation to heat, transport, generation and other demands across the wider energy system. We don't expect any single energy scenario to be correct in practice, but we use the range of projections they provide to frame and test the flexibility of our forward-looking plans to make sure they can adapt to a range of realistic outcomes.

These scenarios also examine the interaction between the gas and electricity systems as well as other changes in the transport and heating sector that may impact us. We also coordinate with a number of key parties to achieve our whole system approach and make every effort to coordinate our plans from the outset, to reduce uncertainty.

DSO Development

The current decade will see the creation of a Distribution System Operator (DSO) Model, which will allow us to further develop our coordinated approach, at the same time taking on new responsibilities and activities which enable the uptake of low-carbon technologies. The development of this model will be underpinned by extensive use of data and stakeholder engagement coupled with whole-system collaboration on low carbon initiatives, such as electric vehicle projects.

Our activities in this area seek to develop demand and generation forecasting tools that will fundamentally impact how we plan and deliver our network development programmes across all of our licences. These network development programmes will enable us to simplify the connection of low carbon technology like electric vehicles and Heat Pumps and provide a hyper-local view of demands and constraints on the network.

Key to our approach are the technologies, systems and communications that enable our DSO model to be realised. This involves determining the 'brain' behind our DSO system, the required telecoms solutions and user interfaces and the ways in which this brain will make real-time decisions for the benefit of all consumers and the network.

Glossary of Terms

Abbreviation	Definition
Biodiversity Unit	A unit of measurement. Metrics assign all habitats a unit value according to their relative biodiversity value. Defra definition is Baseline biodiversity units = Distinctiveness x Condition x Significance x Connectivity x Area in hectares (or length in km).
Business Carbon Footprint	Terminology used to describe our carbon footprint when including Scope 1 & 2 carbon emissions (excluding losses), business travel and contractor emissions, as defined by Ofgem for RIIO-ED1 reporting purposes.
Capital Carbon	Analogous to capital cost and can be used to describe the carbon associated with creation, refurbishment and/or end of life treatment of an asset. Capital carbon of new projects includes embodied carbon of materials and equipment, in addition to transport and energy use in the construction of the asset and emissions associated with site waste.
Carbon Dioxide Equivalent (CO_2e)	A metric measure used to compare the emissions from various greenhouse gases on the basis of their global-warming potential, by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential.
Carbon Footprint	Total greenhouse gas emissions caused directly and indirectly by a person, organisation, event, or product measured in Carbon Dioxide (CO_2). This also contains other greenhouse gases (such as SF_6 below) converted into CO_2 equivalent.
Carbon Neutral	Making or resulting in no net release of CO_2e into the atmosphere. Can be achieved through carbon offsets. Can apply to specific products or services instead of the whole company.
Circular Economy	An alternative to the traditional linear economy (make, use, dispose), in which resources are kept in use for as long as possible, extract the maximum value from them whilst in use, then recover and regenerate products and materials at the end of each service life as opposed to sending to landfill. Also referred to as Zero Waste (below).
DNO	Abbreviation for District Network Operator, who is licensed by Ofgem to develop, operate, and maintain local electricity distribution network. There are 14 licensed distribution network operators (DNOs) in Britain owned by six different companies. Each DNO is responsible for a regional distribution services area.
Embodied Carbon	Embodied carbon is the total carbon generated to produce a built asset. • This may refer to individual materials and components (e.g. concrete, switchgear etc) or may refer to the creation of an infrastructure asset as a whole.
EMS	Abbreviation for Environmental Management System. An ISO14001 certified system to manage and reduce our environmental impacts.

Abbreviation	Definition
ESSG	Abbreviation for the Executive Sustainability Steering Group, formed by SPEN in 2015 to develop and approve, and thereafter review and approve, the Sustainability Policy and Sustainable Business Strategy and Plan actions as part of the route to becoming a Sustainable Networks Business.
Greenhouse Gas Emissions (GHG)	Emissions from gases that absorb and emit radiant thermal energy, causing the greenhouse effect,
ISO14001	International Organisation for Standardisation 14001. Defines criteria and maps out a framework for companies to create an effective Environmental Management System.
Low Carbon Transition	The evolution from a fossil fuel powered economy to an economy based on renewable and low carbon energy use that therefore has a minimal output of greenhouse gas emissions.
Megawatt-hour (MWh)	A unit of energy equivalent to one megawatt (or 1,000,000 watts) of power sustained for one hour.
Natural Capital	Natural capital can be defined as the world's stocks of natural assets which include geology, soil, air, water, and all living things. It is from this natural capital that humans derive a wide range of services often called ecosystem services, which make human life possible.
Net Zero	• Achieving a scale of value-chain emission reductions consistent with the pathway that limits global warming to 1.5°C and; • Neutralising the impact of any source of residual emissions that remains unfeasible to be eliminated, by permanently removing an equivalent amount of atmospheric carbon dioxide.
NGO	Abbreviation for non-governmental organisation, an organisation that tries to achieve social or political aims but is not controlled by a government.
Polychlorinated Biphenyls (PCBs)	PCBs are a group of synthetic chemicals with good dielectric properties and low flammability sometimes used in insulating oil in electrical apparatus such as transformers, liquid filled cables, high and low voltage capacitors, switches etc., manufactured prior to 1987. PCBs are a threat to the environment because of their toxicity, persistence and tendency to bio-accumulate and have been linked to harmful effects such as liver damage and a reduced ability to fight infection.
RIIO-ED1	Abbreviation for Revenue = Incentives + Innovation + Outputs for Electricity Distribution 1. RIIO-ED1 is the price control framework set by our Regulator Ofgem, that sets the outputs that the 14 DNOs need to deliver for their customers and the associated revenues the DNOs are allowed to collect for the eight-year period from 1 April 2015 to March 2023.

Abbreviation	Definition
RIIO-ED2	Abbreviation for Revenue = Incentives + Innovation + Outputs for Electricity Distribution 2. RIIO-ED2 is the price control framework set by our Regulator Ofgem, that sets the outputs that the 14 DNOs need to deliver for their customers and the associated revenues the DNOs are allowed to collect for the five-year period from 1 April 2023 to 31 March 2028.
RIIO-T1	Abbreviation for Revenue = Incentives + Innovation + Outputs for Transmission 1. RIIO T1 is the price control framework set by our Regulator Ofgem, that sets out what the 3 TOs are expected to deliver and details the regulatory framework that supports both effective and efficient delivery for energy customers over the eight years from 1 April 2013 to 31 March 2021.
RIIO-T2	Abbreviation for Revenue = Incentives + Innovation + Outputs for Transmission 2. RIIO T2 is the price control framework set by our Regulator Ofgem, that sets out what the 3 TOs are expected to deliver and details the regulatory framework that supports both effective and efficient delivery for energy customers over the five years from 1 April 2021 to 31 March 2026.
Science-Based Targets	Targets adopted by companies to reduce Greenhouse Gas emissions that are calculated in line with the methodology laid out by the Science-Based Targets Initiative, in line with one of the reduction trajectories featured in the Paris Agreement.
Scope 1 Carbon Emissions	Direct GHG emissions – from sources owned or controlled by the company.
Scope 2 Carbon Emissions	Indirect carbon emissions from the generation of purchased electricity, steam, heating and cooling consumed. For electricity network companies, network losses are included in Scope 2.
Scope 3 Carbon Emissions	All other indirect emissions that occur within the value chain.
SF_6	Abbreviation for Sulphur Hexafluoride, the most carbon intensive greenhouse gas in the world, used extensively as an electrical insulator since the 1980s when the industry moved away from using oil in mass quantities for safety reasons. Use of SF_6 prevents fire/explosion from catastrophic failure of plant and reduces the risk of oil pollution incidents on out network but has a global warming potential 22,800 times that of carbon dioxide.
SPD	Abbreviation for ScottishPower Distribution, a wholly owned subsidiary of SP Energy Networks responsible for the distribution of electricity in central and southern Scotland (33 kV and below).
SPEN	Abbreviation for ScottishPower Energy Networks, holder of the SPT, SPD, and SPM licences awarded by Ofgem, the regulator of the gas and electricity sector.

Abbreviation	Definition
SPM	Abbreviation for ScottishPower Manweb, a wholly owned subsidiary of SP Energy Networks responsible for the distribution of electricity in North Wales and in Merseyside, Cheshire, and North Shropshire in England (132 kV and below).
SPT	Abbreviation for ScottishPower Transmission, a wholly owned subsidiary of SP Energy Network responsible for the transmission of electricity in central and southern Scotland (132 kV and upwards).
SSWG	Abbreviation for Stakeholder Sustainability Working Group, formed by SPEN in 2017 to guide progress towards becoming a Sustainable Networks Business and comprising of invited SPEN stakeholders and SPEN representatives to guide SPEN.
Sustainable Networks Business	SPEN has sought to define this in our Vision statement. We have identified this as managing our triple bottom line – a process to manage our financial, social and environmental risks, obligations and opportunities. This approach is sometimes referred to as profits, people and planet.
tCO_2e	tonnes (t) of carbon dioxide (CO_2) equivalent (e).
TO	Abbreviation for Transmission network Operator, licensed to develop, operate, and maintain a high voltage system within their own distinct onshore transmission areas. These are National Grid Electricity Transmission plc (NGET) for England and Wales, ScottishPower Transmission Limited for southern Scotland and Scottish Hydro Electric Transmission plc for northern Scotland and the Scottish Islands groups.
Zero Waste	An alternative to the traditional linear economy (make, use, dispose), in which resources are kept in use for as long as possible, extract the maximum value from them whilst in use, then recover and regenerate products and materials at the end of each service life as opposed to sending to landfill. Also referred to as Circular Economy.

SP ENERGY NETWORKS

Contact us

We would be delighted to receive any comments, suggestions or questions on the content of this Sustainable Business Strategy.

✉ Sustainable@spenergynetworks.co.uk

✎ Scottish Power House
320 St Vincent Street
Glasgow, G2 5AD

f Facebook.com/SPEnergyNetworks

🐦 Twitter.com/SPEnergyNetwork

🌐 spenergynetworks.co.uk