

Powering change together

SSE PLC SUSTAINABILITY REPORT 2022



SSE has the largest renewable electricity portfolio in the UK and Ireland, providing energy needed today while building a better world of energy for tomorrow. It develops, builds, operates and invests in low-carbon infrastructure in support of the transition to net-zero, including onshore and offshore wind, hydro power, electricity transmission and distribution networks, alongside providing energy products and services to customers. SSE's ambitions for the development of renewable energy now extend beyond the British Isles to carefully selected international markets, including East Asia, Europe and North America.

UK-listed and headquartered in Perth, SSE is a major contributor to the economies in the UK and Ireland. It employs around 11,000 people and is real Living Wage, Living Hours and Fair Tax Mark accredited.

This Sustainability Report for the period 1 April 2021 to 31 March 2022 aims to provide enhanced disclosure of SSE's policies, practice and performance against its key economic, social and environmental impacts and goals.

On occasion the report refers to activities of joint ventures and in these instances it is made clear this is the case.

Data assurance and Sustainability Report

The Directors of SSE plc are responsible for the preparation and presentation of this Sustainability Report. SSE takes an integrated approach to assurance, using internal audit and external assurance providers to ensure accurate and complete disclosures where appropriate. Where data has been externally and independently assured this has been noted in the relevant tables. SSE has objective reporting criteria for preparing and presenting the independently assured information disclosed in this report and the performance measures are in accordance with the reporting criteria. See [sse.com/sustainability/policies-and-assurances](https://www.sse.com/sustainability/policies-and-assurances) for more information.

THE YEAR IN NUMBERS

Absolute scope 1 and 2 GHG emissions:

6.2MtCO₂e
(2020/21: 7.6MtCO₂e)

Renewable energy capacity in construction*:

2.4GW
(2020/20: 2.0GW)

Installed renewable capacity connected to SSEN Transmission's network:

7.8GW
(2020/21: 6.8GW)

Median UK gender pay gap:

18.0%
(2020/21: 18.3%)

Total Recordable Injury Rate per 100,000 hours worked:

0.17
(2020/21: 0.14)

Investment in communities:

£11.2m
(2020/21: £10.6m)

UK/Ireland taxes paid:

£335m/€46.4m
(2020/21: £379m/€20.4m)

UK/Ireland economic contribution:

£5.8bn/€438m
(2020/21: £5.2bn/€439m)

Measurement restatements

This report reflects a number of structural changes within SSE plc in the reporting year. These include the disposal of its Contracting and Rail business; the formation NEOS Networks, a standalone joint venture Telecoms business; and the sale of SSE's stake in gas distribution operator SGN.

Stories in action

Throughout this report, SSE's sustainability policies, practice and performance are brought to life through strategy in action identified with the following icons:



Engagement in action



Innovation in action



Partnering in action



Dilemma

Alternative Performance Measures

SSE assesses the performance of the Group using a variety of performance measures. These measures are not all defined under IFRS and are therefore termed 'non-GAAP' measures. A reconciliation from these non-GAAP measures to the nearest prepared measure in accordance with IFRS is presented and described on pages 204 to 212 of SSE's Annual Report 2022. The Alternative Performance Measures SSE uses might not be directly comparable with similarly titled measures used by other companies.



The SSE plc Sustainability Report 2022 is complemented by SSE's Annual Report 2022 which can be found online at [sse.com](https://www.sse.com).

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Cover image: SSE Renewables employees on the Sloy/Awe hydro scheme, pictured at Loch Sloy.

*Based on equity share at 31 March in each financial year

Chief Executive's statement

2021/22 highlights

Refreshed 2030 Goals

In February 2022, SSE refreshed its 2030 Goals, making them more ambitious and ensuring they remain stretching to the end of the decade. See more on page 10.

Net Zero Transition Report

SSE published its Net Zero Transition Plan in March 2022 and has produced a report on progress against this Plan, which will be subject to shareholder vote at the upcoming AGM in July. See more on page 26.

Action for a just transition

SSE's work over 2021/22 has reinforced the importance of a just transition to net zero, which has included a worker insights report and partnership collaboration to share learnings. See more on page 69.



Increasing climate ambition

SSE announced more stretching net zero ambitions, alongside aligning its Science Based Targets Initiative-approved interim carbon targets to a more stretching 1.5°C pathway. See more on page 25.



Powering change together

The purpose of SSE's annual sustainability report is to disclose the impact of its business activities on people and the environment. Designed to complement the statutory disclosures in the Annual Report, SSE's social and environmental impacts are comprehensively monitored and disclosed. Led from a strategic objective to 'create value for shareholders and society', SSE recognises that it has a far wider impact on the world than simply its annual financial results.

2021/22 was an exceptional year for business delivery, with a capital investment plan between 2021 and 2026 pursuing clean growth opportunities that are critical to removing greenhouse gases from our energy systems and tackling climate change. It was also a year where SSE spelled out, with greater clarity than ever before, the greenhouse emissions targets it must meet to become a net zero business.

Targets

The publication of a Net Zero Transition Plan in March was the culmination of a series of actions taken earlier in the year. New science-based greenhouse gas targets were set in November, accelerating the speed in which emissions reduction plans are delivered. This means, amongst other things, that rather than targeting to cut our absolute scope 1 and 2 greenhouse gas emissions to 6 million tonnes of carbon dioxide equivalent in 2030, we will be cutting them to 3 million tonnes. With COP26 focused on accelerated climate action, I like to think SSE's plan is net zero acceleration in practice.

Action

Setting robust, independently verified targets is one thing. But, as our Net Zero Transition Plan outlines, the targets are only as good as the actions designed to meet them. The same argument is true for nation states and the Nationally Determined Contributions set in advance of COP26. In SSE's case, we are clear on what we must do: we must bring about a responsible phased reduction of carbon emissions associated with unabated gas generation, and establish new carbon capture power stations, as quickly as possible. At the same time, we must increase renewable energy output – and we are developing wind, hydro and solar projects to increase it fivefold by the end of the decade.

Because SSE understands that tackling climate change is not simply a technical challenge to meet through investment in large-scale assets, SSE seeks to support the human challenge too. Working people need to become reskilled, communities must benefit from the economic activity that results and all energy consumers must be able

to access the benefits a low-carbon economy can bring. These principles of a just energy transition to net zero have parity within SSE's plans to achieve net zero.

Integrity

Any plan to meet net zero, indeed, any strategy to create value for SSE's wider stakeholders, requires comprehensive transparency. It's why SSE continues to quantify, annually, its overall socio-economic impact. It's also why we publish, in significant detail, our journey in improving inclusion and diversity within the company. It also means we must be honest about the challenges we face. While excellent progress is being made – SSE's carbon emissions are down again this year – I have no doubt there will be bumps in the path ahead. Our commitment to stakeholders is to let them know when those challenges arise.

Finally, the spirit in which this report is published, is to stimulate further engagement and feedback from the many people and organisations that have an interest in SSE and its business activities. As always, I would encourage you to get in touch with us directly, using the email address sustainability@sse.com.

Alistair Phillips-Davies
Chief Executive

SSE's business model

OUR PURPOSE

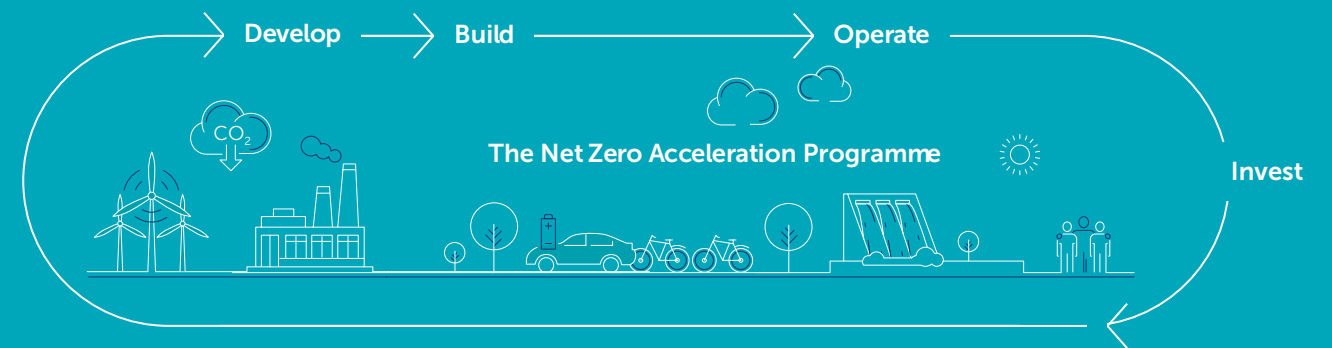
To provide energy needed today while building a better world of energy for tomorrow.

OUR VISION

To be a leading energy company in a net zero world.

OUR STRATEGY

To create value for shareholders and society in a sustainable way by developing, building, operating and investing in the electricity infrastructure and businesses needed in the transition to net zero.



OUR GOALS

With an eye to net zero, in 2022 SSE revised its interim goals aligned to the UN's SDGs for 2030.



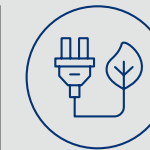
Cut carbon intensity by 80%

Reduce Scope 1 carbon intensity by 80% by 2030, compared to 2017/18 levels, to 61gCO₂e/kWh.



Increase Renewable energy output fivefold

Build a renewable energy portfolio that generates at least 50TWh of renewable electricity a year by 2030.



Enable low-carbon generation and demand

Enable at least 20GW of renewable generation and facilitate around 2 million EVs and 1 million heat pumps on SSEN's electricity networks by 2030.



Champion a fair and just energy transition

Be a global leader for the just transition to net zero, with a guarantee of fair work and commitment to paying fair tax and sharing economic value.



OUR VALUES

All of this is underpinned by a set of core values designed to guide decisions and actions in SSE.



Safety
If it's not safe we don't do it.



Service
We are a company that customers can rely on.



Efficiency
We focus on what matters.



Sustainability
We do things to add long-term value.



Excellence
We continually improve the way we do things.

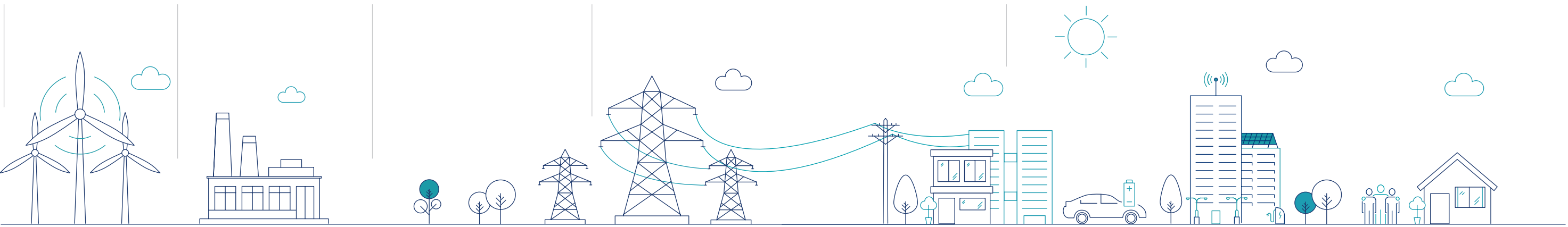


Teamwork
We work together, respect each other and make a difference.

SSE's purpose, vision and strategy

SSE's business model

SSE's strategy is to create value for shareholders and society in a sustainable way by developing, building, operating and investing in the electricity infrastructure and businesses needed in the transition to net zero. SSE's businesses are well positioned to capture the growth opportunities generated by driving and accelerating the net zero agenda through electricity infrastructure.



<p>SSE Renewables</p> <p>What it does Develops, builds, operates and invests in assets that generate electricity from renewable sources.</p> <p>How it supports net zero Develops and generates zero-carbon electricity at large scale from onshore and offshore wind farms and provides clean flexible power from hydro-electricity schemes.</p> <p>2.4GW Renewable generation capacity in construction*</p>	<p>SSEN Thermal</p> <p>What it does Generates electricity from thermal sources in a flexible and reliable way, and its Gas Storage business holds around 40% of the UK's underground capacity, supporting security of supplies in the UK.</p> <p>How it supports net zero Produces progressively lower-carbon electricity and electricity system support to enable net zero transition. Facilitates increasing levels of renewable electricity by offering flexibility to balance renewables' natural variability. SSE's Thermal's Gas Storage assets have potential to be repurposed to hold lower carbon gases in future, including hydrogen.</p> <p>5.3GW Installed thermal generation capacity</p>	<p>Energy Portfolio Management</p> <p>What it does Secures value for SSE's asset portfolios in wholesale energy markets and manages volatility through risk-managed trading of energy-related commodities.</p> <p>How it supports net zero Provides efficient route-to-market for low-carbon electricity, supports system balancing and provides energy solutions for business energy customers.</p>	<p>SSEN Transmission</p> <p>What it does Owns, operates and develops the electricity transmission network in the north of Scotland.</p> <p>How it supports net zero Connecting sources of renewable electricity generation to the national grid and transporting that clean electricity to areas of demand.</p> <p>7.8GW Renewable generation capacity connected to SSEN Transmission's network</p>	<p>SSEN Distribution</p> <p>What it does Owns, operates and maintains the electricity distribution networks in the North of Scotland and central southern England.</p> <p>How it supports net zero Through the timely connection of local renewables and the co-ordinated delivery of network investment and flexible solutions to alleviate network constraints and allow for further electrification.</p> <p>3.8 million Homes and businesses supplied by SSEN Distribution</p>	<p>Customers</p> <p>What it does SSE Business Energy and SSE Airtricity provide energy and related services to households, businesses and public sector organisations across Great Britain and the island of Ireland.</p> <p>How it supports net zero Increases the accessibility of green energy solutions through the provision of customer-driven propositions and acts as a partner to customers and stakeholders as they seek ways to respond to the climate crisis.</p> <p>c.1.2 million Domestic and business customer accounts</p>	<p>Distributed Energy**</p> <p>What it does Focused on investing in, building and connecting localised flexible energy infrastructure, as well as developing solar and battery projects, operating heat networks, and offering integration, aggregation and trading capability.</p> <p>How it supports net zero Through offering services that bring low-carbon, on-site generation, storage and delivery flexibility close to the point of use. Diverse capabilities across a range of low-carbon technologies offer a local 'whole system' approach.</p> <p>380MW solar and battery pipeline secured with >1GW more sites under assessment</p>
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* Based on equity share at 31 March 2022
** Following the sale of its Contracting arm, SSE Enterprise is now referred to as Distributed Energy

Embedding sustainability

SSE's approach to sustainability

A sustainable strategy

SSE does not have a separate sustainability strategy, rather it works to integrate the principles of long-term social and environmental sustainability within its business strategy. Driven by the stated objective to "create value for shareholders and society" established in its business strategy, since 2019, the United Nations Sustainable Development Goals (SDGs) have provided the framework to guide the creation of that shared value. In January 2022, the SSE Board reaffirmed its commitment to the SDGs supporting SSE in delivering sustainable outcomes.

The UN Global Goals is a powerful framework for SSE, as it represents a consensus of the priorities in achieving global sustainable development. The 17 SDGs and their 69 sub targets are as important for businesses and other sub state actors to contribute, as it is for national governments. SSE takes inspiration from those goals and sub targets, disclosing in this report the targets, actions and performance it is taking to make a meaningful contribution.

Confirming strategic materiality

Any effective approach to sustainability must be underpinned by an analysis of the social, environmental, and economic issues that are most relevant and important in the context of SSE's business activities. While an assessment of materiality is something that is constantly under review, the operating context of the urgency to tackle climate change, the Russian invasion of Ukraine and its impact on global energy prices simply reinforced the salience of the most material SDGs identified in 2019.

Highly material SDGs

In March 2022 the Safety, Sustainability, Health and Environment Advisory Committee reconfirmed four highly material SDGs as being:

Highly material

- 13 Climate Action**
- 7 Affordable and clean energy**
- 9 Industry, innovation, and infrastructure**
- 8 Decent work and economic growth**

Material SDGs

Furthermore, a review of SSE's environmental impacts in March 2022, led to the identification of three further SDGs where SSE makes a material impact. These material SDGs guide the pillars of SSE's developing environment strategy and are:

Material

- 12 Responsible consumption and production**
- 14 Life below water**
- 15 Life on land**



"It is impossible to be sustainable without tackling climate change. It is, however, possible to tackle climate change in a way that is unsustainable for people and nature. That is why SSE's approach to sustainability, while putting climate mitigation first, places social and environmental issues at the core of its approach too."

Rachel McEwen,
Chief Sustainability Officer



The strategic hierarchy of Sustainability within SSE

While the breadth and depth of SSE's economic, social and environmental is extensive and complex, a strategic hierarchy of sustainability provides simplification and clarity.



Embedding sustainability

Stretching SSE's 2030 business goals

SSE's 2030 business goals, aligned to the four highly material SDGs, were also established in 2019. A review in 2021/22 reflected on the significant progress made by SSE against the original ambitions at the same time as recognising the impetus for accelerated climate action in the UK and beyond. It also recognised the opportunity for greater specificity particularly in relation to expected customer requirements on electricity networks. As a result, the Board agreed in January 2022 to upweight those business goals, and by doing so ensuring that SSE's medium-term plans better reflect climate science, the ambitions of governments and SSE's accelerated five-year investment plan.

Refreshed Goals in 2022

Goals set in 2019

 <p>Cut carbon intensity by 80%</p> <p>Reduce Scope 1 carbon intensity by 80% by 2030, compared to 2017/18 levels, to 61gCO₂e/kWh.</p>	 <p>Cut carbon intensity by 50%*</p> <p>Reduce the carbon intensity of electricity generated by 50% by 2030, compared to 2018 levels, to around 150gCO₂/kWh.</p>
 <p>Increase renewable energy output fivefold</p> <p>Build a renewable energy portfolio that generates at least 50TWh of renewable electricity a year by 2030.</p>	 <p>Treble renewable energy output</p> <p>Develop and build by 2030 more renewable energy to contribute renewable output of 30TWh a year.</p>
 <p>Enable low-carbon generation and demand</p> <p>Enable at least 20GW of renewable generation and facilitate around 2 million EVs and 1 million heat pumps on SSEN's electricity networks by 2030.</p>	 <p>Help accommodate 10m electric vehicles</p> <p>Build electricity network flexibility and infrastructure that helps accommodate 10 million electric vehicles in GB by 2030.</p>
 <p>Champion a fair and just energy transition</p> <p>Be a global leader for the just transition to net zero, with a guarantee of fair work and commitment to paying fair tax and sharing economic value.</p>	 <p>Champion Fair Tax and a real living wage</p> <p>Be the leading company in the UK and Ireland championing Fair Tax and a real Living Wage.</p>

* Target was subsequently updated to a 60% reduction to around 120gCO₂e/kWh in 2020 as a result of SSE's first set of science-based carbon targets, at the time, aligned to a 'well-below 2oC pathway'.



Embedding sustainability

Structured sustainability governance

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

Structured governance pathways

With sustainability hardwired into the responsibilities of the Board, the Chief Executive and the wider Group Executive Committee, responsibility for the most material sustainable impacts lie at the highest levels of the organisation.



“The good governance of sustainability issues helps to improve SSE’s overall business performance. It manages social and environmental risks – but perhaps more impactfully – it can unlock opportunity for enhanced value too.”

Helen Mahy CBE, Chair, SSHEAC



The Board and its sub-Committees

During 2021/22, the **Board** reviewed and approved SSE’s Group Policies, including specific policy statements on human rights, the environment, climate change and sustainability. The Board also approves, annually, SSE’s priorities relating to its principal sustainability impacts, of which, climate change is defined as the most material of all. In November 2021 the Board approved a set of revised greenhouse gas emissions targets aligned to a 1.5°C warming pathway and verified by the Science Based Targets initiative. In March 2022 the Board also reviewed and approved SSE’s Net Zero Transition Plan.

The Board is advised on matters relating to safety, health and the environment by the **Safety, Sustainability, Health and Environment Advisory Committee (SSHEAC)**, which continues to be chaired by an independent non-Executive Director. In 2021/22 the SSHEAC reviewed SSE’s climate adaptation plans, assessed SSE’s relative performance in ESG surveys and approved the 2021/22 Sustainability Report.

The **Remuneration Committee** is also chaired by an independent non-Executive Director of the Board. Its remit includes preparing SSE’s policy on executive remuneration for the approval of shareholders and assessing Executive Directors’ performance in relation to short and long term incentives. This includes assessing progress towards SSE’s four business goals for 2030 which are aligned to the UN’s SDGs. 2021/22 is the third time the Directors have been assessed against these criteria, see pages 82 to 83 for more information. The Remuneration Committee has undertaken its three-yearly review of its Remuneration Policy through 2021/22 and subject to shareholder approval, sustainability metrics will now be embedded within the long term incentive plan, in addition to the Annual Incentive Plan.

From 2021/22, and as a result of a new obligation to report against the Task Force on Climate-related Financial Disclosures recommendations, the **Audit Committee** reviewed the approach to

the preparation of the 2022 disclosures in SSE’s Annual Report, and approved the TCFD report on pages 42 to 55 of SSE’s Annual Report 2022.

The GEC and its sub-Committees

SSE’s Group Executive Committee (GEC) is responsible for implementing strategy, as approved by the Board, including Group Policies and the management of risks. The GEC agrees priorities relating to SSE’s most material social, environmental, and economic impacts. The Chief Executive chairs the GEC and as Executive Director with responsibility for sustainability, agrees the annual objectives and priorities for the Chief Sustainability Officer.

The **Group Risk Committee** is responsible for managing the processes in place to assess and monitor the Group Principal Risks and provides oversight of Business Unit risks. The Human Rights Steering Group, responsible for the production of the annual Modern Slavery Statement, reports to the Group Risk Committee. In 2021/22, the Group Risk Committee also had oversight of the internal process to identify and quantify the most material climate-related risks and opportunities.

The **Safety, Health and Environment Committee** is responsible for the careful management of safety, health and environment matters across the SSE Group. In 2021/22 the Committee, amongst many other matters, approved a new framework for a group-wide Environment Strategy. It also considered, in detail, the safety, health and environment plans from each of the SSE business units.

SSEPD Board and its sub-Committee

SSE’s two electricity networks businesses, SSEN Transmission and SSEN Distribution, have a dedicated governance framework underneath the SSE plc Board, reflecting business separation obligations under their Ofgem licenses. The **SSEPD Board** is chaired by the SSE Finance Director and comprises Executive Directors from the two businesses, non-Executive Directors from the SSE Group and two independent non-Executive Directors. It

is responsible for the oversight of SSE’s most material sustainability impacts.

The **Sustainability Sub-Committee** of the SSEPD Board governs the sustainability strategies of both SSEN Distribution and SSEN Transmission, comprising of one independent non-Executive Director, the Group Chief Sustainability Officer and Executives from each of the respective businesses. In 2021/22 the Committee reviewed and had oversight of the sustainability strategy contained within the SSEN Distribution ED2 draft business plan.

Chief Sustainability Officer

The role of Chief Sustainability Officer (CSO) was established in 2019, reporting directly to the Chief Executive and is responsible for advising on sustainability issues and strategy. To support the integration of sustainability within the governance structures of SSE, the CSO is a member of the SSHEAC and three of the four Group-level sub-Committees of the GEC: the Risk Committee, from June 2022, the Large Capital Projects Committee and the Safety, Health and Environment Committee; and is also a non-Executive Director of the SSEPD Board and its Sustainability sub-Committee.

SSE’s approach to business ethics

SSE has well established processes and procedures to embed a healthy business culture at all levels of its organisation, supporting employees to adopt the right values and empowering them to speak up against wrongdoing. SSE has robust labour standards to ensure those who work for the company, either directly or on its behalf through its supply chain, are treated fairly and with dignity and respect. More information on its approach can be found on pages 62 to 63 of SSE’s Annual Report 2022 and covers:

- SSE’s Doing The Right Thing employee guide to good business ethics
- Reporting and investigating wrongdoing
- Upholding robust labour standards
- Targeting potential human rights violations and modern slavery risk



Identifying the issues that matter

SSE considers issues material if they have the potential to have significant impact on its operations or its stakeholders, either positively or negatively.

The integrity of an organisation's approach to long term sustainability depends upon its ability to identify the social and environmental risks and opportunities that matter. Those issues may matter to the success of the organisation or to the organisation's stakeholders. This process of considering what is important and to whom is one that is constant and continuous for SSE. It is also a process SSE believes can always be improved upon.

Most importantly, ongoing materiality assessments require an analysis of emerging social, economic and environmental trends, a structured approach to stakeholder engagement, the nurturing of long-term partnership, and a sophisticated understanding of the principal risks facing SSE.

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Identifying material issues

Emerging trends

An organisation’s long-term sustainability is, in part, determined by its ability to identify and respond to key and emerging trends in its external environment. In 2021/22, the case for enhancing future social and environmental value was given greater impetus in the recovery from the coronavirus pandemic, global efforts to combat climate change and the macroeconomic impact of rising prices constraining economic growth and causing hardship for many.



Increasing cost of living

UK consumer price inflation in the year to April 2022 reached 9%, driven by the increased cost of energy, exacerbated by the war in Ukraine. Ofgem’s raised cap on average household bills for gas and electricity means a 70% year-on-year increase. With poorer households spending a greater proportion of their income on energy, those with the least are bearing a greater burden of rising prices than the average household.

The outlook, according to the Bank of England, is that UK inflation will return to close to 2% within two years, but the impact for families in the meantime is serious. The impact of this inflationary period is also, according to the Bank of England, likely to impact on unemployment negatively too. These macroeconomic pressures are not unique to the UK and are being experienced across Europe and beyond.

SSE is concerned for both the hardship being faced by families in the short term and the inequalities that result from reducing economic activity. It is clear, however, that its response must be to continue with its investment plans in the net zero transition, growing its workforce and supply chain, helping to reduce reliance on volatile global gas prices, and invest in a way that maximises local social value too.

“Inflation hits 9% with poorest households facing even higher rates.”

Institute for Fiscal Studies, 18 May 2022, commenting on UK inflation data from the Bank of England.

Urgent messaging from climate science

The Intergovernmental Panel on Climate Change (IPCC) prepares comprehensive assessments of climate change every five to seven years. Its Sixth Assessment reports were published in 2021 and 2022, with increasingly urgent tones on the immediacy of the climate challenge.

The first report summarised the physical science of climate change and concluded that it is unequivocal that human behaviour has warmed the planet, causing widespread and rapid changes to the Earth’s oceans, ice, and land surface. This second report recognises that climate change poses a threat to human well-being and the health of the planet and that whilst adaptation efforts have been observed across all sectors and regions, progress is uneven, fragmented, small in scale and incremental. The third report advises policy makers how to meet net zero and amongst its findings were that drastic changes are needed to phase out global dependence on fossil fuels.

It is clear from the science that time is running out to prevent the most dangerous climate change (more than 1.5°C warming above pre- industrial levels). The final synthesis report of the Sixth Assessment is expected in September 2022 and will provide the conclusion to the entire Sixth Assessment cycle with guidance and advice for policy makers in advance of COP27 in Egypt. SSE continues to pay very close attention to emerging climate science considering the implications of that science on its business activities.

“A shift to renewables will mend our broken global energy mix and offer hope to millions of people suffering climate impacts today. Climate promises and plans must be turned into reality and action, now. It is time to stop burning our planet and start investing in the abundant renewable energy all around us.”

Antonio Guterres, UN General Secretary, 4 April 2022 on the publication of the IPCC Sixth Assessment Working Group III Report.

The emerging consensus on standardised ESG metrics

After years of debate about the importance of common, international standards on sustainability metrics and criteria, consensus emerged in 2021. Announcements at COP26 include the establishment of an International Sustainability Standards Board (ISSB) to develop, in the public interest, a comprehensive global baseline on high-quality sustainability disclosure standards to meet investors’ information needs.

Incorporating existing frameworks such as CDP and the SASB Standards, the announcement was welcomed by the G20, the Financial Stability Board, the World Economic Forum amongst others. Furthermore, UK Chancellor Rishi Sunak announced in October a sustainable finance roadmap for the UK. With enhanced disclosure requirements for businesses on their environmental impacts and a UK taxonomy providing a rule book for the classification of environmental economic activity, further detail on the implementation of the plan is expected in 2022.

Having made comprehensive environmental and social disclosures on a voluntary basis for many years, SSE looks forward to greater standardisation in the future, as the basis for high quality stewardship engagement with its investors and shareholders.

“We want sustainability to be a key component of investment decisions, and our plans will arm investors with the right information to make more environmentally-led decisions.”

Rishi Sunak, UK Chancellor, 18 October 2021

Developing a framework to value nature

Inspired by the impact of the Task Force on Climate-related Financial Disclosure, and the importance of nature in restoring the planet back to balance, progress is being made in establishing a framework for valuing and disclosing nature impacts. The Taskforce on Nature-related Financial Disclosures (TNFD) published the first version of its nature-related risk management and disclosure framework. The TNFD seeks to create a risk management and disclosure framework for organisations to report and act on evolving nature-related risks, ensuring nature is factored into financial and business decisions.

This first version of the TNFD framework includes disclosure recommendations and practical guidance on nature-related risk and opportunity analysis. Disclosure recommendations have been closely aligned with the TCFD recommendations, with the intention to focus on climate adaptation. TNFD is now undertaking an 18-month consultation process on the



framework, with several beta versions published ahead of the final recommendations in September 2023.

SSE believes that the ability to quantify and articulate its impacts on nature is an important area for development in the years to come. It will continue to work, at a business level, on practical activities that support both the transparency of its impacts and the methods in which it can enhance value to nature.

“Truly sustainable economic growth and development means recognising that our long-term prosperity relies on rebalancing our demand of Nature’s goods and services with its capacity to supply them.”

Professor Sir Partha Dasgupta, February 2021

Identifying material issues

Working with and for stakeholders

The essential nature of SSE's core product, energy, means there is a wide range of stakeholders who have a direct interest in SSE and whose perspectives must be considered if it is to achieve its business objectives.

SSE's approach to stakeholder engagement

SSE understands that there is an effective social contract between the company and the society within which it operates. At the core of that contract is a reciprocal relationship between SSE and its stakeholders, with SSE relying on a range of inputs, in return for which value is generated and shared.

SSE interacts with a vast array of stakeholders every single day. Its approach to stakeholder engagement seeks to

ensure that stakeholder perspectives are built into its business plans and objectives every step of the way: from project planning, project delivery and onwards through long-term operations and customer service. It therefore promotes an open and transparent approach to stakeholder engagement which is supported by accountability at both Group and Business Unit level. SSE adopts a range of engagement methods to build those reciprocal relationships. These methods exist in a strategic framework that is a combination of business-led and Board

level engagement. Details of engagement methods deployed, and the material issues raised are outlined on pages 34 to 39 of the SSE Annual Report 2022.

SSE's key stakeholder groups

SSE defines its stakeholders as the people, communities and organisations with an interest in SSE's purpose, strategy, operations and actions and who may be affected by them. In 2021/22 the SSE Board, reconfirmed the six principal stakeholder groups, outlined below, within that context.

<p>Employees</p>	<p>Shareholders and debt providers</p>	<p>Energy customers</p>
<p>Engagement helps SSE attract, retain and develop a diverse and talented workforce now and for the future. See pages 76-83</p>	<p>We engage to ensure confidence and support from those that invest in and lend to SSE. See SSE's Annual Report 2022</p>	<p>Dialogue aims to support the transition to a decarbonised energy system in a fair and affordable way. See pages 38-45</p>
<p>Government and regulators</p>	<p>NGOs, communities and civil society</p>	<p>Suppliers, contractors and partners</p>
<p>Constructive engagement aims to ensure fair energy sector frameworks for energy customers and investors. See page 28</p>	<p>Working openly and progressively seeks to support the achievement of shared goals with societal benefit. See page 19</p>	<p>Fostering healthy reciprocal relationships helps SSE to ensure it achieves the greatest all-round value from its investments and activities. See pages 52-55</p>

Creating value through stakeholder collaboration
Throughout this report, SSE provides case studies and dilemmas to demonstrate practical real-life examples of projects that have been undertaken with and for its stakeholders. These are highlighted using the icons shown to the right.



Engagement in action



Innovation in action



Partnering in action



Dilemma

Partnerships that power change

Working with key partners enables SSE to drive progress by collaborating with leaders and specialists to achieve more than it could alone. Partnerships encourage knowledge sharing that enables SSE to set ambitious targets, keeps it accountable, and contribute to sustainability agendas beyond its own operations. SSE appreciates the support of its partners to drive improvements and increase SSE's visibility of the challenges affecting the industry and its supply chain. SSE's partnerships form a core part of the business, and have done for a number of years, helping SSE navigate new areas of focus as the scope of the business expands, and ensures it is preparing for the future.

Long standing values-based partnerships

SSE has worked with a number of partners for many years, which form a core part of SSE's culture and help set standards for the way SSE operates.

- **Living Wage Foundation:** SSE firmly supports the principles and values promoted by the Living Wage Foundation and seeks to support both the Foundation and the wider business community increase the number of working people earn at least a real Living Wage. SSE has been an accredited Living Wage employer since 2013. Furthermore, SSE became a living hours employer in March 2021. For more information see page 60 of SSE's Annual Report 2022.
- **Fair Tax Foundation:** As the first FTSE100 company to achieve Fair Tax accreditation in 2014, SSE has consistently supported the Fair Tax Foundation to establish a culture of pride amongst businesses making a fair contribution in the support of public services. SSE has achieved Fair Tax Mark accreditation for eight consecutive years. For more information on SSE's tax disclosure see page 70.
- **United Nations Global Compact (UNGC):** SSE has been a signatory of the UNGC since 2018 and aligns to its ten principles for corporate sustainability. For more information see [sse.com/sustainability/partnerships-and-memberships/](https://www.sse.com/sustainability/partnerships-and-memberships/).
- **Institute of Business Ethics (IBE):** IBE promotes the highest standards of ethical business conduct, providing its subscriber companies with a wealth of resources in implementing ethical business practices. SSE has been a subscriber since 2014 and regularly participates in events and industry working groups to share best practice on embedding ethical business cultures.



Driving potential for SSE and wider industry

As SSE's business evolves, partnerships are essential for uncovering new areas of focus and increasing standards for the business, driving awareness of additional requirements that SSE must consider, and enabling SSE to be part of the discussions around emerging industry challenges and how to solve them. Recently SSE has been working with a number of partners that increase its reach and shape its thinking.

- **Accounting for Sustainability:** through SSE's Chief Financial Officer, SSE has been a member of the Prince of Wales's Accounting for Sustainability Network since its inception in 2013. The partnership with A4S and its network of finance leaders has been key in supporting SSE's efforts for enhanced quantification and disclosure of its material social and environmental impacts.
- **Business in the community Ireland (BITCI):** BITCI is the foremost organisation in the Republic of Ireland promoting sustainability and responsible business practices. SSE is an active member and achieved the Business Working Responsibly Mark for the first time in 2017.
- **Supply Chain Sustainability School:** SSE has been a principal partner with the school since 2021 and is a member of a number of working groups relating to labour standards, infrastructure, carbon, and more. SSE has worked with the school to engage with its employees by delivering bespoke training programmes and workshops, as well as collaborate closer with its suppliers.



Many further business partnerships exist across SSE's business units and SSE is grateful to those organisations for their input and contribution.

Identifying material issues

SSE's Group Principal Risks

The execution of SSE's strategy and delivery of its purpose is dependent on the effective identification, understanding and mitigation of the Group's Principal Risks.

Sustainability in the Group Principal Risk context

Whilst all the Group Principal Risks are relevant to the sustainable development of SSE, those with particular significance to social and environmental impacts are outlined below. More information can be found in SSE's Group Principal Risk report and SSE's Annual Report 2022, pages 68 to 81, which detail key developments during the year and key mitigations SSE has in place.

CLIMATE CHANGE

The risk that SSE's strategy, investments or operations are deemed to have an unacceptable future impact on the natural environment and on national and international targets to tackle climate change.

The physical impacts of climate change, such as severe weather that can interrupt energy supply or generation, and the transitional risks relating to developments in political and regulatory requirements on the products and services SSE provides, have potential to impact SSE's operations. SSE's work to reduce its impact on climate change and the consideration of longer-term key climate-related risks and opportunities is detailed on pages 21 and 33.

LARGE CAPITAL PROJECTS MANAGEMENT

The risk that SSE develops and builds major assets that do not realise intended benefits or meet the quality standards required to support economic lives of typically 25 to 60 years within forecast timescales and budgets.

SSE's investment in large infrastructure projects can have considerable social, economic and environmental consequences. To deliver high-quality projects, SSE works closely with suppliers and contractors to ensure its values on issues such as environmental protection, modern slavery and fair pay are upheld. SSE's work to promote and embed sustainability within its supply chain is detailed on pages 53 to 55.

POLITICS, REGULATION AND COMPLIANCE

The risk from changes in obligations arising from operating in markets which are subject to a high degree of regulatory, legislative and political intervention and uncertainty.

SSE aims to work constructively with governments and regulators to help deliver net zero, whilst ensuring the energy system works in the interest of energy customers. SSE's activities are influenced by international and national agreements on climate change, and sustainability issues are increasingly included in regulatory and legislative requirements. See page 28.

ENERGY AFFORDABILITY

The risk that energy customers' ability to meet the costs of providing energy, or their ability to access energy services is limited, giving rise to negative political or regulatory intervention that has an impact on SSE's core regulated Networks and Renewables businesses.

SSE seeks to support the transition to net zero through disciplined investment in developing and operating low-carbon energy infrastructure, and delivering this in a way that represents value for money for energy customers. It works to ensure that the energy it supplies to customers is not only affordable but is accessible too, and it strives to offer services that are inclusive to all. See pages 38 to 43.

PEOPLE AND CULTURE

The risk that SSE is unable to attract, develop and retain an appropriately skilled, diverse and responsible workforce and leadership team, and maintain a healthy business culture which encourages and supports ethical behaviours and decision-making.

An ethical business culture alongside the talent and skills of SSE's employees enable it to fulfil its purpose and achieve its strategic goals. SSE has a long-standing commitment to fair and decent work and seeks to provide an inclusive, fulfilling and high-performing workplace. SSE's responsible approach to attracting, developing and retaining a future skilled workforce is detailed on pages 76 to 83.

SAFETY AND THE ENVIRONMENT

The risk of harm to people, property or the environment from SSE's operations.

SSE has an uncompromising commitment to keep people safe and healthy, and to respect the environment in which it operates. SSE's working environment includes challenging geographic locations and adverse weather conditions, which can impact its activities. It has clear safety and environmental processes and training in place to address these risks. SSE's safety, health and environment performance and initiatives are detailed on pages 84 to 97.

Climate related opportunities and risks

With climate change raising both risks and opportunities over the longer term, SSE's approach to meeting the Task Force on Climate-related Financial Disclosures has been designed to complement the process to identify and mitigate SSE's Group Principal Risks.

Mandated climate-related financial disclosures in the UK

While SSE has voluntarily disclosed against the TCFD recommendations since 2018, in 2021/22 it is now mandatory for premium listed companies to report on a 'comply or explain' basis.

SSE's TCFD report is outlined in its Annual Report 2022 between pages 42 and 55. The report represents the culmination of an enhanced governance and assurance process and represents the most fulsome assessment of the impact of climate change on SSE in the medium to long term.

With four pillars to the TCFD recommendations, and 11 recommended disclosures, the TCFD framework is designed to ensure that climate issues are factored into long term decision making. SSE has fully met 10/11 of the recommended disclosures. The remaining recommendation, under Strategy 2.c, has been partially met with plans to meet it in full in 2022/23. SSE further believes there is an opportunity for increasing maturity of all TCFD disclosures and will actively seek feedback from shareholders and other stakeholders to ensure its disclosures remain appropriate and comparable.

Summary of SSE's TCFD compliance

A summary of SSE's compliance and progress in 2021/22 is provided below.



SSE's material climate-related opportunities and risks

At the core of the 2021/22 TCFD Report is an assessment of the most material risks and opportunities. These are the most strategic climate issues being actively managed by SSE. While outlined in full on pages 51 to 53 of SSE's Annual Report 2022, a summary table is reproduced below.

Opportunities
Valuable flexible hydro
Accelerated transmission growth
Accelerated wind investment
Driving distribution transformation
Valuable flexible thermal
Risks
Variable wind generation risk
Storm damage network risk
Accelerated gas closure risk
Wind-capture market risk

Managing climate-related opportunities and risks

The purpose of the process to identify the most material climate-related risks and opportunities is to support their effective management. The five opportunities outlined represent the core of SSE's investment strategy with detailed plans to exploit those opportunities detailed within SSE's Net Zero Acceleration Programme. The four identified risks are managed and controlled closely.

Full details of the controls and mitigations employed by SSE are outlined within its comprehensive annual submission to CDP, made available at [sse.com/sustainability](https://www.sse.com/sustainability).

Accelerating climate action

Increased climate ambitions and a clear plan of action for delivery are paving the way for SSE to drive accelerated action towards net zero.

SSE recognises the serious threat that climate change poses to the natural world and, therefore, to people and the economy. Despite the progress made in the climate negotiations at COP26 in Glasgow in November 2021, continuing evidence published by the Intergovernmental Panel on Climate Change presents an urgent and alarming picture. It continues to be clear that stronger action is needed by governments and business to support an accelerated delivery of net zero. This presents an opportunity for SSE to provide a clean and resilient energy system which is focused on supporting a transition that creates and shares value with shareholders and society.



Cut carbon intensity by 80%

Reduce Scope 1 carbon intensity by 80% by 2030, compared to 2017/18 levels, to 61gCO₂e/kWh.

SSE's scope 1 GHG emissions intensity increased slightly between 2020/21 and 2021/22, however it has decreased 16% from the 2017/18 baseline.

Despite SSE's scope 1 emissions falling by 19% compared to 2020/21 and being the lowest since SSE's records began, SSE's scope 1 intensity increased slightly by 1% to 259gCO₂e/kWh in 2021/22, compared to 256gCO₂e/kWh in the previous year. Good progress was made in renewables growth and paving a way forward for low-carbon thermal generation. Plans progressed in the development of two new thermal power stations equipped with carbon capture technology with both projects moving forward in

the UK Government's process to support the most competitive carbon capture plants in pursuit of net zero ambitions.



Our progress

Reduction in GHG emissions from electricity generation

19%

GHG emissions from electricity generation

5.75 MtCO₂e



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Adapting to a climate changed world	33

Accelerating climate action

Performance summary

Category	Key performance indicator	Unit	2021/22	2020/21	2019/20
Science-based carbon targets	Scope 1 and 2 emissions	Million tonnes CO ₂ e	6.24	7.64	8.91
	Scope 1 GHG intensity	gCO ₂ e per kWh	259 ^(A)	256	290
	GHG emissions from gas sold (scope 3 carbon emissions)	Million tonnes CO ₂ e	2.29	2.35	2.68
	Proportion of SSE's suppliers by spend that have set or committed to set science-based targets through the SBTi	%	48	29	4
CDP	SSE's CDP Climate Change Programme	Rating	A	A-	A-
Climate adaptation	Weather-related resilience expenditure by SSEN Distribution ¹ :				
	Overhead line replacement and refurbishment	£m	22.8	27.8	24.6
	Tree cutting	£m	23.7	27.7	29.6
	Flood protection	£m	1.5	3.4	5.9

Detailed disclosure on the breakdown of SSE's scope 1, 2, and 3 emissions is available in SSE's sustainability data tables which can be accessed at [sse.com/sustainability](https://www.sse.com/sustainability). 1 2021/22 data may be subject to minor adjustment before final inclusion in the regulatory reporting pack published to Ofgem in August 2022. Some 2019/20 and 2020/21 data has been slightly revised after finalisation of data for the August 2020 and 2021 submissions to Ofgem regulatory reporting pack.
 (A) This data was subject to external independent assurance in 2022. For the limited assurance opinion see page 102.
 (B) This data was subject to external independent assurance in 2021. For the limited assurance opinion see [sse.com/sustainability](https://www.sse.com/sustainability).
 (C) This data was subject to external independent assurance in 2020. For the limited assurance opinion see [sse.com/sustainability](https://www.sse.com/sustainability).



A strategy to support net zero

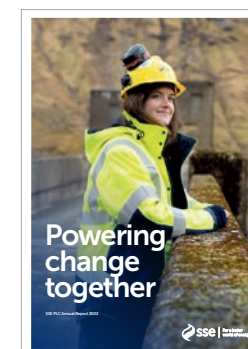
SSE's business strategy has the transition to net zero at its core and SSE has a well-established decarbonisation plan which continues to deliver progress against stretching climate ambitions.

Stretching net zero ambitions

SSE made a clear public commitment in 2020 to the long-term goal of achieving net zero greenhouse gas (GHG) emissions across all its operations by 2050 at the latest, covering scope 1, 2 and 3 GHG emissions. Recognising the national and international importance of decarbonising the power sector as quickly as possible, in 2021/22, SSE revised this ambition and is now targeting net zero across scope 1 and 2 emissions by 2040 at the latest (subject to security of supply requirements) and for remaining scope 3 emissions by 2050 at the latest.

SSE's long-term net zero ambitions are supported by a series of interim targets approved by the Science Based Targets Initiative (SBTi). These targets are aligned to the Paris Agreement and a 1.5°C pathway, and meet the strict SBTi criteria which requires that they cover scope 1, 2 and 3 GHG emissions (see pages 26 to 27 on target progress).

SSE's two economically regulated businesses, SSEN Transmission and SSEN Distribution, as part of their respective business plans, have



set their own science-based greenhouse gas emission targets. To achieve these targets, these regulatory businesses have outlined the actions that they need to take. These targets and actions, which are outlined throughout this Net Zero Transition Plan, deliver GHG emission reductions and contribute to SSE's overall net zero ambitions.

Progress on the Net Zero Transition Plan

At SSE's Annual General Meeting in July 2021, SSE established a framework for annual shareholder advisory votes which involved committing to net zero in addition

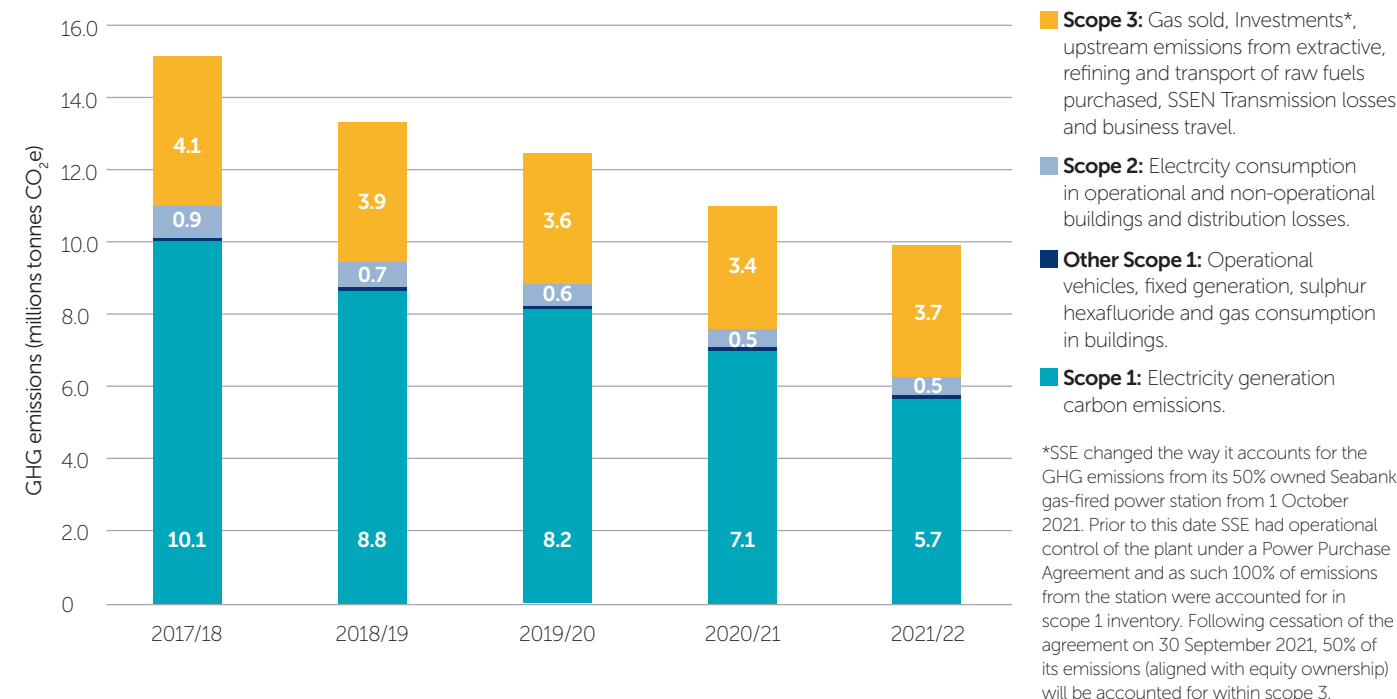
to publishing a Net Zero Transition Report to disclose progress towards net zero.

In March 2022, SSE published its Net Zero Transition Plan which details the targets and actions SSE intends to take to achieve its net zero ambitions. SSE's Net Zero Transition Report summarises the progress against this plan towards SSE's net zero targets and should be viewed alongside SSE's Annual Report 2022, Sustainability Report 2022 and SSE's CDP Climate Change disclosures. All reports are available at [sse.com/sustainability](https://www.sse.com/sustainability).

Reducing GHG emissions

Between 2017/18 and 2021/22 SSE's total GHG emissions (scope 1, 2 and 3) have fallen by 35%, from 15.2MtCO₂e to 9.9MtCO₂e. The fall in GHG emissions across all three scopes is predominantly a result of the change in generation mix of SSE's thermal generation plant from which GHG emissions contribute 99% of scope 1 emissions.

SSE's GHG emissions by scopes between 2017/18 and 2021/22

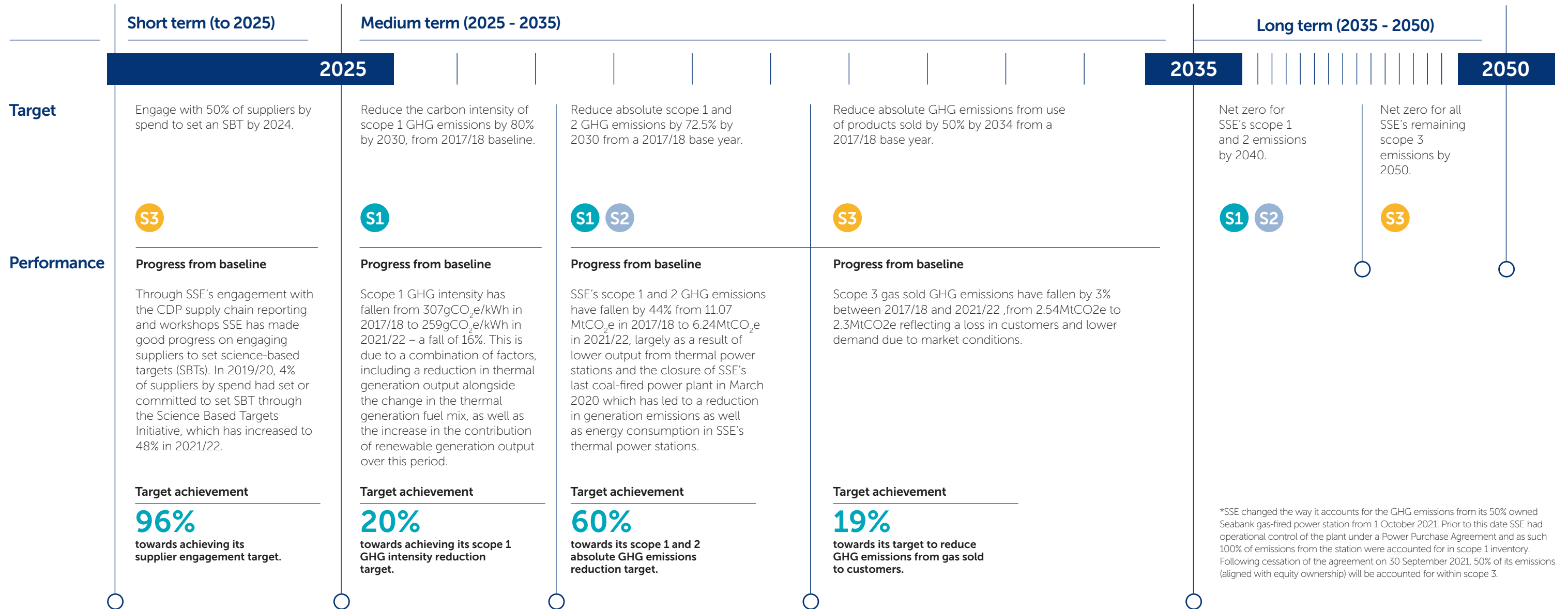


Accelerating climate action

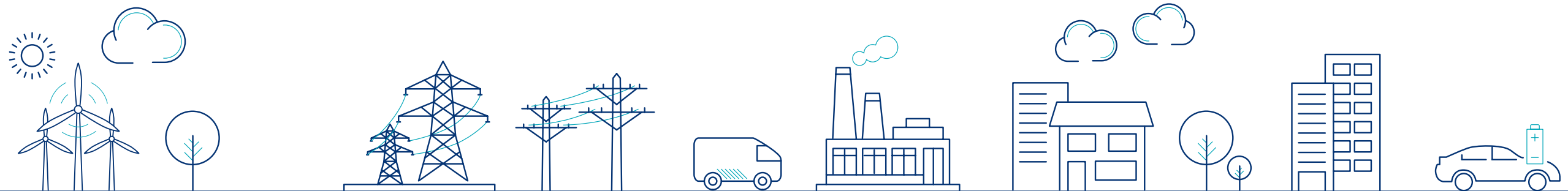
Performance against the Net Zero Transition Plan

To drive improved performance, SSE measures and reports progress against stretching targets that are science-based and aligned to the ambitions set out in the Paris Agreement.

S1 Scope 1 **S2** Scope 2 **S3** Scope 3



*SSE changed the way it accounts for the GHG emissions from its 50% owned Seabank gas-fired power station from 1 October 2021. Prior to this date SSE had operational control of the plant under a Power Purchase Agreement and as such 100% of emissions from the station were accounted for in scope 1 inventory. Following cessation of the agreement on 30 September 2021, 50% of its emissions (aligned with equity ownership) will be accounted for within scope 3.



Accelerating climate action

Embedding climate action

SSE works to embed policies and processes that support the delivery of climate action in line with clear principles aligned to the Paris Agreement and a 1.5°C pathway.

Advocating for accelerated climate policy

During 2021/22, SSE continued to advocate for accelerated climate action with focus on increasing deployment of renewable generation and decarbonisation of thermal generation, heat and transport. Specific activity included:

Addressing barriers to offshore wind deployment:

SSE Renewables has long advocated for the UK Government to set more ambitious renewable buildout targets and streamline the planning process for offshore wind through the Offshore Wind Acceleration Task Force. In 2022, it was pleased to see the UK Government confirm targets in the British Energy Security Strategy for 50GW of offshore wind by 2030, including 5GW floating offshore wind, with a commitment to significantly cut consent time down to one year

Making the case for pumped storage:

through its membership of the Long Duration Electricity Storage Alliance, SSE Renewables engaged with the UK Government's Energy Minister to advocate for bespoke policy mechanisms such as a 'cap and floor' to support the accelerated deployment of these vital technologies for net zero.

Increasing support for lower-carbon technologies:

over 2021/22 SSE Thermal contributed to key UK Government

consultations, including the development of a UK Low Carbon Hydrogen Standard, a Hydrogen Production Business Model and a Power-Carbon Capture and Storage (CCS) Business Model. It advocated for frameworks to establish carbon dioxide transport and storage networks across the UK and low-carbon hydrogen value chains, with the potential to progress to a 100% hydrogen-fuelled power generation supported by hydrogen storage. Working with its CCS trade association, it contributed to a cross-sector Carbon Capture, utilisation and storage (CCUS) 2035 Delivery Plan, setting out the pathway needed to abate 50 million tonnes of CO₂ per year by 2035.

Unlocking the north of Scotland's net zero contribution: in November 2021, SSEN Transmission published an analysis highlighting the significant contribution the north of Scotland will make to UK and Scottish Government net zero targets and advocated for the UK Government to introduce a national strategic plan that sets out the necessary investment in the UK transmission system to achieve a fully decarbonised electricity sector by 2035.



"SSE's Net Zero Transition Plan not only sets robust, scientific carbon targets and spells out the actions that are required to meet them, it seeks to be open and transparent about the challenges we expect to face too. For a company with a social responsibility to provide homes and businesses with an essential product – it is vital that we do so."

Martin Pibworth
Chief Commercial Officer

DILEMMA



Advocating for clean, flexible and affordable energy

The decarbonisation of electricity systems needs to be managed in a responsible and phased way to meet the challenges of energy security, affordability and net zero commitments. This was evidenced in 2021/22, when SSE's scope 1 GHG emissions intensity increased slightly. The main reason for this was the increased demand for more carbon intensive oil-fuelled peaking plant in Ireland that arose due to the need to balance the electricity grid. To address this SSE has been advocating for policy mechanisms that support the deployment of renewable technologies that provide flexibility as well as planning frameworks that deliver accelerated offshore wind development. For instance, policy interventions such as the Maritime Area Planning Act in the Republic of Ireland enable the rapid deployment of offshore wind which in turn decreases dependency on expensive and carbon intensive oil-fuelled peaking plant.



Taking account of the price of carbon

As a generator of electricity, SSE is subject to policies that impact the price of carbon, which means the price of carbon is an explicit consideration in many investment decisions.

During 2021/22, SSE's generation activities in GB operated under the new UK Emissions Trading Scheme (UK ETS) carbon pricing system, which came into operation to replace the EU ETS following Brexit. The UK ETS is a cap-and-trade emissions scheme, similar in design and aims to the EU ETS. SSE's generation assets in Ireland continue to operate under the EU ETS. In addition to the UK ETS, in GB SSE's activities are subject to the Carbon Price Support (CPS) mechanism which sets a price per tonne of carbon emitted and combined with the UK ETS allowance price, makes up the Total Carbon Price paid by electricity generators.

The combination of the UK ETS and the CPS sets the carbon price in electricity market in Great Britain, and the EU ETS in the Single Electricity Market (SEM) between Ireland and Northern Ireland. SSE views that a robust carbon price in the electricity system has a critical role in meeting the UK's net zero commitments, and delivering a net zero electricity system in the 2030s. SSE continues to promote a robust carbon price with the UK and Irish Governments, along with the European Commission, and supported the strengthening of the UK and EU's 2030 ambition ahead of COP26 which directly impacts the UK ETS and EU ETS through determining the supply of greenhouse gas emission allowances. Ultimately, SSE believes the progressive tightening of the allowances available is a powerful tool to reduce greenhouse gas emissions in the most economic way possible. SSE will also continue to actively engage with both the UK and EU as they implement the changes to align their ETS with their net zero targets as soon as possible, both bilaterally and through its trade associations.

Climate alignment of trade association membership

SSE is a member of number of diverse



trade associations that align with its business objectives and enable it to work collaboratively across the energy sector on matters of shared interest. SSE works closely and engages with these trade associations on a continuous basis to ensure that their principles on climate change are consistent with those of its own.

In December 2021, SSE published the first annual review of its trade association memberships in relation to its net zero ambitions and the goals of the Paris Agreement. The results showed that, of

the 20 trade associations considered within scope, 19 were aligned overall and one was partially aligned. None of the trade associations assessed were identified to have opposing climate-related views. SSE will continue to engage with all trade associations that were found to be aligned and will undertake a process to seek increased engagement where partial alignment was identified, with results of action taken to be disclosed in the next annual review later in 2022. More information can be found in SSE's Trade Association Climate Review available at [sse.com/sustainability](https://www.sse.com/sustainability).

Accelerating climate action

Targeted action to address GHG emissions

SSE's Net Zero Transition Plan sets out a clear plan of action it will take to accelerate clean energy development alongside reducing emissions from thermal sources of electricity generation.

A clear plan of action for net zero

SSE understands that credible net zero targets must be backed up by a clear plan of actions that will be taken to achieve them. SSE's Net Zero Transition Plan was designed to provide this clarity for its stakeholders, outlining in detail 14 key actions it will take to ensure its net zero ambitions are met.

The key actions focus primarily on addressing SSE's largest source of GHG emissions from electricity generation, alongside a plan to address remaining GHG emissions across all scopes. This section provides updates on some of the actions taken for the key sources of emissions for SSE's scope 1, 2 and 3 GHG emissions, with further information provided throughout this report.

Targeted action to address GHG emissions

Actions	Where to find more information	Key progress in 2021/22
SCOPE 1		
Reduce emissions from unabated gas generation	Annual Report – pages 54 to 55 Sustainability Report – pages 24 to 27	GHG emissions from SSE's electricity generation fell by 19% between 2020/21 and 2021/22, and were the lowest since SSE's records began.
Develop new low-carbon flexible generation	Annual Report – pages 27 and 104 Sustainability Report – pages 64 and 65	SSE Thermal progressed plans for the development of two new power stations equipped with carbon capture technology, with both projects moving forward to differing degrees in the UK Government's process to encourage and support competitive carbon capture plants.
Transparent advocacy in favour of enhanced policy	Sustainability Report – page 28	SSE continued to advocate for increased support for lower-carbon thermal generation technologies.
Explore options for neutralising residual emissions	Sustainability Report – page 31	SSE showed its support for Direct Air Carbon Capture and Storage (DACCS) in the UK Government's proposed Scottish Cluster and submitted evidence on negative emissions technologies to the UK Environmental Audit Committee.
Build a renewable energy portfolio of 13GW of capacity by 2031	Annual Report – pages 100 to 101 Sustainability Report – pages 56 to 59	SSE made good progress on key renewables projects and at 31 March 2022 it had 2.4GW of capacity in construction*
Reduce leakage and reliance on SF ₆	Sustainability Report – page 96	SSEN Transmission progressed with further trials of SF ₆ alternatives at its substations, including the first substation with SF ₆ -free Siemens Energy Clean Air Power Voltage Transformers. SSEN Distribution published its enhanced SF ₆ leakage reduction strategy as part of its RIIO-ED2 Business Plan.
Reduce reliance on SSEN's Scottish Island backup diesel generation	Sustainability Report – page 63	SSEN Distribution's new RIIO-ED2 business plan outlines its commitment to produce a diesel strategy to transition away from carbon-intensive fuels on the Scottish Islands.
Switch vehicle fleet to electric in line with EV100 commitment	Sustainability Report – page 97	SSE made good progress towards its EV100 commitment with over 40% of its car fleet now fully electric and it increased its fully electric van fleet from 12 to 41.
SCOPE 2		
Reduce electrical losses from SSEN Distribution	Sustainability Report – page 32	SSEN Distribution has implemented a number of measures to reduce electrical losses. Its new RIIO-ED2 business plan sets out an updated losses strategy for 2023 to 2028.
Deliver a net zero property estate	Sustainability Report – page 97	Energy consumed in SSE's offices, depots and data centres fell slightly compared to the previous year. SSE purchased 100% of its electricity for use in its facility managed offices from renewable sources, backed by renewable guarantees.
SCOPE 3		
Support customers to fuel switch and consume less gas	Sustainability Report – pages 41 to 43	The proportion of SSE Business Energy's customers choosing green products grew to 30%, up from 6% the previous year. SSE Airtricity supported domestic customers with energy efficiency, resulting in energy savings of 8.7GWh in 2021/22.
Advocate for a pathway for decarbonised heat	Sustainability Report – page 44	SSE advocated for solutions to decarbonise heat networks and low carbon heat incentives through responses to a number of government consultations and activity through its trade associations.
Establish a framework for supplier collaboration on net zero action	Sustainability Report – pages 32, 54 and 55	SSE's programme of supplier engagement included holding webinars with Supply Chain Sustainability School on the topic of carbon and the development of Powering Net Zero Pact, in collaboration with 10 of its strategic suppliers to drive action towards a fair and just energy transition.
Partner with the CDP supply chain engagement programme	Sustainability Report – page 32	SSE and collaborated with CDP Supply Chain to deliver its first supplier webinar focusing on carbon reporting. SSE was also awarded an 'A' in the CDP Supplier Engagement Rating assessment in 2022.

Addressing GHG emissions from electricity generation

The majority of SSE's direct impact on climate change arise from GHG emissions relating to the generation of electricity from thermal sources, so it is therefore the focus of SSE's actions to reduce GHG emissions. SSE has a clear pathway to achieve its 2030 interim targets by responsibly decreasing the output from existing unabated generation whilst increasing investment to build a significant portfolio of carbon capture and storage (CCS) and hydrogen projects.

While CCS and hydrogen technologies can significantly reduce emissions associated with electricity generation, to achieve a net zero power system, and economy, it is expected that negative emissions technology will be required to neutralise residual emissions. Over 2021/22 SSE Thermal continued to advocate for CCS infrastructure that can facilitate negative emissions and frameworks to incentivise development of technologies.

ENGAGEMENT IN ACTION



Exploring options for neutralising emissions

In 2021/22, SSE Thermal contributed to two bids for UK Government support to deploy decarbonisation infrastructure within industrial clusters; the Scottish Cluster and the East Coast Cluster. The CO₂ transport and storage infrastructure, which is expected to be deployed this decade, would support negative emissions technologies such as Direct Air Capture (DAC). One of the UK's first DAC projects is being developed in North East Scotland, and could use the same geological CO₂ store as SSE's Peterhead Carbon Capture Power Station, emphasising the importance of such infrastructure for achieving net zero. SSE also submitted evidence on negative emissions technologies to the UK Environmental Audit Committee, setting out the criticality of CCS infrastructure to the successful deployment of negative emissions technologies.

Accelerating climate action

Removing other scope 1 and 2 GHG emissions

Although electricity generation emissions are the most significant GHG emission source for SSE, it is still important for SSE to reduce other scope 1 and 2 GHG emissions sources. SSE has a set of actions that aim to reduce these emissions. The next largest contributor to SSE's scope 1 and 2 emissions is losses from the electricity distribution network. These emissions are important because as the network grows to facilitate the connection of renewable electricity generation there will be a corresponding increase in the amount of electricity lost on the network which will result in a rise in electricity losses. Grid decarbonisation will help to lower the impact of emissions from these losses; however, it is important for SSE to continue to invest in methods that limit these losses where possible across the network.

A strategy to address losses from electricity distribution networks

At the beginning of the RIIO-ED1 price control period, SSEN Distribution developed its Distribution Losses Strategy for the purpose of identifying key measures to reduce losses across its networks. SSEN Distribution has implemented innovation projects alongside additional measures such as increasing the minimum size of new secondary transformers and switching off underutilised plant during periods of low loading, to ensure that it continues to reduce losses over the remainder of the current RIIO-ED1 price control period.

For the next price control period between 2023 and 2028, SSEN Distribution has updated its Losses Strategy and will focus on further reduction of technical losses across its networks. SSEN Distribution will continue with many of the initiatives set out in RIIO-ED1, but will also expand its activities to initiatives such as the introduction of On- Load Tap Changing (OLTC) technology in transformers and setting a minimum cable size of 300mm² in its LV, 11kV and 33kV network. It will also work to improve monitoring to understand where actual losses occur to direct intervention measures.

Addressing supplier emissions

SSE has set SBTi-approved targets to engage with 50% of its suppliers by spend to set science-based targets by March 2024. The company is close to meeting this target and is actively engaging with its key suppliers to understand the climate impact of its supply chain activities. The next phase of SSE's engagement is to measure the impact of its suppliers with the aim of integrating solutions to mitigate and manage these emissions.

More information on SSE's work with its supply chain partners can be found on pages 52 to 55.

Demonstrating leadership in supply chain engagement

SSE has been working with CDP to improve its climate-related supply chain engagement. By requesting information and providing supplier support webinars 98 suppliers accounting for over 65% of spend provided information to SSE through the CDP Supply Chain module in 2020/21. This was the highest number of responses since SSE began its partnership with CDP in 2018.

This engagement has been recognised by CDP as it awarded SSE an 'A' in its Supplier Engagement Rating assessment in 2022. Over 11,400 companies were assessed, and SSE featured in the top 5%.



ENGAGEMENT IN ACTION

Developing tools to determine infrastructure project emissions

New infrastructure is essential to support the decarbonisation of the energy system, however, through the construction and operation of this infrastructure carbon is emitted. Understanding the capital carbon (defined as the GHG emissions from the creation, refurbishment and end of life treatment) of infrastructure projects provides the opportunity for decision makers to reduce carbon and support the decarbonisation of other sectors that supply goods to the energy industry.

Over 2021/22, SSEN Transmission began collaborating with other Transmission Operators through the UK Reduction of Capital Carbon in Infrastructure: Transmission (ROCCIT) group to develop a common method for Transmission Operators and their suppliers to use to report the capital carbon in transmission assets. The tool uses a carbon asset database alongside a product carbon calculator. SSE is also collaborating with Distribution Network Operators, through the Energy Networks Association's Carbon Working Group, to further align this approach across all electricity network companies. For the future this tool will enable SSEN Transmission to identify and include technologies that are lower in carbon in its investment cases.

Adapting to a climate changed world

The increasing severity and regularity of extreme weather events can pose significant disruption to SSE's operations and it must work to build resilience as it adapts to changing weather patterns.

Potential impacts of climate change

The physical impacts of climate change have the potential to adversely impact SSE's operations and interrupt the supply of energy to its customers. Changes in rainfall and wind patterns can determine the output levels of SSE Renewables' generation assets. Extreme weather events, such as storms, floods and heat waves, can impact the resilience of SSEN's electricity networks and lead to variations in energy demand which affect SSE's customer businesses. Seven Met Office named storms impacted SSEN's distribution network in the winter of 2021/22, three of which became Red Alert events, Storm Arwen, Storms Malik/Corrie and Storms Eunice/Franklin. These storms impacted over 100,000 customers, with a significant number over a multi-day period.

SSE has mitigation methods in place, such as monitoring short- and long-term weather patterns, crisis management and business continuity plans and investment programmes to improve infrastructure resilience. SSEN Distribution, for example, has an investment programme for weather-related resilience expenditure covering overhead line replacement and refurbishment, tree cutting and flood protecting (see page 24). Overall spend on these areas fell to £48m in 2021/22, compared to £58.9m the previous year. Weather-related resilience spend is managed over price control periods and SSEN's RIIO-ED2 business plan for the upcoming price control period from 2023 to 2028 outlines significant new investment in network resilience.

Assessing future climate risks

An important element in SSE's climate adaptation work is assessing future potential risks from a changing climate. SSE does this in a few ways, including through its TCFD annual assessment of the potential financial impacts of key climate-related opportunities and risks facing the business. Through this process SSE has identified that storm damage to



DILEMMA

Building resilience to future climate change

Future climate models predict that climate change will continue to bring extreme events such as storms, floods and heat waves all of which impact SSE's businesses. For SSE, boosting weather resilience and assessing climate adaptation requirements is essential to the ongoing resilience of its operations.

In 2021/22, SSE contributed to the electricity generation sector's third Climate Change Adaptation Report published by Energy UK. This report detailed the measures electricity generators are implementing to keep

power stations and other generating technologies operating in the event that more extreme weather events, such as flooding, rising sea levels, drought, extreme temperatures and coastal erosion, take place. As part of its resilience planning, SSE assessed the resilience of its new high-efficiency gas-fired power station, at Keadby 2, to the risk of flooding and concluded that the project was resilient to future flooding impacts. Overall, assessments like these provide valuable evidence to help government and businesses assess the UK's resilience to climate change.

its networks is a significant potential risk. Full details of the TCFD assessment can be found in SSE's Annual Report, pages 49 to 53.

In addition to this, SSE continues to review climate projections using the Met Office UK Climate Projection (UKCP18) tool for the next decade, to understand the potential impact on its key assets and infrastructure from higher temperatures, changing rainfall patterns, and more extreme weather events such as floods, droughts and heat waves. This process supports the UK Government's

assessment of critical infrastructure which takes place every five years. SSE's electricity networks and generation businesses have published progress reports against the previous assessments which were completed in 2015 and further work is ongoing to reassess the risks and to update mitigation measures where required (see case study above). In addition, SSEN Transmission and SSEN Distribution have set out resilience strategies with climate adaptation actions in their respective price control frameworks.

Providing affordable and clean energy

As global energy systems transition away from being largely based on fossil fuels, it is vital that the new renewables-led system is accessible, affordable and reliable for energy consumers.

SSE has an important role in supporting its customers and consumers access affordable and clean energy. From driving down the cost of generating electricity from renewables, providing low-carbon energy solutions and green services to customers, to the careful balancing of consumer interests in electricity networks business plans – SSE’s businesses seek to ensure the transition to net zero represents value for consumers.



Increase renewable output fivefold Build a renewable energy portfolio that generates at least 50TWh of renewable electricity a year by 2030.

Despite a fall in renewable generation output between 2020/21 and 2021/22, over the year SSE has made good progress on key renewable projects.

SSE Renewables progressed key offshore projects in 2021/22, including reaching financial close on Dogger Bank C and construction progressing at Seagreen and Dogger Bank A and B. At 31 March 2022, SSE had 2.4GW of renewable energy capacity in construction (based on equity share). SSE’s renewable generation output (inc. pumped storage, biomass and constrained off wind in GB) fell by 7% between 2020/21 and 2021/22, from 10.2TWh to 9.5TWh, driven by unfavourable weather conditions over the summer.

Assuming average weather conditions, renewable output is expected to increase in 2022/23, due to the start of production at Seagreen.



Our progress
Renewable generation output 2021/22*

9.5TWh

Renewable energy capacity in construction at 31 March 2022**

2.4GW

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* Includes pumped storage, biomass and constrained off wind in GB.
** Based on equity share.

Providing affordable and clean energy

Performance summary

Category	Key performance indicator	Unit	2021/22	2020/21	2019/20
Renewable energy	Total renewable generation output including constrained off GB wind ¹	GWh	9,496	10,242	11,442
	Total renewable generation capacity ¹	MW	3,935	3,897	3,992
	Renewable capacity in construction ²	GW	2.4	2.0	0.04
Supporting customers: universal access	Networks customers on the Priority Services Register (PSR)	Number	768,104	770,844	746,821
	Customer minutes lost – SHEPD/SEPD	Average per customer	57/42	57/44	56/46
	Customer interruptions – SHEPD/SEPD	Per 100 customers	56/42	64/48	63/47
	Total renewable generation output ³	GWh	8,799	9,649	10,753
	Renewable generation output – proportion of SSE's total output ³	%	38.1	34.8	37.7
Energy efficiency	Business Energy smart meter operating volumes (gas and electricity) ⁴	Number	173,292	160,970	157,409
	Meter Point Administration Numbers (MPANs) supplied with SSE Green products ⁵	Number	166,080	59,542	49,080
	Energy saved as a result of energy efficiency measures targeted to fuel poor households in Ireland	Million kWh	8.7	5.0	5.8

1 Figures include pumped storage and biomass.

2 Based on SSE equity stake at 31 March in each financial year.

3 Total output includes output related to SSE's 50% ownership share in Seabank power station.

4 At 31 March in each year. 2021/22 data includes operated AMR, S1 and S2 type Smart Meters that are within the scope of the UK Government's Smart Mandate Programme (Profile Class 01-04 for Electric, and <732MWh/Annum consumption for Gas)

5 Individual companies may have more than one MPAN so figures are not representative of customer numbers.



Delivering net zero in a cost-effective way

The scale of infrastructure investment needed to deliver net zero requires innovative technology, partnership models and sustainable financing to deliver value for money for all energy consumers.

Reducing reliance on imported gas

Driven by the global price of gas, the cost for energy for homes and business is at historically high levels, causing significant hardship for many families across the UK and Ireland. However, within the next few years, reduced reliance on gas for energy is expected to deliver improved electricity affordability.

Advances in technology and increased scale of wind turbines means that, in 2019, the price of a Contract for Difference (CfD) for offshore wind in the UK was less than £50/MWh, down from around £140MWh in 2014 (in 2012 prices). While the projects awarded CfDs in 2019 are in development, it has been calculated that if those wind farms had been operating in the winter months of 2021/22, over £7bn of payments would have been made to the CfD scheme administrator, helping to reduce future energy bills for consumers. With SSE's Seagreen wind farm having been developed at pace, SSE expects it to contribute 0.9TWh electricity to the GB electricity system in 2022/23, providing a very practical contribution to both the challenges of

energy security and energy affordability currently facing the country.

Increasing renewables output

The rapid deployment of renewable energy globally is understood to be the most important short-term action to tackle climate change and now, with the effects of global gas prices on inflation, the case for renewable energy is reinforced further. SSE seeks to make a significant contribution to this challenge of increased renewable deployment.

Significant progress was made in 2021/22 in progressing SSE's 2030 Goal to increase renewable electricity generation fivefold between 2017/18 and 2030. Construction continues at offshore wind farms Dogger Bank and Seagreen, in addition to onshore developments at Viking on Shetland and Lenalea in Ireland. First power at Seagreen is expected in July 2022 and Lenalea is due to be commissioned in late 2022 or early 2023.

The development of SSE's pipeline of renewable energy projects continues to be a high priority in ensuring its ambitions are

met. SSE's secured ownership share of an extensive pipeline of projects both home and abroad, totals over 11GW of future renewable energy capacity.

In its core markets of the UK and Ireland, multiple projects are progressing at once, with a wide range of options being pursued in onshore, offshore, pumped hydro options and – in the longer term – green hydrogen production co-located with wind. SSE's plans to expand into carefully chosen international markets made important progress with an agreement reached in early 2022 to acquire a renewables development platform in Southern Europe.

While renewable energy output in 2021/22 declined year-on-year as a result of natural wind resources being below normal yearly averages, SSE's hydro assets played an important role in providing low-carbon flexibility to the GB electricity system. SSE expects renewable output to increase sharply when both Dogger Bank and Seagreen are in full operation.

ENGAGEMENT IN ACTION



Delivering cost effective renewable energy from the north of Scotland

The renewable energy generated in north of Scotland will play a significant role in helping the UK Government achieve its commitment of a fully decarbonised electricity sector by 2035. To achieve this target, the cost-effective transmission of this renewable energy from areas of production to areas of high demand is crucial.

Managed by National Grid, and regulated by Ofgem, Transmission Network Use of System Charging (TNUoS) is a charge to recover the cost of the installation and maintenance of the GB transmission network. Generally, generators located closer to areas of demand pay less, with those in more remote areas paying more to transmit power onto the system. This results in higher costs for the delivery of renewable projects

in the north of Scotland compared to other parts of Britain. The TNUoS methodology was devised over 30 years ago for a fossil fuel led energy system and SSEN Transmission believed it is no longer fit for purpose.

SSEN Transmission has been advocating for the reform of TNUoS and in 2022 it contributed to Ofgem's TNUoS Call for Evidence Next Steps publication. This publication presented options for potential changes to the current TNUoS charging methodology. SSE hopes that Ofgem's review will create a clearer view of network charges which will ultimately drive the delivery of vital renewable electricity projects in the most cost-effective way for energy consumers.

Providing affordable and clean energy

Serving electricity distribution customers

With concerns over the affordability of energy and steep rises in the cost of living, SSEN Distribution has learned from the coronavirus pandemic to adapt quickly to support customers who may be struggling with rising energy prices.

Expanding fuel poverty support

In its approach to addressing fuel poverty, SSEN Distribution works with a network of local and national agencies providing specialist direct support to its customers. Engagement with partners, customers and stakeholders has led to a re-focus of some partnerships, broadening the offer to include critical services such as income maximisation and benefit entitlement checks, and ensuring support was available in areas where the price cap offers limited consumer protection, such as homes heated by oil.

Throughout 2021/22, SSEN Distribution supported its customers experiencing fuel poverty, through a variety of partnerships and initiatives, including:

- **Enhanced partnership outreach to support hard-to-reach customers:** SSEN has well established partnerships with organisations such as Citizens Advice, Centre for Sustainable Energy and Warmworks, which undertake targeted outreach to support customers with tackling

fuel poverty and promote the PSR. In 2021/22, outreach through these organisations was enhanced with the number of households supported increasing to 8,762 from 3,792 in 2020/21.

- **Improving customer referrals:** Over 2021/22, SSEN continued to train colleagues to identify signs that customers may require additional support, ensuring we could refer people for specialist, independent advice and support in matters of fuel poverty and energy efficiency. Once referred, customers are called back directly from SSEN's delivery partners, Home Energy Scotland or YES Energy Solutions.
- **A new interactive self-serve tool:** SSEN Distribution developed and launched a new interactive online self-serve tool, in collaboration with the Energy Saving Trust, which allows customers to virtually walk around a home and learn where they can make energy savings.

Driving greater Priority Services Register awareness

The Priority Services Register (PSR) is the backbone of support for SSEN Distribution customers who require adapted services, additional support, or extra reassurance during power cuts.

Over 2021/22, SSEN continued to raise awareness of the PSR to ensure it reached those customers in most need. This involved: undertaking a PSR gap analysis, both on a geographical and needs code basis, to identify key areas of focus; holding an online workshop with water, emergency response and charities focusing on key PSR gap areas and what channels are best to promote the PSR in different focus areas; and engaging with SSEN's Inclusive Service Panels who gave important insight into the development of an impactful campaign to identify to seek views which would inform the PSR campaign. The Panels were clear, that in the wake of the pandemic we should consider how best to identify those with transient needs, i.e. hospital leavers as this

category has emerged more prominently since the pandemic.

There was a considerable increase in customers registered on the PSR between 2019/20 and 2020/21, from 746,821 to 770,844, which was expected as a result of the coronavirus pandemic. This has been followed by a small decrease in 2021/22 to 768,104. The transient nature of vulnerability means that PSR register numbers are never static. People join and leave as they fall in and out of vulnerable situations. SSEN Distribution is watching closely as the impacts of affordability are felt by communities.

An accredited strategy for engagement

SSEN Distribution seeks to ensure that its engagement with stakeholders is effective and supports the achievement of positive and tangible outcomes for customers, stakeholders, and society. SSEN Distribution's stakeholder engagement strategy continues to meet the AA1000 Stakeholder Engagement Standard (2015), an internationally recognised best practice framework for stakeholder engagement, and its principles of inclusivity, materiality, responsiveness and impact. The successful delivery of the continuous improvement plan has been influenced by AA1000 feedback. In 2021/22, SSEN's AA1000SES Healthcheck scores rose to

71% from 64% the previous year.

Ensuring a smart and fair future energy system

SSEN's Smart and Fair project with the Centre for Sustainable Energy has proven to be instrumental in setting standards for future fairness. Phase One of the project made recommendations for policy makers and system operators on how to support the transition to a smart and fair energy system. A key finding from the research was that customers require particular capabilities to be able to access the benefits of smart grids, for example, the ability to engage with technology, and access to high-quality broadband, as well as the more conventional things like access to finance.

Phase Two was launched in May 2021 to develop the theories into practical action. Alongside a focus on widening participation, particularly for those who are hard to reach, a tool is being developed to overlay the capability lens research and make it applicable in a local area energy planning context. It takes both publicly available and specialist data, such as credit reference agency analysis, to help understand locations where certain vulnerabilities are more likely to be prevalent in the context of the energy transition. It aims

to provide a solid evidence basis for decision makers to understand the implications of decarbonisation projects, such as heat zoning and charge point siting.

Championing equality for EV disabled drivers

In the transition to electrified transport there is the risk that some vehicle users are excluded, and proactive measures are needed to ensure the transition is an inclusive one. In 2021/22, SSEN Distribution launched a two-stage research project in partnership with Disabled Motoring UK to understand the unique enablers and barriers faced by drivers with vulnerabilities adopting EVs and the potential of technologies and DNOs to remove barriers. Over 100 ideas were generated through workshops, with several being selected for in-depth development, such as enabling PSR households to use Vehicle to Home to provide back-up power during a power cut.

The recommendations were published in the 'Equal EV' SSEN Distribution report in collaboration with Energy Systems Catapult. The work has supported the inclusion of a commitment to improve accessibility at public charge points for disabled users in the UK Electric

DILEMMA



Using learnings from the pandemic to inform an adaptable approach

SSEN Distribution's rapid response to the COVID-19 pandemic has given insight, experience and confidence to apply their engagement strategy to the emerging cost-of-living crisis, helping them to address the expected increase in numbers of customers experiencing fuel poverty.

As pandemic restrictions eased, SSEN Distribution was keen to understand how it could continue to adapt to changing customer needs. Direct feedback from stakeholder groups recommended that the use of technology adopted during 2020/21 be maintained but supplemented by in-person events and engagement. This hybrid approach post-pandemic, means that customer representation has expanded and has resulted in broader and richer responses

to current issues, such as the rising cost-of-living.

This hybrid approach includes: providing both face-to-face and live streaming opportunities for workshops and engagement events; making materials available digitally online for stakeholders to watch at their convenience; and, consideration of the timings and duration of engagement events, to increase participation and diversity of stakeholders attending.

Between 2020 and 2022, 200 colleagues received tailored training to become SSEN Stakeholder Champions, taking innovative approaches, knowledge and skills back to their teams to cascade and further embed good practice, understanding and improved performance.



Providing affordable and clean energy

Vehicle Infrastructure Strategy. Further collaboration will take place with the industry to implement the solutions identified by stakeholders, such as exploring the implementation of charging services for PSR customers in outages. Industry and government, hosted project webinars and produced video interviews with participants to highlight their experience firsthand.

Developing common standards for domestic flexibility

SSEN Distribution aims to embed fairness from the start of every net zero and low-carbon technology project, to ensure vulnerable customers and communities are not left behind by including their needs from the earliest stages of planning.

Domestic flexibility will be a powerful tool for the future. However, for all consumers to benefit, this must be done responsibly and through a trusted process. Following feedback from both expert and consumer forums, SSEN approached Flex Assure who set common standards for industrial and commercial flexibility services providers (aggregators) to develop a domestic and small business equivalent. The result,

HOMEflex, will allow aggregators to earn a HOMEflex 'trust-mark' enabling households and microbusinesses to benefit from flexibility in the knowledge that they will be financially rewarded. Technological advances such as smart charging and smart time of use tariffs have the potential to reduce peak electricity demand by up to 23%, helping avoid or postpone network reinforcement.

Vulnerability Future Energy Scenarios

In 2021/22, SSEN Distribution started conducting Consumer Vulnerability

Foresighting with Imperial College London. Currently, investment decisions are guided by Distribution Future Energy Scenarios (DFES) which are based on assumptions using engineering and asset-based predictions and lacks any human, societal or community-based elements.

Outputs from Vulnerability Future Energy Scenarios (VFES) will include plausible societal trends to be considered when planning future networks. These findings were shared with stakeholders at COP26 in Glasgow.



PARTNERING IN ACTION



Increasing value through an adapted approach

SSEN Distribution established a partnership with Centre for Sustainable Energy (CSE) in March 2021 to support fuel-poor households through advice from dedicated Energy Advisors on measures such as supply-switching, access to energy efficiency advice and onward grants including Warm Home Discount. During 2021/22, as the cost of living began to rise, engagement with stakeholders highlighted that SSEN Distribution should seek to support consumers through income maximisation, ensuring that consumers access the financial support they are entitled to.

The CSE Energy Advisor project was reviewed in line with this insight and it was concluded that due to the reduced client financial gain available from switching suppliers, the

project was unlikely to achieve its maximum impact. It was decided that the project should be refocused on benefit entitlement checks (BECs) and that income maximisation activity would become a standard offering, with delivery of the project beginning in December 2021.

1,130

households supported with specialist advice

£57,444

client financial gain achieved through benefits entitlement check

Low carbon energy solutions for customers

SSE's competitive customer businesses

SSE Business Energy

Provides the shopfront and route to market for SSE's low-carbon energy generation and green products to around 470,000 non-domestic customers across GB.

SSE Airtricity

Ireland's largest supplier of 100% green energy, supplying around 700,000 homes and businesses across the island of Ireland and first nationally accredited one-stop-shop for home energy upgrades.

SSE Distributed Energy

Provides integrated energy-related services to industrial and commercial customers. With a focus on distributed energy it has around 11,300 heat network customer accounts.

SSE's customer businesses are its "shop front" offering integrated energy solutions that support customers on their journey to net zero. They provide low-carbon energy supply and new technologies for a decarbonised future.



SSE Airtricity

Supporting customers through current affordability challenges

SSE Airtricity recognises the huge challenges faced by its customers in the current economic environment. Over winter 2021/22, the business announced up to €500,000 of funding for customers requiring additional support with energy costs and established a dedicated affordability project targeting customers experiencing longer-term fuel poverty. SSE Airtricity continues to support customers in difficulty and has established the following support since the end of the 2021/22 financial year as cost of living concerns have heightened:

- **Increasing home energy efficiency:** In April 2022, SSE Airtricity committed to delivering home energy upgrades to up to 600 fuel poor homes at no cost to them. Almost half the energy consumed in a typical home is through heating, and by tackling energy efficiency directly household energy bills can be reduced.
- **Providing additional customer support:** In April 2022, SSE Airtricity established a €1m customer support fund to directly support customers who may be struggling to pay their bills, as well as making a donation of €1m to a trusted all-island charity partner to support hard to reach customers struggling with the cost of living.
- **Shielding vulnerable customers:** In May 2022 a further price promise of up to €20m was announced as a result of a price cap, with Airtricity committing to hold energy tariffs for existing domestic financially vulnerable customers in the Republic of Ireland, for the remainder of the year.

SSE Airtricity has committed to deliver home energy upgrades at no cost to

600

fuel poor homes

€2.5m

Already allocated by SSE Airtricity to directly support households with costs of living and energy bills

"While today's energy prices are a real concern for customers we must remain equally committed to sustainability for the longer term. It has never been more important for us to work closely with customers to help them become more energy efficient through suitable technologies and behaviours, and to ensure all customers can readily access the greenest energy sources to power their businesses and homes."

Nikki Flanders
Managing Director,
Energy Customer Solutions

Providing affordable and clean energy

One-Stop-Shop home energy efficiency solutions

In March 2022, building upon the success of existing partnerships with An Post and several Local Authorities across the country, SSE Airtricity became the first nationally accredited one-stop-shop for home energy upgrades with the Sustainable Energy Authority of Ireland (SEAI). Over 2021/22, SSE Airtricity delivered large-scale energy efficiency retrofit projects for homes across Ireland through these partnerships, supporting almost 800 customers to improve energy efficiency and reduce their carbon output while also saving energy costs. In addition to this, Active8 Solar Energies, in which SSE Airtricity has an ownership share, carried out over 1,100 solar installations over 2021/22.

Of the 800 retrofits, 90 were deep retrofits on fuel poor homes. The occupants of these homes are some of

our communities most vulnerable, they may be living in fuel poverty or be living with a chronic illness so these upgrades are vital and have health and financial benefits for the homeowners. These measures see the average Building Energy Rating (BER) increasing from a D3 to a B2 across these properties. The upgrades are government funded and are free to the homeowner.

800
private and local authority householders supported to retrofit homes and improve energy efficiency

> 1,100
solar installations carried out for customers through Activ8

Counteracting cost-of-living increases
In line with the Irish Government's Climate Action plan to retrofit 500,000 homes

to a BER B2 standard by 2030 and with affordability as a key focus SSE Airtricity in partnership with Limerick City & County Council and Dun Laoghaire Rathdown County Council completed 117 retrofits on fuel poor homes.

All homes had a full deep retrofit with a complete suite of measures installed such as new windows and doors, external insulation, attic insulation, low energy LED lighting, high efficiency gas boilers installed. SSE Airtricity has also been awarded the contract to install the first communal heat pump system in the Republic of Ireland with 44 units being installed in this project.

These measures delivered a combined energy saving of 1.26 GWh. BER ratings raised from D3 to B2 supporting the Climate Action Plan objectives in the decarbonisation of housing stock.

INNOVATION IN ACTION



Developing an energy technology business

SSE Airtricity has further developed its demand side proposition by collaborating with Cool Planet to provide an offering which will help alleviate pressure on Ireland's electricity system through AI technology that supports better balancing of the national grid. Demand response will become an increasingly vital tool towards delivering net zero carbon as it enables increasing renewables penetration and decarbonisation of the electricity systems. It also allows industry to generate revenue from dispatchable load such as decarbonised and electrified process heat.

The demand response solution incentivises commercial energy users to reduce electricity consumption from the grid during periods of high demand. At peak times, when the country's energy demand can outstrip supply, companies and factories will be incentivised to reduce their electricity usage, by making use of on-site generators, battery storage or temporarily switching off certain machines and processes. This will help balance supply and demand and stabilise the grid.

This offering is available to commercial customers across the island of Ireland. Innovative technology, such as this, enables our customers to further demonstrate their green credentials and support integration of renewables on the grid.



SSE Business Energy

Helping business customers go green

In 2021/22, SSE Business Energy in GB saw an expansion in the number of customers supplied with traceable green products, with the proportion of customers choosing green products growing to 30% from 6% the previous year. Businesses customers recognise the importance of taking action to decarbonise. To help address this, as fixed contract business customers renew with SSE Business Energy, they can be migrated to 100% renewable electricity contracts, matched with independently verified and assured output from SSE's UK wind farms and hydro plants.

SSE Business Energy also launched

a Green EV tariff, which supports businesses running on, or switching to, electric vehicles and enables them to charge fleets with 100% renewable electricity.

6% → 30%

Increase in SSE Business Energy customers choosing green products between 2020/21 and 2021/22

In May 2021, a simplified Corporate Power Purchase Agreement (CPPA) approach was established to enable a wider range of customers to purchase energy directly from SSE's renewable assets, giving customers fully traceable

access to 100% renewable energy. This approach aims in the medium term to enable the democratisation of low-carbon energy supply helping an ever increasing number of customers access sustainable energy for their business and associated supply chain.

Under the UK Government's Smart Programme businesses have also been supported through the installation of approximately 27,000 smart meters, which is crucial in the delivery of flexible products, like time-of-use tariff for EVs, to empower and support businesses toward net zero. 2022 saw 166,000 meters supplied with a green product.

ENGAGEMENT IN ACTION



Supporting the ambitions of COP26

Businesses are increasingly looking at ways to reduce their carbon footprint and therefore traceability and transparency of where their energy comes from allows companies to do this in a way they can manage and measure. Energy Customer Solutions green electricity matched to a specific renewable assets supports the demand by business to decarbonise.

In October 2021, SSE Business Energy provided the power for all three COP26 permanent venues in Glasgow. The summit's power supply came from a Wind Farms in

Perthshire operated by SSE Renewables.

The Scottish Event Campus (SEC) moved to renewable energy sources in 2020 as part of its long-term sustainability strategy with SSE Business Energy providing 100% renewable energy to the 14,300 capacity arena for the occasion.

Given the objective of COP 26 in tackling climate change SSE Business Energy supported the ambitions of the event in the carbon reductions at the venues.



Providing affordable and clean energy

SSE Distributed Energy

New horizons for SSE Enterprise

Following the sale of its Contracting and Rail businesses, SSE Enterprise has refocused its business on distributed energy. Now called SSE Distributed Energy, the business helps people and places reach their net zero targets by adopting a 'whole system' approach to connect localised and flexible energy assets. It is focused on accelerating growth in battery storage and solar; as well as supporting decarbonisation through EV infrastructure, electrical connections, heat networks and smart places.

Over 2021/22, SSE Distributed Energy has seen key milestones in its developing solar and battery storage business, including a secured 380MW solar and battery pipeline and with over 1GW more of other sites currently under assessment. Existing grid connections at legacy coal-fired sites, such as Ferrybridge and Fiddler's Ferry, puts SSE Distributed Energy in a strong position to deploy battery storage at scale and pace.

Battery Storage assets providing flexible power

Battery storage is crucial when it comes to balancing the electricity grid and paving the way for society to move towards net zero. As a result, SSE Distributed Energy is actively growing its battery storage pipeline. In 2021 SSE purchased the project development rights for its first 50MW battery storage asset on a consented site in Wiltshire. Construction will begin in summer 2022, with full energisation expected in summer 2023.

Once built, this battery will benefit from the remote monitoring and trading services

now offered in SSE Distributed Energy through the SSE Enhance platform. The platform will integrate with the site control and monitoring systems and also allow smart trading to maximise the value of these assets.

Expanding solar capabilities

SSE Distributed Energy acquired its first large-scale solar development project in January 2022. Solar technologies are a key complementary technology to SSE's existing portfolio of low carbon infrastructure such as wind and hydro that support the energy transition.

The 30MW solar farm at Littleton Pastures is located near Evesham in Worcestershire. Once complete in late 2023, the 77-acre site will be capable of powering some 9,400 homes.

Advocating for heat networks

Taking action to decarbonise heat sources is arguably one of the biggest challenges facing UK energy policymakers over the next few decades. Heat networks have the potential to be a cost-effective way of reducing carbon emissions from heating. Over 2021/22, SSE Distributed Energy undertook a range of activity advocating for heat networks. It submitted responses to key consultations including the Scottish Government's Heat networks delivery plan consultation and three Department for Business, Energy and Industrial Strategy (BEIS) consultations: Heat Networks: Proposals for Heat Network Zoning; A market-based mechanism for low-carbon heat; and, Recovering the costs of heat network regulation.



"While climate targets are agreed globally and translated into national plans, the practical actions are implemented locally. Cities, towns and communities will reduce their carbon footprint by turning to electric transport, transitioning away from fossil fuels for heat, and generating more electricity locally. SSE's distributed energy division has the expertise to support all of those practical actions."

Neil Kirkby, Managing Director, SSE Enterprise

SSE Distributed Energy also works regularly with its trade associations, The Association for Decentralised Energy (ADE) and Energy UK, and is part of their heat networks working groups. It is also a founding member of the Heat Network Industry Council, a group key stakeholders in the heat networks sector working together to find solutions to decarbonising heat networks.



PARTNERING IN ACTION



Decarbonising heat networks to support the path to net zero

In September 2021, SSE Distributed Energy outlined an innovative project in partnership with National Grid, which aims to decarbonise heat networks, capturing waste heat from electricity transformers to generate hot water and space heating for homes and businesses. The technology offers a route to net zero heat when applied to transformers served by 100% renewable electricity from wind or solar farms. It is estimated that the heat recovery project will initially reduce heat network carbon emissions by more than 40% versus traditional gas-led systems.

The heat recovery project can potentially save millions of tonnes of CO2 every year if rolled out across National Grid's network of transformers across England and Wales, harnessing this waste heat via SSE Distributed Energy's heat networks to serve towns and cities across the region. Due to the location of the electricity transformers, they have the potential to become valuable community assets turning transformers into community 'boilers' that serve local heat networks with a low or even zero-carbon alternative to fossil-fuel powered heat sources such as gas boilers.

SSE Distributed Energy's heat recovery technology is



currently undergoing a proof-of-concept trial at National Grid's Deeside Centre for Innovation, the first facility in Europe where assets associated with electricity networks can be tested off-grid. The centre is designed as a unique environment for developments and trials of new technologies and practices. Deeside is a key part of National Grid Electricity Transmission's Innovation programme, a series of projects, informed and developed by stakeholders, innovating to address the challenges of the energy transition.

ENGAGEMENT IN ACTION



The road to renewables

In October 2021 SSE's COP26 electric bus spent 11 days showcasing net zero projects over 1,000 green miles on its 'road to renewables' concluding in Glasgow. As part of the engagement undertaken with stakeholders on this journey the bus visited the Scottish Parliament to give MSPs their chance to learn about the benefits, both environmental and economic, in the transition towards net zero.

The bus made a stop at First Caledonia bus depot, where SSE is helping install charging infrastructure to power 150 clean green buses for Glasgow at what will be the biggest depot in the UK, once finished, and provide cleaner air for the city.

The First Bus EV charging facility will support the transport transition and a more sustainable means of transport.

> 1,000
green miles traveled

> 100
Stakeholders engaged

Investing in industry, innovation and infrastructure

Significant investment is needed in electricity infrastructure and new technologies to deliver an accelerated transition to net zero.

It is understood that the electricity sector will be the first to decarbonise in order to support the decarbonisation of other sectors and allow the transition to net zero at pace. SSE seeks to accelerate this decarbonisation and has an ambitious investment plan out to 2026 focused on low-carbon electricity assets and infrastructure. The scale of the transition to net zero will require continuous innovation and new technologies to be developed. SSE's approach includes carefully chosen partnerships to develop the technologies, experience and skills that it needs to accelerate projects in support of net zero.



Enable low-carbon generation and demand

Enable at least 20GW of renewable generation and facilitate around 2 million EVs and 1 million heat pumps on SSEN's electricity networks by 2030.

SSEN Transmission increased the renewable capacity connected to its network by around 1GW. SSEN Distribution progressed key innovation projects to support flexible markets and future infrastructure provision for low-carbon technologies.

SSEN Transmission made strong start of the first year of its five-year RIIO-T2 price control period and continued to deliver against its strategic objective to enable the connection of renewable capacity to its network. In 2021/22, there was 7.8GW of renewable capacity connected to SSEN Transmission's network, up from 6.8GW the previous year.

including being one of the founding partners of a new global smart grid partnership. It had around 56,000 electric vehicles registered in its licence areas and around 46,000 heat pumps connected to its networks.



In 2021/22, SSEN Distribution had 12 ongoing strategic partnerships and initiatives exploring smart grid solutions to support low-carbon technologies,



Our progress

SSEN Distribution has

12

strategic partnerships and initiatives exploring smart grid solutions to support low-carbon technologies

7.8GW

Renewable capacity connected to SSEN Transmission's network in 2021/22

Creating value in the transition to net zero	48
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Industry, innovation and infrastructure

Performance summary

Category	Key performance indicator	Unit	2021/22	2020/21	2019/20
Enabling the connection of low-carbon technologies	Cumulative total of renewable generation capacity connected to SSEN Transmission's network	GW	7.8	6.8	6.3
	Electric vehicles registered in SSEN Distribution's licence area ¹	Number	c. 56,000	-	-
	Heat pumps connected to SSEN Distributions network ¹	Number	c. 46,000	-	-
	SSEN Distribution's supply points with communicable and smart capability ³	Number (% of reported customer numbers)	1,425,834 (38)	902,703 (23)	333,546 (9)
Investing in critical low-carbon infrastructure	Investment and capital expenditure (adjusted):				
	SSEN Transmission	£m	614.4	435.2	329.0
	SSEN Distribution	£m	364.8	350.8	364.9
	SSE Renewables	£m	811.0	294.3	342.7
Supporting research and innovation	Thermal generation and gas storage	£m	131.4	108.4	177.2
	Spend on research and innovation ²	£m	12	12	-
	Employees working in research and development roles (full-time equivalent) ²	Headcount	57	42.5	-

1 Figures are for calendar year 2021. As SSE's 2030 Goal was updated in 2022 to include ambitions around the facilitation of EVs and heat pumps on SSEN Distribution's network, this is the first year this information is being disclosed in SSE's Sustainability Report.
 2 Calculated using the number of smart meters connected to SSEN Distribution's network which are communicable by SSEN as a proportion of SSEN Distribution's reported customer numbers.
 3 Over 2020/21, SSE undertook a strategic review of its work on investment in research and innovation. 2019/20 data was not collated but instead a baseline of 2020/21 data was created against which to benchmark future years' investment.

Creating value in the transition to net zero

Achieving net zero will mean fundamental changes right across the economy and society, which create opportunities for increased efficiency and economic prosperity.

Investing in a net zero future

SSE's approach is to invest in a well-balanced mix of assets and businesses that support the net zero transition. The completion of the sale of SSE's remaining stake in gas distribution operator SGN represented progress towards sharpening the Group's focus on net zero.

In November, SSE published its £12.5bn Net Zero Acceleration Programme to 2026 aimed at accelerating clean growth, alongside ambitious 2031 targets, aligned with net zero and 1.5°C. It is estimated that SSE's capital investment could total in excess of £25bn this decade in the UK and Ireland. This significant investment will contribute towards tackling climate change whilst securing indigenous energy supplies and creating high quality

low-carbon jobs. It will also enable deliver of around 20% of the UK's revised 50GW offshore wind target and over 20% of UK electricity networks investment, whilst deploying flexibility solutions and exporting renewables capabilities overseas.

A central role for innovation

The transition to net zero will require transformation across the energy system, and SSE's focus is on enabling, harnessing and deploying new technologies and innovations which can accelerate this journey. SSE has a well-established approach to innovation, which enables its businesses to partner with others to develop the technologies, experience and skills that it needs to accelerate projects in support of net zero.

£12.5 bn
Investment and capex planned in the five years to March 2026

With a potential to exceed

£25 bn
by the end of the decade.

£12m
Spent on research and innovation projects

SSE's approach to innovation and technology

SSE is focused on enabling, harnessing and deploying new technologies and innovations which can accelerate the journey to net zero.

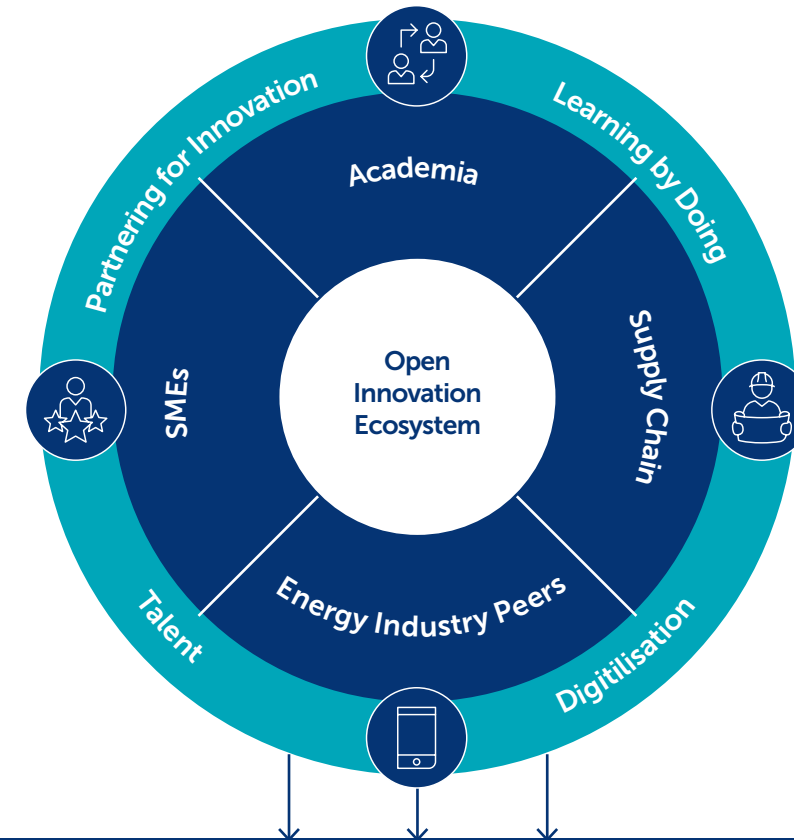
Empowering innovation in SSE's business units

Each SSE business sets their own innovation priorities; whilst Group services co-ordinate cross-cutting innovation and growth areas. An open innovation ecosystem supports the SSE businesses to achieve their innovation priorities which is harnessed through four enabling pillars (Partnering for Innovation;

Learning by Doing; Digitalisation; and, Talent) which provide the businesses with access to technologies, experience and skills.

A culture of innovation is promoted through a dedicated innovation team within SSEN and two Engineering Centres of Excellence. The Networks Innovation team provide expertise

to leverage regulatory funding for innovation and their focus is on accelerating a low-carbon transition and co-creation with partners to develop whole-system solutions. The Engineering Technology Centres of Excellence with SSE Renewables and Thermal enable technology and digital solutions for cost-effective renewables and innovation in pumped hydro, CCS and hydrogen.



Innovation objectives

- 1. Creating new markets and increasing revenue:** Developing credible business cases to harness new technologies, mitigate the risk of disruption and agility to meet net zero.
- 2. Increase efficiency and performance:** Accelerating readiness of technologies, harnessing external expertise and building capability to develop and leverage digitalisation.
- 3. Minimising risk:** Sharing knowledge and best practice with industry, peers and stakeholders to deliver net zero solutions which are supported by government and regulators.
- 4. Building future capabilities:** Creating an innovative culture with diverse perspectives, experiences and skills and align talent recruitment with future capability.

Industry, innovation and infrastructure

PARTNERING FOR INNOVATION



SSE seeks to proactively engage with external partners including its peers, local authorities, supply chain, academia and wider industry and has built significant expertise and capability in forming effective consortia. Co-creation with energy industry peers is crucial to facilitate whole system solutions and SSE is a member of a number of ongoing Collaborative Innovation Partnerships. SSE has an enduring commitment to the University of Strathclyde of more than seven years and has been a member of the Imperial Business Partners programme for over two years.

Value created

- Proactive engagement with stakeholders
- Develop whole-system solutions
- Leverage external expertise, skills and funding
- Supported, open innovation ecosystem

Innovation in action

Decarbonising heat networks – page 45

SSE Distributed Energy is partnering with National Grid to capture waste heat from electricity transformers to generate hot water and space heating for homes and businesses.

Trialling SF₆ alternatives – page 96

SSEN Transmission is working with suppliers to use new, more environmentally friendly gas insulated equipment by installing SF₆ alternatives across its network.

LEARNING BY DOING



SSE's aim is to accelerate technologies to higher readiness levels for deployment, learn from other utilities and industries and mitigate the risks of implementation of new technologies. SSE is a founding member of two National Demonstration Research Centres and leading industry projects such as Project LEO and Electricity Transmission Collaboration Panel, through which the businesses are able to manage trials to test and scale new solutions.

Value created

- Accelerate technologies to higher readiness levels in Demonstration Centres
- Mitigate risk of disruption
- Co-creative learning, sharing knowledge and best practice with industry, peers and stakeholders
- Build credible investment cases

Innovation in action

Zero carbon clusters – page 64

SSE Thermal is partnering with more than 25 leading industrials to develop plans for hydrogen and CCS as part of zero carbon industrial clusters.

Demonstrating smart grids – page 63

SSEN Distribution is a founding member of a new global smart grid partnership that will facilitate the sharing of learnings from innovation projects and support a collaborative transition to a decarbonised future.

TALENT



SSE promotes a culture empowering employees to drive innovation and develop the ability to make decisions in uncertainty. This is done through programmes such as Generation Innovation, Enterprising Ideas, the Career Development Programme, and a knowledge transfer partnership with the University of Strathclyde. SSE's talent strategy focuses on inclusivity, fairness and flexibility to actively engage a diverse range of talent in the market, as well as developing future leader learning for all and the capability to respond to the future needs of the business.

Value created

- Engage employees within a culture of innovation
- Align talent recruitment with future capability requirements
- Provide skills to innovate in high uncertainty

Innovation in action

Encouraging employee innovation – page 78

SSE Distributed Energy has created a new innovation platform for employees to deliver solutions to key operational challenges.

Investing in future capability – page 78

Developing a unique Procurement and Commercial Leadership Development Programme to deliver new skills for the energy transition to zero carbon.

DIGITALISATION



Investment in and adoption of digital is fundamental to achieving successful development, efficient operation and responsible ownership of energy infrastructure. SSE invests in and adopts a range of digital solutions, including drones, AI and Digital twins. SSE continues to strengthen and evolve its approach to cyber risks with control frameworks to identify threats and reduce exposures. SSE also supports using open data to manage the network better and improve the customer experience.

Value created

- Capability to develop and leverage new digital platforms and technology
- Detect, protect and responding to evolving cyber risks
- Proactive engagement with wider industry and digitalisation of the energy system

Innovation in action

Using AI to balance the grid – page 42

SSE Airtricity has partnered with Cool Planet to help alleviate pressure on Ireland's electricity system and intelligently balance the national grid.

Partnering on digital solutions – page 57

SSE Renewables has launched a digital ventures team and partnered with Avanade and Microsoft to deliver solutions to net zero at speed.



Committed to decent work and economic growth

Driving sustainability in the supply chain



As described in detail on page 59 of SSE's Annual Report 2022, an overhaul of SSE's sustainable procurement strategy began in 2020 and continued to be a priority for the business over 2021/22. With plans to invest £25bn in low-carbon infrastructure over the next decade, SSE recognises there are numerous risks from the mismanagement of sustainability issues, as well as enormous opportunities from a focus on the socio-economic and environmental value created through its supply chain activities. SSE is in the process of transitioning to a mature sustainable procurement model where sustainability risks are fully managed alongside opportunities to collaborate and drive innovation. The key actions setting out how SSE is delivering this change are shown in the graphic below.

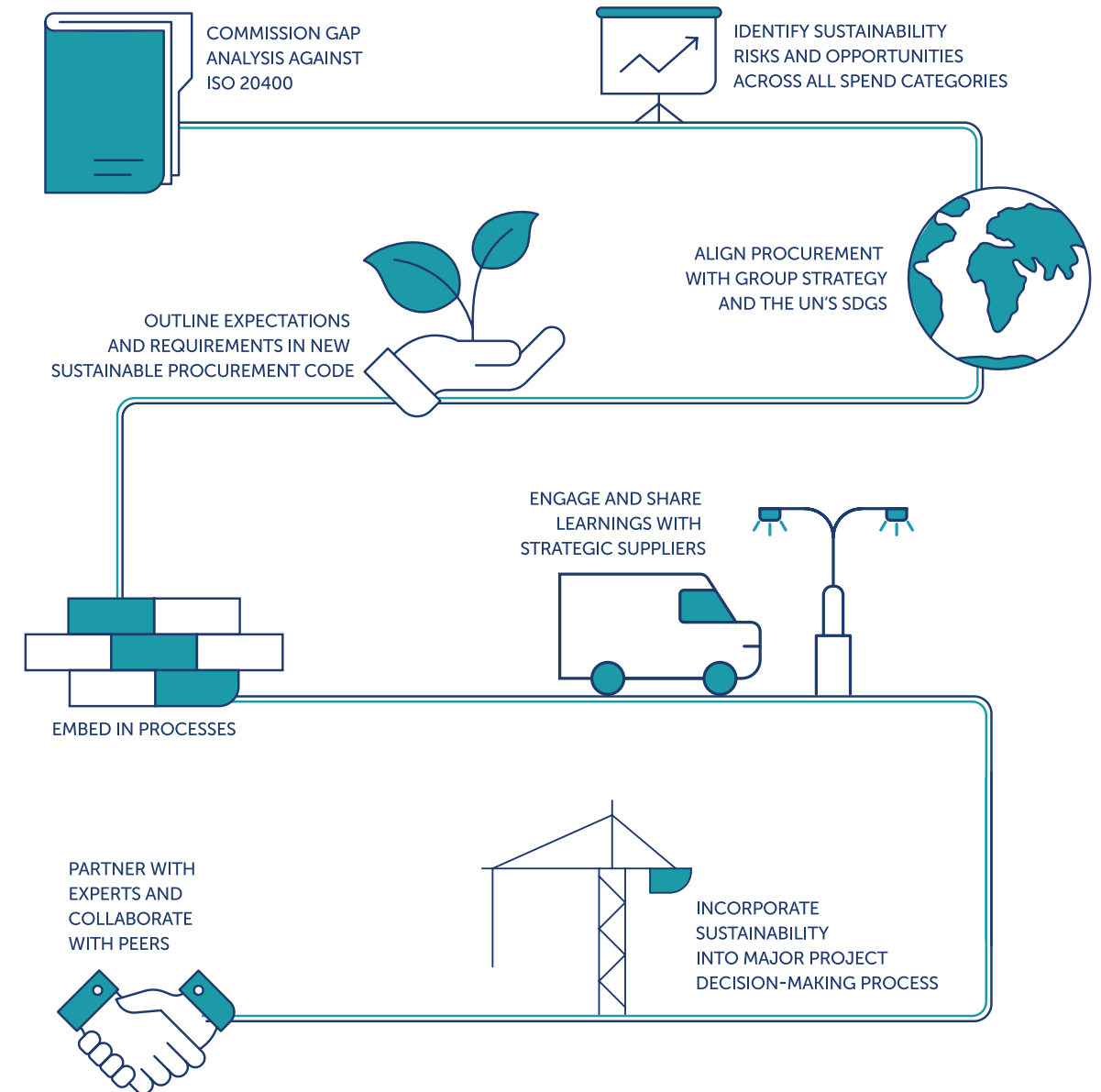
"The scale of the challenge to meet net zero is so great, we need all hands on deck. That is why I am delighted some of SSE's key supply chain partners have joined together to work on tricky sustainability challenges facing our sector. From pinning down some elusive scope 3 emissions, to building in circularity into the products we all need, I am truly excited by the potential of this new, Powering Net Zero Pact."

Ronnie Fleming
Chief Procurement Officer



One particular area in which SSE made significant progress in 2021/22 was the roll-out of a new supply chain reporting tool across all of SSEN Transmission's active large capital projects. The Sustainability Data Capture Tool (SDCT), which is specifically designed to manage and visualise supply chain sustainability performance at a project level, is used to measure sustainability progress and to meet regulatory reporting requirements. SSEN Transmission aims to use this data to develop baselines, set targets, and implement data-based decision making to drive further sustainability and meet business goals.

Transitioning to a mature procurement model



ENGAGEMENT IN ACTION



Measuring social value in the supply chain

In 2020/21, recognising that the energy sector is in transition with a need for new skills, SSE's Procurement and Commercial (P&C) department developed a Leadership Development Programme a key part of which required the cohort of P&C professionals to deliver a project that would add value to SSE Group. The project selected by the cohort focused on the of creating and measuring social value within SSE's supply chain.

The project involved working closely with SSE's supply chain partners on its major projects to enhance the jobs and skills impact of investment. This included: creating partnerships at community level; engaging SSE's supply chain to support its Sustainable Procurement Code; increasing skillsets within

the industry through training opportunities; providing local employment opportunities; and attracting talent who want to work for companies that incorporate social value.

Over 2021/22, SSE began piloting its approach across five projects over a period of six months and due to finish in 2022/23. The pilot has included embedding social value into tender requirements, engaging with suppliers on employability, apprenticeships, and graduate programmes, and asking suppliers to provide commitments on social value and reporting on delivery. SSE are working with sustainability experts Action Sustainability to produce a roadmap with recommendations for the full-scale roll-out of the approach which will embed learnings from the pilot.

Embedding sustainability in Large Capital Projects

In early 2021/22, Deloitte undertook a review of SSE's Large Capital Project (LCP) governance framework and made a recommendation that sustainability should be embedded throughout the process to align with the company's business goals and material UN Sustainable Development Goals (SDGs). SSE recognised that to meet its 2030 goals, and deliver against the UN SDGs, its Large Capital Projects should be designed and constructed to enable the journey to net zero, deliver socio-economic benefits and facilitate a just transition. The company consequently undertook a refresh of the sustainability requirements in its LCP governance

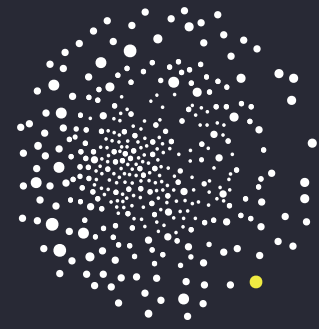
framework to meet four key objectives:

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

The newly updated LCP governance framework requires LCP project teams to embed sustainability throughout the

project process, ensuring sustainability risks are mitigated and sustainability opportunities are maximised across 10 sustainability criteria aligned to the UN's SDGs. This covers key topics from whole life carbon, climate adaptation, circular economy and biodiversity to modern slavery and human rights, and maximising local content.

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



POWERING NET ZERO PACT

COLLABORATION FOR A JUST ENERGY TRANSITION TO NET ZERO

The Powering Net Zero Pact ("the Pact") is a new initiative created by SSE with 10 other founding partners as a legacy of COP26. The Pact brings together companies across all tiers of the power sector globally – including civils, shipping, renewables, electrical engineering, and others – to achieve a fair and just energy transition to net zero. Over a six-month period, the 11 founding partner companies of the Pact – which, alongside SSE, includes: Balfour Beatty; DEME Group; GE Renewables; Hitachi Energy; NKT; RJ McLeod; Siemens Energy; Siemens Gamesa; Subsea 7; and Vestas – met on a regular basis to agree areas of focus, shared commitments, and topics for future collaboration.

The Pact focuses on five areas of ambition: achieving net zero carbon emissions; protecting and enhancing the natural environment; transitioning to a circular economy; guaranteeing fair work and sustainable jobs; and adding value to local communities. Each area of ambition has a shared commitment and area for collaboration, as detailed in the table on the next page.

Any organisation that wants to be involved in driving forward a just energy transition to net zero can become a Powering Net Zero Pact signatory and part of a network of leading global companies committed to working together to deliver real change. To sign up to the Pact, companies must:

- Be involved in some part of the power sector;
- Meet all five of the shared commitments; and
- Be willing to participate in an action-focused working group for at least one of the five collaboration topics.

More information can be found at sse.com/sustainability/poweringnetzeropact or by emailing poweringnetzeropact@sse.com.

5 AREAS OF AMBITION	5 SHARED COMMITMENTS	5 TOPICS FOR COLLABORATION
Achieve net zero carbon emissions	Work towards science-based carbon targets, aligned to 1.5 degrees by 2025*	Develop understanding and quantification of scope 3 carbon emissions
Protect and enhance the natural environment	By 2025, publicly disclose wider environment metrics, including water use, air quality and biodiversity, recognising the importance of the wider natural environment in getting to net zero	Share approaches to managing, protecting and enhancing biodiversity, with the aim of developing a framework for achieving Biodiversity Net Gain
Transition to a circular economy	By 2025, set a waste reduction target through the incorporation of circularity	Develop innovative products and construction methods to increase resource efficiency and design out waste
Guarantee fair work and sustainable jobs	Create a roadmap for the skills needed for net zero and guarantee fair work standards: <ul style="list-style-type: none"> • Aim to prevent all life-changing safety incidents • Work towards paying all workers at least a real Living Wage • Acknowledge the right to freedom of association for all workers • Recognise the importance of greater inclusion and diversity, with targets publicly disclosed by 2025 • Implement a robust approach to good business ethics with clear channels for speaking up against wrong-doing 	Develop a targeted modern slavery and human rights abuse risk-based approach across global supply chains
Add value to local communities	Identify and commit to common responsible developer, constructor and operator principles by 2025	Develop and nurture competitive, local supply chains close to assets
UNDERPINNED BY A SHARED STRATEGIC APPROACH		
Business strategies aligned to the UN's Sustainable Development Goals	Sustainability questions included in tenders and sustainability requirements rolled out through supply chains	Annual meeting of signatories to review commitments and continue ambitious progress

* Where companies face significant technological and methodological challenges for setting SBTs, a commitment to working towards SBTs with an annual update on progress will be accepted

Founding partners:



Together the Powering Net Zero Pact founding partners:

<p>have operations in</p> <p>>100</p> <p>countries</p>	<p>employ</p> <p>240,000</p> <p>people globally</p>	<p>work with</p> <p>120,000</p> <p>suppliers</p>
<p>have plans to invest</p> <p>£16bn</p> <p>in the net zero transition</p>	<p>had a combined annual turnover last year of</p> <p>>£55bn</p>	

Industry, innovation and infrastructure

Ambitious renewables growth to support net zero

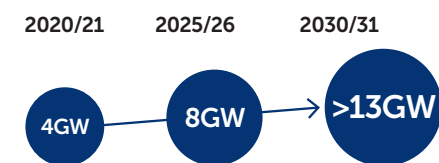
SSE Renewables' considerable expertise in the development, construction, and operation of renewable electricity, alongside an enviable pipeline of high-quality projects, means it is at the forefront of providing the clean energy needed for the net zero transition.

Supporting the delivery of accelerated renewables ambition

The British Energy Security Strategy published in April 2022 set out enhanced ambitions to drive the delivery of net zero, increasing a target for offshore capacity from 40GW to 50GW by 2030.

SSE's Net Zero Acceleration Programme out to March 2026, seeks to deliver a doubling of installed renewable capacity to 8GW. SSE Renewables also has further ambitions to increase this to over 13GW by 2031. These plans will enable delivery of around 20% of the UK's enhanced offshore wind capacity target and are crucial in supporting SSE's refreshed 2030 Goal of increasing renewable generation output fivefold between 2017/18 and 2030, to 50TWh a year.

SSE has ambitious plans for increasing installed renewable generation capacity:



Progressing flagship wind projects

SSE Renewables made good progress on key offshore projects in 2021/22, including reaching financial close on Dogger Bank C and progressing construction at Dogger Bank A and B (each 1,200MW, SSE Renewables share 40%). In February 2022, SSE Renewables and Equinor each sold a 10% share in Dogger Bank C to Eni. Construction was also progressed at Seagreen 1 (1,075MW, SSE Renewables share 49%) and first power is currently expected in July.

SSE's onshore project construction has also progressed over 2021/22. At SSE's Viking wind farm (443MW) in Shetland, turbines are expected to be installed in early 2023 and completion is planned

for July 2024. When complete, Viking wind farm is expected to be amongst the highest-yielding onshore wind farms in Europe. In addition, progress at Lenalea wind farm (30MW, SSE Renewables share 50%) in Ireland will see it be commissioned in late 2022/early 2023.

At 31 March 2022, SSE had 2.4GW of renewable energy capacity in construction (based on equity share).

Developing a strong domestic pipeline

SSE Renewables is currently building more offshore wind than anyone else in the world and, over 2021/22, it continued to expand its sector-leading pipeline with opportunities for renewable development across the UK and Ireland.

In January 2022, SSE Renewables added its first floating offshore wind project to its domestic pipeline with the success in Crown Estate Scotland's ScotWind offshore wind seabed leasing process as part of a consortium with Marubeni Corporation and CIP (Copenhagen Infrastructure Partners). The up-to 2.6GW site (SSE Renewables share 40%) in the Firth of Forth will be one of the largest floating wind projects in the world and aims to start generating by 2030.

In Ireland, SSE Renewables will now progress Arklow Bank Wind Park 2 via the new Marine Area Planning regime. The revised project will proceed with an increased capacity of 800MW and, subject to securing the necessary consents and route to market, could be complete by 2028. A foreshore licence has been secured for site investigations for the 1GW Braymore Wind Park project off the north-east coast and an application has been submitted for the 1.2GW Celtic Sea Array off the south-east coast. Applications for Marine Area Consent for both Braymore Wind Park and the Celtic Sea Array will take place in the Irish Government's next phase, expected in 2023.



"With wind power the most cost-efficient source of generation, SSE Renewables' portfolio of wind assets and its considerable pipeline of projects will support a more affordable transition net zero for energy consumers in the UK and Ireland. We also have our sights set internationally, expanding ambitions into new carefully selected markets overseas."

Stephen Wheeler
Managing Director,
SSE Renewables

At 31 March 2022, SSE's pipeline of renewable capacity in the UK and Ireland consisted of 2.4GW in construction, up to 2.1GW consented, up to 6.5GW requiring consent and a further 2.8GW of future prospects.

Driving growth overseas

With many countries setting out increasingly ambitious climate change targets, the market for renewables globally is growing rapidly and SSE continues to develop options for exporting its long-held renewables expertise to selected new geographies. SSE Renewables' strategy to export its capabilities in offshore wind

development, construction, and operation to selected international markets gained momentum over 2021/22.

In July 2021, SSE Renewables announced the creation of a 50/50 joint venture with ACCIONA Energia to develop offshore wind opportunities in the Polish energy market, with an application having been made by SSE Renewables for offshore development rights in the Baltic Sea, which would be codeveloped with ACCIONA Energia.

In addition, in September 2021, SSE Renewables signed an agreement to create a joint ownership company with Pacifico Energy, one of Japan's largest developers of renewable energy, that will pursue the development of offshore wind projects in Japan. The creation of SSE Pacifico also involved the acquisition of an 80% interest in 10GW of early-stage development opportunities across Japan.

Most recently, in April 2022, it entered into an agreement to acquire Siemens Gamesa Renewable Energy's (SGRE) Southern Europe wind, solar and batteries development platform. The SGRE portfolio includes c.3.9GW of onshore wind development projects across Spain, France, Italy and Greece, with scope for up to 1GW of additional co-located solar development opportunities.

In the Netherlands, SSE Renewables has submitted bids in the 1.4GW Hollandse Kust (west) offshore wind tender for two separate sites of 700MW each. It has formed a 50/50 strategic partnership with Brookfield for the bids.

INNOVATION IN ACTION



Digital solutions to support the delivery of net zero

SSE Renewables has teamed up with technology leaders Microsoft and Avanade on a series of digital innovation projects which are developing solutions to improve understanding of the impacts wind farms have on surrounding ecosystems. Through the partnership, the companies are implementing two ground-breaking digital innovation projects:

- **Species monitoring using artificial intelligence (AI):** In May 2020, SSE Renewables installed four cameras on the Isle of May to pilot the use of AI to accurately monitor local puffin colonies as part of planning conditions for its Beatrice offshore wind farm. The AI technology gathers footage and automatically detects and counts the birds during their breeding season, and has learned not to count the same puffin twice in the field of view. This initial trial was finalised over 2021/22 and the AI technology has proven a success. Live deployment at Dunbeath, in Caithness, is expected to place in September 2022.
- **'Digital twin' site:** In April 2022, SSE Renewables submitted a bid to tender for the Hollandse Kust (West) project. The bid proposes using LIDAR, Sonar, hydrophones and AI, amongst other technologies, to create an ecological 'digital twin' of the site that will show in real-time what is going on below the surface of the water, enabling cause and effect to be modelled in a very transparent way. A requirement of the Dutch Government is that this data must also be open source, meaning that unprecedented amounts of data will be shared and it could be the world's largest digital research project of its kind.

SSE Renewables believes these projects will enable learning on how to limit and avoid negative impacts of wind farm developments while promoting the positive ones, and facilitate research and collaboration.






Industry, innovation and infrastructure


SSE Renewables UK and Irish pipeline and international growth opportunities*




0.7GW
bids submitted to the 1.4GW Hollandse Kust (west) offshore wind tender through a 50/50 partnership with Brookfield.

UK and Ireland pipeline

			
In construction	1.9GW	0.5GW	-
Consented/requiring consent	Up to 6.4GW	0.7GW	Up to 1.5GW
Future prospects	2.2GW	0.6GW	75MW





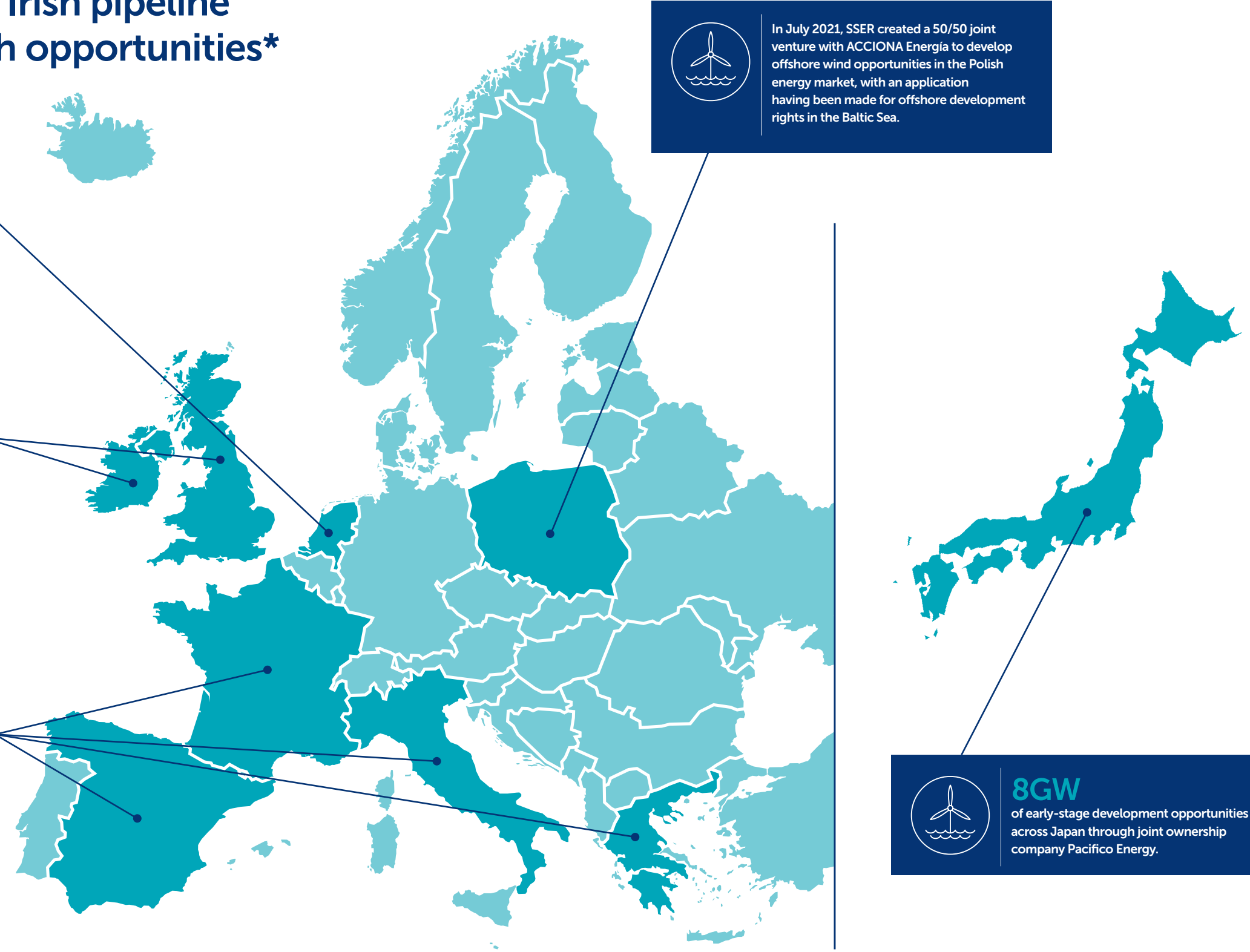
3.9GW



1GW

Onshore wind development projects across Spain, France, Italy and Greece, and scope for up to 1GW of solar development opportunities, through acquisition of Siemens Gamesa Renewable Energy's (SGRE) Southern Europe wind, solar and batteries development platform.

Key:

 Offshore wind
  Onshore wind
  Conventional and pumped storage hydro
  Solar



In July 2021, SSER created a 50/50 joint venture with ACCIONA Energia to develop offshore wind opportunities in the Polish energy market, with an application having been made for offshore development rights in the Baltic Sea.



8GW
of early-stage development opportunities across Japan through joint ownership company Pacifico Energy.

SSE Renewables is also assessing other growth options across selected markets in Northern Europe and the United States. Towards the end of 2021/22, it opened an office in Boston and is assessing participation in upcoming offshore leasing rounds, for example, in California, which is expected to take place in Autumn 2022.

*Figures based on equity share at April 2022. For more information see pages 38 to 41 of SSE's Preliminary Results for the year to 31 March 2022, available at [sse.com/investors](https://www.sse.com/investors).

Industry, innovation and infrastructure

Building a network for net zero

Significant growth in SSEN’s transmission network over the next decade will facilitate the connection of increasing renewable capacity in the north of Scotland, which will play a crucial role in supporting the UK’s climate ambitions.

Delivering a network for net zero

2021/22 marked the first year of SSEN Transmission delivery against its business plan for the new five-year RIIO-T2 price control period, running from 2021 to 2026. Significant progress was made building out critical network infrastructure to unlock renewable generation in the north of Scotland. This included progress on the Shetland HVDC transmission link, which will see Shetland connected to the GB transmission system for the first time, enabling the connection of renewables and supporting Shetland’s security of supply. The project is on track for completion and energisation in 2024. In addition, in January 2022, Tealing substation was completed, which will enable the connection of the Seagreen offshore wind farm.

Growing a network to meet the scale of change needed for net zero will require ambitious investment programmes over and above the baseline settlement agreed with Ofgem, the regulator, for nearly £2.8bn of approved ‘Certain View’ investment. During 2021/22 and early 2022/22, progress has been made on a number of plans for investments by SSEN Transmission over and above the Certain View. These additional investments, which are being taken forward through Ofgem’s Uncertainty Mechanisms, will be key to delivering a pathway for net zero.

Progress has included:

- **Approval of Final Needs Case (FNC) for the 2GW Peterhead to Drax link:** Ofgem approved the FNC in March 2022 for the initial work on the first of two planned HVDC links connecting Peterhead power station to demand centres in England. The project will be progressed jointly by SSEN Transmission and National Grid Electricity Transmission (NGET).
- **Initial Needs Case (INC) submitted for the Argyll and Kintyre 275kV Strategy:** SSEN Transmission

submitted the INC to Ofgem in March 2022 for work needed to upgrade the main Argyll transmission network from 132kV, supporting the forecast growth in renewables in the region.

- **Response to INC for the Fort Augustus to Skye transmission line:** in April 2022, Ofgem published its response to SSEN Transmission’s INC for the replacement and upgrade of the Fort Augustus to Skye transmission line, required to maintain security of supply and to enable the connection of renewable electricity generation along its route. This paves the way to progress to the FNC stage of the regulatory approvals process.

Facilitating the connection of renewables

The RIIO-T2 period is expected to deliver significant growth in the capacity of renewables connected to SSEN Transmission’s network, from around 6.8GW in 2020/21 at the start of RIIO-T2 to around 14GW by March 2026. In 2021/22, the total installed renewable capacity connected to the network increased by 1GW, to 7.8GW in total. SSEN Transmission is well on its way to delivering its RIIO-T2 goal to transport the renewable electricity that powers 10 million homes, which will be met once the installed capacity of renewables reaches 10GW. This growth will play an important role in achieving SSE’s medium-term 2030 Goal to enable low-carbon generation and demand, which is targeting at least 20GW of renewable generation capacity connected to SSEN’s transmission network by 2030.

7.8GW
Renewable capacity connected to SSEN Transmission’s network in 2021/22



“Excellent progress has been made in the first year of delivery of our RIIO-T2 business plan. Our strategic investments in new and upgraded infrastructure will support the growth in renewable energy and ensure that the abundant renewable sources of energy in the north of Scotland can be harnessed and transported to areas of high demand.”

Rob McDonald
Managing Director,
SSEN Transmission

By 2026, SSEN Transmission is targeting to transport the renewable electricity that powers 10 million homes

Preparing for future network requirements

Beyond the RIIO-T2 price control period, further network upgrades in both onshore and offshore transmission infrastructure will be needed to enable the forecasted growth in renewables.

Through its British Energy Security Strategy, the UK Government has revised its offshore wind capacity target to

50GW by 2030 and calls for faster, more strategic network build-out to connect the renewables needed for net zero. In addition, in January 2022, Crown Estate Scotland published the outcome of the ScotWind leasing round, awarding leases with a potential capacity of around 25GW, vastly exceeding the anticipated 10GW of potential capacity expected to be leased. Supporting these ambitions will require advancing major infrastructure projects in SSEN’s Transmission region.

SSEN Transmission also uses energy scenarios to ensure that it is preparing for future network requirements. National

Grid Electricity Transmission’s publication of its Networks Options Assessment (NOA) in January 2022 made clear the extent of future network development that will be needed and provided strong ‘proceed’ signals recommending several major reinforcements in the North of Scotland to meet forecast future energy scenarios. In SSEN Transmission network region, these included: two subsea high-voltage direct current (HVDC) links from Peterhead to England; a second HVDC link from Spittal in Caithness, connecting to Peterhead; and, strategic onshore reinforcements north of Inverness and between Inverness and Peterhead.

In addition, in May 2022, SSEN Transmission published an update to its own North of Scotland Future Energy Scenarios, which provide localised future energy scenarios that better represent energy users’ needs in SSEN Transmission’s network area. The analysis shows that by 2030 the north of Scotland will need up to c.31GW of renewable capacity to meet net zero by 2050. In the latest 2022 update, SSEN Transmission included additional considerations in its analysis such as hydrogen deployment and the electrification of rail.

INNOVATION IN ACTION



Exploring innovative solutions for a network for net zero

In November 2021, SSEN Transmission submitted a number of proposals to Ofgem as part of the Strategic Innovation Fund (SIF) programme, a scheme to help stimulate innovation that can help transform the UK’s energy systems in line with net zero targets in the coming years. In March 2022, three of these SSEN Transmission-led projects were successful in moving to the first round of funding, known as the ‘Discovery’ stage, and were each awarded £150,000.

The three projects include technology aimed at developing new innovative methods to build resilience and improve network reliability, and will provide critical learnings to help inform the future development of the energy system.

- **Network DC:** is looking at enabling installation of the offshore wind capacity required for net zero by demonstrating the capability of Direct Current Circuit Breakers (DCCBs) to support the development of HVDC grids. The development of offshore direct current networks cannot exist without DCCBs, which are needed to minimise the impact of faults, allowing power to keep flowing elsewhere on the network.
- **Project NIMBUS:** is exploring the capability to use high-resolution weather and climate data to help accurately predict the impact of climate change on transmission assets over their lifetime. This will lead to improved intervention planning and asset protection, which could extend asset lives by 10 to 20 years.
- **Project Incentive:** is investigating new solutions to address the issue of increased intermittent offshore wind capacity connecting to the grid. It will demonstrate the use of innovative voltage, current and frequency control technologies coupled with energy storage at the point of onshore connection of offshore wind farms, to allow offshore wind farms to stabilise the onshore grid and reduce the risk of blackouts.

A two-month ‘discovery’ phase on the proposals for each

project is currently underway, after which the projects can apply for the second phase of development, with the potential to be awarded up to £500,000 to take the project forward to further phases.



Industry, innovation and infrastructure

Powering communities to net zero

As local electricity networks undergo a transformation in the coming years, SSEN Distribution is building a strong foundation to meet the electricity demands of the future and make net zero a reality for customers and communities.

A stakeholder-led business plan for net zero

Local electricity networks will be a key enabler in the transition to net zero, as the electrification of heat and transport gathers pace alongside new smart flexible energy solutions. In December 2021, SSEN Distribution submitted its final RIIO-ED2 business plan for 2023 to 2028 to the energy regulator, Ofgem. The stakeholder-led plan aims to balance the need to accelerate investment in the smart and flexible electricity networks that will meet new decarbonisation demands, while keeping costs down for consumers and supporting those who are most vulnerable. It sets out a total expenditure of around £4bn to deliver improvements for customers and accelerate investment in its networks to power communities to net zero.

SSEN Distribution’s plan has six key goals focused on resilience, customers, and working towards net zero – one of which is to facilitate the connection of an additional 1.3 million electric vehicles (EVs) and 800,000 heat pumps in its license areas by 2028. This supports SSE’s refreshed 2030 Goal to enable low-carbon generation and demand, which has a target to facilitate around 2 million EVs and 1 million heat pumps on SSEN Distribution’s networks by 2030.

You can read the full business plan at [ssenfuture.co.uk](https://www.ssenfuture.co.uk).

Demonstrating future smart grids

The need to transform the energy system to address the climate emergency has never been clearer and it is critical that local electricity networks are an enabler rather than a constraint as society transitions toward a net zero future. To ensure this challenge is met, a core part of SSEN Distribution’s approach is to trial and demonstrate the potential

technological solutions that will be required for smart electricity grids.

SSEN Distribution has

12 ongoing strategic partnerships and initiatives exploring smart grid solutions to support low-carbon technologies

In 2021/22, SSEN Distribution had 12 ongoing strategic partnerships and initiatives exploring smart grid solutions to support low-carbon technologies. These included:

- **Project LEO:** taking place in Oxfordshire, it is one of the UK’s most ambitious, wide-ranging and innovative energy trials, seeking to accelerate the UK’s transition to a zero-carbon energy system. You can read more at project-leo.co.uk.
- **Optimise Prime project:** the world’s largest trial of commercial EVs which seeks to investigate the effects of commercial fleets on the electricity distribution network. Physical trials for the project began in August 2021. More information available at optimise-prime.com.
- **The Skyline project:** is establishing data sharing with the automotive and charge point industries, allowing Distribution Network Operators (DNOs) to pinpoint when and where new electricity demand to charge electric vehicles is coming from, to inform infrastructure requirements and improve customer experience.
- **Project Re-Heat:** the first DNO-led large scale heat trial and will see 150 heat pumps installed in domestic homes across three local authority areas. Those heat pumps will be connected to thermal storage units, enabling customers to be more flexible in the times they use electricity for heating.



“Local electricity networks are at the forefront of the transition to net zero, and the behavioural shift that will be needed by consumers as we move to smarter electricity networks will be unprecedented. Our focus is on trialling new methods and new technologies that will facilitate this transition in a way that provides the best value and is inclusive for all energy consumers.”

Chris Burchell
Managing Director,
SSEN Distribution

In addition, in November 2022 at COP26, SSEN Distribution announced it was one of the founding partners of a new global smart grid partnership, International Community for Local Smart Grids (ICLSG). See the case study on page 63 for more information.

INNOVATION IN ACTION



A new global smart grid partnership

Smart grids play an essential role in bridging the gap between international targets and local ambition, and they will be fundamental to achieving a secure, cost-effective, net zero future, whilst maintaining network resilience.

In November 2021, SSEN Distribution announced it was one of the founding partners of a new global smart grid partnership: the International Community for Local Smart Grids (ICLSG). Led by the University of

Oxford, the ICLSG consists of eight founding partners, including electricity distribution companies from the UK, Italy, Australia, New Zealand and Japan. It is a knowledge-sharing partnership founded to accelerate a fair, resilient and local transition to net zero. The new project is a first-of-its-kind five-year knowledge sharing partnership that will see community energy groups and electricity networks share key learnings from innovation projects, facilitate discussions around challenges

and support a collaborative transition to a decarbonised future.

5-year
knowledge sharing programme

8
Founding partners from around the world, from the UK to Japan.

Tackling GHG emissions from SSEN’s electricity distribution network

As its network develops to support the net zero transition, SSEN Distribution must ensure that it takes steps to reduce its own carbon footprint and the impact it has on the environment. In October 2021, SSEN Distribution became the first UK Distribution Network Operator to set science-based targets in line with a 1.5°C pathway, verified by the SBTi, which play an important role in supporting SSE Group’s net zero ambitions.

SSEN Distribution’s SBTi-approved targets are to:

- Reduce its combined scope 1 and 2 GHG emissions by 55% by 2033 from a 2020 baseline.
- Work closely with its supply chain so that 35% of its suppliers have a science-based target set by 2026.

In reducing its scope 1 and 2 GHG emissions, SSEN Distribution is targeting GHG emissions reductions from electricity losses and diesel generation. SSEN Distribution’s RIIO-ED2 business plan sets out an updated Losses Strategy, focusing on understanding and managing technical losses across the network, as well as enhanced SF₆ leakage reduction strategy. For more information on the work SSEN Distribution is doing to address GHG emissions arising from losses and SF₆, see pages 32 and 96 respectively.

The plan also outlines SSEN Distribution’s commitment to produce a diesel strategy



to transition away from carbon-intensive fuels on the Scottish Islands, where diesel backup plants are used to ensure continuity of supply. It will explore a number of options, including: looking into an alternative fuel type for its backup generation; progressing its involvement in a proposed a new mechanism for an

alternative solution to the Scottish Island diesel backup plants, called Hebrides and Orkney Whole System Uncertainty Mechanism (HOWSUM); and, working with engaging with its supply chain to understand what alternative flexible solutions are currently available.

Industry, innovation and infrastructure

A changing role for thermal generation in a net zero world

With thermal generation continuing to be relied upon to meet electricity system demand, SSE Thermal is actively developing low-carbon generation options to ensure continued security of supply and to provide the generation flexibility that society needs on the transition to net zero.

Delivering efficient CCGT plant for the near term

SSE Thermal is committed to the responsible phased reduction of unabated gas output at the same time as repurposing key assets for the net zero world. It is well understood that unabated thermal generation has a diminishing but essential part to play as the UK and Ireland transitions to net zero, and recent market volatility has reinforced the importance of its role in ensuring a resilient energy transition.

In 2021/22, the final phase of development at SSE Thermal's 893MW Keadby 2 progressed well. Commissioning started in October 2021 and a capacity market agreement will be in place from October 2022, therefore the power station is expected to be fully commercially available ahead of this date. Keadby 2 brings Siemens' cutting-edge turbine technology to the UK; this first-of-a-kind turbine will be Europe's most efficient CCGT and will displace older, more carbon intensive plant on the system. It is capable of being upgraded to decarbonise the system further, through hydrogen blending or carbon capture and storage. The completion of Keadby 2 will come at a crucial time to support the UK to secure indigenous energy supplies and provide continued flexibility for the electricity system as the country transitions to net zero.

Developing a thermal generation fleet for net zero

To deliver GHG reductions in line with a 1.5C pathway, considerable reduction in the emissions from SSE Thermal's generation plant will be required. To achieve this, SSE Thermal's strategy is

focused on both decreasing the output from, and therefore investment in, existing unabated generation whilst at the same time increasing investment to build a significant portfolio of carbon capture and storage (CCS) and hydrogen power stations and repurposing the assets for the net zero world.

SSE Thermal is developing CCS projects with Equinor at Keadby and Peterhead, as well as two further projects in the Humber, Keadby Hydrogen power station and a hydrogen storage facility at Aldbrough. These projects will play a pivotal role in helping to achieve national net zero targets, and SSE Thermal has made substantial progress over 2021/22. In January 2022, both Keadby and Peterhead Carbon Capture and Storage projects were submitted into Phase 2 of the UK Government's Cluster Sequencing Process, with outcomes expected to be announced in mid-2022. These projects combined could see up to 3 million tonnes of CO₂ captured a year.

In October 2021 the UK Government announced that the East Coast Cluster – comprising the Humber and Tesside regions – would be Track 1 clusters, or the first clusters supported to deploy shared CCS infrastructure by the middle of this decade. The Scottish cluster was identified as a 'reserve' Track 1 cluster and remains in line to progress to deployment as a Track 2 cluster by the end of the decade.

SSE Thermal also made progress on the development of its low-carbon hydrogen projects, alongside Equinor. For more detail on progress see the case study on the next page.



“Over the past year SSE’s Thermal generation assets have provided much needed flexibility to support a volatile energy market with increasing penetration of intermittent renewables, demonstrating the valuable role they have in delivering a resilient and orderly transition to net zero. Our focus remains on developing and progressing new low-carbon thermal generation options.”

Catherine Raw
Managing Director,
SSE Thermal

Exploring low-carbon hydrogen options

The UK Government's inaugural hydrogen strategy, published in August 2021, highlighted the important role it will play in providing flexible energy for power, heat and transport and the need for large hydrogen storage facilities.

In 2021/22, SSE announced the development of low-carbon hydrogen projects in the Humber, in partnership with Equinor:

- **Keadby Hydrogen Power Station:** the power station would have a peak demand of 1,800MW of hydrogen, producing zero emissions at the point of combustion. It would be the world's first major 100% hydrogen-fired power station, securing at-scale demand for hydrogen in the region for decades to come. With appropriate policy mechanisms in place, Keadby Hydrogen could come online before the end of the decade.
- **Aldbrough Hydrogen Storage:** with an initial expected capacity of at least 320GWh, it would be significantly larger than any hydrogen storage facility in operation in the world today. Hydrogen storage is expected to play an important role in a low-carbon hydrogen economy, balancing supply and demand with hydrogen produced using carbon capture and electrolytic technologies.

SSE Thermal is also involved in an initiative to promote the Isle of Grain as a location for a low-carbon hydrogen economy. This could provide the opportunity to bring low-carbon hydrogen to SSE's Medway site.

SSE Thermal sees significant further growth opportunities in this space, in line with the UK's target to deliver 10GW of low-carbon hydrogen production by 2030.



INNOVATION IN ACTION



K9 comes to K2

Digital innovation will play a central role in the transition to net zero, changing the way businesses work and operate. SSE Thermal's digital strategy aims to use data and technology to enhance digital asset management and maintenance capabilities already used across the SSE Thermal fleet.

In May 2022, Keadby 2 Power Station provided the testing ground for SSE Thermal's new digital strategy as SSE Thermal and Siemens employees at Keadby 2 welcomed a robot 'dog' to the site as part of a trial of the ANYmal D platform.

The ANYmal D platform allows sensory equipment to be carried robotically and autonomously. The sensory equipment carried for this trial included acoustical sensors, optical camera, LIDAR and thermal imaging, which was put through its paces to generate a

point cloud image of the environment, read analogue and digital gauges, generate video and still image capture, and generate infrared spectrum data from steam pipework and electrical infrastructure. The trial also assessed the mobility of the quadruped robot, its ability to generate a 3D picture of its surrounding environment, how it navigates around a complex power generation environment and also its interaction with people. SSE Thermal already deploys instrumentation on sites to control, protect, monitor, and to keep employees safe. The aims of the trial were to test emerging technology and start thinking about future applications of such a platform within its business. The trial was a success and, while some small challenges remain to be ironed out, the technology has proven its future potential and will inform SSE Thermal's future thinking.

Committed to decent work and economic growth

Considered planning for the social consequences of net zero provides an opportunity to create good quality jobs and share economic value widely.

Change of the scale and nature needed to achieve net zero brings social consequences, impacting people – employees, consumers, communities, suppliers, and wider society – in many different ways. SSE has a responsibility to influence those impacts positively, which is why its alignment to SDG 8: Decent Work and Economic Growth is a core strand of its strategic approach. In aligning to SDG 8, SSE has committed to being a global leader for a just energy transition to net zero, with detail on how it is meeting that goal detailed on the following pages.



Champion a fair and just energy transition

Be a global leader for the just transition to net zero, with a guarantee of fair work and commitment to paying fair tax and sharing economic value.

SSE was ranked the top company globally in the World Benchmarking Alliance's just transition assessment in November 2021.

Over 2021/22, SSE continued to engage widely on its Just Transition Strategy and published a second just transition report focused on action to support the worker transition to net zero. Underpinning its just transition approach, SSE maintained its Fair Tax Mark and real Living Wage accreditations, and completed its first year with the Living Hours accreditation. SSE contributed £4 of value to the UK and Irish economies for every £1 earned in adjusted operating profit, and granted over £11m to communities and charities across the UK and Ireland. It also led efforts to bring collaboration across its sector through the creation of the Powering Net Zero Pact.



Our progress

8
Consecutive years of Fair Tax Mark accreditation

1st year
of being Living Hours accredited

9
Consecutive years of being Living Wage accredited

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Creating an inclusive workplace	79
Getting everyone home safe	84

Committed to decent work and economic growth

Performance summary

Category	Key performance indicator	Unit	2021/22	2020/21	2019/20
Economic growth	Contribution to GDP (UK/Ireland) ¹	£bn/€m	5.8/438	5.2/439	5.7/650
	Jobs supported (UK/Ireland) ¹	Headcount	45,290/1,840	41,400/2,160	56,810/3,740
	Taxes paid (UK/Ireland)	£m/€m	335/46.4	379/20.4	421.6/18.1
Increased productivity	Employee productivity compared to national averages (UK/Ireland)	Number:1	4.1:1/2.9:1	3.2:1/1.5:1	3.8:1/1.7:1
	Investment in learning and development ²	£m	17.3	15.8	18.6
	Average training hours per FTE	Hours	20.7	9.0 ³	24.9
Promote development	Total procurement expenditure	£bn	c. 4.5	c. 2.4	c.2.2
	Average time taken to pay suppliers	Days	28	24	29
	Investment in communities ⁴	£m	11.2	10.6	8.2
Full, productive and inclusive employment	Employees on permanent contracts	%	94.4	94.0	95.4
	Employee retention/turnover rate ⁵	%retention/ %turnover	90.5/9.5	92.1/7.9	88.0/12.0
	Voluntary turnover rate	%	7.8	3.6	6.5
	Lost days due to sickness	Number	68,270	66,962	181,365
	Average lost days per head	Number	6.3	5.9	9.4
	Employee engagement survey score	%	82	82	76
Reduce the risk of modern slavery	Median gender pay gap (UK/Ire) ⁶	%	18.0/25.6	18.3/27.1	18.4/-
	Human rights grievances filed through formal mechanisms	Number	0	0	0
Labour rights	Total recordable injury rate – employees and contractors combined	Per 100,000 hours	0.17	0.15	0.16
	Employees covered by collective bargaining agreements ⁷	%	58.2	53.9	56
	Speak up (whistleblowing) contacts made ⁸	Number	52	66	88

1 From PwC analysis. Full report available on sse.com/sustainability.

2 See SSE's sustainability data tables available at sse.com/sustainability.

3 Information on this coronavirus-impacted reduction can be found on page 86 of SSE's Sustainability Report 2021.

4 See page 74 for further details.

5 Includes voluntary and involuntary turnover, excludes end of fixed term

contracts and internal transfers.

6 Data correct as at 5 April in each year. See page 48 of SSE's Annual Report 2022 for more information.

7 Includes only collective bargaining arrangements of which SSE is aware – employees may have personal arrangements in place too.

8 Data is recorded over calendar years, rather than financial years.



A fair and just transition

Ensuring the benefits of the net zero transition are shared widely, and that nobody is left behind.

Embedding the just transition in SSE's strategy

The case for climate action is indisputable. However, the way economies decarbonise is less definite. Without careful planning and deliberate consideration of the implications of the transition on people – whether that's workers, consumers or communities – risks the social legitimacy of net zero itself. A 'just transition' is therefore the fairest way of ensuring that the benefits of climate action are shared widely, whilst preventing an unfair burden of the costs on those with least able to afford it.

In November 2020, SSE became the first company in the world to publish a Just Transition Strategy. This Strategy outlines 20 principles to promote a fair and just

transition for workers, consumers and communities when transitioning 'in' to a net zero world, while at the same time transitioning 'out' of high-carbon activities. The importance of the just transition to SSE is reflected in its update to one of its four company 2030 Goals, with the explicit aim to 'Champion a fair and just energy transition'. The actions underpinning a just transition which are outlined within this 2030 Goal – guaranteeing fair work, fair tax and sharing economic value – form the structure of this section of SSE's Sustainability Report 2022.

For more information on SSE's just transition approach, go to sse.com/sustainability/just-transition-and-careers.sse.com/just-transition.

SSE's progress on the just transition over 2021/22

Communication and consultation on SSE's Just Transition Strategy

Throughout 2021/22 SSE met with a wide range of stakeholders to gather feedback and develop its just transition approach. This included meetings with policy makers, trade union partners, suppliers, oil and gas companies, investors, academics, and industry and skills bodies. Most importantly, SSE undertook primary research with its own employees that have transitioned from high to low carbon careers, including: a detailed survey of over 150 people; gathering information on engagement through its all-employee survey; and focus groups. In addition, SSE contributed to more than 30 stakeholder events over the year focused on just transition.

From principles to action

Using the findings from its research, engagement and consultation over the year, SSE published a new report 'From Principles to Action: Supporting workers transition from high to low-carbon careers' in September 2021. This report outlines 20 commitments for SSE, 10 recommendations for industry and 10 recommendations for governments which are all focused on practical actions to support workers transition.

At an industry and government level, these include things like developing 'all energy' frameworks for skills, fair work terms where there is public sector support for climate action, and making sure net zero sector plans embed the concept of a just transition. And for SSE, clear commitments include not asking for industry-specific experience unless it is specifically required, piloting an engineering conversion programme, and paying for workers to develop the skills they need. See the case study on page 61 of the Annual Report 2022 for more information.

Collaboration for a just energy transition

A just transition to net zero requires genuine collaboration, which is why over 2021/22 SSE worked with a number of partners to progress this shared objective. In advance of COP26, SSE was one of a small group of global energy companies, led by the Council for Inclusive Capitalism and BP, which helped shape the Just Energy Transition Framework for Company Action. This Framework which was launched during COP26 is the first-ever guide for companies on concrete actions they can take to implement an energy transition that advances both

#1 globally

In November 2021, SSE was ranked the top company in the World Benchmarking Alliance's just transition assessment which reviewed 180 global companies on their approach to just transition. SSE scored 14/16 points in the assessment, with the mean score across all assessed companies of just 2.7/16. Only 5% of companies scored above 8 points, with 84% of companies scoring <4 points and 32 companies scoring 0 on all just transition fundamentals.

social and environmental goals. The Framework's building blocks for action are tied to Climate Action 100+'s Net-Zero Benchmark Just Transition Indicator.

As a legacy of COP26, SSE led a group of global companies across the power sector to create the Powering Net Zero Pact with the principles of a just transition forming the basis of shared commitments. See pages 54 and 55 for information on this new world-first collaboration.

Scotland's Just Transition Commission

SSE's Chief Sustainability Officer was one of the Scottish Government's Just Transition Commissioners in its first iteration, which was created to gather evidence and advise the Scottish Government on actions to promote a just transition. The final report was published in March 2021, with a new iteration of the Commission set up later in 2021 to focus on delivery of these recommendations. SSE's Chief Sustainability Officer sits in the Energy Sector workstream of the commission which exists to specifically scrutinise the country's energy policy and strategy and ensure that the just transition is fully integrated.

Committed to decent work and economic growth

Paying a fair share of tax

Providing tax transparency and understanding the role of tax in a just transition to net zero.

At the highest level, society can address some of the distributional challenges of reaching net zero through a tax system where profitable organisations pay their fair share. SSE's commitment to the principles of fair tax is well-documented, and this commitment will make an important contribution to achieving a just transition.

SSE has been accredited with the Fair Tax Mark since 2014, which means the Fair Tax Foundation has independently assessed it as having a responsible and transparent approach to paying tax, and that SSE explicitly rules out the use of tax havens or an aggressive approach to tax avoidance. SSE's total tax contribution for 2021/22 is shown below, with more information found on page 58 of the Annual Report and within its Talking Tax 2022 report which will be published in autumn 2022.



Over 2021/22, SSE's total tax contribution was £944m, split between £375m in taxes paid (including £70m paid in corporation tax) and £569m in taxes collected. This is a decrease of 5.5%, 5.6% and 5.4% respectively compared to 2020/21. This small reduction was the result of three key drivers:

(1) 2020/21 tax figures include the tax contribution from SSE Contracting over the full financial year, whereas the disposal of this business in 2021/22 means that the tax contribution from SSE Contracting was only included up to 30 June 2021

(2) environmental taxes paid were lower this year due to outages at some generation sites; and

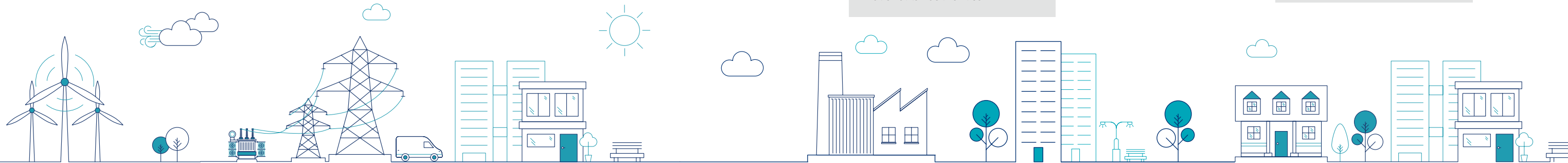
(3) environmental taxes collected were lower due to lower energy usage by business customers.



TAXES PAID:



TAXES COLLECTED:



SSE'S DIRECT OPERATIONS

SOCIETY



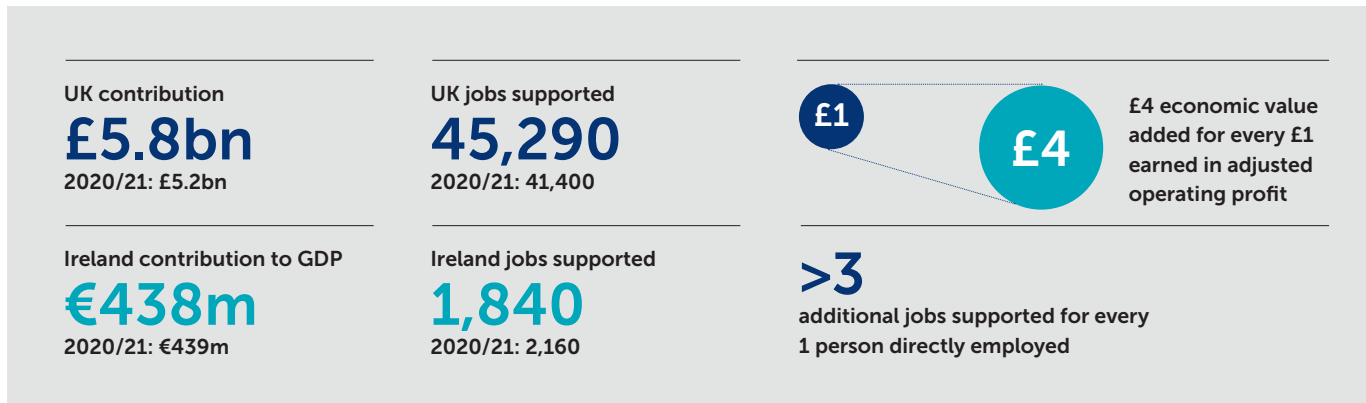
Committed to decent work and economic growth

Sharing economic value

Creating and sharing value with society by adding economic value, investing in communities and supporting sustainable supply chains.

Contributing to GDP and supporting jobs

With an investment plan of £12.5bn between 2021 and 2026, SSE recognises that the way this money is invested can deliver significant economic benefits to the places SSE operates within. To understand its wider socio-economic contribution, SSE has commissioned PwC to measure the value it adds to GDP and the jobs it supports across its home markets for the last 11 years. Over 2021/22, SSE contributed a total of £6.2bn to the combined UK and Irish economies, supporting more than 47,000 jobs.



CASE STUDY

Investing in flexible low-carbon assets and generating socio-economic benefits

The next generation of flexible thermal power stations critical for meeting the UK's carbon reduction targets include the Keadby and Peterhead Carbon Capture Power Stations which are being developed by SSE Thermal partner Equinor (see page 64). Investment in these technologies will present significant economic opportunities for communities and businesses. Over 2021/22, SSE commissioned BiGGAR Economics to analyse the potential socio-economic impact of Keadby and Peterhead carbon capture plants.

The Keadby Carbon Capture Power Station will be located in the Humber and analysis by BiGGAR Economics shows the project has the potential to generate £1.2bn for the UK economy over its lifetime. This is comprised of £470m which would be added to the UK economy through development and construction, with 7,300 years of employment supported. £570m will be generated for Yorkshire and Humber, and the East Midlands. On an annual basis once operational, the plant could contribute £53m to the UK economy each year and support 560 jobs.

Analysis by BiGGAR Economics on the Peterhead Carbon

Capture Power Station likewise showed the potential significant economic contribution of the project, totaling £1.2bn over its lifetime. It is estimated that the development and construction of Peterhead will add £470m to the UK economy, as well as 7,850 years of employment. On an annual basis once operational, the plant would contribute an average of around £50m to the UK economy and support 560 jobs. Of this, £190m could be added to the Scottish economy during development and construction, with 3,070 years of employment supported. Across the lifetime of the station, an average of around £35m would be added to the Scottish economy annually with 290 further jobs supported each year.



The Peterhead and Keadby socio-economic reports can be found on [sse.com/sustainability/reporting](https://www.sse.com/sustainability/reporting).

Supporting competitive, local supply chains

Core to a just transition is the maximisation of economic opportunity for people close to the places hosting renewables developments. An ongoing priority for SSE is to help create an environment where there is increased domestic content of projects, especially offshore wind developments. The ability to locally share the economic benefit of low-carbon investments through sustainable domestic employment, at scale, is a key component of delivering fairness: it means working people, particularly those currently in industries which are in decline, can access new skills and jobs. At the same time, this ambition must be balanced with the cost of delivering renewable power.

SSE believes that all levers should be used to achieve increased local content and more competitive domestic supply chains where infrastructure is being built. It is proactive in supporting policymakers and industry to work together, and has prioritised close collaboration with supply chain partners to bring about greater investment in the manufacturing of key components needed for its projects. Over 2021/22, key areas of progress included:

Key areas of local supply chain progress

Providing an important signal for investment in low-carbon assets and infrastructure in the UK and Ireland, SSE announced its £12.5bn Net Zero Acceleration programme for the five years to 2026.

SSE Renewables is continuing to work with Global Energy Group (GEG) to deliver a world-leading tower facility at Port of Nigg in Scotland, including providing support funding to make it happen. The company will work with GEG to fulfilling its role as a strategic backer, placing orders to meet its growing offshore pipeline in due course.

As part of SSE Renewables' successful ScotWind offshore wind bid, with its project partners it has committed to a £30m supply chain fund which will directly invest in ports and supply chain, including those companies transitioning from the oil and gas sector to get it ready for the floating wind opportunities not just in Scotland, but globally.

SSE Renewables' senior leadership team have taken leadership positions within industry bodies with the objective of supporting practical and actionable steps that will result in a sustainable domestic supply chain, capable of competing internationally. This includes: the Offshore Wind Industry Council, the Global Wind Energy Council, and the Scottish Energy Advisory Group.

SSE led the creation of the Powering Net Zero Pact, a world-leading global initiative which brings the power sector together to collaborate on difficult areas of sustainability with the goal of achieving a fair and just transition to net zero (see pages XX and YY). One of the five working groups for signatories of the Pact to collaborate on is how to better support competitive, local supply chains close to assets.

While voluntary action from developers is important in securing increased local content within projects, SSE believes there is an important role for government to both incentivise and regulate for increased local content. It continues to work closely with policymakers to develop policies that support local content, such as the UK Government's CfD Supply Chain Plan. It is also collaborating with international partners to share lessons learned from the UK's experience of growing local supply chains for onshore and offshore renewables.



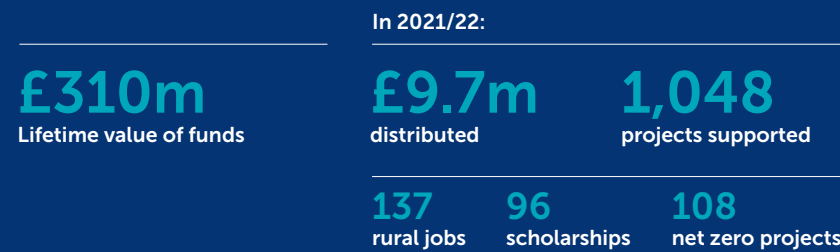
Committed to decent work and economic growth

Investing in communities and promoting resilience

An integral part of a just transition is sharing value with local communities. SSE is one of the largest corporate grant givers in the UK and Ireland and, over 2021/22, distributed and donated over £11m to support more than 1,000 community projects.

The majority of SSE's community giving comes from its SSE Renewables business, which for over a decade has provided communities close to its assets with funding for local or regional projects. SSE Renewables will invest over £310m locally in community funds from its current renewable projects over their lifetime. Over 2021/22, £9.7m was granted through SSE Renewables' community investment funds (2020/21: £10.2m). This funding financed 1,048 community projects across the UK and Ireland, including 137 rural jobs, 96 scholarships and 108 community projects which enhance local net zero ambitions. £1.3m of this total investment in 2021/22 was from SSE Renewables' flagship Sustainable Development Fund which helped fund 29 transformational Scottish

SSE Renewables' community investment programme



and English projects. Detailed disclosure on SSE Renewables' community funding can be found on [saserenewables.com/communities](https://www.sserenewables.com/communities).

In addition to this direct community investment through renewables projects, almost £500,000 was administered to communities through SSEN's Resilient Communities Fund, which prioritises projects which protect the welfare of vulnerable members of the community in SSEN's network areas during significant emergency events. The fund aims to help improve local responses to emergency events by enhancing community facilities,

services, and communication. Following the severe storms in winter 2021/22, SSEN announced it would also grant a further £1m through its Resilient Communities Fund. In May 2022, the fund received 140 applications which demonstrates the commitment and capability of local residents to respond to emergencies.

In addition to the SSE Renewables' community funds and SSEN's Resilient Communities Fund, this year SSE also donated £1m to the Disasters Emergency Committee (DEC) in support of humanitarian aid in Ukraine.

GB: SSE Renewables community investment fund

Investment granted	Projects supported
£8.3m	546

Northern Ireland: SSE Renewables community investment fund

Investment granted	Projects supported
£450k	111



GB: SSEN Resilient Communities Fund

Investment granted	Projects supported
£470k	30

Republic of Ireland: SSE Renewables community investment fund

Investment granted	Projects supported
£930k (€1.12m)	391

Total	
Investment granted	Projects supported
£11.2m	1,078

Donation to Disasters Emergency Committee

Investment granted
£1m

DILEMMA



Adapting community benefit funding

SSE Renewables' community investment funds typically endure for 25 years with a common formula to calculate the value available to communities each year. In 2020, faced with a challenging landscape for developing new onshore wind farms in Great Britain, SSE Renewables made the difficult decision to change its onshore community benefit policy, adjusting the amount of community benefit for future onshore farms

in Great Britain from £5,000 per MW of capacity to £3,000 per MW per year. Eighteen months on from this decision, and following changes in market conditions and representations from the communities themselves, SSE Renewables revised the decision and reverted its direct funding to £5,000 per MW for new onshore wind farm developments.

ENGAGEMENT IN ACTION



Supporting a community-led net zero transition

Communities are conscious about the climate crisis current and future generations are facing, and are exploring ways to reduce their carbon footprint to contribute to the net zero transition. In 2021/22, SSE Renewables increased its community funding for net zero projects, with 108 community projects receiving donations. These funds support projects ranging from electrifying community transport in the Scottish Borders, and air source heating in the Scottish Highlands, to using solar panels in Tournafulla, Ireland. The momentum shows small steps by individual projects and communities can collectively make an important contribution to net zero.

ENGAGEMENT IN ACTION



Encouraging the future generation into STEM careers

SSE Renewables, and partners Equinor and Eni, have invested £1m during the construction of Dogger Bank Wind Farm to help increase STEM attainment in Northeast England and Yorkshire. Local education and skills stakeholders have been consulted to develop initiatives to enhance local STEM programmes, which include introducing STEM learning into nursery education in East Riding of Yorkshire, and embedding STEM careers provision into every primary school in Redcar and Cleveland. In South Tyneside, 40 female and non-binary secondary school pupils participated in Stemettes Goals, an event that develops STEM skills and exposes participants to STEM careers and innovations. The sessions helped to increase their perception, awareness, confidence, and knowledge of STEM.

Supporting Ukraine with the DEC Humanitarian Appeal

In 2022 SSE provided a grant of £1m to support Ukraine, via the Disasters Emergency Committee (DEC) Humanitarian Appeal. On 30 March 2022, a representative from DEC joined an SSE employee call to raise further awareness of the Ukraine crisis and the work the DEC are doing to help, which SSE's donation supports. Donations to the DEC Humanitarian Appeal are reaching people in Ukraine and those who have fled to

neighbouring countries, providing emergency aid and support via 13 charities. They are supplying essential items like food, water and shelter for displaced families, and medical support including incubators for babies in Ukrainian hospitals. In the first six months of the response the DEC aims to deliver £74.5m of aid, and continue to provide access to essential care, with the rest of the funds being spent over the next three years.

Committed to decent work and economic growth

Guaranteeing fair work

Investing today in the workforce of tomorrow by creating jobs, developing skills, and ensuring people are treated fairly and with respect.

Creating good, green jobs

Over 2021/22, SSE hired 3,195 roles through internal and external recruitment channels. This was an increase from 2,227 the previous year, reflecting growth of around 1,000 new jobs over the last year, a rate of growth expected every year to 2026, in support delivery of the £12.5bn Net Zero Acceleration Programme. These jobs will be located across all SSE's operations and in all parts of the UK, with further growth expected. In SSE's transmission business alone, 400 new jobs are expected to be created over the next year. Additional roles will also be created and supported through SSE's supply chain activities. See page 73 for information on SSE's approach to supporting competitive, domestic supply chains.

1,000
new jobs created in 2021/22

1,000
new jobs created every year to 2026

The ability of SSE, and the energy industry more widely, to secure sufficient talent required for the net zero transition is a key area of strategic focus. SSE is developing re-training programmes to widen its reach to those that want to join the green revolution. For SSE, this includes initiatives which have been developed over the year, including a pilot engineering conversion course in its networks business for those with an engineering background in different sectors and a returner programme for those coming back to the STEM industry after a career break, as well as significant investment in early careers programmes (see next page).

SSE is also committed to sustaining its current workforce by having a competitive employee value proposition where employees can see the benefits of being part of a purpose driven organisation that is focused on being the UK's Green Energy Champion. A key part of this sustainable approach involves employee listening where employee views are captured through engagement surveys, focus groups and exit interviews. Understanding

employee sentiment and areas of required improvement is a key for ensuring employees feel valued and belong.

Ensuring these jobs, whether direct roles with SSE or through its supply chain, are good quality jobs is fundamental to a fair and just energy transition. Therefore, in line with the commitments outlined in its 'From principles to action: Supporting workers transition from high to low-carbon careers', SSE is committed to guaranteeing attractive standards for employees, including: a focus on health and safety performance; the right to freedom of association and collective bargaining; payment of at least a real Living Wage, accompanied by Living Hours; respect and incorporation of employee voice; the opportunity to work flexibly; ongoing investment in learning and development; a focus on increasing inclusion and diversity; a robust approach to business ethics with clear channels for whistleblowing.

Growing skills and talent

To develop its existing workforce for the net zero future, SSE seeks to simultaneously maintain current skills, whilst developing the new skills required. Accessibility, inclusion, and diversity are key aspects of creating the workforce with the right skills to reach net zero.

SSE's investment in learning, training and development increased to £7.5m in 2021/22 from £6.8m in 2020/21. Average training hours per full-time employee also returned to near pre-pandemic levels (2021/22: 20.7, 2020/21: 9, 2019/20: 23.4), with 84.2% of SSE's employees receiving some form of development over the year.

£7.5m
investment in learning, training, and development (2020/21: £6.8m)

Embracing a Learning Culture

SSE's response to the coronavirus pandemic helped accelerate a shift to modern learning approaches, using technology to further promote and develop an accessible and inclusive learning culture. This approach has been



“In my 30 years working in the electricity sector, I have never known a better time to join. SSE is involved in some of the most exciting project in the world right now – from building the world’s largest wind farm, to installing high tech transmission infrastructure. And we are looking for new talent to join us, people from all sorts of backgrounds and experiences, to help us provide the very practical solutions to the global climate challenge.”

John Stewart
Human Resources Director

embraced across SSE's businesses, with 80% of all training now delivered digitally.

Over 2021/22, SSE introduced a series of interconnected learning SharePoints, providing self-led resources to support and complement formal learning offerings. This approach gives employees the opportunity to develop their knowledge at their own pace, prior to attending formal courses, and allows them to access information to maintain their skills, as and when required.

SSE made some improvements to IT infrastructure and tools to increase the accessibility of learning. This included using and promoting Office 365 capabilities, which allow learners to use a wide range of devices to view training materials. This enables employees to access training in a variety of formats and locations, allowing SSE to reach a higher proportion of its workforce. This is especially important as SSE's business expands to have more remote workers.



Investing in early careers

Central to creating a workforce for net zero is promoting and encouraging new, diverse talent into early career positions. Investment in pipeline programmes increased to £9.8m in 2021/22 from £9.0m in 2020/21. The number of people on SSE's pipeline programmes (apprenticeships, technical skills trainee programmes, graduate programmes, conversion programmes and other pipeline programmes) remained consistent with the previous year (2021/22: 470 individuals, 2020/21: 465 individuals). SSE's overall headcount decreased however in 2021/22 due to the disposal of non-core businesses, meaning an increase in the proportion of SSE's workforce on a pipeline programme, rising from 3.8% to 4.3%. Focus on recruiting from a more diverse talent pool for pipeline programmes also increased the proportion of women across all of these programmes, overall increasing to 19% in 2021/22 from 10% in 2020/21.

Apprenticeships: with no minimum entry requirements, SSE seeks to attract individuals who can demonstrate seven key characteristics: drive, ownership, resilience, learning agility, safety consciousness, social adaptability and collaboration. SSE's apprenticeship programmes offer opportunities to develop skills within engineering and wider business roles including Electrical, Joiner, Fitter, Energy Power Network Engineer, Finance, Procurement and Data Science. While there is still a long way to go to have gender balance in SSE's apprenticeship programme, the female proportion increased this year to 11% from 7% in 2020/21.

Trainee Engineers: for those who meet the minimum requirements, trainees can benefit from work-based learning whilst studying towards an HNC in Electrical Engineering or a Diploma of Higher Education in Engineering. Trainees undertake work placements to put their education into practice and gain practical, hands-on experience. The proportion of women on this programme increased from 11% to 21% between 2020/21 and 2021/22.

Graduates: SSE's graduate IT and Engineering placements offer practical skills, with Engineering graduates also receiving relevant professional qualifications or charterships e.g. IMECHE, ICE and IET. SSE's graduate opportunities across the business have one thing in common: across the two years of the programme, the graduates gain hands-on experience, build a valuable network and develop a unique set of skills to shape their career. Women made up 39% of SSE's graduates in 2021/22, compared to 23% the previous year.

Employability programmes: these encourage social mobility and are designed to recruit talent from communities and social demographics that may not have otherwise applied to work in the energy sector. The programmes encourage the uptake of STEM subjects in education and include Teach First, Barnardo's Works, SSE Works, and Career Ready. Over 2021/22, in-person work experience programmes have been reinstated, following the easing of coronavirus restrictions, with SSE welcoming 18 people onto the Barnardos Works programme since October 2021. Other programmes such as Career Ready were delivered online and developed over the past year to provide virtual work experiences that expose young people to the energy industry.

£9.8m
invested in pipeline programmes (2020/21: £9m)

280
apprenticeships (2020/21: 361)

43
Trainee Engineers (2020/21: 53)

124
IT and Engineering graduate placements (2020/21: 56)

Committed to decent work and economic growth

Sustaining key skills

In addition to the £9.8m invested in early career programmes, SSE invested £1.7m over 2021/22 to sustain key skills across its workforce (2020/21: £6.8m). This reduction in spend is due to the impact of the coronavirus pandemic, which led to activities paid for in financial year 2020/21 being rescheduled to run in financial year 2021/22. A total of 9,704 people received training, which included: 3,996 receiving technical skills training; 3,625 receiving safety training; and 2,083 receiving personal skills training.

£8.5m

investment over 2020/21 and 2021/22 to sustain key skills

SSE promotes an everyday learning culture, encouraging everyone to learn whilst carrying out their roles. The My Learning portal provides a variety of accessible resources which offer flexibility for learners to maintain and develop skills and knowledge that

will benefit both current and future roles. The portal has continued to be developed over 2021/22, addressing learner feedback and improving the user experience. Development areas include personal and management skills, health and wellbeing, safety, and business ethics.

Developing leaders

SSE continues to build leadership talent that will support the growth of the business as it focuses on delivering a net zero future and takes on the challenges of an increasingly competitive marketplace.

2,569

leadership training events carried out (2020/21: 1,786)

A total of 2,569 leadership training interventions were carried out over 2021/22 (2020/21: 1,786). Development programmes are structured to support leaders as they progress through the

stages of their career. Examples include the People Management Programme (PMP) and Inclusive Leadership Development Programmes (ILDLP) targeting those new to leadership roles, and the Career Development Programme (CDP) aimed at senior talent development. Over 2021/22, 216 leaders attended the PMP, 95 attended the ILDP and 35 attended the CDP.

Tailored leadership programmes are also available for each business area. They provide a combination of theory and practical activities designed to stretch participants as they practice and develop their skills. Tailored offerings supported 153 leaders through 2021/22. Business benefits include; increased staff engagement; improved communication, collaboration and learning across the teams, improved working practices; shared efficiencies and business improvement opportunities; and the identification of talent to aid succession planning.

Creating an inclusive workplace

The innovative solutions required to deliver net zero need a workforce with diverse perspectives, different experiences, and new skills.

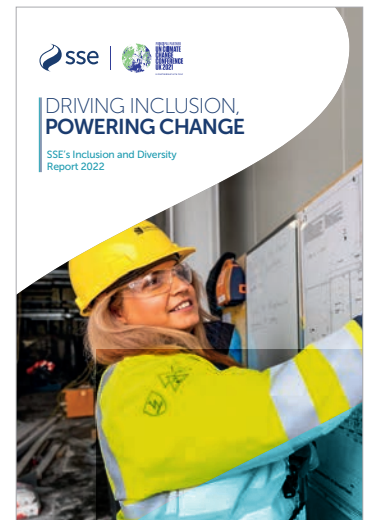
Driving inclusion, powering change

Over 2021/22, SSE has refreshed its strategic approach to inclusion and diversity, recognising that this is an essential driver to deliver net zero in a way that is fair and affordable.

In 2021/22, SSE refreshed its Inclusion and Diversity Strategy by establishing four strategic areas of focus: (1) Ambition, setting measurable goals; (2) Education and Development, focusing on behaviours; (3) Inclusive Processes, embedding best practice; and (4) Employee Voice, actively listening. Actions to influence positive change are informed through collaboration with external partners to identify opportunities for further improvement, as well as listening to employee experiences. The refresh seeks to deliver greater inclusion and diversity

across all levels of the company and embeds systemic and behavioural change, supporting the delivery of SSE's 'IN, ON, UP' approach which it has been implementing since 2017. This approach, developed with inclusion experts EAIInclusion, focuses on attracting diverse talent IN, enabling them to stay ON, and supporting them to progress UP at SSE, by providing opportunities that are fair and transparent for all.

Reflecting its increased strategic focus, SSE has published a new comprehensive Inclusion and Diversity Report 2022, providing information on SSE's updated Inclusion and Diversity Strategy, progress made, gender pay gap performance, and a range of key performance indicators for 2021/22. Read the report on [sse.com/sustainability/reporting](https://www.sse.com/sustainability/reporting).



The 2021 Inclusion and Diversity Strategy pillars: SSE has developed four key areas of focus to deliver the IN, ON, UP ambition.

AMBITION



Setting measurable goals
Setting ambitions and KPIs, and using external benchmarking

EDUCATION AND DEVELOPMENT



Focusing on behaviours
Building leadership confidence and raising awareness for all to create an inclusive workplace

INCLUSIVE PROCESSES



Embedding best practice
Ensuring policies and processes are inclusive to support everyone

EMPLOYEE VOICE



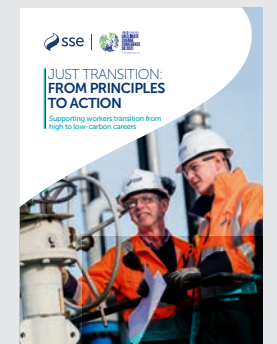
Actively listening
Understanding what matters to employees to inform and shape the improvements needed

INCLUSION AND DIVERSITY IS AN ESSENTIAL PART OF THE JUST TRANSITION

The innovative solutions required over the next decade and beyond will need a workforce with diverse perspectives, different experiences, and new skills. SSE recognises that boosting inclusion and diversity is an essential part of a fair and just transition to net zero, and has therefore included this within the 20 principles of its Just Transition Strategy, forming a core part of its business strategy.

SSE is working to attract people from

declining high-carbon sectors alongside increasing diversity and inclusion within its business, which is why initiatives aim to be broad and inclusive to everyone. For example, industry-specific experience has been removed from job adverts to attract a more diverse pool of talent in all senses, including high-carbon professionals, and those from diverse backgrounds. For more information on SSE's just transition approach, go to www.sse.com/sustainability/just-transition/



INNOVATION IN ACTION



Nurturing employee innovation for the net zero transition

The innovative solutions needed to support the net zero transition will be delivered by a workforce with diverse perspectives, different experiences, and the new skills needed to solve tomorrow's challenges. A core part of SSE's innovation strategy is to promote an innovative culture that empowers employees to explore new ideas and drive innovation.

In January 2022, SSE Distributed Energy launched its new employee innovation app called iDEas. The app allows employees to effortlessly submit ideas for innovative solutions to key challenges they face in their roles, and the process is centred around the Effective communication and detailed reporting.

To date over 100 ideas have already been submitted to the app, with 40 of these already in the delivery phase. Examples of projects being delivered as a result of the iDEas app include a partnership with National Grid to decarbonise heat networks by capturing waste heat from electricity transformers and a project looking at repurposing wind turbine blades for use as canopies for



EV charging hubs. You can read more on pages 45 and 95 respectively.

The app is part of SSE Distributed Energy's refreshed approach to innovation, which has seen the creation of a new Innovation Steering Committee, to oversee improved governance and processes around innovation. The Committee consists of colleagues from across SSE Distributed Energy, from implementing managers and engineers, to IT specialists, ensuring diverse perspectives are brought to the group.

Committed to decent work and economic growth

2020/21 inclusion and diversity highlights

Publication of SSE's Inclusion and Diversity Report 2022, providing more data and detail on its approach than ever before.

Revised senior leadership gender ambitions set to align with the FTSE Women Leaders Review (see more on page 65 of the Annual Report 2022)

SSE reaches a 50/50 gender split on its Board for the first time.



More than 1,300 SSE employees are members of an employee-led Belonging in SSE inclusion and diversity group.

SSE becomes a signatory to: Business in the Community Ireland's Elevate Pledge on workplace inclusion; the Change the Race Ratio; and Business in the Community's Race at Work Charter.

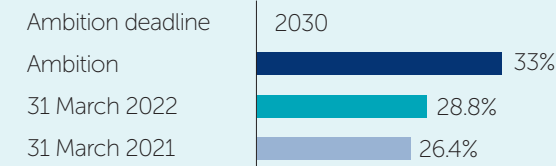
For more information on SSE's 2020/21 inclusion and diversity ambitions, progress made over the year and key inclusion and diversity initiatives, see pages 64 to 65 of its Annual Report 2022 and its dedicated Inclusion and Diversity Report 2022, both of which can be found on [sse.com/sustainability/reporting](https://www.sse.com/sustainability/reporting).

Measuring SSE's ambitions

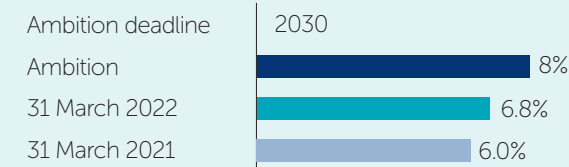
SSE has been tracking progress against a wide range of diversity metrics within the business since 2015, including the proportion of women, ethnic minority, disabled, and LGBTQI+ employees. For the first time, SSE has now published its ambitions to increase the proportion of employees with these diverse characteristics along with its ambitions to increase gender balance at a senior level.

Total workforce diversity ambitions

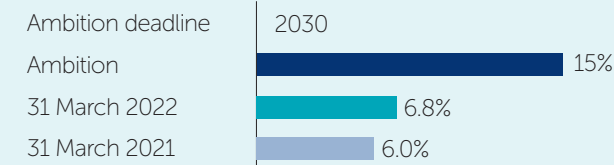
Women



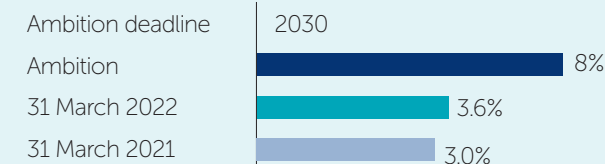
Disability



Ethnic minority

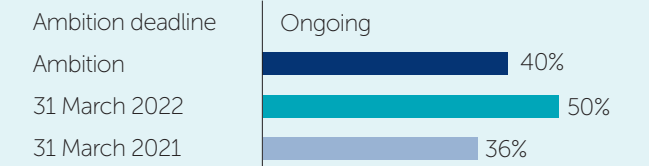


LGBTQI+

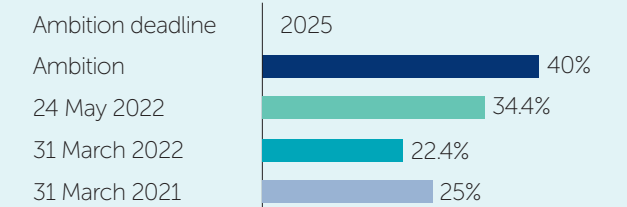


Gender ambitions for senior levels

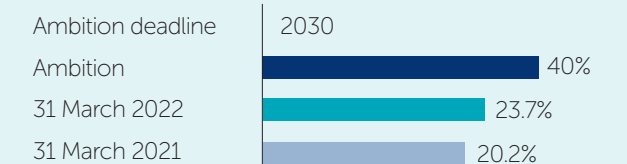
Women on the Board



Women in the Group Executive Committee (GEC)² and direct reports (excl. administrative roles)



Women in the Leadership Group²



1. In the context of gender reporting, the GEC includes all members of the GEC and the Company Secretary. This is the definition of senior managers in SSE for the purposes of s414C(8)(c)(ii).
2. Employees in SSE's senior level pay grades.

HELPING MIGRANT WOMEN COMMUNICATE TRANSFERABLE SKILLS TO ACCESS IRELAND'S JOB MARKET

In Ireland SSE ran the Knowledge Sharing Programme with support from Business in the Community, Ireland, to help migrant women living in Ireland secure a job that matched their skills and expertise. The women, from a range of backgrounds including Brazil and India, are highly qualified for engineering and environmental roles within energy companies. Since arriving in Ireland, due to recruiters and employers not being able to understand how their education and qualifications suit the Irish job market, they were missing out on relevant opportunities and accepting roles which did not match their capabilities.

To help these women obtain the right jobs, SSE took part in six sessions, across six weeks, with the participants, where colleagues across the business shared knowledge

about the energy sector in Ireland on topics including: Irish energy policy; biodiversity; windfarm operations; and grid operations. SSE's Human Resources team gave advice on applying for roles and offered to review participant CV's to help them tailor their experience. In addition, members of Engineers Ireland provided advice on communicating overseas qualifications to Irish recruiters. The programme also provided the participants the opportunity to network and support each other. Subsequent to finishing the programme, four of the seven women have found employment in their fields, one as an engineer. The programme has been shortlisted for the PwC Business Post Sustainable Business Awards under the social and inclusion category.

Committed to decent work and economic growth

SSE's gender pay gap

SSE is committed to providing open and detailed information about its gender pay gap. In 2016, SSE became the first FTSE company to publicly disclose this information. 2022 is therefore SSE's seventh year of reporting its UK gender pay gap, and its second year of voluntarily disclosing its Ireland gender pay gap. Data in this section is as of 5 April 2022.

For SSE's full gender pay gap breakdown and additional narrative, see page 26-28 and 34-35 of its Inclusion and Diversity Report 2022).

UK Gender Pay Gap 2022

Median Gender Pay Gap:

18.0%

18.3% (2021)

Workforce Gender Balance:

71.2% Men / 28.8% Women

73.6% Men / 26.4% Women (2021)

Median Bonus Gender Pay Gap:

17.5%

14.5% (2021)

Mean Gender Pay Gap:

13.2%

16.5% (2021)

Proportion of M/W receiving bonus Y-O-Y:

32.4% / 27.7%

33.5% / 28.3% (2021)

Mean Bonus Gender Pay Gap:

45.9%

45.0% (2021)

Ireland Gender Pay Gap 2022

Median Gender Pay Gap:

25.6%

27.1% (2021)

Workforce Gender Balance:

62.8% Men / 37.2% Women

67.1% Men / 32.9% Women (2021)

Median Bonus Gender Pay Gap:

50.5%

49.0% (2021)

Mean Gender Pay Gap:

18.4%

18.9% (2021)

Proportion of M/W receiving bonus Y-O-Y:

78.9% / 71.6%

67.8% / 70.7% (2021)

Mean Bonus Gender Pay Gap:

53.9%

62.4% (2021)

While its mean and median gender pay gaps in both the UK and Ireland reduced this year, they remain persistently high. SSE has determined two core reasons for its gender pay gap:

1. Low representation of women in senior and higher paid technical positions
2. Fewer women than men applying for roles across all levels of the business

Currently there are more men than women in the marketplace that are trained for SSE's higher paid technical roles. This is due to a number of reasons, including historically the industry being male-dominated, and there being barriers to women taking up STEM education and following this through to technical STEM careers. SSE works to encourage more women into the STEM industry through its STEM Education Outreach Strategy and its STEM Returners scheme, which enables people to return to STEM careers after a career. In addition, SSE is working to increase the proportion of women in its senior leadership, see page 81 for its ambitions and progress against these.

17%

Increase in women being hired in SSE's Leadership Group*

Gender parity can only be achieved if women make up an even proportion of roles at all levels in the organisation. At 5 April 2022, 28.8% of SSE's UK workforce

of 10,754 people were women (2021: 26.4%). The increase in the representation of women is seen across all four quartiles, with the upper quartile (most senior quartile) increasing by 15%. SSE is continuing to implement its Inclusion and Diversity Strategy, with a focus on improving the proportion of women at all levels in its business. Initiatives focus on bringing more women, and wider diversity into the business, enabling them to stay on, and supporting them to progress up to senior levels.

89.6%

Returned after maternity leave in 2021/22

83%

of employees have the ability to work flexibly (2017: 36%)

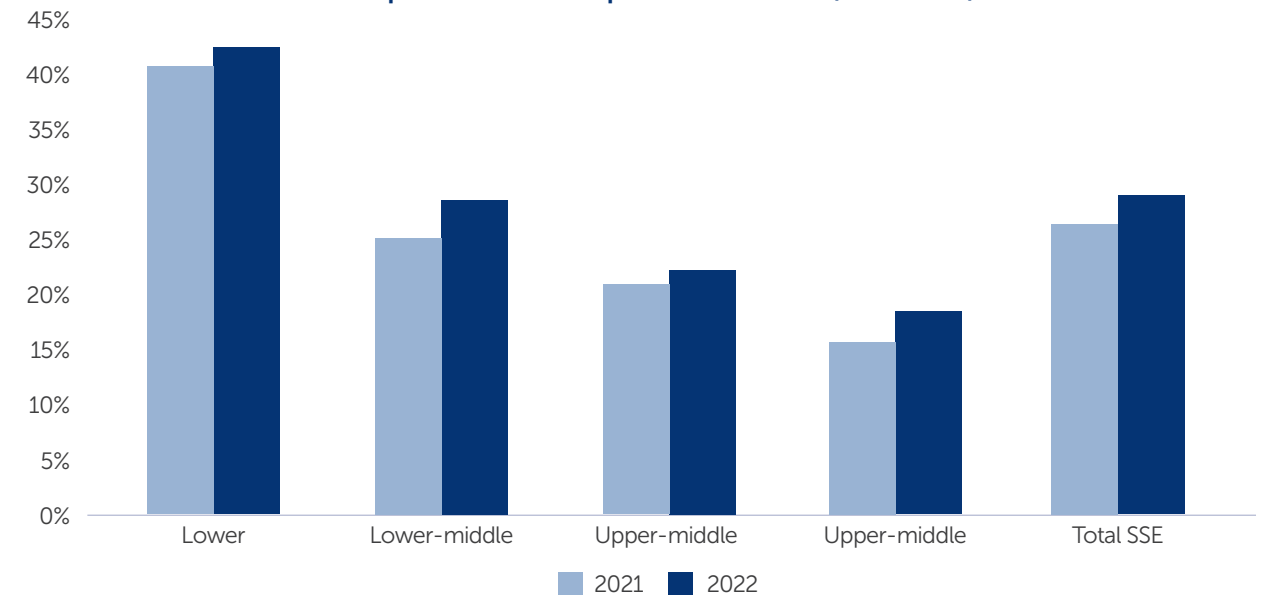
To ensure everyone at SSE is compensated fairly, SSE has moved to a new skills-based reward system, which will create a better opportunity for all employees to move through the pay scales as they acquire new skills.

Over 2021/22, SSE also worked with KPMG to better understand its employee data and the causes of its gender pay gap. This will allow the company to focus its future efforts to reduce the gap. This work is ongoing, and SSE expects to report the findings during the 2022/23 reporting cycle.

SSE has voluntarily disclosed its Ireland gender pay gap since 2021, calculated in line with the UK Gender Pay Gap methodology, based on a snapshot date of 5 April. The figures below follow this approach for 2022. In May 2022, the Irish Government launched new mandatory requirements for calculating the gender pay gap in Ireland, which will require companies to use a June 2022 snapshot date and report this data publicly by December 2022. The June 2022 snapshot is beyond the last practicable day for inclusion in the Annual Report 2022 (being 24 May 2022), but SSE confirms the data will be reported in line with stated December deadline.

SSE is committed to creating an inclusive and diverse workforce across all its operations. For SSE Airtricity, part of SSE's business in Ireland, 100% of all roles are advertised as having the ability to work differently. As part of SSE Ireland's commitment to Business in the Community Ireland's Elevate Pledge, over 2021/22 SSE ensured that all Hiring Managers completed an inclusive recruitment upskilling programme to understand how to be consciously inclusive. The commitment over 2022/23 will be to collect social mobility data. SSE's Inclusion and Diversity Strategy includes its Irish business and details about how SSE are increasing the representation of diversity in its business can be found in SSE's Inclusion and Diversity Report 2022.

Proportion of women per Quartile Y-O-Y (2021-2022)



Committed to decent work and economic growth

Getting everyone home safe

Underpinning everything SSE does is a foundation of guaranteeing a safe place to work for employees and those who work on behalf of SSE.

The safety of everyone

The safety of everyone who works for SSE, and the people who come into contact with the Company, is a long standing priority. In 2017, SSE introduced a simplified way of talking about safety and health and practical steps by which employees and contractors can enable SSE's safety licence, "If it's not safe, we don't do it". With this 'Safety Family' culture now firmly embedded, a new safety and health Vision 2022+ programme builds on a simple concept - setting teams up for success by **making it easier to do the right thing**, so that everyone gets **"Home Safe"**.

SSE seeks to understand underlying employee sentiment towards safety and the annual all-employee survey undertaken in summer 2021 found that safety was recognised as the number one priority for SSE colleagues and SSE's licence "if it's not safe, we don't do it" is something that SSE colleagues live by.

Since 2017 there has been a decline in both the number of incidents and the incident rate. However, 2021/22 has presented challenges, such as, a 30% increase in the hours worked by contract partners, an increase in project activity, and multiple coronavirus distractions leading to an increase in SSE's incident rate for the first time in many years, from a Total Recordable Injury Rate (TRIR) of 0.15 per 100,00 hours worked in 2020/21 to 0.17 in 2021/22.

Ensuring robust governance and management of safety and health

SSE has an integrated management system, covering occupational health and safety risks, major accident hazards, health and wellbeing, and environmental management.

SSE's management system is certified to the internationally recognised standards ISO 45001 Occupational Health and Safety Management and ISO 14001 Environmental Management. In 2020/21 SSE extended ISO 45001 certification to Gas Storage, Thermal, SSE Renewables Operations, Embedded UK, and Thermal

in Ireland. This is in addition to SSE plc and SSE Enterprise Utility Solutions. The ISO 14001 and ISO45001 certificates are publicly available at sse.com/sustainability. With 15 Management Standards it provides a framework across all business areas to deliver safe, sustainable operations, and continual improvement in performance. It also comprises 42 Risk Standards that set out SSE's approach and compliance with legislation for the wide range of safety, health, and environment (SHE) risks impacting the extent of work activities undertaken.

Accompanying this comprehensive set of standards are supporting documents, audit protocols (enabling determination of conformance with SSE SHE standards), Training Briefs, and Employee Risk Cards summarising key points for all employees to manage risks in their day-to-day work activities.

Robust processes and governance are in place in SSE's business units and the Group SHE team develop annual SHE plans, to oversee the performance and progress made to address specific risks such as new technologies and entering new regions.



"Across SSE we have a very simple goal – that we all get home safe having taken care of people and the environment. This is reinforced though our systems, making it easy to do the right thing, and our culture. Across SSE our communities have a real pride in what we do and a commitment to our licence, 'if it's not safe, we don't do it'."

Mark Paterson
Safety, Health and Environment Director

KEY SAFETY DATA 2021/22

<div style="font-size: 2em; font-weight: bold; color: #003366;">254</div> <div style="font-weight: bold; color: #003366;">SAFE DAYS ACHIEVED</div>	<div style="font-size: 2em; font-weight: bold; color: #003366;">51</div> <div style="font-weight: bold; color: #003366;">PEOPLE INJURED</div>
<div style="font-size: 2em; font-weight: bold; color: #003366;">77</div> <div style="font-weight: bold; color: #003366;">RTCS* 1&2</div>	<div style="font-size: 2em; font-weight: bold; color: #003366;">0.17</div> <div style="font-weight: bold; color: #003366;">TRIR**</div>
* Road Traffic Collisions	** Total Recordable Incident Rate

EVERY 'SAFE DAY' COUNTS

'Safe Days' help SSE stay focused on taking care of everyone and the environment. When it comes to this – every safe day counts, and it is a key measure.

On a **'Safe Day'** SSE doesn't have a minor, serious or major incident from the list below for either SSE employees or contractors:

- Reportable, Lost Time (1-7days) or Medical Treatment Injury
- Major/Serious/Minor Environmental Incident/ Permit Breach
- RTC Class 1
- HIPOS – High potential to harm people/Environment.

The Group Safety, Health, and Environment Committee (SHEC) supports the development of SSE's SHE strategy to drive improvement in performance and risk management across the SSE group. This is evidenced by the improvements made through progress and the steps taken to launch SSE's 'Home safe' programme. The SHEC has been able to review the good progress on key SHE measures and, in line with its terms of reference, review specific risk areas.

In addition, the Sustainability, Safety, Health, and Environment Advisory Committee provides additional oversight. It is formed by members of the Board and Non-executive Directors.

Managing safety and health risk across SSE

To ensure risks are identified, managed, and mitigated by SSE's business units and relevant contractor partners, who sit closest to the risk, every employee, supervisor, and manager needs to fulfil their responsibilities for their safety, the safety of others, and the safety of the environment.

SSE undertakes an assurance audit programme across the business, focussing on the management of SHE risks. Where gaps or non-conformance against Management or Risk Standards are identified, improvement actions are developed and tracked to completion. In addition, SSE reviews Group SHE risks annually including occupational

health, process safety, operational safety, and environment risks. This review is undertaken by the SHE Leadership team and the SHE Committee to ensure that risks are addressed adequately in each business units SHE plans.

Annual safety and health reviews are completed by both SSE Group and its businesses to assess performance, the changing internal and external environments, technology, and any incidents over the previous year. These wide-ranging reviews form part of safety and health Governance, and the process for controlling SSE's SHE risks.

Taking care of employees

Over 2021/22, SSE increased its focus on health and wellbeing. To reduce employees' risk of getting seriously ill from coronavirus SSE continued informing and encouraging its employees to proactively make healthier lifestyle choices. This included encouraging people to quit smoking, reduce alcohol intake, eat healthier, and exercise more, and SSE has a number of employee benefits that can help employees achieve these goals, such as gym memberships and health screening.

In addition to physical health, the pandemic has had a significant impact on mental health. Changes to working conditions can cause additional stress and anxiety, and working from home full-time can cause feelings of loneliness and depression. Therefore, in 2021/22,

SSE implemented several mental health initiatives. These included engagement around Time to Talk, Mental Health Week, and World Mental Health Day to help eradicate the stigma around poor mental health, and encourage people to feel confident and comfortable seeking support. Post pandemic, SSE continues to support colleagues as they return back to the office through a flexible first policy.

To support employees on key issues that affect wellbeing, SSE launched employee belonging groups where colleagues support and learn from each other. Groups include Chronic Health and Disabilities, Menopause and Inclusion and Diversity topics. For more information on SSE's belonging communities, see SSE's Inclusion and Diversity report on sse.com/sustainability/reporting.

SSE provides employees access to support services for mental health including Nuffield Health, which is a self referral service, giving access to specialist musculoskeletal support, and care or counselling services for anxiety, depression, and stress. SSE has an Employee Assistance Programme (EAP) and provides access to Care First's EAP which helps provide support for life's challenges. SSE has over 330 trained mental health first-aiders available to talk with colleagues to provide confidential support for anyone in the business and to signpost where additional support can be provided. For more details on employee benefits, see page 61 of SSE's Annual Report 2022.

ENGAGEMENT IN ACTION

Making the uncomfortable comfortable

Over 2021/22, SSE led a number of initiatives to encourage employees to come together to share their personal health stories with the aim of removing the taboo around health conditions and to make uncomfortable conversations comfortable.

Subjects include: mental health, which SSE has prioritised as part of its health and wellbeing focus, reinforcing that it's ok to not be ok; menopause, which although happens to a significant proportion of the population in their lifetime, is another condition that people struggle to talk about even though talking and relating to each other can be a great source of comfort; and cervical

cancer, which affects those suffering and their family and friends.

SSE aims to encourage employees to have these conversations with each other and share lived experiences to identify they are not alone, and to step forward and seek help if required. Initiatives to encourage discussion included webinars with SSE's external health provider on key topics such as cancer, stress, mental health, and mental fitness, as well as, encouraging employees to talk via SSE's seven belonging groups, and by sharing on SHE communications channels such as the email bulletin and safety net (an internal intranet site). One

shared employee story about cervical cancer has resulted in alignment with and support of a programme called Time to Test, where SSE signed up to Jo's Cervical Cancer Trust and is encouraging female employees to take time off work to get a smear test.

"It can be difficult to open up about mental health but opening up can be extremely powerful, it can empower you to take control of your situation and its reassuring to know there are others around you that are going through something similar to you. It's ok to not be ok, and to talk about it."
Murray Francis, SSE employee

Protecting and enhancing the natural environment

The decline in nature is one of the biggest challenges facing society and SSE has a responsibility to ensure that it preserves and enhances the value of the environments in which it operates.

While the greatest threat to nature is from climate change, ecosystems and biodiversity are affected by human behaviour in other ways too. Overuse of resources, land encroachment and pollution are combining with climate change to create a natural environment emergency that is described as profound to human life as global warming. SSE operates in some of the UK and Ireland's most remote areas which are home to a wide variety of valuable ecosystems and habitats. Its Environment Strategy is designed to ensure that environmental impacts are considered throughout SSE's operations and are carefully managed.



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Protecting and enhancing the natural environment

Performance summary

Category	Description	Unit	2021/22	2020/21	2019/20
Waste	Total waste produced	Tonnes	5,286.5	2,321.2	-
	Proportion of total waste:				-
	Sent to landfill	%	12	9	-
	Processed as energy from waste	%	25	55	-
	Recycled	%	59	31	-
	Composted/sent to anaerobic digestion	%	1	4	-
	Treated	%	4	1	-
	Hazardous waste	Tonnes	147.9	54.9	-
	Sulphur dioxide (SO ₂) – thermal generation	Tonnes	3,021	1,379	2,489
	Nitrogen oxide (NO _x) – thermal generation	Tonnes	4,573	4,281	6,244
Environmental Management	Sulphur hexafluoride (SF ₆) – thermal generation and electricity transmission and distribution activities	kg	305	295	318
	Relevant SSE operations covered by ISO14001 by reported revenue ¹	%	61	51	49
	Number of major incidents ²	Number	0	0	0
	Number of serious incidents ²	Number	13	11	12
	Number of minor incidents ²	Number	47	32	42
	Environmental prosecutions and civil penalties ²	Number	0	1	0
	Permit/Licence breach ²	Number	7	4	10
Resource Use	Total water abstracted	Million m ³	23,896 ^(A)	26,032*	27,757 ^(C)
	Total water abstracted (exc. hydro generation)	Million m ³	779	832	722
	Freshwater abstracted (rivers and groundwater) (exc. hydro generation)	Million m ³	1.9	13.6	14.2
	Total water returned	Million m ³	23,895 ^(A)	26,028*	27,751 ^(C)
	Total water consumed	Million m ³	0.8 ^(A)	3.9*	6.9 ^(C)

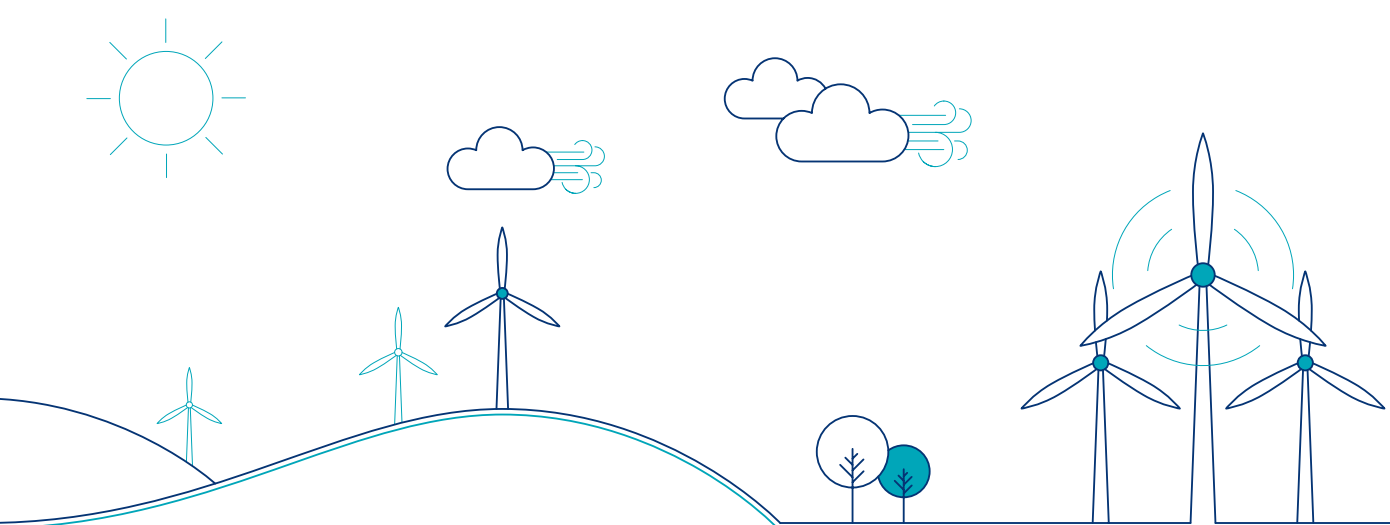
(A) This data was subject to external independent assurance in 2022. For the limited assurance opinion see pages 104 and 105.

(C) This data was subject to external independent assurance in 2020. For the limited assurance opinion see [sse.com/sustainability](https://www.sse.com/sustainability).

* In 2021/22, additional data points and minor amendments to methodologies has resulted in some 2020/21 figures being restated.

¹ The percentage of SSE's relevant business units that interact with the environment that are certified to ISO14001, by reported revenue. The relevant business units are: SSEN Transmission, SSEN Distribution, SSE Renewables, SSE Thermal (generation and gas storage) and SSE Enterprise. See note 5.1 Segmental information disclosure. (i) Revenue by segment section of Annual Reports in each financial year.

² 2021/22 and 2020/21 excludes SSE Contracting following the sale of this business in June 2021.



Embedding effective environmental management and governance

The careful management of environmental impacts is in part achieved through embedding robust policies and procedures to ensure that local environments are protected.

SSE's Environment strategy

In 2021/22, SSE refreshed its Environment Strategy to ensure its environmental objectives remained stretching and its approach ambitious. The Environment Strategy provides a guide for its businesses when undertaking their daily activities and seeks to ensure that the environment in which it operates is protected and, where possible, enhanced.

The strategy has three pillars – environmental management and governance; responsible production and consumption; and, the natural environment – which are underpinned by an ethos of compliance. As part of this strategy, SSE has a robust environmental management system supported by governance at both the Executive and Board level – the Safety Health and Environment Committee (SHEC) and the Safety, Sustainability, Health and Environment Advisory Committee (SSHEAC), respectively.

The strategy provides a pathway to engage internal and external stakeholders while holding SSE accountable for performance. SSE has set Group-wide environment goals, targets and indicators to measure success. Supporting these are Business Unit specific goals and management plans, as each of its businesses have different interactions with, and impacts on, the environment.

Effective environmental management

To ensure effective environmental management, SSE operates an environmental management system (EMS) certified to ISO14001, including controls, processes and procedures, across all its business activities that interact with the environment. All SSE businesses are covered by SSE's EMS. In the last 12 months, SSE was externally audited and has maintained existing ISO14001 accreditation, and plans to extend accreditation to SSEN Distribution,



Distributed Energy and Energy Customer Solutions in 2022/23. This means SSE is currently ISO14001 certified for around 61% of its business activities that interact with the environment by reported revenue (based on 2021/22 figures). SSE's ISO14001 certificates are available at [sse.com/sustainability](https://www.sse.com/sustainability).

Monitoring environmental performance

In 2021/22 the number of environmental permit breaches as a result of SSE's activities totaled seven, compared to four incidents in 2020/21. There was also an increase in SSE's total number of environmental incidents (major, serious

and minor) to 60 incidents from 44 last year. This includes an increase of two incidents classified in the Serious Category.

The increase in incidents recorded reflects the growth in Business Unit activity as well as SSE's focus to improve reporting of incidents. A future focus on enhanced analysis of environment incident data using Power BI aims to identify trends and opportunities for improvement, investment and innovation. A breakdown of environmental incidents by severity category can be found on page 88.

Leading environmental performance

SSEN Transmission submits environmental disclosures to the energy regulator, Ofgem, on an annual basis, to monitor performance and drive improvements. In November 2021, SSEN Transmission was awarded 'leadership' status for Environmental Discretionary Reward (EDR) submission, achieving its highest score to date. SSEN Transmission is the only GB transmission owner to be awarded the prestigious 'leadership' status for four consecutive years, cementing its prominent reputation in environmental sustainability.

Protecting and enhancing the natural environment

Enhancing the natural environment

SSE supports the conservation, restoration and sustainable use of land and water resources; and promoting the integration of amenity, ecosystem and biodiversity improvement into business activities.

Increasing ambition on biodiversity

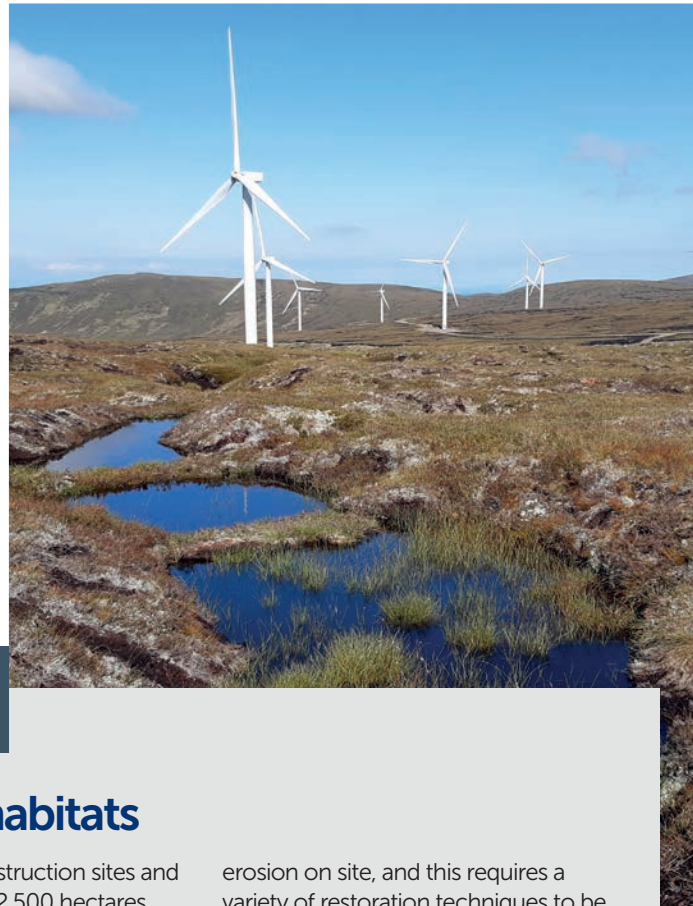
SSE operates in some of the UK and Ireland's most remote areas which are home to a wide variety of valuable ecosystems and habitats. SSE works to actively manage its environmental footprint and take careful consideration of biodiversity in its activities to ensure that it maximises positive and minimises negative impacts. In support of this, in 2021/22, all SSE Business Units committed to achieving no 'net loss' in biodiversity by 2023 and 'net gain' in biodiversity by 2025 on onshore Large Capital Projects.

More information on SSE's approach to biodiversity can be found in SSE's Annual Biodiversity Report, available at [sse.com/sustainability](https://www.sse.com/sustainability). The report highlights the work SSE has undertaken to protect and enhance biodiversity, contribute to biodiversity research and knowledge, and connect people with the natural world.

SSE is targeting

Biodiversity Net Gain by 2025

On all onshore Large Capital Projects



PARTNERING IN ACTION



Partnering to restore peatland habitats

A collaborative approach with communities, landowners and experts ensures the most effective outcomes for nature. In recent years there have been major declines in the extent of the UK's blanket bog habitat, its largest terrestrial carbon store, principally due to afforestation, drainage, burning and overgrazing. More than a fifth of Scotland is covered by peat, storing approximately 4.5 billion tonnes of carbon. Peatlands are home to a wide range of rare, threatened, or declining habitats and species.

SSE Renewables actively manages peatland across ten operational wind farm sites and their associated Habitat Management Plan (HMP) areas in Scotland, have completed 1,678 hectares of restoration, with a further 330 hectares in progress on

operational and construction sites and have identified over 2,500 hectares for future restoration projects, under proposal.

At Dunmaglass Wind Farm*, a key aim of the Nature Conservation Management Plan (NCMP) is to restore and enhance areas of blanket bog across the site. Work to date has focused on restoring circa 25ha of peatland utilising specialist, skilled contractors employing innovative reprofiling and restoration techniques. At each stage in the process, these works have been undertaken collaboratively with the Dunmaglass Estate who have also contributed their own funding to enable additional areas of peatland to be restored.

There are varying types of peatland

erosion on site, and this requires a variety of restoration techniques to be employed including hag re-profiling and cross-tracking.

The success of these restoration techniques will be assessed in line with a commitment to long-term habitat monitoring for the operational lifespan of the site. In addition, SSE Renewables are actively investigating additional monitoring opportunities for blanket bog restoration across operational assets to better understand how to maximise the value of these projects and contribute to delivering positive effects for biodiversity.

* Dunmaglass Wind Farm is a joint venture between SSE (51.1%) and Greencoat UK Wind Plc (49.9%)

ENGAGEMENT IN ACTION



Leading calls to limit North Sea sandeel fishing to support the seabird population

Through 2021/22, SSE Renewables has led a campaign to limit sandeel fishing within UK waters in the North Sea. Sandeels play a key role in the health of the North Sea's marine ecosystem, acting as a food source for vulnerable marine species. However, due to the increasing effects of climate change and industrial fishing, the sandeel population has experienced significant declines in recent years which is negatively impacting several species of birds, particularly the black-legged kittiwake.

SSE Renewables is working alongside the UK and Scottish Governments and other stakeholders to improve how Scottish sandeel fisheries are managed to both help restore the health of the wider marine ecosystem and allow for the development of offshore wind projects. This includes its

proposed 4.1GW Berwick Bank wind farm project located in the outer Firth of Forth.

Berwick Bank will be one of the largest offshore renewable energy developments in the world and delivering it this decade is critical to meeting the UK and Scottish Governments' 2030 offshore wind targets and tackling the climate emergency. However, it is in an area that contains many important bird populations and legally protected colonies. SSE Renewables is seeking to implement a nature positive approach to the management of sandeel fisheries, with a view to improving seabird populations whilst also supporting efforts to develop sustainable fishing over the longer term.



Protecting and enhancing the natural environment

Working together to develop nature-based solutions

For SSEN Distribution, 2021/22 has been a year of listening and learning. Stakeholders have been instrumental in building the RIIO-ED2 business plan and setting its high standard of ambition, by encouraging SSEN Distribution to be bold but credible with target setting and to create a transparent and ethical pathway to net zero. In addition to setting 1.5°C science-based carbon targets, SSEN Distribution is proposing nature-based solutions (NbS) for carbon removal and biodiversity, at a scale it's not yet attempted.

Stakeholder input to nature-based solutions

SSEN Distribution listened to over a hundred stakeholders in 2021/22, including consumers and nature specialists to understand how a credible NbS proposal could be developed. The careful management of investments and interventions locally was prioritised by SSEN Distribution and stakeholders, who were averse to prioritising carbon offsetting, where the guarantee of, location or timing of investment may be unclear. Consumers also highlighted the value of outdoor spaces, especially after experiencing several lockdowns. There was unprecedented support of NbS across all engagement, with importance placed on doing the right thing, and doing it well. SSEN Distribution worked with expert stakeholders and experienced and

respected organisations to develop plans with an emphasis on community driven schemes, which were advised to be more successful. It is clear that restoration works must be considerate to, and supported by, local communities.

A variation in regional approaches

When exploring options for NbS, SSEN Distribution is taking a slightly different approach between its licence area in the north of Scotland compared to its licence area in central southern England. This is due to the different types of environments and stakeholders it typically works with in those regions. Opportunities in Scotland tend to offer larger areas of land owned and/or managed by fewer individuals than in England. For Scotland, two major stakeholders with the required experience and expertise were contacted; Trees for Life, a conservation charity focused on restoring Scotland's native Caledonian forest, and the Cairngorms National Park Authority, a statutory body governing the national park. These stakeholders provided information on multiple potential opportunities for the preferred habitats in the area.

In England, wider engagement was undertaken with a total of 57 stakeholders contacted consisting of: 12 major wildlife/nature charities, one private landowner, 38 local planning authorities, three offsetting providers, and three statutory bodies.

Credible qualitative and quantitative engagement has shaped SSEN Distribution's plans, the level of ambition has increased over the last year from pre-pandemic times, awareness on climate-related issues has never been stronger and has encouraged a 'step change' in leadership that will reduce carbon, improve focus on biodiversity, and reduce the impact of current operations. This is a significant change from previous price controls, but an important one. SSEN Distribution recognises that the



"As the world races to address the climate emergency, it risks forgetting the nature crisis. They are both so inextricably linked that we must work to solve them together. The catastrophic consequences of climate change are already being felt and our lack of action in previous years means that more drastic measures are now needed. Investing in nature is about our survival – nature can bounce back, but it needs to be now."

Shirley Robertson
Head of Environment, Consents and Sustainability Strategic Policy
SSEN Distribution

depletion of nature cannot continue and that wildland must be preserved. The cost of carbon will continue to rise, investing locally and contentiously is arguably the only way to ensure longer-term cost certainty for energy consumers.

Carbon removal and nature-based solutions

Carbon removals feature in SSEN Distribution's net zero plans. SSEN Distribution believes there is still work to be done to demonstrate legitimacy and transparency in the carbon trading market, to ensure no further risk is placed on the consumer. The delivery of carbon

reductions via NbS has uncertainty factors, however, there are a range of wider environmental benefits that can also be delivered: the enhancement of natural capital and delivery of multiple ecosystem services.

There is an emerging market for biodiversity units. Natural England's Biodiversity Metric 3.0 is being used to calculate the units required to deliver the soon to be mandatory 10% Biodiversity Net Gain for new developments in England. This in turn has resulted in a trading market for biodiversity units. While Scotland has not yet adopted Natural England's metric

and model, SSEN Distribution has used it as a proxy for measurement in England and Scotland. It has also explored the latest industry figures for the market value of biodiversity.

Investments of this nature take time to mature, they are not instant, or a quick fix, however once developed they will deliver richly over a 100-year span and beyond. Initial investment requirements rise significantly the sooner the results are needed. The need for immediate investment is clear, to ensure adequate maturity for net zero delivery, and to control and manage costs.

Connecting people with nature

The importance of connecting with nature and having access to outdoor spaces was heightened during the coronavirus pandemic, and it remains essential for people's physical and mental wellbeing. Many of SSE's assets provide recreational amenity, for example Galway Wind Park in Ireland has a series of recreational trails open to the public called the Galway Wind Way.

In 2021/22, SSE Renewables further supported communities to connect with nature through its community investment funds, which awarded almost €90,000 in Galway Wind Park and Cobbs Road to maintain and develop wildlife trails including biodiversity enhancement initiatives, and almost £90,000 to purchase and maintain a community woodland at Clyde Wind Farm.



ENGAGEMENT IN ACTION

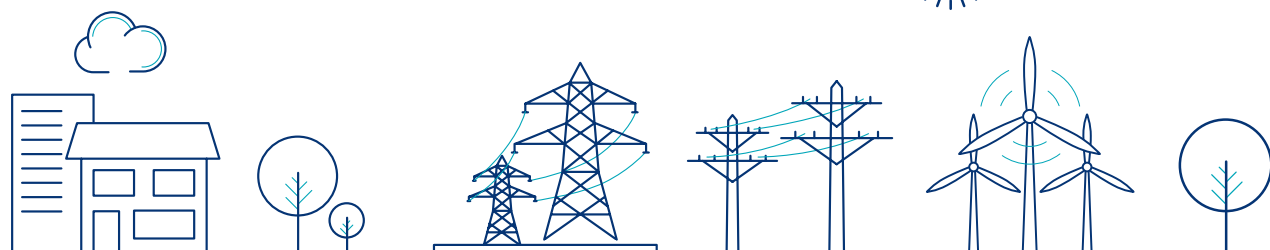


Putting a spotlight on nature

2022 has the potential to be a turning point in the response to the nature emergency and there are calls for radical changes to how nature is valued. With a spotlight on nature at COP26, SSEN Transmission hosted a Biodiversity Net Gain seminar in Glasgow with government, NGO and business stakeholders. Chaired by the Director of WWF, the panellists discussed the interconnectedness of the nature and climate crises and why they must both be tackled together, as well as exploring how businesses can help achieve Biodiversity Net Gain outcomes.

SSEN Distribution is proposing to deliver 2,000ha of woodland restoration and 1,200ha of peatland restoration, which is expected to remove over 300,000 tCO₂e and provide 3,000 biodiversity units by 2045*.

*Subject to Ofgem support.



Protecting and enhancing the natural environment

Responsible production and consumption

SSE relies on many natural resources during the construction and operation of its assets. It seeks to promote circularity, the waste hierarchy and increases in recycling and diversion from landfill for any discarded materials.

SSE's responsible consumption and production strategy

SSE is working towards more sustainable patterns of resource consumption; reducing reliance on non-renewable and single-use products and linking to the objectives of UN SDG 12.

In responsible consumption and production, SSE have rationalised our recycling and resource recovery service providers to single national providers for both UK and Ireland. This allows SSE to ensure consistent management across our business and to drive improvement in recycling, diversion from landfill, reporting and application of circular economy principles.

SSE has waste management controls within each of its businesses and aims to follow the waste hierarchy to prevent, reduce, reuse and recycle its waste. It provides recycling facilities at its key offices and operational sites and adheres to the relevant regulatory requirements for waste management at its different sites and locations.

Over 2021/22, SSE made important progress on elements of its responsible consumption and production strategy. This included:

- **Improving governance:** this has been achieved through Group and Business Unit level Circular Economy Action Groups reviewing monthly performance, driving compliance against new targets and identifying improvement opportunities to apply the waste hierarchy and circular economy principles.
- **Rationalising its waste management supply chain:** SSE now works with one main supplier in the UK, and one in Ireland. This allows it greater oversight of data and management of waste.
- **Improving reporting of data:** SSE now reports waste data monthly via a Power BI report;
- **Setting waste management targets:** SSE set new Group and Business Unit waste management targets for

2022/23 to minimise waste to landfill and to promote increased recycling of discarded materials. Subsequent 2021/22 performance and improvements in data and accuracy meant that SSE exceeded these targets at Group level in the same financial year. SSE is reviewing its data sets to drive improved performance across all Business Units.

SSE's annual waste management targets are a minimum of:

85%
of waste by tonnage diverted

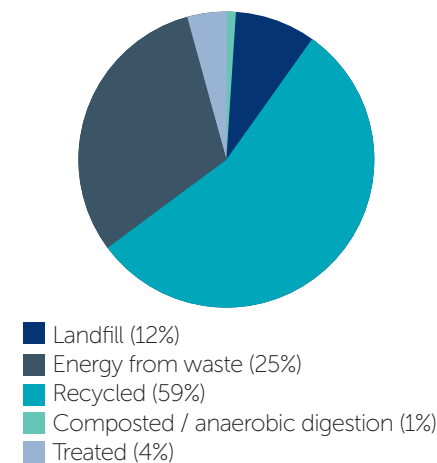
40%
of waste by tonnage recycled

Understanding SSE's resource efficiency data

In 2021/22, SSE managed 5,287 tonnes of waste, around 148 tonnes of which was hazardous waste. The increase in the reported total of waste from 2,321 tonnes in 2021/22 is mostly due to improved accuracy and scope of data including additional information from national suppliers like data on metal recycling, that was previously unavailable. The majority,

59% of SSE's total waste recorded was recycled and a quarter was sent to energy from waste. More detail of the waste disposal methods of SSE's recorded waste in 2021/22 can be seen in the chart below. The figures provided represent SSE's operational waste, and don't include waste data from contractors on large capital projects or minor works contracts, however, plans are in place to begin compiling this data and a reporting tool is being trialed in the renewables and transmission business units.

Disposal methods of SSE's recorded waste 2021/22 by proportion



PARTNERING IN ACTION

Addressing a future waste challenge in renewables

A key future challenge facing the renewables industry relates to the end-of life use of the component parts of wind turbines. To avoid turbine blades becoming landfilled at the end of their economic life, SSE Renewables is an active partner in SusWIND, a UK initiative between industry and academia. Led by the National Composite Centre, SusWIND will demonstrate viable ways to recycle current composite wind turbine blades, explore the use of sustainable materials and processes in developing composites for blades, and innovate in design to future-proof turbine blades. Research included establishing a decommissioning profile of all UK blades to forecast future composite waste streams, decommissioning analysis and cradle to grave lifecycle analysis. Bringing together stakeholders in the composites industry and energy sector, the SusWIND initiative hopes to accelerate the development of technology, processes and materials that address this recyclability challenge for wind turbine blades already in use and to deliver the next generation of recyclable blades.

PARTNERING IN ACTION

Exploring the potential of blade to canopy

SSE Distributed Energy is also supporting the development of solutions to address the challenge of sustainable wind turbine blade disposal that is faced by the renewables industry. Over 2021/22, it has been exploring the potential of repurposing wind turbine blades into canopies for EV charging hubs. The idea, submitted through the employee innovation app, iDEas (see page 78), would use end-of-life blades, stripping them back and cutting them into canopies that offer protection from the elements for users of EV charging hubs.

The project is still in early stages of development with costs of designing and converting blades into canopies still

being explored to assess whether there is a viable business case. SSE Renewables is supporting SSE Distributed Energy in the initial demonstration phase of the project. Should the project progress, SSE Distributed Energy has secured a broken section of blade material and is ready to explore potential sites for a proof of concept build later this year.

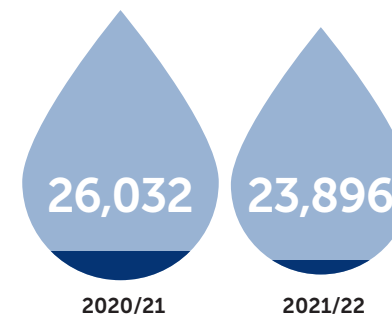
Canopies and shelters are key to positive user experiences and fundamental to the design of EV hubs and with SSE Distributed Energy planning to build over 260 rapid charging hubs in the next five years, repurposing of blades could provide a unique solution for both businesses.



Managing water use

Water plays a significant role in SSE's operations, being used in the energy production process including as a coolant in power stations and a source for power generation in hydroelectric generators. SSE also uses water as an amenity in its buildings.

Total water abstracted (million m³)

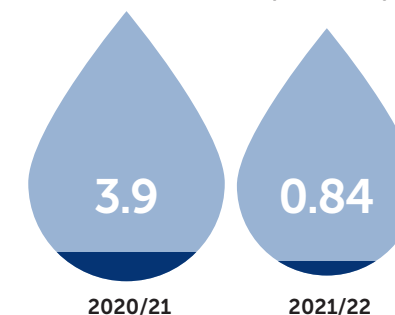


In 2021/22, total water abstracted by SSE fell to 23,896 million m³ from 26,032 million m³ the previous year. This was largely due to a reduction in water passing through SSE's hydro generation plant as a result of lower levels of rainfall compared to the previous year. The vast majority (97%) of water abstracted in 2021/22 was used in SSE's hydro generation operations. This water is technically recorded as abstracted, but it passes through turbines to generate electricity and is returned to

the environment almost immediately, and therefore has minimal environmental impact.

Total water consumed also fell significantly over this period, by over 78%. This was due to reduced output from thermal generation overall, as well as a proportional reduction in the output from thermal power plants with cooling systems that have evaporative losses of water.

Total water consumed (million m³)



SSE has a water efficiency and saving programme in its non-operational offices, data centres and depots, and also runs a behavioural change campaign in its non-operational buildings to encourage water savings at work and at home. In 2017/18 a target was launched as part of the programme, to reduce water

consumption every year by 2.5%. Total SSE non-operational buildings water use in 2021/22 was 22,875 m³, down from 24,480 m³ the previous year. This represents a 6.6% reduction in annual water use and a 44% reduction from the 2017/18 baseline.

SSE provides more detail on water risk management and performance in its annual CDP Water Programme response. SSE received a 'B' rating for its 2021 submission, which is publicly available at [sse.com/sustainability](https://www.sse.com/sustainability).

Managing air emissions

In 2021/22, SSE's thermal generation sites emitted 4,573 tonnes of nitrogen oxides (NO_x), compared 4,281 tonnes the previous year, an increase of around 7%. Emissions of sulphur dioxide (SO₂) more than doubled to 3,021 tonnes, from 1,379 tonnes the previous year. In addition, particulate emissions (PM10) rose to 277 tonnes, from 182 tonnes in 2020/21, and mercury emissions to air decreased significantly from 19.5kg in 2020/21, to 1.9kg in 2021/22.

The rising trend across three of these key air emission sources reflects the increased demand for oil-fuelled peaking plant in Ireland that arose as a result of the need to balance the grid.

Protecting and enhancing the natural environment

Reducing the impact of SF₆

Sulphur hexafluoride (SF₆) gas has been used extensively across the electrical industry due to its insulating and interruption properties, making it possible to reduce equipment size and improve reliability and safety. However, SF₆ is a greenhouse gas that is 23,500 times more harmful to the Earth's atmosphere than CO₂ which if released, stays in the atmosphere for over 3,000 years. It is used as an insulating gas for switchgear in substations and its lifecycle management requires careful handling, particularly when decommissioning aging substations.

SSE's Thermal, Transmission and Distribution businesses¹ use SF₆ in their operations and they have specific procedures for managing, monitoring and reporting SF₆ leakage as well as initiatives to prevent and reduce SF₆ leakages from their operations.

In 2021/22, SSE's SF₆ emissions increased slightly to 305kg from 295kg the previous year. Whilst SF₆ leakage reduced in SSE Transmission and Distribution, SSE Thermal's SF₆ leakage increased slightly due to equipment failures. These have all been assessed, repaired and actions put in place to mitigate these in the future.

For SSE's Transmission and Distribution businesses, SF₆ leakage has an impact on their operations and these businesses have a number of initiatives to prevent and reduce SF₆ leakages from their networks.

INNOVATION IN ACTION



Reducing GHG emissions from networks

Over 2021/22, SSEN Transmission has continued its work on SF₆ alternatives. SSEN Transmission worked with the GE and Arney consortium to energise its first g³ SF₆ free gas-insulated substation on its network using C4-FN* technology, as part of the New Deer project in Aberdeenshire. This is the world's largest installation to date of this type of SF₆-free gas.

In addition, the first SF₆-free Siemens Energy "Clean Air" Power Voltage Transformers were installed on the GB Transmission network at the new Glen Kyllachy substation near Tomatin in the Scottish Highlands.

SSEN Transmission also has plans to install g³ switchgear at their Kintore 400kV substation, in Aberdeenshire, which will be the first time globally that SF₆-free gas insulated switchgear will be used at this voltage level. SSE supported GE in obtaining EU lifeGRID project funding. Over 2021/22, it awarded some key contracts for the project and construction works began in June 2021.

*g³ is a C4-FN is a gas mixture based on carbon dioxide, oxygen and 3M™ Novec™ 4710 Dielectric Fluid from the 3M fluoronitrile family.

It has become apparent in recent years that the rate of SF₆ leakage from the ageing asset base installed across all GB Distribution Network Operators (DNOs) has been increasing. Therefore, it has been necessary for all DNOs, to develop and implement SF₆ leakage mitigation strategies.

Over the year, SSEN Distribution continued to implement its strategy to minimise switchgear SF₆ leakage, which includes a pro-active approach to its SF₆ switchgear repairs process and it has targeted innovation at leak detection and repair, as well as trialling alternatives. In December 2021, SSEN Distribution finalised its RIIO-ED2 Business Plan which outlines its enhanced SF₆ leakage reduction strategy for the price control period 2023 to 2028.

SSEN Transmission continues to work with suppliers to use new, more environmentally friendly gas insulated equipment by installing SF₆ alternatives across its electricity network in the north of Scotland. To date SSE has energised five substations with two distinct SF₆-free alternative technologies. Installing SF₆ alternatives, where technically viable, is now "business as usual" for SSEN Transmission.

Externally, SSEN Transmission and Distribution are taking active roles in addressing the issue of SF₆ and are part of the Energy Networks Association SF₆ (IIG) Strategy group.



[1] SSE's renewables business use negligible quantities of SF₆ in operations, these are not included in reported KPIs

Managing SSE's energy consumption

Between 2020/21 and 2021/22, the energy SSE purchased for use in its assets (offices, depots, thermal power stations, gas storage facilities and data centres) fell by around 16%, from 234GWh to 196GWh. This reduction was largely due to a fall in electricity consumed at the now closed Fiddler's Ferry coal-fired power station, as decommissioning activity reduced, and a reduction in energy consumption at SSE's Aldborough gas storage facility.

During 2021/22, SSE invested in a range of energy efficiency measures for its offices, depots and data centres, including a programme of LED lighting upgrades to depot sites. Over this period, SSE purchased 100% of its electricity for use in its facility managed offices from renewable sources, backed by renewable guarantees. In 2021/22, 38.6% of the electricity that SSE purchased for its assets was from renewable sources, up slightly from 38.3% the previous year.

SSE's 'Better Off' behaviour change campaign, alongside its investment of

£12.8m since 2011/12 in energy efficiency and building renewable generation programmes, has helped to reduce carbon emissions from energy used in its facility managed offices by 42% since 2017/18.

SSE is a member of the Climate Group's EP100 initiative to encourage businesses to double energy productivity associated with office and depot buildings by 2030 from a 2011 baseline. From 1 April 2022 onwards SSE will revise its annual reduction target to 7.19% against a 2020/21 baseline, to align with its ambition of achieving a net zero non-operational buildings (offices, depots and data centres) estate by 2035.

Electrifying SSE's vehicle fleet

In July 2019, SSE joined The Climate Group's EV100 initiative and committed that by 2030 it will switch 2,500 of its vehicles to electric and install charging points at its sites. Progress in 2021/22 means SSE is ahead of schedule to meet its EV100 commitment.

Since the launch of SSE's new low-

emission company car scheme in June 2020, the uptake of electric vehicles has increased significantly. By the end of FY 2021/22 SSE had taken delivery of 560 fully electric vehicles meaning over 40% of its car fleet is now fully electric. There are currently another 409 fully electric vehicles on order meaning SSE will be moving to 70% of its car fleet being fully electric by the time these are delivered. The success of the car scheme has resulted in a reduction in the average CO₂ across SSE's car fleet from 106gCO₂/km when the scheme launched, to just 56gCO₂/km at the end of 2021/22. SSE has also expanded its fully electric van fleet between 2020/21 and 2021/22, increasing it from 12 to 41 with a further 5 on order. SSE is trialling all low emission and fully electric vans that come to market and will increase volumes when suitable vans become available to match operational requirements.

SSE has also continued to grow its electric vehicle charging infrastructure, increasing installations to 260 in 2021/22, from 140 the previous year. This includes 22 rapid and two ultra-rapid charge points.

Data and performance

SSE is committed to transparent and open reporting of current and historic non-financial data.

This section provides additional disclosures of SSE's sustainability performance measured against key internal and external frameworks, as well as the Limited Assurance opinion on select environmental data point mentioned throughout this report.

ESG ratings and indices performance	99
Sustainability-linked Executive remuneration	100
SASB disclosure	102
Limited Assurance opinion on GHG and water data	104

The following additional information on performance can be found at [sse.com/sustainability](https://www.sse.com/sustainability).

Sustainability data tables

Detailed environmental, social and economic data is available to download from SSE's website. For transparency, three years' worth of data is provided against each indicator where possible.

GHG and water criteria documents

The criteria document details the reporting approach SSE uses to disclose GHG and water-related information related to its operational activities. The criteria is updated annually.

Gender pay gap information

SSE's UK and Irish gender pay gap information is available to download on SSE's website. More detail on SSE's gender pay gap and diversity information can be found in SSE's Inclusion and Diversity Report 2022.

Group Policies

SSE makes key sustainability-related Group Policies publicly available on its website, outlining SSE's approach to promoting a healthy business culture and guiding decisions and actions as expected by its stakeholders.

Modern slavery statements


SSE's Modern slavery statements set out the steps taken by SSE to identify and prevent modern slavery and human trafficking existing within its business and supply chains. All statements since 2016 are available to download.

ISO certification

SSE's ISO 14001:15 (Environmental management systems) and ISO 45001:18 (Occupational health and safety management systems) certificates are available to download from its website.

ESG rating and indices performance

To increase transparency of its performance in key ESG ratings and investor-led initiatives, the table below outlines SSE's last two years' ratings and inclusion in indices.

	2021/22	2020/21	Stable/improved/decreased
 V.E	67/100	63/100	Improved SSE scored as 'Advanced' (Oct 2021)
 SAM Now a Part of S&P Global	66/100	56/100	Improved SSE has a 79th percentile ranking (Nov 2021)
 SUSTAINALYTICS ESG Risk Rating*	22.71	30.1	Improved SSE is ranked 11th percentile in the Electric Utilities and assessed as having 'strong' management of ESG issues (Feb 2022)
 MSCI ESG RATINGS AAA	AAA	AAA	Stable SSE is in the top 8% of 139 global utilities (Sep 2021)
 World Benchmarking Alliance Electric Utilities Benchmark	14.4/20	9.9/20	Improved SSE is ranked 2nd out of 50 keystone electric utilities companies globally (Nov 2021)
 World Benchmarking Alliance Just Transition	14/16	-	N/A (first year of benchmark) SSE achieved the highest score out of the 180 companies assessed in the benchmark
 FTSE4Good	Included	Included	Stable SSE has been included in the index series since 2001 (Jun 2021)
 CDP A LIST 2021 CLIMATE	A	A-	Improved SSE is on CDP's climate change A-list (Feb 2022)
 CDP DISCLOSURE INSIGHT ACTION Water	B	B	Stable SSE scored as 'Management' (Dec 2021)
 WDi Workforce Disclosure Initiative	Included	Included	Stable SSE is in the top decile for disclosure (Jan 2022)
 Bloomberg Gender Equality Index	Included		Stable SSE has been included since the index since 2018 (Jan 2022)

*Copyright ©2021 Sustainalytics. All rights reserved. This ESG ratings and indices performance table contains information developed by Sustainalytics (sustainalytics.com). Such information and data are proprietary of Sustainalytics and/or its third party suppliers (Third Party Data) and are provided for informational purposes only. They do not constitute an endorsement of any product or project, nor an investment advice and are not warranted to be complete, timely, accurate or suitable for a particular purpose. Their use is subject to conditions available at [sustainalytics.com/legal-disclaimers](https://www.sustainalytics.com/legal-disclaimers).

Data and performance

Sustainability - Linked Executive Remuneration

The Annual Incentive Plan (AIP) for SSE’s Executive Directors for 2021/22 was evaluated against several sustainability measures, including progress made against the company’s 2030 Goals. The below table summarises the performance outcome for the key non-financial performance measures included in the AIP of ‘Stakeholders’ and ‘Contribution to the UN Sustainable Development Goals’.

The three-yearly review cycle of the Remuneration Policy means that it will be subject to binding shareholder vote at SSE’s 2022 Annual General Meeting. The Remuneration Committee is seeking to use this review to strengthen and align the approach to pay with SSE’s purpose and long-term strategy. This will include an increased emphasis on sustainability overall, with a proposal to include sustainability measures in the longer-term Performance Share Plan, whilst also retaining an ‘in-year’ focus

on sustainability progress by including a smaller element within the AIP.

Further detail on the performance outcome for 2021/22 and the proposed changes to the Remuneration Policy can be found within the Remuneration Committee Report in SSE’s Annual Report 2022, on pages 186 to 189 and 172 to 182 respectively.

		Summary performance	Outcome	
Contribution to the UN Sustainable Development Goals (20% of AIP)	Climate action (5%): Take urgent action to combat climate change and its impacts	Reduce the carbon intensity of electricity generated by 60% by 2030, compared to 2017/18 levels, to around 120gCO ₂ e/kWh.	The carbon intensity of electricity generated increased by 1.2% in 2021/22. Planned and unplanned outages in Thermal Generation and extremely low wind and rain in North of Scotland led to a reduction in overall output. Correspondingly GHG emissions from electricity generation fell by 19%. Keadby 2, expected to be the most efficient CCGT station in Europe, on track to be online by end 2021. Keadby 3 progressing well through planning. SSE set updated science-based carbon targets in November 2021, aligned to a 1.5°C pathway. As a result, this goal has been increased to a reduction of 80% (from 60%) from 2022/23 onwards.	90% Exceeded expectation
	Affordable and clean energy (5%): Affordable, reliable and sustainable energy for all	Develop and build by 2030 more renewable energy to contribute renewable output of 30TWh a year.	Renewable generation output (inc. biomass, pumped storage and constrained off wind in GB) fell in the year due to unfavourable weather conditions. However, excellent progress was made on key offshore projects, including reaching financial close on Dogger Bank C and construction progressing well at Seagreen and Dogger Bank A and B. SSE Renewables, along with partners, also won rights to develop what will become one of the world’s largest floating offshore wind farms in the January ScotWind leasing round.	90% Far exceeded expectation
	Industry, innovation and infrastructure (5%): Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation	Build electricity network flexibility and infrastructure that helps accommodate 10 million electric vehicles in GB by 2030.	SSEN Distribution published its RIIO-ED2 business plan with key goal to facilitate connection of 1.3m EVs by 2028. It has progressed a number of key projects to support low-carbon technology solutions, including several ongoing strategic initiatives and partnerships in this area. 30% of SSE’s car fleet now fully electric with emissions down by 21%. Employee EV salary sacrifice car scheme launched so that every employee will have access to a fully electric car.	85% Far exceeded expectation
	Decent work and economic growth (5%): Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	Be the leading company in the UK and Ireland championing Fair Tax and a real Living Wage.	SSE maintained its Fair Tax Mark accreditation for the eighth consecutive year and published its Talking Tax 2021 report. Living wage increased in line with real Living Wage rate increase and from April now has Living Hours accreditation. Work has begun to roll the new accreditation out in its supply chain. Goal in this area has been reviewed in 21/22, broadening it to encompass a just transition.	80% Far exceeded expectation
Stakeholders (15% of AIP)	Customers (2.5% for each factor assessed)	Business Energy – A range of measures including customer complaints and satisfaction. Gateway for threshold performance at median performance of Citizens Advice league table.	Currently sitting at 6th out of 17 suppliers in Citizen’s Advice Non-Domestic League Table.	60% Far exceeded expectation
		Electricity Networks – A range of measures including customer interruptions and customer minutes lost.	Margin between performance in the North v South. Improvement plan in place for the South. In overall DNO Customer Performance league table SHEPD sat 8/14 and SEPD at 14/14. Dealt with unprecedented level of storms handling a typical year’s worth of calls in 5 months.	40% Below expectation
	Employees (2.5% for each factor assessed)	Safety – Total Recordable Injury Rate (TRIR) and Accident Frequency Rate (AFR) for direct employees.	Similar strong results to last year at this year-to-date with TRIR up slightly (0.09 v 0.08) and AFR the same at 0.04. Overall TRIR slightly up at year end with significant increase in hours worked.	90% Far exceeded expectation
		Engagement – A range of measures including employee engagement survey score, employee uptake of share plans and retention rate. Board and leadership engagement with employees.	Very strong set of results for 2021 with key Sustainable Engagement Index indicator ahead of sector norm and at 82%, 8% up from 2019. Connection to Strategy up 18% at 85%. Strong employee survey and verbatim feedback around flexible working and company’s COVID response.	95% Far exceeded expectation
	Inclusion and diversity – progress made closing SSE’s median UK gender pay gap and progress made against SSE’s Inclusion Strategy including progress on Return on Inclusion.	Return on Inclusion champion status retained with improved index score from 75.5 to 83.3. Inclusive hiring measures up in all categories (open advertising, flexible working, diverse panels and gender diverse shortlist. Increased female representation in talent programmes averaging at 40%. Positive increases in diversity questions in GPTW survey. Increase in number of female leavers year-on-year currently being looked into, GPG median down slightly and more women receiving performance bonus.	85% Far exceeded expectation	
	Suppliers (2.5%)	Safety – Total Recordable Injury Rate (TRIR) and Accident Frequency Rate (AFR) for contractors.	TRIR the same as last year at 0.32 and AFR (0.14 v 0.19) improved significantly.	95% Far exceeded expectation

Data and performance

SASB Standards Disclosure

Table 1. Sustainability Disclosure Topics & Accounting Metric

		SSE disclosure 2021/22
IF-EU-110a.1	(1) Gross global Scope 1 emissions, percentage covered under (2) emissions-limiting regulations, and (3) emissions-reporting regulations	SSE's generation activities in the UK are subject to the UK ETS and the carbon price Support and in Ireland they are subject to the EU ETS (see page 29). SSE is required to report its GHG emissions and energy consumption in the UK through the Companies (Directors' Report) and Limited Liability Partnerships (Energy and Carbon Report) Regulations 2018 and the Streamlined Energy and Carbon Reporting (SECR) requirements. Information disclosed in the accompanying data and performance tables (available at sse.com/sustainability/reporting), alongside pages 54 to 55 of SSE's Annual Report 2022 represent SSE's disclosure against these requirements.
IF-EU-110a.2	Greenhouse gas (GHG) emissions associated with power deliveries	As of January 2020, SSE Energy Services, the retail division of the SSE Group, was sold to OVO Energy. This ended the direct supply of electricity from SSE to household customers in Great Britain. Scottish and Southern Electricity Networks (SSEN) maintain responsibility for the distribution of electricity across central southern England and the north of Scotland, as well as the electricity transmission network in the north of Scotland. Details of the emissions associated with the losses within our networks are disclosed in the accompanying data and performance tables (available at sse.com/sustainability/reporting).
IF-EU-110a.3	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Two of SSE's science-based carbon targets cover SSE's scope 1 GHG emissions. Discussion on trends and progress against these targets can be found on page 26.
IF-EU-110a.4	(1) Number of customers served in markets subject to renewable portfolio standards (RPS) and (2) percentage fulfillment of RPS target by market	SSE's customer facing businesses only serve customers in the GB market and the island of Ireland Single Electricity Market. Both these energy markets have mature carbon reduction and renewable support frameworks. In Ireland, there are government targets on particular forms of renewable energy (for example, 5GW of offshore wind by 2030) and, in the UK, renewable targets support statutory carbon budgets. Neither market has standards that mean electricity generators must secure a proportion of their portfolio of energy generation from renewable sources.
IF-EU-120a.1	Air emissions of the following pollutants: (1) NOx (excluding N2O), (2) SOx, (3) particulate matter (PM10), (4) lead (Pb), and (5) mercury (Hg); percentage of each in or near areas of dense population	SSE discloses NOx, SOx, PM10 and Mercury air emissions on page 95 of this report and in the accompanying data and performance tables (available at sse.com/sustainability/reporting). Data from other air emissions is reported to the environmental regulator and, while this information can be accessed through a request to the regulator, SSE is working to disclose it more readily to its stakeholders in future.
IF-EU-140a.1	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	SSE depends on water in various ways across its operations, from use in electricity generation to an amenity in its buildings. SSE provides information on its water management approach and its operations in relation to water stressed areas on page 95, alongside a detailed breakdown of water use data in the accompanying data and performance tables (available at https://www.sse.com/sustainability/reporting).
IF-EU-140a.2	Number of incidents of non-compliance associated with water quantity and/or quality permits, standards, and regulations	In 2021/22, SSE had three minor permit breaches in relation to water quantity and/or quality permits. Immediate action to rectify the non-compliance was undertaken and the environmental regulator notified in each case. Investigations were completed following these events and actions taken to prevent reoccurrence.
IF-EU-140a.3	Description of water management risks and discussion of strategies and practices to mitigate those risks	Detailed description of the strategies and practices SSE has in place to mitigate water management risks is provided in SSE's CDP Water Programme response, which is publicly available on its website at sse.com/sustainability
IF-EU-150a.1	Amount of coal combustion residuals (CCR) generated, percentage recycled	N/A - SSE closed its last remaining coal-fired power plant in March 2020.
IF-EU-150a.2	Total number of coal combustion residual (CCR) impoundments, broken down by hazard potential classification and structural integrity assessment	N/A - SSE closed its last remaining coal-fired power plant in March 2020
IF-EU-240a.1	Average retail electric rate for (1) residential, (2) commercial, and (3) industrial customers	More information will be available in 2022/23
IF-EU-240a.2	Typical monthly electric bill for residential customers for (1) 500 kWh and (2) 1,000 kWh of electricity delivered per month	More information will be available in 2022/23
IF-EU-240a.3	Number of residential customer electric disconnections for non-payment, percentage reconnected within 30 days	More information will be available in 2022/23
IF-EU-240a.4	Discussion of impact of external factors on customer affordability of electricity, including the economic conditions of the service territory	More information will be available in 2022/23
IF-EU-320a.1	(1) Total recordable incident rate (TRIR), (2) fatality rate, and (3) near miss frequency rate (NMFR)	See the accompanying data and performance tables (available at sse.com/sustainability/reporting) for SSE's safety performance, as well as page 166 of SSE's Annual Report 2022.
IF-EU-420a.1	Percentage of electric utility revenues from rate structures that (1) are decoupled and (2) contain a lost revenue adjustment mechanism (LRAM)	Not applicable in the UK and Irish electricity systems.
IF-EU-420a.2	Percentage of electric load served by smart grid technology	With the smart meter roll out continuing in Great Britain, there are now 1,425,834 smart meters connected to SSEN Distribution's network that can 'communicate' to SSEN's system. This means that 38% of all SSEN's supply points have communicable and smart capability*.
IF-EU-420a.3	Customer electricity savings from efficiency measures, by market	See pages 38 to 42 for details of SSE's fuel poverty and energy efficiency support.
IF-EU-540a.1	Total number of nuclear power units, broken down by U.S. Nuclear Regulatory Commission (NRC) Action Matrix Column	N/A - SSE does not operate nuclear generation.
IF-EU-540a.2	Description of efforts to manage nuclear safety and emergency preparedness	N/A - SSE does not operate nuclear generation.
IF-EU-550a.1	Number of incidents of non-compliance with physical and/or cybersecurity standards or regulations	SSE has robust processes and practices in place to manage cybersecurity and its datacentres are certified to ISO27001 for information security. SSE also has a suite of mandatory ethics and compliance training modules which all employees are required to complete, which includes Cyber Security eLearning module. SSE discloses the number of material or regulatory reportable incidents caused by cyber security breaches of SSE systems in the accompanying data and performance tables (available at sse.com/sustainability/reporting).
IF-EU-550a.2	(1) System Average Interruption Duration Index (SAIDI), (2) System Average Interruption Frequency Index (SAIFI), and (3) Customer Average Interruption Duration Index (CAIDI), inclusive of major event days	A comparable indicator for GB is the Customer Interruptions and Customer Minutes Lost on SSE's electricity distribution network. See the accompanying data and performance tables (available at sse.com/sustainability/reporting) for data.
IF-EU-000.A	Number of: (1) residential, (2) commercial, and (3) industrial customers served	See the accompanying data and performance tables (available at sse.com/sustainability/reporting) for SSE's domestic and business customer supply accounts.
IF-EU-000.B	Total electricity delivered to: (1) residential, (2) commercial, (3) industrial, (4) all other retail customers, and (5) wholesale customers	See pages 106 and 107 of SSE's Annual Report 2022 for volume of electricity sold to customers by business and domestic supply businesses. See page 98 of SSE's Annual Report 2022 for the electricity distributed to customers by SSEN Distribution.
IF-EU-000.C	Length of transmission and distribution lines	SSEN owns, operates and maintains around 130,000km of overhead lines and underground cables. SSE reports the length of electricity transmission lines only in its CDP Climate Change Programme response, which is publicly available at sse.com/sustainability
IF-EU-000.D	Total electricity generated, percentage by major energy source, percentage in regulated markets	See the accompanying data and performance tables (available at https://www.sse.com/sustainability/reporting) and pages 100 and 103 of SSE's Annual Report 2022 for SSE's generation by source. SSE has generation activities in the UK and Ireland which are both regulated markets.
IF-EU-000.E	Total wholesale electricity purchased	See pages 106 and 107 of SSE's Annual Report 2022 where the total volume of electricity sold by SSE Business Energy and SSE Airtricity is described. Because both these businesses act independently from SSE's generation businesses in the market, the volume of electricity sold to customers represents the net amount of electricity purchased by SSE throughout 2021/22.



Independent Limited Assurance Report to the Directors of SSE plc on selected non-financial metrics

The Board of Directors of SSE plc ("SSE") engaged us to obtain limited assurance on the selected non-financial metrics (together the "Subject Matter Information") as defined below and marked with the symbol (A) within the SSE's Annual Report and/or the SSE's Sustainability Report for the year ended 31st March 2022 (the "Reports") available at <https://www.sse.com/sustainability/> (as specified within the 'Subject Matter Information' table below).

Our assurance conclusion does not extend to information in respect of earlier periods or to any other information included in, or linked from, the Reports including any images, audio files or videos.

Our limited assurance conclusion

Based on the procedures we have performed, as described under the 'Summary of work performed as the basis for our assurance conclusion' and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Subject Matter Information as defined below and marked with the symbol (A) on pages 54 to 57 in SSE's Annual Report and 22 to 27 and 88 to 97 in SSE's Sustainability Report for the year ended 31st March 2022, has not been prepared, in all material respects, in accordance with the Reporting Criteria and referenced in the 'Subject Matter Information and Reporting Criteria' section below.

Subject Matter Information and Reporting Criteria

The Subject Matter Information needs to be read and understood together with the Reporting Criteria available at <https://www.sse.com/sustainability/>, which SSE is solely responsible for selecting and applying. The Subject Matter Information is set out in the table below. The location of the Subject Matter Information between the Reports are shown via the symbol ●.

Subject Matter Information	Unit	Total	Annual Report 2022	Sustainability Report 2022
Scope 1 carbon emissions	mtCO ₂ e	5.75	●	●
Scope 2 carbon emissions	mtCO ₂ e	0.49	●	●
Scope 3 carbon emissions	mtCO ₂ e	3.69	●	●
Total carbon emissions	mtCO ₂ e	9.93	●	●
Total water abstracted	million m ³	23,896	●	●
Total water consumed	million m ³	0.8	●	●
Total water consumed – Buildings	million m ³	0.023		●
Total water returned	million m ³	23,895	●	●
Scope 1 GHG emissions intensity of electricity generated	gCO ₂ e/kWh	259	●	●
Carbon intensity of electricity generation	gCO ₂ e/kWh	258		●
Energy Consumption: Total electricity consumption in non-operational buildings	kWh	76,299,038		●
Energy Consumption: Purchased heat from non-renewable sources	GWh	3.33	●	●
Operational Plant & Vehicles: Fuel used in operational vehicles	litres	6,134,294		●
Business Travel: Flights – distance travelled	km	3,406,956		●
Business Travel: Train – distance travelled	km	1,814,847		●
Business Travel: Company cars – distance travelled	km	9,691,114		●

Inherent limitations

The absence of a significant body of established practice on which to draw to evaluate and measure non-financial information allows for different, but acceptable, evaluation and measurement techniques that can affect comparability between entities and over time.

Non-financial performance information is subject to more inherent limitations than financial information, given the characteristics of the underlying subject matter and the methods used for determining such information. The precision of different measurement techniques may also vary.

Responsibilities of SSE's directors

As explained in the Directors' Statement on page 57 of SSE's Annual Report and on page 1 of SSE's Sustainability Report, the Directors of SSE are responsible for:

- determining appropriate reporting topics and selecting or establishing suitable criteria for measuring or evaluating the underlying subject matter;
- ensuring that those criteria are relevant and appropriate to SSE and the intended users of the Reports;
- the preparation of the Subject Matter Information in accordance with the Reporting Criteria including designing, implementing and maintaining systems, processes and internal controls over information relevant to the evaluation or measurement of the Subject Matter Information, which is free from material misstatement, whether due to fraud or error, against the Reporting Criteria; and
- producing the Reports, including underlying information and a statement of Directors' responsibility, which provides accurate, balanced reflection of SSE's performance in this area and discloses, with supporting rationale, matters relevant to the intended users of the Reports.

Our responsibilities

We are responsible for:

- planning and performing the engagement to obtain limited assurance about whether the Subject Matter Information is free from material misstatement, whether due to fraud or error;
- forming an independent conclusion, based on the procedures we have performed and the evidence we have obtained; and
- reporting our conclusion to the Directors of SSE.

Professional standards applied

We performed a limited assurance engagement in accordance with International Standard on Assurance Engagements 3000 (Revised) 'Assurance Engagements other than Audits or Reviews of Historical Financial Information' and, in respect of the greenhouse gas emissions, in accordance with International Standard on Assurance Engagements 3410 'Assurance engagements on greenhouse gas statements', issued by the International Auditing and Assurance Standards Board.

Our independence and quality control

We have complied with the Institute of Chartered Accountants in England and Wales Code of Ethics, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour, that are at least as demanding as the applicable provisions of the International Ethics Standards Board for Accountants International Code of Ethics for Professional Accountants (including International Independence Standards).

We apply International Standard on Quality Control (UK) 1 and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Summary of work performed as the basis for our assurance conclusion

In carrying out our limited assurance engagement we:

- considered the suitability in the circumstances of SSE's use of the Reporting Criteria, as the basis for preparing the Subject Matter Information;
- through inquiries with SSE's management, including the Sustainability team and those with responsibility for sustainability management and group sustainability reporting obtained an understanding of SSE's control environment, processes and systems relevant to the preparation of the Subject Matter Information;
- evaluated whether SSE's methods for developing estimates are appropriate and had been consistently applied;
- undertook site visits at one of SSE's power station sites; we selected these sites based on their inherent risk and materiality to the group, and unexpected fluctuations in the site Subject Matter Information since the prior period;
- performed limited substantive testing on a selective basis of the Subject Matter Information at corporate head office to check that underlying information had been appropriately evaluated or measured, recorded, collated and reported; and
- considered the disclosure and presentation of the Subject Matter Information.

Our procedures did not include evaluating the suitability of design or operating effectiveness of control activities, testing the data on which the estimates are based or separately developing our own estimates against which to evaluate SSE's estimates.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

Other information

The other information comprises all of the information in the Reports other than the Subject Matter Information and our assurance report. The directors are responsible for the other information. As explained above, our assurance conclusion does not extend to the other information and, accordingly, we do not express any form of assurance thereon. In connection with our assurance of the Subject Matter Information, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the Subject Matter Information or our knowledge obtained during the assurance engagement, or otherwise appears to contain a material misstatement of fact. If we identify an apparent material inconsistency or material misstatement of fact, we are required to perform procedures to conclude whether there is a material misstatement of the Subject Matter Information or a material misstatement of the other information, and to take appropriate actions in the circumstances.

Use and distribution of our report

This report, including our conclusion, has been prepared solely for the Board of Directors of SSE in accordance with the agreement between us dated 2nd March 2022 (the "agreement"). Our report must not be made available to any other party save as set out in the agreement. To the fullest extent permitted by law, we do not accept or assume responsibility or liability to anyone other than the Board of Directors and SSE for our work or this report except where terms are expressly agreed between us in writing

PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP
Chartered Accountants
London
13th June 2022

¹ The maintenance and integrity of SSE's website is the responsibility of the Directors; the work carried out by us does not involve consideration of these matters and, accordingly, we accept no responsibility for any changes that may have occurred to the reported Subject Matter Information or Reporting Criteria when presented on SSE's website.

**For further information about SSE,
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