CDP Climate Change Questionnaire 2022

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

SSE is a UK-listed energy company, operating across the UK and Ireland and in carefully selected international markets including East Asia, Europe and North America. It is involved in the generation, transmission, and distribution of electricity; and in the supply of electricity, gas and related services to customers. It is a leading generator of renewable electricity in the UK and Ireland and one of the largest electricity network companies in the UK. SSE's purpose is to provide energy needed today while building a better world of energy for tomorrow; and its vision is to be a leading energy company in a net-zero world. Its 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 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.

On the road to net zero in 2050, SSE has set four interim goals aligned to the United Nations' Sustainable Development Goals (SDGs) for 2030, these are to: cut carbon intensity by 80% from 2018 base year; increase renewable energy output fivefold; enable low-carbon generation and demand with 20GW of renewable generation and facilitate around 2 million EVs and 1 million heat pumps on SSEN's electricity networks by 2030 and champion a fair and just energy transition.

SSE has medium-term carbon targets which have been approved by the Science Based Target Initiative (SBTi): reduce the carbon intensity of scope 1 GHG emissions by 80% by 2030 from 2018 base year; reduce absolute scope 1 and 2 GHG emissions by 72.5% by 2030 from 2018 base year; reduce absolute GHG emissions from use of sold products (scope 3) by 50% by 2034 from 2018 base year and engage with 50% of suppliers by spend to set a science-based target by 2024.

SSE has joined the 'Race to Zero' and was a Principal Partner of the UK Government's presidency of COP26.

SSE's businesses and how they contribute 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:

· **SSE Renewables:** develops, builds, operates and invests in assets that generate electricity from renewable sources.
· **SSE Thermal:** generates electricity from thermal sources in a flexible and reliable way, supporting balancing of the electricity systems in GB and Ireland. **Gas Storage** holds around 40% of the UK's underground capacity, supporting security of supplies in the UK.
· **SSEN Transmission:** owns, operates and develops the electricity transmission network in the north of Scotland.
· **SSEN Distribution:** owns, operates and maintains the electricity distribution network in the north of Scotland and central southern England.
· **SSE Business Energy and SSE Airtricity**: provide energy and related services to households, businesses and public sector organizations across GB and the island of Ireland.
· **SSE Distributed Energy:** 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.
· **SSE Energy Portfolio Management:** secures value for SSE's asset portfolios in wholesale markets and manages volatility through risk-managed trading of energy-related commodities.

SSE has been reporting to CDP on climate-related issues and opportunities since 2004. The most material environment impact and opportunity for SSE is climate-related and SSE's business strategy places climate change and the challenge and opportunity of decarbonisation at its core.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years
Reporting year	April 1, 2021	March 31, 2022	No

C0.3

(C0.3) Select the countries/areas in which you operate.

Ireland
United Kingdom of Great Britain and Northern Ireland

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

GBP

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Operational control

C-EU0.7

(C-EU0.7) Which part of the electric utilities value chain does your organization operate in? Select all that apply.

Row 1

Electric utilities value chain

Electricity generation
Transmission
Distribution

Other divisions

Gas storage, transmission and distribution
Smart grids / demand response
Battery storage

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	GB0007908733

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Chief Executive Officer (CEO)	Climate-related issues are highly material to the energy industry with climate-related risks and low-carbon opportunities having a direct impact on SSE's business strategy and its ability to achieve its business objectives. For this reason, SSE's CHIEF EXECUTIVE (an Executive Director on the SSE plc Board) has ultimate responsibility in their executive capacity for climate-related issues. Key external activities which support this position include being a member of the UK Government's Hydrogen Advisory Council and of the COP26 Business Leaders group. The Board is responsible for setting SSE's strategy and the CHIEF EXECUTIVE is involved in both setting the Group's strategic direction (in their capacity as an Executive Director) and leading on its implementation (as head of executive management and SSE's Group Executive Committee). SSE's 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' executes its vision of 'being a leading energy company in a net zero world' by focusing on core renewables and economically regulated electricity networks businesses that support this transition. When setting strategic objectives, all material influencing factors, including climate change, are considered. The Chief Executive has a specific role to ensure the decisions and actions of the company are sustainable in the long-term, through appropriate management, implementation and progress of sustainability interventions which support SSE's strategy and address material impacts including climate change. An example of the CHIEF EXECUTIVE and SSE Board making a prominent climate-related decision in FY2021/22, was the approval of accelerated science-based targets which align to the SBTi 1.5°C power sector guidance. The Group Executive Committee, which the CHIEF EXECUTIVE leads, and the SSE plc Board, both approved this decision in November 2021. It accompanied SSE's Net Zero Acceleration Programme which centres on a fully-funded £12.5bn capital expenditure plan to 2026 focused on low-carbon electricity assets and infrastructure, and will account for around 20% of the UK's revised 50GW offshore wind target and 20% of UK electricity networks investment.
Chief Financial Officer (CFO)	SSE's Finance Director deputises for the Chief Executive and is responsible for setting SSE's financial strategy and overseeing financial performance. The Finance Director is a member of the Accounting for Sustainability (A4S) CFO Leadership Network. The presence of climate-related issues within the Finance Director's role includes: • Sustainable debt financing to support the execution of SSE's strategic ambitions, such as the issuance of 'green bonds' and the use of ESG linked finance facilities. The CFO has overseen the issuance of four Green Bonds since 2017. The main selection criteria for a project to be selected for a Green Bonds, includes alignment with, and furtherance of, SSE's commitment to reduce the carbon intensity of its

	electricity generation and SDG 13 (take urgent action to combat climate change and its impacts). In March 2022, SSEN Transmission agreed a £350m private placement, the proceeds of which are earmarked to fund part of its programme of critical investments in transmission network infrastructure that will help accommodate the significant increase in renewables required to bolster the UK's energy security and achieve the transition to net zero emissions, as well as cover existing maturing debt. These investments are essential in enabling delivery of the UK Government's ambition for enough offshore wind to power every home with renewable energy by 2030. • Engagement with the investment community on ESG and climate-related matters, which are fed-back to the whole Board and considered in decision making where appropriate. • Climate-related financial and non-financial reporting, such as SSE's approach to the Task Force on Climate-related Financial Disclosure (TCFD) recommendations, this CDP report and other material climate-related non-financial disclosures. The Finance Director approves SSE's CDP Climate Change programme response and the Board ultimately approves SSE's full suite of TCFD disclosures.
Board Chair	SSE's Board Chair leads the SSE plc Board, ensuring its effective operation and governance. As set out in SSE's Schedule of Reserved matters, the Board has overall responsibility for setting the strategy of the SSE Group, which 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. Specifically, the Chair has responsibility for ensuring the decisions of the company are sustainable in the long-term, and the Group's approach to sustainability, including climate change, is addressed through strategic and operational considerations and in the context of assessing risk. In FY21/22 some of the decisions taken by the Board in line with SSE's net zero strategy, included: the approval of SSE's Net Zero Acceleration Programme (see pages 126 to 129 of SSE's Annual Report 2022; and see pages 130 to 131 of the 2022 Annual Report: • the approval of SSE's approach to ScotWind (in which it was successful with its project partners in the leasing round winning the development rights off the east coast of Scotland); • the approval to submit the information required to participate in the Government's CCS cluster sequencing process; • the approval of SSEN Distribution's business plan 'Powering communities to net zero' for the price control period from 2023 to 2028 (RIIO-ED2); • approval of the final investment decision in the offshore wind project Dogger Bank C; • approval of revised 2030 business goals (which include cutting carbon intensity by 80%; increasing renewable energy fivefold; and enabling low-carbon generation and demand);

	• approval of SSE's Net Zero Transition Plan and Report; and approval of international renewables opportunities (including Japan and Southern Europe).
Board-level committee	The Safety, Sustainability, Health and Environment Advisory Committee (SSHEAC) is a sub-Committee of the SSE plc Board with the membership comprising: four non-Executive Directors; the Chair of the Board; the Chief Commercial Officer; the Chief Sustainability Officer; and three senior executives. The Committee's role is to support the Board and provide assurance in matters relating to safety, health, environment (SHE) and sustainability. The SSHEAC provides a leadership forum for non-Executive Directors to work with senior management and shape policy, targets and strategy to improve SHE performance and culture, in addition to supporting SSE's commitment to being a sustainable company that makes a positive contribution. The Committee underwent a degree of reform in 2021/22 to enhance is role in relation to sustainability and now has expanded responsibility for: reviewing SSE's comparative ESG ratings performance; approving SSE's Sustainability Report; reviewing the physical risks of climate change on SSE's activities with a focus on climate adaptation and resilience; and increased oversight of SSE's policy, practice and performance surrounding environmental impacts, including waste, air emissions, biodiversity and water consumption – under which it continues to oversee the actions which have been agreed to manage SSE's environmental footprint.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – all meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and	Strategy, plans, budgets, approvals and performance SSE's Schedule of Reserved Matters outlines the Board's responsibilities, core to which is agreeing the Company's purpose and strategy. Climate change is implicitly linked to SSE's net zero focused strategy and is therefore covered at every Board meeting. The Board also has responsibility in its leadership role to review and approve priorities surrounding SSE's principal sustainability impacts, including in relation to climate change. In 2022, the Board's strategic focus continued to be the growth opportunities available through the net zero transition, which saw the Board approve SSE's Net Zero Transition Programme.

	performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	The Board sets the budget for the SSE Group and must approve major projects that materially impact the Group's strategy through SSE's financial governance framework. Key project-based decisions: • the approval of SSE's successful approach to the ScotWind leasing round; • the approval to participate in the Government's CCS cluster sequencing process; • the approval of SSEN Distribution's RIIO-ED2 business plan for the price control period 2023 to 2028. Group Principal Risks Effective identification, understanding and mitigation of SSE's Principal Risks underpins the Board's approach to setting strategic objectives and informing strategic decision making. The Board aims to consider all material influencing factors and key external trends in the energy market, including those relating to climate change. These material influencing factors also have an impact on the nature and extent of risks the Board is willing to take to meet these objectives, and related mitigation strategies adopted by the SSE Group. Material changes in the nature and potential impacts of SSE's Group Principal Risks are regularly assessed with appropriate mitigations implemented where necessary. Climate action, goals & reporting At SSE's AGM 2021, a framework for annual shareholder advisory votes was established which involved committing to publishing a Net Zero Transition Report. In 2022, the Board approved SSE's Net Zero Transition Plan which details the targets and actions SSE intends to take to achieve its net zero ambitions. This was followed by Board approval of SSE's Net Zero Transition Report which summarises the progress against this plan towards SSE's net zero targets. SSE's 2030 business goals, aligned to the four highly material SDGs, were established in 2019. A review in 2022 reflected on the significant progress made by

		SSE against the original ambitions at the same time as recognising the impetus for accelerated climate action. It also recognised the opportunity for greater specificity particularly in relation to expected customer requirements on electricity networks. As a result, the Board agreed 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.

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues
Row 1	Yes	SSE's Executive Directors have worked in the energy industry and been with SSE for a significant period. The Chief Executive joined SSE in 1997, the Finance Director joined SSE in 1990 and the Chief Commercial Officer joined SSE in 1998. In their respective roles they have gained and currently possess depth of understanding of the climate-related issues facing society and are clear in the role of energy sector (and SSE) in addressing climate change. This is reflected in SSE's purpose and its strategy and the targeted climate action which shapes business objectives (targeted action includes accelerated science based targets, enhanced 2030 business goal and the creation of a Net Zero Transition Report and Plan). External positions which the Executive Directors hold which support the above are: the Chief Executive – Member of the UK Government's Hydrogen Advisory Council, Member of the COP26 Business Leaders group and Member of the Scottish Energy Advisory Board; the Finance Director – member of the Accounting for Sustainability (A4S) Leadership Network; and the Chief Commercial Officer – member of the Energy UK Board. A number of the non-Executive Directors also possess long-standing executive career experience in the sector and have therefore also assimilated understanding of the climate-related issues. Their full biographies can be found in the SSE Annual Report on pages 118 to 122 and on sse.com. For example, one SSE non-Executive Director has been actively involved in climate science research.

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	Quarterly
Chief Sustainability Officer (CSO)	Both assessing and managing climate-related risks and opportunities	Quarterly
Other committee, please specify Members of the Group Executive Committee	Both assessing and managing climate-related risks and opportunities	Quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

Where in the organizational structure this position(s) lie

The CHIEF EXECUTIVE is an Executive Director on the Board and is head of executive management leading the Group Executive Committee (GEC). As a member of the Board, the Chief Executive is involved in setting the strategic direction of SSE. As leader of the GEC, the Chief Executive oversees strategic implementation, which is reported back to the Board. Through the Board approved division of responsibilities (across key Board roles), the Chief Executive has overall responsibility for ensuring the decisions and actions of the company are sustainable in the long-term, through appropriate management, implementation and progress of sustainability interventions which support SSE's strategy and address material impacts including climate change.

The Chief Sustainability Officer (CSO) is responsible for advising the Board, the GEC and SSE's Business Units on sustainability-related issues and strategy, including those relating to climate. The CSO reports directly to the Chief Executive and is a member of the SSHEAC (a sub-Committee of the Board) and two of the three SSE Group-wide sub-committees of the GEC: the Group Safety, Health and Environment Committee (SHEC) and the Group Risk Committee. The CSO is also a non-Executive Director of the Board of SSEPD, the subsidiary company which is responsible for SSE's regulated electricity networks businesses. The roles and responsibilities of the CSO have been defined in the context of the significance of climate-relates issues to the Group's strategy, sustainability approach and long-term success. The role

of CSO ensures a continuous focus on sustainability issues through agreed reporting to the Board and executive, ensuring relevant issues are elevated to the most senior level.

Members of the GEC include the: Chief Executive; Finance Director; Chief Commercial Officer; Managing Director, SSEN Transmission; Managing Director, SSEN Distribution; Managing Director, SSE Renewables; the General Counsel; Director of Corporate Affairs and Strategy; and Director of HR. The GEC has responsibility for climate-related issues through its mandate to implement SSE's strategy through the operational management of SSE's Business Units; and its responsibility for identifying SSE's material sustainability impacts, and deciding the implementation and delivery of the Group's sustainability strategy including in relation to climate change. It is supported in its role by a suite of sub-Committees with agreed delegated authorities. The members of the GEC ensure that each business within the Group is equipped with the necessary resources to deliver agreed strategy effectively and efficiently by considering the expectations of stakeholders in respect of economic, social and environmental impacts.

Specific responsibilities with regard to assessment and monitoring of climate-related issues

The Chief Executive is responsible for considering material influencing factors (which includes climate-related issues and low-carbon opportunities) when proposing and leading the delivery of strategy (which is centred on addressing the issue of climate change and supporting the net zero transition); implementing and driving climate-related performance programmes across the organisation; and communicating and providing feedback on the implementation of Board agreed policies, including SSE's Group Climate Change Policy.

The Chief Sustainability Officer is responsible for the Group Sustainability function which assesses, manages and monitors climate-related issues and opportunities in the context of strategic development, and oversees external reporting, which includes non-financial disclosures such as those in relation to climate change. In addition, the Chief Sustainability Officer, is responsible for driving sustainability performance across the organisation and reports progress on sustainability activities to the Board and SSE's stakeholders. This includes working with SSE's Business Units to deliver the business strategy and implementing the four 2030 business goals, three of which address the challenge and opportunity of climate change. The Group Sustainability function monitors: performance against SSE's Science Based Targets; progress against the 2030 goals; and facilitates TCFD risk and opportunity assessments. Results of these are reported to the GEC, Board and CEO.

The GEC is responsible for delivering strategy under the leadership of the Chief Executive and for overseeing SSE's Group Principal Risks and implementing a comprehensive Principal Risk Self-Assessment, this includes for the Climate Change Group Principal Risk. It drives climate-related performance programmes across the company and considers climate-related issues on a standing basis at least annually, with other climate-related issues being considered as and when required as advised by the Chief Executive or Chief Sustainability Officer.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Chief Executive Officer (CEO)	Monetary reward	Emissions reduction target	Part of the remuneration for SSE's Executive Directors is determined by their performance against the Annual Incentive Plan (AIP). The AIP award is determined by performance against both financial metrics and non-financial performance. In March 2019, the Remuneration Committee aligned 20% of the AIP to progress against the achievement of SSE's four business goals aligned to the UN Sustainable Development Goals. Three of the four goals are climate-related and drive renewable development, electrification and reduce carbon intensity of generated electricity. In March 2020 the GEC approved and in April 2020 the Board endorsed the adoption of four new Science Based Target validated by the Science Based Target Initiative. This meant that the first of SSE's four 2030 Goals became more stretching, committing to a 60% reduction in carbon intensity of the electricity SSE generates by 2030, up from 50%. Accordingly, SSE's Executive Directors AIP has been adjusted to accommodate this target. 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. SSE's 2030 Goals, which are linked to the AIP are: to cut SSE's carbon intensity of the electricity generated by 60%, to develop and build enough renewable energy capacity to treble renewable output and help accommodate 10 million electric

			vehicles on Britain's electricity networks – are in direct response to the net-zero challenge. The final goal, to champion a real Living Wage and Fair Tax are also important to delivering the first three. Public consent for climate action will, in part, depend upon the social benefit of climate action been shared widely with society. While this goal to promote decent work and economic growth is not directly related to the climate imperative, SSE believes that fair tax and fair wages play an important role in demonstrating positive social impact in the transition to a net zero economy.
Chief Financial Officer (CFO)	Monetary reward	Emissions reduction target	Part of the remuneration for SSE's Executive Directors is determined by their performance against the Annual Incentive Plan (AIP). The AIP award is determined by performance against both financial metrics and non-financial performance. In March 2019, the Remuneration Committee aligned 20% of the AIP to progress against the achievement of SSE's four business goals aligned to the UN Sustainable Development Goals. Three of the four goals are climate-related and drive renewable development, electrification and reduce carbon intensity of generated electricity. In March 2020 the GEC approved and in April 2020 the Board endorsed the adoption of four new Science Based Target validated by the Science Based Target Initiative. This meant that the first of SSE's four 2030 Goals became more stretching, committing to a 60% reduction in carbon intensity of the electricity SSE generates by 2030, up from 50%. Accordingly, SSE's Executive Directors AIP has been adjusted to accommodate this target. 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. SSE's 2030 Goals, which are linked to the AIP are: to cut SSE's carbon intensity of the electricity generated by 60%, to develop and build enough renewable energy capacity to treble renewable output and help accommodate 10 million electric vehicles on Britain's electricity networks – are in direct response to the net-zero challenge. The final

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Other, please specify Energy Director (Board member)	Monetary reward	Emissions reduction target	Part of the remuneration for SSE's Executive Directors is determined by their performance against the Annual Incentive Plan (AIP). The AIP award is determined by performance against both financial metrics and non-financial performance. In March 2019, the Remuneration Committee aligned 20% of the AIP to progress against the achievement of SSE's four business goals aligned to the UN Sustainable Development Goals. Three of the four goals are climate-related and drive renewable development, electrification and reduce carbon intensity of generated electricity. In March 2020 the GEC approved and in April 2020 the Board endorsed the adoption of four new Science Based Target validated by the Science Based Target Initiative. This meant that the first of SSE's four 2030 Goals became more stretching, committing to a 60% reduction in carbon intensity of the electricity SSE generates by 2030, up from 50%. Accordingly, SSE's Executive Directors AIP has been adjusted to accommodate this target. 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. SSE's 2030 Goals, which are linked to the AIP are: to cut SSE's carbon intensity of the electricity generated by 60%, to develop and build enough renewable energy capacity to treble renewable output and help accommodate 10 million electric vehicles on Britain's electricity networks – are in direct response to the net-zero challenge. The final goal, to champion a real Living Wage and Fair Taxes are also important to delivering the first

			three. Public consent for climate action will, in part, depend upon the social benefit of climate action been shared widely with society. While this goal to promote decent work and economic growth is not directly related to the climate imperative, SSE believes that fair tax and fair wages play an important role in demonstrating positive social impact in the transition to a net zero economy.
Other, please specify Group Executive Committee	Monetary reward	Emissions reduction target	The Annual Bonus scheme for Executive Directors was based on personal objectives, which included the achievement of sustainability targets and goals (which includes climate and environment related targets and goals). In addition, a 'Corporate' element of the annual incentive for GEC members, representing 25% of the award, flows through directly from Executive Directors' incentive outcomes which includes the achievement of SSE's four business goals aligned to the UN Sustainable Development Goals as detailed above.
All employees	Monetary reward	Other (please specify) Achievement of SSE's sustainability value	Annual appraisals for all SSE employees are based around its 6 core values, one of which is sustainability. Individual performance is assessed and has implications on whether annual incremental pay rises and/ or bonuses are given. In addition, a 'Corporate' element of the annual incentive for all eligible employees, representing between 10% and 25% of the award, flows through directly from Executive Directors' incentive outcomes which includes the achievement of SSE's four business goals aligned to the UN Sustainable Development Goals as detailed above NB: Activity incentivised is reported as Other: Achievement of SSE's sustainability value.
All employees	Non-monetary reward	Other (please specify) Achievement of SSE's sustainability value	Better Off is SSE's energy and water campaign, working with staff to highlight and adopt positive behaviours and develop a 'switch off' culture both at work and at home. 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. A network of Energy Champions, made up of SSE employees, is helping to share the Better Off messages with colleagues

			and act as a local source of advice on energy reduction measures.
Management group	Monetary reward	Emissions reduction target	There are several managers in SSE whose jobs are directly related to environmental management and climate change, and therefore their salary and any incentive (monetary and non-monetary) is linked to the fulfilment of environment and climate change related personal targets.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	3	SSE's time horizons for assessing climate-related risks and opportunities are aligned with other business practice time horizons. The three climate related time horizons mirror the investment/capital and regulatory time horizons that govern SSE's financial, operational and capital plans. SSE's short-term horizon for assessing climate-related risks and opportunities is 0 to 3 years. This is influenced by the viability assessment of the company. Each year, in line with the requirements within provision C.2.2 of the UK Corporate Governance Code and as part of the risk assessment process, the Board assesses the prospects of the Company over the next 3 financial years. It is through this process that SSE determines its Group Principal Risks. Material influencing factors are considered when reviewing Group Principal Risks including those relating to climate change. The Directors have determined that as this time horizon is consistent with the Group's current capital programme and is within the strategy planning period, a greater degree of confidence over the forecasting assumptions modelled can be established.
Medium-term	3	10	SSE's medium-term horizon for considering climate-related risks and opportunities is 3 to 10 years. This is influenced by work done by the Committee on Climate Change (CCC), which is an independent, statutory body set up to monitor the UK's progress towards meeting

			targets set out in the Climate Change Act 2008 and to ensure emissions targets are set based on expert independent assessment of the evidence. The Act requires the Government to set legally-binding, five-yearly carbon budgets, twelve years in advance, from 2008 to 2050, to act as steppingstones towards these targets. In relation to the power sector, the CCC has estimated that the average grid intensity of electricity generated in 2030 should be between 50 and 100 gCO2/kWh. It has recommended that the UK Government provide a longer-term view of future low-carbon power auctions to support an emissions intensity below 100 gCO2/kWh by 2030. The carbon budgets and the CCC's recommendations both impact policy makers' time horizons, which in turn provides a framework for SSE's business planning. An example of SSE using this horizon in its planning is through the setting of its Science Based Targets : to reduce scope 1 GHG emissions intensity by 80% per gCO2e/kWh between 2017/18 and 2030, and to reduce absolute scope 1 and 2 GHG emissions by 72.5% between 2017/18 and 2030. In addition to this, within this medium-term time horizon, the end of Ofgem price control periods for both electricity transmission and electricity distribution regulatory settlements fall (2021 for transmission and 2023 for distribution). The current price control periods are in 8-year blocks, and from 2021 and 2023 the period reduces to five years, meaning that the planning for future price control periods will take place within this medium-term horizon.
Long-term	10	30	Most of SSE's core low carbon electricity assets have lifetimes that exceeds 20 years; therefore, SSE naturally has a long-term business outlook. The long-term horizon runs beyond 10 years and is focused on the trends and scenarios that may shape the future energy system, including climate-related policy, markets, technology and weather/climate impacts. While the longer the timeframe, the less certainty or certainty around the market and policy, it is possible for SSE to understand and consider a number of permutations of both opportunities and threats it may face in that period, outline, for example, within SSE's scenario analysis reports ('Transition to Net Zero: The Role of Gas and Post-Paris report), which assessed the resilience of SSE's business models to various warming scenarios. As part of this work that was undertaken for the two reports SSE assessed the various warming scenarios for the long-term horizon. Three scenarios were established by using publicly available data from National Grid's Future Energy Scenarios which forecasts energy scenarios out to 2040 and SSE projected these out to 2050 using the same assumptions.

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

Definition of substantive financial or strategic impact:

SSE follows the guidance and definitions relating to risk management as outlined in the FRC Corporate Governance Code. Its Principal Risks are therefore those risks that have the potential to impact the liquidity, solvency or business model of one or more of the core Business Units and/or of the Group as a whole to be substantive. SSE only accepts risk when: it is consistent with its core purpose, strategy and values; is well understood; can be effectively managed; with consideration of stakeholder expectations and offers commensurate reward. SSE defines risk as any event or circumstance that has potential to threaten achievement of its strategic objectives or compromise its business values.

In determining its appetite for specific risks, the Board is guided by three key principles:

1. Risks should be consistent with SSE's strategy, values and financial objectives;

2. Risks should only be accepted where appropriate reward is achievable on the basis of objective evidence and in a manner that is consistent with SSE's purpose, strategy and values; and

3. Risks should be actively controlled and monitored through the appropriate allocation of management and other resources, underpinned by the maintenance of a healthy business culture.

The Board has overall responsibility for determining the nature and extent of the risk it is willing to take and for ensuring that risks are managed effectively across the Group. The Board aims to consider all material influencing factors and key external trends in the energy market, including those relating to climate change, and aims to do so in a way that reflects the expectations of SSE's key stakeholder groups. These material influencing factors also have an impact on the nature and extent of risks the Board is willing to take in order to meet these objectives, and related mitigation strategies adopted by the Group. Material changes in the nature and potential impacts of SSE's Group Principal Risks are regularly assessed with appropriate mitigations implemented where necessary. SSE's Group Executive Committee (GEC) and its sub-Committees have responsibility for overseeing SSE's eleven Principal Risks, of which Climate Change is one. All Principal Risks are reviewed by the Board.

Description of the indicators to define substantive financial or strategic impact:

In addition to, and complementary to the Group Principal Risk assessment SSE also conducts a specialist TCFD climate-related risk and opportunity assessment process. This specialist TCFD risk assessment process takes the climate change risks from the Principal Risks and goes into more detail to identify and assess both climate-related risks and opportunities. This specialist TCFD assessment process uses a risk rating matrix to define the material risks and

opportunities and consider the relative significance of the risk or opportunity at a corporate level, this process involves assessing the likelihood and financial impact.

Likelihood - the time frame in which the risk or opportunity is likely to impact SSE:

· **Low** (exceptionally unlikely to unlikely to occur) – less than 1 in 10-year event;
· **Medium** (about as likely as not or more than likely than not to occur) – 1 in 5-year event; and
· **High** (very likely to virtually certain to occur) – 1 in 3-year event.

Financial impact - the financial impact of the risk or opportunity:

· **Low** – <£50m earnings annually or <£100m revenue annually;
· **Medium** – >£50m <£100m earnings annually or >£100m <£250m revenue annually; and
· **High** >£100m earnings annually or >£250m revenue annually.

This framework enables SSE to determine the risks and opportunities with a substantive financial or strategic impact. Out of these thresholds, SSE determines a substantive impact on the business to be an impact which is of a high likelihood (very likely to virtually certain to occur) and of a high financial impact (>£100m earnings annually or >£250m revenue annually).

In 2021/22 governance was further strengthened, with the Audit Committee of the Board taking oversight of the annual TCFD report and the reform of the Safety Health and Environment Advisory Committee to include sustainability oversight including a focus on climate adaptation.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

Process used for identifying and assessing climate-related risks and opportunities which could have a substantive financial impact

SSE's Group Risk Management Framework (RMF) integrates a process for identifying and assessing climate-related risks and opportunities. SSE also undertakes a TCFD climate-related risk and opportunity assessment process which is conducted by the TCFD Steering Group. This specialist TCFD assessment process takes the climate change risks from the RMF and goes into more detail to identify and assess the climate-related risks and opportunities over longer periods of time than the RMF.

This TCFD assessment process identifies the substantive climate-related risks and opportunities by reviewing: key climate-related trends in the external environment; key stakeholder issues and concerns; internal climate-related business unit risk assessment outputs; as well as climate-related influencing factors in the RMF. This assessment is completed across the value chain (direct operations, upstream and downstream activities) for each of the key business areas. Each risk or opportunity is then assessed on its impact over the short (up to 3 years), medium (3 to 10 years) and long term (10 to 30 years).

To determine which risks and opportunities could have a substantive financial or strategic impact on the organisation, the TCFD assessment process identifies and assesses the potential financial impact of the risks and opportunities that are material to SSE. A risk rating matrix provides the framework to define the material risks and opportunities and to consider the relative significance of the risk or opportunity at a corporate level. This process involves assessing the likelihood and financial impact of the risk or opportunity (as defined in C2.1b) and helps to identify the importance of each material risk or opportunity to the business.

To calculate the potential financial impact the following method is used:

• Climate-related risks involve modelling the financial cost of the risk (i.e. reduced earnings or increased costs) over the identified timeframe that the risk is perceived to impact the business.

• Climate-related opportunities, the financial benefits (e.g. adjusted operating profit) is identified over the timeframe that the opportunity is perceived to be realised by the business.

Frequency of risk identification and assessment processes

The climate-related risk and opportunity assessment process is conducted on an ongoing basis by the TCFD Steering Group and working group, with a six monthly review of the outputs by the Group Risk Committee. The TCFD working group consists of finance and sustainability professionals from the core business as well as business unit finance technical experts. The outputs of this process are reviewed by the TCFD Steering Group including SSE's Company Secretary, Finance Director, Investor Relations and the Chief Sustainability Officer and approved by the Group Risk

Committee.

Where relevant, risks and opportunities are assessed against different outcomes as determined by relevant scenarios.

The potential financial impacts are high-level estimates and are likely to change and evolve as methods mature. These risks and opportunities are designed to support consistent, comparable and clear climate-related financial information to SSE's investors and stakeholders.

The decision to mitigate, transfer, accept or control identified risks or opportunities is completed by the Group Risk Committee as part of the risk assessment process. The risk assessment process reviews costs, mitigating actions, the timeframe of the impact against relevant scenarios to provide an indication of the potential financial impact and the relative significance of the risk. This approach is completed for each material climate-related risk or opportunity.

Example of how SSE determines if a risk is mitigated, transferred, accepted or controlled include:

Physical Risk: Variable Wind Generation Risk: The TCFD assessment process identified that chronic long term changes in climate patterns cause higher temperatures that may result in lower rainfall and reduced wind levels. These changes may impact SSE's renewable output and associated earnings. Weather variability is a perennial feature of risk for SSE as the largest generator of renewable electricity in UK and Ireland.

Potential Impact to SSE: SSE's long-term monitoring of weather changes and current forecasts, established that a plausible scenario of significantly below-average rainfall and low wind combined may result in reduced renewable generation output and associated earnings.

In the first half of 2021/22 this risk played out, as SSE experienced one of the driest and calmest summer periods (April to September) on record. By the end of September 2021, Renewable volumes were 30% below plan. Some of this volume was recovered during the winter period, with Renewable volumes ending the year c.13% down on plan. For the future, it is expected that given SSE's planned trebling of renewables capacity by 2031 that this risk will continue to impact SSE. Furthermore, crisis management and business continuity plans are in place to deal with severe weather events that can damage energy assets.

Potential Financial Impact: The impact of this dry and calm period in this financial year was a reduction to adjusted operating profit from plan of c.£140m through the summer period. While the business recovered some of the volume through the second half of the financial year, the financial result for the year was c.£130m below plan. Further significant and sustained weather patterns similar to this could impact the recoverable value of the assets. A sensitivity to the wind goodwill impairment model was performed with a 15% adverse volume variance, which indicated significant headroom on the

carrying value of the assets (see SSE's Annual Report 2022 - note 15). There is still potential for events such as those that took place in 2021/22 to occur in the future, and therefore this remains a potential financial impact to SSE Renewables in the short, medium and long term.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	SSE faces risks from changes in obligations arising from operating in markets in the UK and Ireland which are subject to a high degree of regulatory, legislative and political intervention or uncertainty. The climate-related risks and opportunities relating to current regulation are identified through the Group Principal Risk review process for the 'Politics, Regulation and Compliance' Principal Risk and in the climate-related risks and opportunities risk assessment. Climate Change legislation (UK Climate Change Act 2008 and Irish Government's National Mitigation Plan) impacts financial, strategic and operational decisions. The risks and opportunities to SSE are in relation to the impact of current legislative frameworks in terms of its financial and strategic decisions around renewables investments, operation of thermal assets and development of new infrastructure. For example, the UK Climate Change Act 2008 and Clean Growth Strategy (published in 2017) and its Industrial Strategy describe the mechanisms for the UK to transition to a low-carbon economy. For instance, the UK Government has committed to 50GW of installed offshore wind capacity by 2030 and the Committee on Climate Change sees at least 75GW by 2050. The continued access to Contracts for Difference (CfD) or other price stabilisation mechanism would continue to support an investment case for SSE in off- and onshore wind projects. SSE Renewables has been successful in the UK's fourth Contract for Difference (CfD) Allocation Round, announced in July 2022, and has secured a 15 year low-carbon power contract for 220MW for its wholly-owned Viking Energy Wind Farm (Viking) project, currently being constructed in Shetland. Future CfD auctions also impact on SSE's electricity networks as these auctions determine the scale and location of future new generation plant that requires to be connected to the grid. Uncertainty over the medium-term on the future scale, shape and timing of new generation plant is determined by policy and lack of certainty means system planning can be more difficult.

Emerging regulation	Relevant, always included	SSE faces risks from changes in obligations arising from operating in markets in the UK and Ireland which are subject to a high degree of regulatory, legislative and political intervention. The climate-related risks and opportunities relating to emerging regulation are identified through the Group Principal Risk review process for the 'Politics, Regulation and Compliance' Principal Risk and in the climate-related risks and opportunities risk assessment. International and national agreements such as the 2015 Paris Agreement on Climate Change have been identified as a material influencing factor. Climate Change legislation has the potential to impact the strategy, finance and investment decisions that are made by SSE. The risks and opportunities SSE faces in relation to the impact of emerging legislative frameworks is in terms of its financial and strategic decisions around renewables investments, operation of thermal assets and development of new infrastructure. For example, there is a potential for more aggressive climate change policy that speeds up the closure of unabated gas generation from 2030. SSE expects to operate 2.3GW of Combined Cycle Gas Turbine (CCGT) capacity in 2030. It is, therefore, a plausible scenario that this capacity will not be able to generate beyond 2030 without low-carbon abatement technology. The potential impact of this policy change to SSE's impairment model at 31 March 2022 would be an impairment of £41.5m to Great Island and no impairment to Keadby 2 if it were assumed these plant would close in 2030. In addition to an impairment charge, SSE's decommissioning provisions would reduce by £8.4m if the forecast closure date was brought forward. In the short to medium-term gas generation is likely to play a key strategic role in balancing the variability of renewables, albeit with shorter running regimes, until sufficient net zero alternatives are deployed. The 'Balanced Net Zero Pathway' scenario in the Climate Change Committee's 6th Carbon Budget suggests the phasing out of unabated gas generation by 2035 (subject to security of supply considerations) and the UK Government's Net Zero Strategy outlines plans to decarbonise the power sector by 2035 with a target of 95% of electricity to be low carbon by 2030. It is plausible that to meet climate change commitments the UK Government (and potentially the Irish Government too) may strengthen climate change policies to require unabated gas generation to cease in the 2030s.

Technology	Relevant, always included	The climate-related risks relating to technology are identified through the Group Principal Risk review process for 'Speed of change' and 'Large capital projects quality/management' Principal Risks as well as a risk in the risk and opportunities assessment process. SSE's 'Speed of change' Principal Risk, highlights that SSE faces the risk of failing to recognise and react appropriately to climate-related competition, technological advancements and changes in customer expectations. SSE's 'Large capital projects quality/management' Principal Risk highlights that SSE faces the risk that its climate-related assets that it builds do not meet the quality standards required to support economic lives of typically 15 to 30 years. Technology has the potential to impact the strategy, finance and investment decisions that are made by SSE. For example, technology risk is relevant to Scottish and Southern Electricity Networks (SSEN), both in transmission and distribution networks. These businesses are central to supporting the transition to a low-carbon electricity system – connecting clean energy, supporting electrification of transport and facilitating change as local 'system operators' – and require significant modernisation and reform. SSEN's distribution businesses in the north of Scotland and central southern England are leading the industry through a number of high impact innovation and demonstration projects. The risk is that SSEN's technologies fail to adapt quickly enough to changed patterns of electricity demand and supply, and that customer expectations are not met. That is why SSEN has a deliberate strategy to take a leadership position within the electricity networks industry with innovative demonstration projects that enable far greater levels of flexibility.
Legal	Relevant, always included	SSE faces risks from changes in obligations arising from operating in markets in the UK and Ireland which are subject to a high degree of regulatory, legislative and political intervention or uncertainty. The climate-related risks and opportunities relating to emerging regulation are identified through the Group Principal Risk review process for the 'Politics, Regulation and Compliance' Principal Risk. International and national agreements such as the 2015 Paris Agreement on Climate Change have been identified as a material influencing factor on the 'Politics, Regulation and Compliance' Principal Risk. Climate Change legislation (UK Climate Change Act 2008 and Irish Government's National Mitigation Plan) has the potential to impact the strategy, finance and investment decisions that are made by SSE. Compliance is core to securing SSE's legitimacy as a provider of energy.

		As a generator of electricity, SSE is subject to national and international policies that impact the price of carbon. SSE Group has been operating under the established EU ETS carbon pricing system since the 1st of January 2005. Since the 1st of January 2021, following Brexit, the UK Government has established a UK Emissions Trading Scheme (UK ETS) to replace the EU ETS with the Group's UK generation assets now operating under the UK ETS carbon pricing system. Not meeting the legislative requirements of the UK ETS in the United Kingdom and the EU ETS in the Republic of Ireland would represent a legal risk for SSE. While this has created uncertainties which SSE has had to manage prudently, SSE is encouraged that all policy scenarios lead to high carbon pricing, which SSE supports as a critical tool in decarbonisation.
Market	Relevant, always included	SSE 'Commodity Prices' Group Principal Risk highlights that SSE faces risks associated with the Group's exposure to fluctuations in both the physical volumes and price of key commodities, including electricity, gas, carbon dioxide permits, oil and related foreign exchange values. International and national agreements on climate change have been identified as material influencing factors on this Principal Risk. SSE's 'Energy Affordability' Group Principal Risk highlights that SSE faces risks from the combination of the cost of providing reliable and sustainable energy and the level of customers' incomes means that energy becomes unaffordable to a significant number of SSE's customers. This risk is directly connected to political interventions and commodity price exposure. Public policies, including those aimed at reducing carbon emissions and energy consumption is identified as a material influencing factor on this Principal Risk. Market forces are a relevant risk because they impact on SSE's wholesale, retail and transmission/ distribution activities in the countries in which SSE operates and invests (i.e. UK and Ireland), which have the ability to influence the capital, operational and financial decisions of the company and the markets in which it operates. For example, offshore wind represents an opportunity for SSE to deliver its own decarbonisation ambitions and contribute to the achievement of the UK's and Ireland's carbon targets. The Crown Estate and the Crown Estate Scotland made new seabed rights available to offshore wind developers to ensure new projects can start to operate from the late 2020s. In 2022, SSE Renewables Limited (SSER) partnered with Marubeni Corporation (Marubeni), and Copenhagen Infrastructure Partners (CIP) (the Project Partners) and were successful in the outcome of the ScotWind leasing round winning the rights to develop what will become one of the world's largest floating offshore wind farms

		off the east coast of Scotland. The 858 square kilometres of seabed in the E1 Zone in the Firth of Forth off the Angus Coast is one of the largest lease areas to be offered by Crown Estate Scotland to any bidder. The lease area has average water depths of 72m, making the site suitable for the deployment of floating offshore wind turbines to deliver up to 2.6GW of new installed capacity. The Project Partners will now continue progressing the development of the project to target first generation before the end of the decade.
Reputation	Relevant, always included	Reputational risk is not determined by SSE as a risk in its own right, however impacts are evaluated, and 'Reputation' is used as an indicator in the risk assessment process. Climate-related reputational risks arise as a result of not managing and responding appropriately to the other climate-related risks highlighted in this table. For example, there is a public and political consensus on the need to address climate change. SSE firmly supports Net Zero legislation and believes that an accelerated path to limit global warming to no more than 1.5 degree centigrade must be pursued. SSE has also publicly announced its longer term carbon ambition: to reduce the scope 1 emissions intensity of the electricity it generated by 80% by 2030, based on 2018 levels. Failure to take action to meet this ambition could result in reputational damage to SSE for a number of SSE's key stakeholders, including society, shareholders, and government and regulators – especially in the context of the growing public support for tackling climate change.
Acute physical	Relevant, always included	SSE's 'Energy Infrastructure Failure' Group Principal Risk highlights that SSE faces the risk of national energy infrastructure failure, whether in respect of assets owned by SSE or those owned by others which SSE relies on, that prevents the Group from meeting its obligations. Severe adverse weather that causes damage or interrupts energy supply or generation is identified as a material influencing factor on this risk. In addition to this, weather associated seasonal fluctuations in demand, supply and generation capabilities – which may or may not be in line with historical trends both in GB and across Europe – is highlighted as a material influencing factor on the 'Commodity Prices' Principal Risk. Severe adverse weather that causes damage or interrupts energy supply or generation can impact the Group's ability to meet its business objectives and influences investment decisions made. For example, SSE's Networks business is at risk of the impacts of severe adverse weather events which can result in flooding of substations and/or damage to overhead lines. In an exceptional 2021/22 winter season, seven storms were named by the Met Office including three, Storm Arwen, Storms Malik/Corrie and Storms Eunice/Franklin that became Red Alert events, the most in any year since SSE's records began. Each of these events impacted over 100,000 customers, with a significant number for a multi-day period. On the 18th February 2022, Storm Eunice arrived in southern England

		bringing some of the highest recorded wind speeds on record to SSE's Central Southern England electricity network. With wind speeds reaching a peak of 122mph on the Isle of Wight, and gust in excess of 90mph elsewhere, Eunice was one of the most damaging storms experienced in decades. In a single 24-hour period, Storm Eunice caused more than 6 months' worth of overhead line damage, with over 1,000 points of damage recorded on our network. Following immediately behind Storm Eunice came Storm Franklin, causing further damage and delaying efforts to restore power as quickly as possible. Future climate models predict that climate change will continue to bring extreme events such as storms, floods and heatwaves which will impact network assets.
Chronic physical	Relevant, always included	SSE's 'Energy Infrastructure Failure' Group Principal Risk highlights that SSE faces the risk of national energy infrastructure failure, whether in respect of assets owned by SSE or those owned by others which SSE relies on, that prevents the Group from meeting its obligations. Severe adverse weather that causes damage or interrupts energy supply or generation is identified as a material influencing factor on this risk. In addition to this, weather associated seasonal fluctuations in demand, supply and generation capabilities – which may or may not be in line with historical trends both in GB and across Europe – is highlighted as a material influencing factor on the 'Commodity Prices' Principal Risk. Long-term changes in climate have the potential to impact SSE's ability to meet its obligations. For example, changes in climate could impact SSE's ability to produce electricity from its wind and hydro generation assets, which would impact on SSE's Wholesale business. Changes in climate could also impact the amount of gas and electricity used by customers which would affect SSE's Retail business. SSE's Networks business is at risk of the impacts of changes in climate, including severe adverse weather events which can result in flooding of substations and/or damage to overhead lines. It would also need to adapt its approach to operation and investment in infrastructure to meet the change in electricity generation and consumption patterns as a result of long-term changes in climate.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Chronic physical

Other, please specify

Chronic long-term changes in temperature and/or precipitation

Primary potential financial impact

Other, please specify

Decreased future adjusted operating profits and potential impact to recoverable value of assets.

Company-specific description

Longer term changes in climate patterns cause sustained higher temperatures that may result in lower rainfall and reduced wind levels. These changes may impact SSE's renewable output and associated earnings. Weather variability is a perennial feature of risk for SSE as the largest generator of renewable electricity in UK and Ireland.

SSE's businesses activities are significantly influenced by the weather: from influencing how much energy is demanded from customers, to providing the 'fuel source' for renewable generators. Therefore, weather patterns are an important contributor to SSE's business performance. Weather affects production of renewable energy, the operation of the electricity transmission and distribution networks, and the amount of gas and electricity SSE's energy customers use.

In the first half of 2021/22 this risk played out, as SSE experienced one of the driest and calmest summer periods (April to September) on record. By the end of September 2021, Renewable volumes were 30% below plan. Some of this volume was recovered during the winter period, with Renewable volumes ending the year c.13% down on plan.
For the future, it is expected that given SSE's planned trebling of renewables capacity by 2031 that this risk will continue to impact SSE.

One of the most material impacts that weather can have is fluctuations in weather patterns impacting adversely on the output of SSE's hydro-electric and wind generation assets. In total, SSE has approximately 3.9GW of renewable electricity capacity. SSE has hydro-electric generation assets across the north of Scotland, and onshore wind farms across the UK and Ireland (with the majority of installed capacity in Scotland). In particular, impacting SSE's 1,459MW of hydro electricity generation capacity (including pumped storage) which includes 91 hydro dams in the north of Scotland covering a water catchment area of 5,382 sq. miles and its 2,461MW of on-and off-shore wind generation capacity.

Changes in generation output that is associated with changes in the weather is already factored into SSE's Risk Management Framework. There is the possibility that climate change could exacerbate these weather-related fluctuations by impacting weather patterns over the longer term. The risk facing SSE is that lower levels of wind and rainfall could reduce the output from SSE's wind and hydro assets which could result in a reduction in adjusted operating profit.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

2,000,000,000

Potential financial impact figure – maximum (currency)

3,000,000,000

Explanation of financial impact figure

Based on SSE's long-term monitoring of weather changes and current forecasts, a plausible scenario has been established of significantly below-average rainfall and of low wind. The combination of both these weather impacts will result in reduced renewable generation output and associated earnings. This weather risk is a perennial feature of risk for SSE as the largest generator of renewable electricity in the UK and Ireland.

The impact of the dry and calm period in this financial year was a reduction to adjusted operating profit from plan of c.£140m through the summer period. While the business recovered some of the volume through the second half of the financial year, the financial result for the year was c.£130m below plan.

Further significant and sustained weather patterns similar to this could impact the recoverable value of the assets. A sensitivity to the wind goodwill impairment model was performed with a 15% adverse volume variance, which indicated significant headroom on the carrying value of the assets (see SSE Annual Report: note 15).

There is still potential for events such as those that took place in 2021/22 to occur in the future, and therefore this remains a potential financial impact to SSE Renewables in the short, medium and long term. Due to the potential for weather patterns to affect

renewable output in the future, SSE has calculated the cumulative impact over the next decade (to 2031) on renewable operating profit to be around £2bn to £3bn.

Cost of response to risk

250,000

Description of response and explanation of cost calculation

While the opportunity to mitigate against year-to-year weather variability is limited, there is an element of geographical and technological diversity amongst SSE's renewable portfolio providing a natural hedge to changing weather patterns within and between years. For example, 2,423MW of on-and off-shore wind capacity in UK and Ireland and 1,459MW of hydro generation capacity (inc. pumped storage) in Scotland. This diversity enabled SSE to generate a renewable output of 9.5 TWh in 2021/22.

SSE monitors short- and long-term weather conditions so that it can manage and respond to conditions across its assets. For instance, in the first half of 2021/22 SSE experienced a dry, still weather period leading to lower wind speeds and hydro production than expected. In the past few years, SSE has responded to these changes in weather patterns by operating and adapting its conventional hydro generation plant in a way that allows it to more flexible and responsive for the needs of the electricity system, with increased storage and adaptive operation regimes.

SSE has crisis management and business continuity plans in place to deal with severe weather events that can damage energy assets.

One element of management costs directly attributed to this climate-related risk is the monitoring/forecasting of weather by SSE's meteorological team. The costs directly attributed to SSE's meteorological team and the management of weather is in the region of £250,000 annually.

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical

Other, please specify

Acute changes in temperature and/or precipitation

Primary potential financial impact

Other, please specify

Decreased future adjusted operating profits and potential impact to recoverable value of assets.

Company-specific description

Increased severity of extreme weather events, such as storms, floods and heat waves bring prolonged extreme temperatures, wind or rainfall. This may damage or stress network assets resulting in additional costs to repair and maintain the network and the loss of incentive revenue for distribution operators.

The impact of weather is a perennial feature of operating an electricity distribution network in the north of Scotland and south of England. In an exceptional 2021/22 winter season, seven storms were named by the Met Office including three, Storm Arwen, Storms Malik/Corrie and Storms Eunice/Franklin that became Red Alert events, the most in any year since SSE's records began. Each of these events impacted over 100,000 customers, with a significant number for a multi-day period. Future climate models predict that climate change will continue to bring extreme events such as storms, floods and heatwaves which will impact network assets. For example, severe adverse weather events can result in flooding of substations and/or damage to overhead lines.

Time horizon

Medium-term

Likelihood

Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

100,000,000

Potential financial impact figure – maximum (currency)

300,000,000

Explanation of financial impact figure

It is recognised that 2021/22 brought 'once in a generation' levels of impact and disruption, but with climate impacts accelerating the potential remains for similar events to occur across the network in the short, medium and long term, resulting in potential financial impact. To estimate a potential financial impact of this risk, SSE has assessed the value of the next distribution price control (2023 to 2028) and the impact of weather modelling on fault costs and annual incentive revenue for the next decade (up to 2031). Two scenarios were used:

• The first scenario is a simple consistent assessment where there is an additional 10% fault cost incurred each year for the next 10 years and this would have a corresponding 10% impact on incentive revenue each year in the same period.

• The second scenario takes account of weather modelling which suggests that the weather changes will not be consistent and that in the first part of the decade fault costs will increase by 10% with a corresponding 10% decrease in annual incentive revenue in three of the five years between 2021 and 2026. Whilst in the second part of the decade (between 2026 and 2031) the impact of weather will be greater in magnitude and fault costs will increase by 20% with an 20% annual incentive revenue reduction in two of the five years.

This assessment estimated the cost of faults and loss of incentive income over the next 10 years may result in a potential loss of operating profit cumulatively of between £0.1bn and £0.3bn. These calculations are consistent with the number of faults and current RIIO-ED1 incentive and penalty methodology.

As SSE invests in its networks infrastructure, the impacts of climate change are being built into its capital and operational investment plans, including a Climate Resilience Strategy published as part of the RIIO-ED2 Distribution business plan.

Cost of response to risk

48,000,000

Description of response and explanation of cost calculation

To mitigate the impact of severe weather events, SSE monitors short- and long-term weather conditions; has crisis management and business continuity plans; and has a continuous programme of investment in strengthening and improving the resilience of the electricity network (including overhead line replacement and refurbishment).

Using the Met Office's Climate Projections, asset resilience is reviewed using climate projections for the next 30 years. This includes assessing the impact to the assets from higher temperatures, changing rainfall patterns, rising sea levels, and more extreme weather events such as floods, droughts and heat waves. This process is part of the UK Government's assessment of critical infrastructure which takes place every five years and SSEN Transmission and Distribution responded to the latest call for updates to actions in December 2021.

In 2021/22, extreme weather events, such as storms, floods and heat waves, impacted the resilience of SSENs electricity networks. 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.

Although the impact on the Interruptions Incentive Scheme (IIS) revenue is mitigated during the most severe weather events, there are significant additional costs incurred through the provision of compensation, customer welfare and upweighted operational

requirements. In 2021/22, the total cash expenditure incurred on storm responses was £48m, this including overhead line replacement and refurbishment (£22.8m), tree cutting (£23.7m) and flood protection (£1.5m). 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.

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Legal

Other, please specify

Transition risk, early retirement of existing assets (thermal power plants) due to more aggressive climate policies.

Primary potential financial impact

Other, please specify

Decreased future adjusted operating profits and potential impact to recoverable value of assets.

Company-specific description

More aggressive climate change policy may bring forward the closure of unabated gas generation from 2030. The UK Government's Net Zero Strategy outlines plans to decarbonise the power sector by 2035 with a target of 95% of GB electricity to be low carbon by 2030. It is plausible that to meet climate change commitments the UK Government (and potentially the Irish Government too) may strengthen climate change policies to require unabated gas generation to cease in the 2030s.

SSE's existing 5.3GW fleet of installed gas- and oil-fired generation will be nearing the end of its expected life by the end of the 2020s. However, 2.3GW of Combined Cycle Gas Turbine (CCGT) capacity will still be in operation in 2030. It is a plausible scenario that this capacity will not be able to generate beyond 2030 without low-carbon abatement technology. For assets currently assumed to have a life beyond 2030, it is possible that SSE could invest further in low-carbon abatement technology to prolong their life beyond this date.

However, for the purposes of quantifying this risk, it is assumed that the financial impact of this policy change is the early closure of the remaining gas assets in 2030.

The Committee on Climate Change (CCC) has highlighted the importance of carbon

capture usage and storage (CCUS) technology in helping the UK to achieve its carbon targets. 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.

However, the longer-term risk to SSE in the absence of an economically feasible method of CCUS, is that the output of unabated gas plants may need to be curtailed if the UK and Ireland is to meet carbon targets. This may result in a financial impact to operating profit as the output of gas-fired generation is impacted beyond 2030 (this involves 2.5GW of Combined Cycle Gas Turbine capacity which is expected to be in operation in 2030 and beyond).

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

500,000,000

Explanation of financial impact figure

SSE's existing 5.3GW fleet of installed gas- and oil-fired generation will be nearing the end of its expected life towards the end of the 2020s and early 2030s. However, 2.5GW of Combined Cycle Gas Turbine capacity will still be in operation in 2030 and beyond. It is a plausible scenario that this capacity will not be able to generate beyond 2030 without low carbon technology. It is therefore assumed that the financial impact of this policy change is a loss operating profit from 2030 onwards for the remaining life of these assets. The early closure of the remaining gas assets taking account of the cost to mitigate is estimated to have an adverse impact on earnings of up to £0.5bn cumulatively up to 2031.

Cost of response to risk

5,100,000

Description of response and explanation of cost calculation

SSE continues to accelerate its actions on climate change by focusing on increasing the deployment of renewable generation and decarbonising thermal generation, heat and transport. SSE is 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. 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. SSE Thermal's strategy is focused on both decreasing the output from, and 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. 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. SSE Thermal also made progress on the development of its low-carbon hydrogen projects, alongside Equinor.

In addition, SSE engages with UK and Irish Governments, European Commission, Members of European Parliament and others on accelerated climate policy. For example, 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.

SSE also supports a Carbon Price Floor, the EU ETS, Levy Control Framework and other legislation that supports a move towards transition to a low-carbon economy.

The costs to mitigate the risk relate to the research and development costs for CCS in 2021/22 as well as the amounts capitalised on Keadby 3 CCS and Peterhead 2 CCS. These costs are in the region of £5,100,000 in 2021/22.

Comment

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Market

Other, please specify

Oversupply of renewable electricity on the market.

Primary potential financial impact

Other, please specify

Decreased future adjusted operating profits and potential impact to recoverable value of assets.

Company-specific description

In net zero consistent scenarios, the price wind energy can capture is forecast to reduce as more marginal cost wind generation is connected.

All credible pathways to net zero in the UK and beyond assume the dramatic scaling up of wind (especially offshore) generated electricity. This significant growth in wind power output without a corresponding increase in demand represents a potential climate related transition risk. As wind generation capacity increases, the market (and SSE) expects the average electricity price which wind power receives ('wind capture price') to be less than the average price for electricity ('baseload price'). As wind becomes the dominant source of electricity output it will define the market price, so the volatility of electricity prices correlates to wind output, both high and low. While this is expected in the medium term, and is factored into investment decisions, there is a risk that this lower average price for wind output is more extreme than what the market (or SSE) expects. In the long term, and with careful market design reform, the effect of the wind capture price will stabilise as more low carbon technologies adapt their patterns of demand according to the price signal sent by the market. In its British Energy Security Strategy, the UK Government committed to a Review of Electricity Market Arrangements which will seek, among other things, to ensure future low-carbon generation is fairly remunerated.

The effect of a wind capture price only materially impacts wind generation that is fully exposed to market prices (or 'merchant' wind output), as it is not supported by government-backed fixed price mechanisms such as the Contracts for Difference. Assuming a build out rate of wind generation assets in SSE's renewable project pipeline, it is assumed there will be 10TWh of merchant wind output in 2029/30.

The scale of any impact of a change to the expected wind capture price would therefore be a function of the assumed wind capture price and the amount of merchant wind electricity generated.

Time horizon

Medium-term

Likelihood

Virtually certain

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

1,000,000,000

Explanation of financial impact figure

The effect of a wind capture price only materially impacts wind generation that is fully exposed to market prices (or 'merchant' wind output), as it is not supported by government-backed fixed price mechanisms such as the Contracts for Difference. Assuming a build out rate of wind generation assets as set out in SSE Renewables project pipeline, it is assumed there will be 10TWh of merchant wind output in 2029/30. The scale of any impact of a change to the expected wind capture price would therefore be a function of the assumed wind capture price and the amount of merchant wind electricity generated.

The potential financial impact of this climate-related risk in the absence of any mitigating action is a c.10% reduction in wind capture price on the SSE Renewables project pipeline of 10TWh of merchant wind output in 2029/30. This is estimated to be up to £1bn cumulatively to 2031.

Cost of response to risk

7,000,000

Description of response and explanation of cost calculation

The effect of a wind capture price only materially impacts wind generation that is fully exposed to market prices (or 'merchant' wind output), as it is not supported by government-backed fixed price mechanisms such as the Contracts for Difference. To mitigate these risks, SSE will seek, where appropriate, to submit certain development projects into CfD auctions, thereby removing merchant risk. Further, with its integrated customer facing business, SSE will work with large customers wishing to purchase renewable energy, to provide long term power contacts, called power purchase agreements (PPAs), which again removes merchant risk. Services by EPMI support the most economic market outcomes for SSE's electricity generation, the overall cost of this service provided by EPM is in the region of £7m annually. This activity supports all market activities in renewables, not simply any risks associated with wind price capture.

SSE will also continue to invest in a geographically and technologically diverse generation portfolio of renewable and low carbon thermal assets in order to balance the effect of price volatility. For example, 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.. Additionally, 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.

SSE we will also continue to engage with the UK and Irish Governments, European Commission, Members of European Parliament and others on policies that support the reduction of risk in low carbon electricity and, therefore supports lower-cost renewable energy production.

Comment

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Other, please specify

Increased adjusted operating profit

Company-specific description

International agreements to decarbonise electricity systems, alongside increased energy security and the need to reduce reliance on imported fossil fuels enhance the case for accelerated wind deployment. The UK Government has ambitions for up to 50GW of installed offshore wind capacity by 2030 (including up to 5GW of floating offshore wind) and the Irish Government has targeted 4GW of incremental onshore wind and 5GW of offshore wind capacity by 2030. In the long term, the Climate Change Committee's

balanced net zero pathway suggests 95GW of UK offshore wind by 2050.

The combination of strong carbon price, high energy price and continued access to Contracts for Difference (CfD) or other price stabilisation mechanism would continue to support an investment case for SSE in off- and on-shore wind projects. This would benefit SSE as it would enable SSE to invest in its significant pipeline of both on- and off-shore renewable energy projects.

SSE currently has the largest renewable energy capacity across the UK and Ireland at around 3.9GW (including pumped storage) and in 2021/22 SSE generated [9.49] TWh (including biomass, pumped storage and constrained off wind in GB).

SSE aims to build a renewable energy portfolio that generates at least 50TWh of electricity a year by 2030. SSE's accelerated capital investment plan (the Net Zero Acceleration Programme) published in November 2021 aims to double installed renewable capacity to 8GW (net) by 2026 and targets at least 13GW (net) of installed renewable capacity by 2026. In the longer term, SSE is exploring opportunities in the UK, Ireland and internationally.

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%). Construction was also progressed at Seagreen 1 (1,075MW, SSE Renewables share 49%) and first power is currently expected in July. SSE has further offshore wind project interests in Viking, Berwick Bank and Marr Bank in Scotland, Greater Gabbard Extension in England and Arklow Bank Wind Park in Ireland.

SSE believes this pipeline of new assets will play a critical role in helping the UK and Ireland achieve their decarbonisation goals and contribute to the ultimate goal of zero carbon electricity

Time horizon

Medium-term

Likelihood

Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1,000,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

SSE aims to build a renewable energy portfolio that generates at least 50TWh of electricity a year by 2030. SSE's accelerated capital investment plan (the Net Zero Acceleration Programme) published in November 2021 aims to double installed renewable capacity to 8GW (net) by 2026 and targets at least 13GW (net) of installed renewable capacity by 2026. SSE is also exploring opportunities in the UK, Ireland and internationally.

The opportunities that exist include consented as well as pipeline development projects. Growth opportunities come from key offshore projects involving: Dogger Bank A, B and C (each 1,200MW, 40% share); Seagreen 1 (1,075W, 49% share); ScotWind seabed (2.6GW, 40% share) in Scotland; and Arklow Bank (800MW) in Ireland. SSE has future onshore growth through consented sites at Viking wind farm (443MW) in Scotland and Lenalea (30MW) in Ireland. 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.

Additionally, SSE is exporting its capabilities internationally. With 8GW of early-stage development opportunities across Japan through joint ownership company Pacifico Energy; a 50/50 joint venture with ACCIONA Energía to develop offshore wind opportunities in the Polish energy market; and onshore wind development projects across Spain, France, Italy and Greece alongside the scope for up to 1GW of solar development opportunities, through its acquisition of Siemens Gamesa Renewable Energy's (SGRE) Southern Europe wind, solar and batteries development platform.

The potential financial impact of this climate-related opportunity represents one of the most significant available to SSE both in the short- and long-term and the cumulative impact on operating profit of extra wind capacity is estimated to be around £1bn up to 2031.

Cost to realize opportunity

10,000,000,000

Strategy to realize opportunity and explanation of cost calculation

SSE has a pipeline of over 8GW of potential new wind opportunities. SSE will develop these projects in partnership and will recycle some capital to support further development.

In addition to the immediate opportunities at Seagreen, Dogger Bank and Viking, SSE has further offshore wind project interests in Berwick Bank and Marr Bank in Scotland, Greater Gabbard Extension in England and Arklow Bank Wind Park in Ireland.

SSE engages with UK, Scottish and Irish Governments, European Commission, Members of European Parliament and others on low-carbon policies.

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. Based on SSE's net zero acceleration programme, the cost to realise the opportunity is based the capital plan for renewable developments which is between £8bn to £10bn for the next 10 years.

Comment

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Other, please specify

Increased adjusted operating profit

Company-specific description

Increasing volumes of intermittent wind energy will require support from flexible generators that provide system services, such as short-term reserve, frequency and long-duration energy storage services. The opportunity exists, from existing hydro expertise, to develop long-duration, low-carbon flexibility solutions that provide significant enduring value to the GB electricity system.

Hydro is unique in SSE's portfolio (it represents 16% of its portfolio capacity), as it can be characterised as both renewable and flexible. In addition to 400MW of run-of-river hydro, SSE has 750MW of flexible hydro and SSE's 300MW of pumped storage as well as planning consent for an additional 1.5GW of pumped storage. Flexible hydro operates as 'Britain's biggest battery' and SSE has a significant role to play in providing this. For SSE's existing hydro portfolio, ongoing investment in maintenance, upgrades and repowering will optimise the provision of low carbon flexibility.

SSE also has an important development option for large-scale, long-duration pumped hydro storage at Coire Glas in Scotland, with planning consent for a 1.5GW capacity project and c.30GWh of storage capacity potential. This would more than double existing pumped hydro storage capacity in GB. SSE is working with Government and the regulator to establish a market mechanism that would unlock investment into long-

duration storage projects such as Coire Glas given the critical role they can play in securing low-carbon energy supplies in the UK.

Time horizon

Medium-term

Likelihood

Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

500,000,000

Potential financial impact figure – maximum (currency)

1,500,000,000

Explanation of financial impact figure

SSE has 1,459MW of existing hydro capacity (inc. pumped storage) and has planning consent for an additional 1.5GW of pumped storage at Coire Glas. SSE continues to invest in its hydro generation assets to increase flexibility to the UK grid. This represents 16% of SSE's generation capacity and 13% of the Group's electricity generation output in 2021/22.

SSE's current hydro generation capacity of 1.5GW had an adjusted operating profit of £293.1m and adjusted EBITDA of £324.7m in the year ended 31 March 2022.

The opportunity for more flexible hydro output from existing assets alongside the investment in pumped storage at Coire Glas provides the potential for SSE to generate an additional £0.5bn to £1.5bn in operating profit cumulatively for the next 10 years to 2031.

Cost to realize opportunity

1,000,000,000

Strategy to realize opportunity and explanation of cost calculation

In order to realise this opportunity, SSE is continuing to invest in a diversified generation portfolio of renewable and flexible generation assets (including hydro generation assets) as described in Opportunity 1 (accelerated wind investment) and Opportunity 5 (Valuable Flexible Thermal).

The costs associated with realising this opportunity are wrapped up in the costs of the refurbishment of SSE's assets (which involves upgrades and replacement of plant as a

result of age as well as to respond to this opportunity to provide more flexibility) as well as the capital development expenditure of Coire Glas.

SSE has been investing in its hydro fleet to make them more efficient and provide flexible and renewable energy to ensure that they can take advantage of a decarbonized energy system. SSE has an ongoing programme of maintenance, refurbishment and construction to ensure these assets continue to deliver during the low-carbon transition. In 2021/22 SSE invested c.£50m on existing hydro asset maintenance and repowering.

Early-stage development expenditure has already being incurred on Coire Glas, with the total capital cost for development expected to be in excess of £1bn. The timing of that investment, and returns generated, will depend on the emergence of suitable market mechanisms to stimulate this investment in long-duration storage. Therefore, the costs to realise this opportunity have been estimated at £0.5bn to £1bn which represents the capital expenditure of Coire Glas alongside the maintenance and refurbishment programme for the existing hydro assets up to 2031.

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Other, please specify

Increased adjusted operating profit

Company-specific description

This opportunity involves the investment in transmission infrastructure in the north of Scotland to support the delivery of an accelerated low-carbon electricity system.

Significant growth in renewable wind in the north of Scotland requires significant expansion of the north of Scotland electricity transmission network, to transport the renewable electricity from the sources of generation to the sources of demand. In April 2022, the UK Government set out in the British Energy Security Strategy that it would ensure Ofgem expedites its approvals process to build networks in anticipation of major new sources of generation and demand. This is demonstrated by the Scottish

Government's proposed target of 8-12GW of additional onshore wind by 2030, announced in November 2021, and the Crown Estate Scotland award of seabed leases in January 2022 of c.25GW of new offshore wind capacity.

SSEN operates the transmission network in the north of Scotland. SSEN's transmission network allows the renewable energy generated in the north of Scotland to be transmitted down south to areas of higher demand. This makes it fundamental in facilitating the transition to a low-carbon electricity system.

SSEN Transmission's current RIIO-T2 business plan to 2026 envisages expanding and reinforcing the existing network for major new sources of generation. Regulatory approvals are in-flight for further projects such as reinforcements to Skye, Argyll and the Eastern HVDC offshore link which will connect the North of Scotland directly to demand centres in England. Beyond the current business plan, SSEN Transmission is working closely with stakeholders to determine the network expansion required to meet Government ambitions and new development projects. This will determine the scale of investment required in the next regulatory price control (2026 and 2031).

Time horizon

Medium-term

Likelihood

Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

1,000,000,000

Potential financial impact figure – maximum (currency)

1,500,000,000

Explanation of financial impact figure

The latest RIIO-T2 Price Control Financial Model, submitted to Ofgem in November 2021, envisages spending at least £4bn to expand and reinforce the existing network, with regulator approved projects that are in-flight. With this investment, the Regulated Asset Value (RAV) of SSEN Transmission is expected to reach in excess of £6.5bn by the end of the price control (2026). Between 2026 and 2031 it is expected that RAV will reach between £8-10bn and there is the potential, if the additional expenditure is agreed, for RAV to reach £12bn in this time period. SSEN Transmission earns a return on its RAV, therefore growth of the RAV should result in earnings growth in future periods, subject to future regulatory earnings agreements.

Therefore, assuming the potential growth of new transmission infrastructure in the north of Scotland the impact of this extra network capacity is estimated be £1bn to £1.5bn cumulative impact on operating profit over the next 10 years (up to 2031).

Cost to realize opportunity

8,000,000,000

Strategy to realize opportunity and explanation of cost calculation

SSEN operates the transmission network in the north of Scotland. This network enables renewable energy generated in the north of Scotland to be transmitted south to areas of high demand. To realise this opportunity and ensure that SSEN can continue to invest in this critical infrastructure, SSEN has an ongoing programme of investment, construction, maintenance and refurbishment. 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 the north of Scotland including the Shetland HVDC transmission link. 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. 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. These projects could see the total installed generation capacity in the north of Scotland increase to at least 20GW of renewable generation capacity connected to SSEN's transmission network by 2030.

The costs associated with realising this opportunity is based on the capital investment actions associated with the investment in the transmission network, these are estimated to be approximately £5bn - £8bn over the next 10 years (up to 2031).

Comment

Identifier

Opp4

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Other, please specify

Increased adjusted operating profit

Company-specific description

The UK Government's Net Zero Strategy accelerates the shift to zero emission vehicles, banning new petrol or diesel cars from 2030. National Grid's Future Energy Scenarios (2021) anticipates 12 million electric vehicles and 4 million residential heat pumps in GB in 2030. Depending on the scenario, there is potential for a five to ten-fold increase in annual load spend between now and 2038.

SSEN Distribution's draft RIIO-ED2 business plan for the period 2023 – 2028 establishes an investment and innovation programme that will enable customers to connect their electric vehicles reliably to local electricity grids. To predict the scale of connections Distribution Future Energy scenarios suggest that between 2020 to 2030, the number of EVs in SSEN's Distribution areas may increase from 30,000 to 0.85-2.3 million and for heat pumps from under 50,000 to 0.27-1.05 million.

Increased uptake of EVs has the potential to provide opportunities for SSEN as a network operator. There is the opportunity to invest in and develop the network infrastructure required to support the roll out of EVs, including smart energy systems, demand side response and distributed flexible and renewable energy. For example, SSE is playing a leading role in the transition from a Distribution Network Operator (DNO) to a Distribution Systems Operator (DSO). This involves significant innovation to deliver a cleaner, smarter and more local electricity system, with the rapid transition to a more flexible electricity network.

To support the development of EV roll out, SSEN has joined up with key local and industry partners on Project LEO, which is one of the most wide-ranging and holistic smart grid trials ever conducted in the UK. These projects provide insight into the opportunities available to SSEN from the UK's preparations for a decentralised energy system that is capable of accommodating a dramatic increase in EVs.

The opportunity is estimated to be up to £4bn to £5bn of capital investment by 2031 for SSE in its network areas.

Time horizon

Medium-term

Likelihood

Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1,000,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The uptake of EVs on SSE's networks is likely to provide a significant investment opportunity to support the low carbon transport transition. SSEN is taking a leadership role on electrification and has a 2030 target to build network flexibility that helps accommodate 10 million electric vehicles in the UK. These additional EVs will create extra demand on the distribution network and SSEN will need to ensure the transition to EVs is as smooth as possible by developing cost-effective, smart technology interventions to manage demand without unnecessary upgrades to GB networks and disruption to customers.

Over the RIIO-ED2 period to 2028, SSEN Distribution expects to invest c.£4bn in distribution networks resilience and reinforcement. This is expected to increase RAV to c.£5.5bn by 2026 with a further £7-8bn by 2031, subject to regulatory determination and required future load spend. SSEN Distribution earns a return on its RAV, therefore growth of the RAV should result in earnings growth in future periods, subject to future regulatory earnings agreements.

To calculate the potential financial impact of rapid electrification of vehicles, SSE has profiled the investment predictions in its networks to support electrification of transport. The cumulative impact of the additional growth is expected to increase operating profit up to £1bn to 2031.

Cost to realize opportunity

5,000,000,000

Strategy to realize opportunity and explanation of cost calculation

SSEN is taking a leadership role on electrification and has a 2030 target to 'build network flexibility that helps accommodate 2 million electric vehicles in the SSEN's distribution networks by 2030'. Over the RIIO-ED2 period to 2028, SSEN Distribution expects to invest c.£4bn in distribution networks resilience and reinforcement. This is expected to increase RAV to c.£5.5bn by 2026 with a further £7-8bn by 2031, subject to regulatory determination and required future load spend. SSEN Distribution earns a return on its RAV, therefore growth of the RAV should result in earnings growth in future periods, subject to future regulatory earnings agreements.

In 2021/22, SSEN Distribution had 12 ongoing strategic partnerships and initiatives exploring smart grid solutions to support low-carbon technologies, including:
• Project LEO: an innovative energy trial, seeking to accelerate the UK's transition to a zero-carbon energy system.
• Optimise Prime: 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.

• The Skyline: 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.

SSE is also a member of the Climate Group's global EV100 initiative and pledged to switch its 2,500 vehicles to electric by 2030 and install charging points at its sites. 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 opportunity is estimated to be up to £4bn to £5bn of capital investment by 2031 for SSE in its network areas.

Comment

Identifier

Opp5

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Other, please specify

Increased adjusted operating profit

Company-specific description

As the electricity system decarbonises, increasing volumes of intermittent wind energy requires support from flexible generators that provide system services, such as short term reserve, frequency, security of supply and price stability. There is the opportunity to repurpose SSE's existing gas-powered electricity generators, as well as invest in new low-carbon thermal generation assets. The UK Government's 10 point plan for a Green Industrial Revolution involves a L1bn fund to facilitate CCS deployment in two industrial clusters by the mid-2020s and a further two by 2030 and a Net Zero Hydrogen Fund with £240m up to 2024/25. SSE is developing plans to support the UK's transition to net zero and accelerate the decarbonisation of some of the UK's most carbon intensive regions. SSE is progressing projects in the UK cluster sequencing programme with

carbon capture power plants at Keadby in the Humber and Peterhead in the North of Scotland. SSE is also developing plans for a hydrogen power plant at Keadby and repurposing its Aldbrough Gas Storage site for the safe storage of hydrogen.

Time horizon

Medium-term

Likelihood

Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1,000,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

SSE's Net Zero Acceleration Programme seeks to invest £0.6bn in low-carbon flexible thermal generation, mainly carbon-capture technology but with some development investment in hydrogen projects ahead of potential investment decisions in the second half of the decade. Returns from CCS and hydrogen will depend on the level and nature of government support mechanisms, and plant availability, future consumer demand, generation supply mix within the system and energy commodity price volatility.

Cost to realize opportunity

3,000,000,000

Strategy to realize opportunity and explanation of cost calculation

SSE's Net Zero Acceleration Programme seeks to invest £0.6bn in low-carbon flexible thermal generation, mainly carbon-capture technology but with some development investment in hydrogen projects ahead of potential investment decisions in the second half of the decade. The opportunity is estimated to be between £1bn and £3bn of capital investment by 2031.

Comment

C3. Business Strategy

C3.1

(C3.1) Does your organization's strategy include a transition plan that aligns with a 1.5°C world?

Row 1

Transition plan

Yes, we have a transition plan which aligns with a 1.5°C world

Publicly available transition plan

Yes

Mechanism by which feedback is collected from shareholders on your transition plan

Our transition plan is voted on at Annual General Meetings (AGMs)

Attach any relevant documents which detail your transition plan (optional)

SSE Net Zero Transition Report 2022.pdf
SSE Sustainability Report 2022.pdf
SSE Net Zero Transition Plan 2022.pdf

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy
Row 1	Yes, qualitative and quantitative

C3.2a

(C3.2a) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Physical climate scenarios RCP 8.5	Business division		SSE has structured its climate disclosures according to the Task Force on Climate-related Disclosures (TCFD) recommendations since 2018 believing that good quality information about its climate-related risks and opportunities supports shareholders to make long-term investment decisions. One of the requirements of the TCFD is to "describe the

			resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario". SSE believes it is partially compliant with TCFD recommended disclosure Strategy 2.c as it describes the resilience of the organisation to the key identified climate-related risks in its Annual Report and CDP Climate Change disclosures. However, these risks followed a process of bottom-up analysis and therefore does not meet the specific requirement to take into consideration different climate related scenarios. SSE is still in the process of developing appropriate macro enterprise level climate scenarios, building on climate scenario analysis performed in the past, with a view to complying from 2023. SSE's previous reports, Post Paris, published in July 2017, and Transition to Net Zero, published in November 2019, assessed the resilience of SSE's electricity businesses and gas businesses to different warming scenarios respectively.
Physical climate scenarios Customized publicly available physical scenario	Business division	1.5ºC	SSEN's Transmission business uses scenario planning (based on National Grid FES) to understand likely future network requirements and these trends help will enable SSEN to identify potential future requirements of its transmission network and inform business strategy and investments. 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. SSEN's Distribution business also uses climate related scenario analysis through their Distribution Future Energy Scenario (DFES) reports, which were published in March 2022. SSEN used scenario analysis to understand the growth potential of electrification within its distribution networks. Based on its DFES, SSEN Distribution expects to invest

			nearly £4bn by 2028 and to facilitate 1.3 million electric vehicles and 800,000 heat pumps on our network, as well as 8GW of distributed generation and storage. This analysis is one of the factors informing SSEN's RIIO-ED2 business plan which was published and submitted to Ofgem in December 2021.
Physical climate scenarios RCP 8.5	Business division		In Nov 2019, SSE published its most recent scenario analysis report 'Transition to Net Zero: The Role of Gas', which responded to investors keen to understand how SSE's gas businesses align with its net-zero ambitions. It focused on SSE's gas related activities in the UK and Ireland that are impacted by market and policy changes. The resilience of these businesses was assessed against three different warming scenarios (1.5°C, 1.5°C low nuclear & 4°C) over the short, medium and long term. This 2019 report built upon its 2017 'Post Paris' report – an assessment of how resilient its electricity businesses are to 1.5°C, 2°C and 3-4°C warming scenarios in the short, medium and long term. Analysis considerations: SSE used scenario analysis to inform its business strategy and financial planning. SSE uses publicly available data from Committee on Climate Change and National Grid's Future Energy Scenarios (FES), which takes information based on climate pathways: RCP 2.6, RCP 4.5 and RCP 8.5. Time horizons cover: short term 0 to 3 years; medium term 3 to 12 years; and long term 12 to 30 years. These time horizons are aligned with SSE's other business practice time horizons and mirror the investment/capital/ regulatory time horizons that govern SSE's financial, operational, and capital plans. One of the key findings from 'Transition to Net Zero' report was the importance of SSE's gas business's role in providing flexible and reliable system services to support renewables. Specially, the medium-term analysis found that there was the need for SSE Thermal to develop the next generation of low-carbon technologies (i.e., CCS and hydrogen) and for these to be rolled out at scale in the long term to

			achieve net zero targets set by UK Government. SSE Thermal's strategy reflects this report' s findings and is committed to finding decarbonised solutions to thermal electricity generation. For example, SSE is progressing plans with Equinor to develop carbon capture and storage generation plant at Keadby in Humberside and Peterhead in northeast Scotland, as well as what could be the world's first hydrogen fired power.

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

SSE is still in the process of developing appropriate macro enterprise level climate scenarios, building on climate scenario analysis performed in the past, with a view to comply with TCFD requirements from 2023.

SSE's previous report, Transition to Net Zero, published in November 2019, assessed the resilience of SSE's electricity businesses and gas businesses to different warming scenarios respectively.

The United Kingdom and Republic of Ireland have both set targets to become net zero economies by 2050. With the UK setting its Net Zero Strategy, complete with its 10-point plan for a green industrial revolution, SSE sought to understand what role its gas businesses will play in the future, over the medium (2023 to 2030) and long term (2031 to 2050). SSE has material gas-related business activities in the UK and Ireland that will be impacted by market and policy changes associated with carbon reduction ambitions, namely generating electricity from gas and storing gas in underground cavities.

With this in mind, SSE's focal question for its climate-related scenario analysis was:

"What role does gas have in the short, medium and long term, in a way that is wholly consistent with our net-zero carbon ambition?"

Results of the climate-related scenario analysis with respect to the focal questions

The National Grid's FES and CCC reports both show a clear role for gas in all the scenarios that they describe.

4oC Scenario - role of gas in a 4oC world.

The availability and affordability of gas generation combined with its efficiency mean that it will play a significant role in providing bulk power for longer. Whilst renewables continue to develop at the same pace as today it is projected that this development will slow as progress on decarbonisation slows towards 2050. The role of gas in this scenario is similar to the other scenarios, however, it is unlikely that any abated gas will feature in this scenario.

Net Zero Scenario - role of gas in a net zero world.

Net zero involves the elimination of most carbon dioxide emissions in the power sector by 2050, as described by the CCC 2019 net zero report. There are several power generation technologies which could support a net zero economy in 2050. The CCC report highlights continued growth in the share of renewables but states this needs to be combined with significant volumes of thermal generation (in the form of gas, nuclear or hydrogen). In their ‘Core’ and ‘Further Ambition’ scenarios gas plant, equipped with CCUS plays an increasing role and by 2050 provides almost 25% of electricity demand. Each scenario shows that gas generation whether it is unabated, equipped with CCUS or burns hydrogen will continue to provide a unique and important role in the UK and Ireland systems in the short, medium and long term.

Fundamentally, this role is to provide:

• a flexible and efficient energy source when renewable energy output is low;
• system stability services to support grid with high penetration of renewables; and,
• improved system diversity and security of supply.

It is assumed that in all scenarios that the role of gas will be rewarded for these services and that these services will be increasingly valuable as the energy system has a higher proportion of intermittent generation.

The question is which scenario will play out, and whether new low-carbon gas generation technologies will be developed in the medium term if the market and policy conditions are correct. The long term is uncertain, however, SSE has options available dependent on which technology develops to support the decarbonisation trajectory of that scenario.

Overall, SSE is in a good position to adapt its portfolio to these different scenarios, with its assets able to respond to opportunities to be part of innovative new low-carbon technology developments as they develop.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and	Description of influence

	opportunities influenced your strategy in this area?	
Products and services	Yes	Climate-related risks and opportunities have shaped SSE's short, medium, and long-term strategy, which is focused on its economically regulated electricity networks and renewables, complemented by thermal generation. These businesses have a crucial role in the net-zero transition. SSE's product-related strategy is influenced by climate change legislation and policy such as the UK Government's Energy Security Strategy and the Irish Government's Climate Action and Low Carbon Development Bill. These developments signal a more supporting policy environment which provides the opportunity for SSE to deliver its strategy and realise the growth opportunities from an accelerated transition to net zero. Examples of a substantial decision made that has been influenced by climate related policy opportunity in SSE's products: Example In 2022, the UK Government published its Energy Security Strategy which will double its ambition for hydrogen production to up to 10GW by 2030 (with at least half from electrolytic hydrogen) and deliver on its £1 billion commitment to 4 CCUS clusters by 2030. 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. Example The UK and Irish Governments have set 2030 ambitions for new offshore wind, with the Energy Security Strategy

		targeting 50GW in the UK and at least 5GW in Ireland. This strong policy support has influenced SSE's short and medium-term strategy and as such SSE is confident that it will enable delivery of over 20% of the UK's offshore wind target by 2030. SSE has an unrivalled offshore wind pipeline, including 3.6GW (SSE share of 1.44GW) at Dogger Bank and 1,075MW (SSE share of 527MW) at Seagreen. SSE Renewables is also working towards a consent application submission for the up to 4.1GW at Berwick Bank with the aim of securing consent in 2024.
Supply chain and/or value chain	Yes	SSE's short, medium, and long-term strategy is influenced by climate change legislation and policy such as UK Climate Change Act 2008 and in Ireland the Climate Act 2015. This in turn has influenced elements of SSE's supply chain/value chain strategy. Supply chain: examples of a substantial decision made that has been influenced by climate-related policy risks: To manage the risk of climate change impacts in its supply chain, SSE established the Powering Net Zero Pact. 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. 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. The Pact also includes five shared commitments and five topics for collaboration, which together encourage the delivery of common ambitions for a sustainable future.
Investment in R&D	Yes	UK and Irish climate change legislation and policy shapes SSE's short, medium and long-term strategy, and in turn influences its approach to innovation and R&D, which is required to deliver net zero. R&D: examples of a substantial decision made that has been influenced by climate-related policy opportunities: In 2021, the UK Government published its Heat and Buildings Strategy, which sets out the government's plan to significantly cut carbon emissions from the UK's 30 million

		homes and workplaces. The strategy outlines the ambition to phasing out the installation of new natural gas boilers from 2035. The future is likely to see a mix of low-carbon technologies used for heating: electrification of heat for buildings using hydronic (air-to-water or ground-to-water) heat pumps, heat networks and potentially switching the natural gas in the grid to low-carbon hydrogen. 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.
Operations	Yes	To deliver its strategy, SSE has had to implement initiatives into its operations in response to climate-related policy as well as the physical impacts of climate change. Examples of a substantial decision made that has been influenced by climate related policy opportunities in SSE's operations: In the long-term, as part of the UK Govt's net zero target, it is understood that SF6, a potent GHG, needs to be removed or replaced as far as possible by 2050. In the medium-term, Ofgem (the government regulator) has now included setting a science-based target (SBT) as a minimum requirement within the RIIO-T2 business plan guidance. This SBT covers SSEN Transmission's significant SF6 emissions. In the electricity industry, SF6 is widely used in substations, power transformers, wind turbines, circuit breakers and switchgear due to its excellent insulating properties. This policy impacts the operations of SSE's electricity networks businesses in the short and medium-term. SSEN must address the issue of SF6 as part of their respective science-based targets in their price controls (RIIO-T2 for Transmission and RIIO-ED2 for Distribution). SSEN Distribution maintain a strategy for SF6 switchgear to minimise leakage, involving: establishing a working group to address SF6 leakage; improvements utilising a more pro-

		active approach to the SF6 switchgear repairs process; and changes to internal systems to target leaking SF6 assets. SSEN Transmission is taking part in an innovative trial for SF6 alternative gases for substations at a number of its sites, by installing GE's gas-insulated switchgear and busbars utilising g3 gas in place of SF6. As part of the New Deer project in Aberdeenshire, SSEN Transmission worked with the GE and Amey consortium to energise the first g3 gas-insulated substation on its network, with the world's largest installation to date of g3 SF6 free gas. Also, the new Glen Kyllachy substation near Tomatin in the Scottish Highlands is home to the first SF6-free Siemens Clean Air Power Voltage Transformers on the GB Transmission network. Demonstrating these technologies, will reduce the environment impact of its network and demonstrate a viable alternative.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Indirect costs Capital expenditures Capital allocation Acquisitions and divestments Access to capital Assets Liabilities	Climate-related risks and opportunities surrounding decarbonisation and the transition to a low-carbon economy are factored into all aspects of SSE's financial planning in the short, medium and long-term. For example in terms of SSE's revenues: SSE has a resilient and highly complementary business model built on a mix of market-based and economically regulated businesses, focused on supporting the delivery of net zero. The UK and Irish legislative and policy support for net zero means SSE's businesses are well placed to realise opportunities associated with the transition. Over recent years SSE has deliberately designed its business model to place renewables and electricity networks at the core – businesses which are key to enabling a net zero economy and have significant growth potential. While these businesses accounted for 22% of SSE's total revenue (adjusted) in 2021/22 they contribute 78% of SSE's operating profit. SSE believes that, because of high 'pass through' costs in the electricity sector, operating profit is a better indicator of economic activity that revenue. For example, in terms of SSE's direct and indirect costs:

		Severe adverse weather that causes damage or interrupts energy supply or generation is a climate-related risk for SSE that is factored into SSE's financial planning. For example, SSEN's distribution business' operations can be impacted by severe weather events which cause damage to infrastructure and interruption to electricity supply for its customers. The estimated financial impact of severe weather to the networks business is the estimated cost of faults and loss of incentive income over the next 10 years which may result in a potential reduction of earnings of up to £145m cumulatively. The opportunity of low carbon electricity system influences the development and expansion of SSE's off- and on-shore wind pipeline to support a low-carbon electricity system as well as Investment in transmission infrastructure in the north of Scotland to support the delivery of an accelerated low-carbon electricity system. This presents opportunities for SSE to raise funds using low carbon or sustainable access to capital. For example, in terms of SSE's capital expenditures: In November 2021, SSE announced its Met Zero Acceleration Programme, a fully funded £12.5bn capital expenditure plan to 2026 focused on low-carbon electricity assets and infrastructure, and ambitious 2031 targets aligned to a 1.5°C global warming pathway. The Net Zero Acceleration Programme represents optimal pathway to consolidate SSE's position as UK's clean energy champion, enabling delivery of over 20% of UK's 2030 50GW offshore wind target and over 20% of UK electricity networks investment, whilst deploying flexibility solutions and exporting renewables capabilities overseas In 2021/22, SSE's investment and capital expenditure totalled £1,932.4, 86% of which was in renewables and electricity networks. For example, in terms of SSE's capital allocation: In March 2021, SSEN Transmission issued a new £500m Green Bond, the proceeds of which were directly allocated to fund part of SSEN Transmission's programme of critical investments in transmission network infrastructure that will help accommodate the significant increase in renewables. This was SSE's fourth green bond in five years, reaffirming its position as the largest issuer of Green Bonds in the FTSE 100 and bringing the total outstanding to £2bn. These Green Bonds help SSEN Transmission and the SSE Group as a whole take a leading role in supporting the transition to net zero through continued investment in renewable energy generation and the infrastructure needed to transport it to homes and businesses across the country.

		For example, in terms of SSE's acquisitions and divestments: SSE's strategy is to support the transition to a low carbon electricity system. Core to this is focusing on its low-carbon businesses of renewable generation and regulated energy networks. Climate-related risks and opportunities surrounding decarbonisation are factored into SSE's acquisitions and divestments. SSE's model is to partner with an increasing number of significant Joint Ventures (operated and non-operated) rather than to acquire businesses. The importance of joint ventures and partner management continues to increase in SSE as its Business Units pursue their strategic and business objectives in association with other companies and organisations, both in the UK and Ireland and in some cases other carefully selected international markets. In June 2020, SSE set out plans to secure proceeds of at least £2bn from disposals of assets and businesses considered to be 'non-core' on the basis they are less aligned with the transition to net zero emissions or because SSE is not the principal operator. For example, the completion of the sale of SSE's remaining 33.3% stake in SGN marked the final step to streamline the Group and sharpen its focus on net zero. The sale in March 2022 realised nearly £1.3bn in cash proceeds. SGN delivered a return on investment of over 18% from an initial outlay in 2005 of £505m for a 50% stake, however it had become a purely financial interest less aligned with the Group's focus on electricity. The disposals programme overall achieved headline consideration of over £2.8bn, significantly in excess of the original £2bn target. For example, in terms of SSE's assets: The UK Government's Net Zero Strategy outlines plans to decarbonise the power sector by 2035 with a target of 95% of GB electricity to be low carbon by 2030. It is plausible that to meet climate change commitments the UK Government (and potentially the Irish Government too) may strengthen climate change policies to require unabated gas generation to cease in the 2030s. SSE's existing 5.3GW fleet of installed gas- and oil-fired generation will be nearing the end of its expected life by the end of the 2020s. However, 2.3GW of Combined Cycle Gas Turbine (CCGT) capacity will still be in operation in 2030. SSE has identified the potential risk of seeing more aggressive climate change policy being introduced, which could bring forward the closure of unabated gas generation from 2030. This has influenced SSE's financial planning as in April 2021, a new partnership with Equinor was

		announced to jointly develop two first-of-a-kind power stations in North Lincolnshire: Keadby CCS and Keadby Hydrogen, which could be the world's first 100% hydrogen-fuelled power station. In May 2021, SSE and Equinor announced a similar partnership to develop a further cutting-edge CCS power station at Peterhead in Aberdeenshire. These would be key projects in the Humber and northeast Scotland clusters, and are well located to underpin emerging transport and storage infrastructure, which in can in turn support broader industrial decarbonisation.

C3.5

(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's transition to a 1.5°C world?

Yes

C3.5a

(C3.5a) Quantify the percentage share of your spending/revenue that is aligned with your organization's transition to a 1.5°C world.

Financial Metric

CAPEX

Percentage share of selected financial metric aligned with a 1.5°C world in the reporting year (%)

86

Percentage share of selected financial metric planned to align with a 1.5°C world in 2025 (%)

80

Percentage share of selected financial metric planned to align with a 1.5°C world in 2030 (%)

80

Describe the methodology used to identify spending/revenue that is aligned with a 1.5°C world

SSE supports the development of sustainable finance beyond green and sustainable debt markets. The establishment of a European Taxonomy is an important step forward in defining environmentally sustainable economic activity within equity markets and, as a UK-listed energy company, SSE is looking forward to the establishment of a UK Taxonomy based on the broad principles established by the EU.

To provide stakeholders with an initial indication of SSE's economic activities according to taxonomy criteria, SSE has undertaken preliminary work to assess its activities using

the eligible activities of the EU Taxonomy as a basis. Taxonomy eligible activities in 2021/22 are from SSE's onshore and offshore wind generation, hydro (run of river and pumped storage) as well as its networks transmission and distribution activities. In 2021/22, the proportion of SSE's taxonomy-eligible activities across the different measures were: adjusted operating profit, 84%; adjusted investment and capital expenditure, 86%; and, revenue, 30%.

The reason that SSE's taxonomy-eligible activity appears low in relation to its revenue, is primarily due to Energy Portfolio Management trading activity and the sale of power to end customers, both of which are high volumes, with pass through costs and lower margins than in larger businesses such as renewables generation and networks businesses. SSE believes that revenue is a poor measure in assessing its economic activity and that the most appropriate measures of its taxonomy-eligible economic activity are in relation to its capital investment and its operating profit. The taxonomy non-eligible activities are associated with SSE's thermal generation and gas storage businesses. Other activities that do not currently align may qualify for taxonomy alignment in the future. Providing the UK Taxonomy does not deviate significantly from the EU model, SSE expects its assessment of its taxonomy eligible activities to be consistent with a future UK framework.

N.B. Through its Net Zero Acceleration Programme published in November 2021, SSE has reshaped its capital allocation to c40% Networks, c40% Renewables, c20% other flexible generation, distributed energy, and customer businesses. SSE considers its Transmission and Distribution (Networks) and Renewables businesses to conduct taxonomy eligible activities, therefore SSE expects 80% of its CAPEX will be aligned with a 1.5°C world (using CDP's definition of alignment) over the 5 years to 2025/26. CAPEX plans beyond 2025/26 are yet to be published, therefore a similar capital allocation has been extended to 2030 for the purpose of this disclosure.

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Absolute target
Intensity target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number

Abs 1

Year target was set

2021

Target coverage

Company-wide

Scope(s)

Scope 1
Scope 2

Scope 2 accounting method

Location-based

Scope 3 category(ies)

Base year

2018

Base year Scope 1 emissions covered by target (metric tons CO2e)

10,154,749

Base year Scope 2 emissions covered by target (metric tons CO2e)

907,745

Base year Scope 3 emissions covered by target (metric tons CO2e)

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

11,062,493

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

100

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

Target year

2030

Targeted reduction from base year (%)

72.5

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

3,042,185.575

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

5,746,504

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

491,585

Scope 3 emissions in reporting year covered by target (metric tons CO2e)

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

6,238,089

% of target achieved relative to base year [auto-calculated]

60.1523575638

Target status in reporting year

Underway

Is this a science-based target?

Yes, and this target has been approved by the Science Based Targets initiative

Target ambition

1.5°C aligned

Please explain target coverage and identify any exclusions

This target covers: Direct GHG emissions (scope 1): GHG emissions from the consumption of oil, gas and biomass in SSE's thermal generation plant (including Power Purchase Agreements) to generate electricity, gas consumption in buildings, network and company vehicle fuel (petrol, diesel or gas oil) consumed and fugitive emissions (use of sulphur hexafluoride (SF6) in the transmission and distribution networks for conductivity (used in the switchgears and substations)); and Indirect GHG emissions (scope 2): GHG emissions from electricity consumption in buildings, networks and thermal power stations as well as distribution losses (this is the electricity lost in SSE's distribution network in the north of Scotland (SHEPD) and southern central England (SEPD) transporting electricity to the customer).

It is important to note that SSE does not expect the achievement of this target in 2030 to have followed a linear year-to-year reduction path. Market driven and weather-related fluctuations may mean there are some years in which emissions may increase. However, SSE fully expects to achieve its 2030 target and the long-term trend continues to be significant reduction in the absolute emissions from the electricity it generates.

This target covers SSE's scope 1 and 2 emissions and is a science-based target, validated by the SBTi.

Plan for achieving target, and progress made to the end of the reporting year

Plan for achieving target: SSE understands that credible net zero targets must be backed up by a clear plan of actions that will be taken to achieve them. 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 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.

The key actions covering this target are:

Scope 1 –

• Reduce emissions from unabated gas generation; Develop new low-carbon flexible generation
• Transparent advocacy in favour of enhanced policy
• Explore options for neutralising residual emissions
• Build a renewable energy portfolio of 13GW of capacity by 2031
• Reduce leakage and reliance on SF6
• Reduce reliance on SSEN's Scottish Island backup diesel generation
• Switch vehicle fleet to electric in line with EV100 commitment

Scope 2 –

• Reduce electrical losses from SSEN Distribution
• Deliver a net zero property estate

Performance against the target: SSE's target is to reduce Scope 1 and 2 GHG emissions by 72.5% by 2030, based on 2018 levels. In comparison to the baseline year of 2017/18, SSE's Scope 1 and 2 GHG emissions fell by 44%. The main contributing factors to this decrease included:

• Emissions from electricity generation activities: emissions fell as a direct result of the decarbonisation of the fuels used to generate electricity. The main cause for the emissions decrease was the closure of Fiddler's Ferry. With the closure of its last remaining coal-fired power station, 2020/21 was the first year since 2005 that SSE's generation fleet contained no electricity output from coal.

• Power Purchase Agreements expiring: 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.

List the emissions reduction initiatives which contributed most to achieving this target

Target reference number

Abs 2

Year target was set

2020

Target coverage

Company-wide

Scope(s)

Scope 3

Scope 2 accounting method

Scope 3 category(ies)

Category 11: Use of sold products

Base year

2018

Base year Scope 1 emissions covered by target (metric tons CO2e)

Base year Scope 2 emissions covered by target (metric tons CO2e)

Base year Scope 3 emissions covered by target (metric tons CO2e)

2,538,729

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

2,538,729

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

62

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

Target year

2034

Targeted reduction from base year (%)

50

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

1,269,364.5

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

Scope 3 emissions in reporting year covered by target (metric tons CO2e)

2,289,673

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

2,289,673

% of target achieved relative to base year [auto-calculated]

19.6205266494

Target status in reporting year

Underway

Is this a science-based target?

Yes, and this target has been approved by the Science Based Targets initiative

Target ambition

Well-below 2°C aligned

Please explain target coverage and identify any exclusions

This target covers: The indirect emissions (scope 3) use of sold products which relates to the ‘gas sold to customers by SSE’. This relates to the amount of gas sold to customers (industrial and commercial business customers in the UK and Ireland and domestic customers in Northern Ireland and the Republic of Ireland) that is then used by our customers for heating and power purposes. This figure is calculated by taking the amount of gas sold (millions therms) converting it to kWh and then applying a carbon dioxide conversion factor provided by BEIS reporting guidelines.

At present, SSE's scope 3 emissions are 40% or more of total scope 1, 2, and 3 emissions, and therefore a scope 3 target is required. SSE is involved in the sale and distribution of natural gas and so a scope 3 target for the use of sold products irrespective of the share of these emissions compared to the total scope 1, 2, and 3 emissions is applicable.

SSE's gas sold target covers all the emissions in this category. The target also aligns to the 'well below 2 degree' scenario and so is ambitious in its approach.

Plan for achieving target, and progress made to the end of the reporting year

Plan for achieving target: SSE understands that credible net zero targets must be backed up by a clear plan of actions that will be taken to achieve them. 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 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.

The key actions covering this target are:

Scope 3 –

• Support customers to fuel switch and consume less gas.
• Advocate for a pathway for decarbonised heat.

Performance against the target: SSE's target is to reduce absolute GHG emissions from use of products sold by 50% by 2034 from a 2018 base year. This means that SSE's use of products sold is forecast to be around 1.3 million tonnes CO2e by 2030.

SSE's Scope 3 GHG emissions decreased by nearly 3% between 2017/18 and 2021/22.

It is important to note that SSE does not expect the achievement of this target in 2034 to have followed a linear year-to-year reduction path. Market driven and weather-related fluctuations may mean there are some years in which emissions may increase. However, SSE fully expects to achieve its 2034 target and the long-term trend continues to be to move to lower carbon sources of heat during this time period.

This target covers SSE's scope 3 emissions and is a science-based target, validated by the SBTi.

SSE has a suite of targets which together meet the SBTi criteria.

List the emissions reduction initiatives which contributed most to achieving this target

C4.1b

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

Target reference number
Int 1

Year target was set
2021

Target coverage
Company-wide

Scope(s)
Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Intensity metric
Metric tons CO2e per megawatt hour (MWh)

Base year
2018

Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)
307

Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3 (metric tons CO2e per unit of activity)

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)
307

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure
100

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure

% of total base year emissions in all selected Scopes covered by this intensity figure

100

Target year

2030

Targeted reduction from base year (%)

80

Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]

61.4

% change anticipated in absolute Scope 1+2 emissions

72.5

% change anticipated in absolute Scope 3 emissions

0

Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)

259

Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3 (metric tons CO2e per unit of activity)

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)

259

% of target achieved relative to base year [auto-calculated]

19.5439739414

Target status in reporting year

Underway

Is this a science-based target?

Yes, and this target has been approved by the Science Based Targets initiative

Target ambition

1.5°C aligned

Please explain target coverage and identify any exclusions

This target covers SSE's carbon emissions that arise from the consumption of coal, oil, gas and biomass in SSE's thermal generation plant (including Power Purchase Agreements). The intensity ratio covers the total output from SSE's thermal (oil, gas, coal, multifuel) and renewable (wind, both onshore and offshore, hydro including pumped storage and biomass) electricity generation portfolio.

It is important to note that SSE does not expect the achievement of this target in 2030 to have followed a linear year-to-year reduction path. Market driven and weather-related fluctuations may mean there are some years in which emissions may increase. However, SSE fully expects to achieve its 2030 target and the long-term trend continues to be significant reduction in the carbon intensity of the electricity it generates.

This target covers SSE's scope 1 emissions and is a science-based target, validated by the SBTi.

SSE has a suite of targets which together meet the SBTi criteria.

Plan for achieving target, and progress made to the end of the reporting year

Plan for achieving target: 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. This was designed to provide 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.

The key actions covering this target are:

Scope 1 –

- Reduce emissions from unabated gas generation
- Develop new low-carbon flexible generation
- Build a renewable energy portfolio of 13GW of capacity by 2031

Performance against the target:

SSE's carbon intensity was 16% lower in 2021/22 than the base year (2017/18). In 2021/22, the carbon intensity of SSE's scope 1 emissions increased slightly to 259gCO2e/kWh in comparison to 256gCO2e/kWh in 2020/21. Scope 1 emissions fell 19% from 7.1 Mt CO2e to 5.7 Mt CO2e. This was largely down to a change in the way SSE 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. 50% of its emissions (aligned with equity ownership) is now accounted under scope 3.

Despite the decrease in emissions, SSE's scope 1 intensity increased slightly by 1% to

259gCO2e/kWh in 2021/22, compared to 256gCO2e/kWh in the previous year. Output from SSE's renewable generation portfolio fell to 8.8TWh in 2021/22, from 9.6TWh the previous year. This was driven by still and dry weather conditions, with the summer of 2021 being one of the least windy across most of the UK and Ireland and one of the driest in SSE's Hydro catchment areas in the last 70 years. Output from SSE's thermal generation also fell, this meant that the proportion of total generation output contributed to by renewable generation increased to 40% from 35% in 2020/21. The fall in thermal output did not result in a corresponding fall in the GHG emissions intensity, because there was increased generation output from the most intensive generating plant in SSE's portfolio, including from carbon intensive peaking plant in Ireland.

List the emissions reduction initiatives which contributed most to achieving this target

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Target(s) to increase low-carbon energy consumption or production
Net-zero target(s)
Other climate-related target(s)

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number
Low 1

Year target was set
2018

Target coverage
Company-wide

Target type: energy carrier
Electricity

Target type: activity
Consumption

Target type: energy source
Renewable energy source(s) only

Base year
2018

Consumption or production of selected energy carrier in base year (MWh)

0

% share of low-carbon or renewable energy in base year

0

Target year

2022

% share of low-carbon or renewable energy in target year

100

% share of low-carbon or renewable energy in reporting year

38.6

% of target achieved relative to base year [auto-calculated]

38.6

Target status in reporting year

Underway

Is this target part of an emissions target?

This target is part of the RE100 initiative.

Is this target part of an overarching initiative?

RE100

Please explain target coverage and identify any exclusions

While the Climate Group's RE100 is targeted at non-renewable energy providers, SSE has joined in spirit and, as of 31 March 2022, 38.6% of the electricity that SSE purchased for its assets was from renewable sources, backed by renewable guarantees of origin (REGO) certificates.

Plan for achieving target, and progress made to the end of the reporting year

Plan for achieving target: SSE understands that credible net zero targets must be backed up by a clear plan of actions that will be taken to achieve them. 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 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.

One of these key actions is to deliver a net zero property estate. To do this SSE will install energy efficiency measures to its properties alongside monitoring equipment to reduce energy and carbon; and install micro generation technologies to reduce electrical consumption where viable. Whilst SSE works towards reducing energy use and carbon emissions, it will buy 100% of electricity from a renewable source.

SSE purchased 100% of its electricity for use in its facility managed offices from renewable sources, backed by renewable guarantees.

List the actions which contributed most to achieving this target

C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

Target reference number
Oth 1

Year target was set
2020

Target coverage
Company-wide

Target type: absolute or intensity
Absolute

Target type: category & Metric (target numerator if reporting an intensity target)
Engagement with suppliers
Percentage of suppliers (by emissions) with a science-based target

Target denominator (intensity targets only)

Base year
2018

Figure or percentage in base year
4

Target year
2024

Figure or percentage in target year
50

Figure or percentage in reporting year
48

% of target achieved relative to base year [auto-calculated]
95.652173913

Target status in reporting year
Underway

Is this target part of an emissions target?

This target covers SSE's scope 3 emissions and is a science-based target, validated by the SBTi.

SSE has a suite of targets which together meet the SBTi criteria.

Is this target part of an overarching initiative?

Science Based Targets initiative – approved supplier engagement target

Please explain target coverage and identify any exclusions

At present, SSE's scope 3 emissions are 40% or more of total scope 1, 2, and 3 emissions, and therefore a scope 3 target is required.

SSE's engagement target covers the suppliers that are in the top 50% by spend of SSE's total procurement spend. The vast majority of SSE's total supplier spend is in the 'Services' industry (over 70%) and the majority of the top 50% of SSE's procurement spend in any given year is also in the 'Services' industry (over 90%). The 'Services' industry makes up nearly 90% of the total carbon emissions from SSE's supply chain. This target is ambitious as it covers the dominant carbon emitting 'Services' industry suppliers. Therefore, if those suppliers that are in the top 50% of spend have an SBT then those suppliers would cover over 70% of the supplier scope 3 emissions.

This means that the combination of the gas sold target and the supplier engagement target will cover the significant emissions in the scope 3 category.

Plan for achieving target, and progress made to the end of the reporting year

Plan for achieving target: SSE understands that credible net zero targets must be backed up by a clear plan of actions that will be taken to achieve them. 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 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.

Two of these key actions were in relation to its supplier engagement target. SSE is committed to:

• Establish a framework for supplier collaboration on net zero action; and
• Partner with the CDP supply chain engagement programme.

To achieve this objective:

• SSE's Sustainable Procurement Code outlines the expectation on suppliers to have a net zero carbon reduction strategy with an associated commitment or target that is aligned with climate science;
• Workshops are being held with key suppliers to facilitate dialogue and knowledge-sharing around the setting of science-based carbon targets and the challenges and opportunities presented for various industries;
• SSE is working with CDP Supply Chain to deliver webinars around carbon reporting and science-based target setting; and,

• Tools and techniques are provided through the Supply Chain Sustainability School partnership that supports suppliers to understand and set net zero carbon reduction strategies.

In 2021/22, 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.

List the actions which contributed most to achieving this target

Target reference number

Oth 2

Year target was set

2019

Target coverage

Company-wide

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Low-carbon vehicles

Other, please specify

Number of company owned electric vehicles

Target denominator (intensity targets only)

Base year

2018

Figure or percentage in base year

138

Target year

2030

Figure or percentage in target year

3,500

Figure or percentage in reporting year

560

% of target achieved relative to base year [auto-calculated]

12.5520523498

Target status in reporting year

Underway

Is this target part of an emissions target?

In July 2019, SSE joined The Climate Group's EV100 initiative and committed to electrify its vehicle fleet. In joining the EV100, SSE has committed that by 2030 it will switch 3,500 of its vehicles to electric and install charging points at its sites.

Is this target part of an overarching initiative?

EV100

Please explain target coverage and identify any exclusions

In July 2019, SSE joined The Climate Group's EV100 initiative and committed to electrify its vehicle fleet. In joining the EV100, SSE has committed that by 2030 it will switch 3,500 of its vehicles to electric and install charging points at its sites. SSE's Net Zero Transition Plan outlines the plans to be 100% electric across its vehicles up to 3.5 tonnes and 75% across its vehicles up to 7.5 tonnes by 2030. SSE will make EVs the 'new normal' by switching 2,785 of its vehicles to electric and install charging points for its employees to use.

Plan for achieving target, and progress made to the end of the reporting year

Plan for achieving target: SSE understands that credible net zero targets must be backed up by a clear plan of actions that will be taken to achieve them. 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 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.

One of these key actions is to switch vehicle fleet to electric in line with EV100 commitment. 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.

List the actions which contributed most to achieving this target

Target reference number

Oth 3

Year target was set

2019

Target coverage

Company-wide

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Energy productivity

Other, please specify

£/GJ

Target denominator (intensity targets only)

Base year

2011

Figure or percentage in base year

47,149

Target year

2030

Figure or percentage in target year

94,298

Figure or percentage in reporting year

187,410.41

% of target achieved relative to base year [auto-calculated]

297.485439776

Target status in reporting year

Underway

Is this target part of an emissions target?

In 2019, SSE joined the Climate Group's initiative to encourage more businesses to improve their energy productivity through their pledge, the EP100.

Is this target part of an overarching initiative?

EP100

Please explain target coverage and identify any exclusions

SSE has pledged to double its energy productivity in its offices and depots by 2030. To ensure the success of this pledge, SSE has also set targets for carbon reductions from

these sites of 20% by 2030 from a 2018 baseline. Our internal carbon emissions targets are aligned to SSE's overall sustainability strategy and 2030 goals.

The EP100 pledge is on target so far with SSE's offices and depots' annual electricity consumption in 2021/22 being 25,234.58MWh and gas consumption 3,347.83 MWh.

SSE seeks to cut carbon from its offices and depots through a combination of investment in physical measures and building user engagement through its 'Better Off' behaviour change campaign. SSE's runs its 'Better Off' behavioural change programme to engage employees on energy efficiency activities. To complement these activities energy efficiency and building renewable generation project investments have totalled £12.8m since 2010/11. During 2021/22, investments included £150,000 in energy efficient LED lighting at several depot sites. At the end of year two three of the programme to deliver an internal 2030 target of a 20% reduction in carbon emissions, a total investment of £900,000 has been made across a diverse range of projects, including solar PV generation, LED lighting, free cooling systems, chillers and air conditioning systems. As part of SSE's new agile working arrangements, SSE has also invested significantly in its property portfolio, consolidating multiple non-operational sites into modern buildings which use energy more efficiently.

Plan for achieving target, and progress made to the end of the reporting year

From April 1st, 2022, a new carbon emissions target is to be reported to align with the ambition of achieving a Net Zero non-operational buildings estate by 2035. Performance will be measured going forward against a revised annual reduction target of 7.19% against a 2020/21 baseline.

Performance of the existing target had exceeded expectations. 2021/22 performance for all SSE Non-Operational Buildings (Offices, Depots, Warehouses, Data Centres and Telecoms carbon emissions) was 47.42% ahead of the target 5% reduction on a 2017/18 baseline. The 2030 target to reduce emissions by 15% was deemed to be achieved. SSE's focus is to achieve Net Zero non-operational buildings by 2035.

List the actions which contributed most to achieving this target

C4.2c

(C4.2c) Provide details of your net-zero target(s).

Target reference number

NZ1

Target coverage

Company-wide

Absolute/intensity emission target(s) linked to this net-zero target

Abs1

Abs2
Int1

Target year for achieving net zero

2040

Is this a science-based target?

Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next 2 years

Please explain target coverage and identify any exclusions

In October 2020, SSE joined the 'Race to Zero' campaign and made a clear public commitment to achieve the long-term goal of reaching net zero greenhouse gas (GHG) emissions across all its operations by 2050 at the latest, covering scope 1, 2 and 3 GHG emissions.

In 2022, recognising the national and international importance of decarbonising the power sector as quickly as possible, SSE committed to achieve net zero across scope 1 and 2 emissions by 2040 at the latest and to reach net zero for all SSE's remaining scope 3 emissions by 2050.

In the short to medium term, SSE has already set four interim science-based targets. Its scope 1 and 2 targets are aligned with a 1.5C scenario.

The SBTi have developed the first global standard for net zero businesses. In the longer term, SSE are monitoring the requirements for an SBTi approved net zero science-based target and will review the mechanisms put in place to neutralise the emissions that are currently unfeasible to be eliminated.

Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?

Yes

Planned milestones and/or near-term investments for neutralization at target year

While SSE seeks to achieve net zero emissions across its scope 1 and 2 emissions by 2040 at the latest, it is understood that negative emissions technology may be required to neutralise the remaining, residual emissions associated with electricity generation.

The reduction of greenhouse gas emissions associated with unabated gas generation is the most important action in achieving net zero. Notwithstanding the primary importance of focusing on the reduction of unabated emissions, SSE will start to explore options for the mid-2030s for the neutralisation of its residual scope 1 emissions, and will be guided by the best available science and independent frameworks available, including the GHG Protocol and the Science Based Targets Initiative as well as energy policy frameworks in the UK and Ireland

Planned actions to mitigate emissions beyond your value chain (optional)

n/a

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	10	3,378,079
To be implemented*	0	0
Implementation commenced*	6	886,376
Implemented*	1	30
Not to be implemented	0	0

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Energy efficiency in buildings

Building Energy Management Systems (BEMS)

Estimated annual CO2e savings (metric tonnes CO2e)

30

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Scope 2 (location-based)

Scope 2 (market-based)

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

21,000

Investment required (unit currency – as specified in C0.4)

150,000

Payback period

4-10 years

Estimated lifetime of the initiative

21-30 years

Comment

SSE seeks to cut carbon from its offices and depots through a combination of investment in physical measures and building user engagement through its 'Better Off' behaviour change campaign.
SSE's runs its 'Better Off' behavioural change programme to engage employees on energy efficiency activities. To complement these activities energy efficiency and building renewable generation project investments have totalled £12.8m since 2010/11.

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. This is year 3 of the investment programme and a total investment of £900,000 has been made across a diverse range of projects including solar PV generation, LED lighting, free cooling systems, chillers and air conditioning systems. As part of SSE's new agile working arrangements, SSE has also invested significantly in its property portfolio, consolidating multiple non-operational sites into modern buildings which use energy more efficiently.

During 2021/22, investments included £150,000 in energy efficient LED lighting at several depot sites.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	Examples include, Contracts for Difference, meeting UK & EU ETS allocations and Electricity Market Reform requirements. For example, the result of 2022 UK Contracts for Difference auction marks an important milestone in the competitiveness for 'less established' technologies including Remote Island Wind. The strike price of £46.39 per MWh was secured for 220MW of the Viking Energy Wind Farm (50% of its total capacity) for the 2026/27 delivery year. Viking is progressing through construction with over 50 per cent of turbine foundation bases poured. When complete in 2024, Viking Energy Wind Farm will be the UK's most productive onshore wind farm in terms of annual electricity output^, with the project also contributing to Shetland's security of supply by underpinning the HVDC transmission link that will connect the islands to the mainland

	for the first time. As a generator of electricity, SSE is subject to national and international policies that impact the price of carbon, which means the price of carbon is an explicit consideration in investment decisions. SSE's generation activities in Ireland are subject to the EU Emissions Trading System (ETS). SSE's generation activities in the UK operated under the EU Emissions Trading Scheme (EU ETS) until 1 January 2021, when a new UK Emissions Trading Scheme (UK ETS) carbon pricing system came into operation to replace the EU ETS in the UK, following Brexit. The UK ETS is a cap-and-trade emissions scheme, similar in design and aims of the EU ETS. SSE welcomed the establishing a UK Emissions Trading System (ETS) and has called upon the UK and the European Union to agree a link between the UK ETS and EU ETS as soon as possible in order to benefit from a wide ranging, liquid and mature carbon market.
Dedicated budget for energy efficiency	SSE have an annual budget for energy efficiency investments in larger projects within its wider property budget. SSE also have a separate budget for smaller scale energy efficiency improvement works which is used following onsite energy audits. SSE acts to reduce energy use and thereby cut carbon from its assets through a combination of physical improvements and building user engagement. Between 2020/21 and 2021/22, the energy SSE purchased for use in its assets (offices, depots, power stations 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. In 2021/22, 38.6% of the electricity that SSE purchased for its assets was from renewable sources, up from 38.3% the previous year. For example, SSE seeks to cut carbon from its offices and depots through a combination of investment in physical measures and building user engagement through its 'Better Off' behaviour change campaign. SSE's runs its 'Better Off' behavioural change programme to engage employees on energy efficiency activities. To complement these activities energy efficiency and building renewable generation project investments have totalled £12.65m since 2011/12.
Dedicated budget for low-carbon product R&D	SSE is focused on enabling, harnessing and deploying new technologies and innovations which can accelerate the journey to net zero. 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. Example of an innovation project that drives investment in emissions reduction activities: Project Raas The RaaS - Resilience as a Service – project is investigating an innovative solution to improve the operational resilience of electricity distribution networks in remote locations. The proposed scheme would use services provided by a third party owned Battery Energy Storage System together with local Distributed Energy Resources to swiftly, automatically, restore power to customers in the event of a fault. Through temporary operation of the local network in islanded mode, RaaS will maintain supply to customers allowing time for the DNO to respond to the issue. RaaS would also allow local renewables to continue generating and exporting energy at times when that zero-carbon electricity, and any associated income, would otherwise have been lost. The RaaS concept represents a flexible, low carbon solution to increase security of supply in areas where traditional reinforcement or use of Distribution Network Operator owned standby generation to provide network resilience would be prohibitively costly, supporting the UK's transition to Net Zero.
Employee engagement	SSE has ongoing, two-way channels for engaging with its employees, including: Structured career conversations; annual all-employee engagement surveys; internal social media platforms; employee forums; and structured engagement with trade unions. Over the year calls and townhall events held by the Chief Executive and members of the Group Executive Committee (GEC) were held for SSE's senior leadership team to provide updates on key financial milestones and

	strategic matters which included SSE's 2030 Goals which address climate change at their core (by cutting carbon emissions, trebling renewable energy output and helping to accommodate electric vehicles). In addition, SSE has numerous local employee engagement initiatives throughout the year focusing on sustainability and the environment, highlighting issues such as energy efficiency, business and commuter travel. Examples of this include our energy reduction initiatives, which involves SSE's Better Off campaign.
Partnering with governments on technology development	SSE works with governments and other partners to develop low carbon technologies. For example: SSEN's Project Local Energy Oxfordshire (LEO) and Project Transition are exploring partnerships with Local Authorities. LEO's Smart and Fair Neighbourhood programme. Working with five different communities in Oxfordshire, LEO is co-creating locally relevant trials of different flexibility services. Project LEO is also concerned to ensure fairness for all electricity market participants. In addition, throughout 2021/22, SSE worked with governments, regulators and industry partners to create the right policy framework to accelerate the development of Carbon Capture, Use and Storage (CCUS) and hydrogen which is considered vital in the transition to net zero. SSE Thermal is part of a consortium which aims to transform the Humber region into the first "zero-carbon cluster" by 2040. SSE Thermal has partnered with Equinor to co-develop low-carbon thermal options at its Keadby site, in North Lincolnshire, and at its Peterhead site, in Aberdeenshire.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation

Group of products or services

Taxonomy used to classify product(s) or service(s) as low-carbon

The EU Taxonomy for environmentally sustainable economic activities

Type of product(s) or service(s)

Power

Other, please specify

SSEN Transmission and SSEN Distribution

Description of product(s) or service(s)

To provide stakeholders with an initial indication of SSE's low-carbon products and services, SSE has undertaken preliminary work to assess its activities using the eligible activities of the EU Taxonomy as a basis. The establishment of a European Taxonomy is an important step forward in defining environmentally sustainable economic activity within equity markets and, as a UK-listed energy company, SSE is looking forward to the establishment of a UK Taxonomy based on the broad principles established by the EU.

Support of low carbon energy infrastructure: In total, including that connected at a distribution level, SSE has 7.8GW of renewable generation capacity connected to its electricity transmission network. This reduces third party scope 2 emissions as it supports the decarbonisation of electricity generation and the carbon emissions associated with grid electricity mix.

The emissions saved by third parties are related to the scope 2 emissions. The amount of electricity consumed by a customer will be reduced as a result of a reduction in the carbon emission conversion factor which will be lowered because of a higher proportion of renewable electricity generation in the grid.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

No

Methodology used to calculate avoided emissions

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Functional unit used

Reference product/service or baseline scenario used

Life cycle stage(s) covered for the reference product/service or baseline scenario

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

Explain your calculation of avoided emissions, including any assumptions

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

18

Level of aggregation

Group of products or services

Taxonomy used to classify product(s) or service(s) as low-carbon

The EU Taxonomy for environmentally sustainable economic activities

Type of product(s) or service(s)

Power

Other, please specify

SSE Renewables

Description of product(s) or service(s)

To provide stakeholders with an initial indication of SSE's low-carbon products and services, SSE has undertaken preliminary work to assess its activities using the eligible activities of the EU Taxonomy as a basis. The establishment of a European Taxonomy is an important step forward in defining environmentally sustainable economic activity within equity markets and, as a UK-listed energy company, SSE is looking forward to the establishment of a UK Taxonomy based on the broad principles established by the EU.

Core to SSE's business strategy, is growth in the development of additional renewable energy generation to support the low-carbon transition. SSE increased its renewable generation capacity from 3,897MW in 2020/21 to 3,935MW in 2021/22. Renewable energy accounted for 34.8% of SSE's total generation output in 2020/21. Renewables generated 9,496GWh of electricity and accounted for 38.1% of SSE's total generation output in 2021/22. This was a decrease from 10,242GWh in 2020/21, mainly due to unfavourable weather conditions across both wind and hydro.

For all energy customers the increasing proportion of renewable energy in SSE's generation mix plays a role in helping its customers reduce scope 2 emissions as the carbon emissions associated with the grid electricity mix is lowered.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

No

Methodology used to calculate avoided emissions

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Functional unit used

Reference product/service or baseline scenario used

Life cycle stage(s) covered for the reference product/service or baseline scenario

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

Explain your calculation of avoided emissions, including any assumptions

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

4

Level of aggregation

Group of products or services

Taxonomy used to classify product(s) or service(s) as low-carbon

The EU Taxonomy for environmentally sustainable economic activities

Type of product(s) or service(s)

Power

Other, please specify

Energy Portfolio Management

Description of product(s) or service(s)

To provide stakeholders with an initial indication of SSE's low-carbon products and services, SSE has undertaken preliminary work to assess its activities using the eligible activities of the EU Taxonomy as a basis. The establishment of a European Taxonomy is an important step forward in defining environmentally sustainable economic activity within equity markets and, as a UK-listed energy company, SSE is looking forward to the establishment of a UK Taxonomy based on the broad principles established by the EU.

Through Energy Portfolio Management (EPM), SSE trades commodities for each business unit – ensuring the Group has the energy supplies it requires to meet the needs of customers; procuring the fuel required by the generation plants and selling the power output from its wind farm, hydro and thermal assets. The revenues associates with providing a route to market for SSE Renewables in included as a taxonomy-aligned

activity.

The reason that SSE's taxonomy-eligible activity appears low in relation to its revenue, is primarily due to EPM trading activity and the sale of power to end customers, both of which are high volumes, with pass through costs and lower margins than in larger businesses such as renewables generation and networks businesses. SSE believes that revenue is a poor measure in assessing its economic activity and that the most appropriate measures of its taxonomy-eligible economic activity are in relation to its capital investment and its operating profit.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

No

Methodology used to calculate avoided emissions

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Functional unit used

Reference product/service or baseline scenario used

Life cycle stage(s) covered for the reference product/service or baseline scenario

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

Explain your calculation of avoided emissions, including any assumptions

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

8

C-EU4.6

(C-EU4.6) Describe your organization's efforts to reduce methane emissions from your activities.

SSE has identified that carbon dioxide is its most material greenhouse gas. Therefore, SSE prioritises programmes to reduce carbon dioxide emissions from its generation activities and other indirect sources of carbon dioxide emissions. Methane emissions from our Thermal operations are recognised as a significant environmental aspect within our Environmental

Management Systems. As part of our processes and procedures we calculate emissions of methane, and for sites covered by environmental permits we report annual methane emissions to environmental regulators in line with agreed protocols or guidance. SSE have worked with an electricity supply industry group (The Joint Environmental Programme) to develop new calculation methodologies to provide more accurate calculations that will be trialled during 2022. Furthermore, SSE have part funded two projects focused on improving understanding of emissions and the environmental impact of methane emissions from Combined Cycle Gas Turbines that are currently underway. Furthermore, the longer-term plans for reducing CO2 from our Thermal operations e.g. exploring the use of hydrogen fuels will also have reduction in methane emissions.

For all GHG emissions SSE reviews the risks of each are reviewed annually. Overwhelmingly carbon dioxide emissions are the most material greenhouse gas priority. SSE remains vigilant regarding the emergence of higher priority risks relating to greenhouse gases.

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

No

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?
Row 1	No

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start

April 1, 2017

Base year end

March 31, 2018

Base year emissions (metric tons CO2e)

10,154,749

Comment

The direct GHG emissions (scope 1) cover:

• Generation power stations – oil, gas and biomass consumed in SSE's thermal power generation plant (including Power Purchase Agreements) to generate electricity.
• Gas consumption in buildings – this is the gas consumed by SSE's non-operational buildings (offices, depots, call centres) to maintain building temperatures.
• Network fuel consumed – this includes diesel and gas oil used by fixed generators on islands and mobile generators to generate electricity to maintain the distribution network.
• Company vehicles – this is the petrol or diesel used by SSE's operational vehicles for business activities (operational vehicles are those vehicles that are owned by SSE and used by employees for SSE business activities).
• Fugitive emissions – use of sulphur hexafluoride (SF6) in the transmission and distribution networks for conductivity (used in the switchgears and substations).

Scope 2 (location-based)

Base year start

April 1, 2017

Base year end

March 31, 2018

Base year emissions (metric tons CO2e)

907,745

Comment

The location-based scope 2 figure is calculated using BEIS conversion factors.

The indirect emissions (scope 2) cover:
• Electricity consumption in buildings – this is the electricity consumed by SSE's non-operational buildings (customer call centres, offices). This data excludes leased buildings (which represent less than 1% of employees).
• Electricity consumption in networks – this is the electricity used by SSE's operational buildings (e.g. substations) in the transmission and distribution network.
• Electricity consumption in thermal power stations – this is the electricity used by SSE's GB thermal power stations for the generation of electricity. This data excludes power stations below 100MW which do not have metering and thermal power stations in Ireland.
• Distribution losses – this is the electricity lost in SSE's distribution network in the north

of Scotland (SHEPD) and southern central England (SEPD) transporting electricity to the customer.

Scope 2 (market-based)

Base year start

April 1, 2017

Base year end

March 31, 2018

Base year emissions (metric tons CO2e)

907,745

Comment

The market-based scope 2 figure is calculated using BEIS residual conversion factors and this is the same as the location based conversion factors.

The indirect emissions (scope 2) cover:
• Electricity consumption in buildings – this is the electricity consumed by SSE's non-operational buildings (customer call centres, offices). This data excludes leased buildings (which represent less than 1% of employees).
• Electricity consumption in networks – this is the electricity used by SSE's operational buildings (e.g. substations) in the transmission and distribution network.
• Electricity consumption in thermal power stations – this is the electricity used by SSE's GB thermal power stations for the generation of electricity. This data excludes power stations below 100MW which do not have metering and thermal power stations in Ireland.
• Distribution losses – this is the electricity lost in SSE's distribution network in the north of Scotland (SHEPD) and southern central England (SEPD) transporting electricity to the customer.

Scope 3 category 1: Purchased goods and services

Base year start

April 1, 2017

Base year end

March 31, 2018

Base year emissions (metric tons CO2e)

11,983,125

Comment

SSE used the CDP supply chain questionnaire and methodology to calculate the carbon emissions associated with SSE's supply chain.

Scope 3 category 2: Capital goods

Base year start

April 1, 2017

Base year end

March 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

Capital goods are reported as part of the emissions reported in ‘purchased goods and services’ above. SSE has no other emissions associated with this category not already reported in the above category or in other categories.

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start

April 1, 2017

Base year end

March 31, 2018

Base year emissions (metric tons CO2e)

1,433,903

Comment

Transmission and Distribution emissions from losses for electricity use in non-operational buildings, substations and power stations. Well to tank emissions for fuel consumed with SSE power stations.

Scope 3 category 4: Upstream transportation and distribution

Base year start

April 1, 2017

Base year end

March 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

There are two Joint Ventures were in operation and used vessels to maintain offshore windfarms in the UK and Ireland, however fuel use consumption data was not available during the base year.

Scope 3 category 5: Waste generated in operations

Base year start

April 1, 2017

Base year end

March 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

The carbon impact of our waste was less than 1% of the total carbon emissions and therefore it is not incorporated into our footprint

Scope 3 category 6: Business travel

Base year start

April 1, 2017

Base year end

March 31, 2018

Base year emissions (metric tons CO2e)

8,770

Comment

Fights (domestic, short haul, long haul and international), rail and company car distance travelled by SSE employees for business purposes.

Scope 3 category 7: Employee commuting

Base year start

April 1, 2017

Base year end

March 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

In comparison to our other scope 3 emissions, these emissions are not material (less than 1% of total scope 3 emissions) and the data quality would be based on employee commuting surveys and estimated mileage data from sample data sets.

Scope 3 category 8: Upstream leased assets

Base year start

April 1, 2017

Base year end

March 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

SSE does not have any activities associated with this activity.

Scope 3 category 9: Downstream transportation and distribution

Base year start
April 1, 2017

Base year end
March 31, 2018

Base year emissions (metric tons CO2e)
110,004

Comment
Transmission losses – the electricity lost in the Scottish Hydro Electric (SHE) Transmission network (the network between the generator and the distribution company) in the north of Scotland.

Scope 3 category 10: Processing of sold products

Base year start
April 1, 2017

Base year end
March 31, 2018

Base year emissions (metric tons CO2e)
0

Comment
SSE does not have any activities associated with this activity.

Scope 3 category 11: Use of sold products

Base year start
April 1, 2017

Base year end
March 31, 2018

Base year emissions (metric tons CO2e)
2,538,729

Comment
Gas sold to customers – the amount of gas sold to customers (retail and business customers) that is then used by our customers for heating and power purposes.

Scope 3 category 12: End of life treatment of sold products

Base year start
April 1, 2017

Base year end

March 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

SSE does not have any activities associated with this activity.

Scope 3 category 13: Downstream leased assets

Base year start

April 1, 2017

Base year end

March 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

SSE does not have any activities associated with this activity.

Scope 3 category 14: Franchises

Base year start

April 1, 2017

Base year end

March 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

SSE does not have any activities associated with this activity.

Scope 3 category 15: Investments

Base year start

April 1, 2017

Base year end

March 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

SSE does not have any activities associated with this activity.

Scope 3: Other (upstream)

Base year start
April 1, 2017

Base year end
March 31, 2018

Base year emissions (metric tons CO2e)
0

Comment
SSE does not have any activities associated with this activity.

Scope 3: Other (downstream)

Base year start
April 1, 2017

Base year end
March 31, 2018

Base year emissions (metric tons CO2e)
0

Comment
SSE does not have any activities associated with this activity.

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

Defra Environmental Reporting Guidelines: Including streamlined energy and carbon reporting guidance, 2019
European Union Emission Trading System (EU ETS): The Monitoring and Reporting Regulation (MMR) – General guidance for installations
ISO 14064-1
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)
5,746,504

Comment

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

The indirect emissions (scope 2) cover:
• Electricity consumption in buildings – this is the electricity consumed by SSE's non-operational buildings (customer call centres, offices). This data excludes leased buildings (which represent less than 1% of employees).
• Electricity consumption in networks – this is the electricity used by SSE's operational buildings (e.g. substations) in the transmission and distribution network.
• Electricity consumption in thermal power stations – this is the electricity used by SSE's GB thermal power stations for the generation of electricity. This data excludes power stations below 100MW which do not have metering and thermal power stations in Ireland.
• Distribution losses – this is the electricity lost in SSE's distribution network in the north of Scotland (SHEPD) and southern central England (SEPD) transporting electricity to the customer.

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based

491,585

Scope 2, market-based (if applicable)

491,585

Comment

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

Yes

C6.4a

(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.

Source

Joint ventures

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

Relevance of market-based Scope 2 emissions from this source (if applicable)

Emissions are not relevant

Explain why this source is excluded

This report excludes any joint ventures in which SSE does not have operational control. Below is an example of the largest business unit excluded from the inventory. For a full list of SSE's subsidiary undertakings, partnerships, joint ventures and associates, please refer to pages 303 to 308 of SSE's Annual Report 2022. Scotia Gas Networks (SGN): SGN was a Joint Venture and SSE did not have operational control over these operations. Covering Scotland and the south of England, SGN is the gas network company distributing natural and green gas to 5.9 million homes and businesses through a network of 74,000km of mains and services. SSE held a 33.3% shareholding.

However, in light of market developments, and in consideration of the RIIO-T2 price control referral to the CMA, in March 2021 SSE stated its intention to divest all of its equity stake in SGN. On 2 August 2021, the Group announced it had agreed to sell its 33.3% stake in gas distribution operator SGN to a consortium comprising existing SGN shareholders, with the transaction completed on 22 March 2022. Whilst the business had been a good long-term financial investment for SSE since 2005, SSE's focus is now on low carbon electricity businesses and the role they have in transition to net zero. This disposal marked the completion of SSE's £2bn plus disposals programme announced in June 2020, with a headline consideration amounting to over £2.8bn exceeding that original target.

SGN reports its greenhouse gas emissions in its environmental reports annually.

The percentage of total emissions contained within SGN's annual environment report represents less than 1% of SSE's total carbon emissions.

SSE E&P UK Limited is excluded as although this company was wholly owned by SSE, it did not hold a controlling stake in any assets. SSE announced its intention to sell this business in May 2019. SSE agreed the sale of all of its interests in its portfolio of gas exploration and production in December 2020, and the disposal of this business was concluded on 14 October 2021.

Estimated percentage of total Scope 1+2 emissions this excluded source represents

0

Explain how you estimated the percentage of emissions this excluded source represents

SSE's greenhouse gas inventory is prepared in accordance with requirements of the UK Government's environmental reporting guidelines (BEIS, March 2019); the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (revised edition) developed by the World Resources Institute and the World Business Council for Sustainable Development (2004); and ISO 14064-1:2018 Specification with Guidance at the Organization Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals.

SSE uses an operational control consolidation approach to account for its emissions. As such, joint ventures in which the company has an equity ownership of less than 50% are excluded from its inventory. An example of a joint ventures excluded based on the operational control consolidation approach is Scotia Gas Networks (SGN). SSE held a 33.3% financial investment stake in SGN but did not have a controlling stake in, or operational control of, this business. SGN completes its own GHG and SECR reporting, therefore emissions from this joint venture are not relevant for SSE's inventory (on 22 March 2022 SSE sold its entire 33.3% stake in SGN).

SSE's Greenhouse Gas and Water Reporting Criteria 2021/22 details the full criteria under which SSE's greenhouse gas inventory was prepared. As part of its assurance in accordance with the International Standard on Assurance Engagements 3410 'Assurance engagements on greenhouse gas statements', PricewaterhouseCoopers considered the suitability of SSE's use of the Reporting Criteria, as the basis for preparing the greenhouse has inventory.

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

8,450,000

Emissions calculation methodology

Supplier-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

SSE has used the CDP supply chain questionnaire and methodology to calculate the carbon emissions associated with SSE's supply chain. To calculate SSE's supply chain emissions data was gathered from: those supply chain companies that feature in the top 100 of suppliers by spend (which makes up around 60% of SSE's total procurement spend) and are companies that are high carbon emitters (defined by the CDP carbon intensity industry averages: manufacturing, services and infrastructure). The carbon emissions for the supply chain are calculated using a combination of allocated and intensity emission numbers as defined by CDP supply chain methodology. These emissions are reported in SSE's scope 3 emission inventory and cover the 'Products and Services' and 'Capital Goods' categories.

SSE is working with its suppliers and CDP to understand how it can get a more accurate picture of its supplier carbon emissions in the future. SSE has set a verified SBT target to engage with 50% of suppliers by spend to set an SBT by 2024.

Capital goods

Evaluation status

Not relevant, explanation provided

Please explain

Capital goods are reported as part of the emissions reported in 'purchased goods and services' above. SSE has no other emissions associated with this category not already reported in the above category or in other categories.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

959,393

Emissions calculation methodology

Fuel-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Transmission and Distribution losses for electricity use in non-operational buildings: This is the transmission and distribution losses (the energy loss that occurs getting the electricity to SSE non-operational buildings from the power plant) associated with the electricity consumed by SSE's operational (power stations) and non-operational buildings (offices, depots, call centres, warehouses). This figure is calculated by taking the scope 2 electricity consumption figure for non-operational buildings and applying a carbon dioxide conversion factor provided by BEIS reporting guidelines. As defined by DEFRA's reporting guidelines the transmission and distribution losses are included in this section instead of scope 2.

Transmission and Distribution losses for electricity use in substations: This is the transmission and distribution losses (the energy loss that occurs getting the electricity to SHE Transmission, SEPD and SHEPD substations from the power plant) associated with the electricity consumed in SHE Transmission, SEPD and SHEPD substations. This figure is calculated by taking the scope 2 substation electricity consumption and applying a carbon dioxide conversion factor provided by BEIS reporting guidelines. As defined by DEFRA's reporting guidelines the transmission and distribution losses are included in this section instead of scope 2.

Well to tank emissions: Fuel purchased during the financial year (oil, gas and biomass) is measured through meters and weight tickets and converted into kWh using standard industry recognised conversion factors. Power Purchase Agreements are reported as Scope 1 emissions as the energy generated from these facilities is 100% used by SSE. PwC assures this data.

PwC assure this data. The assurance statement can be found in the answer to C10.1c.

Upstream transportation and distribution

Evaluation status

Not relevant, calculated

Emissions in reporting year (metric tons CO2e)

12,227

Emissions calculation methodology

Fuel-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

There are two Joint Ventures that are operational and use vessels to maintain offshore windfarms in the UK and Ireland. Fuel data is collected from the third party that owns and operates the vessels. Scottish Fuels supply all the fuel data for Beatrice Offshore Windfarm Limited (BOWL) and ASCO provide fuel data for Greater Gabbard Offshore

Windfarm Limited (GGOWL). This data is sent by each third party and collected by BOWL and GGOWL SHE teams. The fuel data is stored by Renewables SHE and consolidated into one report to cover all offshore vessel activities. The sum of all vessel fuels consumed within 2021/22 is applied to an emission factor for Gas Oil, which is sourced from the 2021 UK Government GHG Conversion Factors for Company Reporting database.

All data is verified by PwC using monthly invoices.

Waste generated in operations

Evaluation status

Not relevant, explanation provided

Please explain

The carbon impact of our waste was less than 1% of the total carbon emissions and therefore it is not incorporated into our footprint.

Business travel

Evaluation status

Not relevant, calculated

Emissions in reporting year (metric tons CO2e)

2,359

Emissions calculation methodology

Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Km for flights (domestic, short haul, long haul and international), rail and company car travel are reported, and relevant BEIS conversion factors are applied to calculate CO2e for each type of travel. The carbon impact of SSE's business travel (flights and rail) is less than 1% of the total carbon emissions. SSE reports this data and PwC assures this data. The assurance statement can be found in the answer to C10.1c.

Employee commuting

Evaluation status

Not relevant, explanation provided

Please explain

In comparison to our other scope 3 emissions, these emissions are not material (less than 1% of total scope 3 emissions) and the data quality would be based on employee commuting surveys and estimated mileage data from sample data sets.

Furthermore, following society's emergence from the COVID-19 pandemic, SSE launched its 'Flexible First' employee guidelines which were shaped by employee feedback. Throughout the pandemic virtual channels worked well and continue to be used in the Company. The guidelines are designed to harness the benefits of flexibility, balanced with the need to connect and collaborate in the most effective way. As such, many employees have been utilising technology to work from home and therefore reducing the frequency in which they commute to SSE sites.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

SSE does not have any activities associated with this activity.

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

104,804

Emissions calculation methodology

Other, please specify

Standard transmission losses guidance (produced by Elexon)

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Transmission losses – the electricity lost in the Scottish Hydro Electric (SHE) Transmission network (the network between the generator and the distribution company) in the north of Scotland. The transmission of electricity is managed by the network operator, National Grid. When transferring power across the SHE Transmission System, some of the power is 'lost' known as 'Transmission Losses'. Figures for transmission losses are calculated using standard transmission losses guidance (produced by Elexon) to compute the losses in the transmission system. This data is reported by National Grid as the system operator. They report this figure for the financial year to SSE for its assets. The figure is for the previous financial year as a result of the timing of the data capture process. This means for the financial year April 2021 to March 2022 the data will be based on the previous financial year April 2020 to March 2021. The data is verified by an independent third party, WSP, for National Grid.

When transferring power across the SHE Transmission System, some of the power is 'lost' known as 'Transmission Losses'. Figures for transmission losses are calculated using standard transmission losses guidance (produced by Elexon) to compute the

losses in the transmission system. This data is reported by National Grid as the system operator. They report this figure for the financial year to SSE for its assets. The figure is for the previous financial year as a result of the timing of the data capture process. This means for the financial year April 2021 to March 2022 the data will be based on the previous financial year April 2020 to March 2021. The data is verified by an independent third party, WSP, for National Grid. PwC assure this data. The assurance statement can be found in the answer to C10.1c.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Please explain

SSE does not have any activities associated with this activity.

Use of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

2,289,673

Emissions calculation methodology

Fuel-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Gas volumes are based on settlements data published by Xoserve. SSE receive an allocation of the settlements data based on the total amount of gas used by the local distribution zone based on its portfolio of customers. This number covers both domestic and business customers in Ireland and business customers in GB. To calculate the domestic usage values, the monthly demand totals are divided by the mid-month customer number and then totalled for the financial year to give the total energy sold to customers. The carbon emissions are calculated by taking the scope 3 gas sold to customers figure and applying the carbon dioxide conversion factor provided by BEIS reporting guidelines. PwC assure this data. The assurance statement can be found in the answer to C10.1c.

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Please explain

SSE does not have any activities associated with this activity.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

SSE does not have any activities associated with this activity.

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

SSE does not have any activities associated with this activity.

Investments

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

325,254

Emissions calculation methodology

Supplier-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Emissions data is provided by the third-party owner of the generation site for the financial year. SSE will account for its equity share of the generation's emissions within the financial year.

SSE invests in Thermal electricity generation. Emissions arise from the gas consumed in thermal power generation plant (for example, Seabank with SSE's 50% ownership share) that SSE does not operate but has a 50%-and-over equity interest. The emissions associated with the generation of electricity is calculated using greenhouse gas emissions data from the generator's operating company.

Other (upstream)

Evaluation status

Not relevant, explanation provided

Please explain

SSE does not have any activities associated with this activity.

Other (downstream)

Evaluation status

Not relevant, explanation provided

Please explain

SSE does not have any activities associated with this activity.

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

Yes

C6.7a

(C6.7a) Provide the emissions from biogenic carbon relevant to your organization in metric tons CO2.

	CO2 emissions from biogenic carbon (metric tons CO2)	Comment
Row 1	9,893	Emissions captured under the UK ETS from biomass combustion at our Slough Heat & Power facility.

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0.00072

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

6,238,089

Metric denominator

unit total revenue

Metric denominator: Unit total

8,608,200,000

Scope 2 figure used

Location-based

% change from previous year

35

Direction of change

Decreased

Reason for change

In 2021/22, SSE's total carbon emissions consisted of 58% scope 1 emissions, 5% scope 2 emissions and 37% scope 3 emissions.

Scope 1 and 2 emissions fell 18% from 7.6 million tonnes CO2e to 6.2 million tonnes CO2e. This was predominantly a result of two factors:

1. The ending of SSE's power purchase agreement contract with Seabank gas-fired power station on 30 September 2021. As a result, 50% of emissions from this power station are now reported in SSE's scope 3 GHG emissions category, based on SSE's ownership share; and

2. Output from SSE's thermal generation plant was 26% lower compared to the previous year, due to planned and unplanned outages and market conditions.

SSE's total revenue increased from £6.826 billion in 2020/21 to £8.608 billion in 2021/22. The increase in revenue and decrease in emissions meant that SSE's carbon intensity of total revenue decreased.

Intensity figure

0.282

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

6,238,089

Metric denominator

megawatt hour generated (MWh)

Metric denominator: Unit total

22,155,000

Scope 2 figure used

Location-based

% change from previous year

2

Direction of change

Increased

Reason for change

In 2021/22, SSE's total carbon emissions consisted of 58% scope 1 emissions, 5% scope 2 emissions and 37% scope 3 emissions.

Scope 1 and 2 emissions fell 18% from 7.6 million tonnes CO2e to 6.2 million tonnes

CO2e. This was predominantly a result of two factors:

1. The ending of SSE's power purchase agreement contract with Seabank gas-fired power station on 30 September 2021. As a result, 50% of emissions from this power station are now reported in SSE's scope 3 GHG emissions category, based on SSE's ownership share; and

2. Output from SSE's thermal generation plant was 26% lower compared to the previous year, due to planned and unplanned outages and market conditions.

Output from SSE's renewable generation portfolio (inc. pumped storage and biomass) fell to 8.8TWh in 2021/22, from 9.6TWh the previous year. Output from SSE's thermal generation also fell in 2021/22, and by a greater extent than for renewables output. This meant that the proportion of total generation output contributed to by renewable generation increased to 40% from 35% in 2020/21. The fall in thermal output did not result in a corresponding fall in the GHG emissions intensity, because there was increased generation output from the most intensive generating plant in SSE's portfolio, including from carbon intensive peaking plant in Ireland. The carbon intensity of SSE's generated increased by 1.2% to 258 gCO2e/kWh in comparison to 255 gCO2e/kWh in the previous year.

Intensity figure

580

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

6,238,089

Metric denominator

full time equivalent (FTE) employee

Metric denominator: Unit total

10,754

Scope 2 figure used

Location-based

% change from previous year

5

Direction of change

Decreased

Reason for change

In 2021/22, SSE's total carbon emissions consisted of 58% scope 1 emissions, 5% scope 2 emissions and 37% scope 3 emissions.

Scope 1 and 2 emissions fell 18% from 7.6 million tonnes CO2e to 6.2 million tonnes

CO2e. This was predominantly a result of two factors:

1. The ending of SSE's power purchase agreement contract with Seabank gas-fired power station on 30 September 2021. As a result, 50% of emissions from this power station are now reported in SSE's scope 3 GHG emissions category, based on SSE's ownership share; and

2. Output from SSE's thermal generation plant was 26% lower compared to the previous year, due to planned and unplanned outages and market conditions.

Due to the disposal of certain business areas, SSE's FTE numbers decreased from 12,489 in 2020/21 to 10,754 in 2021/22. Despite the number of FTEs dropping by 14%, SSE's significant decrease in scope 1 and 2 emissions (18%) has led to a reduction in the carbon intensity per full time equivalent employee.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	5,701,742	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	25,417	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	13,013	IPCC Fourth Assessment Report (AR4 - 100 year)
SF6	6,332	IPCC Fourth Assessment Report (AR4 - 100 year)

C-EU7.1b

(C-EU7.1b) Break down your total gross global Scope 1 emissions from electric utilities value chain activities by greenhouse gas type.

	Gross Scope 1 CO2	Gross Scope 1 methane	Gross Scope 1 SF6	Total gross Scope 1	Comment

	emissions (metric tons CO2)	emissions (metric tons CH4)	emissions (metric tons SF6)	emissions (metric tons CO2e)	
Fugitives	0	0	6,332	6,332	SF6 Emissions.
Combustion (Electric utilities)	5,677,142	25,405	0	5,702,547	Emissions from electricity generation.
Combustion (Gas utilities)	0	0	0	0	n/a
Combustion (Other)	24,600	12	0	24,612	Emissions from Operational Vehicles & Plant, Mobile Plant and Fixed Generation.
Emissions not elsewhere classified	0	0	0	13,013	N2O emissions across all SSE activities.

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
United Kingdom of Great Britain and Northern Ireland	4,220,612
Ireland	1,525,893

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By activity

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Generation (excludes biomass)	5,715,233
Operational vehicles and plant	15,392
Mobile plant - gas oil	8,401
SF6 for transmission and distribution	6,332
Fixed generation in distribution	536
Gas consumed in non-operational buildings	687

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Comment
Electric utility activities	5,705,315	

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Decreased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	103	Decreased	0.01	SSE's total consumption of purchased electricity reduced by 16% between 2020/21 and 2021/22, largely due to a disposal of selected businesses and properties. Despite this, the proportion of renewable electricity consumed within SSE's operational buildings increased by 0.3% in 2021/22 compared to 2020/21 levels. By increasing its proportion of renewable electricity purchased, SSE displaced 486 MWh from a standard (or brown) tariff to a renewable (or green) tariff. If this 486 MWh would have been supplied from the grid average fuel mix, the BEIS carbon equivalent conversion factor for electricity generation for 2021/22 was used (0.21233 kgCO2e per kWh) giving the result of 103 tCO2e ((485,749 * 0.21233)/1000 = 103 tCO2e).

Other emissions reduction activities	1,395,759	Decreased	18.3	Scope 1 and 2 emissions fell from 7.6 million tonnes CO2e to 6.2 million tonnes CO2e. This is equivalent to a 18% decrease (1,395,759 / 7,633,849) The largest contributor to this emissions decrease was the This was predominantly a result of two factors: 1. The ending of SSE's power purchase agreement contract with Seabank gas-fired power station on 30 September 2021. As a result, 50% of emissions from this power station are now reported in SSE's scope 3 GHG emissions category, based on SSE's ownership share; and 2. Output from SSE's thermal generation plant was 26% lower compared to the previous year, due to planned and unplanned outages and market conditions. During 2021/22, investments included £150,000 in energy efficient LED lighting at several depot sites. Investments in more efficient lighting is expected to result in new emission reductions of almost 30 tCO2. SSE has an internal 2030 target of a 20% reduction in carbon emissions based on 2018 levels in relation to its non-operational buildings. This is year 3 of the investment programme and a total investment of £900,000 has been made across a diverse range of projects including solar PV generation, LED lighting, free cooling systems, chillers and air conditioning systems. As part of SSE's new agile working arrangements, SSE has also invested significantly in its property portfolio, consolidating multiple

				non-operational sites into modern buildings which use energy more efficiently.
Divestment	0	No change	0	
Acquisitions	0	No change	0	
Mergers	0	No change	0	
Change in output	0	No change	0	
Change in methodology	0	No change	0	
Change in boundary	0	No change	0	
Change in physical operating conditions	0	No change	0	
Unidentified	0	No change	0	
Other	0	No change	0	

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 0% but less than or equal to 5%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes

Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	Yes
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	0	28,585,520	28,585,520
Consumption of purchased or acquired electricity		74,416	160,923	235,340
Consumption of purchased or acquired heat		0	3,333	3,333
Consumption of self-generated non-fuel renewable energy		0		0
Total energy consumption		74,416	28,749,777	28,824,193

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	No

Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

Comment

Not applicable

Other biomass

Heating value

LHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

Comment

Other renewable fuels (e.g. renewable hydrogen)

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

Comment

Not applicable

Coal

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

Comment

Not applicable

Oil

Heating value

LHV

Total fuel MWh consumed by the organization

2,135,678

MWh fuel consumed for self-generation of electricity

2,135,678

MWh fuel consumed for self-generation of heat

0

Comment

Gas

Heating value

LHV

Total fuel MWh consumed by the organization

26,453,175

MWh fuel consumed for self-generation of electricity

26,453,175

MWh fuel consumed for self-generation of heat

0

Comment

Gas consumed for electricity consumption and used within SSE buildings for heating.

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

Comment

Not applicable

Total fuel

Heating value

LHV

Total fuel MWh consumed by the organization

28,588,853

MWh fuel consumed for self-generation of electricity

28,588,853

MWh fuel consumed for self-generation of heat

0

Comment

C-EU8.2d

(C-EU8.2d) For your electric utility activities, provide a breakdown of your total power plant capacity, generation, and related emissions during the reporting year by source.

Coal – hard

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not applicable

Lignite

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not applicable

Oil

Nameplate capacity (MW)

966

Gross electricity generation (GWh)

817

Net electricity generation (GWh)

817

Absolute scope 1 emissions (metric tons CO2e)

637,776

Scope 1 emissions intensity (metric tons CO2e per GWh)

781

Comment

Gas

Nameplate capacity (MW)
4,319

Gross electricity generation (GWh)
12,540

Net electricity generation (GWh)
12,540

Absolute scope 1 emissions (metric tons CO2e)
5,067,539

Scope 1 emissions intensity (metric tons CO2e per GWh)
404

Comment

Sustainable biomass

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment
Not applicable

Other biomass

Nameplate capacity (MW)
15

Gross electricity generation (GWh)
73

Net electricity generation (GWh)

73

Absolute scope 1 emissions (metric tons CO2e)

9,918

Scope 1 emissions intensity (metric tons CO2e per GWh)

136

Comment

Waste (non-biomass)

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not applicable

Nuclear

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not applicable

Fossil-fuel plants fitted with CCS

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not applicable

Geothermal

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not applicable

Hydropower

Nameplate capacity (MW)

1,459

Gross electricity generation (GWh)

3,334

Net electricity generation (GWh)

3,334

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Wind

Nameplate capacity (MW)

2,462

Gross electricity generation (GWh)

5,392

Net electricity generation (GWh)

5,392

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Solar

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Over the past 12 months SSE has announced significant milestones in its nascent solar and battery storage business including a secured 380MW solar and battery pipeline, with over 1GW more of other sites currently under assessment.
The secured pipeline includes a 50MW battery storage asset on a consented site in Wiltshire, where construction gets under way in 2022, with full energisation expected in summer 2023. SSE has also acquired a 30MW solar farm at Littleton Pastures in

Worcestershire and, once complete in late 2023, this 77-acre site will be capable of powering some 9,400 homes.

Marine

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not applicable

Other renewable

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not applicable

Other non-renewable

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not applicable

Total

Nameplate capacity (MW)

9,221

Gross electricity generation (GWh)

22,155

Net electricity generation (GWh)

22,155

Absolute scope 1 emissions (metric tons CO2e)

5,715,233

Scope 1 emissions intensity (metric tons CO2e per GWh)

258

Comment

C8.2g

(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.

Country/area

United Kingdom of Great Britain and Northern Ireland

Consumption of electricity (MWh)

234,360

Consumption of heat, steam, and cooling (MWh)

3,250

Total non-fuel energy consumption (MWh) [Auto-calculated]

237,610

Country/area

Ireland

Consumption of electricity (MWh)

980

Consumption of heat, steam, and cooling (MWh)

83

Total non-fuel energy consumption (MWh) [Auto-calculated]

1,063

C-EU8.4

(C-EU8.4) Does your electric utility organization have a transmission and distribution business?

Yes

C-EU8.4a

(C-EU8.4a) Disclose the following information about your transmission and distribution business.

Country/Region

United Kingdom of Great Britain and Northern Ireland

Voltage level

Transmission (high voltage)

Annual load (GWh)

4,382.3

Annual energy losses (% of annual load)

9.53

Scope where emissions from energy losses are accounted for

Scope 2 (location-based)

Emissions from energy losses (metric tons CO2e)

104,804

Length of network (km)

5,336.3

Number of connections

116

Area covered (km2)

57,347.7

Comment

SSE is the sole-owner of three economically-regulated electricity network licensees that are jointly operated under the brand of Scottish and Southern Electricity Networks (SSEN). The three networks are:
1. Scottish Hydro Electric Transmission plc which owns the high voltage network in the north of Scotland.
2. Scottish Hydro Electric Power Distribution plc which owns the low voltage network in the north of Scotland.
3. Southern Electric Power Distribution which owns the low voltage network in central southern England.

This data refers to Sottish Hydro Electricity Transmission Plc.

Length of network is defined as the total route length. The total circuit length for SSE's transmission business is 5,336.27 km.

SSEN Transmission's of annual losses across its network equated to 417.64 GWh in 2021/22.

SSE's transmission losses are classified as scope 3 emissions and reported in question C6.5. These emissions are classified as scope 3 because SSE does not operate these transmission assets. SSE's transmission losses emissions in 2021/22 were 104,804 tonnes CO2e.

Country/Region

United Kingdom of Great Britain and Northern Ireland

Voltage level

Distribution (low voltage)

Annual load (GWh)

37,631

Annual energy losses (% of annual load)

5.33

Scope where emissions from energy losses are accounted for

Scope 2 (location-based)

Emissions from energy losses (metric tons CO2e)

441,381

Length of network (km)

128,174

Number of connections

31,423

Area covered (km2)

79,524.28

Comment

SSE is the sole-owner of three economically-regulated electricity network licensees that are jointly operated under the brand of Scottish and Southern Electricity Networks (SSEN). The three networks are:
1. Scottish Hydro Electric Transmission plc which owns the high voltage network in the north of Scotland.
2. Scottish Hydro Electric Power Distribution plc which owns the low voltage network in the north of Scotland.
3. Southern Electric Power Distribution which owns the low voltage network in central southern England.

This data refers to the totals for Scottish Hydro Electric Power Distribution plc and Southern Electric Power Distribution. Data can be provided for each license area and this can be found in regulatory reports for these businesses.

Number of connections: Details both the total number of connections by DNO and by Third Parties on SSE's behalf and the Totals split by License Area as these are the splits reported to OFGEM. The number of connections, 31,423 refers to the total number for both SHEPD (5,451) and SEPD (25,972).

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

C-EU9.5a

(C-EU9.5a) Break down, by source, your organization's CAPEX in the reporting year and CAPEX planned over the next 5 years.

Coal – hard

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Not applicable. SSE's last coal-fired power station was closed in March 2020.

Lignite

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Not applicable.

Oil

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Not applicable.

Gas

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

129,300,000

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

16

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

15

Explain your CAPEX calculations, including any assumptions

16% share of CAPEX is FY22 adjusted CAPEX numbers for [SSE Thermal] / [(SSE Thermal + SSE Renewables net of development expenditure refunds)].

15% share of planned CAPEX is an approximation of [SSE Thermal CAPEX less £600m set aside for CCS] / [(Approximation of Thermal capex + SSE Renewables capex planned over 5 years to 2026)].

Sustainable biomass

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Not applicable.

Other biomass

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Not applicable.

Waste (non-biomass)

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Not applicable.

Nuclear

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Not applicable.

Geothermal

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Not applicable.

Hydropower

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

50,000,000

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

6

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

4

Explain your CAPEX calculations, including any assumptions

SSE will invest around £50m per year in maintaining and modernising its hydro fleet over the next 5 years. By taking this approximate figure as the basis for the numerator for the calculation and the Thermal and Renewables CAPEX net of development expenditure refunds as basis for the denominator (total generation CAPEX), SSE estimates 6% CAPEX in the reporting year was for Hydro and 4% of planned CAPEX over the next 5 years will be for Hydro.

Wind

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

624,300,000

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

76

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

72

Explain your CAPEX calculations, including any assumptions

Solar

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Some CAPEX planned through the Distributed Energy business unit, but quantum is not disclosed nor highly material.

Marine

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Not applicable.

Fossil-fuel plants fitted with CCS

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

9

Explain your CAPEX calculations, including any assumptions

Approximately £600m has been set aside for CCS over the 5 years to FY26. This approximation is divided by approximation of Thermal and Renewables CAPEX net of development expenditure refunds over the period to calculate the total planned CAPEX.

Other renewable (e.g. renewable hydrogen)

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Not applicable.

Other non-renewable (e.g. non-renewable hydrogen)

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Not applicable.

C-EU9.5b

(C-EU9.5b) Break down your total planned CAPEX in your current CAPEX plan for products and services (e.g. smart grids, digitalization, etc.).

Products and services	Description of product/service	CAPEX planned for product/service	Percentage of total CAPEX planned products and services	End of year CAPEX plan
Other, please specify Transmission and Distribution	All numbers are approximate. During the year to March 2022, SSE's adjusted investment, capital and acquisition expenditure, which now includes equity expenditure on acquisitions per above, totalled £2,073.7m, an increase of 127% compared with the prior year and representing the highest ever investment recorded by the Group. Almost £2bn of this was invested within SSE's Renewables, Thermal and Networks businesses, all which are fundamental to delivery of the UK's net zero ambitions. Excellent progress was made in SSEN Transmission's investment programme, with a total of £614.4m invested in building out and	5,000,000,000	40	2026

	reinforcing the network in the North of Scotland. Work was completed on Tealing Substation Extension, required to facilitate the connection of Seagreen to the grid. In addition, construction is well under way on the link between Shetland and mainland Scotland, which will see a submarine cable laid in order to transmit power beneath the seabed between converter stations at Weisdale Voe on Shetland and Noss Head in Caithness. SSEN Distribution continued its capital investment programme across both the north and south networks, with a total spend of £364.8m, mainly on strategic investment and construction in both the north and south regions, as well as progressing the replacement of the submarine cable between Skye and Harris. All of which is designed to deliver improvements for customers.			

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	Research costs in 2021/22 were £12m as shown in SSE's Sustainability Report 2022 on page 48.

C-CO9.6a/C-EU9.6a/C-OG9.6a

(C-CO9.6a/C-EU9.6a/C-OG9.6a) Provide details of your organization's investments in low-carbon R&D for your sector activities over the last three years.

Technology area	Stage of development	Average % of total R&D	R&D investment	Comment

	in the reporting year	investment over the last 3 years	figure in the reporting year (optional)	
Energy storage	Applied research and development	81-100%	12,000,000	SSE is focused on enabling, harnessing and deploying new technologies and innovations which can accelerate the journey to net zero. A culture of innovation is promoted through a dedicated innovation team within SSEN which focuses on accelerating a low-carbon transition and co-creation with partners to develop whole-system solutions. Examples of innovation projects: Project Transition Transition is an Ofgem Electricity Network Innovation Competition funded project, led by SSEN. Transition will inform the design requirements of a Neutral Market Facilitator and Whole System Coordinator, develop the roles and responsibilities within the marketplace, develop the market rules required for the trials, and implement and test these by means of a programme of trials. The Transition project is also integral to the Project LEO and will demonstrate a Smart Local Energy System at county scale, to maximise economic, environmental and social prosperity for the region. Working together, Transition and the Project LEO programme will determine how opportunities can be maximised and unlocked from the transition to a smarter, more flexible electricity system and how households, businesses and communities can realise the benefits through

				participation in the markets for flexibility Project Raas The RaaS - Resilience as a Service – project is investigating an innovative solution to improve the operational resilience of electricity distribution networks in remote locations. The proposed scheme would use services provided by a third party owned Battery Energy Storage System together with local Distributed Energy Resources to swiftly, automatically, restore power to customers in the event of a fault. Through temporary operation of the local network in islanded mode, RaaS will maintain supply to customers allowing time for the DNO to respond to the issue. RaaS would also allow local renewables to continue generating and exporting energy at times when that zero-carbon electricity, and any associated income, would otherwise have been lost. The RaaS concept represents a flexible, low carbon solution to increase security of supply in areas where traditional reinforcement or use of Distribution Network Operator owned standby generation to provide network resilience would be prohibitively costly, supporting the UK's transition to Net Zero.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status

Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement

SSE Sustainability Report 2022.pdf

Page/ section reference
104 to 105

Relevant standard
ISAE 3410

Proportion of reported emissions verified (%)
100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach
Scope 2 location-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance

Limited assurance

Attach the statement

SSE Sustainability Report 2022.pdf

Page/ section reference

104 to 105

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

100

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

SSE Sustainability Report 2022.pdf

Page/section reference

104 to 105

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3: Business travel

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement

SSE Sustainability Report 2022.pdf

Page/section reference
104 to 105

Relevant standard
ISAE 3410

Proportion of reported emissions verified (%)
100

Scope 3 category
Scope 3: Downstream transportation and distribution

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement

SSE Sustainability Report 2022.pdf

Page/section reference
104 to 105

Relevant standard
ISAE 3410

Proportion of reported emissions verified (%)
100

Scope 3 category

Scope 3: Use of sold products

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

SSE Sustainability Report 2022.pdf

Page/section reference

104 to 105

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3: Investments

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

SSE Sustainability Report 2022.pdf

Page/section reference

104 to 105

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

100

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C4. Targets and performance	Year on year emissions intensity figure	ISAE3000 and ISAE3410	PwC assure SSE's scope 1 emissions intensity and carbon intensity of electricity generation as part of the annual assurance process.

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.

EU ETS
UK ETS
Other carbon tax, please specify
Carbon Price Support (CPS) - GB only

C11.1b

(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.

EU ETS

% of Scope 1 emissions covered by the ETS

100

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1, 2021

Period end date

December 31, 2021

Allowances allocated

0

Allowances purchased

1,539,374

Verified Scope 1 emissions in metric tons CO2e

1,539,374

Verified Scope 2 emissions in metric tons CO2e

0

Details of ownership

Facilities we own and operate

Comment

Examples of facilities that SSE owns and operates include some joint ventures such as Marchwood and Seabank power stations

UK ETS

% of Scope 1 emissions covered by the ETS

100

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1, 2021

Period end date

December 31, 2021

Allowances allocated

604

Allowances purchased

4,655,555

Verified Scope 1 emissions in metric tons CO2e

4,656,159

Verified Scope 2 emissions in metric tons CO2e

0

Details of ownership

Facilities we own and operate

Comment

Examples of facilities that SSE owns and operates include some joint ventures such as Marchwood and Seabank power stations

C11.1c

(C11.1c) Complete the following table for each of the tax systems you are regulated by.

Other carbon tax, please specify

Period start date

April 1, 2021

Period end date

March 31, 2022

% of total Scope 1 emissions covered by tax

100

Total cost of tax paid

73.7

Comment

£73.7m of CPS Tax was paid by SSE plc for Gas and Oil consumed to produce electricity. Gas paid and expensed when consumed and Oil offsets fuel duty reclaims and expensed when consumed.

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

Emissions Trading Systems (ETSs) apply to SSE's electricity generation business, which has by far the greatest carbon emitting impact of our entire business. SSE's overall strategy is to seek to comply through a mix of reducing its covered emissions and purchasing allowances for its remaining emissions. Emissions under ETSs are treated as a cost of generation, similar to fuel, for the purposes of managing our energy portfolio. Therefore, the trading of emissions allowances is carried out in conjunction with trading associated commodities, electricity and gas.

SSE’s generation activities in the UK operated under the EU Emissions Trading System (EU ETS) until 1 January 2021, when a new UK Emissions Trading System (UK ETS) carbon pricing system came into operation to replace the EU ETS in the UK, following the UK’s exit from the EU. The UK ETS is a cap-and-trade emissions scheme, similar in design and aims of

the EU ETS. As such, our strategy for complying with the UK ETS will be the same as our strategy to comply with the EU ETS. SSE's generation assets in Ireland continue to operate under the EU ETS. SSE welcomed the establishment of a UK ETS and has called upon the UK and the EU to agree a link between the UK ETS and EU ETS as soon as possible in order to benefit from a wide ranging, liquid and mature carbon market. In all markets it operates SSE advocates for ETSs to be aligned with net zero targets, with robust 2030 ambitions to help decarbonise electricity in the 2030s.

In order to comply with targets SSE is constantly trying to improve the efficiency of its power stations and trialling various carbon abatement technologies. For example, SSE Thermal's £350m 893MW CCGT at Keadby 2 in Lincolnshire which is on track to be fully commissioned in 2022. This project will introduce Siemens' first-of-a-kind, high efficiency, gas-fired generation technology to the UK, which will displace older, less efficient gas generation including SSE's existing assets. As part of the co-operation agreement with Equinor, SSE Thermal is also developing options to blend hydrogen at Keadby 2.

To further reduce the emissions of SSE's and the UK's gas generation fleet, SSE is developing low carbon thermal options across its sites and will not develop any gas generation project without a low carbon pathway to ensure it fits well within the respective jurisdiction's climate commitments, including if they commitments were tightened at a later date. In co-operation with Equinor, SSE Thermal is developing Keadby 3 Carbon Capture Power Station and Keadby Hydrogen Power Station in the Humber, and Peterhead Carbon Capture Power Station in Scotland, to plug into the shared CCS and hydrogen infrastructure within the clusters. In combination, these projects would capture an estimated 3 million tonnes of carbon dioxide annually, 30% of the overall target of the UK's target for 2030 and deliver the world's first large-scale hydrogen fired power station.

SSE's first low-carbon thermal station, Keadby 3, is under development and would capture over 90% of its combustion emissions. Importantly, Keadby is located near the Scunthorpe steel works, which is the second largest single emitter of CO2 in the UK, meaning that not only would Keadby 3 provide firm, dispatchable low carbon power, it would support the development of infrastructure that would provide decarbonisation opportunities for sectors which are harder to abate. Keadby 3 is part of the Zero Carbon Humber cluster, which is seeking to make the Humber the world's first net zero industrial cluster by 2040.

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

Yes

C11.2a

(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.

Credit origination or credit purchase

Credit purchase

Project type

Hydro

Project identification

SSE purchased credits from the Yumrutepe Regulator Power Plant Project (Small Hydo Power Project in Turkey). The credits were purchased from Carbon Footprint Ltd and are verified by Verified Carbon Standard (VCS).

The number of purchased project-based carbon credits relates to the 2020/21 financial year. SSE voluntarily purchases credits to provide 100% certified renewable gas and carbon-neutral gas to its SSE Green Gas customers. This offering provides customers with 25% certified renewable gas and 75% carbon-neutral gas backed by carbon offsets. SSE also pledges to plant one tree in the UK for every SSE Green Gas customer.

The number of project-based carbon credits required for 2021/22 is under review. SSE must ensure that all billed consumption data is accurate for SSE Green Gas customers before purchasing credits.

Verified to which standard

VCS (Verified Carbon Standard)

Number of credits (metric tonnes CO2e)

2,067

Number of credits (metric tonnes CO2e): Risk adjusted volume

2,067

Credits cancelled

Yes

Purpose, e.g. compliance

Voluntary Offsetting

C11.3

(C11.3) Does your organization use an internal price on carbon?

Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Objective for implementing an internal carbon price

Navigate GHG regulations

Drive low-carbon investment
Stress test investments
Identify and seize low-carbon opportunities

GHG Scope

Scope 1
Scope 3

Application

Scope of emissions: The use of a carbon price impacts SSE's scope 1 (in particular generation emissions).

Rationale for using a carbon price: SSE's main emissions in the UK and Ireland relating to electricity generation are subject to a carbon price, through the UK Emissions Trading System (UK ETS), UK Carbon Price Support (CPS) and EU Emissions Trading System (EU ETS). Considering a robust carbon price is a key component of many of SSE's operational and capital investment decisions; indeed given SSE's low carbon investment it is more subject to risk through a low carbon price environment. The price of carbon is reflected in decisions to invest in and operate thermal generation plant and renewable generation technologies, the investments made in capital projects and how we perform in the energy markets. Robust carbon pricing will be particularly important to support our activities in CCS and hydrogen.

Actual price(s) used (Currency /metric ton)

100

Variance of price(s) used

SSE views that a robust carbon price in the electricity system is a critical role in meeting the UK's net zero commitments, and a net zero electricity in the 2030s. SSE believes that the combination of the UK Emissions Trading System (UK ETS) and Carbon Price Support (CPS) in Great Britain is one of the most important policy tools the government has to help industry continue to deliver reliable and lower carbon electricity cost-effectively, and as a critical driver for pushing coal off the electricity system.

As of July 2022, the prices used are:

£100/tCO2 in Great Britain
€85/tCO2 in EU

Our future plans will include a low, central and high range forecast based on expected price developments. Activities not included under ETS will consider the potential it will be included within the relevant ETS in the future.

Type of internal carbon price

Implicit price

Impact & implication

Where and how SSE uses a carbon price, for example:

• SSE's Energy Portfolio Management team internalises the price of carbon in its energy market models for the electricity markets in Great Britain and the Single Electricity Market (SEM) between Ireland and Northern Ireland.

• Trading team are pricing carbon into their trades when setting the prices that they are willing to sell thermal generation at.

• Risk Management team are considering value of carbon in their short-medium term valuation models.

• Energy Economics are considering carbon price scenarios in long-term price and revenue modelling used in investments and long-term asset valuation.

• SSE's capital investment decisions in future electricity generation are supported by the Contracts for Difference (CfD) in the UK and the Renewable Energy Support Scheme (RESS) in Ireland. These long-term support mechanisms for low carbon generation influence the way in which SSE develops and invests in new renewable technologies. For example, SSE has already committed to invest £7.5bn between March 2020 and March 2025, almost 90% of which will be in SSE's core businesses of electricity transmission, electricity distribution and renewable sources of electricity. SSE has the largest renewable energy capacity across the UK and Ireland at around 3.9GW (including pumped storage).

Actual price and process to determine the price: 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 SEM between Ireland and Northern Ireland, as well as other European markets in which SSE has emerging interests. SSE views that a robust carbon price in the electricity system is a critical role in meeting net zero commitments in developed economies, and a net zero electricity in the 2030s. SSE. SSE continued to promote a robust carbon price with BEIS, HMT and No.10 in the UK, the Irish Government and MEPs, along with the European Commission, and in particular has supported the increases to the UK and EU's 2030 ambition ahead of COP26 which directly impacts the UK ETS and EU ETS through determining the supply of allowances. SSE welcomed proposed ambition from the UK and the EU and will continue actively encourage both the UK and EU to align their ETS's with their net zero targets as soon as possible, both bilaterally and through our trade associations.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers

Yes, our customers/clients

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect climate change and carbon information at least annually from suppliers

% of suppliers by number

50

% total procurement spend (direct and indirect)

65

% of supplier-related Scope 3 emissions as reported in C6.5

100

Rationale for the coverage of your engagement

98 suppliers responded (out of 172 suppliers that were asked to take part) to the CDP supply chain programme to SSE's request for climate change data in 2020/21. Total scope 1 and 2 and 3 allocated emissions for these suppliers was 8.45 million tonnes tCO2e. The carbon emissions calculated covers all the scope 1, 2 and 3 allocated emissions reported by these 98 companies. SSE will be one of many customers for each of these suppliers. These suppliers represent around 65% of SSE's total procurement expenditure in 2020/21. These suppliers feature in SSE's top 250 and were selected based on the level relevance/impact of climate change to the supplier as well as the level of spend in SSE's supplier programme. In other words, these are the suppliers that, like SSE, their biggest environment impact is carbon emissions and the suppliers with which SSE spend the most. These suppliers support SSE's capital projects for renewable generation projects, transmission and distribution operations as well as IT, human resource and financial services. These suppliers provide capital goods (such as wind turbines and steel lattice towers) to SSE.

SSE are looking to increase the share of its suppliers that it engages with, not only to improve emissions data gathering but to also to collaborate in order to identify opportunities to reduce the company's suppliers' emissions. SSE has been a principal partner with the Supply Chain Sustainability 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. SSE will be aiming to partake in webinars and e-events with our suppliers, with progress to be disclosed in the 2022/23 disclosure.

During 2021/22, SSE continued to make progress against its supplier engagement science-based target. These targets meet the strict SBTi criteria and were approved by

SBTi in April 2020, meaning SSE's target reflect the latest climate science. As part of the SBT, SSE has set a target to "Engage with 50% of suppliers by spend to set an SBT by 2024".

NB: This data has not been assured. This was the fifth year SSE has taken part in the CDP supply chain request and SSE is taking part in this programme in 2021/22.

Impact of engagement, including measures of success

The success of SSE's supplier engagement strategy is measured through indicators including: 1. Number/percentage of suppliers responding to the CDP request for data on climate change; 2. Number/percentage of suppliers providing scope 1&2 emissions data; and 3. SSE's ability to improve its scope 3 data reporting to include suppliers.

As a result of the 2020/21 CDP supply chain programme the impact of the engagement included: 1. 57% of SSE's suppliers responded; 2. 55% reported verified scope 1&2 emissions enabling SSE to continue to report its scope 3 emissions related to its suppliers; 3. 45% of suppliers reported an emissions intensity or allocated emissions; 4. 76% of suppliers reported a target; 5. 76% of SSE's suppliers are engaging their own suppliers on climate-related action and 6. 31% of supplier have set a renewable energy target.

Following the workshops held in 2020/21, which facilitated dialogue around SBTs, SSE continued to engage with key suppliers through direct engagement and hosted a live webinar in partnership with the Supply Chain Sustainability School, on the topic of carbon. On 31 March 2022, 48% of SSE's suppliers (by value) had set or committed to set their own SBTs through the SBTi. This is a significant increase from the 4% of suppliers in the base year (2019/20). Over 2021/22, SSE and CDP Supply Chain collaborated to deliver its first supplier webinar focusing on carbon reporting, which reached over 50 key suppliers and contributed to the highest supplier response rate SSE has had since beginning supply chain reporting.

Supplier emissions represent a significant portion of SSE's scope 3 emissions, meaning that urgent action is required if the company is to meet its net zero goal. Collaboration with its main suppliers will be essential to achieve this target. The Powering Net Zero Pact (the Pact) is a new initiative created by SSE with 10 other founding partners. The Pact brings together companies across all tiers of the power sector globally to achieve a fair and just energy transition to net zero. The Pact focuses on five areas of ambition, one of which is a commitment is to work towards setting SBTs, aligned to 1.5 degrees by 2025 and to develop an understanding and quantification of scope 3 greenhouse gas emissions. By working together, SSE and its partners can cooperate in order to develop a net zero global power sector.

Comment

For SSE to achieve this target it will continue to engage with its supply chain in the coming years and will report its progress against this goal annually in its Sustainability Report.

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement & Details of engagement

Education/information sharing

Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services

% of customers by number

40

% of customer - related Scope 3 emissions as reported in C6.5

62

Please explain the rationale for selecting this group of customers and scope of engagement

Audience: SMEs

Purpose: A British Chamber of Commerce survey found that larger businesses are more likely to take environmental action. The majority of small businesses haven't set targets to reduce their emissions. Just 11% of respondents measure their carbon footprint, despite half of respondents acknowledging their customers are worried about the environment.

Impact of engagement, including measures of success

Small business hub

With cost considered one of the biggest barriers to going green, SSE Energy Solutions wanted to provide free and accessible tools and content to educate businesses and help them become more sustainable.

In April 2022 SSE Energy Solutions launched its 'small business hub' which contains links to free tools and blogs, including its own carbon footprint calculator. The hub has only been live for a few months but has already received over 670 views with increasing engagement rates. Going forward, SSE Energy Solutions will be following a 12-month content plan and creating a number of free resources and tools for SMEs.

Carbon calculator

If SMEs want to reduce their emissions, the first step is understanding their carbon footprint. SSE Energy Solutions has developed a free and easy-to-use carbon footprint calculator. When SMEs visit the carbon footprint calculator landing page on SSE Energy Solutions' website, they'll also be able to watch short animation videos that explain how to use the calculator and what the different types of emissions mean.

Green as standard

In 2021/22, SSE Energy Solutions 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 Energy Solutions, they are migrated to 100% renewable electricity contracts, matched with independently verified and assured output from SSE's UK wind farms and hydro plants. 2021-2022 saw 166,000 meters supplied with a green product, up from 59,542 the previous financial year.

Type of engagement & Details of engagement

Education/information sharing
Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services

% of customers by number

7.6

% of customer - related Scope 3 emissions as reported in C6.5

62

Please explain the rationale for selecting this group of customers and scope of engagement

Audience: All businesses, SMEs in particular who are less likely to have half-hourly metering already.

Purpose: How monitoring usage via smart meters can help customers save energy.

Impact of engagement, including measures of success

Smart

Under the UK Government's Smart Programme businesses have 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.
Email

To engage these customers, SSE Energy Solutions has started to include messaging in email campaigns on why smart meters can be better for the planet and help reduce carbon emissions, building on other benefits such as energy and cost management.

Publications

SSE Energy Solutions runs a PR programme to engage different sectors and industries with smart meters, highlighting carbon as well as energy and cost savings and how this

can help businesses demonstrate that they are taking action on climate change.

- Food and Drink Network UK: It's time to take charge of your energy
Magazine published and distributed on a monthly basis; 55,000 readers in food and drink manufacturing, catering and retailing.

- CLH (Cater Licensee Hotelier) News: How to manage energy costs and demonstrate green credentials

A one-stop trade press and digital publication for the independent and small chain groups sector for the hospitality industry. Circulated monthly to 20,000; website attracts 15,450 unique visitors each month on average; digital newsletter is distributed twice weekly to over 10,000 subscribers.

- First Voice: How to save on business energy costs
For smaller business owners, published by FSB (National Federation of Self Employed & Small Businesses). The 68-page, flagship magazine is mailed three times per year to the member base of FSB, 117,852 circulation. Alongside the printed edition, there is also a digital version of the magazine available on the website.

- TFN (Third Force News): Help is available to manage energy costs and demonstrate green credentials
Scotland's only dedicated daily news outlet for charities and voluntary organisations in Scotland. It is published by the Scottish Council for Voluntary Organisations. Magazine; website; twice weekly email bulletin.

- Umi: Powering data: why smart meters could lead to big savings for SMEs
Since 2007, Umi has worked with more than 450,000 businesses across the UK, finding and packaging the best information, expertise and finance to help businesses make better business decisions more quickly.

Type of engagement & Details of engagement

Education/information sharing
Run an engagement campaign to education customers about your climate change performance and strategy

% of customers by number

13

% of customer - related Scope 3 emissions as reported in C6.5

62

Please explain the rationale for selecting this group of customers and scope of engagement

Audience: Politicians, public sector, businesses and change makers: 120 world leaders and over 40,000 registered participants, including 22,274 party delegates, 14,124

observers and 3,886 media representatives.

Purpose: To showcase SSE's climate action, renewable generation and energy solutions, and foster collaboration.

Further examples:

Let's Power Change Together – an evening with Professor Brian Cox CBE FRS

Professor Brian Cox CBE FRS gave an inspiring and thought-provoking speech at SSE's Let's Power Change Together customer event.

As well as a fascinating lesson on the vastness of space and the potential energy capabilities of blackholes, Professor Cox really brought home the need to protect our planet, which was followed by a panel discussion on the commitments made at COP26.

The panel featured SSE's Martin Pibworth and Neil Kirkby who were joined by Vijay Chouhan from Virgin Media O2 and Dr Tracy Morse of the University of Strathclyde. SSE Climate Ambassador Victory Luke closed the event with a moving call to action for collaboration across generations to power real change.

Impact of engagement, including measures of success

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. SSE green electricity matched to a specific renewable asset supports the demand by business to decarbonise. In October 2021, SSE Energy Solutions provided the power for all three COP26 permanent venues in Glasgow. The summit's power supply came from a wind farm 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 Energy Solutions providing 100% renewable energy to the 14,300 capacity arena for the occasion. Given the objective of COP26 in tackling climate change SSE Energy Solutions supported the ambitions of the event in the carbon reductions at the venues.

The road to renewables

In October 2021 SSE Energy Solutions' 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 Energy Solutions 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. The Road to Renewables campaign won a PRCA DARE B2B Award.

Augmented reality (AR) Smart City Platform

SSE Energy Solutions' Augmented Reality (AR) Smart City Platform at the COP26 Green Zone in the Glasgow Science Centre gave visitors a 3D view of how we can decarbonise buildings, cities and places.

The President of the United Nations General Assembly, Abdulla Shahid, even paid a visit to the exhibit and was really impressed with the technology and the way it engaged audiences on such a complex suite of solutions.

Type of engagement & Details of engagement

Education/information sharing
Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services

% of customers by number

6.5

% of customer - related Scope 3 emissions as reported in C6.5

62

Please explain the rationale for selecting this group of customers and scope of engagement

Audience: End users (private and public sector), TPIs, industry bodies, government; 20,000 companies use the website.

Purpose: To demonstrate our green energy and flexible infrastructure solutions for businesses and TPIs – and share SSE sustainability strategy and innovations – positioning SSE Energy Solutions as the partner of choice on their journey to net zero.

Impact of engagement, including measures of success

Impact of engagement, including measures of success

Future Net Zero

Weekly article published on futurenetzero.com

EV webinar

Interviews

The Big Zero Show

21 June 2002, Coventry Building Society Arena, and recordings online afterwards

Over 700 attendees on the day

Speaking sessions:
- Can renewable energy end our dependence on fossil fuels?
- 24/7 green: transparency in energy buying, focusing on renewables
- Behind the meter solar and storage
- How SMEs can hold an advantage when it comes to reaching net zero – Richard Hagan, Managing Director, Crystal Doors – an SSE Energy Solutions green energy customer

Post-event The Big Zero Report: SSE Energy Solutions contributed a thought leadership article about our net zero vision and challenges, focused on renewables, financing net zero and decarbonisation.

Type of engagement & Details of engagement

Collaboration & innovation

Run a campaign to encourage innovation to reduce climate change impacts

% of customers by number

3

% of customer - related Scope 3 emissions as reported in C6.5

62

Please explain the rationale for selecting this group of customers and scope of engagement

Audience: SMEs, local authorities and regional bodies.

Purpose: When it comes to tackling sustainability, a lack of understanding – not enthusiasm – is stopping SMEs making changes. Research shows that 77% of Britain's six million SMEs don't know how to measure carbon emissions (Small Business Britain Sustainability Survey – Small Business Britain and BT Skills for Tomorrow). Local authorities and regional bodies are struggling to help them break this inertia.

Further detail:

About the Zellar Sustainability platform

Founded in 2019, Zellar is a sustainability-as-a-service company on a mission to make sustainable business possible for the UK's six million SMEs. In September 2021 it launched a sustainability platform for SMEs, focused on enabling community climate action. The company has already attracted numerous partners including SSE Energy Solutions, The Co-Operative Bank, Volkswagen Group and East Midlands Chamber.

Headline features:

• Dashboard with single view of emissions, net zero action plan and live score
• Commission-free marketplace full of energy and green tech, helping businesses transition to green more easily and cheaply – and save hundreds in broker fees
• Useful tools include ROI calculators, PDF guides and climate grant information
• Connections to local biodiversity initiatives, volunteering projects and other like-minded businesses in the same region and sector
• Community features that enable Zellar businesses to form local groups to share information and support one another along the net zero journey

The current average offset for Zellar businesses is six tonnes of carbon each per year, over three years. Energy cost savings of more than £2,600 per business each year are based on the average SME energy spend and 50% of users achieving an average energy saving of 35% over a three-year period. The 35% saving is achievable through a combination of behavioural changes to reduce usage and investments in green technology such as LED lighting.

Successful local authorities receive a minimum of 200 fully funded Zellar licences to give away to local SMEs. For the first year of the partnership, Zellar is matching SSE Energy Solutions' investment. For every 200 licences a local authority funds, SSE Energy Solutions and Zellar triple that to 600, turbo-boosting SMEs' sustainability journeys in these areas.

Impact of engagement, including measures of success

Zellar partnership

SSE Energy Solutions is leading a £3.6 million campaign designed to help local authorities kickstart the journey to net zero and beyond for SMEs, working in partnership with Zellar.

The Sustainable Business Communities project aims to help 9,000 SMEs offset over 54,000 tonnes of carbon and save a combined £24 million in energy costs in its first year, as well as to provide local authorities with insightful data to help them report on sustainability progress in their region. The scheme is driven by funding from SSE Energy Solutions for annual subscriptions to Zellar; a sustainability digital tool for SMEs, focused on community climate action.

The sustainability platform makes it easy for SMEs to take their first steps towards creating a sustainable business. It provides regular, positive ongoing actions that encourage them to offset the environmental impact of their businesses within their local communities. Driven by a simple, tailored and measurable climate action plan, and a live score – Zellar not only benchmarks progress, but also enables SMEs to compare against similar businesses within their sector and local communities. Local authorities signing up to SSE Energy Solutions' Sustainable Business Communities initiative are also granted access to the rich data insights and case studies available within the platform, enabling them to measure, benchmark and showcase local progress.

Powering change together

In 2022 the East Midlands became the first region to benefit from having local SMEs on the Zellar platform. Via Zellar, a number of SMEs have switched to green electricity and gas from SSE Energy Solutions. SSE Energy Solutions and Zellar are also running a UK-first Sustainable Schools Pilot with 40 schools across the East Midlands. This empowers each school to appoint a Sustainability Champion, obtain a sustainability score and develop a bespoke action plan to reach net zero. Through the platform, they can network with other school champions, and engage students, parents and their community. Collaboration between SSE Energy Solutions and Zellar is enabling a range of sectors to take action on climate change, as well as boosting green energy use among businesses.

Type of engagement & Details of engagement

Collaboration & innovation

Run a campaign to encourage innovation to reduce climate change impacts

% of customers by number

10

% of customer - related Scope 3 emissions as reported in C6.5

62

Please explain the rationale for selecting this group of customers and scope of engagement

Audience: Large energy users, I&C and public sector; 2,351 delegates in person and online; 9.2 million reach.

Purpose: Build on SSE's leading role at COP26 and the inaugural Decarbonisation Summit, driving actions and commitment for net zero.

Impact of engagement, including measures of success

Impact of engagement, including measures of success

Decarbonisation Summit

In partnership with Green.TV Media, SSE Energy Solutions launched the inaugural Decarbonisation Summit which provided a platform for a variety of voices in the sustainability space to collaborate and share their net zero ideas and visions.

The event took place over two days during COP26, 9-10 November 2021, and covered a range of topics and discussions through in-person events and online seminars.

Then over 7-8 June 2022, the second Decarbonisation Summit took place at Manchester's Museum of Science and Industry, and was live streamed, making it a truly hybrid event that anyone could attend. Two days of panel sessions. Exhibition from net zero solutions providers including SSE Energy Solutions and others.

High-profile panellists included mayors Andy Burnham, Tracy Brabin and Steve Rotheram. Sportspeople and green transport advocates Dame Sarah Storey and Martin Offiah attended. Local TV coverage and social media.

Zellar offset the carbon footprint of all attendees.

Type of engagement & Details of engagement

Collaboration & innovation

Run a campaign to encourage innovation to reduce climate change impacts

% of customers by number

0.8

% of customer - related Scope 3 emissions as reported in C6.5

62

Please explain the rationale for selecting this group of customers and scope of engagement

Audience: 800 private and local authority householders supported to retrofit homes and improve energy efficiency. Of the 800 retrofits, 90 were deep retrofits on fuel poor homes. This year SSE Airtricity has committed to deliver home energy upgrades at no cost to 600 fuel poor homes. Also 1,100 solar installations carried out for domestic customers through Activ8.

Purpose: The occupants of these homes are some of Ireland's 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.

Impact of engagement, including measures of success

Impact of engagement, including measures of success

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. The upgrades are government funded and are free to the homeowner.

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.

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.

Type of engagement & Details of engagement

Education/information sharing

Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services

% of customers by number

0.07

% of customer - related Scope 3 emissions as reported in C6.5

62

Please explain the rationale for selecting this group of customers and scope of engagement

Audience: Football clubs and fans.

Purpose: This allowed SSE Airtricity to speak directly to communities, encouraging them to make greener choices.

Impact of engagement, including measures of success

Impact of engagement, including measures of success

In Ireland SSE Airtricity has worked closely with its sponsorship partner the FAI to support local communities and clubs on their sustainability journey, this saw the launch of 'A Common Goal', SSE Airtricity is challenging each club within the league to improve their sustainability. The campaign saw a monthly focuses on green topics, with clubs participating in a sustainability league table, with six players taking up ambassadorial roles; this allows for collaborations across clubs, players and fans alike to better understand the role of sustainability and its impacts.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

Yes, climate-related requirements are included in our supplier contracts

C12.2a

(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.

Climate-related requirement

Complying with regulatory requirements

Description of this climate related requirement

As a minimum, SSE expects all suppliers and contractors to comply with local laws and regulations. Where relevant and appropriate, it also expects the values and standards outlined in its Sustainable Procurement Code to be shared by those working in its supply chain.

SSE's Sustainable Procurement Code provides information to suppliers and contractors on how to meet the sustainability requirements and expectations outlined in the Code. The Code also explains how SSE intends to work with suppliers to monitor and improve performance. Whilst SSE does not have a set of determined climate-related requirements for all its suppliers, requirements on suppliers and contractors will be determined by the contract size and nature, and clearly outlined when tendering for work with SSE.

Whilst not a requirement, suppliers and contractors are encouraged to:

• Report annually on scope 1&2 GHG emissions in line with recognised frameworks and standards.
• Have carbon data externally validated to recognised standards (such as ISO14064 and ISAE3000) or by equivalent credible accredited third parties.
• Complete the annual CDP Climate Change Programme.
• Have a net zero carbon reduction strategy and associated commitment or target in place which is in line with climate science.
• Have validated science-based carbon reduction targets with an external validation body (such as SBTi). Where contracts with SSE are of a significant value, this will be a requirement.

% suppliers by procurement spend that have to comply with this climate-related requirement

60

% suppliers by procurement spend in compliance with this climate-related requirement

50

Mechanisms for monitoring compliance with this climate-related requirement

Supplier self-assessment
Off-site third-party verification

Response to supplier non-compliance with this climate-related requirement

Retain and engage

Climate-related requirement

Setting a science-based emissions reduction target

Description of this climate related requirement

As a minimum, SSE expects all suppliers and contractors to comply with local laws and regulations. Where relevant and appropriate, it also expects the values and standards outlined in its Sustainable Procurement Code to be shared by those working in its supply chain.

SSE's Sustainable Procurement Code provides information to suppliers and contractors on how to meet the sustainability requirements and expectations outlined in the Code. The Code also explains how SSE intends to work with suppliers to monitor and improve performance. Whilst SSE does not have a set of determined climate-related requirements for all its suppliers, requirements on suppliers and contractors will be determined by the contract size and nature, and clearly outlined when tendering for work with SSE.

Whilst not a requirement, suppliers and contractors are encouraged to:

• Have validated science-based carbon reduction targets with an external validation body (such as Science Based Targets initiative (SBTi)) or equivalent. Where contracts with SSE are of a significant value, this will be a requirement. In these cases, SSE will work with suppliers and contractors to support the setting of science-based targets.

% suppliers by procurement spend that have to comply with this climate-related requirement

60

% suppliers by procurement spend in compliance with this climate-related requirement

50

Mechanisms for monitoring compliance with this climate-related requirement

Supplier self-assessment
Off-site third-party verification

Response to supplier non-compliance with this climate-related requirement

Retain and engage

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate

Yes, we engage directly with policy makers

Yes, we engage indirectly through trade associations

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

Yes

Attach commitment or position statement(s)

SSE Sustainability Report 2022.pdf

Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy

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 1.5oC pathway. 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.

C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

Focus of policy, law, or regulation that may impact the climate

Renewable energy generation

Specify the policy, law, or regulation on which your organization is engaging with policy makers

British Energy Security Strategy

Policy, law, or regulation geographic coverage

National

Country/region the policy, law, or regulation applies to

United Kingdom of Great Britain and Northern Ireland

Your organization's position on the policy, law, or regulation

Support with minor exceptions

Description of engagement with policy makers

SSE Renewables is a founding member of the UK Government's Offshore Wind Acceleration Task Force which is co-chaired by the UK Energy Minister and aims to significantly reduce the planning and development time of offshore wind farms. 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.

Recognising that increasingly ambitious targets will also have impacts on local communities, SSER is also actively participating in the government's Offshore Transmission Network Review. The review's objective is to ensure the transmission connections are delivered in the most appropriate way, balancing the environmental, social, and economic costs. Through this review, SSER continues to work with the government on ways to both minimise local impacts and accelerate the deployment of its projects to help meet the 2030 offshore wind target.

Additionally, SSE recognises that hydropower is Scotland's original source of renewable energy and one which has an increasingly vital role to play in our path to achieving net zero. SSER led several initiatives over the past year promoting hydropower's critical flexibility and storage capabilities with key stakeholders and the wider public including a virtual tour of our hydro business. SSER also established the Long-Duration Electricity Storage Alliance together with other companies to work with the UK Government to develop an appropriate policy and regulatory framework to unlock potential new developments such as the 1,500MW Coire Glas pumped storage project in the Scottish Highlands. In March 2022, the Alliance hosted a roundtable with UK Energy Minister, the Rt Hon Greg Hands MP to discuss how such technologies are needed to decarbonise the power sector, ensure greater energy independence, and can be facilitated by government policy.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

SSE supports the UK Government's increased ambition as part of its energy strategy and has pledged to create 1,000 jobs per year to 2025 in order to deliver critical net zero infrastructure including offshore wind, electricity networks and long duration storage.

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Focus of policy, law, or regulation that may impact the climate

Electricity grid access for renewables

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Transmission Network Use of System Charging (TNUoS)

Policy, law, or regulation geographic coverage

National

Country/region the policy, law, or regulation applies to

United Kingdom of Great Britain and Northern Ireland

Your organization's position on the policy, law, or regulation

Oppose

Description of engagement with policy makers

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.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

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.

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Focus of policy, law, or regulation that may impact the climate

Low-carbon, non-renewable energy generation

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Cluster sequencing for carbon capture, usage and storage (CCUS) deployment.

Policy, law, or regulation geographic coverage

National

Country/region the policy, law, or regulation applies to

United Kingdom of Great Britain and Northern Ireland

Your organization's position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers

SSE engaged with the Department for Business, Energy and Industrial Strategy (BEIS) on the UK Government's Cluster Sequencing Process. Keadby and Peterhead have both been deemed eligible for evaluation as part of Phase 2 of the UK Government's Cluster Sequencing Process. The proposed carbon capture projects – which are being jointly developed by SSE Thermal and Equinor – were submitted into the process as key emitter projects for the East Coast and Scottish Clusters respectively.
The first phase of the process saw the UK Government announce the two 'Track 1' clusters which will be supported to develop carbon capture and storage (CCS) infrastructure. The East Coast Cluster, which takes in the Humber and Teesside regions, was named in 'Track 1', with the Scottish Cluster named as a reserve cluster.

Keadby 3 Carbon Capture Power Station would plug into the shared CO2 pipelines being developed through the East Coast Cluster, with its emissions safely stored under the Southern North Sea. Peterhead Carbon Capture Power Station, on the Aberdeenshire Coast, would decarbonise Scotland's only major thermal generation site, with the captured emissions transported and stored using pipelines being developed by the Acorn Project.

In total, the two low-carbon power stations at Keadby and Peterhead would capture up to three million tonnes of CO2 a year – at least 10 per cent of the UK Government's 2030 target - while providing low-carbon, flexible power to back-up renewable generation.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.3b

(C12.3b) Provide details of the trade associations your organization engages with which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association

Global Wind Energy Council (GWEC)

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

SSE works closely with trade associations and seeks to ensure that its principles on climate change align with those of the trade associations of which it is a member. SSE assessed the Global Wind Energy Council's position on climate change and compared it against its own five key principles:

- Acknowledges the serious threat of climate change
- Net zero ambitions by 2050 at the latest
- Supports a strong carbon price
- Promotes innovation
- Seeks a just transition to net zero

SSE found that Global Wind Energy Council (GWEC) was aligned to its position on climate change. More details can be found in SSE's Trade Associations Climate Review 2020/21 and the accompanying scope and methodology paper.

GWEC advocates for policy makers to take a true Climate Emergency approach to administrative procedures and institutions. GWEC advocates that wind power is a cornerstone of achieving net zero and powering a green recovery as a cost-competitive, resilient power source with the most decarbonisation potential per MW. The trade association aims to help the world to reach Net Zero by supporting government, associations and communities on their journeys through the Energy Transition. GWEC has also released several reports which will focus on the role of renewable energy and wind power in particular in the world's net zero objectives.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

WindEurope

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

SSE works closely with trade associations and seeks to ensure that its principles on climate change align with those of the trade associations of which it is a member. SSE assessed WindEurope's position on climate change and compared it against its own five key principles:

- Acknowledges the serious threat of climate change
- Net zero ambitions by 2050 at the latest
- Supports a strong carbon price
- Promotes innovation
- Seeks a just transition to net zero

SSE found that WindEurope was aligned to its position on climate change. More details can be found in SSE's Trade Associations Climate Review 2020/21 and the accompanying scope and methodology paper.

WindEurope is the voice of the wind industry, actively promoting wind energy across Europe. WindEurope recognises that the power sector is the largest single contributor to global greenhouse gas emissions and swift action to fundamentally transform national energy systems and scale-up investments in renewable energy is essential in order to limit global temperature increase and reach net zero.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify

Energy Networks Association (ENA)

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

SSE works closely with trade associations and seeks to ensure that its principles on climate change align with those of the trade associations of which it is a member. SSE assessed Energy Networks Association (ENA)'s position on climate change and compared it against its own five key principles:

- Acknowledges the serious threat of climate change
- Net zero ambitions by 2050 at the latest
- Supports a strong carbon price
- Promotes innovation
- Seeks a just transition to net zero

SSE found that Energy Networks Association (ENA) was aligned to its position on climate change. More details can be found in SSE's Trade Associations Climate Review 2020/21 and the accompanying scope and methodology paper.

Energy Networks Association (ENA) represents the companies which operate the electricity wires, gas pipes and energy system in the UK and Ireland. The ENA recognises climate change as the defining issue of our time and that energy networks will be required to play a vital role in delivering the UK's 2050 and 2045 net-zero emissions targets.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify

Energy UK

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

SSE works closely with trade associations and seeks to ensure that its principles on climate change align with those of the trade associations of which it is a member. SSE assessed Energy UK's position on climate change and compared it against its own five key principles:

- Acknowledges the serious threat of climate change
- Net zero ambitions by 2050 at the latest
- Supports a strong carbon price
- Promotes innovation
- Seeks a just transition to net zero

SSE found that Energy UK was aligned to its position on climate change. More details can be found in SSE's Trade Associations Climate Review 2020/21 and the accompanying scope and methodology paper.

Energy UK is the trade association for the energy industry with over 100 members spanning every aspect of the energy sector. Energy UK, on behalf of the energy industry, reaffirms its commitment to tackling climate change, and taking action to support wider society and other sectors of the economy to move towards net zero emissions. The trade association encourages the energy industry to invest capital in order transform the energy system with the ambition of reaching a net zero power system in the 2030s.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify

Renewable UK

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

SSE works closely with trade associations and seeks to ensure that its principles on climate change align with those of the trade associations of which it is a member. SSE assessed Renewable UK's position on climate change and compared it against its own five key principles:

• Acknowledges the serious threat of climate change
• Net zero ambitions by 2050 at the latest
• Supports a strong carbon price
• Promotes innovation
• Seeks a just transition to net zero

SSE found that Renewable UK was aligned to its position on climate change. More details can be found in SSE's Trade Associations Climate Review 2020/21 and the accompanying scope and methodology paper.

RenewableUK seeks to encourage the building of a future energy system, powered by clean electricity. It aims to ensure increasing amounts of renewable electricity are deployed across the UK and access markets to export all over the world. RenewableUK believes that delivering on climate change commitments must be put right at the heart of every Government department as a matter of urgency, with more ambitious targets for renewable energy required in order to reach net zero.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In mainstream reports, incorporating the TCFD recommendations

Status

Complete

Attach the document

SSE Annual Report 2022.pdf

Page/Section reference

Environment (Annual Report pages 54 to 57; Sustainability Report pages 22 to 65 and 86 to 97);
Labour (Annual Report pages 60 to 62; Sustainability Report pages 66 to 85);
Human Rights (Annual Report pages 62 and 63; SSE's Modern Slavery Statement 2022); and
Anti-Corruption (see SSE's Annual Report page 47)
TCFD - Annual Report pages 42-57

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity
Row 1	Yes, both board-level oversight and executive management-level responsibility	SSE's Group Environment Policy details the company's commitment to protect the environment, prevent pollution and to operate in a sustainable way. The purpose of the policy is to identify and mitigate material impacts, manage environmental risks and engage positively with key stakeholders to improve the environmental impact of SSE's business activities. The Group Environment Policy commits SSE to manage, protect and enhance the biodiversity by: • Working towards Biodiversity Net Gain for new major projects after 2025. We recognise that some habitat types will prove problematic to replace. • Assessing and mitigating impacts of major projects on Biodiversity. • Monitoring the impacts on Biodiversity of operational assets located in sensitive environments, and to take measures to reduce those impacts where practical. • Collaborating with relevant organisations that protect and enhance biodiversity The SSE plc Board and Group Executive Committee are responsible for the oversight of the Environment Policy including the approval of any changes to the Policy. This Policy is reviewed annually as part of an evaluation process. The Safety, Health and Environment Committee (SHEC) supports the Policy Owner and makes sure that the policy is adhered to through awareness, training and monitoring of policy implementation. Governance for the implementation of the Policy and for the continual improvement in performance is provided by the SHE Committee at Group-level, the Safety, Sustainability,

		Health and Environment Advisory Committee (SSHEAC) at Board level, and at local level by Local SHE Communities (LSC).

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Yes, we have made public commitments and publicly endorsed initiatives related to biodiversity	Commitment to Net Positive Gain Commitment to No Net Loss Adoption of the mitigation hierarchy approach Commitment to respect legally designated protected areas Commitment to avoidance of negative impacts on threatened and protected species	SDG

C15.3

(C15.3) Does your organization assess the impact of its value chain on biodiversity?

	Does your organization assess the impact of its value chain on biodiversity?
Row 1	No, but we plan to assess biodiversity-related impacts within the next two years

C15.4

(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water protection Land/water management Species management Education & awareness Law & policy Livelihood, economic & other incentives

C15.5

(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	Yes, we use indicators	State and benefit indicators Pressure indicators Response indicators

C15.6

(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In mainstream financial reports	Content of biodiversity-related policies or commitments	Annual Report 2022 - Page 56 1
In other regulatory filings	Content of biodiversity-related policies or commitments Governance Impacts on biodiversity Details on biodiversity indicators Influence on public policy and lobbying Biodiversity strategy	Sustainability Report 2022 - Page 90 to 93 Biodiversity Report 2020 - Page 7 to 10. Other regulatory filings: SSEN Distribution: Environment Report 2021/21 SSEN Transmission Sustainability Annual Statement 2020/21 2, 3

[1]SSE Annual Report 2022.pdf

[2]SSE Biodiversity Report 2022.pdf

[3]SSE Sustainability Report 2022.pdf

C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Finance Director	Chief Financial Officer (CFO)

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please confirm below

I have read and accept the applicable Terms