Welcome to your CDP Water Security Questionnaire 2021

W0. Introduction

W0.1

(W0.1) Give a general description of and introduction to your organization.

SSE is a UK-listed energy company, operating across the UK and Ireland, 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 through successful development, efficient operation and responsible ownership of energy infrastructure and energy-related businesses.

SSE set its own ambition to achieve net zero carbon emissions across all its operations by 2050, covering direct and indirect emissions, or its scope 1, 2 and 3 GHG emissions. 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 60% from 2018 base year; treble renewable energy output; help accommodate 10 million electric vehicles and champion Fair Tax and a real Living Wage.

SSE has medium-term carbon targets which have been approved by the Science Based Target Initiative (SBTi): reduce the carbon intensity (scope 1) of electricity generated by 60% by 2030 from 2018 base year; reduce absolute scope 1 and 2 GHG emissions by 40% by 2030 from 2018 base year; reduce absolute GHG emissions from use of products sold (scope 3) by 50% by 2034 from 2018 base year and engage with 50% of suppliers by spend to set an SBT by 2024.

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

SSE's businesses and how they contribute to net zero:

SSE's economically regulated electricity networks and the renewable electricity generation businesses form the low-carbon core.

- **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 Renewables:** develops, builds, operates and invests in assets that generate electricity from renewable sources.

These businesses are complimented by a range of other businesses that each support SSE's 2030 goals.

- **SSE Thermal:** generates electricity from thermal sources in a reliable way, supporting balancing of the electricity systems in GB and Ireland. **Gas Storage** owns and operates large underground caverns in which gas is stored.
- **Customers**: 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 Enterprise:** focuses on distributed energy solutions and invests in, builds and connects localised flexible energy infrastructure for public sector, commercial and industrial markets in the UK and Ireland.
- **Energy Portfolio Management:** provides energy trading, risk management and settlement services.

CDP Water Report

This is SSE's sixth year reporting on water-related issues. SSE has focused on the material water-related activities associated with its electricity generation activities, as well as the impact of severe weather on its electricity networks business:
Hydro-electricity generation: SSE Renewables operates 1,459MW of hydro generation capacity (inc pumped storage). This includes 91 hydro dams in the north of Scotland with a water catchment area of 5,382 sq. miles. At hydro generation sites water is taken from rivers and lochs and returned to the water almost immediately after being run through the turbines to generate electricity.
Thermal generation: SSE Thermal's generation business is now dominated by gas generation, its last coal-fired power station closed in March 2020. Its multifuel generation business was sold in October 2020 and it has a small number of oil-fired generation units. Water is used in a several operations such as for cooling and as process water. Its last coal plant was closed on 31 March 2020 and this is reflected in the capacity and output data, however, there continues to be water use at the site due to ongoing decommissioning requirements and for the site to support local water course management.
Electricity network resilience: Increased severity of extreme weather events such as storms and flooding can damage the network assets resulting in interruption to customer supply, the loss of incentive revenue and increased maintenance.

NOTE: SSE's reported capacities are at 31 March 2021 in line with its Annual Report 2021. SSE's energy-to-waste asset was sold in October 2020 and is recorded as 0MW in SSE's Annual Report 2021 and reflected in WEU01b. However, this plant was active during 2020/21 and its activities are included in the data.

W-EU0.1a

(W-EU0.1a) Which activities in the electric utilities sector does your organization engage in?

Electricity generation
Transmission
Distribution
Other, please specify
Energy retail - household and business, and gas storage

W-EU0.1b

(W-EU0.1b) For your electricity generation activities, provide details of your nameplate capacity and the generation for each technology.

	Nameplate capacity (MW)	% of total nameplate capacity	Gross electricity generation (GWh)
Coal – hard	0	0	0
Lignite	0	0	0
Oil	983	11	420
Gas	4,321	47	17,374
Biomass	15	0.2	71
Waste (non-biomass)	0	0	251
Nuclear	0	0	0
Fossil-fuel plants fitted with carbon capture and storage	0	0	0
Geothermal	0	0	0
Hydropower	1,459	16	3,720
Wind	2,423	26	5,858
Solar	0	0	0
Marine	0	0	0
Other renewable	0	0	0
Other non-renewable	0	0	0
Total	9,201	100	27,694

W0.2

(W0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date
Reporting year	April 1, 2020	March 31, 2021

W0.3

(W0.3) Select the countries/areas for which you will be supplying data.

Ireland

United Kingdom of Great Britain and Northern Ireland

W0.4

(W0.4) Select the currency used for all financial information disclosed throughout your response.

GBP

W0.5

(W0.5) Select the option that best describes the reporting boundary for companies, entities, or groups for which water impacts on your business are being reported.

Companies, entities or groups over which operational control is exercised

W0.6

(W0.6) Within this boundary, are there any geographies, facilities, water aspects, or other exclusions from your disclosure?

Yes

W0.6a

(W0.6a) Please report the exclusions.

Exclusion	Please explain
Joint Ventures	This report excludes any joint ventures in which SSE does not have operational control. Scotia Gas Networks (described below) is one of the largest business units excluded from the inventory. For a full list of SSE's subsidiary undertakings, partnerships, joint ventures and associates, please refer to pages 266 to 270 of SSE's Annual Report 2021. Scotia Gas Networks Limited (SGN): SSE holds a 33% financial investment stake in Scotia Gas Networks (SGN). SSE does not have a controlling stake in, or operational control of, this business and they do their own environmental reporting. SSE has retained the option of selling SGN since June 2020 and intends to have an agreed sale by the end of the 2021 calendar year.
Supply chain	The data for water withdrawal, discharge and consumption detailed in this report excludes data for SSE's suppliers.
Gas production activities	SSE invests in gas production assets in the North Sea and west of Shetland, all of which are owned by SSE E&P (UK) Limited. Although this company is wholly owned by SSE, it does not hold a controlling stake in any assets. SSE agreed the sale of all of its interests in its portfolio of gas exploration and

	production in December 2020, and at 31 March 2021 these assets were accounted for as held for sale in SSE's financial statements (see SSE's Annual Report 2021, pages 68).

W1. Current state

W1.1

(W1.1) Rate the importance (current and future) of water quality and water quantity to the success of your business.

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital	Important	Sufficient volumes of quality freshwater are vital for SSE's direct operations: SSE's hydro generation activities take water from rivers and lochs as a fuel source, 97% (25.2bn m3, 2020/21) of all water abstracted was used in these plants. Some of SSE's thermal generation activities take quality freshwater to cool generation plants and as process water for a range of operations. Most of these assets are located near coastal areas, less than 1% (9.6m m3) of water abstracted by these assets was from freshwater sources. In 2020/21 SSE hydro generation assets accounted for 17% and thermal generation accounted for 10% of the Group's total adjusted operating profit. If sufficient volumes of quality freshwater are not available, it has potential to impact around 50% of SSE's generation output. In 2020/21, hydro generation accounted for 16% and 13% of SSE's total capacity/ output. SSE operates 1,459MW of hydro generation capacity. Its focus is to invest in existing hydro assets to ensure they perform over the coming decades in line with environmental obligations. SSE Thermal is currently constructing a new 893MW CCGT at Keadby 2, which will be the most efficient CCGT in Europe. It is also developing options in CCS and hydrogen at its Keadby and Peterhead sites. While these projects are crucial to progressively reduce carbon emissions associated with its activities, adoption of these technologies may increase abstraction from freshwater sources

			in the future. Some smaller quantities of quality freshwater are Important for SSE's indirect operations: Freshwater is used by contractors during project construction, e.g. network infrastructure and wind farms, in activities such as the dewatering of sites. These activities are periodic and not sustained so a rating of "Important" is deemed relevant. SSE also relies on raw materials for processes in its generation assets which require water for their manufacture and production eg the use of raw materials for demineralisation.
Sufficient amounts of recycled, brackish and/or produced water available for use	Vital	Important	Sufficient volumes of brackish water are deemed vital for SSE's direct operations: most of SSE's thermal plants are located near coastal areas, and as such a majority of the water abstracted is classed as sea water or estuarine/brackish water. These plants rely on this water as cooling water for its operations. The water withdrawn from brackish surface water/ seawater is for SSE's Keadby, Peterhead, Medway, Lerwick, Great Island and Tarbert power stations. SSE's thermal generation assets accounted for 58% of SSE's total capacity and 65% of output in 2020/21, and Thermal's electricity generation activities accounted for 10% of the Group's total adjusted operating profit. If sufficient volumes of brackish water are not available, it has potential to impact on a portion of SSE's generation output and operating profit. Some smaller quantities of brackish water are Important for SSE's indirect operations. The use of brackish water for 'indirect' activities (eg supplier goods and services) is minimal but important and therefore the rating of "Important" is deemed relevant. SSE is also investing in new net zero developments and the construction and development activities associated with these activities may increase the amount of brackish water required in time.

W1.2

(W1.2) Across all your operations, what proportion of the following water aspects are regularly measured and monitored?

	% of sites/facilities/operations	Please explain
Water withdrawals – total volumes	76-99	Hydro and thermal generation activities contribute over 99% of SSE's total water withdrawals in terms of total volumes. These withdrawals are therefore business critical and monitored closely for both operational and regulatory purposes. SSE's Thermal power stations monitor, measure and report water aspects to the appropriate regulators against specific environmental permits/licenses and their requirements. Across these thermal generation sites, withdrawals are regularly monitored and are reported to the appropriate regulator. The frequency of reporting varies across sites and different jurisdictions – it can be as frequent as monthly but as a minimum is reported annually. The coverage is based on total generation output for the group which is 76.4%.
Water withdrawals – volumes by source	76-99	Hydro and thermal generation activities contribute over 99% of SSE's total water withdrawals in terms of volumes by source. This data is gathered and monitored for both regulatory and operational purposes. The coverage is based on total generation output for the group which is 76.4%.
Water withdrawals quality	76-99	Hydro and thermal generation activities contribute over 99% of SSE's total water withdrawals in terms of quality. This data is similarly gathered for regulatory and operational purposes. The coverage is based on total generation output for the group which is 76.4%.
Water discharges – total volumes	76-99	Hydro and thermal generation activities contribute over 99% of SSE's total water discharges in terms of total volumes. These

		activities are business critical and therefore the data is gathered and monitored for regulatory and operational purposes. The coverage is based on total generation output for the group which is 76.4%.
Water discharges – volumes by destination	76-99	Hydro and thermal generation activities contribute over 99% of SSE's total water discharges in terms of volumes by destination. This data is gathered for regulatory and operational purposes. The coverage is based on total generation output for the group which is 76.4%.
Water discharges – volumes by treatment method	76-99	Thermal power stations monitor, measure and report water aspects to the Regulators against specific environmental permits and this may include water discharge (volumes by treatment method). The coverage is based on thermal generation, which represents over 60% output for the group. SSE's hydro-electric generation stations use freshwater to generate electricity. Water passes through turbines and is returned to the environment almost immediately. Since there is no change to the water that is returned to the environment, this parameter is not relevant to these operations.
Water discharge quality – by standard effluent parameters	76-99	Thermal power stations monitor, measure and report water aspects to the Regulators against specific environmental permits and this may include water discharge quality (by standard effluent parameters). The coverage is based on thermal generation, which represents over 60% output for the group. SSE's hydro-electric generation stations use freshwater to generate electricity. Water passes through turbines and is returned to the environment almost immediately. Since there is no change to the water that is returned to the environment, this water discharge quality by

		standard effluent parameter is not relevant to these operations.
Water discharge quality – temperature	76-99	Thermal power stations monitor, measure and report water aspects to the Regulators against specific environmental permits and this may include water discharge quality in terms of temperature. The coverage is based on thermal generation, which represents over 60% output for the group. SSE's hydro-electric generation stations use freshwater to generate electricity. Water passes through turbines and is returned to the environment almost immediately. Since there is no significant temperature change as part of the hydropower operation, this water quality temperature parameter is not relevant to these operations.
Water consumption – total volume	76-99	The water that is consumed by SSE is used for cooling and as process water in SSE's thermal power stations and in SSE's non-operational buildings for amenities. SSE's thermal generation activities contribute over 85% of total water in terms of consumption with the remainder consumed by SSE's property portfolio. This is business critical activity and therefore data is gathered for both regulatory and operational purposes. The coverage is based on thermal generation, which represents over 60% output for the group. SSE's hydro-electric generation stations use freshwater to generate electricity. Water passes through turbines and is returned to the environment almost immediately. Since there is no water consumption as a part of hydropower operations this water consumption by total volume' parameter is not relevant for these operations.
Water recycled/reused	76-99	Hydro and thermal generation activities contribute over 99% of SSE's total water recycled/ reused. This data is gathered for regulatory and operational purposes (for

		example for optimising efficiencies in thermal generation) as it is business critical. The water which passes through one hydropower facility is immediately returned to the natural environment and will typically be recycled through a further 3-4 hydropower facilities as part of a cascade model. Therefore, the hydropower business, which is responsible for 97% of total water abstracted, recycles the bulk of this water without compromising its quality.
The provision of fully-functioning, safely managed WASH services to all workers	76-99	The water that is consumed by SSE for WASH purposes is in SSE's non-operational buildings for amenities. This data is gathered for internal monitoring and measurement purposes to support efficiency activities and programmes. The coverage is based on the number of full-time employees.

W-EU1.2a

(W-EU1.2a) For your hydropower operations, what proportion of the following water aspects are regularly measured and monitored?

	% of sites/facilities/operations measured and monitored	Please explain
Fulfilment of downstream environmental flows	100%	SSE's heritage has its foundations in the large-scale development of hydro-electricity in the north of Scotland in the 1940s and 1950s. SSE works closely with regulators, environmental organisations and the local community to ensure that its hydro-electricity operations have minimal adverse impacts on these stakeholders, biodiversity and the environment. SSE monitors all abstractions (based on the volume of water passing through its turbines), compensation and freshet flows and report these to the Regulator, the Scottish Environment Protection Agency (SEPA), on an annual basis or as requested. Environmental flows are defined as conditions in the operating licence issued by SEPA. There is a legally defined process for SEPA to vary these flows if this is necessary to protect the environment.

Sediment loading	100%	There is no impact to sediment loading from SSE's hydro operations in normal operating conditions; during maintenance, non-routine overhauls and other non-routine activities sediment loading is monitored. For these activities, SSE has emergency response and containment processes in place to manage any impacts from these activities. Normal and ongoing management of sediment to maintain river continuity is undertaken using methods agreed with SEPA. SSE is beginning a process of developing specific sediment management plans for particularly environmentally sensitive locations.
Other, please specify	100%	SSE's hydro power stations operate in the north of Scotland in freshwater catchments. Salmon and sea trout return to breed in the rivers every year. To safeguard the fish stocks fish ladders and fish screens help the adult fish return upstream to breeding grounds and for juvenile smolts to return to the sea. SSE closely monitors the operation of these fish passes and fish screens. SSE's responsibilities to operate and maintain fish passes and screens date back to the original Acts of Parliament that were passed between the 1920s and the 1970s. These responsibilities are now covered by conditions of the operating licences issued by SEPA. Fish counters have been installed on most of the major fish passes since the 1950s and are still operated and maintained by SSE. The count data, and the software SSE has developed to manage and view the data, is made freely available to SEPA and the local District Salmon Fishery Boards. SSE also supported many projects to capture, tag and release salmon and sea trout smolts heading out to sea as part of research and fishery management improvement projects.

W1.2b

(W1.2b) What are the total volumes of water withdrawn, discharged, and consumed across all your operations, and how do these volumes compare to the previous reporting year?

	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Total withdrawals	26,032,120	Lower	SSE depends on water in various ways across its operations, from cooling and process use in electricity generation to an amenity in buildings. SSE seeks to use water in a sustainable way. In terms of water use, SSE's hydro-electric generation stations use freshwater to generate electricity in their operations. The water passes through turbines to generate electricity and is returned to the environment almost immediately and therefore the impact on the freshwater sources is minimal. In 2020/21 SSE abstracted 26.0 billion m3 of water compared to 27.8 billion m3 in 2019/20. Over 97% of the total water abstracted by SSE was used in its hydro generation operations. The reduction in water abstracted was therefore largely due to a reduction in water passing through SSE's hydro-electric generation plant as a result of lower levels of rainfall compared to the previous year. In 2020/21 SSE's hydro generation assets output decreased by 4% from 3,870GWh to 3,720GWh between 2019/20 to 2020/21. Around 3% of total water abstracted by SSE in 2020/21 was used in its thermal generation operations. For thermal generation water is used for cooling and as process water in a variety of operations. Water abstraction and return for thermal generation reflects the type of water system used by the power station. In March 2020, SSE shut its last remaining coal-fired power station which has evaporative cooling towers where water is recycled for cooling purposes. As a result, the majority of SSE's thermal generation mix in 2020/21 was

			primarily based on power stations that use water in a 'once through direct cooling water systems' with minimal consumptive losses. Water abstraction and return therefore increased from SSE's thermal power stations in 2020/21 in comparison to 2019/20 reflecting this change in generation cooling system mix.
Total discharges	26,028,352	Lower	Similar to water abstraction, SSE's water discharges are from across its operations, from cooling and process use of water in electricity generation to amenity in buildings. SSE's hydro generation activities contribute to the majority of water returned to the environment - the water passes through turbines to generate electricity and is returned almost immediately to the freshwater environment. In 2020/21, SSE discharged 26.0 billion m3 of water in comparison to 27.8 billion m3 the previous year. The fall in discharge volumes reflects the decrease in generation output primarily from SSE's hydro generation activities which represent 97% of the total water discharged. SSE's hydro generation output fell from 3.87TWh to 3.72TWh between 2019/20 to 2020/21. For SSE's thermal generation operations, the water returned mirrors the water abstracted trend. 3% of total water returned in 2020/21 was from SSE's thermal generation operations. For thermal generation water is used for cooling and as process water in a variety of operations. Water abstraction and return for thermal generation reflects the type of water system used by the power station. In March 2020, SSE shut its last remaining coal-fired power station which has cooling towers where water is recycled for cooling purposes. As a result, the majority of SSE's thermal generation mix in 2020/21 was primarily based on power stations that use water in a 'once through direct cooling water systems' with minimal consumptive losses. Water abstraction and return therefore increased from SSE's thermal power stations in

			2020/21 in comparison to 2019/20 reflecting this change in generation cooling system mix.
Total consumption	3,902	Much lower	The water that is consumed by SSE is used primarily as cooling and process water in SSE's thermal power stations and some is used in SSE's non-operational buildings for amenities. In 2020/21, SSE consumed 3.6 million m3, accounting for 0.01% of the total water withdrawals in this period. This compares to consumption of 6.9 million m3 in 2019/20, accounting for 0.02% of the total water withdrawals in that period. SSE has water efficiency and saving programmes in its generation operations and non-operational offices, data centres and depots. The decrease in water consumption was primarily a result of the shift in generation output power stations with cooling towers, where water is recycled for cooling purposes, to generators that use water in a system that has only one cycle (called a 'once through cooling water system'). These once through cooling water systems have lower evaporative losses and therefore consume less water. This change in generation mix was in line with expectations as SSE's closed its last remaining coal-fired power station Fiddler's Ferry in March 2020. This resulted in SSE's total water consumption reducing in 2020/21 compared to the previous year. Total water consumed is calculated using UK Government (BEIS) reporting standards. For water consumed it is the amount of water that is abstracted less the amount of water returned to the environment. Water is used for four main purposes: to cool generation plant (in thermal operations); as process water for a variety of operations (thermal generation operations); as a source of energy in hydro generation schemes; and for amenities in offices and buildings. The total water consumed reflects the 'volume of water used by the business to conduct its operations'.

W1.2d

(W1.2d) Indicate whether water is withdrawn from areas with water stress and provide the proportion.

	Withdrawals are from areas with water stress	Identification tool	Please explain
Row 1	No	WRI Aqueduct	Hydro and thermal generation activities contribute over 99% of SSE's total water withdrawals in terms of quantity. This data is gathered for regulatory and operational purposes as it is business critical. In SSE's thermal power stations water is primarily used for cooling and as process water. Individual installations monitor, measure and report water aspects to the Regulators in accordance with specific environmental permits. None of SSE's thermal power stations have been identified as being located in areas of water stress under the Environment Agency's 'Water Stressed Areas 2013 classification' for England and Wales and under the EU Water Framework Directive in Ireland. In December 2017 the UK Government published its Water Abstraction Plan which set out how the UK government will reform water abstraction management in England over the coming years and how this will protect the environment and improve access to water. This plan aims to make full use of existing regulatory powers to address unsustainable abstraction; promote a stronger catchment focus to develop local solutions to protect the environment that will inform updated abstraction licensing strategies that detail the solutions and set out approaches to environmental issues; and modernise the abstraction service by upgrading systems and moving the water abstraction licensing regime into the Environmental Permitting Regulations. Water companies are to play a leading role in abstraction planning in England and Regional Water Resource Management groups have been established to deliver a multi-sector resource planning function. SSE is engaged in these initiatives, either directly or through it's membership of EnergyUK, in order to track potential impact on its thermal generation activities. For SSE's hydro generation, there is no direct classification by SEPA in Scotland for water stressed areas. For water bodies affected by SSE hydro operations these are classified by SEPA under the European Water Framework

			Directive (WrFD) for quality, ecology and hydrology. SSE uses the Aquator tool to analyse hydrology and other hydro operational metrics to ensure water resources are efficiently managed within the constraints of the system (for instance: in terms of rainfall, reservoir inflows, snowmelt, storage, power station availability and efficiency). Following SSE's reduction in water abstraction on the River Garry and its tributaries to meet the WrFD requirements under SEPA's second River Basin Management Plan (RBMP), SSE continues to engage with SEPA on a small number of minor water bodies under potential consideration for the third RBMP to identify and agree what, if any, operational changes may be necessary to meet WrFD requirements in the future. Additionally, the WRI Aqueduct tool demonstrates that Scotland, where SSE's hydro operations are located, are in the lowest category of risk. For SSE's thermal operations, which are located across UK and Ireland, these are located in the lowest or second lowest category of risk.

W1.2h

(W1.2h) Provide total water withdrawal data by source.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Relevant	25,211,648	Lower	Withdrawals from fresh water sources is undertaken by SSE's hydro assets (97%) which withdraw water from lochs which is returned almost immediately to the environment. SSE's Thermal business also withdrew some small volumes of water from freshwaters for water management and station decommissioning activities at Fiddlers Ferry power station. In 2020/21 withdrawals from fresh water sources decreased by 7% compared to 2019/20. The reduction

				was due to a 4% decrease in generation output from SSE's hydro generation assets in the same period. Thresholds between periods: 'much higher/ lower' involve a 'increase/ decrease of 10% or greater'; 'higher/lower' '3%-9% change'. The 'stayed the same' category is '0%-2% change'. SSE calculates the water withdrawn using UK Government (BEIS) reporting standards. Data is independently assured by professional services firm PwC. Volume of water abstracted by hydro plant is measured via telemetry and for thermal plant is measured through flow meters.
Brackish surface water/Seawater	Relevant	818,573	Much higher	Brackish water is withdrawn for SSE's thermal generation assets: Keadby, Peterhead, Medway, Lerwick, Great Island and Tarbert. The cooling system used by these assets would have the most influence on the water withdrawals from brackish water. In 2020/21 SSE's generation mix moved from power stations with cooling towers, where water is recycled for cooling purposes, to plant that use water in a system that has only one cycle ('once through cooling water system'). As a result, the water withdrawn from brackish water increased by 13% between 2019/20 and 2020/21. This change in mix

				was in line with expectations as SSE shut its remaining coal-fired power station in March 2020. Thresholds between periods: 'much higher/ lower' involve a 'increase/ decrease of 10% or greater'; 'higher/lower' '3%-9% change'. The 'stayed the same' category is '0%-2% change'. Flow metres measure abstraction. Water volumes are calculated using UK Government (BEIS) reporting standards. PwC assure the data.
Groundwater – renewable	Relevant	1,856	Much lower	SSE's Slough Heat and Power biomass power station abstracts water from renewable groundwater for use in its power station and for supply to SSE's private water supply business which serves around 600 large and small business customers. Between 2019/20 and 2020/21 there was a reduction in the water withdrawn from groundwater (renewable) sources to supply SSE's private water supply business customers with water. Thresholds between periods: 'much higher/ lower' involve a 'increase/ decrease of 10% or greater'; 'higher/lower' '3%-9% change'. The 'stayed the same' category is '0%-2% change'. To compile SSE's volumetric data for water reporting, SSE calculates the water

				withdrawn, consumed /returned using UK Government (BEIS) reporting standards. The data is subsequently independently assured by PwC.
Groundwater – non-renewable	Not relevant			Not applicable, there is no groundwater usage within the thermal business. Dewatering has occurred during the construction of Keadby 2 to allow for the pouring of concrete constructions, but all extracted water is returned to water courses without contamination.
Produced/Entrained water	Not relevant			Not applicable, SSE does not have any oil and gas extraction operations.
Third party sources	Relevant	42	Much lower	Water withdrawn from third party sources is used by SSE's Rhode, Tawnaghmore, Chickerell and Burghfield thermal generation assets and is influenced by the type of cooling water system used. SSE monitors the water use in these activities through meter readings flow meters. Small volumes of water are used in amenities (provided by a third-party supplier), this decreased by nearly 90% between 2019/20 and 2020/21 reflecting the reduction in office occupancy due to the Covid-19 pandemic. SSE monitors the water use in these activities through meter readings. SSE has water efficiency and saving programmes in its generation operations and

				non-operational offices, data centres and depots. Thresholds between periods: 'much higher/ lower' involve a 'increase/ decrease of 10% or greater'; 'higher/lower' '3%-9% change'. The 'stayed the same' category is '0%-2% change'. SSE calculates the water withdrawn, consumed/returned using UK Government (BEIS) reporting standards and is assured by PwC.

W1.2i

(W1.2i) Provide total water discharge data by destination.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water	Relevant	25,209,912	Lower	Water discharges to fresh water sources is undertaken by SSE's hydro generation assets, and a few of its thermal generation assets discharge water to rivers (i.e. Fiddlers Ferry decommissioning). Over 97% of SSE's total water returned to the environment is by its hydro generation assets. Water discharged to fresh surface water decreased by 7% between 2019/20 and 2020/21. The fall in discharge volumes to fresh surface water was due to a decrease in output from SSE's hydro generation assets. Between 2019/20 and 2020/21, there was a 4% decrease in SSE's hydro generation output. Thresholds between years: 'much higher/ lower' involve a 'increase/

				decrease of 10% or greater'; 'higher/lower' '3%-9% change'; 'stayed the same' is '0%-2% change'. SSE calculates the water returned using UK Government (BEIS) reporting standards. Data is assured by PwC. Water passing through hydro turbines is measured via telemetry and discharges by thermal plant through flow meters.
Brackish surface water/seawater	Relevant	816,811	Much higher	SSE's Keadby, Peterhead, Medway, Lerwick, Great Island and Tarbert power stations discharge to brackish waters. The type of cooling system used by these assets would have had the most influence on the water discharged to brackish water. In 2020/21 SSE's thermal generation mix moved from power stations with cooling towers, where water is recycled for cooling purposes, to plant that use water in a system that has only one cycle (called 'once through cooling water system'). As a result, the water discharged to brackish water increased by ~13% between years. This change in generation mix was in line with expectations as SSE shut its remaining coal-fired power station in March 2020. Water abstracted is measured with flow meters. Water volumes are calculated using UK Government (BEIS) reporting standards and PwC assure the data.
Groundwater	Not relevant			SSE's policy is to meet all regulatory requirements. Environmental regulations that govern SSE's operations do not

				allow for discharge to groundwater. Therefore, this is not applicable.
Third-party destinations	Relevant	1,629	Lower	Water discharged to third-party destinations is from SSE's non-operational buildings, Burghfield, Chickerell, Rhode, Tawnaghmore and Slough power stations. Water discharged to third-party destination decreased by 6% between 2019/20 and 2020/21 reflecting a decrease in water supplied to SSE's private water supply customers at Slough Heat and Power station. Water used and subsequently discharged to sewer in SSE's amenities decreased by nearly 90% between 2019/20 and 2020/21 reflecting the impact of the coronavirus pandemic and the low occupancy of buildings in 2020 and 2021. SSE continues to implement a water efficiency, behavioural change and saving programme in its non-operational offices, data centres and depots.

W1.2j

(W1.2j) Within your direct operations, indicate the highest level(s) to which you treat your discharge.

	Relevance of treatment level to discharge	Volume (megaliters/year)	Comparison of treated volume with previous reporting year	% of your sites/facilities/operations this volume applies to	Please explain
Tertiary treatment	Relevant	1,104	This is our first year of measurement	Less than 1%	SSE's thermal power stations treat some process and cooling waters using tertiary treatment

					methods prior to discharge back to source.
Secondary treatment	Relevant	21	This is our first year of measurement	Less than 1%	SSE's thermal power stations treat some process and cooling waters using secondary treatment methods prior to discharge back to source.
Primary treatment only	Relevant	25	This is our first year of measurement	Less than 1%	SSE's thermal power stations treat some process and cooling waters using primary treatment methods prior to discharge back to source.
Discharge to the natural environment without treatment	Relevant	26,025,546	This is our first year of measurement	91-99	Over 97% of the total water abstracted by SSE in 2020/21 was used in its hydro generation operations, and therefore was returned to the environment almost immediately, meaning there is no change of state and

					that no treatment is required. For thermal generation water is used for cooling and as process water in a variety of operations. The majority of water abstracted and returned for thermal generation is used for cooling purposes. Cooling processes can include recirculatory systems which reuse the water or once through cooling systems. Both systems use the water to cool and therefore there is no change in the water between abstraction and its return to the natural environment. For some thermal process uses

					the water abstracted is treated before discharged back to source (as described above).
Discharge to a third party without treatment	Relevant	1,656	This is our first year of measurement	Less than 1%	Water discharged to third-party destinations is from SSE's non-operational buildings, Slough Heat and Power biomass power station, Rhode, Tawnaghmore, Burghfield and Chickerell power stations.
Other	Not relevant				

W-EU1.3

(W-EU1.3) Do you calculate water intensity for your electricity generation activities?

Yes

W-EU1.3a

(W-EU1.3a) Provide the following intensity information associated with your electricity generation activities.

Water intensity value (m3)	Numerator: water aspect	Denominator	Comparison with previous reporting year	Please explain
0.04	Total water withdrawals	MWh	Much higher	SSE uses water intensity to inform water optimisation strategies in its thermal generation plant as well as for regulatory

				resource efficiency metrics reporting purposes. For thermal generation water is used for cooling and as process water. Water abstraction and return for thermal generation reflects the type of water system used by the power station. The increase in water withdrawn was primarily a result of the shift in generation output from power stations with cooling towers, where water is recycled for cooling purposes, to generators that use water in a system that has only one cycle (called a 'once through cooling water system'). As a result, the water withdrawn intensity increased from 0.041 megalitres/MWh to 0.046 megalitres/MWh during the two periods (water withdrawn intensity is calculated using total water abstracted - thermal (megalitres) against total thermal generation output (MWh)).
0	Other, please specify Total water returned	MWh	Much higher	For thermal generation water is used for cooling and as process water. Water abstraction and return for thermal generation reflects the type of water system used by the power station. The increase in water returned was primarily a result of the shift in generation output from power stations with cooling towers, where water is recycled for cooling purposes, to generators that use water in a system that has only one cycle (called a 'once through cooling water system'). This change in generation mix was in line with expectations as SSE's closed its last remaining coal-fired power station in March 2020. As a result, the water returned intensity increased from 0.040 megalitres/MWh to 0.046 megalitres/MWh during the two periods (total water returned intensity is calculated using total water returned - thermal (megalitres) against total thermal generation output (MWh)).

0	Total water consumption	MWh	Much lower	SSE uses water intensity to inform water optimisation strategies in its thermal generation plant as well as for regulatory resource efficiency metrics reporting purposes. For thermal plants water is used for cooling and as process water. Water is treated onsite if required before returning it to source in accordance with specific environmental permits. For thermal generation water is used for cooling and as process water. Water abstraction and return for thermal generation reflects the type of water system used by the power station. The decrease in water consumption was primarily a result of the shift in generation output from power stations with cooling towers, where water is recycled for cooling purposes, to generators that use water in a system that has only one cycle (called a 'once through cooling water system'). These once through cooling water systems have lower evaporative losses and therefore consume less water. This change in generation mix was in line with expectations as SSE's closed its last remaining coal-fired power station in March 2020. This resulted in SSE's total water consumption reducing to 0.0002 in 2020/21 compared to 0.0004 the previous year. Total water consumed intensity is calculated using total water consumed - thermal (megalitres) against total thermal generation output (MWh).

W1.4

(W1.4) Do you engage with your value chain on water-related issues?

No, not currently but we intend to within two years

W1.4d

(W1.4d) Why do you not engage with any stages of your value chain on water-related issues and what are your plans?

	Primary reason	Please explain
Row 1	We are planning to do so within the next two years.	SSE is working with its value chain (primarily suppliers) based on reviewing and understanding environment, social and governance issues that are relevant and influence the business and its operations. Climate change, safety, modern slavery, and local economic impact have been identified as high priority with the likelihood of and magnitude of potential financial/ reputational impacts higher than those posed by water issues. Water is highlighted as an issue to the business, but the risk review highlighted it as low materiality in terms of the likelihood and magnitude of potential financial and reputation impact. However, SSE asks its suppliers to outline their water management policies and systems at the point of contract tender and disclose any breaches to permits over the last 3 years as well as if any mitigations were required and the impact of these. This is particularly relevant for suppliers or contracts engaged with construction projects across our business when this construction is taking place in the vicinity of water courses. When abstraction is required a water management plan will be developed. As part of SSE's newly developed Sustainability Procurement Code, over the next two years engagement will increase with suppliers who develop products or services in areas of water scarcity. This will promote suppliers who do not participate in detrimental actions.

W2. Business impacts

W2.1

(W2.1) Has your organization experienced any detrimental water-related impacts?

No

W2.2

(W2.2) In the reporting year, was your organization subject to any fines, enforcement orders, and/or other penalties for water-related regulatory violations?

No

W3. Procedures

W-EU3.1

(W-EU3.1) How does your organization identify and classify potential water pollutants associated with your business activities in the electric utilities sector that could have a detrimental impact on water ecosystems or human health?

For SSE's hydro generation operations, sufficient amounts of water from freshwater sources is very important for the business as a fuel source for hydro generation operations. At hydro generation sites water is taken from rivers and lochs and returned to the water environment after being run through the turbines to generate electricity. SSE monitors, measures and reports on all compensation and freshet flows to regulators as well fish passes and fish screens. SSE's hydro generation licences also have a condition to avoid any release of lubricating or other oils when the water is returned to the environment. As part of SSE's value chain, we engage with both upstream and downstream stakeholders to ensure our activities are compliant with their requirements. One potential risk is pollutants of small quantities of oil from bearings within moving equipment for lubrication, this is measured and mitigated by contractors who filter oil from water and sell the oil back to be reused in the same equipment.

In SSE's thermal power stations water is primarily used for cooling with some water used as process water. All SSE's thermal installations have environmental permits with associated environmental impact assessments. Each site monitors, measures and reports water aspects to the Regulators in accordance with specific environmental permits. SSE also monitors water intake to understand and monitor quality of the water entering its power stations.

Across SSE's value chain there is minimal variation. We ask suppliers to detail any non-compliant environmental issues such as those which would incur fines or penalties. SSE has also recently launched a sustainability supply chain commitment, a new industry leading approach to sustainable practice. This document requires that all suppliers detail their own policy documents at the point of tender activity, detailing any non-compliance by way of contract management.

W-EU3.1a

(W-EU3.1a) Describe how your organization minimizes the adverse impacts of potential water pollutants associated with your activities in the electric utilities sector on water ecosystems or human health.

Potential water pollutant	Description of water pollutant and potential impacts	Management procedures	Please explain
Other, please specify Thermal discharge	Thermal cooling-water discharges have been shown to have minimal detrimental impact to the water ecosystems. Process water discharges are treated as required by environmental permits / licences to ensure that there are no detrimental impacts to the water environment. SSE also monitors water intake to understand and monitor	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Community/stakeholder engagement Emergency preparedness Other, please specify Monitoring and measurement process	SSE monitors, measures and reports water aspects in accordance with specific requirements of the environmental permit. SSE has an environmental management system certified to ISO14001:2015 in place to manage these activities. This ISO14001:2015 certificate covers all of the business

	quality of water entering its power stations.		units which are detailed by this water survey. This system is audited annually by an external auditor. It also has emergency response procedures, secondary containment, and water treatment facilities where required in relation to permit conditions. In addition, SSE monitors water intake in its thermal generation assets to understand and monitor quality of water entering its power stations.

W3.3

(W3.3) Does your organization undertake a water-related risk assessment?

Yes, water-related risks are assessed

W3.3a

(W3.3a) Select the options that best describe your procedures for identifying and assessing water-related risks.

Direct operations

Coverage

Full

Risk assessment procedure

Water risks are assessed in an environmental risk assessment

Frequency of assessment

More than once a year

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

International methodologies

Tools and methods used

Other, please specify

ISO14001:2015 Environmental Management System

Comment

The Chief Executive has lead responsibility for environment issues at Board level. The Board approves Group Principal Risks (GPR). As part of the GPR a viability assessment is undertaken for each of the 11 Principal Risks. Some scenarios assessed include water related issues eg the 'Climate Change' GPR assesses the impact of severe weather events on networks; and the 'Safety and Environment' GPR assesses safety failure which has included localised flooding for instance at hydro power stations in Dunalistair.

In addition to the GPR assessment SSE also conducts a specialist TCFD climate-related risk and opportunity assessment, which seeks to identify and assess the climate-related risks and opportunities, incl flooding and severe weather events.

SSE implements an environmental management system (EMS) across all key areas of its business that interact with the environment. An EMS is designed to ensure that appropriate policies, processes and outputs are in place to ensure a business recognises and effectively manages the most significant environmental issues and impacts it faces. SSE is certified to ISO14001:2015 for all of these activities, except electricity distribution and SSE's Distributed Energy business which are covered by SSE's internal audit programme. This means SSE is ISO14001 certified for around 51% of its business activities that interact with the environment by reported revenue (based on 2020/21 figures). This system is audited annually by an external auditor.

Supply chain

Coverage

Partial

Risk assessment procedure

Water risks are assessed in an environmental risk assessment

Frequency of assessment

More than once a year

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

International methodologies

Tools and methods used

Other, please specify

ISO14001:2015 Environment Management System

Comment

SSE works with its suppliers, identified by risk, to review and understand the impact of environmental issues. Water is identified as a risk of our activities but considered low risk in terms of likelihood/magnitude.

SSE meets planning obligations by doing detailed Environmental Impact Assessments (EIA) for large projects, and completing an environmental assessment for projects where an EIA is not a statutory requirement. These assessments take account of surrounding water courses and any potential impacts on these are identified, alongside any other water-related issues. SSE's Tier 1 contractors are required to mitigate any potential impacts identified through the assessments. Tier 1 contractors have contractual obligations to report environmental incidents or breaches (including water-related) through SSE's internal reporting system. These incidents are monitored continuously at site level with monthly reports at Group level. Going forward SSEN Transmission will also require Tier 1 contractors to provide data of water use from works activities on site, including pre-construction estimates and as-built reporting during and at the end of construction.

SSE's businesses have supplier frameworks in place which outlined planned activities and new developments. These cover a minimum of 3 years but often up to 10 years and allow stronger collaboration with our supply chain to identify and mitigate environmental risks, including water use and pollution.

Other stages of the value chain

Coverage

Partial

Risk assessment procedure

Water risks are assessed in an environmental risk assessment

Frequency of assessment

More than once a year

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

International methodologies

Tools and methods used

Other, please specify

ISO14001:2015 Environmental Management System

Comment

SSE has identified its material issues relating to its key business operations. SSE has a programme of work with its value chain based on risk to review and understand the impact of environment, social and governance issues. Water is identified as a risk but highlighted as low risk in terms of likelihood/ magnitude of potential financial/ reputation impact. Climate change is the most material environment risk. SSE remains vigilant to the emergence of higher risks relating to water.

W3.3b

(W3.3b) Which of the following contextual issues are considered in your organization's water-related risk assessments?

	Relevance & inclusion	Please explain
Water availability at a basin/catchment level	Relevant, always included	Water is used to power turbines to generate electricity at SSE's hydro power stations. Water availability is relevant as the amount of water available impacts the hydro generation efficiency and output. Hydro generation is managed according to the volumes of water available. SSE uses the 10-year rolling average of runoff as the basis of operational planning of the hydro assets for every year. It then overlays station outages and maintenance that may affect the running of the hydro assets. This rolling average takes some account of the past trends in climate and weather in order to enable SSE to predict future generation in its hydro assets. Water availability is therefore assessed in the immediate term (daily through 24/7 monitoring systems), short term (for the year ahead), medium term (5 years ahead) and long term (over 5 years into the future) for all the hydro power station operations at a local, regional and national level. These risk assessments then inform how SSE's hydro generation plant is run and adapted to the resources available.
Water quality at a basin/catchment level	Relevant, always included	Water is used for generation at SSE's hydro power stations. Water is also used to cool generation plants; as process water for a variety of operations; and for amenities in SSE's offices and buildings. At thermal generation plants most water is used for cooling. Water quality is constantly monitored and treated if required to meet operational quality requirements. For non-operational buildings, depots and offices, water availability and quality of water are included in property risk management plans. SSE monitors water consumption and has activities in place to reduce water consumption across its property portfolio.
Stakeholder conflicts concerning water resources at a basin/catchment level	Relevant, always included	Water is used for energy generation, cooling, process water and for amenities in offices and buildings. The use of water by stakeholders and the use of water for SSE's operations can in some instances create water resource issues at a local level. As part of SSE's risk assessment process, water risks that arise from the use of water resources by other stakeholders are integrated into operational procedures and processes, impacts are measured, monitored and reported to stakeholders. SSE also consults

		and engages with relevant stakeholders to manage and mitigate the impact of its operations on water resources and other stakeholders use of these resources (such as Fisheries Boards and recreational users in relation to its hydro operations). An example of how SSE is putting this approach into practice – River Garry in Perthshire – where under the river basin management plan SSE has restored flow to a river which had been dry since the 1950s. This has impacted the hydro generation output at this site however is bringing about environmental improvements to the river biodiversity which is seen to be a benefit to all stakeholders, and which is being monitored as part of a five-year joint programme. The change in the operation of this hydro generation facility was a joint agreement between SSE, SEPA and the District Salmon Fishery Board to improve flows on the River Garry. There are further sites that SSE is investigating introducing similar environmental improvements as part of the ongoing River Basin Planning Process. It is unlikely that any future change will be of similar scale to what took place on the River Garry catchment.
Implications of water on your key commodities/raw materials	Relevant, always included	Production of electricity is SSE's core product, and the availability of water is essential for SSE's thermal and hydro electricity generation activities. For SSE's hydro-generation activities, the amount of water available impacts the hydro generation efficiency and output. Hydro generation is managed according to the volume of water available. For SSE, the risk is assessed through understanding trends in climate and weather in the past and predicting this over different time periods in order to run generation in the future. Water availability is therefore assessed in the immediate term (daily through 24/7 monitoring systems), short term (for the year ahead), medium term (5 years ahead) and long term (over 5 years into the future) for all our hydro power station operations at a local, regional and national level. These risk assessments then inform how SSE's hydro generation plant is run and adapted to the resources available. SSE also conducts scenario analysis for its generation plant to ensure that future changes in key resources are factored into investment and future operating decisions.
Water-related regulatory frameworks	Relevant, always included	Water is used for energy generation, cooling, process water and for amenities in offices and buildings. Regulations on water impact all areas of the business, for example compensation flow regulations (regulated volumes of water

		that must remain in the river) impact the way SSE runs its hydro generation. Water abstraction charges impact our hydro and thermal generation activities as there are water charges in place based on the volumes of water consented for use. Therefore the expected strategic review of water charges in England will be of interest for SSE's thermal generation assets. In addition, the Water Abstraction licencing regime is expected to transition into the Environmental Permitting Regulations in England and Wales in 2023, and this may impact SSE's thermal generation plant. As part of SSE's risk assessment process, water risks from regulatory frameworks and tariffs are identified and assessed, procedures and processes implemented to manage the impacts and measurement, monitoring and reporting systems in place to report compliance to relevant authorities. SSE has compliance and regulatory teams to manage and mitigate the impact of regulatory frameworks to its business activities. SSE also consults and engages regularly with relevant authorities to manage the impact of water regulation (for example Scottish Environmental Protection Agency (SEPA), Environment Agency for England (EA), and Environment Protection Agency in Ireland (EPA), DEFRA and BEIS (both directly and through industry representative groups).
Status of ecosystems and habitats	Relevant, always included	Water is used for energy generation, cooling, process water and for amenities in offices and buildings. The status of ecosystems and habitats is constantly reviewed through SSE's risk assessment approach. To mitigate the risk SSE has processes and procedures in place to monitor water quantity and quality to ensure compliance with any consents and reports regularly to stakeholders (including regulators) on its water impacts. SSE also engages and consults with stakeholders on water-related issues and the impact that its activities have on the status of ecosystems and habitats. SSE monitors ecology and commissions research with Universities and academics to better understand the ecology and biodiversity of the rivers that it operates in. For example, SSE is working with SCENE (a part of Glasgow University) to look at the behaviour of Freshwater Pearl Mussel in an artificial flume environment to see how they react to changes in water flow and level. In a follow up part of this study, we are also investigating their real-world behaviour downstream from a major reservoir.

Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	Water is used for amenities in offices and buildings and operational sites. Current risk assessments of availability and quality of water are included in property risk management plans. SSE monitors water consumption and has activities in place to reduce water consumption across its property portfolio.
Other contextual issues, please specify	Relevant, always included	SSE has assessed the impact of different stakeholders and has not identified any other categories that may have a significant impact on its operations in relation to water risk.

W3.3c

(W3.3c) Which of the following stakeholders are considered in your organization's water-related risk assessments?

	Relevance & inclusion	Please explain
Customers	Relevant, sometimes included	SSE has regular contact with its customers (this can be retail customers in Ireland, business energy customers in Great Britain and households and businesses connected to SSE's electricity distribution networks) in relation to winter readiness and the impact of potential flooding on its networks, generation and retail business activities. SSE contacts these customers using web communications; TV, radio and newspaper campaigns; and direct customer contact through our customer call centres. SSE has emergency response plans, business continuity plans and a series of communication for different customers to ensure they understand how to respond to the impact of flooding on energy supply.
Employees	Relevant, sometimes included	SSE regularly reviews and tests the readiness of its employees to respond to emergencies, get to sites to maintain operations and other business continuity issues. This may be a result of flooding in communities where its employees live or flooding at SSE's sites. This is to ensure business continuity in the event of flooding or other emergency situations.
Investors	Relevant, sometimes included	SSE reports to investors on water risks through CDP (this survey) and its sustainability report. This is the sixth year SSE has reported to CDP on water and this is a result of the increased importance of water to its investment community. In 2014/15 SSE extended its annual report and sustainability report to include water data and for the past six financial years its water data has been assured by PwC in accordance with the ISAE3000 (revised) and ISAE3410 standards. SSE also responds to a number of surveys from investor ESG ratings agencies, many of which will ask specific questions around the

		policies and procedures SSE has in place for managing water-related issues.
Local communities	Relevant, sometimes included	SSE consults and engages with local communities and community groups/ organisations on the impact of its operations to their recreational and business activities. For instance, the impact of its hydro operations on fisheries and fishing, canoeing and other recreational users. This is to ensure that SSE can operate responsibly in the local communities in which it has a presence.
NGOs	Relevant, sometimes included	SSE regularly consults with key stakeholders on water related issues and the main groups of relevant agencies are the other categories outlined in this table.
Other water users at a basin/catchment level	Relevant, sometimes included	SSE's risk assessments have identified the key water users at local levels and the impact of these on its operations, the key stakeholder groups are covered by the other categories in this table.
Regulators	Relevant, sometimes included	SSE has regular contact with regulators, Environment Agency, SEPA and Environment Protection Agency (Ireland) on water issues including consents, compensation flows, flood and drought management and river basin/ ecosystem/ habitat management. SSE also maintains a strong presence at meetings that involve regulators and policy makers in relation to water issues for example SSE is engaging in workstreams associated with the recently published water abstraction plan for England and, through EnergyUK, SSE is also represented at various levels across the relevant Regional Water Resource Planning groups in England. Furthermore, SSE meets regularly with SEPA to discuss the impact of The Water Framework Directive on its hydro operations in the period to 2027.
River basin management authorities	Relevant, sometimes included	SSE has regular discussions and responds to consultations with key river basin management authorities (including regulators and government) through industry working groups on water abstraction reform, water framework changes and the different needs of different water users. This is to ensure that SSE's views and knowledge can be integrated into regulatory plans and the impact to its operations is understood by regulatory authorities.
Statutory special interest groups at a local level	Relevant, sometimes included	SSE has regular contact with statutory special interest groups in relation to impact of current operations and future activities on water resources (quality and quantity) and river basin/ ecosystem/ habitat management planning. SSE does this through formal planning consultation processes as well as through regular meetings/ discussions and forums that exist as

		part of its ongoing stakeholder consultation and engagement exercises and through direct liaison meetings.
Suppliers	Relevant, sometimes included	Suppliers and contractors are crucial for SSE's successful operation. Potential water-relates issues or impacts are identified at project level through the environmental assessment processes during the development and construction of SSE's assets. SSE works with its Tier 1 contractors to ensure that they meet requirements to mitigate any potential impacts identified through the assessments. Tier 1 contractors also have contractual obligations to report any environmental incidents or breaches, including water-related incidents, through SSE's internal reporting system. These incidents are monitored on an ongoing basis at site level with monthly reports collated and reported at Group level. If any mitigation measures are not implemented or monitoring shows measures to be ineffective, SSE works constructively with its contractors to ensure appropriate action is taken. Where relevant, SSE also assesses the impact of water resources on the ability of its suppliers to provide us with raw materials. For example, at its thermal generation plant, SSE understands the impact of flooding to its suppliers.
Water utilities at a local level	Relevant, sometimes included	SSE has regular contact with water utilities in relation to impact of its current operations and future activities on water resources (quality and quantity) and river basin/ ecosystem/ habitat management planning. SSE does this through formal planning consultation processes as well as through regular meetings/ discussions and forums that exist as part of its ongoing stakeholder consultation and engagement exercises.
Other stakeholder, please specify	Not relevant, included	SSE has assessed the impact of different stakeholders in relation to water risk and has not identified any other categories that have a significant impact on its operations.

W3.3d

(W3.3d) Describe your organization's process for identifying, assessing, and responding to water-related risks within your direct operations and other stages of your value chain.

SSE identifies and evaluates risk at both Group and divisional (including assets) level by considering, controlling, and monitoring the impact of risks against the achievement of SSE's strategic objectives (set by the Board). The Group Executive Committee and its sub-committees have responsibility for overseeing SSE's Principal Risks. The Group Risk Management and Strategic Frameworks have been designed to ensure (amongst other things) that SSE is in a position to address the issue of water, whether as a risk or as an opportunity. The risk assessment timeframe is greater than 10 years because in terms of water risk there are regulatory, physical and asset risks that can occur over the short-term horizon (0 to 3

years), medium-term (3 to 12 years) and long-term (12 years and beyond). These time horizons are aligned with other business practice time horizons and SSE's climate-related aspects. Risk assessments are completed six monthly or more frequently (when required) to ensure risks are still relevant/ mitigated and managed. Water risks are relevant to all geographies and all businesses. E.g. water quality/ quantity issues could present challenges in operations of hydro and thermal generation assets; equally, flooding could cause disruption to operations across networks, generation and retail. For SSE, the challenge of water (regulatory, physical and reputational) does not have a significant impact (in terms of likelihood and impact) to change or impact the businesses strategic objectives. Where water risk is relevant, SSE responds by having mitigation plans in place to manage the impact. Water risks can arise from issues like: flooding (short term), to mitigate this over 300 risk assessments are completed to understand the impact of flooding to business operations (i.e substations); future legislation (medium term) could impact hydro assets, SSE has compliance and regulatory teams to mitigate/ manage the impact of regulatory frameworks; and in the long term climate change may impact water resource availability for generation assets, SSE manages this by monitoring trends in climate/ weather.

W4. Risks and opportunities

W4.1

(W4.1) Have you identified any inherent water-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes, only within our direct operations

W4.1a

(W4.1a) How does your organization define substantive financial or strategic impact on your business?

The successful delivery of SSE's strategic objectives depends on effective identification, understanding and mitigation of its Principal Risks. SSE has an established Risk Management Framework and wider system of internal control to inform decision-making in support of creating value in a sustainable way. The Board directly sets the Group Risk Management and Internal Control policy and reviews risk management performance at SSE on an ongoing basis. The Safety, Health and Environment Committee supported by the Board's Safety, Health and Environment Advisory Committee provides oversight for environment and safety risks. SSE defines risk as anything that can threaten the achievement of its business and strategic objectives or compromise SSE's core values. Each of SSE's business units have differing levels of exposure to additional risks. For example, the Transmission and Distribution businesses are largely economically regulated and are characterised by relatively stable, inflation linked cash flows while the SSE Renewables business benefits from cash flows linked to government-mandated renewables subsidies. Those business units that generate and trade energy are also exposed to significant medium to long term energy market and commodity risks in operational and investment decision making. SSE's risk management framework ensures that all risks associated with the environment (including water-related risks) are identified, assessed, evaluated, recorded, monitored and reviewed to understand the impact on the

business. In relation to water risk, a pollution incident, water availability/ quality issue or climate related impact could have a material adverse impact to the environment, operations, property, employees, contractors or members of the public.

W4.1b

(W4.1b) What is the total number of facilities exposed to water risks with the potential to have a substantive financial or strategic impact on your business, and what proportion of your company-wide facilities does this represent?

	Total number of facilities exposed to water risk	% company-wide facilities this represents	Comment
Row 1	30	1-25	SSE's hydro generation facilities represent 16% of SSE's generation capacity and 13% of the Group's electricity generation output in 2020/21. The hydro generation plant is located in regions of high average rainfall – north of Scotland. It is the variability and change of climate (and associated weather) that impact the way SSE generates from its hydro generation sites. This in turn means that there is the possibility that climate change could exacerbate weather-related fluctuations by impacting weather patterns over the longer term. The risk facing SSE is that lower levels rainfall could reduce the output from SSE's hydro assets which could result in a reduction in revenue. Conversely, higher periods of rainfall may require that SSE reduce output in order to limit flow during periods of high discharge to prevent downstream flooding. In the past few years, SSE has had to respond to milder and wetter winters. This means that SSE has to operate and adapt its generation activities and has resulted in a different way of managing the assets to the way it did 5 to 10 years ago. This is an opportunity as well as a risk for SSE.

W4.1c

(W4.1c) By river basin, what is the number and proportion of facilities exposed to water risks that could have a substantive financial or strategic impact on your business, and what is the potential business impact associated with those facilities?

Country/Area & River basin

United Kingdom of Great Britain and Northern Ireland

Other, please specify

River catchments in Scotland

Number of facilities exposed to water risk

10

% company-wide facilities this represents

1-25

% company's annual electricity generation that could be affected by these facilities

1-25

% company's total global revenue that could be affected

Less than 1%

Comment

The hydro generation plant is located in regions of high average rainfall – north of Scotland. It is the variability and change of climate (and associated weather) that impact the way SSE generates from its hydro generation sites. This in turn means SSE may have to adapt and change the way it operates in the future to respond to water related issues that arise as a result of climate change.

SSE has worked with the regulator, SEPA, to carry out surveys to better understand water-related impacts, as a result around 10 of the sites are viewed to be exposed to water risk that could have a substantive financial or strategic impact to the business. In the past few years, SSE has had to respond to milder and wetter winters. This means that SSE has to operate and adapt its generation activities and has resulted in a different way of managing the assets to the way it did 5 to 10 years ago. This is an opportunity as well as a risk for SSE.

W4.2

(W4.2) Provide details of identified risks in your direct operations with the potential to have a substantive financial or strategic impact on your business, and your response to those risks.

Country/Area & River basin

United Kingdom of Great Britain and Northern Ireland

Other, please specify

River catchments in Scotland

Type of risk & Primary risk driver

Physical

Seasonal supply variability/inter annual variability

Primary potential impact

Other, please specify

Reduction in generation output

Company-specific description

SSE's generation assets rely on rainwater to operate, in particular SSE's hydro assets use water as a 'fuel' to generate electricity. Climate change has the potential to change future weather patterns. This could result in changes to water availability and the way SSE runs it generation portfolio. For example, longer term changes in climate patterns have the potential to cause sustained higher temperatures that may result in lower rainfall and reduced wind levels. These changes may impact SSE's renewables (including hydro and wind generation assets) output and associated earnings.

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.

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. 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 2,423MW of on-and off-shore wind generation capacity.

In total, SSE has approximately 3.9GW of renewable electricity capacity which provides electricity to over 2 million homes. 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 revenue.

Timeframe

More than 6 years

Magnitude of potential impact

High

Likelihood

Likely

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

100,000,000

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

Levels of rainfall can fluctuate from year to year. Climate change may exacerbate these fluctuations. Fluctuations can be both positive & negative for SSE. To illustrate this, 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.

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 combined. The combination of these weather impacts may result in reduced renewable generation output and associated earnings. Weather patterns affect renewable output (both hydro and wind) and in any one year the potential adverse financial impact on renewable earnings (both hydro and wind) is estimated to be around £100m.

Primary response to risk

Improve monitoring

Description of response

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 meant that in spite of less favourable weather conditions in 2020/21 achieved its second highest-ever year of electricity generation from renewable sources with 10.2TWh of output compared to 11.4TWh in 2019/20 (including biomass, pumped storage and constrained off wind in GB).

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

Cost of response

250,000

Explanation of cost of response

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

meant that in spite of less favourable weather conditions in 2020/21 achieved its second highest-ever year of electricity generation from renewable sources with 10.2TWh of output

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 2019/20 SSE experienced a relatively 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 hydro generation activities in a different way to the way it did 5 to 10 years ago (ie storing water in different seasons depending on rainfall).

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 impacts is in the region of £250,000 annually.

Country/Area & River basin

United Kingdom of Great Britain and Northern Ireland

Other, please specify

River catchments Scotland

Type of risk & Primary risk driver

Regulatory

Regulation of discharge quality/volumes

Primary potential impact

Reduction or disruption in production capacity

Company-specific description

SSE's hydro generation assets are assessed through Scottish River Management Basin Plans in order to meet the requirements of European Union Water Framework Directive. This regulation puts limits on the amount of output through the use of compensation flows. From 2016/17 and up to 2027 output across SSE's hydro assets could potentially be reduced to meet legal requirements by up to 1%. SEPA has capped the impact to hydro activities by a maximum of 3% across all Scottish operators at 100GWh of output. For example, at the River Garry in Perthshire a change to the operating licence in 2017/18 reduced generation from hydro power stations along the river by 20 to 30 GWh per annum. As a result, SSE reduced the water abstraction on the River Garry and its tributaries to meet the Water Framework Directive requirements. Following this reduction in water abstraction on the River Garry and its tributaries, there remain a small number of minor water bodies under potential consideration for the third RBMP (2021 – 2027) to identify and agree with SEPA what, if any, operational changes may be

necessary to meet WrFD requirements in the future. SSE and SEPA are currently reviewing water bodies affected, no decisions have been taken but a small number of water bodies where SEPA will request us to release water have provisionally been identified, this will have a limited impact on the business as the scale of these sites cumulate to less than 20GWh per annum.

Timeframe

More than 6 years

Magnitude of potential impact

Medium-low

Likelihood

Virtually certain

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

An illustration of the potential financial impact of this risk is the reduction of water abstracted from the River Garry and its tributaries which has the potential to reduce hydro generation output by around 20-25 GWh in future years.

Primary response to risk

Engage with regulators/policymakers

Description of response

The response involves engagement with regulators, public policy makers, and other stakeholders in the river basin along with the adaptation and change of SSE's hydro generation assets in order to reduce the impact of future legislation on its generation output. The management and operation of the assets is kept under constant review to ensure output of renewable energy can be maximised, consistent with SSE’s regulatory and other obligations. SSE's response to the risk of the impact of future legislation on generation activities is constantly monitored by regulatory and public affairs experts, along with the management team that oversees operations. SSE’s experts respond in the designated timeframes to formal consultations. SSE’s experts also engage and consult with government and regulators before legislation is statutory. Projects will be identified (where required) in operational and capital plans to ensure that any mitigating plans are in place to meet regulatory requirements. For example, SSE recently reduced the water abstraction on the River Garry and its tributaries to meet the Water

Framework Directive requirements after extensive consultation and engagement with government, regulators and impacted local stakeholders (such as the Fisheries Board).

Cost of response

Explanation of cost of response

All costs associated with SSE's response to this risk are included within operational and capital investment plans and budgets. SSE engages and consults regularly with key stakeholders through formal consultation processes and through industry and sector working groups. SSE also has community consultation experts, public policy and regulatory experts that engage and consult with communities and other local stakeholders, government and regulators on any future legislation changes.

Country/Area & River basin

United Kingdom of Great Britain and Northern Ireland

Other, please specify

River catchments Scotland/ south England

Type of risk & Primary risk driver

Physical

Flooding

Primary potential impact

Reduced revenues from lower sales/output

Company-specific description

Increased severity of extreme weather events, such as storms, floods and heat waves bring prolonged extreme temperatures, wind or rainfall. These severe adverse weather events can cause damage or interrupt energy supply or generation, and this is a key risk to SSE's business. The risk is that these events can impact the Group's ability to meet its business objectives and influences investment decisions made. For instance, weather events such as storms, floods and heat waves may damage network assets which result in the loss of incentive revenue and increased maintenance costs for SSE's Distribution Networks business. For example, severe adverse weather events can result in flooding of substations and/or damage to overhead lines, causing power supplies to customers to be disrupted (for example flooding of one substation can impact around 10,000 of SSEN's customers). Over ten days in February 2021, SSE employees faced challenging work condition faced by weather hazard impacts including: 'line-icing' (significant snowfall freezing and accumulating on overhead power lines, increasing the tension on the conductor causing them to sag and potentially even break) impacting conductors on the network in Argyll; heavy snowfall in the Highlands, with Braemar in Aberdeenshire experiencing the lowest temperature in 26 years; extremely high flood waters at Coupar Angus substation, risking a widespread interruption to supply which could have impacted thousands of customers. This ten-day series of events was concluded with wildfires on the Western Isles, with both electricity transmission and distribution lines at risk of choking and heat damage on the Isles of Skye and Lewis.

Timeframe

Current up to one year

Magnitude of potential impact

Medium

Likelihood

Virtually certain

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)

120,000,000

Potential financial impact figure - maximum (currency)

220,000,000

Explanation of financial impact

To estimate a potential financial impact of this risk, it is assumed that the next distribution price control (2023 to 2028) will be of similar value and size as the current RIIO-ED1 distribution price control (2015 to 2023). To calculate the financial impact two scenarios have been assessed:

• 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.

These calculations are consistent with the number of faults and current RIIO-ED1 incentive and penalty methodology.

The estimated cost of faults and loss of incentive income over the next 10 years may result in a potential reduction of earnings of between £120m and £220m cumulatively.

Primary response to risk

Develop flood emergency plans

Description of response

To mitigate the impact of severe weather events, SSE monitors 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. Short and long-term monitoring of weather conditions enable SSE to identify extreme events and implement its crisis management and business continuity plans. Monitoring the longer-term weather trends helps SSE to implement resiliency response strategies such as flood protection.

E.G. in February 2021, when SSEN Transmission's assets were subjected to a high number of diverse extreme weather hazards impacting the network over a tenday period. Employees faced challenging work condition faced by weather hazard impacts including: 'line icing' (significant snowfall freezing and accumulating on overhead power lines, increasing the tension on the conductor causing them to sag and potentially even break) impacting conductors on the network in Argyll; heavy snowfall in the Highlands, with Braemar in Aberdeenshire experiencing the lowest temperature in 26 years, which occurred alongside extremely high flood waters at Coupar Angus substation, risking a widespread interruption to supply which could have impacted thousands of customers. This ten-day series of events was concluded with wildfires on the Western Isles, with both electricity transmission and distribution lines at risk of choking and heat damage on the Isles of Skye and Lewis.

SSEN Transmission is working to understand whether these events are being exacerbated by climate change. SSE established a Wildfires subgroup to assess risk and develop a mitigation strategy, reviewed safety management procedures which manage wildfire response and appointed specialist wildfire consultants to provide wildfire risk forecasts for the network area. It has also engaged with other UK asset owners and electricity transmission businesses worldwide to understand risk, control and mitigation measures they have in place to deal with wildfires.

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.

Cost of response

60,600,000

Explanation of cost of response

Examples of the cost to management of directly mitigating severe adverse weather in SSEN Distribution is the combination of costs associated with:

- Investment in overhead line replacement and refurbishment (£30.7m).
- Tree cutting (£26.6m).
- Flood protection (£3.3m).

The combination of these costs was £60.6m in 2020/21. These investment costs strengthen and improve the resilience of the assets, this in turn ensures that SSE also mitigates the impact of weather damage on its assets.

W4.2c

(W4.2c) Why does your organization not consider itself exposed to water risks in its value chain (beyond direct operations) with the potential to have a substantive financial or strategic impact?

	Primary reason	Please explain
Row 1	Risks exist, but no substantive impact anticipated	SSE has identified its material sustainability issues relating to its key business operations. SSE is working with its value chain (primarily suppliers) based on reviewing and understanding environment, social and governance issues that are relevant and influence the business and its operations. Climate change, safety and local economic impact have been identified as high priority with the likelihood of and magnitude of potential financial/ reputational impacts higher than those posed by water issues. Water is highlighted as an issue to the business, but the risk review highlighted it as low priority in terms of the likelihood and magnitude of potential financial and reputation impact. Risks are reviewed annually. Overwhelmingly climate change is the most material environmental priority. SSE remains vigilant regarding the emergence of higher priority risks relating to water.

W4.3

(W4.3) Have you identified any water-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes, we have identified opportunities, and some/all are being realized

W4.3a

(W4.3a) Provide details of opportunities currently being realized that could have a substantive financial or strategic impact on your business.

Type of opportunity

Products and services

Primary water-related opportunity

Increased sales of existing products/services

Company-specific description & strategy to realize opportunity

Decarbonisation provides the opportunity to increase output and earnings from flexible and renewable hydro assets. As the energy system decarbonises, an increasing volume of wind energy is coming onto the GB system. Flexible generation and storage are required to provide electricity when wind output is low. Hydro is unique (it represents 16% of its portfolio capacity), as it can be characterised as both renewable and flexible. SSE's hydro generation assets (inc. pumped storage) are in a good position to take advantage of an increase in value of flexible output.

SSE has 400MW of run-of-river hydro, 750MW of flexible hydro alongside 300MW of pumped storage. Despite challenging weather conditions SSE's hydro fleet delivered increased value from their increased flexibility over the past three financial years, enabled by enhancements to SSE's commercial management of these assets.

In order to realise this opportunity, SSE invests in a diversified generation portfolio of renewable and flexible generation assets (including hydro generation assets).

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. To support this SSE has an ongoing programme of maintenance, refurbishment and construction to ensure these assets continue to deliver during the low-carbon transition. SSE has 1,450 MW of existing hydro capacity (inc. pumped storage) and has planning consent for an additional 1.5GW of pumped storage.

SSE has a consent for the development of 1.5GW (30GWh) Coire Glas scheme. SSE sees this has having an important role in providing critical flexibility to balance the increasing volumes of variable renewables. SSE is working closely with policy makers to encourage further clarity on the policy framework and route to market for such projects, and details on this are expected from BEIS and Ofgem later this year.

Finally in order to realise this strategy, in 2020/21, and despite challenging weather conditions, SSE's hydro fleet delivered increased value from their increased flexibility, which was enabled by enhancements in SSE's commercial management of these assets. SSE's hydro generation facilities represent 16% of SSE's generation capacity and 13% of the Group's electricity generation output in 2020/21. In addition, in 2020/21 SSE Renewables' (hydro and wind generation) accounted for 48% of the Group's total adjusted operating profit.

Estimated timeframe for realization

More than 6 years

Magnitude of potential financial impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

900,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact

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.

It is assumed that by providing more flexible hydro output from existing assets SSE could generate an additional £10m per annum through generating additional volumes and/or capturing high prices during system stress periods. In addition, balancing market and ancillary services revenues could generate income of up to around £25m per year. These values will vary depending on market conditions. Furthermore, the successful development of the consented 1.5GW Coire Glas Pumped Hydro plant could potentially earn additional revenue from 2028/2029. This is based on the current revenue projections for the existing pump storage capacity that SSE owns.

The combination of these additional revenues could result in revenues of up to £900m being earned by continuing to provide flexible hydro output and investing in new pumped storage output over the next 10 years.

W5. Facility-level water accounting

W5.1

(W5.1) For each facility referenced in W4.1c, provide coordinates, water accounting data, and a comparison with the previous reporting year.

Facility reference number

Facility 1

Facility name (optional)

Hydro generation Scotland

SSE's hydroelectric power stations are located across Scotland. Pitlochry is one of the key sites for hydro power at SSE and the longitude and latitude is taken from this point.

Country/Area & River basin

United Kingdom of Great Britain and Northern Ireland

Other, please specify

River catchments Scotland

Latitude

56.7044

Longitude

3.7297

Located in area with water stress

No

Primary power generation source for your electricity generation at this facility

Hydropower

Total water withdrawals at this facility (megaliters/year)

25,200,190

Comparison of total withdrawals with previous reporting year

Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

25,200,190

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

25,200,190

Comparison of total discharges with previous reporting year

Lower

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

0

Comparison of total consumption with previous reporting year

About the same

Please explain

Over 97% of water abstracted and then discharged is associated with SSE's hydro generation business. In 2020/21, SSE's hydro electricity generation output increased by 4% compared to 2019/20. As a result, water withdrawals and associated discharges for hydro generation purposes decreased by around 6% in this same period.

Facility reference number

Facility 2

Facility name (optional)

Thermal generation
SSE's thermal power stations are situated across different locations in the UK. Keadby power station in North Lincolnshire is one of SSE's power station assets and the longitude and latitude is taken from this point.

Country/Area & River basin

Latitude

53.5967

Longitude

0.7395

Located in area with water stress

No

Primary power generation source for your electricity generation at this facility

Gas

Total water withdrawals at this facility (megaliters/year)

831,905

Comparison of total withdrawals with previous reporting year

Much higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

11,458

Withdrawals from brackish surface water/seawater

818,573

Withdrawals from groundwater - renewable

Withdrawals from groundwater - non-renewable

1,856

Withdrawals from produced/entrained water

Withdrawals from third party sources

17

Total water discharges at this facility (megaliters/year)

828,137

Comparison of total discharges with previous reporting year

Much higher

Discharges to fresh surface water

9,722

Discharges to brackish surface water/seawater

816,811

Discharges to groundwater

0

Discharges to third party destinations

1,605

Total water consumption at this facility (megaliters/year)

3,768

Comparison of total consumption with previous reporting year

Much lower

Please explain

For thermal plants water is used for cooling and as process water in a variety of operations. Cooling water is abstracted and returned to the environment. The better the cooling the higher the efficiency of water use and process water use. The water abstracted, returned and consumed reflected the change in generation mix, with the closure of SSE's last remaining coal-fired power station which uses cooling towers to power plants that use once through cooling systems. This meant that water withdrawal and return volumes increased, however, water consumption volumes reduced. These once through cooling systems return water almost immediately once used in the power generation process.

Facility reference number

Facility 3

Facility name (optional)

Non-operational buildings SSE is headquartered in Perth, Scotland.

Country/Area & River basin

United Kingdom of Great Britain and Northern Ireland
Other, please specify
River catchments England and Scotland

Latitude
56.935

Longitude
3.4308

Located in area with water stress
No

Primary power generation source for your electricity generation at this facility
Not applicable

Total water withdrawals at this facility (megaliters/year)
24.5

Comparison of total withdrawals with previous reporting year
Much lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Withdrawals from brackish surface water/seawater
0

Withdrawals from groundwater - renewable
0

Withdrawals from groundwater - non-renewable
0

Withdrawals from produced/entrained water
0

Withdrawals from third party sources
24.5

Total water discharges at this facility (megaliters/year)
24.5

Comparison of total discharges with previous reporting year
Much lower

Discharges to fresh surface water
0

Discharges to brackish surface water/seawater
0

Discharges to groundwater

0

Discharges to third party destinations

24.5

Total water consumption at this facility (megaliters/year)

24.5

Comparison of total consumption with previous reporting year

Much lower

Please explain

Water used in amenities decreased substantially between 2019/20 and 2020/21 reflecting the impact of the coronavirus pandemic on occupation of offices. SSE continues to implement ongoing water efficiency, behavioural change and saving programme in its non-operational offices, data centres and depots.

SSE monitors the water use in these non-operational buildings, and in 2017 a target was launched as part of the programme, to reduce water consumption every year by 2.5%.

W5.1a

(W5.1a) For the facilities referenced in W5.1, what proportion of water accounting data has been externally verified?

Water withdrawals – total volumes

% verified

76-100

What standard and methodology was used?

Assured by PwC to the ISAE3000 standard and ISAE3410 (assurance engagements on greenhouse gas statements). This document is uploaded in the response to W9.1

Water withdrawals – volume by source

% verified

76-100

What standard and methodology was used?

Assured by PwC to the ISAE3000 standard and ISAE3410 (assurance engagements on greenhouse gas statements). This document is uploaded in the response to W9.1

Water withdrawals – quality

% verified

76-100

What standard and methodology was used?

Assured by PwC to the ISAE3000 standard and ISAE3410 (assurance engagements on greenhouse gas statements). This document is uploaded in the response to W9.1

Water discharges – total volumes

% verified

76-100

What standard and methodology was used?

Assured by PwC to the ISAE3000 standard and ISAE3410 (assurance engagements on greenhouse gas statements). This document is uploaded in the response to W9.1

Water discharges – volume by destination

% verified

76-100

What standard and methodology was used?

Assured by PwC to the ISAE3000 standard and ISAE3410 (assurance engagements on greenhouse gas statements). This document is uploaded in the response to W9.1

Water discharges – volume by treatment method

% verified

Not verified

Water discharge quality – quality by standard effluent parameters

% verified

Not verified

Water discharge quality – temperature

% verified

Not verified

Water consumption – total volume

% verified

76-100

What standard and methodology was used?

Assured by PwC to the ISAE3000 standard and ISAE3410 (assurance engagements on greenhouse gas statements). This document is uploaded in the response to W9.1

Water recycled/reused

% verified

76-100

What standard and methodology was used?

Assured by PwC to the ISAE3000 standard and ISAE3410 (assurance engagements on greenhouse gas statements). This document is uploaded in the response to W9.1

W6. Governance

W6.1

(W6.1) Does your organization have a water policy?

Yes, we have a documented water policy that is publicly available

W6.1a

(W6.1a) Select the options that best describe the scope and content of your water policy.

	Scope	Content	Please explain
Row 1	Company-wide	Description of business dependency on water Description of business impact on water Company water targets and goals Commitments beyond regulatory compliance Commitment to water-related innovation Commitment to stakeholder awareness and education	SSE's Environment policy is company-wide and provides the policy framework on the environment for all its business operations, recognising our management commitments and dependency on resource use such as water. This policy is implemented locally by business units through environmental management systems. The policy requires SSE's operations to, amongst other things, identify material impacts, manage environmental risks, engage positively with key stakeholders, work with suppliers, and integrate environmental improvements into everyday decision making. Water is included as part of this policy, processes and procedures. Specifically, SSE commits to "decreasing the impact of our resource consumption by: a) Minimising resource use and waste production. b) Engaging with the circular economy, by using reprocessed materials and ensuring our waste can readily be reused or recycled so far as is practical.

		Commitment to water stewardship and/or collective action Recognition of environmental linkages, for example, due to climate change	c) Selecting materials that have sustainable lifecycle impacts.", The policy also commits to "Engage positively with key stakeholders on environmental issues and take responsibility within the wider community for improving the environmental impact of our business." SSE's Group Climate Change policy also acknowledges the potential for water-related climate risks: "SSE assessed the physical impacts of climate change, including the increased likelihood of severe weather events, in its business continuity and crisis management plans, implementing climate adaptation plans. These policies are group policies, signed by the Chief Executive Officer.

W6.2

(W6.2) Is there board level oversight of water-related issues within your organization?

Yes

W6.2a

(W6.2a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for water-related issues.

Position of individual	Please explain
Chief Executive Officer (CEO)	SSE's Chief Executive has overall lead responsibility for sustainability issues, including water, and this includes at Board-level. The Chief Executive is assisted by Board-level committees, senior management and several specific management committees. The Board is advised on matters of safety, health and environment (SHE) by the Safety, Health and Environment Advisory Committee (SHEAC). The Chief Executive is a member of the SHEAC. The SHEAC has an overarching role in supporting SSE's commitment to be a sustainable company that makes a positive contribution to the communities and societies of which it is part. In fulfilling this role, the SHEAC reviews and oversees the implementation of key sustainability-related Group policies (that include water-related aspects), which in 2020/21 included the Safety and Health policy, Environment policy, and Sustainability policy. The SSEPD Board (SSE's two electricity network businesses have a dedicated governance framework underneath SSE plc Board reflecting business separation obligations under Ofgem licenses) is responsible for the oversight of SSEN's most

	material sustainability impacts (including severe weather and flooding). The Sustainability Sub-Committee of the SSEPD Board governs the sustainability strategies (including water-related aspects) of these businesses, comprising one non-Executive Director, the Group Chief Sustainability Officer and Executives from each of the representative businesses.

W6.2b

(W6.2b) Provide further details on the board's oversight of water-related issues.

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Scheduled - some meetings	Monitoring implementation and performance Reviewing and guiding annual budgets Reviewing and guiding business plans Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding strategy Reviewing and guiding corporate responsibility strategy Reviewing innovation/R&D priorities Setting performance objectives	The Board is advised on matters of safety, health and environment (SHE) by the Safety, Health and Environment Advisory Committee (SHEAC). Including the Committee Chair, membership comprises four non-Executive Directors and five senior executives. The SHEAC has an overarching role in supporting SSE's commitment to be a sustainable company that makes a positive contribution to the communities and societies of which it is part. In fulfilling this role, the SHEAC reviews and oversees the implementation of key sustainability-related Group policies (that include water-related aspects), which in 2020/21 included the Safety and Health policy, Environment policy, and Sustainability policy. SSE's Chief Sustainability Officer (reporting to the Chief Executive) is responsible for advising the Board and its Committees, the Group Executive Committee (GEC) and individual Business Units, on sustainability issues and strategy (including water-related aspects) . The Sustainability team supports and drives sustainability performance programmes across the organisation and reports progress on sustainability activities to the full range of SSE's stakeholders. For example, water disclosure was identified as an area for improvement and processes were established and implemented to improve the quantity and quality of water reporting by SSE businesses to external stakeholders.

W6.3

(W6.3) Provide the highest management-level position(s) or committee(s) with responsibility for water-related issues (do not include the names of individuals).

Name of the position(s) and/or committee(s)

Other committee, please specify

Group Executive Committee

Responsibility

Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

Quarterly

Please explain

The Group Executive Committee (GEC) is responsible for implementing the Group strategy set by the Board. Sustainability (including water-related aspects) are integrated and considered within the Group strategy. SSE's strategy is focused on the transition to net zero and its business model which embeds sustainability throughout is designed to ensure that in achieving its core business objectives, it creates value for shareholders and society in a sustainable way by developing, building, operating and investing in the electricity infrastructure and businesses that are needed in the transition to net zero. This includes the environment and water-related issues that impact its key stakeholders and wider society. The GEC also monitors the operational and financial performance of sustainability related activities across the organisation. It is supported by the Group Safety, Health and Environment Committee in relation to sustainability matters.

Name of the position(s) and/or committee(s)

Safety, Health, Environment and Quality committee

Responsibility

Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

Quarterly

Please explain

The Safety, Health and Environment Committee advises the Group Executive Committee on safety, health and environment (SHE) matters. It is responsible for SHE policies, targets and strategy, performance, awareness and action including water related issues.

W6.4

(W6.4) Do you provide incentives to C-suite employees or board members for the management of water-related issues?

	Provide incentives for management of water-related issues	Comment
Row 1	Yes	SSE's Exec Directors have part of their annual incentive linked to achievement of SSE's 2030 Goals, stakeholders and safety (inc. environmental performance). They can also have personal objectives linked to environmental performance. The Chief Executive and the Energy Director's 2020/21 performance assessments noted strong environmental performance. If a significant water-related issue or breach were to occur, this would be reflected in the personal performance assessment. SSE operates in countries with robust regulatory systems, meaning its hydro and thermal operations must meet licence/permit conditions set by environmental regulators. Its distribution business has regulatory incentives on customer minutes lost and interruptions, so it is incentivised to reinforce the network to mitigate the impact of flooding or severe weather. As such, water-related issues are managed well at business unit level and most incentives for managing water-related issues sit below the C-suite.

W6.4a

(W6.4a) What incentives are provided to C-suite employees or board members for the management of water-related issues (do not include the names of individuals)?

	Role(s) entitled to incentive	Performance indicator	Please explain
Monetary reward	Board/Executive board Chief Sustainability Officer (CSO)	Improvements in efficiency - direct operations Implementation of employee awareness campaign or training program Supply chain engagement Implementation of water-related community project	20% of the Exec Directors' Annual Incentive Plan (AIP) is linked to performance against SSE's 2030 Goals, one of which is to treble renewable output by 2030. While the majority of this output will be from SSE's wind portfolio, it also covers hydro output. 15% of the AIP is also made up of personal assessment, which takes account of environmental performance where relevant. A further 15% of the AIP is contributed to by measures against stakeholder engagement. One of these stakeholder groups is employees.

			In 2020/21 it was noted that there was strong overall safety performance including environmental performance. Environmental performance takes account of environmental incidents, which would pick up any water-related incidents as well.
Non-monetary reward	No one is entitled to these incentives		

W6.5

(W6.5) Do you engage in activities that could either directly or indirectly influence public policy on water through any of the following?

Yes, direct engagement with policy makers

Yes, trade associations

Yes, funding research organizations

W6.5a

(W6.5a) What processes do you have in place to ensure that all of your direct and indirect activities seeking to influence policy are consistent with your water policy/water commitments?

SSE's business strategy and its sustainability value guides its overall approach on environment and climate change issues. SSE has policy and public affairs specialists based across the UK and Ireland who engage constructively with legislators, officials and other policy makers on all aspects of environment and climate change policy. All communications across the business are managed by these experts and processes are in place to ensure consistency, quality, and accuracy of communications across SSE. These processes ensure approaches are consistent with SSE's Environment Policy.

Any issues of non-compliance once identified are handled through constructive engagement with the relevant regulator to ensure mitigations and remunerations are actioned. SSE has a commitment to responsible political engagement, and this is communicated through its political engagement policy. This policy is in place for all employees and is consistently applied across the SSE Group and governs both SSE's policies in this area – for example its policy on political contributions - and serves as a guide to how employees should conduct themselves when representing SSE to government or other institutions.

SSE has also signed up to the voluntary membership of the Chartered Institute of Public Relations' UK Lobbying Register. Alongside the SSE Group policy, employees are governed by its Code of Conduct. SSE also participates in mandatory registration for political engagement where such register exists.

W6.6

(W6.6) Did your organization include information about its response to water-related risks in its most recent mainstream financial report?

Yes (you may attach the report - this is optional)

sse-annual-report-2021 (3).pdf

W7. Business strategy

W7.1

(W7.1) Are water-related issues integrated into any aspects of your long-term strategic business plan, and if so how?

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	21-30	SSE's vision is to be a leading energy company in a net-zero world. Its purpose is to provide the energy needed today while building a better world of energy for tomorrow. Its strategy is to create value for shareholders and society from developing, building, operating and investing in electricity infrastructure and businesses needed in the transition to net zero. SSE's businesses involve a highly complementary mix of net-zero focused businesses. At the core of its business are a portfolio of world-class renewable generation assets and electricity network businesses. These businesses are key to enabling a net zero economy, have significant growth potential and, importantly, they fit together. The strategy is therefore focussed on developing, building, operating and investing in assets that create long-term value and are vital to the low-carbon transition. Increasing volumes of clean energy are required to enable a net zero economy. Flexible generation and storage are required to provide electricity when wind output is low. SSE's hydro generation assets (inc. pumped storage) are in a good position to take advantage of an increase in value of flexible output. In addition, SSE has further options through investment in flexible pumped storage such as an additional 1.5GW at Coire Glas. Therefore, SSE's

			hydro generation assets are well placed to provide this in an optimal way.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	21-30	SSE's strategy is a commitment to contribute substantively to the transition to a low-carbon electricity system. To support this strategy, SSE's core businesses will be focused on economically regulated electricity networks and renewable sources of energy, complemented by others that contribute to the transition to net zero. Flexible generation and storage are required to provide electricity when wind output is low. SSE's hydro generation assets (inc. pumped storage) are in a good position to take advantage of an increase in value of flexible output. SSE's strategy to achieve these objectives relies on two pillars: increasing the efficiency of current assets and developing new ones. • SSE has a consent for the development of 1.5GW (30GWh) Coire Glas scheme. SSE sees this has having an important role in providing critical flexibility to balance the increasing volumes of variable renewables. SSE is working closely with policy makers to encourage further clarity on the policy framework and route to market for such projects, and details on this are expected from BEIS and Ofgem later this year. • In recent years hydro-electric generation has demonstrated its capability in delivering substantial value through flexible operation enabled by enhancements to SSE's commercial management of these assets. These assets will continue to play an important role in providing low-carbon flexibility required for the net zero transition.
Financial planning	Yes, water-related issues are integrated	11-15	The expansion of SSE's renewable energy portfolio includes the development and investment of its hydro generation assets. Capital and operating investment decisions integrate water-related issues into the financial planning process. In addition, SSE's environmental improvement plan sets goals and targets on water-related issues. These water-related goals and targets require capital and operational investment, and these are included as part of annual financial plans and decision making.

W7.2

(W7.2) What is the trend in your organization's water-related capital expenditure (CAPEX) and operating expenditure (OPEX) for the reporting year, and the anticipated trend for the next reporting year?

Row 1

Water-related CAPEX (+/- % change)

-26

Anticipated forward trend for CAPEX (+/- % change)

Water-related OPEX (+/- % change)

2

Anticipated forward trend for OPEX (+/- % change)

Please explain

The CAPEX figures include: SSE's adjusted capital expenditure in its Thermal generation (all business activities); hydro generation CAPEX ; and flood protection spend in its electricity distribution networks business. Between 2019/20 and 2020/21, SSE's water-related CAPEX decreased by 26% (this reflects the impacts of the coronavirus pandemic).

The OPEX figures include: SSE's OPEX spend for its Thermal generation (water-related spend) (including deprecation); hydro generation OPEX (including deprecation); and costs of SSE's meteorological team. Between 2019/20 and 2020/21, SSE's water-related OPEX increased by just over 2%.

SSE is now in the second year of its £7.5bn capital investment plan to March 2025, of which almost 90% will be in SSE's core businesses of electricity transmission, electricity distribution and renewable sources of electricity.

W7.3

(W7.3) Does your organization use climate-related scenario analysis to inform its business strategy?

	Use of climate-related scenario analysis	Comment

Row 1	Yes	In Nov 2019, SSE published its scenario analysis report 'Transition to Net Zero: The Role of Gas'. This response for investors identifies how SSE's gas businesses align with its net-zero ambitions against three different warming scenarios. This report built upon SSE's 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. These reports identified the future role that thermal and renewables will play in a net zero world, with the development of low carbon options such as CCS and hydrogen crucial to a net zero world alongside flexible and renewable hydro-electric generation. SSE's networks business, has published two reports forecasting the impact of a net zero future and these identify the impact of electrification on the distribution network. This report also showed the importance of hydro generation and storage in these future scenarios.

W7.3a

(W7.3a) Has your organization identified any water-related outcomes from your climate-related scenario analysis?

Yes

W7.3b

(W7.3b) What water-related outcomes were identified from the use of climate-related scenario analysis, and what was your organization's response?

	Climate-related scenarios and models applied	Description of possible water-related outcomes	Company response to possible water-related outcomes
Row 1	Other, please specify National Grid's Future Energy Scenarios	The "Transition to Net Zero: The Role of Gas" and "Post Paris" scenario reports identified the future role that thermal and renewables (including hydro electric power stations) will play in a net zero world. For thermal this will involve the development of low carbon options such as CCS and hydrogen crucial to a net zero world. While these projects are crucial to progressively reduce carbon emissions associated with its activities, adoption of these technologies may change the water volumes abstracted/ returned in the	SSE is developing plans with partners to support the UK's transition to net zero and accelerate the decarbonisation of some of the UK's most carbon intensive regions. SSE Thermal's focus is on CCS and hydrogen. As part of these plans, SSE is working with regulators, policy-makers and other stakeholders on the impacts of these development on other environmental issues (including water-related impacts). In terms of flexible hydro generation: SSE continues to invest in its hydro

		future. In addition, these reports also showed the importance of hydro generation for flexibility and storage in future net zero scenarios.	generation assets to increase flexibility to the UK grid. SSE has a consent for the development of 1.5GW (30GWh) Coire Glas scheme. SSE sees this has having an important role in providing critical flexibility to balance the increasing volumes of variable renewables in a net zero world.

W7.4

(W7.4) Does your company use an internal price on water?

Row 1

Does your company use an internal price on water?

No, but we are currently exploring water valuation practices

Please explain

In 2017 SSE's Finance Director outlined SSE's latest initiative to quantify the natural capital of the seabed. This was launched as another phase of SSE's long term engagement programme to identify and quantify the impacts that its submarine electricity cables have on the marine environment and what mitigations it can adopt to ensure the most effective use and co-existence.

SSE continues to be an active participant in the Natural Capital Oceans protocol which is currently being development by the Institute of Chartered Accountants in England and Wales (ICAEW), Conservation International (CI), and the U.S. National Oceanic and Atmospheric Administration (NOAA). In the last 12 months SSE has presented its Marine Licences CBA method statement and CBA tool at two separate events. SSE's tool is widely regarded as one of the most advanced examples of quantification of the seabed and being used as a platform for other projects in both the public and private sector.

W8. Targets

W8.1

(W8.1) Describe your approach to setting and monitoring water-related targets and/or goals.

	Levels for targets and/or goals	Monitoring at corporate level	Approach to setting and monitoring targets and/or goals

Row 1	Company-wide targets and goals	Targets are monitored at the corporate level Goals are monitored at the corporate level	The Safety, Health and Environment Advisory Committee (SHEAC) (a sub-Committee of the Board) advises the Board on safety, health and environment maters. It is responsible for SHE policies, targets and strategy, performance, awareness and action. SSE has an environment improvement plan that has been agreed by the SHEAC. This plan involves water-related goals and targets. In 2020/21, SSE's group wide Environment policy was implemented locally by business units through environmental management systems. Water is included as part of this policy, processes and procedures. Specifically, SSE commits to "decreasing the impact of our resource consumption by: a) Minimising resource use and waste production. b) Engaging with the circular economy, by using reprocessed materials and ensuring our waste can readily be reused or recycled so far as is practical. c) Selecting materials that have sustainable lifecycle impacts."". The policy also commits to "Engage positively with key stakeholders on environmental issues and take responsibility within the wider community for improving the environmental impact of our business." The policy requires SSE's operations to, amongst other things, identify material impacts, manage environmental risks, engage positively with key stakeholders, work with suppliers, and integrate environmental improvements into everyday decision making. SSE's Group Climate Change policy also acknowledges the potential for water-related climate risks: "SSE assessed the physical impacts of climate change, including the increased likelihood of severe weather events, in its business continuity and crisis management plans, implementing climate adaptation plans. These group policies are signed by the Chief Executive Officer.

W8.1a

(W8.1a) Provide details of your water targets that are monitored at the corporate level, and the progress made.

Target reference number

Target 1

Category of target

Water pollution reduction

Level

Company-wide

Primary motivation

Reduced environmental impact

Description of target

This target is focused on pollution prevention to reduce impacts to the environment, protect the reputation of the company, reduce risk and ensure compliance with regulations.

Quantitative metric

Other, please specify

No pollution incidents - number

Baseline year

2019

Start year

2019

Target year

2021

% of target achieved

100

Please explain

In 2020/21, the number of environmental permit breaches as a result of SSE's activities totalled 4 compared to 10 in the previous year. In this period there were no major environmental incidents. A breakdown of environmental incidents can be found on p.98 of SSE's Sustainability Report 2021. SSE monitors, and reports water aspects in accordance with specific requirements of its environmental permits. SSE has a ISO14001 system in place to manage its activities. It also has emergency procedures, secondary containment, and water treatment facilities where required in relation to permit conditions. The increased transparency around water reporting has led to the improvement in the reliability of water data. In addition, SSE conducts internal water audits of water monitoring, data collection and reporting activities. Part of the improved due diligence process is the assurance of water data by PwC first in 2015/16 and the repeated assurance of water data by PwC from 2016/17 to 2020/21.

Target reference number

Target 2

Category of target

Water consumption

Level

Company-wide

Primary motivation

Cost savings

Description of target

SSE targets a 15% reduction in water consumption in its non-operational buildings up to 2023 (5-year plan). In year 4 (2020/21), SSE achieved its 2.5% target reduction in water consumption in its non-operational buildings. This was a result of the impact of the coronavirus pandemic and the low occupancy of buildings in 2020/21. SSE continues to implement a water efficiency, behavioural change and saving programme in its non-operational offices, data centres and depots.

Quantitative metric

% reduction in total water consumption

Baseline year

2017

Start year

2017

Target year

2023

% of target achieved

54

Please explain

SSE targets a 15% reduction in water consumption in its non-operational buildings up to 2023 (5 year plan). In year 4 (2020/21), SSE achieved its 2.5% target reduction in water consumption in its non-operational buildings. This was a result of the impact of the coronavirus pandemic and the low occupancy of buildings in 2020/21. SSE continues to implement a water efficiency, behavioural change and saving programme in its non-operational offices, data centres and depots.

W8.1b

(W8.1b) Provide details of your water goal(s) that are monitored at the corporate level and the progress made.

Goal

Watershed remediation and habitat restoration, ecosystem preservation

Level

Company-wide

Motivation

Water stewardship

Description of goal

Partnerships and collaborative working with regulatory bodies (such as SEPA) and other stakeholders to find the appropriate balance between maintaining renewable energy generation, security of supply and delivering local environmental improvements.

Baseline year

2016

Start year

2016

End year

2021

Progress

SSE has regular contact with regulators, Environment Agency, SEPA and Environment Protection Agency (Ireland) on water issues including consents, compensation flows and river basin/ ecosystem/ habitat management. SSE also maintains a strong presence at meetings that involve regulators and policy makers in relation to water issues for example SSE are engaging in workstreams associated with the recently published water abstraction plan for England and SSE meets regularly with SEPA to discuss the impact of water framework directive (WrFD) on its hydro operations up to 2027. The WrFD process with the current cycle runs in six year cycles, with the current cycle due to end in 2021.

W9. Verification

W9.1

(W9.1) Do you verify any other water information reported in your CDP disclosure (not already covered by W5.1a)?

Yes

PwC signed GHG & Water Assurance Statement 2021.pdf

W9.1a

(W9.1a) Which data points within your CDP disclosure have been verified, and which standards were used?

Disclosure module	Data verified	Verification standard	Please explain
W1 Current state	Water withdrawn, consumed and returned	ASAE3000	SSE calculates the water withdrawn, consumed and returned using UK

	by PwC and published externally.		Government (BEIS) reporting standards and is assured by PwC and published externally. This data is also included in section 5.

W10. Sign off

W-FI

(W-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.

W10.1

(W10.1) Provide details for the person that has signed off (approved) your CDP water response.

	Job title	Corresponding job category
Row 1	SSE's Finance Director	Chief Financial Officer (CFO)

W10.2

(W10.2) Please indicate whether your organization agrees for CDP to transfer your publicly disclosed data on your impact and risk response strategies to the CEO Water Mandate's Water Action Hub [applies only to W2.1a (response to impacts), W4.2 and W4.2a (response to risks)].

Yes

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I am submitting to	Public or Non-Public Submission
I am submitting my response	Investors	Public

Please confirm below

I have read and accept the applicable Terms