

## Welcome to your CDP Water Security Questionnaire 2020

### 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 principally in the generation, transmission and distribution of electricity; and also 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. In line with this strategy, SSE has set four core business goals for 2030 directly aligned to the United Nations' Sustainable Development Goals (SDGs) most material to its business. These are to:

- reduce the carbon intensity of electricity generated by 60% by 2030, compared to 2018 levels, to around 120gCO<sub>2</sub>/kWh (linked to SDG13 Climate action);
- develop and build by 2030 more renewable energy to contribute renewable output of 30TWh a year (linked to SDG7 Affordable and clean energy);
- build electricity network flexibility and infrastructure that helps accommodate 10 million electric vehicles in GB by 2030 (linked to SDG9 Industry, innovation and infrastructure); and
- be the leading company in the UK and Ireland championing Fair Tax and a real Living Wage. (linked to SDG8 Decent work and economic growth).

**SSE's core businesses**

SSE's core businesses are economically-regulated electricity networks and the provision of electricity from renewable sources. These electricity businesses have crucial roles to play in the transition to net-zero emissions.

- **SSEN Transmission:** owns, operates and maintains 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:** world-class development, construction and operation, and ownership, of assets that generate electricity from renewable sources across the UK and Ireland.

### **SSE's complimentary businesses**

SSE's core businesses are complimented by a range of other businesses that each have an important role in providing energy and related services for customers and stakeholders, and supporting the transition to net zero.

- **SSE Thermal:** generates electricity from thermal sources (coal, gas, oil and multifuel) in a reliable and flexible way, supporting the electricity systems in GB and Ireland.
- **SSE Business Energy (GB):** provides a route to market for the output from SSE's renewables and thermal businesses, and provides the sustainable energy services that customers increasingly seek.
- **SSE Enterprise:** provides innovative energy and utility services solutions.
- **Gas Storage:** owns and operates large underground caverns in which gas is stored.
- **SSE Airtricity:** provides energy and related services to households, businesses and public sector organisations across the island of Ireland.
- **Energy Portfolio Management:** delivers value adding energy trading services for business units in SSE and external customers.

### **CDP Water Report**

This is SSE's fifth year reporting on water-related issues. SSE has focused on the material water-related activities which take place through 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 (including 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 coals, gas, oil and multifuel operations use water in a variety of operations such as for cooling and as process water. Its last coal plant was closed on 31 March 2020.

**Electricity distribution network resilience:** Increased severity of extreme weather events such as storms and flooding can damage the network assets resulting in the loss of incentive revenue and increased maintenance.

**NOTE:** SSE's reported capacities are at 31 March 2020 in line with its Annual Report 2020. SSE's last remaining coal-fired generation power station was closed on 31 March 2020 and is recorded as 0MW in SSE's Annual Report 2020 and this has been reflected in W-EU0.1b. However, this plant was active during 2019/20 and its water-related 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	1,946
Lignite	0	0	0
Oil	985	10.5	238
Gas	4,311	46.1	15,155
Biomass	18	0.2	58
Waste (non-biomass)	68	0.7	395
Nuclear	0	0	0
Fossil-fuel plants fitted with carbon capture and storage	0	0	0
Geothermal	0	0	0
Hydropower	1,459	15.6	3,870
Wind	2,515	26.9	6,824

Solar	0	0	0
Marine	0	0	0
Other renewable	0	0	0
Other non-renewable	0	0	0
Total	9,356	100	28,486

## 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, 2019	March 31, 2020

## W0.3

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

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	<p>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 252 to 259 of SSE's Annual Report 2020.</p> <p>Scotia Gas Networks Limited (SGN): SGN is a Joint Venture and SSE does not have operational control over these operations. Covering Scotland, the south of England and part of North Ireland, SGN is a gas network company distributing natural and green gas to 5.9 million homes and businesses through a network of 75,000km of mains and services. SSE has 33.3% shareholding.</p>
Supply chain	The data for water withdrawal, discharge and consumption detailed in this report excludes data for SSE's suppliers.
Gas production activities	<p>SSE E&amp;P UK Ltd is the way through which SSE has equity shareholding in gas producing assets but SSE does not operate these assets so this is excluded from the disclosure. Although this company is wholly owned by SSE, its stake in any gas producing assets is significantly below 50%.</p> <p>Investment in these gas production assets is no longer consistent with SSE's strategy and focus on decarbonisation and they are accounted for as held for sale.</p>
SSE Energy Services	<p>In January 2020, the SSE Group completed the sale of SSE Energy Services to OVO. This business, which had been held for sale for the duration of financial year 2019/20, supplies gas and electricity to domestic customers in GB.</p> <p>SSE Energy Services has been excluded from the SSE Group's 2019/20 water assurance process, however material environmental KPIs</p>

	for SSE Energy Services between 1 April 2019 up to the date of sale in January 2020 are reported in the SSE Group's Sustainability Report 2020.
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## 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	<p>Sufficient volumes of quality freshwater are deemed vital for SSE's direct operations: SSE's hydro-electric activities (water is taken from rivers and lochs as a fuel source) and a proportion of thermal generation activities (quality freshwater is required to cool generation plants and as process water for a range of operations).</p> <p>In 2019/20 SSE Renewables (hydro and wind generation) accounted for 38% and SSE Thermal's electricity generation activities accounted for 11% of the Group's total adjusted operating profit. If sufficient volumes of quality freshwater are not available, it has potential to impact a considerable portion of SSE's generation output and operating profit.</p> <p>In 2019/20, hydro generation accounted for 16% of SSE's total capacity, and 14% of total output. SSE operates 1,459MW of hydro electricity generation capacity (inc pumped storage) which has been consistent for the last 10 years. Its focus has been to invest in existing hydro assets to ensure they perform over the coming decades in line with environmental obligations.</p> <p>SSE owns and operates gas, oil (last coal plant closed 31/03/20) and energy-from-waste</p>

			<p>generation assets in the UK and Ireland. In 2019/20 thermal generation accounted for 57% of SSE's total capacity and 62% (inc. coal) of total output. It is constructing the 840MW Keadby 2, which will be the most efficient CCGT in Europe. It has opportunities to develop more thermal generation with low-carbon pathways to support its net-zero ambitions but recognises this may result in increased water use in the cooling processes associated with carbon capture.</p> <p>In 2019/20 the vast majority of all water abstracted (27bn m3) was used in SSE's hydro generation (freshwater) and a small quantity was used in its thermal generation.</p> <p>In terms of SSE's activities, the main need for freshwater by suppliers is during the construction of assets, such as substations and wind farms. It is required for facilities and welfare on site.</p>
<p>Sufficient amounts of recycled, brackish and/or produced water available for use</p>	<p>Vital</p>	<p>Not very important</p>	<p>Sufficient volumes of brackish water are deemed vital for SSE's direct operations: a proportion of SSE's Thermal generation plant relies on cooling water for its operations from estuaries or the open sea (i.e. brackish water). In 2019/20 SSE Thermal's electricity generation activities accounted for 11% 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.</p> <p>SSE owns and operates gas, oil (last coal plant closed 31/03/20) and energy-from-waste generation assets in the UK and Ireland. The water withdrawn from brackish surface water/ seawater is for SSE's Keadby, Peterhead, Medway, Great Island, Tarbert gas-fired and Fiddlers Ferry coal-fired power stations.</p> <p>In 2019/20 SSE's thermal generation accounted for 57% of total capacity and 62% (inc. coal) of total output. It is currently constructing the 840MW Keadby 2, which will be the most efficient CCGT in Europe. It has opportunities to develop more thermal generation with low-</p>

		carbon pathways to support its net zero ambitions but recognises this may result in increased water use in the cooling processes associated with carbon capture.
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## 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	<p>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.</p> <p>The coverage is based on total generation output for the group (including coal).</p>
Water withdrawals – volumes by source	76-99	<p>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.</p> <p>The coverage is based on total generation output for the group (including coal).</p>
Water withdrawals quality	76-99	<p>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.</p> <p>The coverage is based on total generation output for the group (including coal).</p>



Water discharges – total volumes	76-99	<p>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.</p> <p>The coverage is based on total generation output for the group (including coal).</p>
Water discharges – volumes by destination	76-99	<p>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.</p> <p>The coverage is based on total generation output for the group (including coal).</p>
Water discharges – volumes by treatment method	76-99	<p>Hydro and thermal generation activities contribute over 99% of SSE's total water discharges in terms of volumes by treatment method. This data is gathered for both regulatory and operational purposes.</p> <p>The coverage is based on total generation output for the group (including coal).</p>
Water discharge quality – by standard effluent parameters	76-99	<p>Hydro and thermal generation activities contribute over 99% of SSE's total water discharges. This data is gathered for both regulatory and operational purposes.</p> <p>The coverage is based on total generation output for the group (including coal).</p>
Water discharge quality – temperature	51-75	<p>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.</p> <p>The coverage is based on total generation output for the group (including coal), over 60% is from thermal generation.</p>
Water consumption – total volume	51-75	<p>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</p>

		gathered for both regulatory and operational purposes.  The coverage is based on total generation output for the group (including coal), over 60% is from thermal generation.
Water recycled/reused	1-25	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 coverage is based on total generation output for the group (including coal).
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.

		<p>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.</p>
Sediment loading	100%	<p>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.</p> <p>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.</p>
Other, please specify	100%	<p>SSE’s hydro power stations operate in the north of Scotland in fresh water catchments. Salmon and sea trout return to breed in the rivers ever year. To safeguard the fish stocks SSE has fish ladders and fish screens to help the fish return upstream to breeding grounds. SSE closely monitors the operation of these fish passes and fish screens.</p> <p>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.</p> <p>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. We also have 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.</p>

## 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	27,757,120	Higher	<p>In 2019/20 SSE abstracted 27.8 billion m3 of water compared to 25.1 billion m3 in 2018/19. Over 97% of the total water abstracted by SSE in 2019/20 was used in its hydro generation operations to run through turbines to create electricity, and therefore was returned to the environment almost immediately. This rise was due to an increase in generation output from SSE’s hydro assets by nearly 10% from 3,543GWh to 3,870GWh between 2018/19 and 2019/20. Water withdrawals by SSE’s hydro generation plant increased by 10% in the same period and as a result the total water withdrawals for all SSE’s activities increased by over 9% in this period.</p> <p>3% of total water abstracted by SSE in 2019/20 was used in its thermal generation operations. For thermal generation plant 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. Overall, thermal output fell by 20% between the two periods. The water abstracted by SSE’s thermal generation plant decreased by around 24% in the same period reflecting the overall reduction in thermal generation output between 2018/19 and 2019/20.</p> <p>Thresholds for comparison between years are defined as: 'much higher' and 'much lower' involve an 'increase or decrease of 10% or greater' between the reporting periods; 'higher' and 'lower' involve a '3% to 9% change in volumes' in comparison to the previous reporting year; 'stayed the same' involves a 'zero to 2% increase or decrease' between years.</p>

			<p>SSE calculates the water withdrawn, consumed and returned using UK Government (BEIS) reporting standards and is assured by PwC and published externally. SSE's water reporting criteria (available publicly) details uncertainties in data, e.g. for thermal stations if there is a failure in the flowmeter PI system, there is a backup process agreed with the regulators which involves pump running hours.</p>
Total discharges	27,750,828	Higher	<p>In 2019/20 SSE discharged 27.8 billion m3 of water compared to 25.1 billion m3 in 2018/19. Over 97% of the total water abstracted by SSE in 2019/20 was used in its hydro generation operations, and therefore was returned to the environment almost immediately, meaning the discharge figures provided here are very similar to the withdrawal figures. The rise in discharge volumes was due to an increase in generation output from SSE's hydro assets by 10% from 3,543GWh to 3,870GWh between 2018/19 and 2019/20. Total water withdrawals and associated discharges increased by 9% in the same period.</p> <p>3% of total water abstracted by SSE in 2018/19 was used in its thermal generation operations. For thermal generation plant 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. Between 2018/19 and 2019/20, there was a 20% decrease in SSE's total thermal generation output in UK and Ireland. The water discharged by SSE's thermal generation plant decreased by 24% reflecting the overall reduction in thermal generation output between the two periods.</p> <p>Thresholds for comparison between years are defined as: 'much higher' and 'much lower' involve an 'increase or decrease of 10% or greater' between the reporting periods; 'higher' and 'lower' involve a '3% to 9% change in volumes' in comparison to the previous reporting year; 'stayed the same' involves a 'zero to 2% increase or decrease' between years.</p> <p>SSE calculates the water withdrawn, consumed and returned using UK Government (BEIS) reporting standards and is assured by PwC and published externally. SSE's water reporting criteria (available publicly) details uncertainties in data, e.g. for thermal stations if there is a failure</p>

			in the flowmeter PI system, there is a backup process agreed with the regulators which involves pump running hours.
Total consumption	6,918	Much higher	<p>Water consumed by SSE is used for cooling and as process water in its thermal power stations and amenities in its non-operational buildings. In 2019/20, SSE consumed 6.9 million m3, accounting for 0.02% of the total water withdrawals in this period. This compares to 5.4 million m3 in 2018/19, accounting for 0.02% of the total water withdrawals that year. SSE has water efficiency and saving programmes in its generation operations and non-operational offices, data centres and depots. The increase in water consumption was primarily due to a shift in generation output from generators that use water in a system that has only one cycle (called 'once through cooling water system'), to power stations with cooling towers, where water is recycled for cooling purposes. These recirculatory systems have higher evaporative losses and therefore consume more water. This change in generation mix was in line with expectations as SSE's approach was to use remaining coal stocks at Fiddler's Ferry ahead of its closure in March 2020. This resulted in SSE's total water consumption increasing by over 22% in 2019/20 compared to 2018/19.</p> <p>Thresholds are: 'much higher/ lower' to involve an 'increase/ decrease of 10% or greater than 10%' between reporting periods. For 'higher/lower' thresholds defined as a '3%-9% change'. The 'stayed the same' category is defined as a '0%-2% change'.</p> <p>SSE calculates the water withdrawn, consumed and returned using UK Government (BEIS) reporting standards and is assured by PwC and published externally. SSE's water reporting criteria (available publicly) details uncertainties in data, e.g. for thermal stations if there is a failure in the flowmeter PI system, there is a backup process agreed with the regulators which involves pump running hours. Water consumption in non-operational building is based on 21 sites which cover 75% of consumption based on employee occupation.</p>

## 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	Other, please specify Regulators - EA and SEPA	<p>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.</p> <p>None of SSE's thermal power stations have been identified as being located in areas of water stress under the Environment Agency's 'Restoring Sustainable Abstraction Programme'. 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.</p> <p>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. 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</p>

			water bodies under potential consideration for the third RBMP to identify and agree what, if any, operational changes may be necessary to meet WtFD requirements in the future.
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## 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	27,039,000	Much higher	<p>SSE’s hydro generation assets withdraw from freshwater lochs, and a number of its thermal assets withdraw from rivers. In 2019/20 SSE’s withdrawals from freshwater sources increased by 10% compared to the previous year. Over 97% of all water abstracted was used in SSE’s hydro generation and therefore was returned to the environment almost immediately. The rise in abstraction volumes was due to an increase in generation output from SSE’s hydro generation assets by nearly 10% between the two periods.</p> <p>Thresholds are: 'much higher/ lower' to involve an 'increase/ decrease of 10% or greater' between reporting periods. For 'higher/lower' thresholds defined as a '3%-9% change'. The 'stayed the same' category is defined as a '0%-2% change'.</p> <p>SSE calculates the water withdrawn, consumed /returned using UK Government (BEIS) reporting standards and is assured by PwC. Volume of water abstracted by hydro plant is measured via telemetry and for thermal plant is measured through flow meters.</p>



<p>Brackish surface water/Seawater</p>	<p>Relevant</p>	<p>716,083</p>	<p>Much lower</p>	<p>The water withdrawn from brackish water is for SSE's Keadby, Peterhead, Medway, Great Island, Tarbert gas-fired and Fiddlers Ferry coal-fired power stations.</p> <p>In 2019/20, the output from SSE's brackish water power plant rose by about 2% due to changes in the generation mix. But, the water abstracted by SSE's brackish water thermal power plant decreased by 23% in this period. The factor that will have had the most influence on this change is the type of cooling water system used by the assets operated, which moved from plant that use water in a system that has only one cycle (called 'once through cooling water system'), to power stations with cooling towers, where water is recycled for cooling purposes.</p> <p>This was in line with expectations as SSE used the remaining coal stocks at Fiddler's Ferry ahead of its closure in March 2020.</p> <p>Water abstracted is measured with flow meters. Water volumes are calculated using UK Government (BEIS) reporting standards and PwC assure the data.</p>
<p>Groundwater – renewable</p>	<p>Relevant</p>	<p>2,037</p>	<p>Higher</p>	<p>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 2018/19 and 2019/20 there was a 5% increase in the water withdrawn from groundwater (renewable) sources to supply SSE's private water supply business customers with water.</p> <p>Thresholds are: 'much higher/ lower' to involve an 'increase/ decrease</p>

				<p>of 10% or greater than 10%' between reporting periods. For 'higher/lower' thresholds defined as a '3%-9% change'. The 'stayed the same' category is defined as a '0%-2% change'.</p> <p>To compile SSE's volumetric data for water reporting, SSE calculates the water withdrawn, consumed /returned using UK Government (BEIS) reporting standards and is assured by PwC.</p>
Groundwater – non-renewable	Not relevant			
Produced/Entrained water	Not relevant			
Third party sources	Relevant	46.5	Much lower	<p>Water used in amenities (provided by a third party supplier) decreased by nearly 10% between 2018/19 and 2019/20. SSE has a water efficiency and saving programme in its non-operational offices, data centres and depots, and runs a behavioural change campaign in non-operational buildings to encourage water savings at work and at home. SSE monitors the water use in these non-operational buildings through meter readings. Total water use in non-operational buildings in 2019/20 was 46,494 m3. Water consumption reduced by 4,762 m3 compared to 2018/19, representing a 10% reduction in annual water use.</p> <p>Thresholds are: 'much higher/ lower' involve an 'change of 10% or greater' between reporting periods. For 'higher/lower' thresholds defined as a '3%-9% change'. The 'stayed the same' category is defined as a '0%-2% change'.</p> <p>SSE calculates the water withdrawn, consumed /returned using UK Government (BEIS) reporting standards and is assured by PwC.</p>

## 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	27,037,904	Much higher	<p>Water discharges to fresh water sources is undertaken by SSE's hydro generation assets, and the majority of its thermal assets. Over 97% of SSE's total water returned to the environment is by its hydro generation assets. Water discharged to fresh surface water increased by 10% between 2018/19 and 2019/20. The rise in discharge volumes to fresh surface water was due to an increase in output from SSE's hydro generation assets. Between 2018/19 and 2019/20, there was nearly a 10% increase in SSE's hydro generation output.</p> <p>Thresholds are: 'much higher/ lower' involve an 'change of 10% or greater' between reporting periods. For 'higher/lower' thresholds defined as a '3%-9% change'. The 'stayed the same' category is defined as a '0%-2% change'.</p> <p>SSE calculates the water withdrawn, consumed /returned using UK Government (BEIS) reporting standards and is assured by PwC. Water passing through hydro turbines is measured via telemetry and discharges by thermal plant through flow meters.</p>
Brackish surface water/seawater	Relevant	711,250	Much lower	<p>SSE's Keadby, Peterhead, Medway, Great Island, Tarbert gas-fired and Fiddlers Ferry coal-fired power stations discharge to brackish waters.</p> <p>Output from these stations in 2019/20 rose by about 2% due to a change in generation mix, but the water discharged by SSE's brackish water thermal generation plant fell by 23%. The factor that will have had the most influence on</p>

				<p>this is the type of cooling water system used by the assets operated, which moved from plant that use water in a system that has only one cycle ('once through cooling water system'), to power stations with cooling towers, where water is recycled for cooling purposes.</p> <p>This was in line with expectations as SSE used the remaining coal stocks at Fiddler's Ferry ahead of its closure in March 2020.</p> <p>Water discharges are measured using flow meters. Water volumes are calculated using UK Government (BEIS) reporting standards and PwC assure the data.</p>
Groundwater	Not relevant			
Third-party destinations	Relevant	1,720	About the same	<p>Water discharged to third-party destinations is from SSE's non-operational buildings and Slough Heat and Power biomass power station. For SSE's thermal generation activities some process water and cooling waters are discharged to an onsite wastewater treatment plant before discharged back to source. As a result, SSE includes these water discharges in its fresh surface water volume reported.</p> <p>Water discharged to third-party destination increased marginally by 1% between 2018/19 and 2019/20. The rise in discharge volumes to third party destinations was mainly a result of an increase in the water supplied to SSE's private water supply customers at Slough Heat and Power station.</p> <p>Water used and subsequently discharged to sewer in SSE's amenities decreased by nearly 10% between 2018/19 and 2019/20 reflecting the ongoing water efficiency, behavioural change and saving programme in its non-operational offices, data centres and depots.</p>

## 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	Lower	<p>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. Between 2018/19 and 2019/20 output from thermal power stations decreased. This resulted in less water being abstracted and ultimately returned to the environment by the thermal generation fleet between the two periods, and therefore amount of water abstracted decreased. As a result the water withdrawn intensity fell slightly from 0.042 megalitres/MWh to 0.041 megalitres/MWh during the two periods (water withdrawn intensity is calculated using total water abstracted - thermal (megalitres) against total thermal generation output (MWh)).</p> <p>Thresholds are: 'much higher/ lower' involve an 'change of 10% or greater' between reporting periods. For 'higher/lower' thresholds defined as a '3%-9% change'. The 'stayed the same' category is defined as a '0%-2% change'.</p> <p>To compile SSE's volumetric data for water reporting, SSE calculates the water withdrawn, consumed /returned using UK Government (BEIS) reporting standards and is assured by PwC.</p>

0.04	Other, please specify Total water returned	MWh	Lower	<p>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. Between 2018/19 and 2019/20 output from thermal power stations decreased. This resulted in less water being abstracted and ultimately returned to the environment by the thermal generation fleet between the two periods. As a result the water returned intensity fell slightly from 0.042 megalitres/MWh to 0.040 megalitres/MWh during the two periods (total water returned intensity is calculated using total water returned - thermal (megalitres) against total thermal generation output (MWh)).</p> <p>Thresholds are: 'much higher/ lower' involve an 'change of 10% or greater' between reporting periods. For 'higher/lower' thresholds defined as a '3%-9% change'. The 'stayed the same' category is defined as a '0%-2% change'.</p> <p>To compile SSE's volumetric data for water reporting, SSE calculates the water withdrawn, consumed /returned using UK Government (BEIS) reporting standards and is assured by PwC.</p>
0	Total water consumption	MWh	Higher	<p>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.</p> <p>Between 2018/19 and 2019/20 SSE's total thermal generation output decreased by 20%. Total water consumption reduced by 24%. Water consumption however increased reflecting a change in the generation mix and the different types of cooling water used by SSE's thermal generation activities. SSE's gas- and oil-fired generation output decreased from 20.1TWh to 15.4TWh whilst its coal-fired generation output increased from around 0.6GWh to 1.9GWh. The higher use of coal-fired generation in the generation mix meant that a recirculatory cooling water system was used, which has</p>

				<p>higher evaporative losses and therefore consumes more water. The increase in the total water intensity ratio from 0.0002 to 0.0004 between 2018/19 to 2019/20 was primarily a result of this switch to using power stations with cooling towers rather than power stations that use once through cooling water systems. This performance is in line with expectations as SSE's approach was to use the remaining coal stocks at Fiddler's Ferry ahead of its closure in March 2020. As a result of the closure of SSE's remaining coal-fired power station it is likely that SSE's total water consumption intensity ratio will fall.</p> <p>Total water consumed intensity is calculated using total water consumed - thermal (megalitres) against total thermal generation output (MWh).</p> <p>To compile SSE's volumetric data for water reporting, SSE calculates the water withdrawn, consumed /returned using UK Government (BEIS) reporting standards and is assured by PwC.</p>
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## W1.4

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

No, we do not engage on water with our value chain

## 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	Important but not an immediate business priority	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

	<p>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.</p> <p>SSE is currently working on a new sustainable procurement strategy which when implemented will require suppliers for which water is highlighted as high risk to answer additional questions on that issue in the PQQ stage.</p>
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## 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. 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.

### 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 system. SSE also monitors water intake to understand and monitor quality of water entering its power stations.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Community/stakeholder engagement Emergency preparedness	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 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

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##### 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 overall lead responsibility for environment issues (inc water-related aspects), including 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 Pitlochry.

In addition to, and complementary to the GPR assessment SSE also conducts a specialist TCFD climate-related risk and opportunity assessment , which takes climate change risk and goes into more detail to identify and assess the climate-related risks and opportunities, inc flooding and severe weather events.

SSE also implements an environmental management system (EMS) across 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 at a parent group-level for selected operations, which includes its thermal and renewable energy generation activities. In 2019/20, SSEN Transmission also became certified to ISO14001:2015. This system is audited annually by an external auditor.

## Supply chain

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### 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 based on 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 take on the obligation to meet requirements 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**

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**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 takes a 10 year rolling average of runoff for the operation 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 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 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.
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.

<p>Implications of water on your key commodities/raw materials</p>	<p>Relevant, always included</p>	<p>Production of electricity is SSE's core product and the availability of water is essential for SSE's thermal and hydro electricity generation activities.</p> <p>For SSE's hydro-generation activities, the amount of water available impacts the hydro generation efficiency. 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.</p>
<p>Water-related regulatory frameworks</p>	<p>Relevant, always included</p>	<p>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.</p> <p>In addition, SSE's generation assets will be subject to changes in national regulations that implement the requirements of the EU Water Framework Directive. For SSE's hydro generation operations this will impact future compensation levels and how SSE runs its generation plant. For SSE's thermal generation plant this may impact the environmental quality standards and potentially the water discharges from sites.</p> <p>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</p>

		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 on the River Lyon.
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
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Customers	Relevant, sometimes included	SSE has regular contact with its customers (this can be retail customers, households connected to the electricity grid and businesses) 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 fifth 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 five 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	<p>Suppliers and contractors are crucial for SSE's successful operation. Potential water-related 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.</p> <p>Where relevant, SSE also assesses the impact of water resources on the ability of its suppliers to provide us</p>

		with raw materials. For example, at its thermal generation plant, SSE understands the impact of flooding to its suppliers and its potential to impact the delivery of coal to its business. Going forward, SSE has closed its remaining coal-fired power station and therefore this will no longer be an issue.
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 (next 12 months), medium (within 5 years) and long term (6 years and beyond). Risk assessments are completed six monthly or more frequently 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 14% of the Group's electricity generation output in 2019/20. 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. 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

12

**% 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**

SSE's hydro generation facilities represent 16% of SSE's generation capacity and 14% of the Group's electricity generation output in 2019/20. 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. 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.**

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**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 its 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 2,533MW of on-and off-shore wind generation capacity.

In total, SSE has over 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**

Medium-low

**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.

Weather patterns affect renewable output and in any one year the potential adverse financial impact on renewable earnings is estimated to be around £100m. This figure represents a worst-case scenario of a combination of the worst year of hydro generation output and the worst year of onshore wind generation output from the past decade coinciding. The calculation is based on differences between average and lowest outputs over the last 10 years combined with reasonable assumptions for forward power prices.

**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, 2,533MW of on-and off-shore wind capacity in UK and Ireland and 1,459MW of hydro generation capacity (inc. pumped storage) in Scotland. This diversity enabled SSE in 2019/20 to achieve its highest-ever year of electricity generation from renewable sources with 11.4TWh of output compared to 10.4TWh in 2018/19 (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, 2,299MW of on-and off-shore wind capacity in UK and Ireland and 1,459MW of hydro generation capacity (inc pumped storage) in Scotland. This diversity enabled SSE to achieve its highest ever output from renewable energy in 2019/20 of 11.4TWh

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.

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**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 WFD requirements in the future.

**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 and therefore are presented as zero. 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.

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### 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). In late February/early March 2018, SSEN's Distribution business was impacted by severe weather

conditions when a cold wave, named the 'Beast from the East', combined with Storm Emma to bring high winds and significant snowfall to the UK and Ireland impacting 22,500 customers in its central southern England network area.

**Timeframe**

Current up to one year

**Magnitude of potential impact**

Low

**Likelihood**

Very likely

**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 assumes that for three years fault costs will increase by 10% with a corresponding 10% decrease in annual incentive revenue; and for a further three years fault costs will increase by 20% with a 20% annual incentive revenue reduction.
- The second scenario assumes that an additional 10% fault cost will be 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.

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 short- and long-term weather conditions; has crisis management and business continuity plans; and has a continuous programme of investment in strengthening and improving the resilience of the electricity network. Short- and long-term monitoring of weather conditions enables 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. For example, SSEN invested £4.5m to elevate a substation above the flood risk level near Osney Island, a riverside village in Oxfordshire, to safeguard it from the risk of flood damage. The works involve replacing outdoor equipment which is sensitive to flood levels by constructing an elevated building on part of the existing site protecting power supply to over 10,000 customers.

Another example in 2019, SSEN Transmission saw an increase in the number and impact of wildfires on its electricity network infrastructure in the north of Scotland. SSEN 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.

Asset resilience is currently being reviewed using climate projections for the next 30 years and 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. using the Met Office's Climate Projections. This process is part of the UK Government's assessment of critical infrastructure which takes place every five years.

### **Cost of response**

57,400,000

**Explanation of cost of response**

Examples of the cost to management of directly mitigating severe adverse weather in SSEN is the combination of costs associated with investment in overhead line replacement and refurbishment (£26.5m), tree cutting (which is fundamental to the ongoing maintenance of SSE’s assets) (£26.6m) and flood protection (£4.3m). The combination of these costs was £57.4m in 2019/20 as reported in Sustainability Report 2020.

**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.**

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### **Type of opportunity**

Products and services

### **Primary water-related opportunity**

Increased sales of existing products/services

### **Company-specific description & strategy to realize opportunity**

Decarbonisation of the electricity system 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. 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 is investing in a diversified generation portfolio of renewable and flexible generation assets (including hydro generation assets). 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 is continuing to invest in a diversified generation portfolio of renewable and flexible generation assets (including hydro generation assets). For example, in 2019/20 SSE commissioned Beatrice (588MW capacity) offshore wind farm and has over 7GW of new renewable projects in development.

SSE also 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 600MW of pumped storage.

Finally in order to realise this strategy, in 2019/20, 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 14% of the Group's electricity generation output in 2019/20. Generation output from SSE's hydro generation assets by nearly 10% between 2018/19 and 2019/20. In addition, in 2019/20 SSE Renewables' (hydro and wind generation) accounted for 38% of the Group's total adjusted operating profit.

**Estimated timeframe for realization**

1 to 3 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)**

450,000,000

**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 600MW of pumped storage. 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 Coire Glas Pumped Hydro plant could potentially earn additional revenue from 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 £450m 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)**

27,035,550

**Comparison of total withdrawals with previous reporting year**

Much higher

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

27,035,550

**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)**

27,035,550

**Comparison of total discharges with previous reporting year**

Much higher

**Discharges to fresh surface water**

27,035,550

**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 the total water abstracted by SSE in 2019/20 was used in its hydro generation operations to run through turbines to create electricity, and therefore was returned to the environment almost immediately. SSE reuses large amounts of water as part of the 'cascade' schemes (which are in place for the majority of SSE's larger hydro schemes such as Conon, Ness, Tummel and Beaully) where the water is used multiple times at different power stations as it flows downstream.

SSE's hydro generation assets output increased by nearly 10% from 3,543GWh to 3,870GWh between 2018/19 and 2019/20. As a result, water withdrawals and discharges by SSE's hydro generation plant increased by 10% in the same period.

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**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**

United Kingdom of Great Britain and Northern Ireland

Other, please specify

River catchments of England

**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)**

721,571

**Comparison of total withdrawals with previous reporting year**

Much lower

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

3,450

**Withdrawals from brackish surface water/seawater**

716,083

**Withdrawals from groundwater - renewable**

2,037

**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)**

715,278

**Comparison of total discharges with previous reporting year**

Much lower

**Discharges to fresh surface water**

2,354

**Discharges to brackish surface water/seawater**

711,250

**Discharges to groundwater**

0

**Discharges to third party destinations**

1,674

**Total water consumption at this facility (megaliters/year)**

6,292

**Comparison of total consumption with previous reporting year**

Much higher

**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. Output from SSE's thermal generation power stations decreased by 20% between 2018/19 and 2019/20. The water abstracted and discharged by SSE's thermal generation plant decreased by around 24% in the same period reflecting the overall reduction in thermal generation output between 2018/19 and 2019/20.

The water that is consumed is used as process water in SSE's thermal power stations. The increase in water consumption was primarily a result of the shift in generation output from generators that use water in a system that has only one cycle (called a 'once through cooling water system'), to power stations with cooling towers, where water is recycled for cooling purposes. These recirculatory systems have higher evaporative losses and therefore consume more water. This change in generation mix was in line with expectations as SSE's approach was to use the remaining coal stocks at Fiddler's Ferry ahead of its closure in March 2020. This resulted in SSE's total water consumption in its thermal power stations increasing by over 24% in 2019/20 compared to 2018/19.

For water consumed it is the amount of water that is abstracted less the amount of water returned to the environment.

**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)**

46.5

**Comparison of total withdrawals with previous reporting year**

About the same

**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**

46.5

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

46.5

**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**

46.5

**Total water consumption at this facility (megaliters/year)**

46.5

**Comparison of total consumption with previous reporting year**

Lower

**Please explain**

Water used in amenities decreased by nearly 10% between 2018/19 and 2019/20. SSE has a water efficiency and saving programme in its non-operational offices, data centres and depots, and also runs a behavioural change campaign in its non-operational buildings to encourage water savings at work and at home. 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%. Total SSE non-operational buildings water use in 2019/20 was 46,494 m3. Water consumption reduced by 4,762 m3 compared to 2018/19, representing nearly a 10% reduction in annual water use.

**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).

**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).

### **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).

### **Water discharges – total volumes**

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**% verified**

76-100

**What standard and methodology was used?**

Assured by PwC to the ISAE3000 standard and ISAE3410 (assurance engagements on greenhouse gas statements).

### **Water discharges – volume by destination**

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**% verified**

76-100

**What standard and methodology was used?**

Assured by PwC to the ISAE3000 standard and ISAE3410 (assurance engagements on greenhouse gas statements).

### **Water discharges – volume by treatment method**

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**% verified**

Not verified

**Water discharge quality – quality by standard effluent parameters**

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**% verified**

Not verified

**Water discharge quality – temperature**

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**% verified**

Not verified

**Water consumption – total volume**

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**% verified**

76-100

**What standard and methodology was used?**

Assured by PwC to the ISAE3000 standard and ISAE3410 (assurance engagements on greenhouse gas statements).

**Water recycled/reused**

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**% verified**

76-100

**What standard and methodology was used?**

Assured by PwC to the ISAE3000 standard and ISAE3410 (assurance engagements on greenhouse gas statements).

## 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	Commitments beyond regulatory compliance Commitment to water-related innovation Commitment to stakeholder awareness and education Commitment to water stewardship and/or collective action Recognition of environmental linkages, for example, due to climate change	<p>In 2019/20, SSE’s Environment and Climate Change policy provided the policy framework on climate change and the environment for all of its business operations. This policy is implemented locally by business units through environmental management systems. Water is included as part of this policy, processes and procedures. Specifically, SSE commits to “reduce carbon, energy and water impacts and look at new technologies to support low carbon and less water intensive energy systems in the future”. 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. The Environment and Climate Change Policy was a group policy, signed by the Chief Executive Officer.</p> <p>For 2020/21 onward SSE has a separate Environment policy and Climate Change policy.</p>

### 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)	<p>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.</p> <p>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 2019/20 included the Safety and Health policy, Environment and Climate Change policy, and Sustainability policy.</p>

## 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	<p>Monitoring implementation and performance</p> <p>Reviewing and guiding annual budgets</p>	<p>The Board is advised on matters of safety, health and environment (SHE) by the Safety, Health and Environment Advisory Committee (SHEAC). The SHEAC contains five independent non-Executive Directors and five Executive Directors. 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,</p>

		<p>Reviewing and guiding business plans</p> <p>Reviewing and guiding major plans of action</p> <p>Reviewing and guiding risk management policies</p> <p>Reviewing and guiding strategy</p> <p>Reviewing and guiding corporate responsibility strategy</p> <p>Reviewing innovation/R&amp;D priorities</p> <p>Setting performance objectives</p>	<p>the SHEAC reviews and oversees the implementation of key sustainability-related Group policies (that include water-related aspects), which in 2019/20 included the Safety and Health policy, Environment and Climate Change policy, and Sustainability policy.</p> <p>In addition, SSE's Chief Sustainability Officer and Managing Director for Corporate Affairs and Sustainability (reporting to the Chief Executive) identifies specific sustainability issues arising from SSE's responsibilities to its customers, communities, employees and shareholders and develops policy in line with the values agreed by the Board. 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.</p>
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### 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 low-carbon transition and its Sustainability Framework is designed to ensure that in achieving its core business objectives, by conducting itself in a way that respects the social contract it has with society and creates long term value. 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.

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**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 2019/20 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 2019/20 it was noted that there was

			'continued improvement in driving safety and environmental performance'. Environmental performance takes account of environmental incidents, which would pick up any water-related incidents as well.
Non-monetary reward			

## 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 (one of six of its core values) guides its overall approach on environment and climate change issues. SSE has policy and public affairs specialists based in Glasgow, Edinburgh, London, Belfast and Dublin who engage openly and constructively with legislators, officials and other policy makers on all aspects of environment (including water) 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. 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 exist (e.g. SSE's European Declaration).

## 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)

## 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	<p>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, operating and owning energy and related infrastructure in a sustainable way.</p> <p>At the core of its business are a portfolio of world-class renewable generation assets and electricity network businesses. These businesses are particularly well placed to seize the opportunities presented by decarbonisation and electrification. The strategy is therefore focussed on developing, operating and owning assets that create long-term value and are vital to the low-carbon transition. Increasing volumes of wind energy coming onto the UK energy system will create the need for more flexibility in the form of energy storage, and SSE's hydro generation assets are well placed to provide this in an optimal way.</p>

<p>Strategy for achieving long-term objectives</p>	<p>Yes, water-related issues are integrated</p>	<p>21-30</p>	<p>At the heart of 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 other flexible electricity generation.</p> <p>The transition to a low-carbon economy will lead to increasing volumes of wind energy coming onto the UK energy system and this will create the need for more flexibility in the form of energy storage. SSE's fast-acting flexible generators like hydro and pumped storage are able provide this flexibility in an optimal way. Hydro generation is unique in SSE's portfolio, as it can be characterised as renewable and flexible. SSE has 400MW of run-of-river hydro, 750 MW of flexible hydro and 300 MW of pumped storage. These hydro assets operate flexibly as 'Britain's biggest battery'.</p> <p>SSE is investing to upgrade these 'natural batteries' and ensure that they are even more relevant. This investment in these critical assets will create value for shareholders in terms of returns and create value for society in terms of its contribution to the achievement of the all-important goal of a low carbon economy.</p>
<p>Financial planning</p>	<p>Yes, water-related issues are integrated</p>	<p>11-15</p>	<p>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.</p> <p>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.</p>

## 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)**

4

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

**Water-related OPEX (+/- % change)**

2.3

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

**Please explain**

The capex figures include: SSE's adjusted capital expenditure its Thermal generation (all business activities); hydro generation capex; and flood protection spend in its electricity distribution networks business. Between 2018/19 and 2019/20, SSE's water-related capex increased by 4%.

The opex figures include: SSE's opex spend for its Thermal generation (water-related spend) (inc. dep'n); hydro generation opex (inc. dep'n); and costs of SSE's meteorological team. Between 2018/19 and 2019/20, SSE's water-related opex increased by just over 2%.

SSE plans to invest capital and investment of around £7.5bn net in five years to 2024/25, focused on core strategic decarbonisation projects.

**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 most recent scenario analysis report 'Transition to Net Zero: The Role of Gas'. This report responded to investors keen to understand how SSE's gas businesses align with its net-zero ambitions. It focused on SSE's gas related businesses in the UK and Ireland that are most impacted by market and policy changes. The resilience of these businesses was assessed against three different warming scenarios (1.5°C, 1.5°C low nuclear & 4°C) over the short-, medium- and long-term. This 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. Both analyses demonstrated that SSE's businesses are resilient to, and have a key role to play in, different warming scenarios, with future options for development that align with a net zero pathway highlighted. SSE will regularly monitor its scenario analysis and seek to review them in 2021.
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### W7.3a

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

No

### 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 sea bed 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	<p>The Safety, Health and Environment Advisory Committee (SHEAC) (a sub-Committee of the Board) advises the Board on safety, health and environment matters. 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.</p> <p>In 2019/20, SSE's group wide Environment and Climate Change 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 “reduce carbon, energy and water impacts and look at new technologies to support low carbon and less water intensive energy systems in the future”. 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. The Environment and Climate Change Policy is a group policy and is signed by the Chief Executive Officer.</p>

## 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.

The target is - no pollution incidents.

**Quantitative metric**

Other, please specify

No pollution incidents - number

**Baseline year**

2019

**Start year**



2019

**Target year**

2020

**% of target achieved**

100

**Please explain**

In 2019/20 SSE had no pollution incidents.

SSE monitors, measures 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 response procedures, secondary containment, and water treatment facilities where required in relation to permit conditions.

For the hydro generation business there is regulatory requirements for the flow rates (compensation flows) and these are monitored and reported to the relevant regulator.

The increased transparency around water reporting has led to the improvement in the reliability and accuracy of water data. In addition, SSE conducts internal water audits of water monitoring, data collection and reporting activities.

External audit is also part of the improved due diligence process, with assurance of water data by PwC for the first time in 2015/16 and the repeated assurance of water data by PwC from 2016/17 to 2019/20.

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**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 3 (2019/20), SSE achieved its 2.5% target reduction in water consumption in its non-operational buildings. This was a result of working differently and the introduction of water saving initiatives.

**Quantitative metric**

% reduction in total water consumption

**Baseline year**

2017

**Start year**

2017

**Target year**

2023

**% of target achieved**

60

**Please explain**

SSE targets a 15% reduction in water consumption in its non-operational buildings up to 2023 (5 year plan). In year 3 (2019/20), SSE achieved its 2.5% target reduction in water consumption in its non-operational buildings. This was a result of working differently and the introduction of water saving initiatives.

## W8.1b

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

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**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

### 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 by PwC and published externally.	ASAE3000	SSE calculates the water withdrawn, consumed and returned using UK 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	Chief Sustainability Officer	Chief Sustainability Officer (CSO)

## 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

## SW. Supply chain module

### SW0.1

**(SW0.1) What is your organization’s annual revenue for the reporting period?**

	Annual revenue
Row 1	

### SW0.2

**(SW0.2) Do you have an ISIN for your organization that you are willing to share with CDP?**

No



## SW1.1

**(SW1.1) Could any of your facilities reported in W5.1 have an impact on a requesting CDP supply chain member?**

No, CDP supply chain members do not buy goods or services from facilities listed in W5.1

## SW1.2

**(SW1.2) Are you able to provide geolocation data for your facilities?**

	Are you able to provide geolocation data for your facilities?	Comment
Row 1	Yes, for all facilities	

## SW1.2a

**(SW1.2a) Please provide all available geolocation data for your facilities.**

Identifier	Latitude	Longitude	Comment
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## SW2.1

**(SW2.1) Please propose any mutually beneficial water-related projects you could collaborate on with specific CDP supply chain members.**

## SW2.2

**(SW2.2) Have any water projects been implemented due to CDP supply chain member engagement?**

No



## SW3.1

**(SW3.1) Provide any available water intensity values for your organization’s products or services.**

## Submit your response

**In which language are you submitting your response?**

English

**Please confirm how your response should be handled by CDP**

	<b>I am submitting to</b>	<b>Public or Non-Public Submission</b>	<b>Are you ready to submit the additional Supply Chain Questions?</b>
I am submitting my response	Investors Customers	Public	Yes, submit Supply Chain Questions now

**Please confirm below**

I have read and accept the applicable Terms