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# GREEN BOND REPORTING CRITERIA



# SCOPE

This covers investments in Eligible Green Projects as detailed in the [2017 Green Bond Framework](#), [2019 Green Bond Framework](#) and [2021 Green Bond Framework](#) refinanced by the issuance of SSE plc's (SSE) four Green Bonds.

	GREEN BOND 2017 GREEN BOND 1	GREEN BOND 2018 GREEN BOND 2
<b>ISSUER</b>	SSE PLC	SSE PLC
Currency	EURO	EURO
ISIN	XS1676952481	XS1875284702
Size	€600,000,000	€650,000,000
GBP:EUR at issuance	1.09404	1.0990
Sterling Equivalent	£548,426,017.30	£591,446,676.80
Pricing Date	30 August 2017	28 August 2018
Settlement Date	6 September 2017	4 September 2018
Maturity Date	6 September 2025	4 September 2027
Coupon	0.875%	1.375%
	GREEN BOND 2019 GREEN BOND 3	GREEN BOND 2021 GREEN BOND 4
<b>ISSUER</b>	SSE PLC	SSE PLC
Currency	GBP	GBP
ISIN	XS2057092236	XS2321663473/ XS2322933495
Size	£350,000,000	£500,000,000 (Dual Tranche) (£250,000,000 per tranche)
GBP:EUR at issuance	N/A	N/A
Sterling Equivalent	£350,000,000	£500,000,000
Pricing Date	20 September 2019	17 March 2021
Settlement Date	27 September 2019	24 March 2021
Maturity Date	27 September 2035	24 March 2028/ 24 March 2036
Coupon	2.25%	1.5%/ 2.125%



# GREEN BOND FRAMEWORK

Under SSE's Green Bond Framework, SSE committed to the following reporting:

## Allocation Reporting

Allocation reporting will be available to investors within one year from the date of each Green Bond issuance as specified in the Green Bond Framework. There will be one report after issuance, as the proceeds will be used for the refinancing of projects, thus the whole amount raised will be employed at settlement. Where SSE refinances its equity share within a joint venture it will be reported on an equity stake basis. Should there be any variance in the initial allocation reporting, such as divestments, SSE will duly update the allocation report within one year in its Annual Sustainability Report on SSE's website which is published every June following the end of the financial reporting period of 31 March.

Independent auditors or any other third-party appointed by SSE will verify the internal tracking method and the allocation of funds from the Green Bond proceeds to the Eligible Green Projects.

## Impact Reporting

SSE will provide investors with information on its investor website and within its Annual Sustainability Report on SSE's website regarding the environmental impact of the category of projects on an annual basis until the maturity of the Green Bond. This reporting will include relevant environment metrics related to the eligible Green Bond projects, for example the expected annual carbon saved, expected renewable electricity capacity and output.

For the environmental impact metrics of renewable electricity capacity and output, and carbon saved, reporting will be on the basis of SSE's equity stake. The environmental impact reporting for the Caithness-Moray transmission link and other Scottish Hydro Electric Transmission plc ("SHET") Eligible Green Projects connecting renewable generation to the network is reported qualitatively to reflect the nature of the projects.

## Methodology Statement of Proceeds

For each Green Bond all proceeds were fully employed at settlement. This is confirmed by

taking the total capital expenditure on the eligible green projects and comparing this with the proceeds of the Green Bond. The total values of each Green Bond's proceeds are sourced from SSE's project accounting system, TM1.

Table 2 in Annex 1 lists the eligible green projects and confirms the proceeds of the Green Bond that was allocated to the eligible projects issued on 27 September 2019 (Green Bond 3, GB3).

Table 3 in Annex 1 lists the eligible green projects and confirms the proceeds of the Green Bond that was allocated to the eligible projects issued on 24 March 2021 (Green Bond 4, GB4).

## Green Bonds 1 & 2

For Green Bonds 1 and 2, the majority of the onshore wind farms listed are 100% owned by SSE. The table details the restated allocation of proceeds and total capital spend arising from the sale of equity stakes in these wind farms:

- SSE sold a 49.9% stake in the Dunmaglass wind farm in 31 March 2019, with £85.5m reallocated from Dunmaglass to Bhlairaidh wind farm.
- As at 31 March 2019 SSE's equity stake was 50.1% in Clyde Extension<sup>1</sup>, Stronelairg and Dunmaglass<sup>2</sup> wind farms.
- As at 31 March 2020 SSE no longer had an equity stake in Slieve Divena 2 wind farm with the completion of the sale of the wind farm in March 2020.

All projects were complete as at 31 August 2018 apart from Stronelairg wind farm and the Caithness Moray Transmission Link. For Stronelairg capital expenditure at 31 August 2018 was £177.6m (based on 100% ownership), the project completed in December 2018. On 11 January 2019 SSE confirmed the completion of the Caithness Moray high-voltage direct current (HVDC) connection which is listed on page 56 of the 2017/18 Annual Report. For Caithness-Moray capital expenditure was £943m.

<sup>1</sup> For the Clyde Extension, SSE's equity stake had been reduced to 65%, as was announced in RNS Number 6396M on 1 August 2017, the joint venture partners then exercised their right to purchase a further 14.9% equity stake on 30 May 2018, as noted on page 70 of the 18/19 Interim Statement.

<sup>2</sup> On 1 February 2019 in RNS Number 8013O it was announced that an agreement had been reached to sell a 49.9% stake in Stronelairg and Dunmaglass wind farms, the transaction completed on 31 March 2019.

Details of SSE's equity holdings for each wind farm are provided in SSE's annual and interim statements. Strathy North is listed as a SSE wind farm on page 28 of the 15/16 Interim Statement the other wind farms are all listed on page 25 of SSE's 17/18 Interim Statement. Comhlacht Gaoith Teoranta is part of the Galway Wind Park and 100% owned by SSE, further details can be found in the [SSE Press Release dated 16th June 2017](#).

### Capacity Reporting (MW – megawatts), Onshore wind farm projects

For the purposes of reporting capacity for onshore wind farm projects, the capacity is taken from the total installed capacity. This is calculated using the sum of the number of operational turbines installed within each wind farm multiplied by their given turbine rating. The capacity for operational Onshore and Offshore Wind Farms and those still under construction listed as eligible green projects in the Green Bond Framework is taken from SSE's published Interim Statements referenced under Statement of Proceeds section.

### Capacity Reporting (MW – megawatts, and MVA – mega volt amperes), Transmission projects

The primary reason for transmission projects in the SHET network region is to support the expected increase in renewable generation connecting to the transmission network. Transmission projects can involve the construction of new transmission assets or the upgrade or reinforcement of existing infrastructure to support new renewable connections. These different types of transmission projects are classified by Ofgem in accordance with their project classification criteria.

The capacity of new renewable generation connection projects are reported in MW and the capacity of new or upgraded transmission assets on the AC system are reported as MVA; which represents the new or increased power rating of the asset needed to enable the power from additional renewable energy to flow through the existing AC system.

For the purposes of reporting, the MW capacity of generation projects is taken from the total installed capacity as detailed by the wind farm owner and as reported in the Transmission Entry Capacity (TEC) register and Embedded Register by the electricity system operator (ESO). For HVDC systems, there is only the transfer of active power (in MW) rather than in Alternating Current (AC) systems which transfers both active and reactive power (in MVA). For HVDC systems the power rating of the new assets is therefore reported in MW. For new or upgraded transmission assets on the AC system, the new or increased asset power rating is therefore reported in MVA which describes the physical limit of the asset considering both MW and MVA transfer.

### Output Reporting (GWh – gigawatt hours), Onshore wind farm projects

Output (or volume) is taken from the 1 April to 31 March of the reporting year. The output reporting is based on SSE's equity stake during the Green Bond reporting period (for example 50.1% for Clyde Extension, Stronelairg and Dunmaglass). The output volumes include projects that are operational. For projects that move from construction to operation during the reporting period, output data is taken from the date of commissioning.

The output refers to the generation from the wind turbines at the Notional Balancing Point. This is where demand is managed and is comparable across the industry for trading and monitoring.

For the Clyde Extension the output is estimated based on the Renewable Obligation Certificate banding to determine the split of the total output relevant to the Clyde Extension from the windfarm which was an extension of an already existing windfarm (Clyde).

Output data is based on meter points at the Notional Balancing Point. This data is collected by Elexon, stored on SONET (an external database that stores electricity settlement data) and managed through an internal finance management system by business finance at SSE.

### Environmental impact reporting (tCO<sub>2</sub>e – tonnes of carbon dioxide equivalent) for onshore wind farm projects

The carbon emissions associated with the production of electricity at a wind farm are assumed to be zero.

The GHG standard project protocol states that for wind power projects the primary effect of these projects is to reduce the combustion emissions from generating grid-connected electricity. For these projects the baseline (or counterfactual) is estimated from the GHG emission rates of existing sources of production that will be displaced or reduced.

SSE's methodology calculates the carbon emissions saved as a result of the renewable energy project by comparing its likely emissions to those of a marginal grid electricity mix, using the UK government's Greenhouse Gas (GHG) reporting guidance and conversion factors. To do this the output from the 1 April 2020 to 31 March 2021 for each windfarm is taken and multiplied by the marginal grid conversion factors (as stated by UK government GHG conversion factors, May 2022). The electricity generated conversion factor represents the average emissions associated with the UK electricity supplied to the grid that is purchased by organisations and the UK transmission and distribution factor accounts for the grid losses (the

<sup>1</sup> For the Clyde Extension, SSE's equity stake had been reduced to 65%, as was announced in RNS Number 6396M on 1 August 2017, the joint venture partners then exercised their right to purchase a further 14.9% equity stake on 30 May 2018, as noted on page 70 of the 18/19 Interim Statement.

<sup>2</sup> On 1 February 2019 in RNS Number 80130 it was announced that an agreement had been reached to sell a 49.9% stake in Stronelairg and Dunmaglass wind farms, the transaction completed on 31 March 2019.

<sup>3</sup> RNS 8966M confirms the completion of the Caithness Moray high-voltage direct current connection, which is 100% owned by SSE Networks Limited a 100% subsidiary of SSE plc.

energy losses that occur getting the electricity from the power plant to the organisations that purchase it).

The carbon emissions reporting is based on SSE's equity stake during the Green Bond reporting period (for example 50.1% for Clyde Extension, Stronelairst and Dunmaglass).

### **Scottish Hydro Electric Transmission plc (SHET) transmission projects connecting renewable generation to the network capacity (MW – megawatts, and MVA – mega volt amperes).**

The latest investments in transmission networks in the north of Scotland are primarily required to provide energy transportation between Scottish renewable generation supply and the UK electricity customer demand.

The Transmission networks project that features in all Green Bonds Caithness-Moray is a HVDC technology that is used to transmit power through 113km of subsea cable beneath the Moray Firth seabed between the new converter stations at Spittal in Caithness and Blackhilllock in Moray. For the Caithness-Moray transmission link, the green impact refers to the 1,200MW<sup>4</sup> of capacity to transmit power from the north of Scotland across the UK. The project has already facilitated the connection of 985MW of renewable generation to connect to the national grid. This includes turbines from Beatrice offshore wind farm (588MW capacity) and Dorenell onshore wind farm (177MW capacity on completion).

For the SHET projects used to allocate proceeds from GB3 and GB4, the green impact relates to 5,947.7MW (including Caithness-Moray transmission link and Shetland transmission links) of capacity for renewable generation connections with a further 6,728.0MVA of new or upgraded transmission infrastructure to accept additional power from new renewable projects and to transmit that power from the north of Scotland to the appropriate regions in the UK.

These transmission projects will for example connect turbines from Stronelairst (228MW), Dorenell (177MW) and Kyllachy (48.5 MW) onshore wind farms and the Aberdeen Offshore wind farm (99MW).

### **Adjustments**

Where there are adjustments to previously reported data, this will be stated in the year end reporting by 31 March.

The financial and environmental data associated with any divestments is removed from the current year to ensure relevant comparisons and consistent performance towards the green bonds.

<sup>4</sup> For this transmission link, the actual electricity transmitted is controlled by National Grid Electricity System Operator.



# REFERENCES

- [SSE Green Bond Framework 2021](#)
- [SSE Green Bond Framework 2019](#)
- [SSE Green Bond Framework 2017](#)
- [GHG Standard Project Protocol](#)
- [UK government GHG reporting guidance and conversion factors](#)



## Annex 1: Asset Register for Green Bonds

Table 1: List of eligible green projects refinanced by proceeds from the 2017 and 2018 Green Bonds at 31 March 2022 (details of qualifying criteria are outlined in the Green Bond Framework)

ELIGIBLE GREEN PROJECTS <sup>1</sup>	TOTAL ACTUAL CAPEX SPEND (£m) <sup>1</sup>	QUALIFYING PROJECT CAPACITY IN MW <sup>2</sup>	DATE FULLY OPERATIONAL	ALLOCATION OF 2017 GREEN BOND PROCEEDS (£m)	ALLOCATION OF 2018 GREEN BOND PROCEEDS (£m)
Strathy North	102.9	67	November 2015	102.9	NIL
Tievenameenta	42.9	34	February 2017	41.5	NIL
Comhlach Gaoithe Teoranta (Galway Wind Park)	85.6	66	June 2017	81.9	NIL
Dunmaglass 50.1%	88.9	47	August 2017	88.9	NIL
Clyde Extension 50.1%	110.3	87	September 2017	100.1	NIL
Bhlaraidh	117.1	110	October 2017	106.6	NIL
Leanamore	30.8	18	February 2018	NIL	30.8
Stronelaig 50.1%	147.6	114	December 2018	NIL	147.6
Caithness Moray Link <sup>3*</sup>	1,020.0	1,200	January 2019	26.5	413.0
<b>TOTAL</b>	<b>1,736.1</b>	<b>1,743</b>		<b>548.4</b>	<b>591.4</b>

<sup>1</sup> Onshore wind farms and Caithness Moray high voltage direct current (HDVC) connection. Actual Capex spend to 31 March 2019, where SSE holds a partial stake, the Capex spend reported represents SSE portion only.

<sup>2</sup> Project capacity in MW reflects SSE's equity stake as at 31 March 2021.

<sup>3</sup> Slieve Divena 2 Wind Farm was sold in March 2020, proceeds from the 2017 Green Bond have been reallocated to the Caithness Moray Link project.

\*Caithness-Moray Link project features in all three Green Bonds (2017, 2018 and 2019). The total capex spend for this project is included in both this table and table 2 below.

Table 2: List of eligible green projects refinanced by proceeds from the 2019 Green Bond at 31 March 2022 (details of qualifying criteria are outlined in the Green Bond Framework)

SHET ELIGIBLE GREEN PROJECTS	CONSTRUCTION/ ENERGISED <sup>1</sup>	TOTAL ANNUAL CAPEX SPEND (£m) <sup>2</sup>	QUALIFYING PROJECT CAPACITY <sup>3 4</sup>	ALLOCATION OF 2019 GREEN BOND PROCEEDS (£m)
Caithness Moray Link*	Energised Jan 2019	1,020.0	1,200 MW	107.0
<b>Connecting offshore transmission company projects</b>				
Moray Firth OTFO connection (New Deer)	Energised May 2021	4.8	900MW	3.1
<b>Connecting distribution projects</b>				
Rannoch GSP (Corrour Hydro)	Energised Aug 2017 <sup>(5)</sup>	5.1	5.5MW	5.1
Coupar Angus GSP (Tullymurdoch & Welton of Creuchies)	Energised Aug 2017	9.4	31.7MW	9.4
Rothienorman GSP (Rothmaisie)	Energised June 2021	0.2	580MVA	0.2
Fort William GSP	Energised Sep 2018	7.1	24MW	7.1
<b>Connecting onshore renewable projects</b>				
Aberdeen Offshore windfarm	Energised May 2018	14.1	99MW	9.2
Dornell windfarm	Energised Aug 2018	28.2	117MW	28.2
Stronelairst windfarm	Energised Mar 2018	114.1	228MW	90.2
Beauly – Tomatin				
Beauly – Tomatin (Boat of Garten Reconductoring)	Energised Dec 2019	86.1	782MVA	38.0
Beauly to Keith OHL Replacement	Energised June 2021	13.6	230MVA	13.0
Loch Buidhe to Dounreay 275kv	Energised May 2020	3.9	167MVA	3.9
Rothienorman Substation & Rothienorman – Kintore Reconductoring	Energised Aug 2021	4.0	580MVA	4.0
Fort Augustus 400/132kv	Due May 2022	6.1	960MVA	6.1
Fort William to Fort Augustus (FFE/FFW)	Energised Sep 2019	43.5	220MVA	23.8
Fort William GSP Infrastructure	Energised Sep 2018	1.7	24MW	1.7
<b>TOTAL</b>		<b>1361.9</b>	<b>2,629.2MW/ 3519.0MVA</b>	<b>350.0</b>

1 Refers to the status of the project. Construction means the project is still in construction and a due date for project completion is given and energised means the projects is completed and a date of completion is provided.

2 Actual Capex Spend to 31 March 2019.

3 MW refers to the total installed capacity of new renewable (on- and off-shore renewable energy) generation projects that are connecting to the transmission network, and the power rating of new HVDC transmission systems (in this case the Caithness Moray Link).

4 MVA refers to the new or increased power rating of the new or upgraded transmission infrastructure needed to enable the power from new additional renewable energy to flow through the existing alternating current (AC) system. This infrastructure is not attributable to specific renewable energy projects.

5 Rannoch GSP was energised in August 2017, however there was minor construction work ongoing until May 2021 and therefore the completion date of the project was May 2021.

\* Caithness-Moray Link project features in all three Green Bonds (2017, 2018 and 2019). The total capex spend for this project is included in both this table and table 1 above.

Table 3: List of eligible green projects refinanced by proceeds from the 2021 Green Bonds at 31 March 2022 (details of qualifying criteria are outlined in the Green Bond Framework)

SHET ELIGIBLE GREEN PROJECTS	CONSTRUCTION/ ENERGISED <sup>1</sup>	TOTAL ANUAL CAPEX SPEND (£m) <sup>2</sup>	QUALIFYING PROJECT CAPACITY <sup>3 4</sup>	ALLOCATION OF GREEN BOND 4 PROCEEDS (£m)
<b>Connecting offshore transmission company projects</b> Moray Firth OTFO connection (New Deer)	Energised May 2021	32.7	900MW	32.7
<b>Connecting distribution projects</b> Rothienorman GSP (Rothmaisie)	Energised June 2021	8.6	580MVA	8.6
<b>Connecting onshore renewable projects</b>				
Dorenell windfarm	Energised Aug 2018	0.4	117MW	0.4
Stronelairg windfarm	Energised Mar 2018	16.2	228MW	16.2
Beauty – Tomatin (Boat of Garten Reconductoring)	Energised Dec 2019	29.7	782MVA	29.7
Beauty to Keith OHL Replacement	Energised June 2021	17.3	230MVA	17.3
Loch Buidhe to Dounreay 275kV	Energised May 2020	17.7	167MVA	17.7
Rothienorman Substation & Rothienorman – Kintore Reconductoring	Energised Aug 2021	60.4	580MVA	60.4
Fort Augustus 400/132kV	Due May 2022	51.5	960MVA	51.5
Fort William to Fort Augustus (FFE/FFW)	Energised Sep 2019	17.0	220MVA	17.0
Kyllachy windfarm (transformer and OHL infrastructure (TCA and H1)	Energised April 2021	6.1	48.5MW	6.1
Lairg to Loch Buidhe OHL	Due August 2022	27.9	607MVA	27.9
Carradale GSP reinforcement (TCA)	Due Oct 2022	8.3	60MW	8.3
Keith to Blackhilllock 132kV	Energised Oct 2020	15.8	87MVA	15.8
<b>Connecting offshore renewable projects</b>				
Tealing 275kV Busbar East Coast	Energised Dec 2021	33.4	1,075MVA	33.4
Shetland HVDC	Due July 2024	125.7	600MW	125.7
<b>Connecting onshore/ offshore renewable projects</b>				
Tealing PST (ECU2)	Due Oct 2023	4.3	610MW	4.3
Alyth	Due Oct 2023	5.3		5.3
NE400 upgrades	Due Oct 2023	19.4	1,440MVA	19.4
Eastern subsea HVDC link	Due Oct 2029	2.3	2000MW	2.3
<b>Total</b>		<b>500.0</b>	<b>4,563.5MW / 6,728.0MVA</b>	<b>500.0</b>

1 Refers to the status of the project. Construction means the project is still in construction and a due date for project completion is given and energised means the projects is completed and a date of completion is provided.

2 Actual Capex Spend from 1 April 2019 to 31 March 2021.

3 MW refers to the total installed capacity of new renewable (on- and off-shore renewable energy) generation projects that are connecting to the transmission network, and the power rating of new HVDC transmission systems (in this case the Eastern subsea HVDC link).

4 MVA refers to the new or increased power rating of the new or upgraded transmission infrastructure needed to enable the power from new additional renewable energy to flow through the existing alternating current (AC) system. This infrastructure is not attributable to specific renewable energy projects.

