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# SSE'S GREEN BOND REPORTING

SSE's third annual Green Bond Report



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SSE issued its third green bond of £350m in September 2019. This, in addition to SSE's inaugural €600m Green Bond issued in September 2017 and its second €650m Green Bond issued in September 2018, means SSE continues to be the largest issuer of Green Bonds in the UK corporate sector.

This report constitutes SSE's third annual Green Bond update to investors and covers the allocation of proceeds and environmental impact from SSE's three Green Bonds in accordance with its Green Bond Frameworks 2017 and 2019. These frameworks can be found at [sse.com/greenbond](http://sse.com/greenbond).

SSE's Tax and Treasury Committee, led by SSE's Finance Director, evaluated and selected eligible green projects for inclusion in its Green Bond Frameworks. These eligible projects were either completed in the 24 months up to the issuance of each green bond or due to be completed in the near future. The main criteria for a project to be eligible within the Green Bond Frameworks was that it must make a positive environmental impact, support SSE's commitment to the ongoing reduction of the carbon intensity of its electricity generation and finally, support the United Nations Sustainable Development Goal 13 (to take urgent action to combat climate change and its impacts).

## ALLOCATION OF PROCEEDS

The proceeds from all three of SSE's Green Bonds were directly allocated to the refinancing of eligible green projects listed in the Green Bond Frameworks, and therefore fully employed at settlement.

Table 1 provides the details of SSE's three Green Bonds, including the total value allocated to eligible green projects in Sterling.

All three Green Bonds have been independently verified by PwC LLP. The assurance statement and the criteria used for reporting can be found at [sse.com/greenbond](http://sse.com/greenbond).

The proceeds of Green Bond 1 (issued in 2017) and Green Bond 2 (issued in 2018) have been allocated to refinancing of part of SSE's £1.3bn portfolio of eligible projects of onshore wind farms in the UK and Ireland and the Caithness-Moray HDVC (High Voltage Direct Current) connection, as listed in SSE's Green Bond Framework 2017.

The proceeds of Green Bond 3 have been allocated to refinancing of part of SSE's £1.3bn portfolio of eligible transmission network projects in the UK. 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.

It is SSE's intention, where possible, to maintain a ratio of 1.2 to 1 of eligible green project to total Green Bonds outstanding.



**TABLE 1: SSE PLC'S GREEN BONDS**

	<b>Green Bond 1</b>	<b>Green Bond 2</b>	<b>Green Bond 3</b>
<b>Issuer</b>	<b>SSE plc</b>	<b>SSE plc</b>	<b>SSE plc</b>
Currency	EURO	EURO	GBP
ISIN	XS1676952481	XS1875284702	XS2057092236
Size	€600,000,000	€650,000,000	£350,000,000
GBP:EUR at issuance	1.09404	1.0990	N/A
Sterling Equivalent at issuance	£548,426,017.30	£591,446,676.80	£350,000,000
Pricing Date	30 August 2017	28 August 2018	20 September 2019
Settlement Date	6 September 2017	4 September 2018	27 September 2019
Maturity Date	6 September 2025	4 September 2027	27 September 2035
Coupon	0.875%	1.375%	2.25%

## ENVIRONMENTAL IMPACT OF SSE'S GREEN BONDS

To report the environmental impact of the Green Bonds, SSE considers the impacts outlined below in relation to its onshore wind farm projects and transmission networks projects.

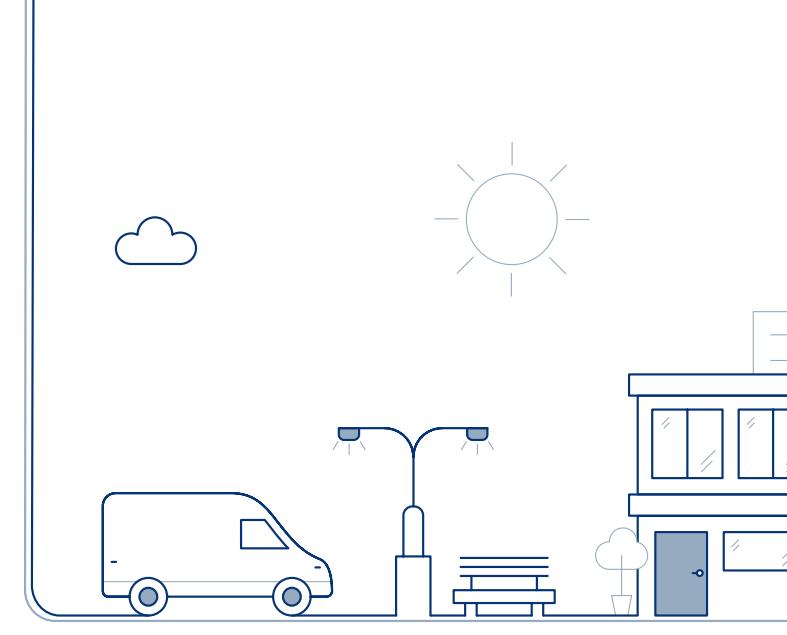
**Onshore wind farm green projects:** The carbon emissions are assumed to be zero and the environmental impact is the reduction of carbon emissions from generating wind power rather than generating grid-connected electricity. The criteria for Green Bond reporting is described at [sse.com/greenbond](http://sse.com/greenbond).

**Transmission networks, Caithness-Moray:** Caithness-Moray is a HVDC technology used to transmit power through 113km of subsea cable beneath the Moray Firth seabed between the new converter stations at Spittal in Caithness and

Blackhillock in Moray. For the Caithness-Moray transmission link, the green impact refers to the 1,200MW<sup>1</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).

The project supports the additional connection of onshore renewable generation on the mainland as well as the Scottish Islands of the Western Isles, Orkney and Shetland.

**Transmission networks, Scottish Hydro Electric Transmission plc (SHET)<sup>2</sup> projects:** For the pipeline of SHET projects, the green impact relates to 2,732.2MW (including Caithness-



Moray transmission link) of capacity for renewable generation connections with a further 3,519MVA 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 Stronelairg onshore wind farm (227MW capacity) and Aberdeen Offshore wind farm (99MW).

Tables 2 to 4 detail the environmental impact from the green projects which the Green Bond proceeds were allocated to. It is estimated that SSE's inaugural Green Bond proceeds were allocated to projects which saved 356,415tCO<sub>2</sub>e (Between 1 April 2019 to 31 March 2020) and its second Green Bond 87,240tCO<sub>2</sub>e (1 September 2019 to 31 March 2020).

<sup>1</sup> For this transmission link, the actual electricity transmitted is controlled by National Grid Electricity System Operator.

<sup>2</sup> SSE Transmission operating under licence as Scottish Hydro Electric Transmission plc

## GREEN BOND 1 ISSUED 2017

Table 2: Allocation of Green Bond proceeds and green project impact to refinancing eligible onshore wind farm green projects for Green Bond 1.

Type of eligible green project	Eligible green project	Total actual capex spend (£m) **	Capacity fully operational (MW) * / Qualifying capacity (MW) **	Date fully operational	Allocation of Green Bond 1 proceeds (£m)	Qualifying output (GWh) <sup>(1)(2)</sup>	Qualifying carbon saved (tCO <sub>2</sub> e) <sup>(1)(2)</sup>
Onshore wind farm	Strathy North	102.9	67/67	Nov 15	102.9	121.3	30,992
Onshore wind farm	Tievenameenta	42.9	34/34	Feb 17	41.5	93.8	23,980
Onshore wind farm	Sieve Divena 2 <sup>(3)</sup>	NIL	NIL	Jun 17	NIL	NIL	NIL
Onshore wind farm	Comhlach Gaoithe Teoranta (Galway Wind Park)	85.6	66/66	Jun 17	81.9	199.9	51,091
Onshore wind farm	Dunmaglass	88.9	94/47	Aug 17	88.9	121.3	30,997
Onshore wind farm	Clyde Extension (part of Clyde Windfarm (Scotland) Limited)	100.3	173/87	Sep 17	100.1	657.5	168,049
Onshore wind farm	Bhlaraidh	117.1	110/110	Oct 17	106.6	200.7	51,307
<b>Total</b>	<b>Onshore wind farm project contribution</b>	<b>537.7</b>	<b>544/411</b>		<b>521.9</b>	<b>1,394.5</b>	<b>356,416</b>
HDVC Transmission connection <sup>(4)</sup>	Caithness-Moray transmission link <sup>(5)</sup>	1,020.0	1,200/1,200	Jan 19	26.5	-	-
<b>Total contribution</b>	<b>Onshore wind farms and Caithness-Moray transmission link</b>	<b>1,557.7</b>	<b>1,744/1,611</b>		<b>548.4</b>	<b>1,394.5</b>	<b>356,416</b>

\*Capacity fully operational reflects the total capacity of the project in MW.

\*\*Reported actual capex and qualifying capacity reflect SSE's 50.1% ownership in Clyde Windfarm (Scotland) Limited and Dunmaglass wind farms as at 31 March 2020.

(1) Reported output and carbon saved reflects SSE's 50.1% ownership in Dunmaglass and Clyde Windfarm (Scotland) Limited wind farms to 31 March 2020.

(2) Green Bond 1 output (GWh) and carbon saved (tCO<sub>2</sub>e) for reporting period 1 April 2019 to 31 March 2020.

(3) Sieve Divena 2 Wind Farm was sold in March 2020, proceeds from Green Bond 1 have been reallocated to the Caithness-Moray transmission link.

(4) For this transmission link, the actual electricity transmitted is controlled by National Grid Electricity System Operator.

(5) Caithness-Moray transmission link features in all three Green Bonds (1, 2 and 3) so the total capex spend for this project is included in tables 2, 3 and 4. The green impact of Caithness-Moray refers to the 1,200MW of capacity that transmits 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 the Beatrice offshore wind farm (588MW capacity on completion) and Dorenell onshore wind farm (177MW capacity on completion). The project supports the additional connection of onshore renewable generation on the mainland as well as the Scottish Islands of the Western Isles, Orkney and Shetland.

## GREEN BOND 2 ISSUED 2018

Table 3: Allocation of Green Bond proceeds and green project impact to refinancing eligible green projects for Green Bond 2.

Type of eligible green project	Eligible green project	Total actual capex spend (£m) **	Capacity fully operational (MW) */ Qualifying capacity (MW) **	Date fully operational	Allocation Green Bond 2 proceeds (£m)	Overall output (GWh)/ Qualifying output (GWh) <sup>(1)(2)</sup>	Qualifying carbon saved (tCO <sub>2</sub> e) <sup>(1)(2)</sup>
Onshore wind farm	Leanamore	30.8	18/18	Feb 18	30.8	61.1	15,624
Onshore wind farm	Stronelairg	147.6	228/114	Dec 18	147.6	280.2	71,616
<b>Total</b>	<b>Onshore wind farm project contribution</b>	<b>178.4</b>	<b>246/132</b>		<b>178.4</b>	<b>341.3</b>	<b>87,240</b>
HDVC Transmission connection <sup>(3)</sup>	Caithness-Moray transmission link <sup>(4)</sup>	1,020.0	1,200/1,200	Jan 19	413.0	-	-
<b>Total contribution</b>	<b>Onshore wind farms and Caithness-Moray transmission link</b>	<b>1,198.4</b>	<b>1,446/1,332</b>		<b>591.4</b>	<b>341.3</b>	<b>87,240</b>

\*Capacity fully operational reflects the total capacity of the project in MW.

\*\*Reported actual capex and qualifying capacity reflect SSE's 50.1% ownership in Stronelairg wind farm as at 31 March 2020.

(1) Reported output and carbon saved reflects SSE's 50.1% ownership in Stronelairg wind farm.

(2) Green Bond 2 output (GWh) and carbon saved (tCO<sub>2</sub>e) for reporting period 1 September 2019 to 31 March 2020.

(3) For this transmission link, the actual electricity transmitted is controlled by National Grid Electricity System Operator.

(4) Caithness-Moray transmission link features in all three Green Bonds (1, 2 and 3) so the total capex spend for this project is included in tables 2, 3 and 4. The green impact of Caithness-Moray refers to the 1,200MW of capacity that transmits 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 the Beatrice offshore wind farm (588MW capacity on completion) and Dorenell onshore wind farm (177MW capacity on completion). The project supports the additional connection of onshore renewable generation on the mainland as well as the Scottish Islands of the Western Isles, Orkney and Shetland.

## GREEN BOND 3 ISSUED 2019

**Table 4: Allocation of Green Bond proceeds and green project impact to refinancing eligible green projects for Green Bond 3.**

<b>SHET eligible green projects*</b>	<b>Construction/ Energised<sup>(1)</sup></b>	<b>Total actual capex spend (£m)<sup>(2)</sup></b>	<b>Qualifying project capacity<sup>(3)(4)</sup></b>	<b>Allocation of Green Bond 3 proceeds (£m)</b>
Caithness-Moray transmission link <sup>(5)</sup>	Energised Jan 19	1,020.0	1,200 MW	80.5
<b>Connecting offshore transmission company projects</b>				
Moray Firth OTFO connection (New Deer)	Due Apr 2021	4.8	900MW	4.8
<b>Connecting distribution projects</b>				
Rannoch GSP (Corrour Hydro)	Energised Aug 2017 <sup>(6)</sup>	5.1	5.5MW	5.1
Coupar Angus GSP (Tullymurdoch & Welton of Creuchies)	Energised Apr 2018	9.4	31.7MW	9.4
Rothienorman GSP (Rothmairie)	Due Sep 2020	0.2	580MVA	0.2
Fort William GSP	Energised Sep 2018	7.1	24MW	7.1
<b>Connecting onshore renewable projects</b>				
Aberdeen Offshore wind farm	Energised May 2018	9.0	99MW	9.0
Dorenell windfarm	Energised Aug 2018	28.2	220MW	28.2
Stronelaig windfarm	Energised Mar 2018	116.1	228MW	116.1
Beauly – Tomatin	Energised Dec 2019	86.1	782MVA	35.5
Beauly – Tomatin (Boat of Garten Reconductoring)				
Beauly to Keith OHL Replacement	Due May 2020	14.1	230MVA	14.2
Loch Buidhe to Dounreay 275kV	Due May 2020	4.1	167MVA	4.1
Rothienorman Substation & Rothienorman – Kintore Reconductoring	Due Jun 2021	4.0	580MVA	4.0
Fort Augustus 400/132kV	Due Aug 2021	6.1	960MVA	6.1
Fort William to Fort Augustus (FFE/FFW)	Energised Sep 2019	24.0	220MVA	24.0
Fort William GSP Infrastructure	Energised Sep 2018	1.7	24MW	1.7
<b>Total</b>		<b>1,340</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, energised means the project 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 (onshore and offshore 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 transmission 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) Caithness-Moray transmission link project features in all three Green Bonds (1, 2 and 3) so the total capex spend for this project is included tables 2, 3 and 4. The green impact of Caithness-Moray refers to the 1,200MW of capacity that transmits 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 the recently connected turbines from Beatrice offshore wind farm (588MW capacity on completion) and Dorenell onshore wind farm (177MW capacity on completion). The project supports the additional connection of onshore renewable generation on the mainland as well as the Scottish Islands of the Western Isles, Orkney and Shetland.

(6) Rannoch GSP was energised in August 2017, there was minor construction work ongoing until March 2019 and therefore the completion date of the project was March 2019.

\* For the pipeline of SHET projects, the green impact for this report relates to 2,732.2MW (including Caithness-Moray transmission link) of capacity for renewable generation connections with a further 3,519MVA 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 Dorenell onshore wind farm (177MW capacity on completion), Stronelaig onshore wind farm (227MW capacity) and Aberdeen Offshore wind farm (99MW).

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