
Energy for
generations
ESB Green Bond Reporting 2021
TRANSITION TO A LOW CARBON ENERGY FUTURE

BRIGHTER TOGETHER

ESB's strategy, which was refreshed in December 2021, 'Driven to Make a Difference: Net Zero by 2040' is anchored in the UN's Sustainable Development goals and is an ambition to make a difference. It aims to deliver a brighter future by creating and connecting sustainable, reliable, affordable energy, and is grounded in ESB's enduring purpose to support the customers and communities ESB serve to achieve net zero. It aims to achieve this by decarbonising electricity, connecting the renewable generation needed, making its networks smarter to enable the electrification of heat and transport and providing the solutions to support its customers in making their own transition. This will be done in a way that will ensure that ESB continues to grow as a successful business while maintaining the financial strength to invest in a low-carbon future at the necessary pace and scale. Since its establishment in 1927, ESB has been characterised by a commitment to enabling society and creating opportunities for the communities it serves. The challenge for ESB today is to be a leader in the transition to reliable, affordable, low-carbon energy and to serve its customers better and achieve sustainable growth.

In 2021 clear progress was made in delivering on our sustainable agenda. A total of 6.5 GW of low-carbon energy has been connected to our networks in Ireland and Northern Ireland. ESB Networks installed in excess of 380,000 smart meters in 2021. We are progressing our Galloper, Inch Cape and Neart na Gaoithe projects off the east coast of Great Britain growing our position in offshore wind. In Ireland the Board approved investment in Phase 2 of the Oweninny Windfarm (83 MW) in County Mayo and in battery storage technologies at Poolbeg and South Wall in Dublin. Certain short term challenges were experienced with lower wind and during 2021, the carbon intensity of our electricity generation activities rose as it was necessary to increase output from thermal plant to reliably meet national electricity demand. This measure to support national energy security does not take away from our decarbonisation commitments and our strategic focus is firmly fixed on low carbon and renewable generation and driving the green agenda.

ESB GREEN BOND

ESB, through its financing entity, ESB Finance DAC had issued €700m in Green Bonds as at 31 December 2021. The net proceeds which amount to €697.95m, were used to finance eligible projects in the period since issuance in accordance with the ESB Green Bond Framework, published in May 2019. The Framework aligned to the Green Bond Principles (2018). The proceeds of both bonds were fully allocated by 31 March 2020.

In January 2022, ESB issued a further €500m Green Bond which will be included in the 2022 Green Bond Report.

Issuer:	ESB Finance DAC
Currency:	EUR
ISIN:	XS2009861480
Bond Value:	€500,000,000
Pricing Date:	4th June 2019
Settlement Date:	11th June 2019
Tap Value:	€200,000,000
Pricing Date:	15th July 2020
Settlement Date:	22nd July 2020
Maturity Date:	11th June 2030
Coupon:	1.125%
Proceeds to allocate:	€697,950,000

USE OF PROCEEDS

The net proceeds of the green bond, €698m, were used to finance eligible projects according to the 'ESB Green Bond Framework' and a summary is set out below:

Eligible Green Project Category	Projects	Summary of Allocated Funding	Sustainable Development Goals
Renewable Energy	Renewable wind farms	€581m	7 AFFORDABLE AND CLEAN ENERGY; 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE; 13 CLIMATE ACTION
Energy Efficiency	Smart Meter Roll Out	€50m	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE; 11 SUSTAINABLE CITIES AND COMMUNITIES
Clean Transportation	Infrastructure to facilitate Electric Vehicle penetration	€6.2m	11 SUSTAINABLE CITIES AND COMMUNITIES
Green Buildings	The Redevelopment of ESB'S Head Office, Lower Fitzwilliam Street, Dublin 2 A Green Certified Sustainable Building	€60.8m	11 SUSTAINABLE CITIES AND COMMUNITIES

EVALUATION AND SELECTION

A dedicated Green Finance Committee was created to ensure compliance with the Green Bond Framework and oversee the entire issuance and allocation process. The Committee is composed of the Head of ESB's Treasury, Sustainability and Strategy departments.

The Committee reviewed proposed projects with respect to the eligibility criteria set out in the Green Bond Framework to ensure each project showed a clear, positive and measurable environmental impact. The Committee also ensured that each selection was aligned with ESB's strategic intent of meeting 'customer energy needs by bringing the best of its capabilities together to deliver innovative and value-driven solutions for a low-carbon world'.

The Group setup a project register to monitor and track the allocation to selected projects. An amount equal to, or greater than, the unallocated funds raised, were held by the Group as cash.

During the life of the Green Bond (11 years from 11th June 2019), should a selected project be sold, cease to fulfil eligibility criteria or otherwise be determined to be incompatible with the environmental objectives of the Green Bond Framework, those allocated proceeds will be reallocated to a different project which complies with the eligibility criteria as soon as is reasonably possible.

There were no such reallocations in the current year.

ALLOCATION OF GREEN BOND FUNDING AND IMPACTS

Project Name	Allocated Spend (€ m)	Status	Generation Capacity (MW)	Qualifying Generation Capacity (MW)	Qualifying energy Generated or Forecast (MWh)	Qualifying Tonnes of CO_2 Equivalent Avoided	Non-windfarm - Project Impact
Neart na Gaoithe Wind Farm (Offshore)	223.2	In Construction	224	155	642,391	136,187	
Galloper Wind Farm (Offshore)	130.9	Operational	44	44	178,740	37,893	
Grousemount Wind Farm (Offshore)	154.7	Operational	123	95	206,160	68,651	
Cappawhite Wind Farm	16.2	Operational	57	11	28,879	9,617	
Castlepook Wind Farm	56.0	Operational	35	30	65,361	21,765	
Smart Meter Roll-Out	50.0	Ongoing Project					More than 620,000 total new smart meters were installed on overall project to end December 2021. This was partially funded by ESB's Green Bond Issuances.
Project Fitzwilliam – ESB's Head Office Redevelopment	60.8	Operational					Designed and under construction in line with "BREEAM Excellent" Certified Building Standards
Electric Vehicle	6.2	Ongoing Project					138 Fast Chargers 118 AC Charges Installed over period of spend
Total	**698.0**		**483**	**335**	**1,121,531**	**274,113**	

Notes on Reporting Criteria;

- All spend was incurred between 1 July 2017 and 31 March 2021.
- The equivalent carbon emissions 'displaced' for windfarms are calculated using the most recent 'carbon intensity' of the relevant national grid and the qualifying MWh of renewables generation. At the time of preparation these were:

	CO_2 intensity, Kg/kWh	Source
ROI	0.333	SEAI, 2021, carbon intensity of electricity – interim balance
UK	0.212	Department for Business, Energy & Industrial Strategy - Greenhouse gas reporting: conversion factors 2021 (electricity)

- Generation capacity represents the current or forecast capacity of the windfarm apportioned based on ESB's equity stake in the project.
- In respect of Offshore windfarms, impact metrics are calculated based on ESB's equity stake in the windfarm. This is proportioned further when the allocated spend does not represent the full equity investment made in the windfarm to 31 December 2021.
- All onshore windfarms are fully owned and funded by ESB. Impact metrics are apportioned based on the proportion of allocated spend to total project capital spend.
- Forecast impact metrics are included for those windfarms which have not had a full year's operation.
- ESB Networks has installed over 620,000 meters as at the end December 2021 as part of its Smart Meter Programme. The €50m allocated to the Green Bond represents only a portion of the spend to date on the project. The full programme is expected to cost approximately €1.2bn and involve the roll out of over 2.3 million meters and a significant level of IT spend. It will result in significant benefits as documented by the Commission for Regulation of Utilities in its cost benefit analysis (see www.cru.ie) of the programme. This includes a change in the patterns of electricity usage by residential households, most notably a reduction in overall energy consumption of c 2.86% for standard customers and SMEs and a movement of demand away from peak times (over 8%).
- In relation to Electric Vehicle Infrastructure, the spend was incurred in the period 1 July 2017 to 31 December 2019, contributions of €0.3m were received from other funding sources in relation to the charge points (138 Fast Chargers and 118 AC Charges) installed in the period July 2017 to December 2019.

NEART NA GAOITHE WIND FARM

Neart na Gaoithe is a windfarm currently under development off the East Coast of Scotland. In late 2019 ESB, bought a 50% stake in the project from EDF Renewables, ESB's joint venture partner in the development. The windfarm is expected to be approximately 448MW in capacity. Construction began in 2020, some challenges were experienced in the delivery of the foundation package and so there will be some delays to commissioning, now expected in 2024.

CASTLEPOOK WIND FARM

Castlepook Wind Farm is located in Castlepook forest, Ballyhoura, Co.Cork, Ireland. It features 14 turbines with a total capacity of 35MW—enough renewable electricity to power around 17,000 households a year. It was initially developed by ESB as a joint venture with another partner with project finance. It is now fully owned by ESB and was refinanced using Green Bond funds.

ELECTRIC VEHICLE INFRASTRUCTURE

ESB eCars builds, owns and operates electric vehicles (EV) charging networks for public use across ROI, NI and GB. This network contains over 1,350 charger points on the island of Ireland, as well as over 350 charger points in Great Britain.

SMART METERS

ESB Networks is in the middle of Phase 2 of the National Smart Meter Programme in the Republic of Ireland. Phase 1 consisted of a major IT investment that has enabled Suppliers offer new time of use tariffs since the end of February 2021. Phase 2 of the project will see further IT enhancements and new meter types delivered over the next two years. ESB Networks installed in excess of 380,000 smart meters in 2021 bringing the total number of smart meters installed since September 2019 to 620,000. Over 2.3 million meters are due to be installed by 2025, over the three phases of the programme.

GALLOPER WIND FARM

Galloper Wind Farm (353MW) features 56 Siemens-Gamesa turbines and is 30 km off the coast of Suffolk in the United Kingdom.
It entered into commercial operations in 2018 and is expected to generate, on average each year, enough green power to meet the annual electricity needs of more than 380,000 households. Galloper is owned by RWE Renewables UK (previously Innogy SE (25%)), Siemens Financial Services (25%), Sumitomo Corp (12.5%), ESB (12.5%) & a consortium managed by Green Investment Group and Macquarie Infrastructure and Real Assets (25%).

PROJECT FITZWILLIAM

The redevelopment of ESB's Fitzwilliam Street Head Office site in Dublin 2 in the Republic of Ireland began in June 2017. The project involved the removal of the existing buildings, the retention and refurbishment of a number of protected Georgian structures and the construction of two new office blocks on site. One of these blocks, Fitzwilliam 27, has now occupied by ESB as its Head Office. The building has been designed and fitted to BREEAM Excellent Standard. BREEAM is the world's leading sustainability assessment method for master planning projects, infrastructure and buildings. It recognises and reflects the value in higher performing assets across the built environment lifecycle.

GROUSEMOUNT WIND FARM

The site is located in south east Kerry in the Republic of Ireland. Grousemount Wind Farm began construction in the summer of 2017 and was finalised in mid- 2020. The windfarm comprises 38 wind turbines, which are used to harness the natural energy of the wind to generate electricity and provide enough renewable power for approximately 70,000 homes. Turbines have maximum overall dimensions of 126 metres which will result in up to 123MW of renewable electricity being generated on site. It is ESB's largest onshore farm.

CAPPAWHITE WIND FARM

Cappawhite Wind Farm is located at the southern most extent of the mountain range known as the Hollyford Hills in Tipperary in the Republic of Ireland. It was completed in 2017, features 17 turbines and a production capacity of 57MW—enough renewable electricity to power around 32,500 households a year.

AN EXTERNAL OPINION – SUSTAINALYTICS

ESB's Green Bond Framework (May 2019) was reviewed by Sustainalytics in terms of its alignment with relevant industry standards and its robustness and credibility in the meaning of Green Bond Principles ("GBP") 2018.

ESB also engaged Sustainalytics to conduct a review confirming the proceeds were allocated to projects which meet the Eligibility Criteria defined in ESB's Green Bond Framework for each of its Green Bond Reports published to date.

Copies of the Green Bond Reports and final reviews can be found at **www.esb.ie/investors/green-financing**

CONTACTS

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Energy for generations