

Second-Party Opinion ESB Green Bond

Evaluation Summary

Sustainalytics is of the opinion that the ESB Green Bond Framework is credible and impactful, and aligns with the four core components of the Green Bond Principles 2018. This assessment is based on the following:



USE OF PROCEEDS The eligible categories for the use of proceeds (Renewable Energy, Energy Efficiency, Clean Transportation and Green Buildings) are aligned with those recognized by the Green Bond Principles. Sustainalytics considers that green projects in the areas of renewable energy, low carbon transport and green buildings to have positive environmental impacts and to advance the UN Sustainable Development Goals.



PROJECT EVALUATION / SELECTION ESB has established a dedicated Green Finance Committee, including the Head of ESB's Treasury, Sustainability and Strategy Areas and representatives from ESB's Business Units, which will ensure compliance with the Green Bond Framework and oversee the totality of the issuance process. The Green Finance Committee is responsible for reviewing the proposed projects with respect to the Eligibility Criteria and ensuring that the requirements of ESB's environmental risk management procedures have been applied to selected projects. Sustainalytics is of the opinion that this process is in line with market standards.



MANAGEMENT OF PROCEEDS ESB will set up a register and internal controls to monitor and track the net proceeds allocated to Eligible Projects. ESB will allocate an amount equal to the green bond net proceeds towards eligible green projects. The company will also strive to reach full allocation to eligible projects within two years of the Green Bond issuance. Sustainalytics considers this process to be in accordance with market practice.



REPORTING ESB commits to producing, at least annually, an allocation and impact report either as a stand alone dedicated report or integrated into ESB's existing annual sustainability report, which will be made available via the company's website. Sustainalytics views the scope of reporting on both allocation and impact to be adequate and considers ESB's approach to reporting to be in accordance with market practice.

Evaluation date	6 May 2019
Issuer Location	Dublin, Ireland

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For inquiries, contact the Sustainable Finance Solutions project team:

Joshua Zakkai (Amsterdam)
Project Manager
joshua.zakkai@sustainalytics.com
(+31) 20 205 00 79

Jean-Claude Berthelot (Amsterdam)
Client Relations
jean-claude.berthelot@sustainalytics.com
(+31) 20 205 00 15

Introduction

Electricity Supply Board (“ESB” or the “company”) is an integrated energy company that engages in the production, transmission, distribution and supply of electricity in the Republic of Ireland, Northern Ireland and other parts of the UK. The company produces energy through different sources, including both fossil fuel sources and renewables. Moreover, ESB has expanded its business activities to new areas, including the installation of electric vehicle public charging points and providing telecommunication services for mobile and wireless operators. The Government of Ireland owns 95% of ESB.

ESB has developed the ESB Green Bond Framework (the “Framework”) under which it is considering the issuance of multiple green bonds with the intention of using the proceeds to finance/refinance, in whole or in part, existing and future projects that will provide a positive environmental impact, such as mitigating and reducing GHG emissions and generating renewable energy. The Framework defines eligibility criteria in four areas:

1. Renewable Energy
2. Energy Efficiency
3. Clean Transportation
4. Green Buildings

ESB engaged Sustainalytics to review the ESB Green Bond Framework, dated 29 April 2019, and provide a second-party opinion on the Framework’s environmental credentials and its alignment with the Green Bond Principles 2018 (GBP).¹ This Framework has been published in a separate document.²

As part of this engagement, Sustainalytics held conversations with various members of ESB’s management team to understand the sustainability impact of their business processes and planned use of proceeds, as well as management of proceeds and reporting aspects of ESB’s green bond. Sustainalytics also reviewed relevant public documents and non-public information.

This document contains Sustainalytics’ opinion of the ESB Green Bond Framework and should be read in conjunction with that Framework.

¹ The Green Bond Principles are administered by the International Capital Market Association and are available at <https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/>

² The ESB Green Bond Framework is available on ESB’s website at: www.esb.ie/ir

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the ESB Green Bond Framework

Summary

Sustainalytics is of the opinion that the ESB Green Bond Framework is credible and impactful, and aligns with the four core components of the Green Bond Principles 2018. Sustainalytics highlights the following elements of ESB's green bond framework:

- Use of proceeds:
 - The four uses of proceeds (Renewable Energy, Energy Efficiency, Clean Transportation and Green Buildings) are recognized as impactful by the GBP 2018. Sustainalytics is of the opinion that the eligible projects in these categories will provide meaningful environmental contributions and will support its host countries (Ireland and UK) in transitioning towards a low carbon economy.
 - Regarding green buildings, ESB specifies that it will limit financing to buildings certified by Green Buildings Schemes such as LEED (gold or above) and BREEAM (very good or above). Sustainalytics has conducted an evaluation of the noted certifications and considers them to be credible and impactful (refer to Appendix 1 for Sustainalytics assessment of green building standards).
 - Sustainalytics notes that ESB intends to finance upgrades to its power transmission infrastructure that will facilitate energy efficiency improvements. Sustainalytics considers activities to reduce transmission losses from the electricity grid to be impactful. Regarding impact reporting on energy efficiency improvements in the transmission infrastructure, ESB has defined impact metrics at the project portfolio level. However, Sustainalytics positively notes that ESB confirmed its intention to report to the extent possible on the level of efficiency achieved for projects considered to be above EUR 5 million in CAPEX.
 - With regards to energy efficiency investments, Sustainalytics further notes that the Framework includes projects related to improving the energy efficiency of ESB's commercial buildings. ESB's investments in this area are targeted at displacing fossil fuel based technologies with zero and low carbon alternatives, as well as other technology to improve buildings' energy performance. Sustainalytics highlights that ESB's framework defines eligible projects as those that achieve an improvement of energy efficiency of at least 50% against the baseline, a significant improvement.
 - Sustainalytics highlights ESB's exclusionary criteria that exclude financing of electricity generation projects that rely wholly or partly on fossil fuels or nuclear power.
 - ESB will finance and refinance projects that fall into a lookback period of 24 months and the company commits to full allocation within two years of issuance, which is in line with market practice.
- Project Evaluation and Selection
 - ESB has established a dedicated Green Finance Committee, including the Head of ESB's Treasury, Sustainability and Strategy Areas and representatives from ESB's Business Units. The Green Finance Committee will be responsible for reviewing the proposed projects and ensuring compliance with the eligibility criteria outlined in the framework. It is particularly notable that proposed projects will be subject to ESB's environmental risk management procedures (see section 2). Sustainalytics is of the opinion that this process is in line with market practice.
- Management of Proceeds
 - ESB will set up a register and internal controls to monitor and track the allocation of net proceeds to eligible projects. ESB will allocate an amount equal to the Green Bond net proceeds towards Eligible Green projects. If during the lifetime of the green bond, the Eligible Projects are sold, become ineligible or are otherwise determined to be incompatible with the environmental objectives of the framework, ESB will re-allocate proceeds to projects that comply with the Framework. Sustainalytics considers this process to be in accordance with market practice.
- Reporting
 - In line with market practice, ESB commits to making available on its website, at least annually, either a standalone allocation and impact report or allocation and impact reporting that is integrated into ESB's annual sustainability report. With regards to allocation metrics, ESB will report on allocated proceeds, the absolute value of proceeds dedicated to new financing and refinancing and unallocated proceeds. The Impact report will contain information related to Eligible projects, such as

installed renewable energy capacity (MW), expected annual renewable energy generation (MWh), number of smart meters installed, number of EV charging points installed or upgraded and annual energy savings (MWh).

Alignment with Green Bond Principles 2018

Sustainalytics has determined that ESB's green bond aligns to the four core components of the Green Bond Principles 2018. For detailed information please refer to Appendix 2: Green Bond/Green Bond Programme External Review Form.

Section 2: Sustainability Strategy of ESB

Contribution of framework to ESB's sustainability strategy

Sustainability and corporate social responsibility are embedded across ESB's operations.³ Notably, ESB's strategic business priorities integrate the company's efforts to support the transition to a low carbon economy in Ireland and the United Kingdom.⁴ From a governance perspective, the board of directors Committee on Health Safety and Environment is responsible for overseeing the implementation of sustainability strategies across the company. Furthermore, at the management level, the Environment and Sustainability Committee, which is chaired by the Executive Director Group People and Organisational Development, has accountability for approving environmental and sustainability programmes.⁵

Within its ESB Group Policy Statement on Environmental Management and Sustainability,⁶ ESB commits to environmental management and sustainability in all aspects of its operations and business activities, and leadership in carbon management and energy efficiency. Additionally, ESB's Strategy to 2030 commits the company to producing, connecting and delivering clean, secure and affordable energy to its markets (Ireland, UK and Northern Ireland).⁷ Overall, ESB's sustainability strategy focuses on transitioning towards a low carbon energy supply, based on the decarbonisation of the electricity system and heating in homes and workplaces, as well as supporting the electrification of Ireland's vehicle fleet.⁸

As a commercial semi-state owned entity, ESB is required by Irish legislation to deliver a 33% reduction in its Total Primary Energy Requirement⁹ by 2020 (compared to 2006 levels).¹⁰ The company is also committed to generating 40% of its power from renewable sources with a carbon intensity reduction of 50% by 2030 and transitioning to fully carbon-free energy supply by 2050.¹¹ In terms of renewable installed capacity, the company strives to reach 5 GW of installed renewable capacity in Ireland and 2 GW in Northern Ireland by 2030.¹²

During 2017, ESB's energy efficiency schemes have delivered 196 GWh of energy savings for customers, and, in the same year, the company produced a total of 17.15 TWh of renewable energy.¹³ Furthermore, ESB achieved a 31.6% energy savings against its baseline in its own operations by the end of 2017, on track to meet its 2020 energy saving goal of 33%.¹⁴ Over the course of 2018, ESB's subsidiary, Northern Ireland Electricity Networks, connected multiple sources of renewable energy to its power network, including 179

³ ESB, "ESB Annual report 2018", (2019), at: [https://esb.ie/docs/default-source/investor-relations-documents/annual-report-2018-full-report-\(interactive-version\).pdf?sfvrsn=d28304f0_2](https://esb.ie/docs/default-source/investor-relations-documents/annual-report-2018-full-report-(interactive-version).pdf?sfvrsn=d28304f0_2).

⁴ ESB, "Sustainability in ESB", at: <https://www.esb.ie/acting-responsibly/sustainability-in-esb>.

⁵ ESB, "ESB Sustainability Report 2017", (2018), at: <https://www.esb.ie/docs/default-source/sustainability/esb-sustainability-report-2017>.

⁶ ESB, "ESB Group Policy Statement on Environmental Management and Sustainability", at: <https://www.esb.ie/docs/default-source/default-document-library/group-policy-here>.

⁷ ESB, "ESB Sustainability Report 2017", (2018), at: <https://www.esb.ie/docs/default-source/sustainability/esb-sustainability-report-2017>.

⁸ ESB, "Ireland's low carbon future - Dimensions of a solution", at: https://www.esb.ie/docs/default-source/default-document-library/dimensions-of-a-solution.pdf?sfvrsn=a9e93bf0_4.

⁹ The total amount of energy required in order to provide power sufficient to meet demand.

¹⁰ ESB, "ESB Sustainability Report 2017", (2018), at: <https://www.esb.ie/docs/default-source/sustainability/esb-sustainability-report-2017>.

¹¹ ESB, "ESB Sustainability Report 2017", (2018), at: <https://www.esb.ie/docs/default-source/sustainability/esb-sustainability-report-2017>.

¹² ESB, "ESB Annual report 2018", (2019), at: [https://esb.ie/docs/default-source/investor-relations-documents/annual-report-2018-full-report-\(interactive-version\).pdf?sfvrsn=d28304f0_2](https://esb.ie/docs/default-source/investor-relations-documents/annual-report-2018-full-report-(interactive-version).pdf?sfvrsn=d28304f0_2).

¹³ ESB, "ESB Sustainability Report 2017", at: <https://www.esb.ie/docs/default-source/sustainability/esb-sustainability-report-2017>.

¹⁴ ESB, "ESB Sustainability Report 2017", at: <https://www.esb.ie/docs/default-source/sustainability/esb-sustainability-report-2017>.

large-scale wind farms, 24 small-scale renewable generation projects and several hundred micro-generation projects, which produced approximately 1.65 GW. Moreover, ESB also disclosed that in 2018 the renewable energy share of its total energy mix was 14%, corresponding to 4 GW of renewables installed capacity in Ireland and 1.6 GW in Northern Ireland. In 2018, ESB also was a founding member of Leaders Group on Sustainability, a Business In The Community Ireland (BITCI) led group of organizations committed to the Low Carbon Pledge, representing the first public commitment generated by Irish businesses to promote the transition towards a sustainable economy.

Given ESB's sustainability vision, strategy, commitments and policies, Sustainalytics is of the opinion that the eligible green projects will contribute towards furthering ESB's sustainability strategy and its transition towards carbon free energy generation and that ESB is well positioned to issue green bonds.

Well positioned to address common environmental and social risks associated with the projects

While Sustainalytics recognizes that the use of proceeds outlined in the ESB Green Bond Framework will be directed towards eligible investments that are recognized as impactful by the GBP 2018, Sustainalytics is acknowledges that the eligible projects also have environmental and social risks. Some key environmental and social risks associated with the use of proceeds relate to workers' health and safety in the construction and maintenance of renewable energy projects and transmission infrastructure, impacts on biodiversity and the environment generally as well as community relation challenges associated with large infrastructure projects.

Sustainalytics is of the opinion that ESB is well positioned to mitigate related risks through the following policies, systems and processes:

- The ESB Health and Safety Policy¹⁵, Environment and Sustainability Policy⁵ and ESB Group Safety Policy¹⁶ commits the company to providing a safe working environment and causing zero harm to employees, contractors, clients, partners and members of the public who may be affected by its operations. These policies stipulate processes aimed at ensuring workers health and safety during construction. Moreover, the company's business units maintain safety management systems in place that are externally certified to the OHSAS 18001:2007 standard, which Sustainalytics regards as a robust standard.¹⁷ Furthermore, ESB procedures require that all staff and contractor injuries resulting in an absence of more than one day from work are reported to the CEO within 24 hours ahead of the follow-up investigation by local management.¹⁸ The company analyses all injuries and near-misses to better develop prevention mechanisms of such incidents in the future.¹⁹
- ESB commits to sustainable management of the environment in its ESB Group Policy Statement on Environmental Management and Sustainability.²⁰ ESB also implements the ESB Biodiversity Policy, ESB Sustainability Objectives and Group Environmental Standards as well as business unit environmental policies, environmental management systems and plans.²¹ In this regard, ESB's business units operate environmental management systems that are externally certified to ISO 14001.²² All proposed projects and structural changes are assessed at the planning stage to determine whether a Natura 2000 Impact Assessment and new environmental impact assessment are required.²³ Furthermore, biodiversity

¹⁵ ESB, "ESB Health & Safety Policies and Performance", at: <https://www.esb.ie/acting-responsibly/staying-safe/esbs-health-safety-policy-and-performance>.

¹⁶ ESB, "ESB Group Safety Policy", (2014) at: <https://www.esb.ie/docs/default-source/default-document-library/keeping-safe/esb-group-policy-and-framework-safety-statement>.

¹⁷ ESB, "ESB Sustainability Report 2017", at: <https://www.esb.ie/docs/default-source/sustainability/esb-sustainability-report-2017>.

¹⁸ ESB, "ESB Health & Safety Policies and Performance", at: <https://www.esb.ie/acting-responsibly/staying-safe/esbs-health-safety-policy-and-performance>.

¹⁹ ESB, "ESB Health & Safety Policies and Performance", at: <https://www.esb.ie/acting-responsibly/staying-safe/esbs-health-safety-policy-and-performance>.

²⁰ ESB, "ESB Group Policy Statement on Environmental Management and Sustainability", at: <https://www.esb.ie/docs/default-source/default-document-library/group-policy-here>.

²¹ ESB, "ESB Group Policy Statement on Environmental Management and Sustainability", at: <https://www.esb.ie/docs/default-source/default-document-library/group-policy-here>.

²² ESB, "Environmental Information", at: <https://www.esb.ie/acting-responsibly/environmental-information>.

²³ ESB, "ESB Sustainability Report 2017", at: <https://www.esb.ie/docs/default-source/sustainability/esb-sustainability-report-2017>.

impacts are taken into account where existing or new assets are planned within close proximity of conservation areas established by the EU Birds and Habitats Directives.²⁴

- In order to develop infrastructure, in addition to environmental impact assessments, ESB commits to providing a community needs assessment as part of a broader regulatory engagement process.²⁵ ESB confirmed to Sustainalytics that the community needs assessment takes place at the pre-planning stage for proposed infrastructure projects, and involves a multi-stakeholder approach through which concerns are identified and addressed during the planning process. Furthermore, the company maintains stakeholder engagement plans throughout the life of each project. ESB also contributes to the development of essential infrastructure and services for the local community in which its wind farms operate through the Wind Farm Community Fund.²⁶

Based on ESB's policies, programmes and procedures, Sustainalytics considers ESB to be well-positioned to mitigate the environmental and social risks associated with the projects funded by green bond proceeds.

Section 3: Impact of Use of Proceeds

All four use of proceeds categories are recognized as impactful by the GBP. Sustainalytics has focused below on the impact in the local context.

Relevance of Renewable Energy for Ireland's transition to a low carbon economy

As part of the EU, Ireland set a target for 16% of its Gross Final Energy Consumption to be derived from renewable sources by 2020,²⁷ which entails achieving 40% renewable electricity production, 12% renewable heat production and 10% clean transportation by 2020.²⁸ Moreover, in April 2019, Ireland revised its renewable electricity goal from 55% to 70% of total electricity supply by 2030.²⁹ As of 2017 only 30.1% of the country's electricity was generated from renewable sources.³⁰ Furthermore, according to the Sustainable Energy Authority of Ireland (SEAI), the state is facing several challenges in lowering the consumption of fossil fuels for transportation, heating and electricity production.³¹

Given the context, Sustainalytics favourably views ESB's investments into renewable energy projects (wind and solar) and power transmission infrastructure, especially in the Irish context where significant investments are required to bridge the gap between current electricity production and targets.

The Importance of Energy Efficiency, Green Buildings and Clean Transportation for Ireland and the UK's climate goals

In accordance with the Paris Climate Agreement and Kyoto Protocol, the EU has set up goals for its member states in terms of energy efficiency and GHG emissions reductions in all sectors of the economy, such as energy generation, buildings and transportation.³² Two of Ireland's climate change targets are to reach a 20% reduction of non-ETS (Emissions Trading Scheme) emissions by 2020,³³ and 30% by 2030 (based on 2005

²⁴ ESB, "ESB Sustainability Report 2017", at: <https://www.esb.ie/docs/default-source/sustainability/esb-sustainability-report-2017>.

²⁵ ESB, "ESB Sustainability Report 2017", at: <https://www.esb.ie/docs/default-source/sustainability/esb-sustainability-report-2017>.

²⁶ ESB, "ESB Sustainability Report 2017", at: <https://www.esb.ie/docs/default-source/sustainability/esb-sustainability-report-2017>.

²⁷ European Commission, "The Environment", (2019), at: https://ec.europa.eu/ireland/news/key-eu-policy-areas/environment_en.

²⁸ Irish Department of Communications, Climate Action & Environment, "Renewable Energy Target 2020", at: <https://www.dccae.gov.ie/en-ie/energy/topics/Renewable-Energy/decarbonisation/Pages/2020-Landing-Page.aspx>.

²⁹ Out-Law.com, "Ireland sets new renewable energy targets", (2019), at: <https://www.out-law.com/en/articles/2019/april/ireland-70-renewable-energy-target/>.

³⁰ Sustainable Energy Authority of Ireland, "Energy in Ireland 2018 Report" (2018), at: <https://www.seai.ie/resources/publications/Energy-in-Ireland-2018.pdf>.

³¹ European Commission, "The Environment", (2019), at: https://ec.europa.eu/ireland/news/key-eu-policy-areas/environment_en.

³² European Commission, "EU climate action", at: https://ec.europa.eu/clima/citizens/eu_en.

³³ Irish Department of Communications, Climate Action & Environment, "EU Emissions Targets", at: <https://www.dccae.gov.ie/en-ie/climate-action/topics/eu-and-international-climate-action/2020-eu-targets/pages/default.aspx>.

levels).³⁴ The United Kingdom, ESB's other market, aims to cut GHG emissions by at least 32% by 2020 (2010 baseline)³⁵ and 80% by 2050, compared to 1990 levels.³⁶

In 2013, the energy consumption from the transportation sector accounted for 33% of total energy use in Ireland³⁷ and 26% of total GHG emissions in the UK in 2018.³⁸ In order to reduce the share of emissions from the transport sector, the Irish government developed the National Policy Framework on Alternative Fuels Infrastructure for Transport in Ireland 2017 to 2030, which commits the state to have all new cars and vans sold in Ireland emit zero emissions by 2030.³⁹

Moreover, the Irish residential sector accounts for around 25% of the total energy use in the country, while also being responsible for a quarter of the energy-related CO₂ emissions.⁴⁰ Through a combination of energy efficiency improvements and high energy prices, Ireland has managed to achieve a 25% reduction in CO₂ emissions from 2006 to 2014 in this sector.⁴¹ However, between 2014 and 2016, the CO₂ emissions from buildings increased by 6% , and currently stands at almost 60% more CO₂ compared to the average EU household.⁴²

Taking into account all the above, Sustainalytics considers that ESB's investments into energy efficient solutions, such as smart meters, power transmission infrastructure, electric vehicles for the company's fleet, electric vehicles charging points, and certified green buildings will have a positive impact in relation to lowering the GHG emissions from multiple sources of emissions in Ireland and the UK, while also supporting the countries in meeting their climate goals.

Alignment with/contribution to SDGs

The Sustainable Development Goals (SDGs) were set in September 2015 and form an agenda for achieving sustainable development by the year 2030. This green bond advances the following SDG goals and targets:

Use of Proceeds Category	SDG	SDG target
Renewable Energy	7. Affordable and Clean Energy	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix
Energy Efficiency	7. Affordable and Clean Energy	7.3 By 2030, double the global rate of improvement in energy efficiency.
Green Buildings		
Clean Transportation	11. Sustainable Cities and Communities	11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.

Conclusion

³⁴ The Irish Times, "Ireland's climate change plan 'way off track' in meeting targets", (2019), at: <https://www.irishtimes.com/news/environment/ireland-s-climate-change-plan-way-off-track-in-meeting-targets-1.3860328>.

³⁵ Bairstow, J. (2018), "UK Government to slash emissions by 32% before 2020", at: <https://www.energylivenews.com/2018/02/07/uk-government-to-slash-emissions-by-32-before-2020/>.

³⁶ Committee on Climate Change, "UK regulations: the Climate Change Act", at: <https://www.theccc.org.uk/tackling-climate-change/the-legal-landscape/the-climate-change-act/>.

³⁷ Irish Department of Communications, Climate Action & Environment, "Transport", at: <https://www.dccae.gov.ie/en-ie/energy/topics/Renewable-Energy/transport/Pages/Transport.aspx>.

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³⁹ Irish Department of Communications, Climate Action & Environment, "Electric Vehicles", at: <https://www.dccae.gov.ie/en-ie/energy/topics/Renewable-Energy/transport/electric-vehicles/Pages/Electric-Vehicles.aspx>.

⁴⁰ Sustainable Energy Authority of Ireland, "Energy in the Residential Sector", (2018), at: <https://www.seai.ie/resources/publications/Energy-in-the-Residential-Sector-2018-Final.pdf>.

⁴¹ Sustainable Energy Authority of Ireland, "Energy in the Residential Sector", (2018), at: <https://www.seai.ie/resources/publications/Energy-in-the-Residential-Sector-2018-Final.pdf>.

⁴² Sustainable Energy Authority of Ireland, "Energy in the Residential Sector", (2018), at: <https://www.seai.ie/resources/publications/Energy-in-the-Residential-Sector-2018-Final.pdf>.

ESB has developed the ESB Green Bond Framework, under which it is considering to issue green bonds and use the proceeds to finance and refinance, in whole or in part, existing and future projects related to renewable energy, energy efficiency, clean transportation and green buildings. Sustainalytics believes that these projects will have environmental benefits and support a transition to a low carbon economy. Sustainalytics specifically notes the Framework's contribution to the company's ongoing transition to a low carbon electricity producer and distributor, and, in this regard, highlights the focus on renewable energy generation and transmission. Additional strengths of the Framework include the use of credible third-party green building standards and quantitative thresholds for energy performance improvement in ESB's commercial buildings.

ESB's process for project evaluation and selection, management of proceeds and reporting are aligned with the Green Bond Principles, and Sustainalytics considers these elements to be consistent with market practice. Furthermore, Sustainalytics believes that investments financed by green bond proceeds will support the advancement of the UN Sustainable Development Goals, with a specific impact on goal 7, Affordable and Clean Energy, and Goal 11, Sustainable Cities and Communities.

Based on the above, Sustainalytics is confident that ESB is well-positioned to issue Green financial instruments, and that the ESB Green Bond Framework is robust, transparent, and in alignment with the Green Bond Principles 2018.

Appendices

Appendix 1: Sustainalytics' Assessment of Green Building Standards

	BREEAM	LEED
Background	BREEAM (Building Research Establishment Environmental Assessment Method) was first published by the Building Research Establishment (BRE) in 1990.	Leadership in Energy and Environmental Design (LEED) is a US-based Certification System for residential and commercial buildings used worldwide. LEED was developed by the non-profit U.S. Green Building Council (USGBC).
Certification levels	• Pass • Good • Very Good • Excellent • Outstanding	• Certified • Silver • Gold • Platinum
Areas of Assessment	• Energy • Land Use and Ecology • Pollution • Transport • Materials • Water • Waste • Health and Wellbeing • Innovation	• Energy and atmosphere • Sustainable Sites • Location and Transportation • Materials and resources • Water efficiency • Indoor environmental quality • Innovation in Design • Regional Priority
Requirements	Prerequisites depending on the levels of certification, and credits with associated points. This number of points is then weighted by item to determine an overall score, upon which the overall rating is based. Majority of BREEAM issues are flexible, meaning that the client can choose which to comply with to build their BREEAM performance score.	Prerequisites independent of level of certification, and credits with associated points. These points are then added together to obtain the LEED level of certification There are several different rating systems within LEED. Each rating system is designed to apply to a specific sector (e.g. New Construction, Major Renovation, Core and Shell Development, Schools-/Retail-/Healthcare New Construction and Major Renovations, Existing Buildings: Operation and Maintenance).
Performance display		

Qualitative Considerations	Widely recognized internationally, with ability to adapt to local conditions.	Widely recognized internationally, and strong assurance of overall quality.
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Appendix 2: Green Bond / Green Bond Programme - External Review Form

Section 1. Basic Information

Issuer name:	Electricity Supply Board
Green Bond ISIN or Issuer Green Bond Framework Name, if applicable: <i>[specify as appropriate]</i>	ESB Green Bond Framework
Review provider's name:	Sustainalytics
Completion date of this form:	6 May 2019
Publication date of review publication: <i>[where appropriate, specify if it is an update and add reference to earlier relevant review]</i>	

Section 2. Review overview

SCOPE OF REVIEW

The following may be used or adapted, where appropriate, to summarise the scope of the review.

The review assessed the following elements and confirmed their alignment with the GBPs:

- | | |
|--|--|
| ☒ Use of Proceeds | ☒ Process for Project Evaluation and Selection |
| ☒ Management of Proceeds | ☒ Reporting |

ROLE(S) OF REVIEW PROVIDER

- | | |
|---|--|
| ☒ Consultancy (incl. 2 nd opinion) | ☐ Certification |
| ☐ Verification | ☐ Rating |
| ☐ Other <i>(please specify)</i> : | |

Note: In case of multiple reviews / different providers, please provide separate forms for each review.

EXECUTIVE SUMMARY OF REVIEW and/or LINK TO FULL REVIEW *(if applicable)*

Please refer to Evaluation Summary above.

Section 3. Detailed review

Reviewers are encouraged to provide the information below to the extent possible and use the comment section to explain the scope of their review.

1. USE OF PROCEEDS

Overall comment on section *(if applicable)*:

The eligible categories for the use of proceeds (Renewable Energy, Energy Efficiency, Clean Transportation and Green Buildings) are aligned with those recognized by the Green Bond Principles. Sustainalytics considers that green projects in the areas of renewable energy, low carbon transport and green buildings to have positive environmental impacts and to advance the UN Sustainable Development Goals.

Use of proceeds categories as per GBP:

- | | |
|--|--|
| ☒ Renewable energy | ☒ Energy efficiency |
| ☐ Pollution prevention and control | ☐ Environmentally sustainable management of living natural resources and land use |
| ☐ Terrestrial and aquatic biodiversity conservation | ☒ Clean transportation |
| ☐ Sustainable water and wastewater management | ☐ Climate change adaptation |
| ☐ Eco-efficient and/or circular economy adapted products, production technologies and processes | ☒ Green buildings |
| ☐ Unknown at issuance but currently expected to conform with GBP categories, or other eligible areas not yet stated in GBPs | ☐ Other <i>(please specify)</i> : |

If applicable please specify the environmental taxonomy, if other than GBPs:

2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section *(if applicable)*:

ESB has established a dedicated Green Finance Committee, formed from the Head of ESB's Treasury, Sustainability and Strategy Areas and representatives from ESB's Business Units, which will ensure compliance with the Green Bond Framework and

oversee the totality of the issuance process. The Green Finance Committee is responsible for reviewing the proposed projects with respect to the Eligibility Criteria and ensuring that the requirements of ESB's environmental risk management procedures have been applied. Sustainalytics is of the opinion that this process is in line with market standards.

Evaluation and selection

- | | |
|--|---|
| ☒ Credentials on the issuer's environmental sustainability objectives | ☒ Documented process to determine that projects fit within defined categories |
| ☒ Defined and transparent criteria for projects eligible for Green Bond proceeds | ☒ Documented process to identify and manage potential ESG risks associated with the project |
| ☒ Summary criteria for project evaluation and selection publicly available | ☐ Other <i>(please specify)</i> : |

Information on Responsibilities and Accountability

- | | |
|---|---|
| ☐ Evaluation / Selection criteria subject to external advice or verification | ☒ In-house assessment |
| ☐ Other <i>(please specify)</i> : | |

3. MANAGEMENT OF PROCEEDS

Overall comment on section *(if applicable)*:

ESB will set up a register and internal controls in order to monitor and track the net proceeds allocated to Eligible Projects. In accordance with the evaluation and selection process, ESB will allocate an amount equal to the green bond net proceeds towards eligible green projects. The company will also strive to reach full allocation to eligible projects within two years of the Green Bond issuance. Sustainalytics considers this process to be in accordance with market practice.

Tracking of proceeds:

- | |
|---|
| ☒ Green Bond proceeds segregated or tracked by the issuer in an appropriate manner |
| ☒ Disclosure of intended types of temporary investment instruments for unallocated proceeds |
| ☐ Other <i>(please specify)</i> : |

Additional disclosure:

- | | |
|---|---|
| ☐ Allocations to future investments only | ☒ Allocations to both existing and future investments |
|---|---|

- | | |
|--|---|
| ☒ Allocation to individual disbursements | ☐ Allocation to a portfolio of disbursements |
| ☐ Disclosure of portfolio balance of unallocated proceeds | ☐ Other <i>(please specify)</i> : |

4. REPORTING

Overall comment on section (if applicable):

ESB commits to producing, at least annually, an Allocation and Impact report either in its own dedicated report or integrated into ESB's existing annual sustainability report, which will be made available via the company's website. Sustainalytics considers this process to be in accordance with market practice.

Use of proceeds reporting:

- | | |
|--|--|
| ☐ Project-by-project | ☐ On a project portfolio basis |
| ☐ Linkage to individual bond(s) | ☒ Other <i>(please specify)</i> : |
| | <ul style="list-style-type: none"> • Total funds distributed per Eligible Category and/ or per project where relevant |

Information reported:

- | | |
|---|--|
| ☒ Allocated amounts | ☐ Green Bond financed share of total investment |
| ☒ Other <i>(please specify)</i> : | |
| | <ul style="list-style-type: none"> • Total funds used for refinancing or allocated to newly financed projects • Amount of unallocated proceeds |

Frequency:

- | | |
|--|--------------------------------------|
| ☒ Annual | ☐ Semi-annual |
| ☐ Other (please specify): | |

Impact reporting:

- | | |
|--|--|
| ☐ Project-by-project | ☒ On a project portfolio basis |
| ☐ Linkage to individual bond(s) | ☐ Other (please specify): |

Frequency:

- ☒ Annual ☐ Semi-annual
☐ Other (please specify):

Information reported (expected or ex-post):

- ☒ GHG Emissions / Savings ☒ Energy Savings
☐ Decrease in water use ☒ Other ESG indicators (please specify):

- Breakdown of Renewable Energy projects by energy type e.g. wind, solar
- Installed renewable energy capacity (MW)
- Renewable energy capacity connected (MW)
- Expected annual renewable energy generation (MWh)
- Number of smart meters installed
- Number of customers using smart meters (supply)
- Capacity of energy storage facilities installed
- Annual reduction in energy consumption (in kWh)
- Number of EV charging points installed or upgraded
- Number of Electric Vehicles in ESB Fleettonnes

Means of Disclosure

- ☐ Information published in financial report ☐ Information published in sustainability report
☒ Information published in ad hoc documents ☐ Other (please specify):
☐ Reporting reviewed (if yes, please specify which parts of the reporting are subject to external review):

Where appropriate, please specify name and date of publication in the useful links section.

USEFUL LINKS (e.g. to review provider methodology or credentials, to issuer's documentation, etc.)

www.esb.ie/ir
[https://esb.ie/docs/default-source/investor-relations-documents/annual-report-2018-full-report-\(interactive-version\).pdf?sfvrsn=d28304f0_2](https://esb.ie/docs/default-source/investor-relations-documents/annual-report-2018-full-report-(interactive-version).pdf?sfvrsn=d28304f0_2)
<https://www.esb.ie/acting-responsibly/sustainability-in-esb>
<https://www.esb.ie/docs/default-source/sustainability/esb-sustainability-report-2017>
<https://www.esb.ie/docs/default-source/default-document-library/group-policy-here>

SPECIFY OTHER EXTERNAL REVIEWS AVAILABLE, IF APPROPRIATE

Type(s) of Review provided:

- | | |
|--|--|
| ☐ Consultancy (incl. 2 nd opinion) | ☐ Certification |
| ☐ Verification / Audit | ☐ Rating |
| ☐ Other (<i>please specify</i>): | |

Review provider(s):

Date of publication:

ABOUT ROLE(S) OF INDEPENDENT REVIEW PROVIDERS AS DEFINED BY THE GBP

- i. **Second Party Opinion:** An institution with environmental expertise, that is independent from the issuer may issue a Second Party Opinion. The institution should be independent from the issuer's adviser for its Green Bond framework, or appropriate procedures, such as information barriers, will have been implemented within the institution to ensure the independence of the Second Party Opinion. It normally entails an assessment of the alignment with the Green Bond Principles. In particular, it can include an assessment of the issuer's overarching objectives, strategy, policy and/or processes relating to environmental sustainability, and an evaluation of the environmental features of the type of projects intended for the Use of Proceeds.
- ii. **Verification:** An issuer can obtain independent verification against a designated set of criteria, typically pertaining to business processes and/or environmental criteria. Verification may focus on alignment with internal or external standards or claims made by the issuer. Also, evaluation of the environmentally sustainable features of underlying assets may be termed verification and may reference external criteria. Assurance or attestation regarding an issuer's internal tracking method for use of proceeds, allocation of funds from Green Bond proceeds, statement of environmental impact or alignment of reporting with the GBP, may also be termed verification.
- iii. **Certification:** An issuer can have its Green Bond or associated Green Bond framework or Use of Proceeds certified against a recognised external green standard or label. A standard or label defines specific criteria, and alignment with such criteria is normally tested by qualified, accredited third parties, which may verify consistency with the certification criteria.
- iv. **Green Bond Scoring/Rating:** An issuer can have its Green Bond, associated Green Bond framework or a key feature such as Use of Proceeds evaluated or assessed by qualified third parties, such as specialised research providers or rating agencies, according to an established scoring/rating methodology. The output may include a focus on environmental performance data, the process relative to the GBP, or another benchmark, such as a 2-degree climate change scenario. Such scoring/rating is distinct from credit ratings, which may nonetheless reflect material environmental risks.

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Sustainalytics is a leading independent ESG and corporate governance research, ratings and analytics firm that support investors around the world with the development and implementation of responsible investment strategies. With 13 offices globally, the firm partners with institutional investors who integrate ESG information and assessments into their investment processes. Spanning 30 countries, the world's leading issuers, from multinational corporations to financial institutions to governments, turn to Sustainalytics for second-party opinions on green and sustainable bond frameworks. Sustainalytics has been certified by the Climate Bonds Standard Board as a verifier organization, and supports various stakeholders in the development and verification of their frameworks. In 2015, Global Capital awarded Sustainalytics "Best SRI or Green Bond Research or Ratings Firm" and in 2018 and 2019, named Sustainalytics the "Most Impressive Second Party Opinion Provider". The firm was recognized as the "Largest External Reviewer" by the Climate Bonds Initiative as well as Environmental Finance in 2018, and in 2019 was named the "Largest Approved Verifier for Certified Climate Bonds" by the Climate Bonds Initiative. In addition, Sustainalytics received a Special Mention Sustainable Finance Award in 2018 from The Research Institute for Environmental Finance Japan and the Minister of the Environment Award in the Japan Green Contributor category of the Japan Green Bond Awards in 2019.

For more information, visit www.sustainalytics.com

Or contact us info@sustainalytics.com

