Energy for generations

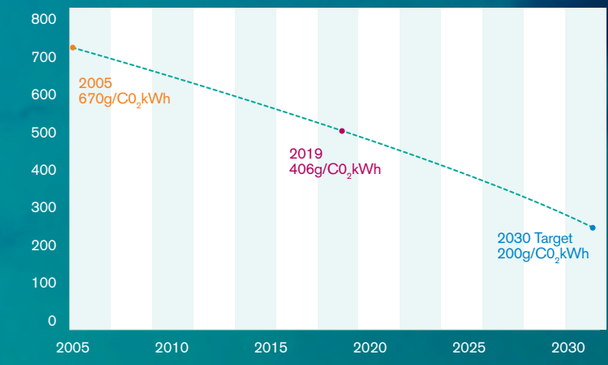
POWERING THE TRANSITION TO A CLEAN ENERGY FUTURE

ESB RESPONSIBLE BUSINESS REPORT 2019

POWERING THE TRANSITION TO A CLEAN ENERGY FUTURE

ESB is committed to leading the transition to a reliable, affordable, low-carbon energy future. This is a future powered by clean, sustainable electricity. We are investing and innovating right across our business to make this future a reality.

ESB'S CARBON INTENSITY



ABOUT ESB

ESB was established in 1927 as a statutory body under the Electricity (Supply) Act 1927. With a holding of 95.7%, ESB is majority owned by the Irish Government. The remaining 4.3% is held by the trustees of an Employee Share Ownership Plan. As a strong, diversified, vertically integrated utility, ESB operates across the electricity market, from generation through transmission and distribution, to supply of customers, with an expanding presence in Great Britain's generation and supply markets. In addition, we extract further value at certain points along this chain by supplying gas and using our networks to carry fibre for telecommunications. ESB is a leading Irish utility with a regulated asset base (RAB) of approximately €10 billion (comprising ESB Networks €8.1 billion and NIE Networks €1.9 billion), a 30% share of generation in the all-island market and a significant supply business supplying electricity and gas to approximately 1.5 million customers throughout the island of Ireland and Great Britain. ESB will continue to grow the scale of its generation, trading and supply businesses so that it can continue to compete within the all-island competitive environment. ESB is focused on providing excellent customer service and maintaining its financial strength. As at 31 December 2019, ESB Group employed over 7,900 people.

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ABOUT THIS REPORT

ESB's purpose is to lead the transition to a reliable, affordable, low-carbon energy future. This report explains ESB's strategy and environment and sustainability ambition in service to that purpose. It also accounts for ESB's environmental and sustainability performance for the past year. It's intended audience is customers, investors, analysts, policy makers, the public and other stakeholders, internal and external to ESB Group and it is focused on the sustainability issues of greatest concern to these stakeholders.

Our reporting is guided by the principles of materiality, inclusiveness and responsiveness. We use leading standards and methodologies for reporting, such as the Greenhouse Gas Protocol, CDP and the Global Reporting Initiative (GRI). This report has been prepared in accordance with the GRI Standards Core option and has been independently assessed by DNV GL against this option. A guide linking the disclosures in the report to the relevant GRI indicators is presented in the report appendices.

SCOPE OF REPORT

This report covers the fiscal and calendar year 2019. This report pertains to the full activities of ESB and its subsidiary companies, including NIE Networks, hereinafter referred to as ESB Group. It has been prepared in accordance with GRI global standards for sustainability reporting, as well as the GRI Electric Utilities Sector Supplement. The report content is based on the output from a materiality process, including both operational and strategic engagements with internal and external stakeholders.

The 2019 Sustainability Report meets our commitment to report annually on our Sustainability performance. Where scope boundaries pertain to specific material aspects of the business, these are detailed in the specific sections of the report. Readers of this report may also view the ESB Group Annual Report 2019 https://www.esb.ie/investor-relations/result-presentations-investor-updates . Together these reports present a coherent picture of ESB's activities and explain how sustainability is central to our corporate strategy. Accordingly ESB Group is embedding environmental stewardship and sustainability throughout our business. The alignment of our activities with the UN Sustainable Development Goals is highlighted where relevant throughout the report.

ESB'S FIRST IRISH OFFSHORE WIND FARMS

Joint venture with Parkwind to develop wind farms at Oriel & Clogherhead

Jim Dollard, Executive Director Generation and Trading (GT); Kate Tuohy, GT Asset Development; Pat O'Doherty, ESB Chief Executive; Richard Bruton, Minister for Communications, Climate Action and Environment; Eric Antoons – Co-CEO Parkwind; Francois Van Leeuw, Co-CEO Parkwind and Paul Lennon – GT Asset Development.

We welcome requests, comments and enquiries relating to this report and to sustainability. Please email our mailbox: sustainability@esb.ie or our Sustainability Coordinator: brian.gray@esb.ie
www.esb.ie
Twitter: @ESBGroup
LinkedIn: www.linkedin.com/company/esb
YouTube: www.youtube.com/user/ESBVideo

CHAPTER 1
BUSINESS OVERVIEW

1.1 CHIEF EXECUTIVE'S REVIEW

Pat O'Doherty
Chief Executive

> If we can aid the electrification of heat and transport , and remove carbon from the production of electricity, then electricity becomes a hugely transformative force, the catalyst for a low carbon world

Pat O'Doherty discusses progress against the Brighter Future Strategy in 2019 and looks forward to the year ahead.

Q What were the biggest developments affecting ESB in 2019?

2019 was a watershed year for energy and climate change, particularly in Ireland where government policy and public sentiment combined to significantly accelerate the pace and urgency of the transition to a low-carbon energy system. It is widely accepted at a policy level that electricity will play a critical role in the low-carbon energy system of the future. This has big implications for all parts of ESB, by way of both challenge and opportunity.

Q How has this impacted the delivery of ESB's strategy?

Our strategy is fully aligned with emerging policies around low-carbon energy and is anchored to our purpose of creating a brighter future for the customers and communities we serve by leading the transition to reliable, affordable, low-carbon energy. This presents a great growth opportunity for the electricity sector while also playing a key role in addressing climate change. Each of our business units has a unique but interrelated role in making this a reality.

Q What progress have you made during the year?

ESB's new organisational structure has focused on driving transformational change across every area of our business during 2019. We successfully launched Ireland's first corporate Green Bond, and have invested significantly in low-carbon technologies and solutions, including new low-carbon and renewable generation, smarter, more resilient networks, and new products and services to support our customers.

> Each of our business units has a unique but interrelated role in making this [the transition to low-carbon] a reality.

Q How is ESB managing the transition away from coal and peat?

In 2019, we continued to increase volumes of electricity generated from low-carbon and renewable sources, while reducing our dependence on high carbon thermal plant. New partnerships with Coillte, Parkwind, EDF and Equinor will enable us to significantly increase our onshore and offshore wind portfolio to grow earnings from renewables while also meeting carbon reduction targets. We are building a portfolio of assets in the offshore wind sector. In 2019, we acquired a 50% stake in Neart na Gaoithe in the North Sea. We acquired a stake in the Oriel project off the coast of Dundalk with our partners in Parkwind and we are developing further onshore projects in the Republic of Ireland (ROI) at Clogherhead, and Kilmichael Point - all of which build on our investment in the Galloper offshore wind farm (UK) in 2018. We also invested significantly in onshore wind farms in ROI at Oweninny in Mayo, which we completed in 2019, and in Grousemount in Co.Kerry, which will be completed by the start of Q2 2020.

> We successfully launched Ireland's first corporate Green Bond

In 2019 we announced the closure, by the end of 2020, of our two remaining peat-fired power stations, which will further reduce our carbon emissions. Over seven decades, peat has been part of our generation fuel mix and its cessation has significant implications for local communities. Also, during the year, we reconfigured the operation of Moneypoint coal station in order to secure its commercial viability in the short term in the context of reduced running due to the impact of increasing renewables and carbon pricing. In line with Government policy, we will not generate electricity from coal beyond 2025.

Q What is ESB doing to prepare the electricity networks to meet future customer needs?

We continue to invest and innovate in our ROI and Northern Ireland (NI) networks businesses to increase the level of automation and resilience, to meet growing demand and to facilitate significant increases in customers' own distributed energy assets. ESB Networks is working with three communities – Limerick, Dingle and the Aran Islands – to pilot new network and customer technologies with a view to gaining valuable insights into the network required to meet future customer needs and inform future network planning and investment decisions. During the year, ESB Networks made its submission on Price Review 5 to the Regulator which includes provision to support the delivery of the Irish Government's Climate Action Plan.

> ESB Networks is working with three communities – Limerick, Dingle and the Aran Islands – to pilot .... the network required to meet future customer needs

> ESB Networks made its submission on Price Review 5 to the Regulator which includes provision to support the delivery of the Irish Government's Climate Action Plan.

Q How is ESB adapting its customer offering in response to changing energy needs?

Customers will play a critical role in the electricity system of the future and we have therefore implemented new structures to support customer-centric product development for both business and residential markets. During the year, we continued to build our portfolio and pipeline of products and services to help customers manage their energy use more efficiently and reduce their carbon footprint. These included new green tariffs, a home charging installation service and home retrofit supports. The new Brighter Together advertising campaign to promote this suite of products went live in December. With €10 million support from the Government Climate Action Fund, our eCars division began a €20 million upgrade of the national electric vehicle (EV) charging infrastructure. In Great Britain (GB), we opened a new office in Manchester to serve our growing customer base there and we completed the roll-out of electric vehicle (EV) infrastructure for the London Taxi Fleet. Our Smart Energy Services business consolidated its position as a leading energy services provider to businesses securing a contract to design and deliver heat pump and combined heat and power (CHP) installations for what will be the largest and most sustainable commercial greenhouses in GB.

ESB Networks continued to improve digital services for customers, and commenced the roll-out of the National Smart Metering programme which will see over 2 million meters upgraded over a multi-year programme to smart digital technology, paving the way for all suppliers to develop new products and services that will enable customers to take more control of their energy use.

> "Safety and environmental responsibility are priorities at every level of the organisation and we continue to encourage an open reporting culture

Q How successful has ESB been in keeping up with changing customer expectation by leveraging the potential of new technologies?

ESB collaborates with industry, academia and start-ups to identify and deploy new technologies to improve efficiency and meet customers' needs. During the year, we embarked on pilot projects with five finalists from Free Electrons, an accelerator programme co-founded by ESB with other energy companies, which targets start-ups operating in the energy sector. We are also incubating new commercial propositions in our offsite Innovation Hub, where we fast track new ideas in a start-up environment.

Q What progress is ESB making in addressing environmental and safety concerns raised during the year regarding legacy infrastructure?

ESB has an ongoing programme of maintenance and investment to ensure that its legacy infrastructure meets applicable safety and environmental standards. We have invested significantly in the replacement of switch gear and fluid-filled cables in recent years and although considerable progress has been made, we recognise the need for further improvement. This will be a central part of our 2020 transformation programme. Safety and environmental responsibility are priorities at every level of the organisation and we continue to encourage an open reporting culture to identify and appropriately address issues as they arise.

Q How was ESB's financial performance in 2019?

Following a challenging couple of years, ESB achieved an improved financial performance in 2019 with EBITDA of €1,372 million and Operating Profit before exceptional items of €682 million. We are focused on maintaining ESB's financial strength to ensure we can deliver on our Brighter Future strategy. During 2019 ESB invested €1,242 million including €340 million in renewables as we continue to lead the transition to low-carbon generation. The dividend for 2019 amounted to €88 million, bringing the total dividends paid over the past decade to over €1.2 billion.

Q Is ESB investing in talent as well as in technology?

We recognise that a high-performance culture requires an engaged and agile workforce and a supportive work environment that values diversity and inclusion. This year, we recruited 77 graduates and 86 apprentices across a range of disciplines and backgrounds, and provided extensive training and development opportunities for our existing employees. We also developed new volunteering opportunities for our employees through our Generation Tomorrow sponsorship programme, which empowers young people through STEAM (Science, Technology, Engineering, Arts and Mathematics) education and learning.

Q What are the major challenges facing ESB in the year ahead?

The increasing need for climate action presents new opportunities for ESB to build on its core areas of expertise in the areas of renewable generation, smart networks, electric heating, transport and innovative customer offerings. However, it also presents challenges in terms of managing legacy infrastructure, securing community support for new infrastructure and engaging citizens to ensure the electricity system is built around the future low-carbon energy needs of all our customers, while at the same time ensuring that ESB has the people and financial capability to deliver our own growth ambitions. While challenging, the transformation of the energy sector that is happening before our very eyes is exciting and I believe that ESB is in a strong position to take advantage of the many opportunities that lie ahead.

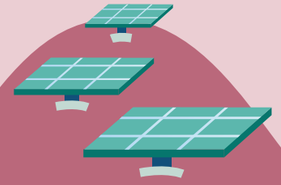
Pat O'Doherty, Chief Executive
27 February 2020

1.2 ESB AT A GLANCE

BUSINESS SEGMENT	GENERATION AND TRADING (GT)	ESB NETWORKS	NORTHERN IRELAND ELECTRICITY NETWORKS (NIE NETWORKS)	CUSTOMER SOLUTIONS	OTHER SEGMENTS
DESCRIPTION	ELECTRICITY GENERATION	ELECTRICITY TRANSMISSION AND DISTRIBUTION		ELECTRICITY SUPPLY	INNOVATION AND INTERNAL SERVICE PROVIDERS
REVENUE	€1,518m	€1,156m	€303m	€2,069m	€326m
CAPITAL EXPENDITURE**	€198m	€344m	€61m	€59m	€20m
REGIONS OF OPERATIONS	ROI, NI, GB	ROI	NI	ROI, NI, GB	ROI, NI, EU, MIDDLE EAST, ASIA, AFRICA
SCALE OF OPERATIONS	10 THERMAL STATIONS, 8 HYDRO AND PUMPED STORAGE STATIONS, 24 WINDFARMS	88 DEPOTS, YARDS, STORES AND VEHICLE WORKSHOPS	15 DEPOTS, YARDS, STORES AND OFFICES	5 OFFICE LOCATIONS IN ROI, NI AND GB	41 OFFICES AND STORES ACROSS ROI, NI, GB AND INTERNATIONALLY
EMPLOYEE NUMBERS	914	3,490	1,208	551	1,811
STRATEGIC FOCUS	DEVELOPING A LOW CARBON PORTFOLIO, CREATING CLEANER POWER USING SUSTAINABLE GENERATION	BUILDING SMARTER MORE RESILIENT NETWORKS. PUTTING THE CUSTOMER IN CONTROL OF THEIR ENERGY. FACILITATING THE CONNECTION OF RENEWABLES.		BRINGING SUSTAINABLE AND COMPETITIVE ENERGY SOLUTIONS TO ALL OUR CUSTOMERS	BRINGING LEADING EDGE ENERGY SOLUTIONS TO ALL OUR CUSTOMERS. INNOVATING FOR THE FUTURE

1.3 HIGHLIGHTS

ENVIRONMENT



CO_2 INTENSITY 406GCO$_2$/kWh - REDUCTION IN CARBON INTENSITY: 39% SINCE BASELINE 2005

2.5TWh RENEWABLES GENERATED

78MW NEW WIND FARMS CONNECTED

CUSTOMERS

ENDURING SAVINGS OF UP TO 8.5% FOR RESIDENTIAL ROI CUSTOMERS

OVER 15,000 SMART METERS INSTALLED

OVER 34,000 NEW CUSTOMER CONNECTIONS

STAKEHOLDERS

€500 MILLION IRELAND'S FIRST CORPORATE PUBLIC GREEN BOND RAISED

IRISH ECONOMY

OVER €1 BILLION INVESTMENT IN INFRASTRUCTURE

OVER €2 MILLION DISBURSED ACROSS A RANGE OF COMMUNITY INITIATIVES

OVER 7,900 EMPLOYEES

JUST UNDER €2 BILLION CONTRIBUTION TO IRISH ECONOMY

1.4 BUSINESS MODEL

Our Purpose is to 'Create a Brighter Future for the customers and communities we serve, by leading the transition to reliable, affordable, low-carbon energy.'

CAPITAL INPUTS

Manufactured Capital
- 5,520 MW of generation capacity
- Over 229,000 km of Network across ROI and NI

Financial Capital
- A-credit rating
- Total net assets €3.9 billion
- Liquidity of €1.5 billion

Intellectual Capital
- Promotion of innovation
- Corporate governance Structure

Human Capital
- 7,974 employees
- Employee development programmes
- Safety transformation programme

Social and Responsible Capital
- Over 1.5 million customers

Natural Capital
- 884 MW of renewable generation

GENERATE

ESB develops, operates and trades the output of ESB's electricity generation assets. The portfolio consists of 5,520 MW of thermal and renewable generation assets across ROI, NI and GB and a further 338 MW under construction

TRANSMIT

ESB builds, manages and maintains the transmission and distribution network in ROI and NI – over 229,000 km of Network.

SUPPLY

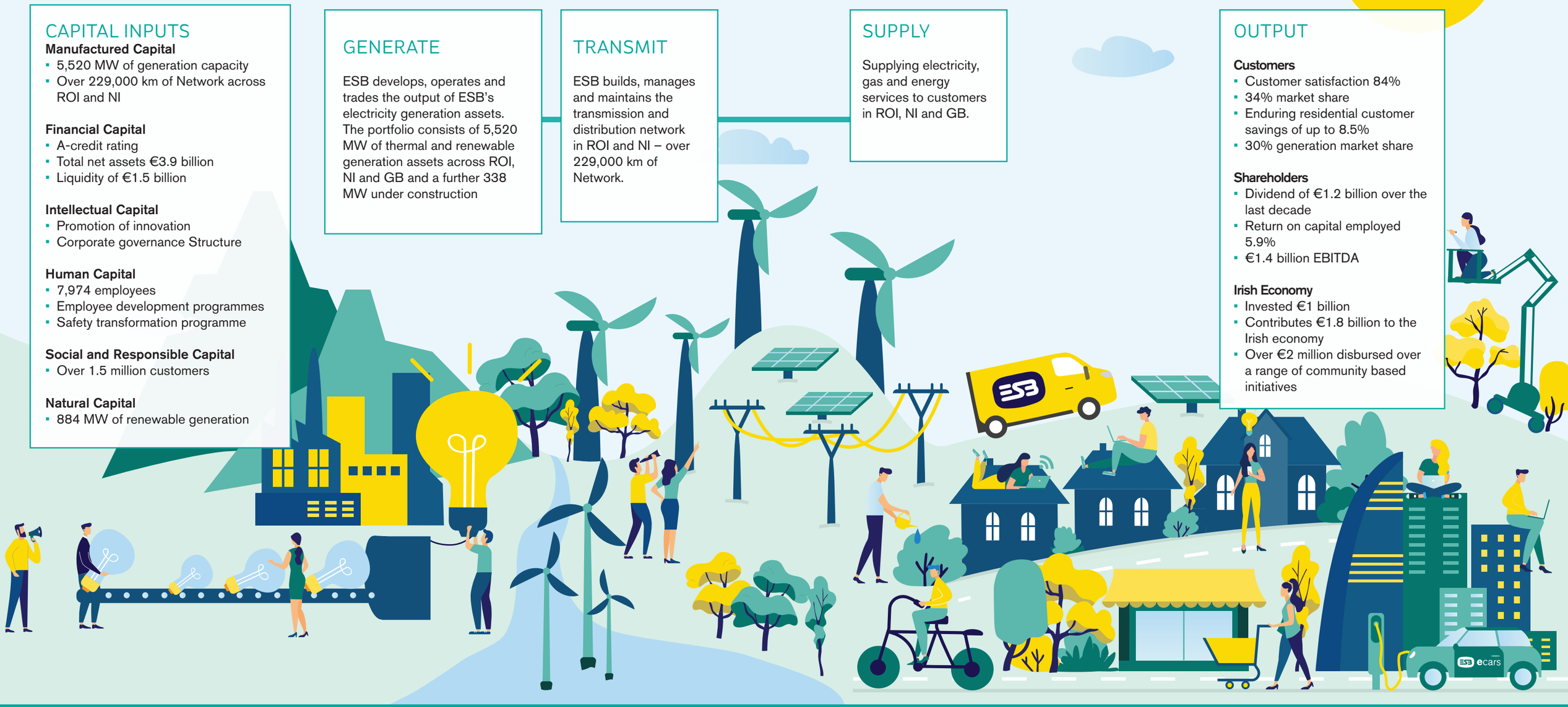
Supplying electricity, gas and energy services to customers in ROI, NI and GB.

OUTPUT

Customers
- Customer satisfaction 84%
- 34% market share
- Enduring residential customer savings of up to 8.5%
- 30% generation market share

Shareholders
- Dividend of €1.2 billion over the last decade
- Return on capital employed 5.9%
- €1.4 billion EBITDA

Irish Economy
- Invested €1 billion
- Contributes €1.8 billion to the Irish economy
- Over €2 million disbursed over a range of community based initiatives



WE'RE COURAGEOUS

WE'RE CARING

WE'RE DRIVEN

WE'RE TRUSTED

PUT CUSTOMERS' CURRENT AND FUTURE NEEDS AT THE CENTRE OF ALL OUR ACTIVITIES

PRODUCE, CONNECT AND DELIVER CLEAN, SECURE AND AFFORDABLE ENERGY

DEVELOP ENERGY SERVICES TO MEET EVOLVING MARKET NEEDS

GROW THE BUSINESS WHILE MAINTAINING ESB'S FINANCIAL STRENGTH

DELIVER A HIGH-PERFORMANCE CULTURE THAT SUPPORTS INNOVATION AND COLLABORATION

1.5 STRATEGY AND PROGRESS

ESB's Brighter Future Strategy puts sustainability at the heart of our strategic objectives and our purpose as an organisation. With the ambition to 'Create a Brighter Future for the customers and communities we serve, by leading the transition to reliable, affordable, low-carbon energy', our progress during 2019 in putting this into action has begun to deliver on that ambition. Aligning our activities and progress to the broader global efforts to deliver the Sustainable Development Goals, allows ESB to demonstrate its contribution to the global purpose and climate action focus that underpins the SDGs.

13 CLIMATE ACTION

RENEWABLE CONNECTIONS: 550 MW IN ROI, BRINGING TOTAL RENEWABLES (ALL ISLAND) CONNECTED TO THE GRID TO 6.2GW

13 CLIMATE ACTION

ESB SIGNS LOW CARBON PLEDGE COMMITTING TO LESS THAN 200gCO_2/kWh BY 2030 (50% REDUCTION) CARBON INTENSITY

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

ESB NETWORKS GREW ITS REGULATED ASSET BASE BY €0.2BN THROUGH DELIVERY OF TRANSMISSION AND DISTRIBUTION PROGRAMMES

7 AFFORDABLE AND CLEAN ENERGY

OVER 30,000 HOUSES CONNECTED DURING 2018

7 AFFORDABLE AND CLEAN ENERGY

89 MW OWENNINEY WIND FARM COMMISSIONED. 338 MW IN CONSTRUCTION

7 AFFORDABLE AND CLEAN ENERGY

50% SHAREHOLDING IN THE 448 MW NEART NA GAOITHE OFFSHORE WIND FARM IN UK

PRODUCE, CONNECT AND DELIVER CLEAN, SECURE AND AFFORDABLE ENERGY

7 AFFORDABLE AND CLEAN ENERGY

ELECTRIC IRELAND CONTINUES TO FOCUS ON REDUCING DISCONNECTION RATES, NOW BELOW 20 PER 10,000

13 CLIMATE ACTION

ELECTRIC IRELAND LAUNCHED ITS ALL ELECTRIC DISCOUNTED TARIFF FOR CUSTOMERS WITH ALL ELECTRIC HOMES

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

ESB NETWORKS SUCCESSFULLY INSTALLED THE FIRST SMART METER IN 2019 AND HAS CONTINUED TO SAFELY RAMP UP DELIVERY WITH OVER 15,000 METERS INSTALLED IN 2019

PUT CUSTOMERS' CURRENT AND FUTURE NEEDS AT THE CENTRE OF ALL OUR ACTIVITIES

DEVELOP ENERGY SERVICES TO MEET EVOLVING MARKET NEEDS

OUR PURPOSE

ESB's purpose is to create a brighter future for the customers and communities we serve and we will do this by leading the transition to reliable, affordable, low-carbon energy

DELIVER A HIGH-PERFORMANCE CULTURE THAT SUPPORTS INNOVATION AND COLLABORATION

4 QUALITY EDUCATION

8 DECENT WORK AND ECONOMIC GROWTH

5 GENDER EQUALITY

ESB IS NATIONAL SPONSOR OF BITC TIME TO COUNT NUMERACY PROGRAMME, BUILDING STEAM CAPABILITIES FOR THE FUTURE

11 OF 83 APPRENTICESHIP STARTERS IN 2019 WERE WOMEN

GROW THE BUSINESS WHILE MAINTAINING ESB'S FINANCIAL STRENGTH

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

ESB DELIVERED EBITDA OF €1.4BN IN 2019. CAPEX OF €1.2BN WAS SPENT ON INCREASING ESB'S ASSET BASE

PROGRESS AGAINST STRATEGY FROM AROUND THE BUSINESS FACILITATING RENEWABLES

Knockanure underground cable. This new 22km length cable in north Kerry will allow the region to utilise its abundant energy resources, will allow for future growth in demand, will increase the security of supply for the South West region and further support the development of the renewable energy sector.

ESB ECARS CELEBRATES 100TH RAPID CHARGER IN GB

ESB has rapidly expanded its charge point networks in both London and Coventry City. Our rapid charge points provide CCS, CHAdeMO and Fact AC charging, that can charge an EV up to 80% in as little as 30 minutes.

ESB INVESTS IN 50% STAKE OF NEART NA GAOITHE OFFSHORE WIND FARM

ESB invested in a 50% stake in NnG offsore wind farm project from EDF Renewables off the east coast of Scotland. It will have a capacity of 450MW and will offset over 400,000 tonnes of CO_2 emissions annually once operational in 2023.

OWENINNY WIND FARM ENTERS COMMERCIAL OPERATION

Oweninny, Phase 1, is an 89MW wind farm joint venture with Board na Móna in Co. Mayo. Its 29 turbines will supply clean energy to the equivalent of over 50,000 homes. The cross business ESB team is now looking to the development of Phase 2 of Oweninny (83MW).

NEW ESB ARCHIVES BUILDING COMPLETE

The new ESB Archives building was completed in July 2019, to a BER A1 energy rating standard. The project, designed in house, provides an energy efficient all electric building, including an array of roof mounted solar panels.

ESB NETWORKS FLEET BEGINS TRANSITION TO EV

ESB Networks took delivery of 70 Nissan ENV200 fully electric light vans which will be added to the fleet throughout 2019/2020 and are estimated to offset 170 tonnes of carbon annually by phasing out diesel in ESB Networks' small van fleet. The vehicles will be deployed nationally to replace small diesel equivalents working in the areas of metering and stores.

1 NO POVERTY
2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION
5 GENDER EQUALITY
6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
10 REDUCED INEQUALITIES
11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
14 LIFE BELOW WATER
15 LIFE ON LAND
16 PEACE, JUSTICE AND STRONG INSTITUTIONS
17 PARTNERSHIPS FOR THE GOALS

SUSTAINABLE DEVELOPMENT GOALS

1.6 GOVERNANCE

ESB is committed to the highest standards of corporate governance to manage risk and support sustainability and growth. ESB has put in place measures to comply with the Code of Practice for the Governance of State Bodies (2016). In addition, ESB complies, (on a voluntary basis to the maximum extent possible as a statutory corporation), with the UK Code of Corporate Governance 2016 and the Irish Corporate Governance Annex.

A revised UK Corporate Governance Code was issued by the Financial Reporting Council (FRC) in July 2018 and applies for periods commencing on or after 1 January 2019. ESB completed a detailed review of the UK Code in 2019 in line with its "comply or explain" model and has implemented certain recommendations including the establishment of a Cultural Dashboard report, briefing the Board on the Stakeholder Mapping and Engagement Plan, updated code of conduct for Board members, carrying out a review of the terms of reference of the Remuneration Committee and revising ESB's Whistleblowing and Protected Disclosure policy to provide further guidance to employees on how to raise concerns. Exceptions to compliance with the UK Code are outlined on page 91 of the annual Report. In this way, ESB adheres in so far as is reasonably applicable to listed company governance standards.

ESB has put in place the appropriate measures to comply with the State Code, which sets out the governance framework established by the Government for the internal management and the internal and external reporting relationships of State Bodies. ESB has a robust process in place to confirm compliance with the state code and a report on such compliance is made annually to the Audit and Risk Committee. A report confirming compliance is also issued annually to the Minister for Communications, Climate Action and Environment (DCCAE) which confirms compliance with the requirements of the State Code.

ESB values its reputation and maintaining best practise governance arrangements is an important aspect of ESB business performance.

FULL DETAIL ON CORPORATE GOVERNANCE IN ESB IS AVAILABLE IN OUR 2018 ANNUAL REPORT;

<www.esb.ie/who-we-are/investor-relations/annual-reports>

ESB has adopted a Code of Ethics, which sets out our approach to responsible and ethical business behaviour. The underlying principle of The Code of Ethics is that employees best serve ESB by adhering to the highest standards of integrity, loyalty, respect, fairness and confidentiality and by meeting all legal and regulatory requirements. The Code of Ethics is published on the ESB intranet. Group Internal Audit investigates any reported breaches and provides updates to the Audit and Risk Committee:
https://www.esb.ie/who-we-are/corporate-governance/esbs-code-of-ethics-and-practice

HUMAN RIGHTS

ESB respects human rights and expects all suppliers/contractors providing goods, services or works to ESB and/or on behalf of ESB to conduct their business in an honest and ethical manner, in accordance with all applicable laws, and to respect internationally recognised human rights. As the parent of a number of subsidiary companies with significant operations in the UK, ESB has adopted a Policy on Modern Slavery with the aim of preventing opportunities for modern slavery occurring within its business and supply chains. In accordance with the Act, ESB publishes an Annual Statement setting out the steps that ESB has taken during the previous financial year to ensure that slavery and human trafficking is not operating within either its own business or its supply chains. The most recent Annual Statement was published in June 2019.

Our procurement policies are available here:
https://www.esb.ie/who-we-are/procurement/procurement-policy

DIVERSITY

The Board, both for itself and the Group as a whole, is fully committed to diversity as a key value, and an important factor in achieving ESB's business objectives. It is committed to achieving the optimal balance of skills, experience and diversity among its members. In relation to Board diversity, the Chairman of the Board, in assisting the DCCAE in drawing up the specification for Board appointments, has regard to the benefits of diversity on the Board, as provided for under the State Code of Practice guidelines and the related "Guidelines on Appointments to State Bodies".

RISK MANAGEMENT

Risk management and reporting continues to be a key area of focus for both the Board and the Audit and Risk Committee, with ESB's approach to managing risk being defined by the ESB Risk Policy and Governance Framework and a strong internal control framework. While the Board has overall responsibility for the Group's approach to risk, the responsibility for supporting the Board's review of the effectiveness of internal controls and risk management has been assigned to the Audit and Risk Committee which played a key role in 2019 in ensuring that appropriate governance and challenge around risk and assurance were embedded across the Group. The approach to risk is set out further in section 3.6 of this report and in the Risk Report.

GOVERNANCE OF SUSTAINABILITY

The Board Committee on Health Safety and Environment has oversight of environment and sustainability issues. The HSE Committee monitors and tracks progress against environmental and sustainability targets and assesses the implications of environmental sustainability and climate issues for major company plans and delivery of the company strategy. The Committee meetings take place five times a year and facilitate detailed consideration of environment and sustainability matters on behalf of the Board.

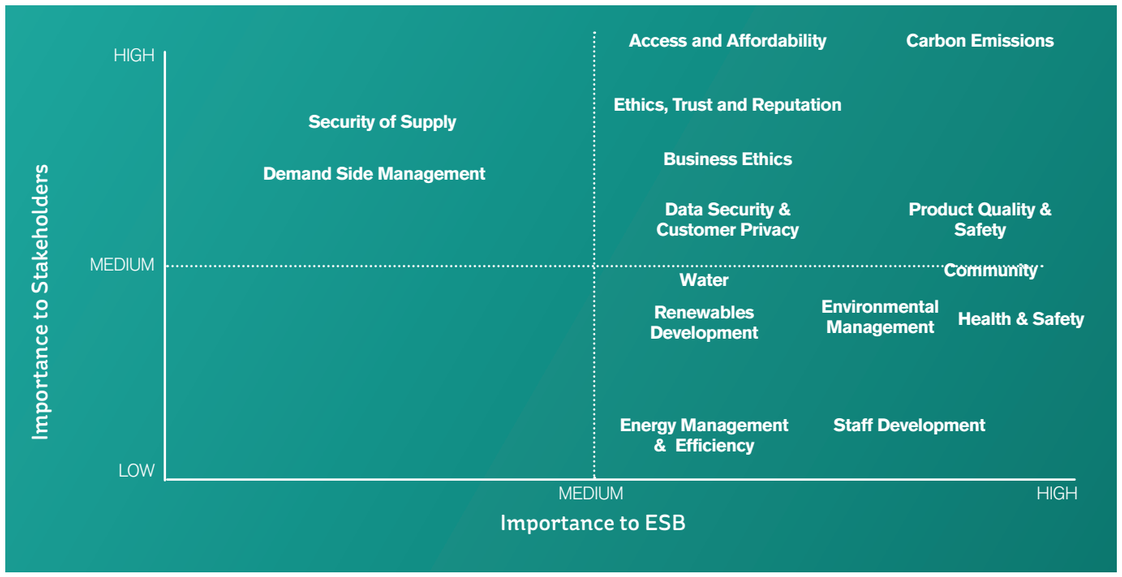
The Environment and Sustainability Leadership Team is chaired by the Executive Director Group People and Organisational Development and made up of senior managers from each business unit. The Environment and Sustainability Leadership Team is responsible for the overall direction of Environment and Sustainability to deliver on the corporate strategy and for providing leadership on environment and sustainability in each business unit.

The committee meets four times a year to review progress and overall group performance. The committee also oversees assurance on environmental management through receiving reports from the Environment and Sustainability Management Group, made up of the business unit Sustainability and Environmental Co-ordinators and Managers. The Group meets monthly and tracks progress and debates proposals and plans, agreeing on proposals for consideration by the Environment and Sustainability Leadership Team.

1.7 MATERIALITY APPROACH

ESB works in the very heart of every community across Ireland. Being embedded in this way, brings a broad span of exposure to and engagement with a wide range of stakeholders. In our purpose of creating a brighter future for the people we serve, we recognise that electricity is an enabler of societal and economic wellbeing and a pathway to a decarbonised society. Understanding the expectations, concerns and interests of our stakeholders is front and centre in delivering of our services and to help shape a brighter future. From the consolidated engagements and inputs into the various stakeholder channels and a formal stakeholder engagement process, we identify the most material topics raised by these internal and external stakeholders. The stakeholder groupings that we engage with are detailed in section 1.8 of this report. From this process, the most material topics are identified and form the bulk of the disclosures in this report, as per the materiality matrix below. Disclosures focus on the most material issues identified in the top right quadrant. As robust reporting and data sets are established, disclosures will expand to include other issues of importance within the matrix and newly emerging material issues.

MATERIALITY MATRIX 2019



1.8 STAKEHOLDER ENGAGEMENT

As a business we generate and distribute electricity to homes, farms and businesses across Ireland. This means that we have a strong and visible interface with every community to which we provide electricity. Stakeholder engagement is central to the success of our business activities. Stakeholder engagement takes place at all levels, from the policy makers right down to the local community group and ranges in focus from national to community level interests. From the consolidated engagements and inputs into the various stakeholder channels and the formal stakeholder engagement process outputs, members of the stakeholder management group, together with the Environment & Sustainability Leadership Team hold a materiality workshop every two years to help prioritise the issues emanating from the various external and internal stakeholder engagement channels and to formulate the issues output from these engagements into a list of prioritised material issues.

STAKEHOLDER MATRIX

STAKEHOLDER GROUPING	MEANS OF ENGAGEMENT	SUBJECTS OF ENGAGEMENT	KEY ISSUES
Ministers & Government Depts. DCCAE, DfE, DAERA, DBEIS, DEFRA, PER (New ERA), DTTAS	Policy meetings, consultations	Energy policy, regulatory consultation processes, strategy	Energy policy, maintaining financial strength
Market, Data and Transparency Regulatory Bodies (CRU, UR, Ofgem, ComReg, Ofcom, DPC, ICO, SIPO)	Price reviews, regular meetings, programme meetings	Compliance with licence and permit conditions, price reviews, work programmes.	Compliance planning, Delivery of work programmes, emission reduction plans, consultations.
Networks Operators EirGrid, SONI, National Grid	Scheduled meetings, programme meetings	Grid connections, work programmes, planning, renewable integration	Renewable energy, network stability, security of supply
Industry NGOs (Eurelectric, EAI, IWEA, IBEC, CBI, AEP, IETA, Chambers Ireland, British Irish Chamber of Commerce, NI Chamber of Commerce, Dublin Chamber, Cork Chamber.	Consultation processes, information meetings.	National and EU energy policy, climate action and sustainability policy development, consultations.	Policy positions, climate action, competitiveness, supply security
Sustainability/Non industry NGOs (BiTCI & NI, CDP, IIEA, IFA, Coillte)	Scheduled meetings, focus groups, member fora, surveys	Land access, work programmes, CR programme, performance disclosures.	Emission reduction, corporate responsibility, renewable energy, planning
Environmental Authorities (NPWS, UW, SEAI)	Ongoing dialogue.	Annual reporting, planning, safety	Water conservation, energy efficiency, waste
Environmental and Safety Regulators (EPA, NIEA, EA, HSA, HSENI, HSE, RSA)	Licences, inspections, formal compliance reviews	Licence conditions and compliance, annual reporting, dealing with breaches and complaints	Legal compliance.
Engineering and Scientific Research (UCD, ERC, UL, TUD, TCD, NUI, EPRI, SEAI, VGB, QUB,	Industry for a, partnerships, conferences, technical collaborations, ongoing dialogue	Technology, skills pool, research partnerships, technology deployment	Technical innovation, market disruption, energy efficiency, availability of skills.
Public representatives, local authorities	Scheduled meetings, planning process, ongoing dialogue	Planning concerns, building community support	Community engagement, legal compliance
Ratings agencies	Scheduled review meetings	Economic performance, Performance to Plan, Strategy, Funding rounds, Growth programme	Rating, ability to raise debt at competitive rates, financial performance.
Employees ESB Group of Unions	Team and one-to-one meetings, surveys.	Business performance, safe working environment, fair employment and trading practices, sustainability	Employee engagement, Recognition and reward, Development
Customers (Domestic, Commercial, Industrial)	Social media, customer contact centres, surveys, via business development team	Price, continuity and quality of supply, energy efficiency services, disconnection policy.	Energy price, disconnection policy, energy efficiency

1.9 ASSOCIATIONS AND EXTERNAL INITIATIVES

CHARTERS TO WHICH THE ORGANISATION SUBSCRIBES

- Code of Practice for the Governance of State Bodies (2009)
- Bettercoal Code (2015)
- UK Corporate Governance Code (2012)
- Irish Corporate Governance Annex (2010)
- The Prompt Payment Code of Conduct (2014)
- The Energy Engage Code (2014)
- E.DSO Sustainability Charter

PRINCIPAL ASSOCIATIONS TO WHICH THE ORGANISATION BELONGS

ESB plays an active role in many associations, both at a board level and as an active member. Playing an active role in such external associations is central to the development of key staff, the promotion of engineering skills, developing common approaches on national policy, promoting diversity and inclusion in society as well as policies consistent with national climate objectives.

- Association for Higher Education Access and Disability (AHEAD)
- Business In The Community (BITC) Ireland
- Bettercoal
- Business in the Community NI
- Chambers Ireland
- Chartered Institute of Professional Development
- CHAdeMO Association
- Corporate Leadership Council
- Confederation of British Industry (CBI)
- Diversity Charter of Ireland
- European Distribution System Operators
- Electricity Association of Ireland (EAI)
- Electric Power Research Institute (EPRI)
- Energy Networks Association
- Energy UK EV Task Force
- Engineers Ireland
- Eurelectric
- Institute of Engineering and Technology
- Institute of Directors
- Institute of Customer Service
- Irish Wind Energy Association (IWEA)
- Irish Business and Employers Confederation (IBEC)
- Irish Marketing Institute
- Low Carbon Vehicle Partnership
- National Irish Safety Organisation (NISO)
- NI Chamber of Commerce
- National Energy Action
- Open Charge Alliance
- Society of the Irish Motor Industry
- The Society of Motor Manufacturers & Traders (SMMT)
- The Mediators Institute of Ireland.
- Ulster Wildlife

CHAPTER 2
ECONOMIC PERFORMANCE

2.1 INTRODUCTION

In 2019 ESB delivered an improved financial performance following profit reductions in 2017 and 2018 which were both challenging years. As we continue the transition to a low carbon future ESB delivered Earnings before Interest, Tax, Depreciation and Amortisation (EBITDA) of €1,372 million, Operating Profit before exceptional items of €682 million and capital investment of €1,242 million. Our gearing at the end of 2019 was at a relatively moderate level of 57% and during 2019, ESB successfully issued Ireland's first corporate public Green Bond.
Our 2019 performance reflects:

- ESB Networks and NIE Networks continuing to deliver safe and reliable networks with significant capital and maintenance programmes in accordance with their regulatory contracts;
- Generation and Trading (GT), operating successfully in the first full year of the Integrated Single Electricity Market (I-SEM) and delivering continued growth in our renewable portfolio (including further investment in offshore wind) with the 50% acquisition of the 448MW Neart na Gaoithe project in GB;
- Customer Solutions continuing to innovate and create value for customers, including the application of enduring longterm savings to almost one million of its residential electricity and gas customers.

2019 Operating Profit (before exceptional items) is up 50% on 2018, primarily reflecting improved energy margins from our thermal gas plant, lower operating costs reflecting reduced overhaul spend, higher revenues in our Customer Solutions business and foreign exchange.

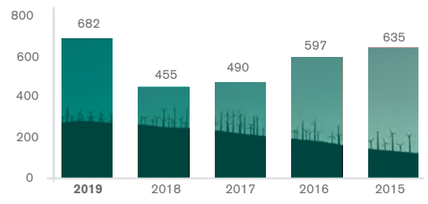
Arising from our announcement to close the midland peat stations at the end of 2020, the re-organisation of Moneypoint arising from reduced coal running and the closure of North Wall power station, an exceptional charge for related severance and associated costs on these plants of €60 million has been made. In addition, a further impairment charge of €34 million was made against shareholder loans advanced to Tilbury Green Power Holdings Limited (a waste wood to energy joint venture in GB).

ESB invested €1,242 million in capital expenditure in 2019. Almost 60% of which was invested in our two networks businesses in line with agreed regulated capital programmes, including €64 million on Smart metering roll out in ROI. As part of the transition to low-carbon generation ESB invested €340 million in renewable generation projects. Notwithstanding the exceptional charge, as outlined above, ESB has delivered a strong set of financial results in 2019, with Group EBITDA at €1,372 million, a strong liquidity position of €1.5 billion and credit ratings of A- or equivalent with Standard & Poor's and Moody's (BBB+ standalone).

Revenue and other operating income before exceptional items at €3,718 million has increased by €285 million compared to 2018 (€3,433 million). The increase is primarily driven by higher revenue in Customer Solutions due to increased volumes and increased unit rates arising from increased wholesale energy prices in 2018.

KEY FACTS AND FIGURES

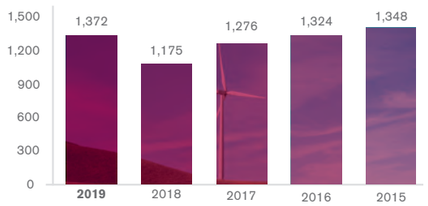
OPERATING PROFIT* €'M



€227 million

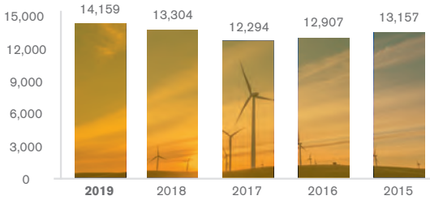
* Before exceptional items. See Financial Review page 50.

EBITDA* €'M



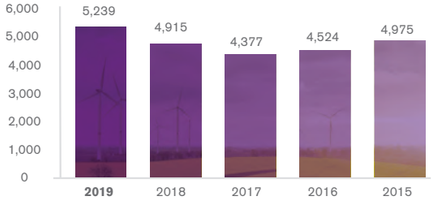
€197 million

TOTAL ASSETS €'M



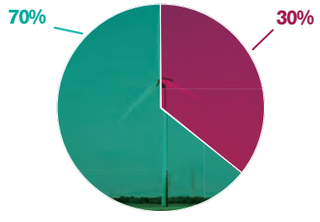
€855 million

NET DEBT €'M



€474 million

GENERATION ALL-ISLAND MARKET SHARE



SUPPLY ALL-ISLAND MARKET SHARE

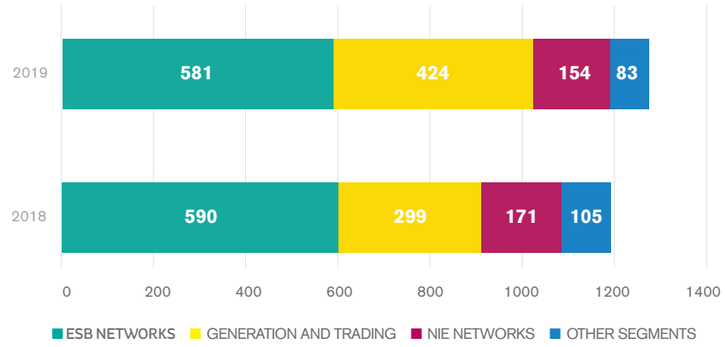
2.2 INVESTING FOR THE FUTURE (GRI 203-1)

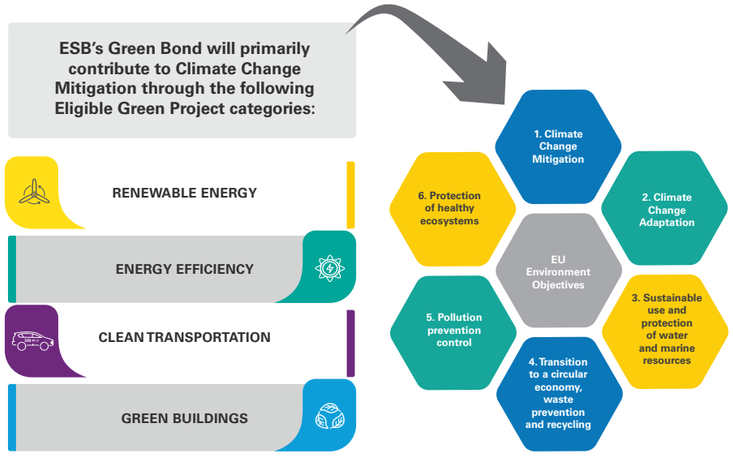
Capital expenditure totalled €1,242 million in 2019, an increase of €77 million on 2018. Capital investment in the networks businesses continued in 2019 with €735 million (59% of the total capital investment) invested in the networks infrastructure in Republic of Ireland (ROI) and Northern Ireland (NI) in line with agreed regulatory programmes. Expenditure in Generation and Trading in 2019 amounted to €424 million (2018: €299 million). This expenditure primarily related to the continued investment in renewable generation including €243 million in the 448 MW Neart na Gaoithe (GB) offshore windfarm and €97 million in the 114MW Grousemount wind farm in Co.Kerry, which is expected to become fully operational by the start of Q2 2020. Capital investment of €83 million in other segments includes various group projects such as the redevelopment of the Fitzwilliam Street Head Office and IT systems (see figure Captial Expenditure).

In June 2019, following the launch of ESB's Green Bond Framework the previous month, the Group issued a EUR €500 million 11-year Green Bond with a fixed coupon of 1.125%. This was the first ever Irish corporate public Green Bond. The transaction was executed following an extensive European roadshow, involving more than 100 leading investors and resulted in ESB's lowest coupon for a senior bond. There was strong participation from socially responsible investors from a diverse range of geographies, demonstrating confidence in ESB's Brighter Future Strategy and associated investment programme. A dedicated Green Finance Committee has been created to ensure compliance with the Green Bond Framework and to oversee the allocation of the net proceeds of this Green Bond to eligible projects that are sustainable and socially responsible in areas such as renewable energy, energy efficiency, green buildings and clean transportation. For more information on the disbusal of funds raised by the Green Bond, please refer to the Green Bond report in the Appendices, Chapter 5 of this report.

These public bond transactions enabled both the growth of ESB's portfolio of renewable assets and the early repayment of a portion of ESB's existing project finance debt

CAPITAL EXPENDITURE





REGULATED INVESTMENT

ESB, Ireland's leading energy utility, has a stable business profile with over two thirds of its earnings and assets accounted for by regulated electricity networks in Ireland under established and transparent regulatory frameworks.
ESB Networks made its Price Review 5 (PR5) submission to the Commission for the Regulation of Utilities in November. This is a very important process for the company, which will set the level of investment and operating expenditure for ESB Networks for the coming five-year period. The ESB Board welcomed the Regulator's proposal that the submission should provide for the resources and capability required to deliver on the National Climate Action Plan and ESB looks forward to working constructively with the Regulator to finalise the proposal during 2020.

All infrastructure development is subject to appropriate planning authority approval, including the undertaking of Environmental Impact Assessments, as required. Operational procedures for works in and adjacent to SAC's or where particular environmental or biodiversity risks may be identified, are in place and subject to on-going review. Energy infrastructure needs assessment is undertaken as part of the broader regulatory engagement process, which culminates with a price review determination, incorporating specific asset development programmes, which form the basis of investment programmes for our regulated assets, at the scale summarised above. Within our networks' businesses the capital and maintenance programmes are delivered in accordance with these established regulatory frameworks. ESB carefully and continuously monitors all of these strategic financial opportunities and challenges and takes prudent financial actions, including management of the significant capital programme, as appropriate, so as to enable the delivery of Strategy 2030 while maintaining ESB's financial strength. Please see also section 3.4, detailing further how we engage with communities around these investment determinations.

BOARD LEVEL OVERSIGHT

The Board has overall responsibility for risk management and internal control. The main financial risks faced by the Group related to liquidity, foreign exchange, interest rates, commodity price movements and operational risk. Policies to protect the Group from these risks, and other risk areas, such as credit risk, are regularly reviewed, revised and approved by the Board.

2.3 INDIRECT ECONOMIC IMPACTS

INVESTMENT
Investing over €1 billion per annum to facilitate a more sustainable energy environment as well as supporting economic growth through providing, safe and reliable electricity supply to homes and businesses

€1,242 MILLION

TAXES
Annual payments across various headings

OVER €450 MILLION

SUPPORTING COMMUNITIES
Seek to empower and enrich the lives of individuals and communities through the corporate social responsibility programme

OVER €2 MILLION

EMPLOYMENT
Making a long-term commitment to employees, giving them the time to build their skills and the opportunity to advance their careers. Supporting jobs through contractor and supplier service contracts

163 APPRENTICES AND GRADUATES RECRUITED IN 2019

RETURN TO THE SHAREHOLDER
ESB targets an annual dividend of 40% of adjusted profits after tax

€88 MILLION FOR 2019

DEBT INVESTORS
Annual interest and repayments

€741 MILLION

INDIRECT ECONOMIC IMPACTS (GRI203.2)
Investments in the generation portfolio are focused on accelerating investment in renewable energy to reduce the carbon intensity of the generation portfolio and support the transition to reliable, affordable, low carbon energy. Investments in the networks business in Republic of Ireland focused on the reinforcement and construction of new network infrastructure to facilitate the connection of renewables and the diversification of electrification, whilst also committing significant investment to maintaining existing network. NIE Networks focused on the delivery of its network investment plan under RP5 to achieve reliability of supply and ensure the safety of the network for customers, as well as continuing investment to facilitate the connection of additional renewable generation and the replacement of customer meters.

RESIDENTIAL CUSTOMER SATISFACTION
Developing new and innovative products and services for customers aimed at improving customer experience and empowerment

84%

2.4 PENSION OBLIGATIONS (GRI 201-3)

The Group companies operate various pension schemes in the Republic of Ireland and Northern Ireland, which are funded through payments to trustee administered funds. All permanent staff are members of either the Defined Benefit Plan or another retirement plan.

2.4.1 Pension schemes in the Republic of Ireland

The Group operates two pension schemes, which are called the ESB Defined Benefit Pension Scheme and the ESB Defined Contribution Pension Scheme. Pensions for the majority of employees in the electricity business are funded through a contributory pension scheme called the ESB Defined Benefit Pension Scheme. The fund is vested in Trustees nominated by ESB and its members for the sole benefit of employees and their dependants. The Scheme is registered as a Defined Benefit Scheme with the Pensions Authority.
The regulations governing the Scheme stipulate the benefits that are to be provided and the contributions to be paid by both ESB and the contributing members. Benefits payable are determined by reference to a Career Average Revalued Earnings (CARE) pension model for benefits earned after 1 January 2012 (previously based on final salary). ESB has no legal obligation to increase contributions to maintain benefits in the event of a deficit and ESB's rate of contribution cannot be altered without the agreement of ESB and approval of the Minister for Communications, Climate Action and Environment. Should an actuarial deficit arise in the future, ESB is obliged under the Scheme regulations to consult with the Superannuation Committee, the Trustees and the Scheme Actuary to consider the necessity of submitting an amending Scheme for Ministerial approval.

Under the 2010 Pensions Agreement (approved by employees in July 2010 and formally ratified by the Board of ESB on 20 October 2010), ESB agreed to a once-off cash injection into the Scheme, payable over a number of years, which had an agreed valuation for actuarial purposes as at 1 January 2010 of €591.0 million. The fixed contribution rates for the employer and for employees were not changed. Under the Agreement membership of the Scheme has been closed to new joiners. The obligations to the Scheme reflected in ESB's financial statements have been determined in accordance with IAS 19 Employee Benefits. Given that the Scheme is not a typical "balance of costs" Defined Benefit Scheme (where the employer is liable to pay the balance of contributions required to fund benefits), the obligations to be reflected in the financial statements require the exercise of judgement. Should a deficit arise in the future, the Company, as noted above, is obliged to consult with the parties to the Scheme. However, ESB has no obligation to increase contributions to maintain benefits in the event of a deficit and the Company does not intend that any further contributions, other than the normal on-going contributions and the balance of the Company's €591.0 million additional contribution (committed to as part of the 2010 Pensions Agreement), will be made. Therefore, ESB has concluded that the financial statements should reflect its obligations to the Scheme, which consist of:

a. any remaining amounts to be paid in relation to the once-off contribution agreed pursuant to the 2010 Agreement (€591.0 million in 2010 money to be paid over a number of years);
b. pre-existing commitments relating to past service (the present value of the agreed contributions that relates to service prior to October 2010); and
c. Past Voluntary Severance (VS) Programmes – in 2010 the Company recognised a future commitment in respect of staff who have left the Company under past VS programmes. ESB will make pension contributions in respect of those staff and these are recognised at fair value.

Ongoing contributions (up to 16.4%) are recognised in the income statement as incurred. Any unpaid amounts at year end are recognised as liabilities on the balance sheet.

The ESB Defined Contribution Pension Scheme is a defined contribution scheme and contributions to the Scheme are accounted for on a defined contribution basis with the employers' contribution charged to income in the period the contributions become payable. The percentage of salary contributions made by individual employees to the scheme are confidential between ESB and the individual employee.

2.5 PROCUREMENT PRACTICES

ESB's Supply Chain is key to our business success and delivery of the Group's Brighter Future Strategy. ESB's procurement strategy is aligned to the delivery of these business objectives & sustainability goals.

Competitive tendering is our standard procurement procedure, and all procurement processes are undertaken in a non-discriminatory, transparent and proportionate manner. This process ensures equal treatment, non-discrimination, mutual recognition and freedom to provide services and establishment, in line with applicable procurement law, the Irish Government's Code of Practice for the Governance of State Bodies and EU Treaty Principles.

It is custom and practice in ESB to conduct tender evaluations based on the total lifetime cost (LCC) of a product or service. ESB are increasingly using sophisticated LCC models to capture whole life costs when assessing major projects and equipment purchases. For example, tailored LCC's are used to evaluate the cost and efficiency of renewable generation tenders. For the purchase of vehicles, the total cost of ownership (fuel and Adblue), maintenance and emissions are assessed along with the upfront purchase cost. Similarly, a Total Cost of Ownership (TCO) model is used to assess the total cost of major items of equipment, which may include a range of cost inputs including purchase price, energy usage (load or otherwise) prototyping costs, type tests, installation costs, maintenance and end of life costs.

ESB expects our suppliers/contractors of all tiers to comply with all applicable laws and to respective internationally recognised human rights. ESB's Supplier Charter sets out the basic principles that all ESB suppliers, service providers and contractors are expected to comply with in relation to:

- Conduct of business
- Health & Safety
- Environment (GRI308-1)
- Ethics, Bribery & Anti-corruption
- Employment Standards and Modern Slavery.

ESB's Requirements for Third Parties gives contractual effect to these expectations, and copies of these documents and other relevant ESB Procurement Policies are publicly available on the ESB Group website; www.esb.ie/who-we-are/procurement

ESB's Supply Chain supports its business operations across the value chain in generation, networks and supply - including its international activities. With an annual procurement spend (excluding fuel) of approximately €900m, we rely on a complex and diverse supply chain in order to provide the services necessary to meet our customer's needs. Of this spend approximately 75% is sourced from suppliers within the Republic of Ireland & Northern Ireland, 13% from the UK, and 9% from other EU member states (GRI204-1). We currently have approximately 4600 Tier 1 suppliers, ranging from local SME's & micro companies to large multi-national corporations / contractors, with whom we placed over 40,000 purchase orders in 2019.

GRI 204-1: PROPORTION OF SPENDING ON LOCAL SUPPLIERS

Location Name	%
UK, NI & Ireland	88%

Contracts range from standard supply type arrangements for consumable items, such as tools & equipment to more complex service / works contracts for renewable generation, smart metering installation, networks substation & overhead/underground line construction & refurbishment, customer billing & metering services and financial & engineering related consultancy assignments. Where technical considerations allow, we favour the use of functional and performance-based specifications, supported by International/European standards. All significant contracts are advertised in the Official Journal of the European Union.

Many of these contracts by their nature are labour intensive and it is essential that suppliers maintain a strong culture of corporate responsibility, in addition to good sustainable and environmental practices. During 2019 ESB conducted desktop assessments of over 400 suppliers for the potential of modern slavery / forced labour in their supply chains, in addition to conducting over 100 contractor employment standards audits on ESB sites in the Republic of Ireland during 2019 (GRI409-1).
Sustainability features are generally sought from tenderers where such features contribute to the delivery of ESB's sustainability goals. Some notable procurements that included a strong sustainability remit in 2019, included:

- Mini-tenders for Wind Turbines for a number of high-profile renewable projects in ROI & UK
- ESB's Integrated Facilities Management Framework Agreement, which placed a clear emphasis on the importance of using environmentally friendly cleaning products, the need to reduce, re-use and re-cycle materials, and the requirement to work closely with supply chain partners of all tiers to supply environmentally friendly services
- ESB's Shuttle Bus Tender to our temporary Head Office in Gateway sought information on how tenderers propose to adhere to emission standards and how their respective telematics system monitors and reports on individual vehicle fuel efficiency.

ESB's aim is to ensure that sustainability is embedded across every business function including Procurement. In Procurement very significant elements of our business operations are transacted electronically, including the issue and receipt of tenders and purchase orders to our suppliers. ESB are also committed to complying with the terms of applicable late payments legislation and are signatories to the Prompt Payment Code of Conduct. ESB's standard terms of payment are Nett Monthly Account. In recent years ESB has significantly increased the number of PDF invoices received from suppliers - 72% of all invoices received in 2019 were in PDF format. The key benefits for suppliers for submitting invoices in this way include, traceability and the ability to email queries to a dedicated mailbox for quick resolution. This is a no cost option to suppliers and means invoices can be processed much quicker. This also has a positive environmental impact due to the reduction in the submission of paper-based invoices, envelopes and associated postal costs.

2.5.1 Modern Slavery

As an organisation that operates in the United Kingdom, ESB fully supports the aims of the UK Modern Slavery Act 2015 and has a zero-tolerance approach to modern slavery. In order to prevent acts of slavery and human trafficking from occurring within its business and supply chains ESB has taken a number of steps, including the adoption of a Policy on Modern Slavery, which is published on ESB's website; https://www.esb.ie/who-we-are/procurement/procurement-policy.

ESB seeks at all times to comply with employment law applicable to the jurisdictions in which it operates and puts in place contractual arrangements with providers of agency staff requiring that they achieve the same level of compliance.
Following on from its previous statements on the prevention of slavery and human trafficking, ESB has, during 2019, taken the following steps to prevent acts of modern slavery from occurring within its supply chains:

- Risk assessed all vendors with an annual spend of greater than €250,000 based on their geographical location & industry sector (415 vendors in total)
- Issued questionnaires to vendors identified as being potentially high risk based on this assessment and the previous year's review
- Assessed these returns and identified three vendors for external audit

- Appointed a third party with extensive expertise in the area of modern slavery and forced labour (BSI – British Standards Institute) to undertake these audits. These audits were conducted in February & March 2020 and no incidents of modern slavery or forced labour were found during these assessments
- Engaged with our major coal suppliers to ensure that they are aware of ESB's commitment to the Bettercoal organisation, including ESB's commitment to implementing the Bettercoal Code and making use of the Bettercoal tools in its due diligence processes in the coal supply chain and to ensure that our suppliers acknowledge the Bettercoal Code as a standard for continuous improvement in ESB's coal supply chain
- Updated ESB's Request for Tenders Template to capture ESB's Modern Slavery requirements, which require all tenderers to formally confirm their acceptance of these requirements from the outset of each tender process
- Continued to provide bespoke training on modern slavery to ESB Procurement Staff
- ESB's on-line training module on the Prevention of Modern Slavery in ESB's Supply Chains, which was co-developed with BSI in 2018 for all ESB staff, also continues to be hosted and accessed by staff on ESB's internal website.

CASE STUDY - Bettercoal Country Prioritization Strategy

Bettercoal is working towards a global responsible coal supply chain. To this end, ESB has been a member of Bettercoal since 2015 and we work with Bettercoal and the stakeholders in ESB's supply chain to deliver improvements in the performance of coal mining operations through the adoption of the Bettercoal Code. Bettercoal has developed a Country Prioritization Strategy that aims to explain why some countries and coal suppliers are prioritised in the Assessment Programme. The objective of this strategy is to prioritize for inclusion in the Bettercoal Assessment Programme the greatest volume of coal from sources that present significant reputation and non-technical risk to Bettercoal Members, and by doing so, be able to show that over time these sources are being produced at operations that meet the Bettercoal Code. In determining the prioritisation criteria, Bettercoal have looked at overall European coal consumption, global coal trading movements, and from where Members have purchased coal in the past two years through the Members Implementation and Reporting (MIRO) system. Bettercoal have also considered criteria for social, environmental, governance and reputation risk. ESB is an active participant on the Bettercoal Colombia Country Working Group.

2.6 Anti Corruption (GRI 205-1)

Good governance provides the foundation for long-term value creation and is a core focus for the ESB Board of Directors. In this regard, and in line with the UK Corporate Governance Code 2018 (the UK Code) and the Code of Practice for the Governance of State Bodies 2016 (State Code), their duties include responsibility for the long-term success of the Group, providing leadership and direction for the business as a whole, and supporting and challenging management to get the best outcomes for ESB and its stakeholders. The Board is satisfied that ESB has complied with the requirements of the State Code in fiscal year 2019. A report is issued annually to the Minister for Communications, Climate Action and Environment which confirms compliance with the requirements of the State Code. The Board is satisfied that appropriate steps have been undertaken to monitor ESB's Irish subsidiaries' compliance with the applicable requirements of the Companies Act 2014.

During 2019, the Board Audit and Risk Committee reviewed the procedures around compliance and fraud, and approved an updated policy on Whistleblowing and Protected Disclosures and an updated policy on Anti-Bribery, Corruption and Fraud. The aim of these policies is to enhance and further clarify guidance to employees on what action to take in the event that they encounter a wrongdoing or suspected fraud.

For full details on the role of the Board Audit and Risk Committee please refer to ESB Annual Report 2019, Audit and Risk Committee Report (pages 95-100).

There were no reported incidents of corruption or termination of contracts due to corruption for employees or contractors during 2019 (GRI 205-3).

DUTY	ACTIVITIES CARRIED OUT IN 2019
Internal Control and Risk Management Review the effectiveness of internal control and risk management	▪ Reviewed and monitored the effectiveness of the Group's system of internal control ▪ Reviewed the arrangements for business continuity planning and crisis management ▪ Reviewed ESB's Risk Management Policy and Governance Framework, Risk Plan, and regular Risk ▪ Reports and recommended them to the Board for approval ▪ Considered a detailed review of cyber security and the impacts of emerging technologies ▪ Considered updates on implementation findings of an external review of ESB IT Security ▪ Considered updates on Brexit assessments ▪ Considered update on approach to outsourcing
Compliance, whistle-blowing and fraud Review the adequacy and security of the arrangements for employees and contractors to raise concerns, in confidence, about possible wrongdoing in financial reporting or other matters	▪ Reviewed the controls and procedures in place to provide assurance of compliance with statutory obligations ▪ Reviewed the procedures and policies for preventing and detecting fraud and were informed of any instances of fraud and attempted fraud ▪ Reviewed the adequacy and security of the arrangements for raising concerns confidentially about possible wrongdoing in financial reporting or other matters ▪ Reviewed and considered updates on status of investigations into potential protected disclosures ▪ Reviewed and approved updated policy on Whistleblowing and Protected Disclosures ▪ Reviewed and approved updated Anti-Bribery, Corruption and Fraud policy ▪ Reviewed readiness for application of revised UK Corporate Code ▪ Reviewed updates on GDPR

CODES OF PRACTICE

ESB adheres to the Code of Practice for the Governance of State Bodies dated August 2016. We are required to adopt this Code of Practice in the conduct of our operations, and to confirm to the relevant Minister when this has been done.

The Code of Practice makes provision for all aspects of the Corporate Governance Framework, including:

- Codes of conduct for directors and employees
- The internal audit function
- Procurement
- Disposal of assets and access to assets by third parties
- Establishment of subsidiaries and acquisitions by state bodies
- Diversification
- Investment appraisal
- Remuneration and directors' fees
- Reporting arrangements
- Strategic and corporate planning
- Tax compliance

ESB CODE OF ETHICS

At ESB, all our board members and staff adhere to a code of ethics which outlines our approach to responsible business behaviour.
ESB's Code of Ethics guides the behaviour of all employees in all their business dealings. On commencing work with ESB, all employees are introduced to ESB's Code of Ethics and annually employees in key operational Directorates are reminded to review the code, make any relevant disclosures and declarations to the company and reaffirm their commitment to abide by the Code of Ethics.

The main premise of our codes is that everyone will strive to perform their duties in accordance with the highest standards of integrity, loyalty, fairness and confidentiality and will abide by all legal and regulatory requirements.

- To read our ESB Staff Code of Ethics, Click here.
- To read our ESB Board Code of Ethics, Click here

CHAPTER 3

3.1 OCCUPATIONAL HEALTH AND SAFETY

OVERVIEW

ESB's Board, management and employees are committed to protecting the health and safety of employees, customers, contractors and the people ESB serves; their safety and health is always considered first in business actions and activities. ESB believes that all operational processes can be designed and operated in a safe manner. This belief guides its approach to safety and health across all business activities and is reinforced through strong and visible leadership throughout the Group. The Chief Executive has overall responsibility for the management of health, safety and wellbeing in ESB. The ESB Group Safety Statement, as approved by its Board, sets out the overall policy and general arrangements in ensuring the health, safety and wellbeing of all employees. Functional responsibility is shared with all senior management and, in turn, with each manager, supervisor, team leader and employee.

SAFETY PERFORMANCE IN 2019

Lost Time injuries

The number of lost time injuries (LTIs) in 2019 was 65 compared to 69 in 2018, 63 in 2017 and 72 in 2016. The majority of these injuries were of low severity as indicated by the lower number of injuries that necessitated reporting to the statutory authorities. The most common causes of LTIs are slips and trips, road traffic collisions, other movements of the person, and loss of control of the object the person was working on. Together these accounted for 71% of all LTIs.

The month on month differences in LTIs demonstrates the random nature of these incidents. LTIs are occupational injuries which result in at least one day's absence from work, not including the day that the injury occurred. The linear trend in all graphs is the mean average for that indicator (see figure 1).

HIGH POTENTIAL INCIDENTS (P1)

In addition to focusing on LTIs, ESB categorises all injurious incidents and near misses with a particular focus on high potential incidents that could lead to more serious outcomes (see figure 2). In 2019, 138 high potential incidents were recorded. Although this is a higher number than in 2018, the linear trend (see figure 2) for these incidents is decreasing over the years 2016 to 2019. The totals for each previous year were; 2018 (102), 2017 (163) and 2016 (255). All high potential incidents and LTIs are investigated to determine their root causes. The most significant safety risks arising from high potential incidents for ESB are: public/third parties, electricity, driving and transport and human behaviour which accounted for 67% of all P1 incidents.

FIGURE 1: LTI TREND 2017-2019

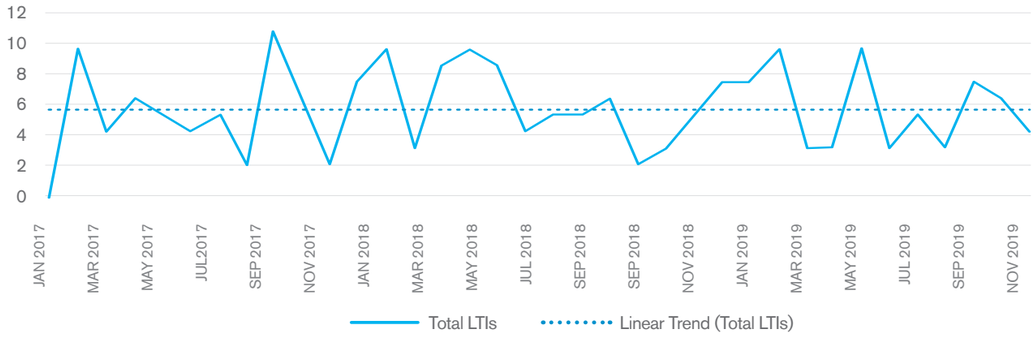
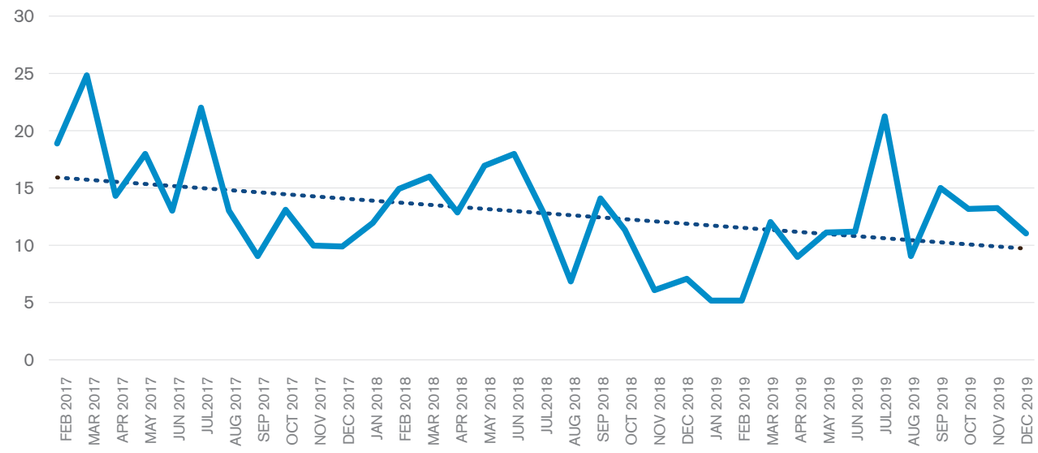


FIGURE 2: HIGH POTENTIAL INCIDENTS TREND (P1) 2017-2019



	2019	2018
Staff Fatalities	0	0
Contractor Fatalities	0	0
Staff Lost Time Injuries (LTI)	41	50
Staff LTI Rate (per 100,000hrs)	0.33	0.40
Contractor Lost Time Injuries	24	17
P1 (High Potential Severity Incidents)	138	102
Absenteeism Rate (avg. days/staff)	8.01	8.39
Days lost due to occupational injury	1080	1415.5
Public Fatalities due to electricity (Customer side of meter)	0	0
Public Fatalities due to electricity (Network side of meter)	1	0
Safety Incidents on the Network (including Public Safety Incidents)	2,232	2,015

HEALTH & SAFETY MANAGEMENT SYSTEMS (GRI 403-5, 403-8)

All ESB business units have health and safety management systems in place, many of which are externally verified and certified to the International ISO 45001, OHSAS 18001 standards or equivalent. The established safety management systems (SMS) describe the formal framework within each organisation/business unit, which is designed to manage the different elements of health and safety in the workplace. All companies, including ESB, have a legal duty to manage the health and safety of all its staff, to know the risks in the business and to then take action to control them. The key elements of an effective SMS include:

1. Policy and commitment
2. Planning for incident and ill health prevention
3. Implementation and operation including responsibilities, procedures and resources
4. Measuring performance
5. Auditing and reviewing performance

ESB continued to progress and monitor leading indicators of safety and health performance. These are Good Catches, Leadership Conversations, P1 Investigation, P1 Action closure and Audit non-conformances.

ESB continued to make progress in 2019 on improving its safety performance through delivery of key improvement projects in ESB Networks and in Generation and Trading. Safety Assurance Audits against our Policy and Standards were completed in ESB Networks, Generation and Trading, and in Engineering and Major projects.

While the specific training requirements of each individual will be dictated by their roles and responsibilities and the risks to which they are exposed, at a minimum all ESB staff and contractors working on behalf of ESB receive the following mandatory occupational health and safety training: Safety Induction, VDU Workstations (for desk based personnel), Manual Handling as determined by Risk Assessment. Training as required to perform specific tasks or roles safely. All H&S training takes account of differing levels of responsibility, ability, language skills, literacy and risk.

RISK ASSESSMENT (GRI 403-2)

ESB continues to focus on reducing risks in the business that give rise to injurious incidents. Improvement plans, projects, training and audit programmes, with a focus on injury prevention are maintained. Risk Assessment is the basis for the identification and management of hazards that may occur during the course of work.

The following Enterprise health and safety risks are communicated to the Board and managed through a number of programmes: electricity, driving, working at height, objects falling from height, load handling, tools, plant & equipment, other hazardous energies, physical, chemical & biological hazards, fire & explosion, slips, trips & falls, lone working, stress and third party sites.

Implementation of company-wide Fire Safety Review recommendations commenced during the year.

Safety Health & Environment Performance is managed through a Key Performance Indicator process, reported weekly across the organisation on injuries, incidents, training, risk assessments, audits, investigations and corrective actions. All employees and contractors are encouraged to report safety concerns, to intervene when they observe unsafe behaviours and to stop work where unsafe conditions are observed. Safety Management systems across the business define the specific actions and processes required and incidents are ultimately reported via SHIELD EHS system. Caring is one of ESB's core values and ultimately our highest priority with all work is that all employees and contractors complete their day's work safely and safely return home to their loved ones.

SAFE AND SOUND

The focus of the Safety Culture Transformation ('Safe and Sound') programme is to establish a culture where safety is central to everything ESB does, where there is a mind-set that is intolerant of incidents and injuries, where employees take responsibility and care for their own safety and for those around them, where they speak up when they see something unsafe, where they choose to follow the safety rules, where they are compliant, where they implement sensible safety systems and where they take pride in their achievements. There was significant progress in the key Safe and Sound programme modules in 2019.

SAFE & SOUND
Because we care

The key highlights include:

- establishment of 48 Leadership Teams (approx. 500 staff) focused on embedding the Safe and Sound principles at local levels, while working on the adaptive challenges raised;
- the establishment of a strong, full time, Safe and Sound Coach Team (15 in total), providing Safe and Sound coaching support to the Leadership Teams, while also conducting Safe and Sound engagement sessions with staff (to encourage Staff to talk about what Safe and Sound means to them);
- and the delivery of leadership development training sessions - working with managers, supervisors and leadership Teams, supporting them in developing the leadership skills required to realize the Safe and Sound vision.

HEALTH AND WELLBEING (GRI 403-3, 403-6)

ESB is committed to proactively supporting its employees in maintaining good health and wellbeing. ESB's Health and Wellbeing team helps its employees to reach their full potential in the workplace by providing proactive, preventative and early intervention health and wellbeing services. It provides information and advice to employees to help them to create and maintain a healthy lifestyle. The programme provides effective support where employees face ill health and other personal life challenges through an occupational health medical service, an Employee Assistance Programme (EAP), an independent counselling service and through a range of other support measures.

In recognition of the diversity of employees and their wellbeing needs, ESB developed a new Health and Wellbeing Strategy. A Wellbeing Handbook was developed in 2018. A second publication "Supporting the Wellbeing of My Team" was developed and launched during Mental Health Week in 2019.

Health & Wellbeing Roadshows have also taken place to ensure all employees are aware of the services and supports available and to enable them avail of health screening and attend proactive health & wellbeing seminars.
ESB continues to provide access to a digital health and wellbeing tool. Proactive Health & Wellbeing interventions are extended and open to contractors who work on site and wish to avail of them.

WORKERS WITH HIGH INCIDENCE OR HIGH RISK OF DISEASES RELATED TO THEIR OCCUPATION (GRI 403-3)

There is currently no evidence from occupational health or occupational injury reporting that indicates that any particular worker or working group is at a higher risk or incidence of disease due to their occupation. All employees undergo health screening prior to employment and at regular intervals, where they may be at risk of exposure in an industrial environment. All employees are offered a health screening programme and projects that require significant contractor workforce involvement cater for health and wellbeing promotion and health screening on a voluntary basis. Action levels and maximum exposure levels exist within legislation to ensure potential health risks such as noise, dust and vibration are actively managed through risk assessment and mitigated for through exposure limits, PPE, regular surveillance and monitoring.

HEALTH AND SAFETY COMMITTEES (GRI 403-4)

ESB has formal agreements in place with trade unions covering all aspects of health and safety activities and responsibilities of ESB and employees (i.e. 100%). All ESB employees are represented in formal joint management-worker health and safety committee structures that monitor, advise and respond to health and safety matters. Safety Representatives are appointed to represent employees in any required discussions with management. Joint H&S committees are commonplace across the organisation and employee representation on formal H&S committees is also a requirement of legislation. Frequency of meetings and the topics governed by the H&S committee are set out in the particular business unit's safety management system.

Governance of Health, Safety & Environment

The Health, Safety and Environment Committee (Board sub-committee) supports the Board's monitoring and governance of health, safety and wellbeing.

KEY ACTIVITIES OF THE HEALTH, SAFETY AND ENVIRONMENT COMMITTE IN 2019

Duty	Examples of activity
Monitor the development of health, safety and environmental strategy and translation of the strategy into policies and programmes	Reviewed and considered: ▪ Group Safety KPIs ▪ Group Safety, Health Environment Improvement Projects ▪ ESB Networks Environment Update ▪ Health, Safety and Environment Annual Report ▪ Safe and Sound Transformation project updates ▪ Environmental incident updates
Review and consider information on key health, safety and environmental trends in Ireland, Europe and elsewhere, where relevant	Reviewed and considered: ▪ Key safety risk updates including lost time injuries, high potential incidents, near-misses and good catches ▪ Update on ESB participation in Bettercoal scheme ▪ Update on development of cultural dashboard
Review and consider reports on compliance with all applicable health, safety and environmental legislation	Reviewed, considered and suggested actions in respect of: ▪ Environment and sustainability updates ▪ ESB Networks Environmental Compliance audit ▪ Reports on incidents and non-compliance with legislation ▪ Engagement with Environmental Protection Agency (EPA) in relation to peat stations ▪ Fisheries update ▪ Update on working time directive
Support the Board in carrying out Board responsibilities in ensuring that health, safety and environmental risks are properly identified, assessed, reported and controlled	Considered the risks in the following areas: ▪ Dam safety review ▪ Health and wellbeing update on staff mental health ▪ Update on ESB Networks storm safety management ▪ Public safety ▪ Business unit safety improvement projects

Further details of the Health, Safety and Environment Committee are outlined In the Annual Report 2019, page 101

3.2 PUBLIC SAFETY (GRI 416-1)

There was one fatality when a member of the public was fatally injured when flying a micro-light plane near to overhead electricity networks. Investigations into the cause of the tragic accident are being carried out by the Air Accident Investigation Unit of the Department of Transport, and separately by ESB Networks.

There was also a significant near miss incident which involved a member of the public who was attempting to retrieve a drone that was caught in overhead electrical networks. The individual was very fortunate not to have been fatally injured.

Safety is fundamental to everything we do in ESB Group and we are committed to protecting the safety, health and wellbeing of our employees, contractors, customers, members of the public and others who may be affected by our work activities. The key focus of our public safety programme concerns the risk management of people coming into contact with our network, plant and equipment. Our on-going network refurbishment programme continues to have a significant and beneficial impact on public safety. While ESB is not responsible for public safety beyond the customer's meter, we deliver regular public safety campaigns to alert the general public to the potential dangers posed by electricity.

Public awareness around the dangers of coming into contact with live electricity are regularly promoted. With the increasing frequency of extreme weather events, risks associated with fallen power lines in particular are emphasised. Delivery of the Public Safety Strategy and Action Plan continued in 2019 with active engagement with stakeholders in the construction, farming and education sectors.

The revised and updated Code of Practice for Avoiding Danger from Overhead Electricity Lines was published with H.S.A. approval and, together with the accompanying video is an important contribution to improving safety in the construction sector. TV, radio and social media campaigns targeted the risks associated when working near overhead and underground electricity networks, as well as risks with activities such as flying drones.

The sponsorship of RTE Radio 1 weather was used to highlight risks associated with the dangers of fallen wires especially during storms and when operating tall machinery near electricity networks. The 'Stay Safe-Stay Clear' primary schools programme attracted a large number of entries with regional and national winners recognised.

Stay Safe Stay Clear Poster Competition, Junior National Winner, Emma Taheny, Mullaghroe NS, Sligo, pictured with Arthur Byrne (ESB Networks) and her teacher Ms.Murphy.

Padraig Delaney (HSA), 2nd from left, pictured with Arthur Byrne, Deirdre McKenna and Mark Madigan (ESB Networks) at the launch of the ESB Networks Code of Practice for Avoiding Danger from Overhead Electricity Lines.

3.3 ESB PEOPLE AND ORGANISATIONAL DEVELOPMENT

INTRODUCTION

This has been the first year of ESB's new operating model, following a review in 2018 to align the organisation for delivery of our Strategy for a Brighter Future. 2019 has been an important year in mobilising the organisation around our ambition. The development of our People Strategy has brought a focus to the capability we need to succeed in a changing context, and the need to evolve our culture to deliver the performance required for our business to succeed. This strategy is built on the foundation of our One HR model – a single people strategy for a single workforce. Our values of being courageous, caring, driven and trusted are the foundation for everything we do. In 2019, we began to execute our People Strategy by using these values to define and shape the culture we need to realise our strategy and deliver a brighter future for those we serve. This has led to the development of a programme to support this cultural evolution called The Way We Work at ESB, which brings together a number of elements in support of changing behaviours and a connected employee experience to enable our people to thrive.

We know that tone starts at the top and significant effort has been deployed in enabling our senior leadership to be proactive and accountable in leading on this cultural change. The capability of our people managers at every level in the organisation is critical to making change happen. 2019 saw us enhance our Management Development Framework to align with our strategy and the need for a performance ethos in every team. This refocussed management development will be deployed in 2020 and will include learning to use digitally-enabled people insights to drive change.

In our new operating model, we have brought together our HR, safety and environment and sustainability functions. This year we leveraged this partnership by ensuring that our safe behaviours programme, Safe & Sound, is integrated with our overall cultural development programme for those business areas with high-risk safety environments. Looking forward to 2020 as our industry continues to evolve, the impact on capability and development and the pace of change therein will see ESB take a changed approach to both resource assurance and learning & development. We will continue to work on reshaping our culture and bringing an ongoing focus to performance, enabled through an inclusive and connected employee experience.

ESB WORKFORCE

Over 2019, ESB continued to recruit across a number of key areas to ensure the capability needed to deliver the Strategy for a Brighter Future.

- Through the Graduate Recruitment Programme ESB recruited 77 people across Engineering, Finance, HR, IT and Business Networks, brought 83 people at a variety of levels including school leavers and graduates into their first year of the four-year programme. In addition, 10 apprentices were taken on in the field of finance and information technology.
- 121 new Network Technicians were recruited in 2019 – 90 from ESB Networks Apprentice Programme and 31 from outside industry.

	2019	2018
Number of Employees	7,974	7,874
Female	25%	24%
Management Level Female	30%	25%
Full Time	93.2%	93%
Employee with Disabilities	3%	3%
Permanent Contract	91%	99%
Temporary Contract	9%	1%
Skilled Craft and General	42.3%	42%
Non Craft and General	57.7%	58%
Female Board Members	33%	33%
Third Party Contractor Staff working on behalf of business	2,800	3,100
STAFF BY REGION		
Republic of Ireland	81.1%	80.5%
Northern Ireland	16%	17.5%
Europe	1.6%	0.1%
Middle East	0.01%	1.4%
Asia	0.02%	0.03%
Africa	0.01%	0.01%
Nationalities Employed	47	35

Notes:

1. Permanent (90.7% of Male and 91.1% of Female Employees)
   1. Temporary (9.3% of Male and 8.9% of Female Employees)
2. ESB continues to exceed the 9% employement target for people with disabilites as set out in the Disability Act 2005.
3. Contractor workforce numbers are not gathered for all Individual contracts.
4. Numbers reflect regular contractors working on behalf of our networks businesses on construction and overhaul projects, as well as facility service providers.

TRAINING AND EDUCATION

Following the development of ESB's People Strategy and the definition of the culture it needs for success, ESB has developed a leadership profile that articulates what this means for leaders in ESB. This provides a unifying framework for leadership development across the company and has informed the development of a leadership programme for Middle and Front-Line Managers which will be delivered in 2020 and the selection of senior managers in the organisation.

ESB is committed to the continuing development of the skills and capabilities of all our employees. We are a company committed to life-long learning and we believe that this commitment is a key factor in the retention of our staff and delivering on our Brighter Future strategy.

The identification of training needs and requests for training solutions is managed through the OKR (My Goals and My Development) process, a process for learning and development conversations to take place between employees and their manager throughout the year. Engaging in this process allows an employee the opportunity to access training opportunities to develop their skills and knowledge through a structured process.

The Learning and Development Delivery team manage and organise Non-Technical Training. This includes IT, Business and Personal Skills, and Management Development training courses. Technical Training and Safety Training Solutions are managed and organised by ESB Business Units and the National Training Centre.

PERFORMANCE AND CAREER DEVELOPMENT (GRI 404-3)

Our Brighter Future strategy calls out the need for a high-performance culture that supports collaboration to drive innovation and business performance. Achieving high performance in ESB is about how we all perform to our best, delivering outcomes that are aligned with the business needs. Using our performance management approach, managers in ESB play a critical role in enabling all of us to succeed. All employees (100%) are part of an annual performance management process, goal setting and career development process, which is deployed across the business.

THE WAY WE WORK

The Way We Work at ESB is a programme, designed to guide the evolution of the culture across ESB, by enabling an employee experience to support performance at every level.

ESB Engineering and Major Projects HR Team commended at CIPD Awards 2019 for their work and contribution to the local community through the project 'Building a Brighter Future with students of Grange Community College

ESB's values are the foundation of this programme and they have been brought to life for employees through a range of supports including a film and a guide for employees on what these values mean and how they translate into the way we work. For managers, ESB has provided a set of supports to help team engagement on how it works based on ESB's values.

ESB has identified and called out a set of mindsets for success – these are attributes and behaviours which are critical to delivering ESB's strategy and purpose. They are Performance, Customer Centricity, Collaboration, Innovation and Agility. Through the Way We Work at ESB, ESB aims to foster and enhance these mindsets. Using the values, ESB is developing Our Code, an engaging and values-led approach to defining ethical behaviour to support a positive culture.nclusion is at the heart of a performance culture and enabling ESB's leaders to set the tone for inclusion is an important driver for this. In 2019 ESB's Senior Managers and HR Business Partners participated in an Inclusive Leadership development programme. Coaching and supporting people to reach their potential and enable collective performance is key to ESB's success as a business and as individuals. In 2019 ESB developed a new approach to managing performance through people, introducing the OKR (Objectives & Key Results) methodology which improved alignment of objectives with strategy.

For 2020, ESB is building on this by bringing an enhanced focus on behaviours and how ESB works together as well as what ESB delivers. Senior management leadership is critical to setting and evolving ESB's culture. In 2019 ESB brought together all senior managers in a series of workshops to focus on their personal role in leading out on the Way We Work.

BeMe@ESB Allies

2019 has seen significant increase in the number of ESB colleagues taking part in BeMe@ESB – I Am An Ally Awareness Programme. The purpose of the programme is to raise awareness of experiences and challenges LBGT+ colleagues may face in the workplace, and to understand the importance of the role that allies play in supporting an inclusive workplace. Each of us, as allies and advocates for inclusion, play a role and have responsibility to make a positive difference in shaping the culture of an LGBT+ inclusive organisation. To date in 2019, over 600 colleagues from across ESB have attended the programme.

How can LGBT+ allies make a difference?

AN LGBT+ ALLY:

- **Proudly supports LGBT+ colleagues**
- **Are LGBT+ and non- LGBT+ Employees**
- **Is committed to raising awareness and working to ensure ESB is an LGBT+ inclusive workplace**
- **Is an advocate for positive change**
- **Helps to create an inclusive environment/culture in the workplace where everyone can bring their whole self to work**
- **Respectfully challenges inappropriate language, commentary or 'banter'**
- **If you are interested in being an ally or organising a briefing in your area, simply email BeMe@esb.ie**

Check out the BeMe@ESB - I Am An Ally video www.youtube.com/watch?v=LnFlsIVsh_4

Understanding how it feels to work at ESB and the impact that leader and manager behaviours are having, is critical to ensuring ESB is making progress. In 2019, ESB introduced a new approach to employee surveying using a digital platform to provide real-time people insights for managers. This feedback will help managers to shape a positive workplace culture and improve employee engagement.

Through the Way We Work, ESB will bring a renewed focus to low-carbon leadership, by engaging its employees on leading and enabling the transition to a low-carbon future.

ESB will bring this to life through initiatives on electric cars and e-heat, which will see its employees in the position of advocates for a low-carbon future.

INCLUSION & DIVERSITY AT ESB

Inclusion continues to be an area of focus and development for ESB. Throughout 2019, over 650 employees participated in BeMe@ESB's Ally Awareness Programme. In June, highest ever numbers of employees, allies, friends and family took part in Dublin Pride to show ESB's support for LGBT+ colleagues. ESB was represented on Allies for Inclusion Panel discussion at OUTStanding Ireland members' event. ESB's Managing Successful Parenting Transitions programme continues to go from strength to strength and was awarded PWN Global Gender Balanced Leadership Training Initiative Award in October. ESB's growing numbers of female apprentices and colleagues attended one of a number of events held across ESB to celebrate International Women's Day - Balance for Better – Brighter Future, Performance, Impact and Success.

Over the summer months, ESB partnered with EY to conduct a diagnostic of inclusion and diversity across ESB. This involved a companywide survey, interviews with leaders, several employee focus groups and analysis of policies, procedures and processes to determine ESB's level of maturity in this area. Through this ESB has identified where it is strong and where more attention is needed, to bring ESB to the next level of maturity. This diagnostic will support the development of a comprehensive strategy on inclusion and diversity in 2020. As part of the Way We Work programme, Senior Managers and HR Business Partners participated in Inclusive Leadership Development in 2019.

ESB's Joint Equality Council, which represents all Business Units and Group of Unions, reconvened and continues to raise awareness to ensure our workplaces are inclusive, where equality of opportunity exists for all and where the diversity of our people drives innovation and creative problem solving to better serve ESB's customers.

ESB'S CODE OF ETHICS

At ESB, all our board members and staff adhere to a code of ethics which outlines our approach to responsible business behaviour. The main premise of our codes is that everyone will strive to perform their duties in accordance with the highest standards of integrity, loyalty, fairness and confidentiality and that we will abide by all legal and regulatory requirements. ESB's code of Ethics encourages employees in the first instance to report any suspected ethical breach to their Line Manager, as one would with any other concern in the course of duties.

Alternatively, ESB has made available a Confidential Helpline/Web Facility which staff can use to report suspected wrongdoing. This Helpline operates 24 hours a day, seven days a week. The Helpline offers a safe, confidential and, if necessary, anonymous means of reporting wrongdoing for staff who may otherwise feel uncomfortable coming forward to their line manager.

DIVERSITY OF ESB BOARD OF DIRECTORS

The Board, both for itself and the Group as a whole, is fully committed to diversity as a key value, and an important factor in achieving ESB's business objectives. It is committed to achieving the optimal balance of skills, experience and diversity among its members. In relation to Board diversity, the Chairman of the Board, in assisting the DCCAE in drawing up the specification for Board appointments, has regard to the benefits of diversity on the Board, as provided for under the State Code of Practice guidelines and the related "Guidelines on Appointments to State Bodies". Of the 12 members of the Board, 4 are female. There are also 4 Worker Board members as part of the 12 member board. Board member details are set out in ESB's Annual Report 2019, page 80-83.

NON-DISCRIMINATION AND PROTECTED DISCLOSURES

ESB will not tolerate any penalisation of any person who raises a concern to an appropriate person in the reasonable belief that it intends to show a wrongdoing.

Under the Protected Disclosures Act 2014 ESB is required to have procedures for dealing with any protected disclosures that may be made by its employees and others. A protected disclosure relates to information about a wrongdoing in the workplace which a staff member reasonably believes has taken place. ESB's Policy on Fraud and Other Unlawful Activities sets out the procedures in place in ESB to ensure that staff can bring their genuine concerns to the attention of the company in the knowledge that those concerns will be dealt with appropriately and without being penalised for doing so.

Section 22 of the Protected Disclosures Act 2014 requires ESB to publish an Annual Report relating to protected disclosures made under the Protected Disclosures Act 2014. In accordance with this requirement, ESB confirms that in the full year ending 31 December 2019, three protected disclosures were made to ESB. The matters reported have been or are in the course of being investigated in accordance with the applicable ESB Group policies.

All at ESB have a duty to uphold the Dignity and Respect at Work Charter, embrace the values and behaviours it sets out and ensure a working environment that is free from bullying, harassment and sexual harassment.

ESB's Respect and Dignity for the Individual Policy details both the process to be followed and the confidential supports available to employees in the event of any alleged incidents occurring. Any such incidents that do occur are treated with the utmost confidentiality and are not publicly disclosed or commented on.

FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING

Approximately 60% of employees have elected to join a trade union and are directly covered by collective bargaining arrangements, reflecting ESB Group's position of supporting freedom of association for all employees.

Under the obligations outlined in ESB's 3rd Party Requirements, all contracting entities are required to allow their staff freedom of association. This is monitored as part of the Contractor Employment Standards (CES) audits which are undertaken across all major contracts each year. In essence 100% of contractor staff should have freedom of association, as long as their employer is abiding by the ESB 3rd Party Requirements.

3.4 COMMUNITY ENGAGEMENT AND CSR

Since its foundation in 1927, ESB has supported communities and programmes that enhance the economic and social fabric of Ireland, helping to bring light and energy to the people it serves, allowing individuals and communities to fulfil their potential in every walk of life.

ENERGY FOR GENERATIONS FUND

Throughout 2019, ESB has invested over €2 million in good causes through its CSR programme. ESB's Energy for Generations Fund is dedicated to fighting homelessness, preventing suicide and enabling access to Science, Technology, Engineering, Arts and Maths (STEAM) education. In 2019, the fund supported 103 projects at local and national level to the value of €1 million. This includes partnerships with TU Dublin Foundation for the Access to Apprenticeship programme, the rollout of Aware's Life Skills for Schools initiative to promote mental health awareness in secondary schools throughout Ireland and Jigsaw's My World Survey Two, the largest ever survey on youth mental health in Ireland.

EMPLOYEE VOLUNTEERING

The ESB Energy for Generations Fund also promotes employee volunteering. Any ESB employee who volunteers for over 20 hours with a charity can request that ESB donates €250 to that organisation. In 2019, €25,000 has been donated through the Fund to a range of charities including Make A Wish Foundation, Debra Ireland, Irish Kidney Association and Dublin Simon Community.

ESB employee volunteers participate in Time to Read and Time to Count in partnership with Business in the Community (BITC), to help improve literacy and numeracy initiatives in eight primary schools throughout Ireland.

ESB volunteers also introduce transition year pupils in five secondary schools to the world


Moneypoint Skills@Work


Moneypoint Skills@Work

of work through BITC's Skills@Work work experience programme.

WIND FARM COMMUNITY FUND

ESB's subsidiary wind farm companies operate in the Republic of Ireland (ROI), Northern Ireland (NI) and Great Britain (GB) and its Wind Farm Community Fund makes €1 million available to communities close to wind farm sites for the development of local infrastructure and services, bringing a brighter future for the residents of its neighbouring rural communities.

The Wind Farm Community Funds were established by ESB, representing our intention and commitment to ensure clear and lasting benefits in the communities which surround our wind farms. These funds also help the communities in which we operate our wind farms to become more sustainable, through the support of positive local initiatives and activities.

Over the past 6 years, ESB, through its subsidiary companies, has invested in excess of €5.3million in support of 765 community-led projects completed across our operational portfolio of 25 wind farms.

The funds, which open on an annual basis for the lifetime of each wind farm, are made available to local community and voluntary organisations who wish to complete a project within one/any of our broad themes:

- Education and Skills
- Health, Safety and Wellbeing
- Environment and Habitat Conservation
- Energy Efficiency and Sustainability
- Culture and Heritage
- Recreation, Sport and Social Inclusion

SPONSORSHIP

The Group manages an active sponsorship portfolio including the following:
Promoting young people in sport through the Electric Ireland GAA All-Ireland minor championship and Ireland's under-20s rugby.

Proud supporter and sponsor to the Pieta House Darkness into Light annual event. Supporting the arts and music through sponsorships of Feis Ceoil, Electric Picnic and the National Gallery of Ireland. Supporting the development of skills in science, technology, engineering, art and maths (STE AM) to empower Ireland's young people to reach their potential and power their collective brighter future through partnerships with TechSpace, Science Blast, Cool Planet, Generation Apprentice, University of Limerick and Engineers Ireland.

ESB's Generation Tomorrow STEAM education programme underpins the corporate sponsorship portfolio and is both a key driver for brand reputation and a tangible proof point of the Brighter Future Strategy. Through partnership with organisations like RDS (ESB Science Blast), Camara Education Ireland (TechSpace and ESB Creative TechFest) and Cool Planet Experience among others, the aim is to support children to develop the skills they need to thrive in 21st century society, helping them not only to become creative and innovative problem solvers, but also active and engaged citizens, capable of making informed choices to tackle climate change and other global challenges.

Programmes like ESB Science Blast and Generation Tomorrow STEAM workshops, positively impact thousands of primary school students in communities across Ireland, while through the youth work sector TechSpace provides opportunities for young people to use digital media and STEAM to be creators and inventors of the future.

ESB SCIENCE BLAST

ESB Science Blast, delivered by the RDS, replaced the RDS Primary Science Fair, which existed for almost 10 years in a smaller format. Over 12,000 children from 496 primary schools across the country participated this year in one of three events (seven days in total) in Dublin, Limerick and Belfast.

The event grew in scale from 255 schools (2018) to 496 (2019) and there was a 50% increase in new schools participating this year. 99% of participant teachers surveyed said they will participate again while 60% planned to continue the project in the classroom. In respect to ESB Group Involvement, over 60 staff across ESB, Electric Ireland, ESB Networks and NIE Networks supported as volunteers or judges.

Minster Bruton and CEO Pat O'Doherty discuss a project with students at ESB Science Blast

TECHSPACE AND ESB CREATIVE TECHFEST

ESB has supported TechSpace since 2012 through the Energy for Generations Fund and continue to support as a partnership approach between EFG and Corporate. ESB Creative TechFest celebrates the work of young people across Ireland that participate in TechSpace hubs. Over 550 young people from 50 youth clubs in 25 out of the 26 ROI counties participated in the biggest ESB Creative TechFest ever, in Dublin's Convention Centre on October 30th this year.

GENERATION TOMORROW STEAM PROGRAMME

ESB staff volunteers deliver STEAM workshops in primary schools across Ireland across the year.

Over 600 children from local schools visited our Gateway Head Office in Dublin for Science Week 2019 and participated in workshops hosted by 40 staff volunteers including six Executive Directors.

Caption: Pat O'Doherty , Chief Executive and Marguerite Sayers, Exec Director Customer Solutions with category winners at ESB Tech Fest 2019

INTERNATIONAL CSR

ESB is a corporate partner of ElectricAid, a charity established by the staff of ESB in 1987. Today, ElectricAid enjoys the support of 2,500 donors, both serving and retired staff, with donations matched by ESB on a 2:3 ratio to a ceiling of €275,000 annually. In 2019 ElectricAid funded 126 projects in 35 countries to a total of €1.2 million with each project directly addressing one or more of the United Nations Sustainable Development Goals (UN SDGs). A copy of the ElectricAid Annual Report is available from the ElectricAid website – www.electricaid.ie

3.5 CUSTOMER PRIVACY (GRI 418-1)

As a key public utility, ESB collects and processes large volumes of data about its customers, employees and a range of other business partners. Much of this data is considered to be data that identifies or concerns individuals, also known as Personal Data. ESB is subject to various legal requirements protecting the rights of data subjects.

ESB regards the responsible handling of Personal Data as a key value in its customer-centric strategy. In addition to compliance with its legal obligations. ESB respects the rights and freedoms of our customers, employees and others who trust us with their Personal Data. Protecting the privacy and security of this information is a top priority for ESB. The policy also applies to all information systems used by ESB, including all undertakings in which ESB has a controlling interest, wherever located and for whatever purpose used, and whether operated by ESB or by an outside processor on its behalf.

All suspected or actual personal data breaches must be immediately reported in accordance with ESB's data breach management process, where they are subject to investigation and review in line with the governance structures of the organisation, including reporting to the Board Audit and Risk Committee

SUBSTANTIATED COMPLAINTS CONCERNING BREACHES OF CUSTOMER PRIVACY AND LOSSES OF CUSTOMER DATA (418-1);

i. Complaints received from outside parties and substantiated by the organisation; 4
ii. Complaints from regulatory bodies; 3
iii. Total number of identified leaks, thefts, or losses of customer data; 24

3.6 RISK MANAGEMENT

APPROACH TO RISK MANAGEMENT

The effective management of risks and the pursuit of opportunities supports the development of ESB's strategy while protecting the interests of its stakeholders and shareholders. ESB is exposed to a number of risks and opportunities which could have a material impact on its performance and long-term development. The effective identification, management and mitigation of these risks and the pursuit of opportunities is a core focus of the ESB Group.

HOW ESB MANAGES RISK

The Board has overall responsibility for risk management and internal control. The current UK Corporate Governance Code 2018 (the UK Code) (Clauses 28, 29 and 31) and related guidance sets out the Board's responsibility for determining the nature and extent of the principal risks it is willing to take in achieving its strategic objectives. The Code of Practice for the Governance of State Bodies (Section 7.2) also refers to the Board's oversight of risk management including the requirement to "approve the risk management plan and risk register at least annually".

The Board ensures that the Group's risk exposure is proportional to the pursuit of its strategic objectives and longer term shareholder value. It has adopted a Risk Management Policy and Governance Framework to support its oversight of risk throughout the Group.

The Board delegates responsibility for oversight of its principal and emerging risks to Board Committees in accordance with the Committees' Terms of Reference and their respective areas of expertise. The Committee Chairs report to the full Board on key developments and matters requiring further discussion and consideration. The Audit and Risk Committee has overall responsibility for ensuring that enterprise risks and opportunities are properly identified, assessed, reported and controlled on behalf of the Board and advises the Board on its consideration of the overall risk appetite, risk tolerance and risk strategy of the Group.

The details of the activities undertaken by the Board and the Audit and Risk Committee during 2019 in respect of their risk responsibilities are outlined on page 93.

ESB's approach combines a top-down strategic assessment of risk and risk appetite, which takes account of the external business environment and any changes to the business model, along with a bottom-up operational identification and reporting process arising from a review and assessment of the business unit risk registers.

ESB's Risk Management Policy and Governance Framework was reviewed during 2019 ensuring consistency of approach to risk management across the Group.

RISK OVERSIGHT ACTIVITIES DURING 2019

In early 2019, the Audit and Risk Committee reviewed and recommended to the Board the Group Risk Plan for 2019 which set out the Principal and Emerging Risks facing the Group, including the controls and mitigating actions proposed to manage the risks over 2019. The Committee was provided with quarterly reports which considered the status and impact of implementing the identified controls and mitigating actions and provided assurance of a robust risk management process.

The Group Risk Plan also included a comprehensive Work Plan for the Committee detailing its risk oversight activities for the year. The Committee identified a number of specific topics they wished to focus on during the year including:

- Monitoring key regulatory developments
- Maintaining focus on cyber risks and the impact of emerging technologies
- Understanding preparedness for risks arising from Brexit
- Monitoring upcoming legislative and other legal exposures, in particular the new UK Governance Code

The Committee held a full day off-site workshop, to which all members of the Board were invited, to examine these topics and others that became more material over 2019 in more detail. External speakers provided additional insights for the Board members.

In addition, to facilitate the Committee in remaining current with movements in the risk landscape that are relevant to ESB, a range of additional papers on key risk topics were provided to the Committee over the year. These considered topics such as the National Risk Assessment 2018 report and World Economic Forum Global Risk Review 2019, in addition to reviews of material external incidents relevant to the Group.

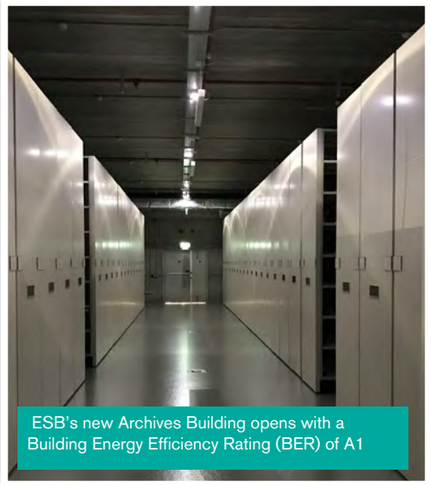
During 2019, ESB sought to identify and report on a range of key performance indicators for the Committee to aid them in monitoring the efficiency and effectiveness of their risk oversight activities. ESB also identifies and seeks to mitigate a range of High Impact Low Probability (HILP) risks relevant to the Group. HILPs are a class of risks with the potential to cause long-term, catastrophic damage to the business. A full review of HILPs is completed on a bi-annual cycle.

A review was last undertaken in 2018, with the outcome of that review still considered relevant over 2019. Group Risk, Group Internal Audit and Group Finance functions continued to meet quarterly to review internal control and risk reporting. This ensures alignment between the functions, better information-sharing and opportunities to identify areas for improvement in the overall internal control framework.

CHAPTER 4

ENVIRONMENTAL & SECTORAL DISCLOSURES

4.1 ENERGY MANAGEMENT



ESB's new Archives Building opens with a Building Energy Efficiency Rating (BER) of A1

Thermal Generation (GWh)	2019	2018	
Coal	1,767	5,683	
Natural Gas	18,999	22,925	
Oil	413	205	
Peat	3,971	4,045	
Operational (Primary Energy equivalent in kWh)			Baseline[1]
Electricity	48,823,028	53,489,805	95,785,331
Thermal	4,321,560	4,986,783	
Transport	54,318,204	56,146,927	
Energy Performance Indicator (EnPI)			
kWh/FTE Employee	18,363	20,852	30,414
% improvement towards 2020 33% target	39.60%	35%	0%

Table Notes and Clarifications:
1. Baseline 2006 for Operational energy consumption (excluding generation)
Energy by fuel source (generation) in GWh current year and comparison year.
Operational Energy (disclosed as Primary Energy Equivalent) in kWh for electrical and thermal energy for buildings and transport fuel.
Energy Performance Indicator metric kWh/FTE current year, comparison year and baseline year.
Defra and SEAI conversion factors are utilized to calculate energy consumption.
SEAI data on Operational Energy is reported a year in arrears. 2019 data reflects 2020 SEAI Reporting cycle.

Energy Management and energy efficiency aid economic competitiveness, whilst helping to lower greenhouse gas (GHG) emissions. Energy efficiency is the foundation of a sustainable economy and is at the heart of many of the efforts being undertaken across the ESB Group to address aspects of energy efficiency and decarbonisation.

ESB Group delivers energy efficiency programmes to new and existing energy customers via our retail businesses Electric Ireland and ESB Energy and via Smart Energy Services for industrial and commercial customers. These programmes enable customers to improve the energy performance of their homes and businesses, reducing both running costs and environmental impacts. For the regulated network businesses, ESB Networks and NIE Networks, energy efficiency improvements are via asset policies and replacement programmes on the network assets. These are incorporated into plans that are approved every five years by the respective energy regulators.

ENERGY EFFICIENCY PROGRAMME

In ESB Group, energy efficiency is identified as a strategic priority within the Brighter Future strategy. It is cascaded into business unit business plans, factored into long-term asset planning, incorporated into our customer-facing energy services offerings, and included in our regulatory price review submissions, as part of the multifaceted approach across the breadth of the business.

For employees, energy efficiency is brought to life through our focus on energy conservation within our operations and how behavioural change can contribute to energy efficiencies in building energy, vehicle fuel consumption and other operational energy loads. During 2019 ESB implemented a cross business unit energy management system covering operations of our buildings and fleet energy across ESB Group ROI operations, accounting for an annual consumption of approximately 81,000 GWh. We were successfully certified to ISO50001:2018 in November following an in-depth series of site visits by our auditors, NQA.

The Energy Management System will be used to achieve further savings against the increased targets for 2030 of 50% energy efficiency and 30% absolute carbon emissions reductions. ESB purchased 70 fully electric small vans to replace 100 diesel vans involved in specific, suitable duties. The fleet management system and the energy management system are in place to identify further savings. The redevelopment project of ESB headquarters with a new state-of-the-art, energy-efficient premises continued, while the construction of a bespoke archives building was completed to a BER A1 energy rating.

As a commercial semi-state owned company, ESB is also committed to supporting and being an exemplar in the delivery of Ireland's 2020 public sector targets. Under this legislation (SI426/2014), Irish public sector bodies and commercial semi-state bodies are required to deliver a 33% reduction in their Total Primary Energy Requirement by 2020. Our operational energy management system, governed by ISO50001, will enable us to deliver on this target and more.
To the end of 2019, ESB Group has delivered a 39.6% improvement over baseline and against the 33% target (GRI 302-4).

DELIVERING ENERGY REDUCTIONS FOR CUSTOMERS (GRI 302-5)

RESIDENTIAL CUSTOMERS

The Irish Government has enlisted the assistance of Energy Suppliers in meeting the national requirements of the EU Energy Efficiency Directive to deliver a 20% Energy saving by 2020 and has introduced an Energy Efficiency Obligation scheme (EEOS). The Energy Efficiency Incentive, first introduced in 2014, is designed to incentivise customers to install energy efficiency measures to SEAI standards by giving them a credit on their energy bill. This incentive, along with SEAI's grants make it even more cost effective for home owners to install energy efficiency measures.

Electric Ireland is pleased to partner with The Society of St. Vincent de Paul, who work tirelessly with people experiencing poverty and disadvantages during Christmas and throughout the year.

The emergence of digitisation, increasing public interest in climate change issues and improvements in technology have resulted in a step change in the range of services which are of interest to customers: For residential customers, smart energy controls, smart security systems, peace of mind services and data analysis tools are all becoming part of customer propositions offered by utilities.

Electric Ireland continues to deliver a customer focused but effective credit management strategy to ensure vulnerable customers are protected. A range of products and payment plans are in place coupled with proactive early interaction with customers, resulting in disconnections of less than 20 per 10,000 customers, the lowest rate in recent years.

INDUSTRIAL AND COMMERCIAL CUSTOMERS

ESB Smart Energy Services (SES) was established to help large industrial and commercial energy users to reduce their energy use and costs through energy management and efficiency projects. SES delivered 126,710,318 kWh of energy credits towards Electric Ireland's non-residential energy credits target in 2019. As a customer services business, SES endeavours to grow its energy services offerings and customer base in Ireland and the UK through broadening its expertise and offerings to large energy users.

CASE STUDY- SMART ENERGY SERVICES – THE OLD AND THE NEW

ESB Smart Energy Services (SES) work with a broad base of customers helping them to identify, understand, resolve and maintain energy efficiency opportunities within their business operations.

During 2019, SES worked with the National Trust to remove off-grid fuels and introduce heat pumps into a 500 year old historical building, Baddesley Clinton Manor House, which will deliver carbon savings in the region of 300 tonnes a year.

Baddesley Clinton Manor House

During 2019, SES implemented ESB's Energy Management Hub, as part of a 3 year partnership with Shannon Airport. The energy data captured will identify energy saving opportunities throughout the entire Shannon Airport site and will highlight opportunities for future capital projects which will increase energy savings potential.

Shannon Airport

4.2 BIODIVERSITY

ESB activities comprise electricity generation, transmission, distribution and supply. As set out in ESB's Group Policy Statement on Environmental Management and Sustainability, ESB Group has a responsibility to manage these in a way that provides a high level of protection for the natural environment and contributes to the sustainable development of the economy. Managing work that has the potential to impact on biodiversity is a key aspect of ESB Group's approach to environmental management. ESB's Environmental Management Systems' structure provides the mechanism by which the necessary local statutory authorisations, operational procedures and improvement measures and programmes are developed and maintained. All proposed operational and maintenance activities are screened at an early stage of planning to determine whether a Natura Impact and/or Environmental Impact Assessment are required.

Biodiversity impacts are considered in all areas where existing assets or new assets are planned within close proximity to special areas of conservation and designated sites, as set out by national, regional or EU legislation. Correspondingly, specific work instructions and methods exist to ensure the conservation of biodiversity incorporating all habitats and species inside and outside of designated sites, during and following any such works.

CASE STUDY: BELLACORRICK-MOY 110kV UPRATE PROJECT

The project involves the uprating of the existing line (commissioned in 1962), which is required to facilitate the offloading of electricity generated at the newly built Oweninny Wind Farm. Due to the environmentally sensitive nature of the terrain which the line traverses, planning permission contained stringent requirements for working in the Bellacorrick Bog Complex SAC. Actions taken to mitigate risk of damage included;

- Using a helicopter to deliver materials and equipment to over 30 locations along the line.
- Using Durabase bog mats to protect the environment and clear span bridges to enable access to locations where major works were carried out.
- Monitoring of all works along the line by an onsite ecologist

A lorry delivery across the Durabase bog mats

MANAGING OPERATIONAL IMPACTS ON BIODIVERSITY

ESB Group has a duty to protect habitats and species, not just those in designated areas, in the course of its day to day operations and has a management process to enforce this as part of its Environmental Management System.

The network of designated sites in the Republic of Ireland includes Special Areas of Conservation (SAC), Special Protection Areas (SPA), candidate Special Areas of Conservation (cSAC) and proposed Special Protection Areas (pSPA). A number of initiatives have been developed to address biodiversity considerations, including incorporating biodiversity aspects into existing environmental management systems, the adoption of biodiversity guidelines for HV substations, biodiversity action plans, the preparation of Networks job aids addressing design work in close proximity to designated sites and the ongoing preparation, with EirGrid (Transmission System Operator), of draft ecology guidelines for electricity power lines. If a project or plan (either new development or works to existing structures) is located within or adjacent to a designated site) then screening for Appropriate Assessment is mandatory.

NIE Networks has circa 3,500 kilometres of 11kV (or below) overhead line in natural heritage protected sites. These sites are all mapped on its systems. NIE Networks mapping tools have recently extended data layers to include historic environment sites in Northern Ireland. NIE Networks liaises with the NIEA regularly to receive the required consent and to agree the necessary processes to be followed on all such sites to ensure they and their features are protected and mismanagement is avoided.

Helicoptering in materials

WORKING IN AREAS OF HIGH BIODIVERSITY VALUE (GRI 304-1)

The estimated extent of ESB Group assets within designated sites in Republic of Ireland and Northern Ireland is set out in the table below. Where required, development projects and activities are audited to ensure effectiveness of biodiversity processes. Examples of these types of site include; Areas of Outstanding Natural Beauty (AONB), Areas of Special Scientific Interest (ASSI), Special Protection Areas (SPA) and Special Areas of Conservation (SAC).

Where conditions are imposed, these will be followed to ensure there is minimal disturbance or potential of pollution within the area while work is carried out. ESB continues to assess the impact of its operations in accordance with its obligations.
The vast majority of ESB Group assets are not located within designated sites. The estimated extent of ESB Group assets within designated sites in Republic of Ireland and Northern Ireland is set out in the table below.

Republic of Ireland (assets inside SAC, SPA, NHA, PNHAs)	2019	2018
Lands under ESB control (km²)	96.7	96.7
LV Stations (No.)	266,853	260,425
38kV to 400kV OHL (km)	12,752	12,667
38kV to 400kV Cable (km)	2,004	1,591
Northern Ireland (Assets inside SAC, SPA, ASSIs)	**2019**	**2018**
11kV or below (km)	3,500	3,500

IMPACTS OF ACTIVITIES ON BIODIVERSITY

Developments and activities are designed and planned to avoid impacting on biodiversity. Where there is a potential of significant impacts on biodiversity, measures are undertaken to avoid and reduce impacts to a minimum.

Where an IUCN Red list species or species of national conservation concern is identified as being potentially impacted by a project at assessment stage e.g. ecological impact assessment, environmental impact assessment or Appropriate Assessment under the Habitats Directive, appropriate mitigation measures are put in place to avoid, redesign or reduce significant impacts, as well as monitoring protected species, such as birds or butterflies during the operational phase.

CASE STUDY: NIE NETWORKS SOARING HIGH IN THE PROTECTION OF NORTHERN IRELAND'S WILDLIFE

NIE Networks is playing a vital role in the protection of Northern Ireland's wildlife and surrounding environment through a three-year partnership with Ulster Wildlife and has been awarded a Wildlife Aware accreditation by the charity.

The company has been educating employees and contractors about some of Northern Ireland's most protected biodiversity, making the safeguarding of wildlife a priority and ensuring their work has minimal impact on the local landscape and natural habitats.
NIE Networks has collaborated with Ulster Wildlife to develop a bespoke Wildlife Aware Guide and associated training programme for employees. The company organised a tailored 'Biodiversity Walk & Talk' training session for its patrol and survey employees with wildlife experts. The session was designed to help them identify and protect wildlife and better understand the environment they come in contact with daily. Alastair Usher, Environment Officer at NIE Networks, explained,

"Protecting the landscape and wildlife we come in contact with has always been our priority but partnering with Ulster Wildlife has been fundamental in taking that commitment to the next level.

"We deliver a vital public service and there is essential work we must carry out to ensure we have a reliable electricity network. The guide and training programme means our teams are better informed about the ecosystems they are working in and the importance of working in harmony with those systems to ensure wildlife remains protected.

"Many of our sites are natural habitats for species protected under European legislation. Our staff are now better equipped to identify where their work could have an impact on wildlife and the steps they need to take to protect species including birds, badgers, otters and bats."
Vickie Chambers, Supporter Relationship Manager at Ulster Wildlife, added,
"We are delighted that NIE Networks has taken this very positive step to further educate their staff and create an awareness of looking after our natural environment. It is very encouraging to see them delivering a strong biodiversity programme within their business.

"A key priority for us is working with communities and businesses to ensure everyone can live and work alongside nature in a positive way. We hope others will take their lead from the example NIE Networks is setting through its commitment to being Wildlife Aware."

Biodiversity Walk & Talk training with Ulster Wildlife and NIE Networks patrol and survey

Alastair Usher, Environment Officer at NIE Networks, with Mike Meharg, Ulster Wildlife expert

NIE Networks' Wildlife Aware booklet distributed to all employees

4.3 EMISSIONS

DECARBONISATION AMBITION

ESB's unique position as a player of scale in both Networks and Generation markets enables it to take a leading role in the decarbonisation of society. Our Generation and Trading business is changing rapidly. We commissioned 89 MW of renewable energy with a further 338 MW under construction (including our 50% stake in the 448 MW Neart na Gaoithe offshore wind farm). We entered into important new partnerships in 2019 and we look forward to working closely with them on a pipeline of onshore and offshore development opportunities.

While our renewables portfolio continues to grow, it has been a challenging year for our peat and coal fired power plants. We announced the cessation of electricity generation from peat by the end of 2020 and we have significantly rationalised Moneypoint in the face of greatly reduced coal operation as we head towards the cessation of coal-fired generation by 2025.

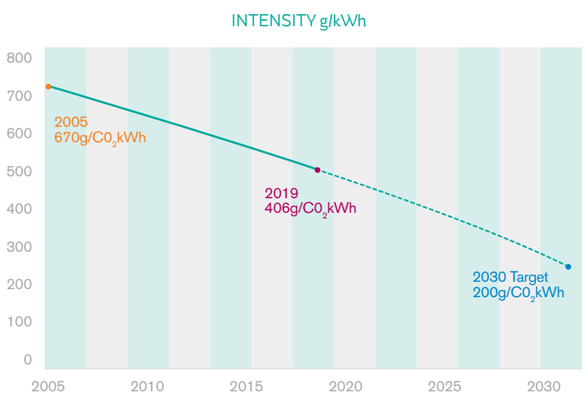
Taking delivery of turbine blades for Oweninny Wind Farm at Killybegs port

ESB is committed to progressively reducing the carbon intensity of electricity generation and has set an ambitious carbon intensity target of 200g CO_2/kWh (by 2030), which represents a 50% reduction on the current carbon intensity level. In 2019, CO_2 output from GT's generation plants remain lower than 2005 (baseline) by approximately 59%, and the carbon intensity of generation has reduced by 39% to 406g CO_2/kWh (GRI 305-4). Since 2009, ESB has disclosed its carbon emissions through CDP, a global disclosure not-for-profit charity that runs a carbon disclosure platform for investors, companies, cities, states and regions to manage their environmental impacts, representing the most comprehensive collection of self-reported environmental data globally. In addition to capturing carbon emissions, CDP assesses the performance of each company against sustainability and climate action best practices.

ESB targeted an improvement in ESB performance in 2018, resulting in an improvement in the score from D to B- on the CDP scoring methodology. Further efforts during 2019 improved ESB's score to B.

ESB joined the Leaders Group on Sustainability, a Business in The Community Ireland (BITCI) led group of leading businesses who hold the Business Working Responsibly Mark. One of the first actions announced by the Group is the Low Carbon Pledge – the first dedicated public commitment generated by Irish business to lead on the transition to a low carbon economy, and it completed its first full cycle of reporting during 2019.

ESB'S CARBON INTENSITY



ESB and other founding members have committed to reduce their carbon intensity by 50% by 2030.

REDUCING EMISSIONS

Our aim is to deliver a balanced low carbon generation portfolio with an increasing proportion of the capacity accounted for by renewables such as on and off shore wind, solar PV and sustainable biomass. The strategy envisages growth and asset renewal in both the UK and Ireland.

ESB's thermal generation portfolio operates within the confines of the EU Emissions Trading Scheme (ETS) and Scope 1 generation emissions are subject to an operating licence, external verification and reporting to the relevant competent authority, which is dependent on the jurisdiction that the plants operate in. The relevant competent authorities are the Environmental Protection Agency (EPA) in the Republic of Ireland, Northern Ireland Environmental Agency (NIEA) and the Environmental Agency for England and Wales (EA).

In terms of the management of any emissions related public complaints, each business unit and thermal generating station operates an independent Environmental Management System (EMS), which is certified to ISO 14001 and subject to external verification auditing. A management process is established within each EMS to manage the organisational response to complaints of an environmental nature.

EMISSIONS BASELINES

The baseline year chosen for reporting of the CO_2 emissions is 2005, the year when the formal reporting for the EU Emission Trading Scheme (ETS) started. Each installation operates in accordance with a greenhouse gas permit which authorises the site to emit greenhouse gases (CO_2). This permit is issued by the competent authority once they are satisfied that an operator can comply with the legislation and is capable of monitoring and reporting of emissions. The monitoring and reporting of CO_2 is carried out in accordance with the EU Commission regulation 601/2012 and is verified by an accredited external verifier, which must also comply with Commission Regulation 600/2012. The methodology used for determining CO_2 emissions is based on a calculation approach which primarily uses fuel usage and fuel analysis. The source of the emission factors is derived from Ireland's Specific Emission Factors or back calculated from the CO_2 calculation.

SCOPE 1 GHG EMISSIONS (GRI 305-1)

Direct (Scope 1) GHG emissions are reported on an equity share basis for thermal assets. All thermal assets operate under licence and all their emissions are subject to measurement, independent external verification and reporting to the relevant licencing authority annually. No biogenic CO_2 is reported for 2019, as Tilbury Port 40MW waste wood biomass plant had yet to enter commercial operation. (TBC for 2019).

SCOPE 2 GHG EMISSIONS (GRI 305-2)

Verification of Scope 2 emissions is undertaken by an independent third party assessor using ISO – 14064-3:2006 Specifications with Guidance for the Validation and Verification of Greenhouse Gas Assertions.

Scope 2 Emissions 2019

Indirect Emissions Location-Based (Scope 2)	11,243 tonnes
Indirect Emissions Market- Based (Scope 2)	9,548 tonnes

No significant changes in emissions recalculations for 2019.

FUTURE OUTLOOK (EU 10)

ESB's position as Ireland's leading energy utility, its stable business profile and its solid financial position ensures it is well positioned to meet the challenges that lie ahead and to support its strategic ambition to lead the transition to reliable, affordable low-carbon energy for the benefit of its customers.

GENERATION AND TRADING

Increase the number of opportunities for investment in low-carbon generation including solar and offshore wind.

Significant progress was made in 2019 with the investments in NNG and Oriel wind farms. The joint venture established with Coillte and partnership with Equinor increase the number of opportunities for investment in low-carbon generation including solar and offshore wind. ESB also entered into partnership with Parkwind on development of Oriel amd Clogherhead offshore wind farms. There is continuing development of up to 850 MW of wind generation in Scotland and 110MW of wind generation in Wales, in conjunction with Coriolis and with REG Holdings, of which 150 MW is now fully consented. Continuing development of potential Solar Projects, in conjunction with Terra Solar and by means of joint ventures with Bord na Móna is planned. Development of potential flexible gas plants and batteries is planned in GB and ROI, with 10-year capacity contracts achieved for a number of developments in ROI.

ESB NETWORKS LTD.

Facilitate the widespread electrification of transport and heat, and the adoption of the Clean Energy Package.

ESB Networks increased the design standards for new connections at Low Voltage to provide the capability to support the electrification of heat and transport at domestic level.

Develop processes for enhancing the low voltage network for the seamless electrification of domestic transport while enhancing customer continuity. Submit the 2021 – 2025 (PR5) investment plans to the CRU, detailing all capital investment and operational expenditures and activities through this critical period of the energy transition.

After widespread consultation and engagement, the 2021–2025 (PR5) investment plans were submitted detailing proposals for facilitating a secure, low-carbon future, protecting customers, and transforming the role of the Distribution System Operator, consistent with the National Climate Plan.

Deliver the Smart Metering project so that customers can play their part in the low carbon energy future.

The Smart Metering Project has made substantial progress during 2019 with all key deliverables, including the installation of the first 15,000 meters, achieved in line with project timelines. The project now shifts focus to delivery of phase II of the Smart Metering project including 250,000 meter installations and the retail market services system required for electricity supply companies to be able to offer smart services in 2021.

NIE NETWORKS LTD.

Deliver RP6 programme while maintaining a safe and secure network Deliver total expenditure in line with RP6 allowances.

Substantial capital investment (€154million) was made during 2019 with spend incurred in line with allowances. There was a review of business plans to 2024 and the necessary steps to ensure NIE Networks remain on track for successful delivery of RP6.

CUSTOMER SOLUTIONS

Customer Solutions is the retail customer face of the ESB business, providing smart energy solutions to help our customers consume energy efficiently, as well as creating e-transport and e-heating propositions. Electric vehicles (EV) provide the most commercially available technology to improve air quality and reduce emissions in the transport sector. EVs are expected to account for circa 40% of cars in Ireland in 2030 and so ESB eCars are now upgrading and extending the national network of public EV chargers in Ireland in anticipation of the growth in the electric car market.

EMISSIONS PERFORMANCE (EU 5)

GHG Emissions Scope 1 (tonnes CO2e) from Thermal Generation[4]	2019	2018	Baseline (2005)
Ireland	3,999,613	5,704,932	14,630,000
Northern Ireland	685,350	803,553	
Britain	1,507,600	1,766,836	
GHG Emissions Scope 1,2 & 3 (tonnes CO_2e)	**2019**	**2018**	**Baseline (2015)**
Scope 1			38,596
Premises Energy	833	983	
Vehicle Transport	17,216	17,216	
Gaseous Emissions SF_6	12,583,	20,520	
Scope 2			13,754
Premises Energy	11,243	12,888	
Scope 3			10,393
Premises Energy	757	875	
Vehicle Transport	5,314	5,132	
Travel	4,024	4,169	
Total GHG emissions (tonnes CO_2e)	6,244,533	8,337,104	
Other Emissions (tonnes)	**2019**	**2018**	**Baseline (2006)**
NOx	3,370	5,061	21,585
SOx	628	1,308	25,400
Dust	67	159	1,127
Carbon Intensity from Generation	406gCO_2e/kWh	454g CO_2e/kWh	670g CO_2e/kWh (2005)

1. All Generating emissions are subject to verification under EU ETS and are reported to national environmental agencies annually.
2. Sulphur hexafluoride (SF6) is used in a significant portion of high-voltage switchgear assets on the transmission and distribution networks. It is used because of its very high electrical insulating properties which facilitate efficient and safe operation of the switchgear. In 2019, approximately 316.9kg of SF6 emissions for ESB Networks and 192.53kg for NIE Networks, were reported due to equipment faults.
3. Emissions table addresses GRI Standards 305-1, 305-2, 305-3, 305-4, 305-5, 305-6, 305-7, EU5
4. GWP Source - IPPC AR5 Conversion Factors

4.4 EFFLUENTS AND WASTE

In line with our overall focus of being a responsible corporate citizen, there has been a concerted effort to minimise the impacts from our operations, including waste. The focus on the area of waste management has led to improved segregation, handling of hazardous waste streams and higher levels of reuse and recycling, including the identification of new streams of reuse for waste products.

Staff commitment and involvement in appropriate segregation, waste reduction and improved reuse is central to our improving waste management performance.

Framework contracts with key waste services providers have also increased our level of oversight and assurance of proper and legally compliant disposal methods being employed by waste contractors and ensuring the maximum possible levels of waste are diverted from landfill and that all waste streams are handled appropriately. Records on the management of waste are collected and maintained by each ESB Business Unit. This information is also used as a basis to estimate the CO_2 emissions associated with waste management. Carbon emissions associated with waste disposal for 2019 totalled 862 tonnes (Scope 3).

Waste type	Hazardous (tonnes)	Non-Hazardous (tonnes)	Total (tonnes 2018)
Reuse	0.00	582.00	582.00
Recycling	2,379.20	8,390.61	10,769.81
Composting	0.00	126.44	126.44
Landfill	506.45	145.96	652.41
Disposed of directly by the organization or otherwise directly confirmed	0.00	172,634	172,634
Total 2019	2,885.65	181,879.01	184,764.66

Notes to Waste Disposal data provided;
1. Zero waste reported for the following categories of disposal method (Recovery, including energy recovery, incineration (mass burn), deep well injection, on-site storage, organisational defaults of waste disposal contractor)
2. Information provided by the waste disposal contractor for the purposes of collating waste volumes and categories
3. All hazardous waste as identified in the table above is handled and managed by approved and licensed hazardous waste management contractors, including all transport of hazardous waste materials.
4. Waste disposed of directly relates to ash disposal from Moneypoint (coal) and West Offaly and Lough Ree (peat) stations
5. Waste totals are reported a year in arrears

4.5 ENVIRONMENTAL MANAGEMENT

ESB is committed to the highest standards of environmental management and to proactively addressing the challenges of climate change. Under the Brighter Future Strategy ESB commits to leadership in the transition to low carbon energy and to produce, connect and deliver clean, secure affordable energy. We implement programmes across our operations to promote energy and resource efficiency and develop new environmentally driven product and process innovation and new business opportunities. We believe that continued sustainable business success is built on maintaining excellent relationships with all stakeholders.

As a major Irish utility with significant presence in the all-island (Republic of Ireland and Northern Ireland) market, and a growing presence in the Great Britain energy market, ESB is focused on maintaining the highest levels of environmental management and sustainability in all aspects of its operations in order to minimise environmental impacts and enhance the reputation of ESB as an exemplar organisation.

ENVIRONMENTAL MANAGEMENT SYSTEMS

ESB recognizes that our activities comprising of electricity generation, transmission, distribution and supply have the potential to cause environmental impacts and that it is our responsibility to manage our activities in a manner that provides a high level of protection for our natural environment and contributes to the reduction of greenhouse gas emissions, while supporting sustainable economic development. Due to the nature of our activities we are subject to rigorous standards of environmental legislation and regulation through for example environmental licences and permits issued by relevant Regulatory authorities. Our Thermal generating stations operations are licenced activities and we must comply with all aspects of their associated Industrial Emissions Licences.

Non licenced activities are subject to assessment during planning processes and subsequent conditions where the planning authority deems necessary. We strive for excellence in all our endeavours to comply with all applicable laws and regulatory requirements. We work through externally certified environmental management systems in line with the ISO14001:2015 standard throughout our company to achieve this. We are committed to playing our part as a responsible business by achieving an appropriately high standard of environmental management and by embedding sustainability in all our activities.

The emphasis on responsibility for environmental management in ESB flows through the company from the Board through the Chief Executive, to all senior management and in turn to each manager, supervisor, team leader and member of staff. The Board Health Safety and Environment Committee are responsible for oversight of company strategy, policy and compliance in safety, health and environmental matters and for advising the Board on health, safety and environmental matters. The Executive Director Team (EDT) are ultimately responsible for embedding sustainability and the implementation of effective environmental management within their areas of responsibility. Each business unit within ESB has dedicated Environmental managers who report to the relevant business unit senior manager and ultimately keep the Board abreast of all matters relating to the environment.

ESB Group requires robust and responsive methods for handling any grievances that may arise from the general public or any other societal stakeholder, be they general complaints or complaints of an environmental nature.

ACCESS TO INFORMATION ON THE ENVIRONMENT

Under the European Communities (Access to Information on the Environment) Regulations 2007-2018 (the "AIE Regulations") members of the public are entitled to request access to information on the environment that is held by or for ESB and or by ESB Networks DAC. Only environmental information can be requested under the AIE Regulations. This term however, is widely defined in the AIE Regulations and interpreted widely by the Commissioner for Environmental Information and the High Court.

ESB and ESB Networks DAC are separate public authorities under the AIE Regulations and information on how to make a request for environmental information to ESB or ESB Networks DAC is available at the following company website links **www.esb.ie/acting-responsibly/environmental-information** and **www.esb.ie/acting-responsibly/environmental-information**

ENVIRONMENTAL PERFORMANCE (GRI 307-1) (A)

Significant fines and non-monetary sanctions for non-compliance with environmental laws and /or regulations in terms of;	2019
(i)Total monetary value of significant fines	0
(ii)Total number of non-monetary sanctions	0
(iii) Cases brought through dispute resolution mechanisms	0

GRI 307-1 (B) STATEMENT

While there were no prosecutions noted against ESB Group in 2019 we wish to comment on the following.

ESB NETWORKS

In ESB Networks a number of environmental issues were raised by a staff member as part of a Protected Disclosure made to the Minister. Issues raised by the protected disclosure related to Sulphur Hexafluoride (SF6) and loss of fluid from underground ESB Network cables. SF6 is used widely around the world as an insulator in switchgear, because its high electrical insulating properties allow the switch gear to work efficiently and safely. During 2019 ESB Networks replaced SF6 switch gear at Moneypoint transmission station (at a capital cost of over €100 million) that had a history of leakage, and continues to manage, monitor and reduce SF6 leakage across the network. In 2019 SF6 leakage in Networks reduced by more than 50% compared to 2018.

ESB Networks also addressed fluid filled cable leakage issues, developing response and reporting protocols with the relevant statutory authorities and reporting to the EPA. An Environmental Information page on www.esbnetworks.ie website now provides current public information in relation to fluid filled cables and this will continue to be updated as further reviews are undertaken.

AIE Regulations Statistics	ESB 2019	ESB Networks DAC 2019	ESB 2018	ESB Networks DAC 2018
New AIE requests	20	8	18	4
Requests b/f from previous calendar year	2	1	0	0
Requests c/f to next calendar year	1	0	2	1
Requests Granted / Part Granted	14	7	11	3
Requests Refused	7	1	7	1
Requests Transferred	0	1	1	0
Internal Review Requests	11	1	4	0
Requests appealed to OCEI	3	0	1	0

ESB GENERATION AND TRADING

During 2019 summons for prosecution were issued to ESB Generation and Trading, Midland Generation Stations, (Lough Ree Power and West Offaly Power) by the EPA for failure to comply with Condition 5.5 of their IE licenses which related to breaching limits for thermal plume cooling water during periods of dry weather, low water levels and low water flow in 2018.

In February 2020 prosecution proceedings were concluded in respect of both peat stations and no convictions were imposed on ESB. While it was accepted that technical breaches of the licenses did take place it was recognised that no environmental damage occurred. ESB were requested by the Court to contribute to a nominated charity.

GRI 306-3 SPILLS AND SPILL RESPONSE

ESB Networks Fluid Filled Cable Leaks

During 2019, 13,337 litres of cable insulating fluid leaked from ESB's High Voltage Cable network. This is a decrease of 26,170 litres and represents approximately a 65 % reduction on the 2018 fluid leakage figure of 39,507 litres. The breakdown of the fluid leaks was as follows:

- 220 kV Cable Network = 828 litres
- 110 kV Cable Network = 2,500 litres
- 38 kV Cable Network = 10,049 litres

ESB Networks' tracer detection equipment has significantly improved our ability to identify leak sites and implement repairs. We continue to implement this state of art leak detection methodology along with other leak detection methods when required.

On foot of the protected disclosure (referenced above), the EPA carried out an investigation in relation to underground cable leaks and a report on this investigation is publicly available on the EPAs website. **http://www.epa.ie/pubs/reports/enforcement/esbreport.html**

CASE STUDY: BIG STEPS FORWARD IN GAS RECLAMATION & STORAGE

NIE Networks, like other electricity networks companies, uses SF6 in its electrical switchgear, as an electrical insulation, arc quenching and cooling medium.

This gas, while critical within electrical equipment, needs to be very carefully managed as it is 23,900 times more potent as a global warming gas than CO_2. Management of SF6 gas is a statutory requirement and any release of SF6 gas, due to leaks, is monitored carefully.

With this in mind, the company has undertaken a programme to recycle SF6 in order to reduce the amount needing to be manufactured. Previously, any gas contaminated with air would have been destroyed and new gas purchased. The recycling scheme which currently utilises Dilo to reprocess the gas and remove contaminants will also reduce future gas purchase. At present, other methods of air removal from the gas are being investigated which might reduce future dependence upon Dilo whilst achieving additional savings.

The filtered gas can be stored along with clean gas in newly purchased 600kg bottles. A central store of the gas for the entire company, made it easier to manage paperwork and control systems. Individual depots continue to hold smaller bottles of the gas which are then refilled from the central store as and when required.

4.6 WATER

ESB's most significant water demand is for the purposes of providing cooling water for thermal power generation. Cooling water is generally withdrawn from a riverine or estuarine source for use in the cooling process and is then safely discharged back to source under controlled and licensed conditions. In addition lesser quantities of water are consumed in our offices and depots. As our operations are primarily in the Republic of Ireland, Northern Ireland and the UK, we do not operate significant water consuming operations in any locations currently considered as under water stress. As with the use of all natural resources, ESB is committed to being a responsible consumer of water through our management and conservation practices.

THERMAL GENERATION

Water usage, abstraction and discharge is managed and monitored to operating license conditions in our generating stations. The water temperature is recorded when it is withdrawn and again when it is discharged, the difference in these temperatures are monitored in conjunction with the ELV setting a maximum and minimum degrees Celsius, measured hourly. Other parameters such as pH prior and during discharges are also measured with an alarm trigger if the pH varies outside parameters pH 6-9.

Weekly and quarterly samples are taken from the discharged water recording chlorine, TDS, BOD, oils, ammonia. Methods of analysis include pH meter, colorimetric analysis, gravimetric and Kone analyser by external labs. To further reduce the impacts of potential risk of water pollution from our generation stations bund tests are carried out 3 times a year to ensure integrity of containment structures and to eliminate risk of leaks reaching the water surface, damaging the supply. Drainage repairs and hydrostatic testing are also performed to reduce the risk of leaks reaching surface water.

WATER CONSERVATION

Water conservation, leak detection and water recycling projects take place at the power station or location level. For example, the introduction of an environmental retrofit plant in Moneypoint coal fired station, to reduce emissions of NOx, SOx and particulates (See EU5 dislosure), brought with it an increased water demand. To address this demand, a number of potential sources for capturing run off, waste water and drainage systems for recycling and return of the captured water to the process were identified. This recycled grey water is used in the emissions scrubbing and other processes and provides approximately 15% of the plant's water demand. The water recycling project has also alleviated demand pressures on the local authority water infrastructure.

Elsewhere, ESB Networks has deployed a number of water data loggers on water supply to monitor consumption levels and to provide level alerts and leak alarms. Whilst in operation, the data loggers enabled early detection and repair of water leaks, preventing leaking in excess of one million litres of water. A recent national programme to install water metering has resulted in disconnection of many of these loggers and ESB Networks is working closely with the water utility to reinstate the water monitoring programme.

CASE STUDY: REDUCING CONTAMINATED WATER

NIE Networks has put in place a programme to improve water recycling and usage reduction using a simple low cost test.

By introducing a mobile oil / water separator unit the company can now separate clean and contaminated water found in specific underground chambers in our substations and depots. Previously these had been routinely emptied and treated as though all the water was polluted before being refilled with clean water. The contaminated water is now drawn off and taken for disposal with the clean water being returned to the chamber.

Using another very simple and cost effective test, the water is now changed only when contaminants have been identified in the cross section using the testing device, saving over 150,000 litres of water per annum.

Boxer water bailer device

WATER CONSUMPTION TABLE

Water Source	Potable Water		Surface Water		Sea Water		Recycled Water	
m³	2018	2019	2018	2019	2018	2019	2018	2019
Withdrawal	1,668,548	1,215,888	3,727,750	3,356,680	187,820,427	172,979,872	0	0
Discharged	1,668,687	1,217,606	3,727,750	3,356,680	187,820,427	172,979,872	0	0
Recycled	0	0	0	0	0	0	71,640	99,407

4.7 ENERGY UTILITY SECTOR SPECIFIC DISCLOSURES

EU1 INSTALLED CAPACITY, BY ENERGY SOURCE AND REGULATORY REGIME (MW)

Installed capacity by regulatory regime & primary energy source in MW.

Fuel Source & Year	Republic of Ireland	Northern Ireland	Great Britain
Gas			
2018	2,025	402	1,231
2019	2,025	-	-
Peat			
2018	266	-	-
2019	266	-	-
Oil			
2018	-	53	-
2019	-	53	-
Wind			
2018	327	100	169
2019	416	100	169
Hydro[1]			
2018	512		
2019	512		
Solar			
2018	1		
2019	1		

Note 1: Hydro included pumped storage capacity

EU2 NET PRIMARY OUTPUT BY ENERGY SOURCE AND REGULATORY REGIME

ESB does not disclose net primary output by energy source and regulatory regime in MWh. Due to the nature of all island market structures, disclosure of this nature is deemed to be commercially sensitive to a level where it may provide competitors with significant commercial insights and advantage. Energy inputs to the thermal generation process are reported below, as is required by legislation in Ireland.

EU3 NUMBER OF RESIDENTIAL, INDUSTRIAL INSTITUTIONAL CUSTOMERS

Connections to the Network	2019	2018
Republic of Ireland[1]		
Residential	2,099,630	2,057,339
Small Business	185,193	184,6212
Medium Business[2]	117,425	92,0743
Large Energy User (distribution connected)[3]	1,894	1,779
Transmission connected	20	18
Transmission connected with embedded generation	88	60
New Connections	30,206	26,954
Northern Ireland		
Total Customer connections	890,003	881,492
Residential	92.6%	92.65%
Commercial & Industrial	7.4%	7.35%
Disconnections (Republic of Ireland)[1]		
Number of Disconnections	2,000	2,200
Disconnection Rate	<20 per 10,000 customers	20 per 10,000 customers
Vacant Disconnections	35%	35%
Reconnection within 48 hours	100% of non vacant	100% of non-vacant
Customer Minutes Lost (av. minutes per customer)		
ESB Networks [4]	171.1	148.3
NIE Networks[4]	82.5	94.2
Access to Electricity Supply		
Republic of Ireland	100%	100%
Northern Ireland	100%	100%
Complaints		
ESB Networks	4,665	2,905
NIE Networks[5]	2	1
Electric Ireland	1,930	1,948

Notes on Customer Disclosures;

1. Reporting a year in arrears
2. Includes Embedded Generation
3. Including Embedded Generation and Public Lighting
4. The average duration of interruptions (planned and fault) for all customers during the year
5. Complaints classified as stage 2 to Consumer Council NI

ENVIRONMENTAL COMPLAINTS

ESB's website (www.esb.ie), sets out a variety of channels for reporting directly to the main customer facing businesses in the ESB Group; to ESB Networks Ltd. and Electric Ireland, as does NIE Networks Ltd. website (www.nienetworks.co.uk). The process for each of these public-facing business units is underpinned by a customer charter and code of practice, a complaints handling procedure, all with clear performance expectations stated publicly, as well as a regulatory obligation to report in certain circumstances.

HANDLING COMPLAINTS ESB NETWORKS LTD

ESB Networks has a customer charter outlining twelve customer distribution service guarantees. A National Customer Care Centre also acts as a first point of contact. https://www.esbnetworks.ie/help-centre

NIE NETWORKS

NIE aims to provide a first-class service and value for money to all its customers. Its customer charter, code of practice and customer care helpline are accessible via the company website (www.nienetworks.co.uk).

ELECTRIC IRELAND

Electric Ireland is committed to offering a quality service. Their service commitment is to treat all customers with courtesy and respect, to try and clearly understand customer needs and to act as quickly as possible. Electric Ireland's service standards are based on five Customer Codes:
The Code of Practice on Customer Billing and Disconnection
The Code of Practice on Vulnerable Customers
The Complaints Handling Code of Practice
The Code of Practice on Marketing and Sign Up
The Code of Practice on Pay As You Go Metering
https://www.electricireland.ie/residential/helpful-links/customer-service-guarantees

EU4 LENGTH OF ABOVE AND UNDERGROUND TRANSMISSION AND DISTRIBUTION LINES BY REGULATORY REGIME

ESB Networks (Length in Kms)	2019	2018
	Distribution	
– LV-OHL	39,942	39,045
- LV- Underground	14,276	13,807
-10kV - Overhead	37,225	37,462
-10kV - Underground	8,389	8,270
-20kV - Overhead	46664	46,071
-20kV - Underground	1,779	1,688
-38kV - Overhead	5,729	5,756
-38kV - Underground	1,230	1,112
-110kV-Overhead	448	414
-110kV - Underground	230	240
NIE Networks		
Distribution	47,000 (34% underground)	47,000 (34% underground)
Transmission	2,200 (5% underground)	2,200 (5% underground)

CHAPTER 5
APPENDICES

5.1 INDEPENDENT GRI STANDARDS OPTION CHECK

GRI Standards Option Check Independent Assessment

DNV GL Business Assurance Services UK Ltd. ('DNV GL') was engaged by the Electricity Supply Board ('ESB') to carry out an independent assessment of ESB's Responsible Business Report 2019 ('the Report') against the Global Reporting Initiative ('GRI') Standards 2018 and the GRI Electric Utilities Sector Supplement.

The Report has been independently assessed by DNV GL as being in accordance with the 'Core' option of the GRI Standards 2018.

DNV GL's independent assessment confirms that the required disclosures for the 'Core' option have been addressed in ESB's Report. The GRI Standards Cross Referencing Table within the Report's appendices demonstrates a valid representation of the disclosures, in accordance with the requirements of the GRI Standards 2018. This independent assessment does not provide an opinion on ESB's sustainability performance in 2019 nor on the quality of information disclosed in the Report.

DNV GL was not engaged by ESB on any other commitments in 2019 which could compromise the independence of our assessment of ESB's GRI reporting.

26 June 2020, London

For and on behalf DNV GL Business Assurance Services UK Ltd

Shaun Walden
Principal Consultant

5.2 ESB GREEN BOND 2019: ALLOCATION AND IMPACT REPORT 2019/20

Since its establishment in 1927, ESB has been characterised by a commitment to create a brighter future for the customers and communities we serve. This is manifest in the scale and vision of the energy projects that we have delivered over the past 90 years to create an efficient and reliable energy system for Ireland and its citizens.

Understanding the enormous climate change challenge faced by the world, ESB is taking action by leading the transition to a low carbon energy future powered by a clean electricity system.

ESB's Strategy for a Brighter Future sets out ESB's ambition and roadmap for the period to 2030. Over this period, we will step up the pace of investment to further reduce the carbon intensity of our generation portfolio, increase the capacity of our electricity networks to support low carbon technologies and distributed energy resources, enable the widespread electrification of heating and transport, and create customer centric products and services to enable customers manage their energy more efficiently. These investments in the low carbon future will be underpinned and enabled by strong commercial propositions in the Republic of Ireland (ROI), Northern Ireland (NI) and Great Britain (GB) that maintain the financial strength of our business.

ESB recognises the importance of sustainable finance in today's financial markets and in June 2019 ESB successfully issued Ireland's first corporate public Green Bond. This was followed most recently in February 2020 with the signing of a new EUR1.4bn five- year sustainability linked loan, in the form of a revolving credit facility, further demonstrating ESB's commitment to leading the transition to a low-carbon future while enabling banks and investors to direct increasing levels of capital into carbon action investments.

ESB Green Bond 2019

ESB, through its financing entity, ESB Finance Designated Activity Company (DAC) issued a Green Bond in June 2019. The net proceeds, which amount to €498.5m, 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 is aligned to the Green Bond Principles, 2018.[1]

Issuer:	ESB Finance DAC
Currency	EUR
ISIN	XS2009861480
Nominal Account	€500,000,000
Pricing Date	4th June 2019
Settlement Date	11th June 2019
Maturity Date	11th June 2030
Coupon	1.125%
Proceeds to allocate	€498,500,000

USE OF PROCEEDS

The net proceeds of the green bond, €498.5m, were used to finance or refinance 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	RELEVANT SUSTAINABLE DEVELOPMENT GOALS
Renewable Energy		**Renewable wind farms**	€381.5m	
Energy Efficiency		**Smart Meter Roll Out**	€50m	
Clean Transportation		**Infrastructure to facilitate Electric Vehicle penetration**	€6.2m	
Green Buildings		**The Redevelopment of ESB'S Head Office, Lower Fitzwilliam Street, Dublin 2** **A Green Certified Sustainable Building**	€60.8m	

The proceeds of the Green Bond of €498.5m are now fully allocated. Of those proceeds approximately 70% was used to refinance projects which had funding in place on the issuance of the Green Bond with the remainder being used to finance projects subsequent to the issue.

[1] The Green Bond Principles (GBP) published by the International Capital Market Association (ICMA), updated as of June 2018, are voluntary process guidelines that recommend transparency and disclosure and promote integrity in the development of the Green Bond market by clarifying the approach for issuance of a Green Bond.

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 set up a project register and put internal controls in place to monitor and track the allocation to selected projects. An amount equal to, or greater than, the unallocated funds raised, was 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.

PROJECT NAME	ALLOCATED SPEND €'M	STATUS	GENERATION CAPACITY MW	QUALIFYING GENERATION CAPACITY MW	QUALIFYING ENERGY GENERATED OR FORECAST MWH	QUALIFYING TONNES OF CO2 EQUIVALENT AVOIDED	NON – WINDFARM PROJECT IMPACTS
Galloper Wind Farm (Offshore)	130.9	Operational	44 MW	44 MW	177,230	42,710	
Neart na Gaoithe Wind Farm (Offshore)	23.7	In Construction	224 MW	22 MW	91,135	21,963	
Grousemount Wind Farm	154.7	In Construction	114 MW	88 MW	282,090	93,372	
Cappawhite Wind Farm	16.2	Operational	52 MW	10 MW	33,578	11,114	
Castlepook Wind Farm	56.0	Operational	34 MW	29 MW	78,105	25,853	
Smart Meter Roll-out	50.0	Ongoing project					15,086 new smart meters installed by December 19
Project Fitzwilliam - ESB's Head Office Redevelopment	60.8	In Construction					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 between July 17 and December 2019
TOTAL	498.5		468MW	193MW	662,138	195,012	

Notes on Reporting Criteria:

All spend was incurred between 1 July 2017 and 31 March 2020.

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	0.331	SEAI, 2019 provisional figure.
UK	0.241	National Grid, 2019 average.

Generation capacity represents the 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. Furthermore, in the case of Neart na Gaoithe where only €23.7m of ESB's total investment to date of €234m has been allocated to the Green Bond, the qualifying generation capacity and associated emissions has been similarly proportioned (i.e. 10% of the 50% ESB stake).

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 15,086 meters as at the end December 2019 as part of its Smart Meter Programme. The €50m allocated to the Green Bond represents a portion of the spend to 31 December 2019 on the project. The overall project has involved a significant level of upfront IT spend which will benefit the full smart meter roll out of over 2 million meters. The full programme is expected to cost approximately €1.2bn and 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 installed in the period July 2017 to December 2019 included above.

GALLOPER WIND FARM

Galloper Wind Farm is a 353MW development, featuring 56 Siemens-Gamesa turbines, 30 km off the coast of Suffolk in the United Kingdom. Galloper 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 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%).

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. The wind farm when finalised will comprise 38 wind turbines, which will be used to harness the natural energy of the wind to generate electricity and provide enough renewable power for approximately 70,000 homes. Turbines will have maximum overall dimensions of 126 metres which will result in up to 114MW of renewable electricty being generated on site. It is ESB's largest on-shore 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 52MW—enough renewable electricity to power around 32,500 households a year.

CASTLEPOOK WIND FARM

Castlepook Wind Farm is located in Castlepook forest, Ballyhoura, Co. Cork, Ireland. It features 14 turbines with a total capacity of 34MW—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.

NEART NA GAOITHE WIND FARM

Neart na Gaoithe is a windfarm currently under development off the East Coast of Scotland. In November 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, enough to power around 375,000 Scottish homes a year, and construction is expected to get underway in 2020 with commissioning to follow in 2023.

SMART METERS

ESB Networks is in the middle of the rollout out of Phase 1 of a National Smart Meter Programme in the Republic of Ireland. Phase 1 will see major IT investment and up to 250,000 meters installed. Over 2 million meters are due to be installed by 2025, over the three phases of the programme.

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 involves 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, is to be retained by ESB as its Head Office. The building is being 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.

ELECTRIC VEHICLE INFRASTRUCTURE

ESB eCars builds, owns and operates electric vehicle charging networks for public use across the Republic of Ireland, Northern Ireland and Great Britain. As at December 2019 this network contains over 1,100 charge points on the island of Ireland, as well as over 100 charge points in Great Britain.

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.

A copy of the final review can be found at
https://www.esb.ie/investor-relations/green-bond

CONTACTS

If you have any further questions, comments or enquires relating to this report please contact us as per below:

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5.3 GRI STANDARDS CROSS REFERENCING TABLE

GENERAL STANDARD DISCLOSURES			
Reference	**Disclosure**	**Location**	**Notes on Disclosure**
102-1	Report the name of the organisation.	Sec.1	
102-2	Report the primary brands, products, and services.	Sec. 1.2	
102-3	Report the location of the organisation's headquarters.	GRI Cross Reference Table, Cover	ESB Head Office, Gateway Two, East Wall Rd., Dublin D03 A995, Ireland.
102-4	Report the number of countries where the organisation operates, and names of countries where either the organisation has significant operations or that are specifically relevant to the sustainability topics covered in the report.	Sec.1.2, 3.3	
102-5	Report the nature of ownership and legal form.	Sec. 1, pg 2	
102-6	Report the markets served (including geographic breakdown, sectors served, and types of customers and beneficiaries).	Sec.1.2,1.3, 3.3	
102-7	Report the scale of the organisation: Total number of employees Total number of operations Net sales (for private sector organisations) or net revenues (for public sector organisations) Total capitalization broken down in terms of debt and equity (for private sector organisations) Quantity of products or services provided	Sec. 1.2, 3.3	
102-8	Workforce detail disclosure	Sec.3.3	
102-9	Describe the organisation's supply chain.	Sec. 2.5	
102-10	Report any significant changes during the reporting period regarding the organisation's size, structure, ownership, or its supply chain, including: ▪ Changes in the location of, or changes in, operations, including facility openings, closings, and expansions ▪ Changes in the share capital structure and other capital formation, maintenance, and alteration operations (for private sector organisations) ▪ Changes in the location of suppliers, the structure of the supply chain, or in relationships with suppliers, including selection and termination		
102-11	Report whether and how the precautionary approach or principle is addressed by the organisation.	Sec.3.6	
102-12	List externally developed economic, environmental and social charters, principles, or other initiatives to which the organisation subscribes or which it endorses.	Sec. 1.9	
102-13	List memberships of associations (such as industry associations) and national or international advocacy organisations in which the organisation: ▪ Holds a position on the governance body ▪ Participates in projects or committees ▪ Provides substantive funding beyond routine membership dues Views membership as strategic This refers primarily to memberships maintained at the organisational level.	Sec. 1.9	
102-14	Statement from the most senior decision-maker of the organisation	Sec. 1.1	
102-16	Values, principles, standards, and norms of behaviour	Sec.1.4,1.5,1.6, 3.3	Working language in ROI, NI and UK is English.
102-18	Governance structure	Sec. 1.6	
102-40	Provide a list of stakeholder groups engaged by the organisation.	Sec. 1.8	
102-41	Report the percentage of total employees covered by collective bargaining agreements.	Sec. 3.3	
102-42	Report the basis for identification and selection of stakeholders with whom to engage.	Sec. 1.8	
102-43	Report the organisation's approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group, and an indication of whether any of the engagement was undertaken specifically as part of the report preparation process.	Sec. 1.8	
102-44	Report key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting. Report the stakeholder groups that raised each of the key topics and concerns.	Sec.1.7, Sec. 1.8	
102-45	a. List all entities included in the organisation's consolidated financial statements or equivalent documents. b. Report whether any entity included in the organisation's consolidated financial statements or equivalent documents is not covered by the report.	Annual Report 2019	Note 35 to Financial Statements, ESB Annual Report 2019 (pg206) lists all subsidiary, equity accounted investees and associate undertakings.
102-46	a. Explain the process for defining the report content and the Aspect Boundaries. b. Explain how the organisation has implemented the Reporting Principles for Defining Report Content.	Sec.1	
102-47	List all the material Aspects identified in the process for defining report content.	Sec. 1.7	
102-48	Report the effect of any restatements of information provided in previous reports, and the reasons for such restatements.	None	No restatements of information made in 2018 report.
102-49	Report significant changes from previous reporting periods in the Scope and Aspect Boundaries.	Sec.1.7, Sec. 1.8	No significant organisational changes in 2019. Water and Environmental Management have become of increased interest to stakeholders and ESB and are disclosed as material topics in the 2019 report.
102-50	Reporting period (such as fiscal or calendar year) for information provided.	Sec. 1	Calendar Year 2019
102-51	Date of most recent previous report (if any).	Sec. 1	Sustainability Report 2018
102-52	Reporting cycle (such as annual, biennial).	Sec. 1	Annual
102-53	Provide the contact point for questions regarding the report or its contents.	Sec. 1	
102-54	Report the 'in accordance' option the organisation has chosen.	Sec. 1, Sec. 5	
102-55	GRI Content Index	Sec. 5	Appendix, GRI Table
102-56	Report the organisation's policy and current practice with regard to seeking external assurance for the report..	Sec. 1	

SPECIFIC STANDARD DISCLOSURES			
103-1, 103-2, 103- 3 Economic Performance 201	Generic Disclosures on Management Approach	Sec 2.2, 2.4	
201-3	Defined benefit obligations and other retirement plans	Sec 2.4	% salary contributions are confidential between ESB and the individual employee. All permanent staff are members of either the Defined Benefit Plan or another retirement plan.
103-1, 103-2,103-3 In-direct economic impact 203	General Disclosures on Management Approach	Sec 2.2, 2.3	
203-1	Development and impact of infrastructure investments and services supported	Sec. 2.2, 2.3	
203-2	Significant indirect economic impacts, including the extent of impacts	Sec. 2.3	

SPECIFIC STANDARD DISCLOSURES			
Reference	**Disclosure**	**Location**	**Notes on Disclosure**
103-1, 103-2,103-3 Procurement	Generic Disclosures on Management Approach	Sec. 2.5	
204-1	Proportion of spending on local suppliers	Sec 2.5	
103-1, 103-2,103-3 Anti Corruption	Topic Boundary	Sec. 2.6	
205-1	Operations assessed for risks related to corruption	Sec. 2.6	
103-1, 103-2,103-3 Health & Safety	Topic Boundary, Explanation and Evaluation	Sec. 3.1	
403-1	Occupational health and safety management system	Sec. 3.1	
403-2	Hazard Identification, risk assessment and incident investigation	Sec. 3.1	
403-3	Occupational health services	Sec. 3.1	
403-4	Work participation, consultation and communication	Sec. 3.1	
403-5	Worker training on occupational health & safety	Sec. 3.1	
403-6	Promotion of worker health	Sec. 3.1	
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Sec 3.1	In circumstances where ESB has no direct control over work or workplace, ESB's expected health and safety standards are specified as part of contract award and would be subject to audit and review by ESB.
403-8	Workers covered by SMS	Sec. 3.1	
403-9	Work related injuries	Sec. 3.1	
403-10	Work related ill health	Sec. 3.1	Individual worker ill health cases are managed by ESB's occupational health doctor and subject to doctor/patient privilege. Any absence resulting from ill health is reported through absenteeism rates.
103-1, 103-2,103-3 Training & Education	Topic Boundary, Explanation and Evaluation	Sec. 3.3	
404-3	% of employees receiving regular performance and career development reviews	Sec. 3.3	
103-1, 103-2,103-3 Community Engagement	Topic Boundary, Explanation and Evaluation	Sec. 3.4	
413-1	Operations with local community engagement, impact assessments and development programmes	Sec. 3.4	
103-1, 103-2,103-3 Products and Services	Topic Boundary, Explanation and Evaluation	Sec. 3.2	
416-1	Assessment of health & safety impacts pf product and service categories	Sec. 3.2	
103-1, 103-2,103-3 Customer Privacy	Topic Boundary, Explanation and Evaluation	Sec. 3.5	
418-1	Substantiated complaints concerning breaches of customer privacy	Sec. 3.5	

SPECIFIC STANDARD DISCLOSURES			
Reference	**Disclosure**	**Location**	**Notes on Disclosure**
302-1	Energy Consumption within the organisation	Sec. 4.1	
302-2	Energy Consumption outside the organisation	Sec. 4.1	Conversion Factors used are set annually by SEAI and DEFRA.
302-4	Reduction of energy consumption	Sec. 4.1	kWh/FTE is the indicator reported on.
302-5	Reduction in energy requirement of products and services	Sec. 4.1	
103-1, 103-2,103-3 Water	Topic Boundary, Explanation and Evaluation	Sec 4.6	
303-1	Interactions with water as a shared resource	Sec 4.6	
303-2	Management of water discharge-related impacts	Sec 4.6	
303-3	Water withdrawal	Sec 4.6	
303-4	Water discharge	Sec 4.6	
303-5	Water consumption	Sec 4.6	
103-1, 103-2,103-3 Biodiversity	Topic Boundary, Explanation and Evaluation	Sec. 4.2	
304-1	Operational sites owned, leased, managed in or adjacent to protected areas	Sec. 4.2	All areas detailed are terrestrial protected areas.
103-1, 103-2,103-3 Emissions	Topic Boundary, Explanation and Evaluation	Sec. 4.3	
305-1	Direct (Scope 1) GHG emissions	Sec. 4.3	
305-2	Energy Indirect (Scope 2) GHG emissions	Sec. 4.3	
305-3	Other Indirect (Scope 3) GHG emissions	Sec. 4.3	
305-4	GHG emissions intensity	Sec. 4.3	
305-6		Sec. 4.3	SF6 Included in disclosure
305-7		Sec. 4.3	
103-1, 103-2,103-3 Effluents and Waste	Topic Boundary, Explanation and Evaluation	Sec 4.4	
306-2	Hazardous and Non Hazardous Waste by Disposal Method	Sec. 4.4	
306-3	Significant Spills	Sec. 4.5	linear alkyl benzene (LAB) -classified as non hazardous replacement for mineral oil. ESB Networks has completed a preliminary assessment of each fluid filled cable leak, these assessments have been submitted to the relevant Local Authority. ESB Networks commenced site-specific investigations in January 2020, based on a site prioritisation plan as agreed with the Environmental Protection Agency. Please refer to linked EPA report: http://www.epa.ie/pubs/reports/enforcement/esbreport.html
103-1, 103-2,103-3 Environmental Compliance	Topic Boundary, Explanation and Evaluation	Sec 4.5	
307-1	Non-compliance with environmental laws and regulations	Sec 4.5	

ENERGY UTILITY SECTOR SPECIFIC DISCLOSURES			
Reference	**Disclosure**	**Location**	**Notes on Disclosure**
EU1	Installed capacity, broken down by primary energy source and by regulatory regime	Sec. 4.7	
EU2	Net energy output broken down by primary energy source and by regulatory regime	Sec. 4.7	
EU3	Number of residential, industrial, institutional and commercial customer accounts	Sec. 4.7	
EU4	Length of above and underground transmission and distribution lines by regulatory regime	Sec. 4.7	
EU5	Allocation of CO_2E emissions allowances or equivalent, broken down by carbon trading framework	Sec. 4.3	All generating emissions are subject to verification under EU ETS and are reported to national environmental agencies annually.
G4-10	Total contractor workforce	Sec. 3.3	Contractor workforce numbers are not gathered for all individual contracts. Numbers reported reflect regular contractors working on ESB Networks sites, NIE Networks sites, major construction and overhaul projects and facility service providers.
G4-11	% Contractor employees covered by collective barganing agreements	Sec. 3.3	Under the obligations outlined in ESB's 3rd party requirements, all contracting entities are required to allow their staff freedom of association. This is monitored as part of the contractor employment standards (CES) audits which are undertaken across all entities.
EU10	Planned capacity against projected electricity demand	Sec. 4.3	Future outlook
EU12	Transmission & distribution losses as a % of total energy	GRI CROSS REFERENCE TABLE	ESB networks and NIE Networks are the licenced distribution system operators and are not responsible for operation of the transmission system. Losses reported by ESB Networks (6.69%, Comprising technical at 6.19% And commercial at 0.5%) are a key part of the work programme agreed with the energy regulator in ROI, the CRU. NIE Networks programme of works agreed with UREG, does not include a significant works programme for rural upgrading of network to reduce losses, and is therefore deemed not to be material to nie networks.
EU25	Number of injuries and fatalities to the public involving company assets, incl judgements, settlements and pending legal cases of diseases	Sec. 3.1	Public liability claims have decreased over the past 10 years, however, disclosure on the number of incidents is commercially sensitive and is not disclosed.
EU26	% Of population unserved in licensed distribution service areas	GRI CROSS REFERENCE TABLE	100% Of the population of ROI and NI have access to an electricity supply.
EU27	Number of residential disconnections for non-payment, broken down by duration of disconnection and by regulatory regime.	Sec. 4.7	
EU28	Power outage frequency	Sec. 4.7	Reported as customer minutes lost (CML) in ROI, as required by the CRU. In NI, system average interruption frequency index (SAIFI) is employed as required by URegNI.
EU29	Average power outage duration	Sec. 4.7	Reported as customer minutes lost (CML) in ROI, as required by the CRU. In NI, system average interruption frequency index (SAIFI) is employed as required by URegNI.
EU30	"Average plant availability factor by energy source and by regulatory regime "	Sec 4.7	ESB does not disclose average plant availability or outage schedules publicly due to the nature of all island electricity market structures. Disclosure of this nature is deemed to be commercially sensitive to a level where it may provide competitors with significant commercial insights and advantage.

5.4 GLOSSARY OF TERMS

GLOSSARY OF TERMS	
Abbreviated Term	**Explanation**
BWR	Business Working Responsibly Award
CCGT	Combined Cycle Gas Turbine
CDP	Carbon Disclosure Protocol
CER	Commission for Energy Regulation
Coillte	Coillte is a commercial company operating in forestry, land based businesses, renewable energy and panel products and owns over 1 million acres of forest on behalf of the Irish Government
Colleges	UL – University of Limerick, UCD – University College Dublin, TCD – Trinity College Dublin, NUI – National University of Ireland, DIT – Dublin Institute of Technology, QUB – Queen's University Belfast, UCC – University College Cork
DCCAE	Department of Communications, Climate Action and Environment
DfE	Department for the Economy (NI, replaces DETI)
DAERA	Department of Environment and Rural Affairs (NI)
DTTAS	Department of Transport, Tourism and Sport
EAI (NEAI)	Electricity Association of Ireland
Eirgrid	Republic of Ireland System Operator
EPA	Environmental Protection Agency
EPRI	Electricity Power Research Institute
Eurelectric	The Union of the Electricity Industry - EURELECTRIC is the sector association which represents the common interests of the electricity industry at pan-European level
EV	Electric Vehicle
HSA	Health and Safety Authority
IBEC	Irish Business and Employer Association
IFA	Irish Farmers Association
IPPCL	Integrated Pollution Prevention and Control Licence
IWEA	Irish Wind Energy Association
LTI	Lost Time Injury (in ESB defined as being absent from work on the next planned shift/day)
OER	Organisational Effectiveness Review
NOx, SOx,	Nitrous Oxides, Sulphur Dioxides,
NHA/PNHA/SAC/SPA	National Heritage Area, proposed NHA , Special Area of Conservation, Special Protection Area
NPWS	National Parks and Wildlife Service
RAB	Regulated Asset Base
SEAI	Sustainable Energy Authority of Ireland
SONI	System Operator Northern Ireland
UR	Utility Regulator of Northern Ireland
VGB	European technical association for power and heat generation - a voluntary association of companies for which power and heat generation is the basis of their business.
WITS	Women in Technology and Science

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